



GAI-TRONICS® CORPORATION
A HUBBELL COMPANY

Model 7245-005 Indoor Remote Subset Amplifier Enclosure

Confidentiality Notice

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General Information

Product Overview

The Model 7245-005 Indoor Remote Subset Amplifier Enclosure is intended for use in GAI-Tronics Page/Party® and SmartSeries ADVANCE systems. The enclosure enables the amplifier, speaker, and field cabling of subset stations to be remotely mounted. This indoor amplifier enclosure is constructed of fabricated steel and is equipped with a 24-position remote subset connector.

System Requirements and Limitations

For proper operation, the Model 7245-005 Amplifier Enclosure must be installed with a Model 723-005 or 723-905 Remote Amplifier and with a subset from the following list:

Single Party Subsets:	Multi-Party Subsets:
Model 726-101 Desktop Subset	Model 7265-101 Desktop Subset (5-party)
Model 711-102 Desk-Edge Subset	Model 7115-102 Desk-Edge Subset (5-party)
Model 716-102 Flush-Mount Subset	Model 7165-102 Flush-Mount Subset (5-party)

The amplifier enclosure must be mounted within 8 feet of the subset due to the subset cable limitations. In addition, the amplifier enclosure must be mounted at an indoor location - the amplifier enclosure is not designed for outdoor use.

In order to provide SmartSeries features, the amplifier enclosure must be connected to a Model 723-905 Remote SmartSeries Subset Amplifier. The SmartVolume™ feature is not supported for the Model 7265-101 Subset. Also, the SmartVolume™ feature is not supported for speakers equipped with L-pads or for multiple speaker applications.

The Model 723-005 or -905 Remote Amplifier is designed only for use with the magnetic hookswitch subsets listed in the System Requirements section of this manual. Subsets containing an RF hookswitch are not supported.

In order to provide Page/Party® features, the amplifier enclosure must be connected to a Model 723-005 Remote Subset Amplifier.

