



**GAI-TRONICS® CORPORATION**  
A HUBBELL COMPANY

# Model 12576-115 Access Panel with VFD

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## Confidentiality Notice

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## General Information

The Model 12576-115 Access Panel is a component of the SmartSeries system that may be used for public address, intercommunication, and emergency notification.

## How to Use the Assembly

### Application

The Model 12576-115 Access Panel is a standard EIA 19-incsh rack-mount assembly with a 120 V ac/240 V ac power input. This power input allows the access panel to be used in almost all installations without requiring additional line transformers.

The access panel can be used to initiate alarms and to monitor system activity via a vacuum fluorescent display (VFD). A piezo audible alarm is included that is typically used to alert personnel of updated system status.

The panel provides a handset equipped with an integral pressbar. The handset is used to make page announcements and to hold two-way party line conversations.

The main components of the Model 12576-115 Access Panel are as follows:

- Vacuum fluorescent display
- 17 push buttons
- Handset
- Piezo alarm

The function of each of the 17 push buttons is software configurable. Contact GAI-Tronics for more information on configuration of the access panel.

# Hardware Configuration

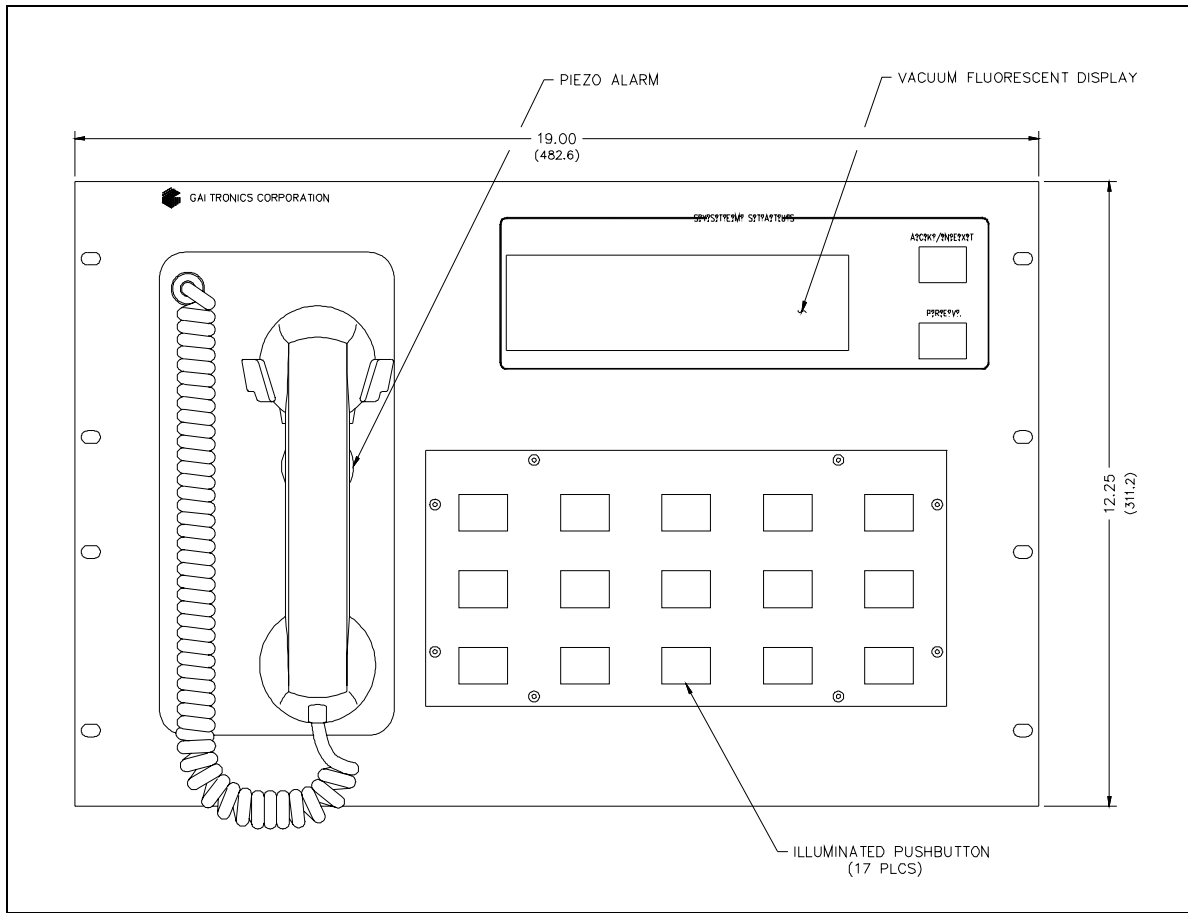


Figure 1. Model 12576-115 Access Panel (Front View)

## Interfaces

A three-conductor ac power cord is included with the access panel. One end of the power cord is connected to the three-prong connector located on the back of the access panel, while the other end is plugged into a grounded ac electrical outlet. The compatible ac input voltages are 120 V ac /240 V ac (auto-ranging), 50/60 Hz.

Data and audio connection to the system control unit is provided by a four-position terminal block located at the rear of the panel. The physical connection is a single twisted-pair cable connection using two of the four terminal points. One of the remaining two points is tied to chassis ground and may be used to connect to a cable shield if shielded cable is preferred.

**NOTE:** Ensure that only **one** end of the cable's shield is grounded in order to avoid ground loops. The remaining terminal point is not used.

A second four-position terminal block is provided for optional connections:

- Two terminals are available to connect a single 40-ohm (nominal) external speaker for page audio monitoring.
- Two terminals are available to drive an external piezo alarm.

Contact GAI-Tronics Service Department for further information.

**NOTE:** The piezo alarm is a polarity-sensitive device. Ensure that proper polarity is observed when connecting it to the access panel.

