



GAI-TRONICS® CORPORATION  
A HUBBELL COMPANY

# Auto-dial Telephones

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## Confidentiality Notice

This manual is provided solely as an operational, installation, 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

This manual applies to the following auto-dial telephones:

- Model 227-001 Public Auto-dial Telephone
- Model 247-001 Indoor Rugged Auto-dial Telephone
- Model 257-001 Weatherproof Rugged Auto-dial Telephone
- Model 277-001 Public Auto-dial Telephone Flush-panel

GAI-Tronics auto-dial telephones are fully line-powered telephones. When the handset is removed from the cradle, a preprogrammed number is automatically dialed. The auto-dial telephones are programmed to automatically dial up to 31 digits when the handset is taken off-hook.

## Installation Guidelines

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.
- **Install a UL Listed lightning arrestor** 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 to maximize the protection. The lightning arrestor must not be installed within the enclosure supplied with the phone.
- 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.

## User Instructions (USA)

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On this equipment is a label that contains, among other information, a product identifier in the format US:AAAEQ##TXXXX. If requested, this number must be provided to the telephone company.

A plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant. See installation instructions for details.

The REN is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of the RENs should not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact the local telephone company. For products approved after July 23, 2001, the REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is an REN of 0.3). For earlier products, the REN is separately shown on the label.

If this equipment [GAI-Tronics telephone] causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the operation of the equipment. If this happens the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with this equipment [GAI-Tronics telephone], for repair or warranty information, please contact GAI-Tronics Corporation at 800-492-1212 or [www.gai-tronics.com](http://www.gai-tronics.com). If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for information.

This equipment uses a telephone handset and it is hearing aid compatible.

## User Instructions (Canada) CP-01, Issue 8, Part I: Section 14.1

**NOTICE:** The Industry Canada label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements as prescribed in the appropriate Terminal Equipment Technical Requirements document (s). The Department does not guarantee the equipment will operate to the user's satisfaction. Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations. Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



**CAUTION**

**Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.**

## CP-01, Issue 8, Part I: Section 14.2

**NOTICE:** The **Ringer Equivalence Number (REN)** assigned to each terminal device provides an indication of the maximum number of terminals allowed to be connected to a telephone interface. The termination on an interface may consist of any combination of devices subject only to the requirement that the sum of the Ringer Equivalence Numbers of all the devices does not exceed 5.