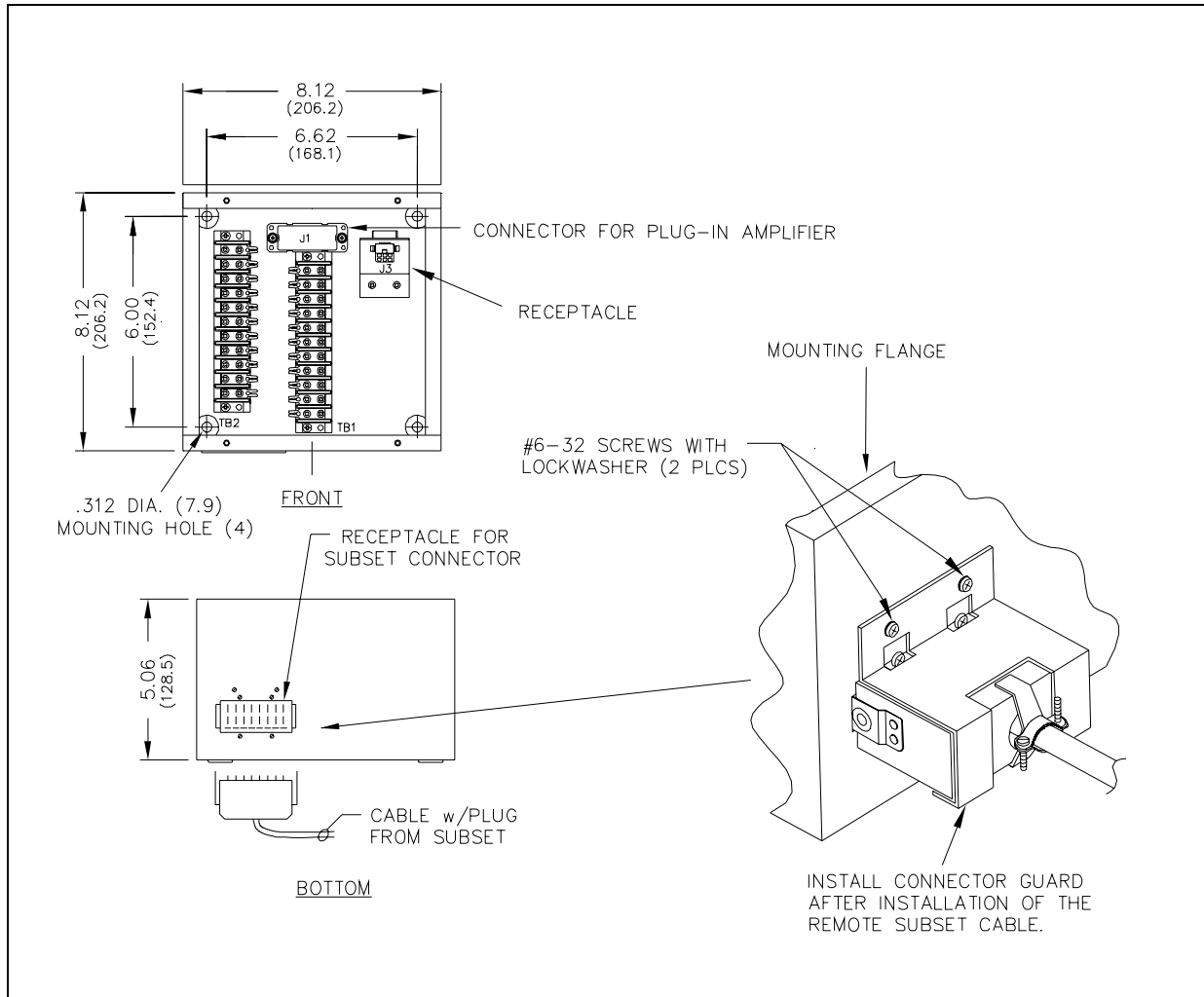


Figure 1. Model 7245-005 Outline Detail

Features and Functions

The Model 7245-005 Indoor Remote Subset Amplifier Enclosure provides terminations for the following:

- Connectorized subset cabling
- Plug-in remote amplifier
- External speaker(s)
- System cabling
- Auxiliary input signals (SmartSeries stations only)

Description of Major Components

For the following discussion, refer to Figure 2, which provides a block diagram of the enclosure. The Model 7245-005 Amplifier Enclosure can be divided into 3 primary sections. Each of these sections is described in greater detail below.

Subset Connector

The 24-position subset connector J2 links the remote subset with the amplifier and enclosure. This interface enables the microphone, receiver, hookswitch, page switch, party line, speaker, and auxiliary input signals of the subset to be connected to the amplifier and system cabling.

Amplifier Connector

The 16-position amplifier connector J1 and 6-position amplifier connector J3 links the amplifier with the subset and system cabling. This interface enables the ac power, microphone, receiver, hookswitch, page switch, party line, page line, speaker, mute, and auxiliary input signals of the amplifier to be connected to the subset and system cabling.

Terminal Blocks

Terminal blocks TB1 and TB2 provide connection points for the system cable, an 8-ohm or 16-ohm speaker, and the auxiliary inputs signals. In addition, the terminal blocks provide connectivity to the subset receptacle and remote subset amplifier connector.

