



GAI-TRONICS® CORPORATION  
A HUBBELL COMPANY

## SP2 Fiber Zone 2/22 Weatherproof Handset/Speaker Amplifier Station Quick Installation Guide

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### Important Safety Instructions

This equipment is suitable for use in Zone 2/22 hazardous areas OR non-hazardous locations only. Combinations of equipment in your system are subject to investigation by the local authority having jurisdiction at the time of installation.

- Read, follow, and retain instructions—All safety and operating instructions should be read and followed before operating the unit. Retain instructions for future reference.
- Heed warnings—Adhere to all warnings on the unit and in the operating instructions.
- Attachments—Attachments not recommended by the product manufacturer should not be used, as they may cause hazards. Maximum system cable length is not to exceed two miles.
- Servicing—Do not attempt to service this unit by yourself. Opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- Attention—This device requires an active laser component provided by the end installer. Supply voltage 3.3 V dc, supply current 300 mA, power dissipation 1 W. Fiber optic module must comply with the provisions of Laser Class 1.

**⚠ WARNING ⚠** —POTENTIAL ELECTROSTATIC CHARGING HAZARD—Model 10401-201 Headset and 10416-103 Extension Cord should be used in Group IIB or Group IIA areas only.

Capacitance values of 140 pF to 580 pF were measured on the external metallic unearthed components of this equipment. As such, special care must be taken in installation location and environment to address this hazard. See EN TR50404, “Electrostatics—Code of practice for avoidance of hazards due to static electricity” for additional information in regards to proper installation and potential hazards.

**⚠ WARNING ⚠** —EXPLOSION HAZARD—Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous. Avertissement—Risque d’explosion—Avant de débrancher l’équipement, couper le courant ou assurer que le secteur est su pour n’être pas hasardeux.

**⚠ WARNING ⚠** —In 24 V dc systems: Under NO condition should this equipment be operated from a battery charger without the batteries connected.

In 24 V dc systems, most chargers have an unloaded output of 35 to 45 volts that can quickly damage the equipment designed for nominal 24 volts. The maximum battery voltage should never exceed the maximum specified input voltage.

### General Information

This guide covers the installation of the SP2 Fiber Zone 2/22 Weatherproof Handset/Speaker Amplifier Station. Figure 1 shows the standard Zone 2/22 station with available options. Refer to Publication 42004-797L2 for detailed explanations of the available configuration options, adjustments, system design, and warranty information. GAI-Tronics’ product documentation is located on the “Document Center” page of the GAI-Tronics website. The link to the document center is <https://www.gai-tronics.com/docs/default.htm>.

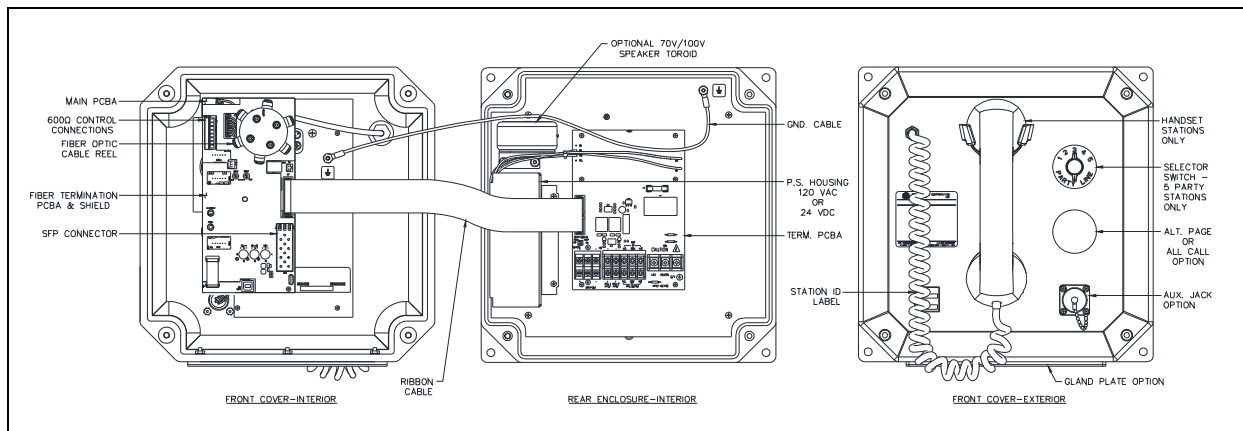


Figure 1. SP2 Fiber Zone 2/22 Weatherproof Station (AC Version) with available options

## Installation

### Mounting the Enclosure

Mount the enclosure using the four 0.312-inch (8 mm) diameter holes located on the mounting flanges with ¼-inch (M6) hardware. The suggested mounting height for all station enclosures is 48 inches (1219 mm) to the center of the bottom mounting holes of the enclosure. See Figure 2 for mounting details. The SP2 Station is not supplied with conduit or cable openings.

Remove the front panel and drill or punch wire entry openings in the rear enclosure, or gland plate when present. The recommended entry is via the enclosure bottom to prevent moisture from dripping onto the terminals. Top entry is not recommended. Refer to Figure 2 for the suggested cable entry locations. There must be a minimum of ½ inch (13 mm) of material between entry holes.

### Field Wiring

The SP2 Station provides terminal blocks on the termination PCBA located in the rear enclosure for field wiring the power, speaker, and RTU connections. Connect spade lugs to the wires before attaching them to the termination board terminal blocks to obtain the most secure connection. Torque the terminal block screws to 8–10 lb-in (0.90–1.13 Nm) when attaching the spade lugs. The main PCBA, mounted to the back of the front panel, contains the 600-ohm audio connection. Use ferrule terminals for this connection. The fiber termination board is mounted on top of the main PCBA, which provides fiber optic termination to the Ethernet SFP transceiver.