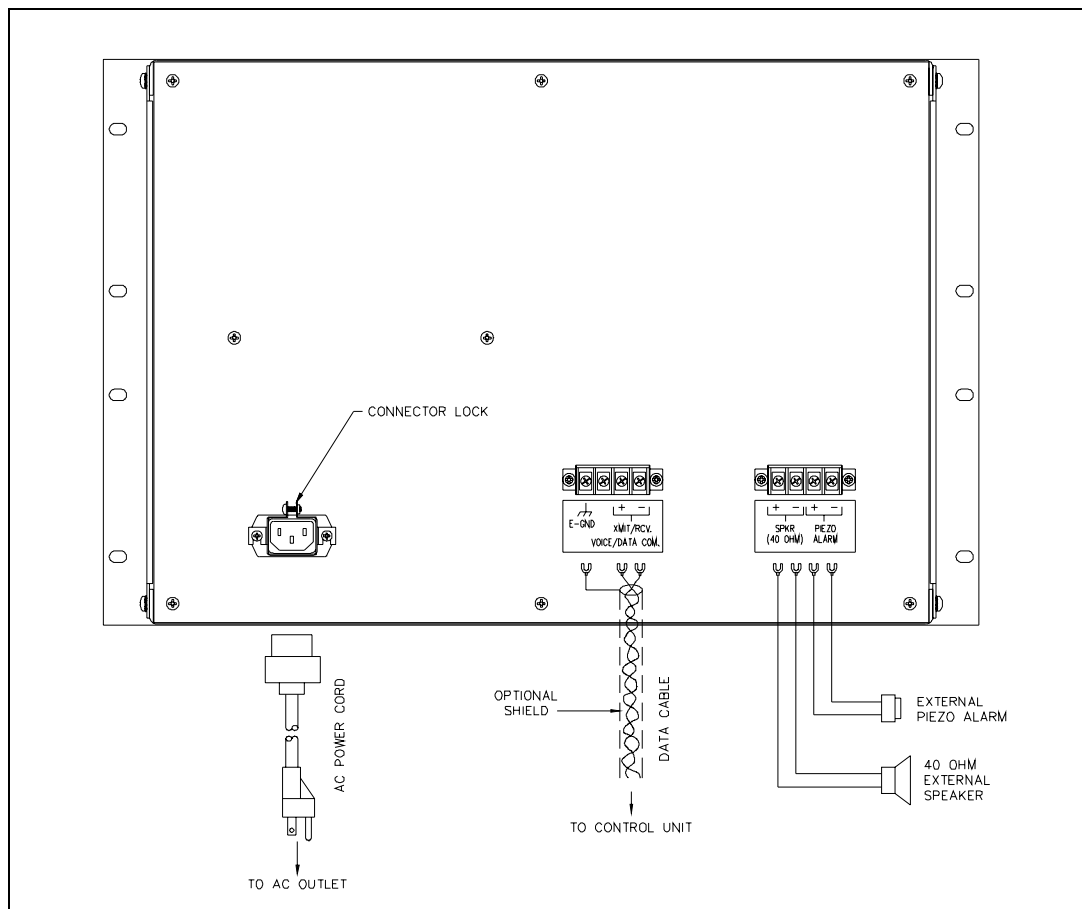




Figure 2. Model 12576-115 Access Panel Typical Connections (Rear View)

# Installation

 **WARNING**  **Please adhere to all warnings, safety, and operating instructions on the unit and in the installation manual.**

1. **Disconnect power before servicing.**
2. **Avoid servicing the unit during electrical storms.**
3. **Do not touch uninsulated wires.**

## Mounting

**NOTE:** Mounting hardware is not included with this assembly and must be purchased separately.

Remove the access panel from its protective packing. Position the access panel in the 19-inch EIA enclosure and secure the access panel with the appropriate screws. When installed correctly, the handset will be on the left side of the access panel.

## Data Connection

Connect a twisted-pair cable from the access panel terminal block points labeled **VOICE/DATA COM.** to the corresponding connector on the appropriate termination block of the control unit. This connection is not polarity-sensitive and may be wired in either orientation. A chassis ground (labeled **E-GND**) is also provided on this terminal block to connect to a cable shield if shielded cable is used.

### NOTES:

1. The data cable is not included with this assembly and must be purchased separately.
2. If shielded cable is used, only **one** end of the cable's shield should be grounded in order to avoid ground loops.

## External Speaker Connection

Connect the optional external 40-ohm speaker to the access panel at the terminal block points labeled **SPKR+/-** at the back of the unit. Contact GAI-Tronics Service Department for further information.

**NOTE:** The optional external speaker is not included with this assembly and must be purchased separately.

## External Piezo Alarm Connection

Connect the optional external piezo alarm to the access panel at the terminal block points labeled **PIEZO ALARM+/-** at the back of the unit. Contact GAI-Tronics Service Department for further information.

### NOTES:

1. The optional external piezo alarm is not included with this assembly and must be purchased separately.