Block Diagram

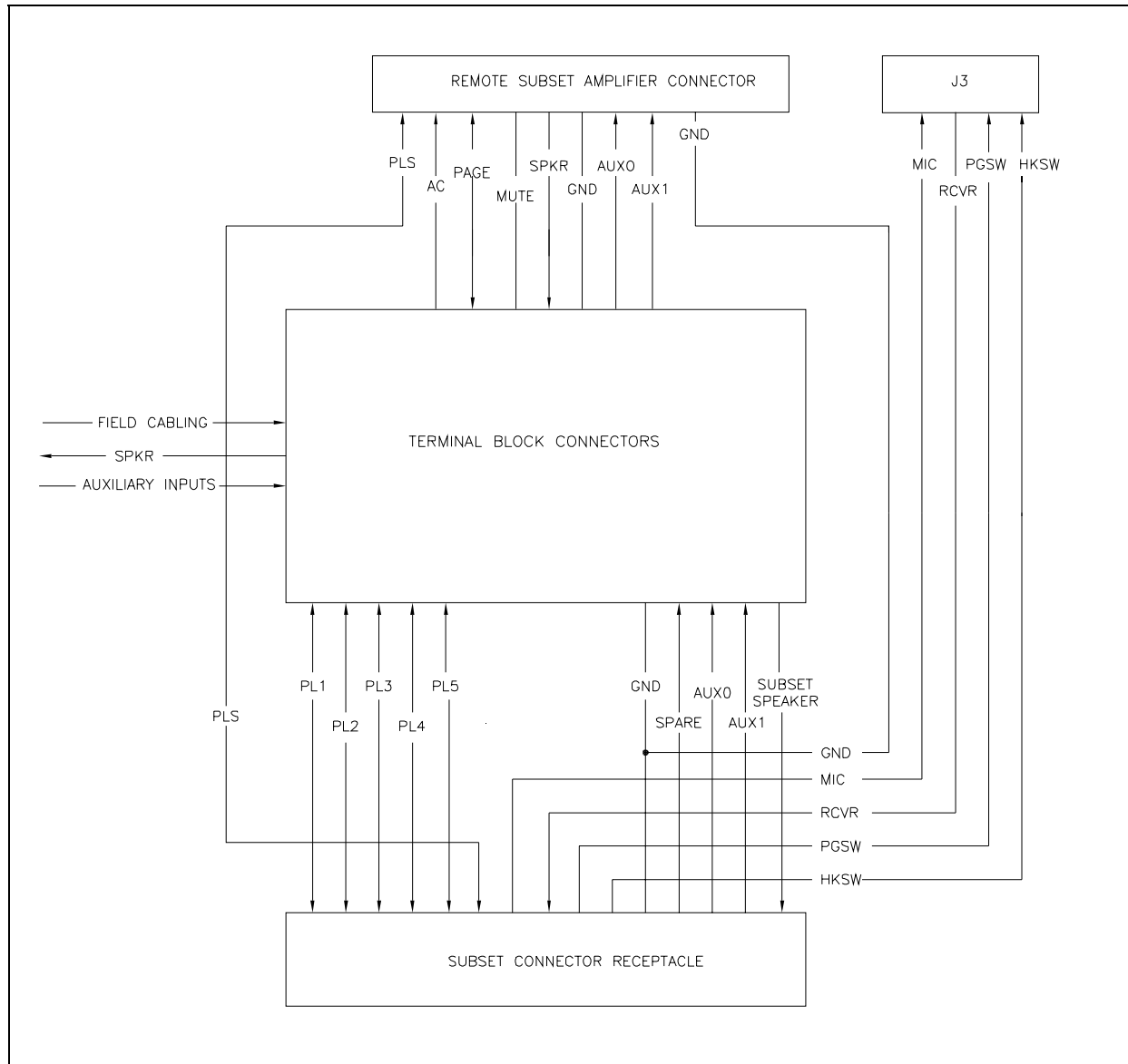


Figure 2. Block Diagram

Installation

General Information

For additional system installation, operation, and maintenance information consult the Installation of GTC 700 Series Page/Party® Systems Manual (Publication 42004-139) or the SmartSeries System General Installation Guide (Pub. 42004-280).

System layout and power cable length are very important when installing SmartSeries and Page/Party® equipment. Although it varies for different systems, the general guideline is that the most distant station should not exceed 1 mile [5280 feet (1600 m)] from the line balance assembly in Page/Party® systems, or the Page/Party® Interface in SmartSeries systems.

SmartSeries stations require 120 V ac power. The typical ac input current for Page/Party[®] and SmartSeries stations is less than 0.5 A_{RMS} at full power output. GAI-Tronics system cable contains a 14 AWG wire triplet for distributing ac power to the stations. This wire can carry a maximum of 15 amps. Therefore, up to 30 SmartSeries stations can be connected to a single power circuit. Additional stations must be powered by additional power circuits. Refer to the table below for power calculations.

Voltage drop must also be taken into consideration for long cable runs. The minimum operating voltage for a GAI-Tronics station is 90 V ac and the resistance of 14 AWG cable is 26.8 ohms per loop mile. Contact your nearest GAI-Tronics representative if you require assistance with system layout.