Ensure any unused openings are sealed with proper fittings per local standards. All metric cable entry devices and blanking elements shall be certified for Zone 2/22 applications with an IP66 rating, suitable for conditions of use and correctly installed. Use field wiring suitable for the ambient temperature.

**NOTE:** Wire sizes that can be used are 5.26 mm<sup>2</sup> or less, the protective earth conductor is required to be the same size.

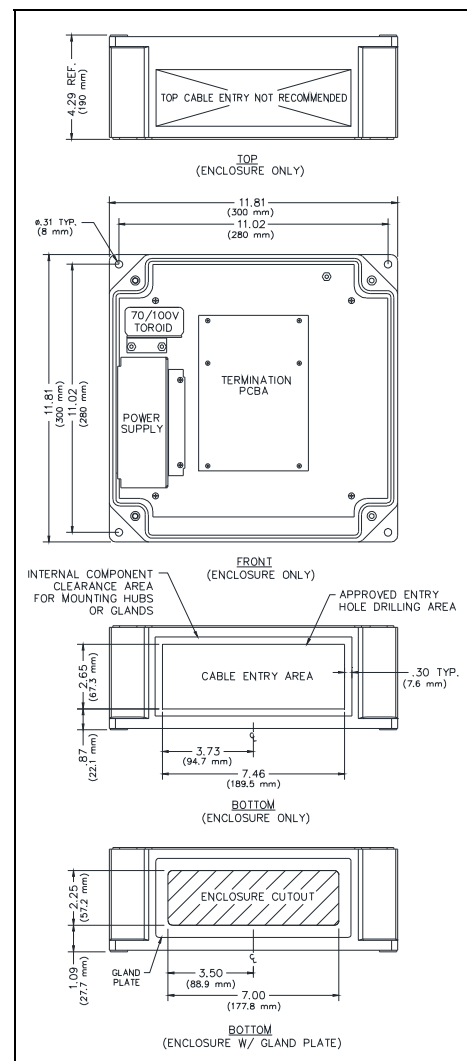


Figure 2. Suggested cable entry locations

### Available Settings and Adjustments

Most optional equipment is preconfigured to a default standard configuration at the factory. The following is a partial list of the available adjustments and settings that may be needed:

- Speaker volume
- Receiver volume
- Transmit level
- Station ID and zone selector
- Series/parallel speaker connection

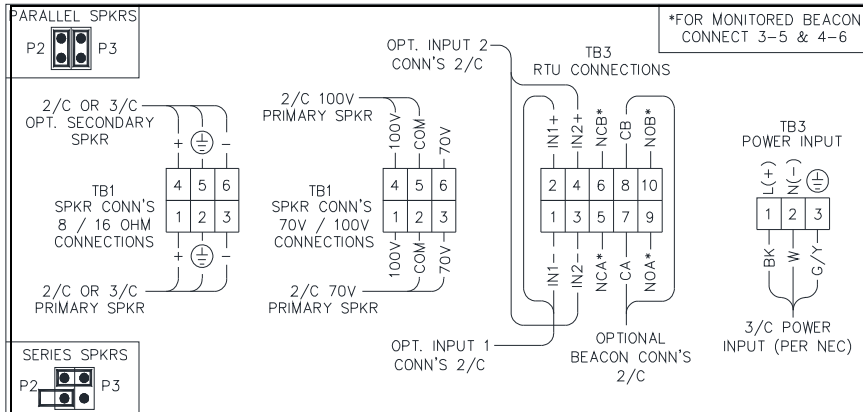


Figure 3. SP2 Termination Board Connections

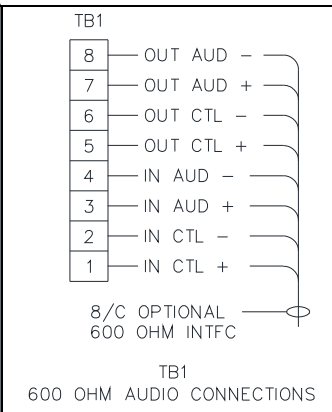


Figure 4. SP2 Mainboard Connections

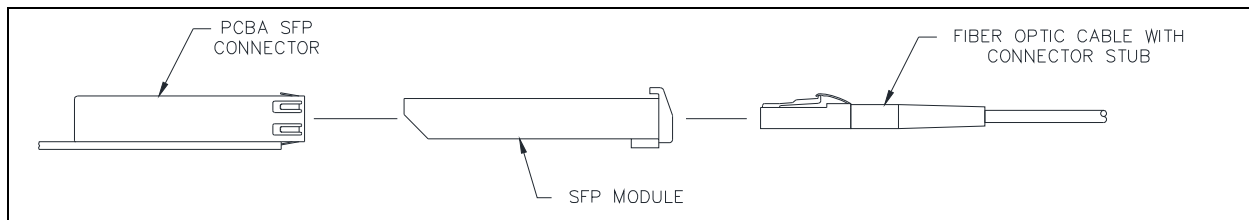


Figure 5. SP2 Fiber Optic Ethernet Connection

### Attaching the Front Cover

Connect any cable harnesses that were disconnected during mounting. Place the front cover inside the rear enclosure, being careful not to pinch any cables. Attach the front cover with the four screws and washers provided. Torque the screws to 50 lb·in (5.65 N·m).

### Approvals

CE Mark

Certificate No.

DEMKO 10 ATEX 1010664x.....  $\text{Ex}$  II 3 G Ex ic nA IIC T4 Gc and  $\text{Ex}$  II 3 D Ex ic tb IIIC T135°C Dc  
 IECEX UL 10.0038x..... Ex ic nA IIC T4 Gc and Ex ic tb IIIC T135°C Dc

# 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.