2. The external piezo alarm is a polarity-sensitive device and care must be taken to ensure that proper polarity is observed when connecting it to the access panel.

## Power

Connect the three-conductor ac power cord provided with the access panel as follows:

1. Loosen the captive screw on the connector lock of the three-prong power connector at the rear of the access panel.
2. Plug one end of the power cord into the three-prong power connector at the rear of the access panel.
3. Tighten the captive screw in order to clamp the connector lock around the power cord. Plug the other end into a grounded ac electrical outlet.
4. The access panel does not contain an internal power switch. The access panel will power up immediately.

## Push-Button Overlay

To install or replace the push button overlay, proceed as follows:

1. Loosen the eight mounting screws located along the edge of the existing push button overlay using a 1/16-inch Allen wrench or equivalent. **Save these mounting screws.**
2. Lift the existing push button overlay away from the access panel.
3. Mount the new push button overlay onto the access panel, aligning the screw-holes on the overlay with those on the access panel.
4. Replace and tighten the eight mounting screws using a 1/16-inch Allen wrench or equivalent.

## Operation

Operation of the access panel is highly dependent on the attached system's software configuration. The software is factory-created and is subsequently downloaded to the system control unit via an external PC at system start-up.

This access panel offers the following standard features in addition to the configurable options including a handset for page and party functions, a vacuum fluorescent display (VFD) that shows the system status in a text format, and a piezo alarm that may be activated to alert the operator of a change in system status.

### Handset Communications

The handset is used for both page and party communications. Lifting the handset from the cradle creates an off-hook condition. In a normal configuration, lifting the handset causes it to be connected to a party line.