Page/Party [®] Zone Power Calculation Table	
The maximum power in any leg of a zone is limited to 120 V ac at 15 amps due to the wire size (14 AWG) in the system cable. Therefore, the following calculations must be made when determining the maximum number and type of units in a leg of the zone.	
Number of handset stations, speaker amplifiers, or SmartSeries Remote Terminal Units:	_____ × 0.50 amp = _____
Total current (<15 amps):	_____

 **WARNING** 

- **Do not install this equipment in hazardous areas. It may cause a safety hazard and consequent injury or property damage.**
- **Do not disconnect equipment while energized.**
- **Ensure proper grounding to protective earthing.**

Installation Guidelines:

- Refer to Figure 3 for a typical installation of desk-edge or desktop subsets stations in the knee-well of the desk. Refer to Figure 4 for a typical installation of flush-mount subset stations.
- Do not install conduit from the top unless absolutely necessary. Side or bottom entry helps to prevent moisture from dripping onto the terminals or printed circuit boards.
- When drilling or punching conduit openings, use caution to avoid damaging the internal electrical components and wiring of the enclosure.
- Place the enclosure in a location that provides easy installation and removal of the connectorized subset cabling, the plug-in amplifier, the speaker cabling, and the system cabling.
- Subsets designed for use with this enclosure contain 8-foot (244 cm) connectorized cables. This enclosure should be mounted within reach of these cables.
- The recommended torque setting for securing the amplifier to the enclosure is 10 to 12 in-lbs. or 1.13 to 1.36 n-m.

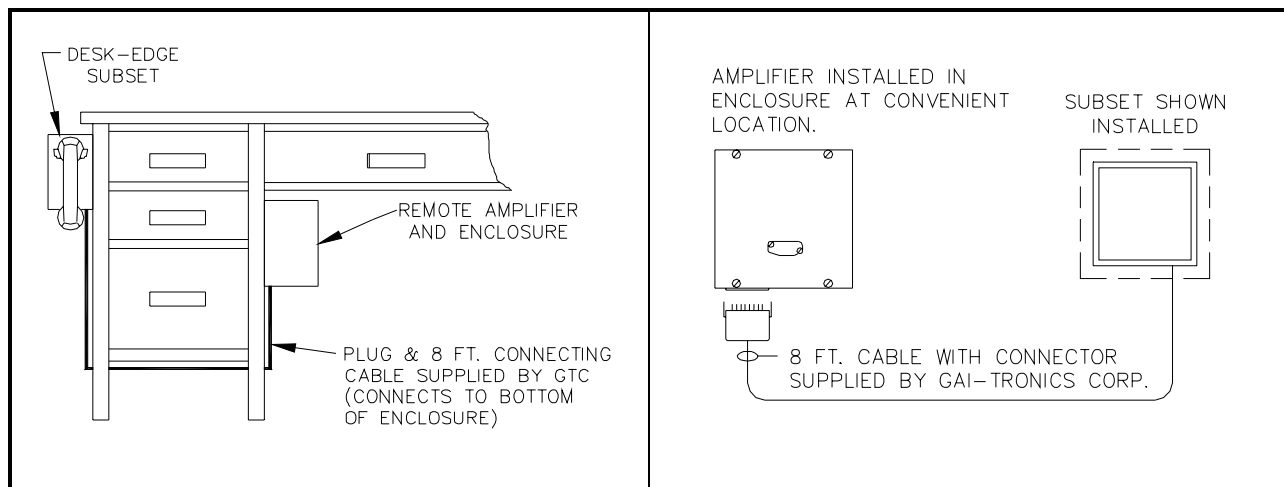


Figure 3. Typical Desk-edge Installation

Figure 4. Typical Flush-mount Installation

Mounting and Wiring Instructions

1. The indoor enclosure is not supplied with openings for conduit or cable because their locations vary with each installation. Drill or punch these openings using the supplied template before mounting the enclosure. The best location for the conduit holes is along the top or bottom of the enclosure and near the rear surface. Avoid the top center and bottom left because of possible interference with the plug-in amplifier receptacle and the subset receptacle. Sealed threaded hubs, such as Myers "Scru-tite" are recommended conduit terminations.
2. Four 0.312-inch (7.92 mm) diameter mounting holes located in each corner of the amplifier enclosure have been provided for installing the enclosure. See Figure 1.
3. Place the enclosure on the mounting surface and secure it with four screws.
4. Install the conduit and hubs.
5. Feed the system wiring into the enclosure. Strip the insulation on each conductor of the system cable. Install a ring lug on the ground conductor (GRN/YW wire) and spade lugs on all other conductors. Terminate each conductor using the wire colors indicated in the system wiring diagrams in Figure 3 and Figure 4.
NOTE: Improper terminations may diminish the station performance.
6. Feed the speaker wiring into the enclosure. Strip the insulation on each conductor of the speaker cable. Install spade lugs on each conductor. Connect the speaker wires of an 8-ohm speaker between the TB1-4 (speaker common) and TB1-5 (8-ohm) or connect the speaker wires of a 16-ohm speaker between the TB1-4 (speaker common) and TB1-6 (16-ohm).
7. Set the speaker muting control to the desired location. Refer to the adjustment section for details.
8. Plug the subset connector into the J2 receptacle located at the bottom of the enclosure. Secure the connector with the connector guard and screws provided. See Figure 1.
9. Insert the plug-in amplifier's J3 into the mating receptacle of the enclosure. Insert the plug-in amplifier into the J1 receptacle of the enclosure and secure the amplifier with four screws.