### Vacuum Fluorescent Display (VFD) and Control

The VFD displays status messages from the system control unit in a text format. Typically, the push buttons to the right of the VFD are configured for **NEXT** and **PREVIOUS** functions. Use the **NEXT** push button to view each additional new message. The **NEXT** push button can be configured to flash when a new message is available. Use the **PREVIOUS** to cycle backward in order to review old status messages.

### Piezo Alarm

The piezo alarm is an audible indicator. It is typically configured to sound when a new message is available on the VFD. If configured as described above, press the **NEXT** push button to display each new message. When the last available new message has been displayed, the piezo alarm turns off. The exact details of the operation of the piezo alarm are configurable.

# How to Diagnose Assembly Faults

## Servicing Guidelines

1. Notify plant personnel of a system shutdown prior to servicing the unit.
2. Disconnect power before connecting external wiring or installing or removing the access panel.

Symptom	Action
Access panel does not function. (No push buttons detected, no LED lamps activate, VFD is blank, and handset is not functioning.)	<ul style="list-style-type: none"> <li>• Verify ac power is applied to access panel. Verify that ac power cord is plugged-in. Also verify that ac outlet is active.</li> <li>• Verify that the twisted-pair data cable is properly connected between the access panel and the control unit.</li> <li>• Call for service of the access panel.</li> </ul>
No push buttons are detected.	<ul style="list-style-type: none"> <li>• Verify that the twisted-pair data cable is properly connected between the access panel and the control unit.</li> <li>• Call for service of the access panel.</li> </ul>
Some push buttons are not detected.	Call for service of the access panel.
No LED lamps activate.	<ul style="list-style-type: none"> <li>• Verify that the twisted-pair data cable is properly connected between the access panel and the control unit.</li> <li>• Call for service of the access panel.</li> </ul>
Some LED lamps do not activate.	<ul style="list-style-type: none"> <li>• Verify that an LED lamp is installed in the faulty illuminated push button(s).</li> <li>• Replace the faulty LED lamp(s).</li> <li>• Call for service of the access panel.</li> </ul>
Piezo alarm does not function.	Call for service of the access panel.
VFD does not function, even during a lamp test.	Call for service of the access panel.
Handset does not function properly.	Call for service of the access panel.
External speaker interface does not function.	<ul style="list-style-type: none"> <li>• Verify wiring between the speaker connector on the access panel and the speaker itself.</li> <li>• Determine if speaker is faulty by connecting a different speaker to the speaker interface and verifying operation.</li> <li>• Call for service of the access panel.</li> </ul>

# Specifications

## Electrical

Input voltage ..... 120 V ac/240 V ac  
 Auto-ranging  
 Input frequency ..... 50/60 Hz  
 Input current draw ..... 1 amp max. @ 120 V ac  
 Line length ..... 3.0 km with 24 AWG, attenuation = 8.0 dB/km  
 2.2 km with 26 AWG, attenuation = 11.5 dB/km

## Environmental

Operating temperature range ..... +32 °F to +120 °F (0° C to +49° C)  
 Relative humidity ..... Non-condensing 85% max.

## Mechanical

Unit dimensions ..... 12.25 H × 19.00 W × 9.13 D inches (311.2 × 482.6 × 232.2 mm)  
 Unit weight ..... 14 lbs.  
 Handset material ..... Black ABS  
 Handset microphone ..... Dynamic, noise-canceling  
 Handset receiver ..... Dynamic, hearing aid compatible per FCC part 68  
 Handset cord ..... Hytrel, 6-foot (1.8 m) when extended  
 Handset cradle ..... Fixed. Built-in off-hook detector  
 External controls ..... Press-to-page switch  
 17 configurable push buttons

## Replacement Parts

Model Number	Description
12509-009	LED Lamp Replacement Kit
54003-001	LED Lamp Holder Tool
54003-002	Lens Removal Tool
61002-007	Replacement Line Cord

## Reference Material

### Reference to Assembly/Model Drawings

Published by	Title	GAI-Tronics Ref. No.
GAI-Tronics	Model 12576-115 Access Panel Outline	72120

# 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.