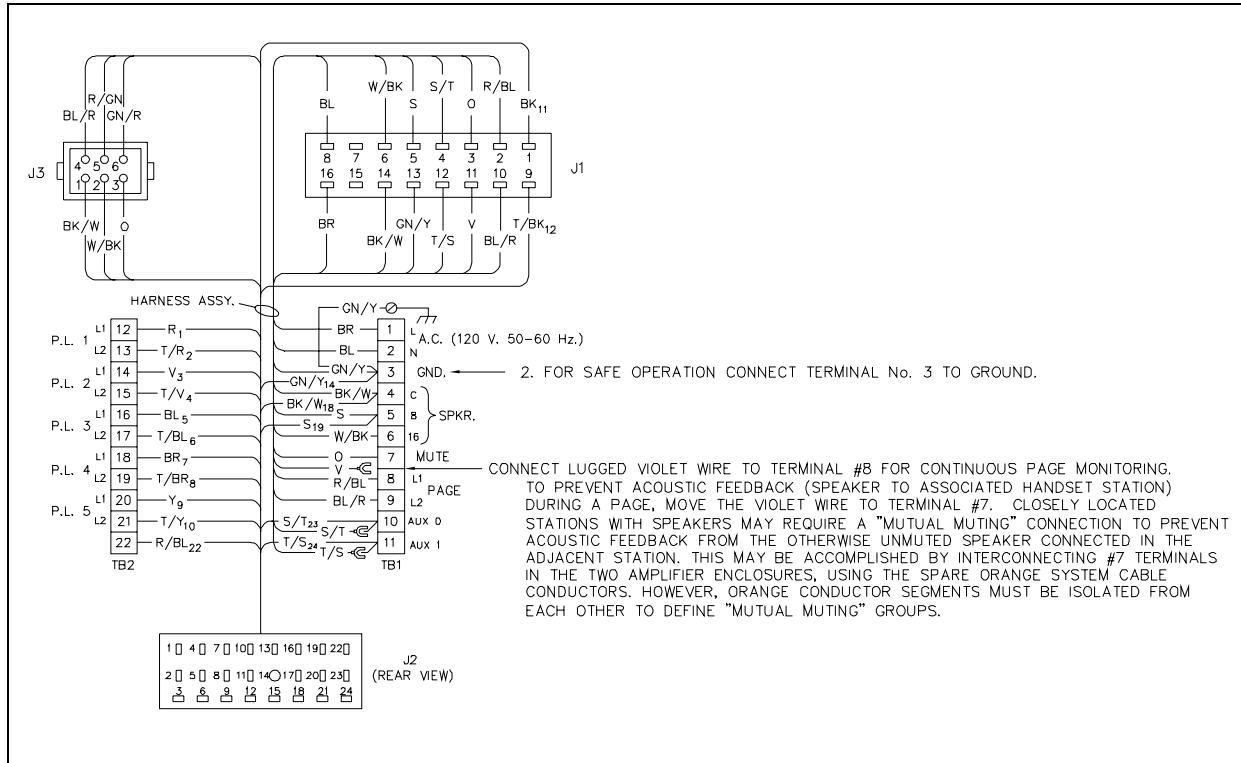


Figure 5. Enclosure Wiring Details

Maintenance

Speaker Muting

To enable muting of the local speaker when paging, connect the lugged violet wire to TB1-7. See Figure 5. In this position, the paging speaker connected to this station is silenced (muted) when the station handset pressbar is pressed to prevent acoustic feedback to the handset microphone. However, while the handset is in use for party-line conversations, the paging speaker is “live” to receive paging calls from other stations.

To disable muting of the local speaker when paging, connect the lugged violet wire to TB1-8. In this position, the paging speaker connected to that station is not muted when the station handset pressbar is pressed or while the handset is in use for party-line conversations.

NOTE: If the muting feature is disabled, the station’s associated speaker(s) must be carefully positioned away from the subset to avoid acoustical feedback.

Preventative Maintenance

Regular inspection and a good preventive maintenance program will increase the reliability of your GAI-Tronics station.

The following procedure can be used to keep your amplifier enclosure operating effectively:

1. Disconnect power to the enclosure.
2. Remove the amplifier from the enclosure.
3. Inspect each conductor for fraying, cracking, corrosion, etc. If it becomes necessary, re-terminate the conductors by stripping the wires back to clean copper and replacing the lugs.
4. Using a Model 10440-002 extension cable, plug the amplifier into the connector in the enclosure. Check the amplifier control settings. If necessary, make adjustments to maximize performance. Instructions on amplifier adjustments can be found in the manual for the amplifier.
5. Reinstall the amplifier in the enclosure. Ensure that all gaskets and hardware are in place. Failure to install the gaskets, which also act as spacers, can damage the connectors on the amplifier and enclosure causing system faults.

Troubleshooting

The following table lists some of the most common difficulties encountered in systems. Included are some troubleshooting hints to aid in remedying these problems.

Problem	Solution
Feedback occurs only during page.	Use the muting feature in the amplifier enclosure at the terminal blocks. Connect the violet wire at terminal 8 to terminal 7, or reposition the speaker. In some cases, the speaker of a nearby station may have to be repositioned.
Crosstalk occurs.	One or more system cable pairs may be improperly terminated or a fault exists somewhere else in the system. Visually inspect the system cable connections for accidental crossing of the cable pairs or grounds.
Remote subset is inoperable.	<ul style="list-style-type: none"> • Verify that the connector of the remote subset is securely connected to the subset receptacle of the enclosure. • Remove the amplifier from the enclosure. Re-install the amplifier ensuring the enclosure connector and the amplifier connector are aligned properly.
Auxiliary inputs do not operate.	<ul style="list-style-type: none"> • Remove the amplifier and verify the lugged auxiliary input wires are properly terminated on terminal points TB1-10 and TB1-11 respectively. • Verify the auxiliary inputs have been enabled in the system software.

Specifications

Environmental

Temperature Range -22° F to +158° F (-30° C to +70° C)
Relative Humidity Non-condensing 85% max.
Indoor Environmental Rating.....Meets the requirements of IP20; NEMA 2 (Type 20)

Mechanical

Construction/Finish 16-gauge cold-rolled steel/textured gray polyurethane
MountingWall or column, four 0.312-inch (7.92 mm) diameter mounting holes
ConnectionsInternal screw-type barrier terminal blocks
Dimensions 8.1 H × 8.1 W × 5.1 D inches (206 × 206 × 129 mm)
Shipping Weight..... 5.4 lbs. (2.5 kg)

Approval

CE MarkComplies with Low Voltage Directive 73/23/EEC, and the
EMC Directive 89/336/EEC amended by the Directive 93/68/EEC.

Replacement Parts

Contact GAI-Tronics Corp. for replacement part information.

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.