# Auto-dial Telephone PCBA

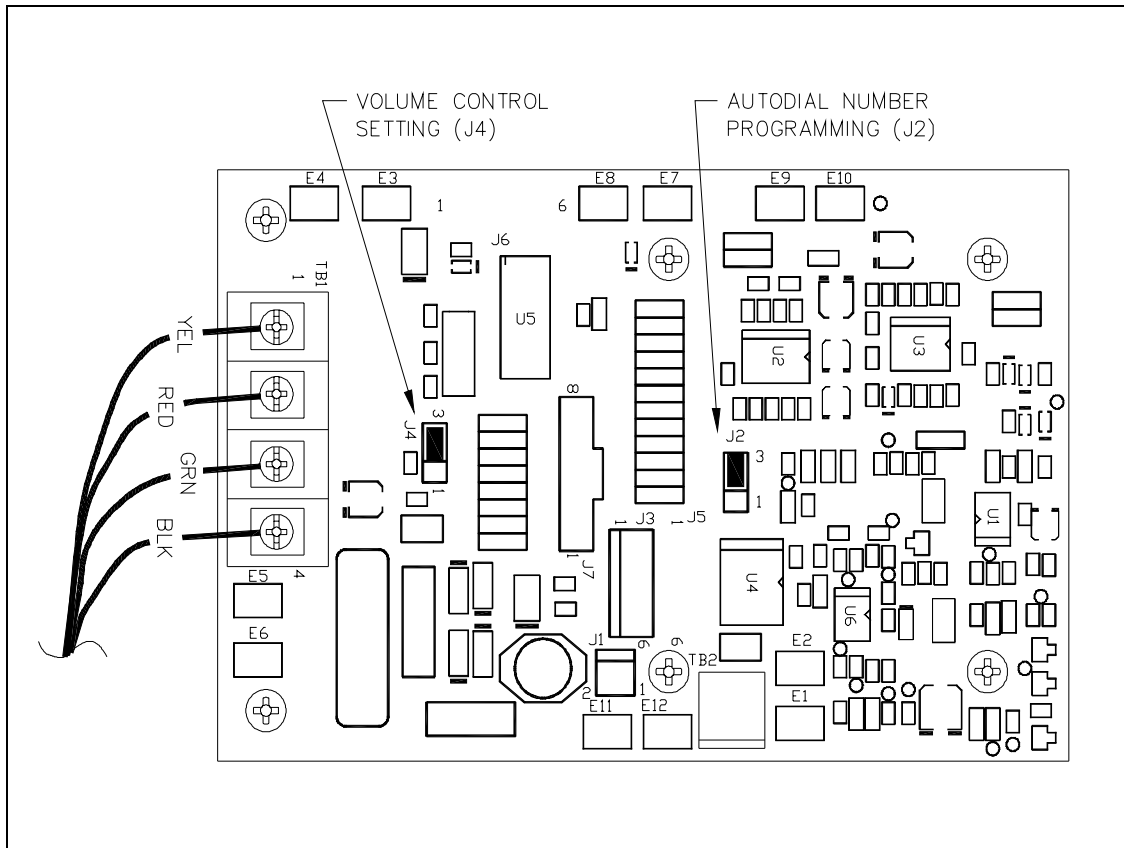


Figure 1. Auto-Dial Telephone PCBA Jumper Locations

## Model 227-001 Public Auto-dial Telephone Installation

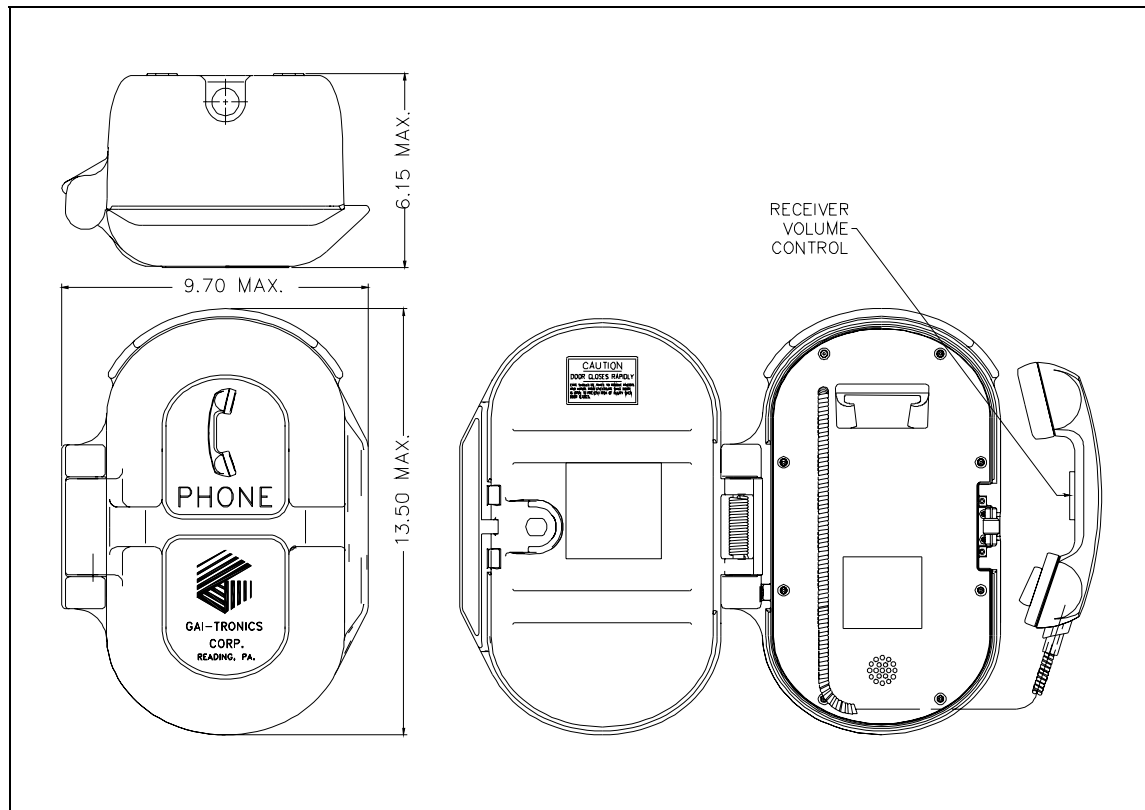


Figure 2. Outline Drawing for Model 227-001

1. Use a GAI-Tronics Model 233 Screwdriver to loosen the 8 tamper-resistant front panel screws.
2. Remove the front panel assembly to expose the 8 mounting holes. These holes accept 3/8-inch diameter bolts. The length of these bolts depends on the mounting surface. Four hole plugs are supplied for the unused holes.

For wider and retrofit hole patterns from the Northern Telecom Model NE-2525Q Series, use the 7.875-inch × 4.00-inch hole pattern.

When using the Model 232 Pole Mounting Kit, use the 5.25-inch  $\times$  4.00-inch four-hole pattern. This kit includes four 3/8-inch – 16  $\times$  1-inch shoulder bolts with Teflon™ seal washers.

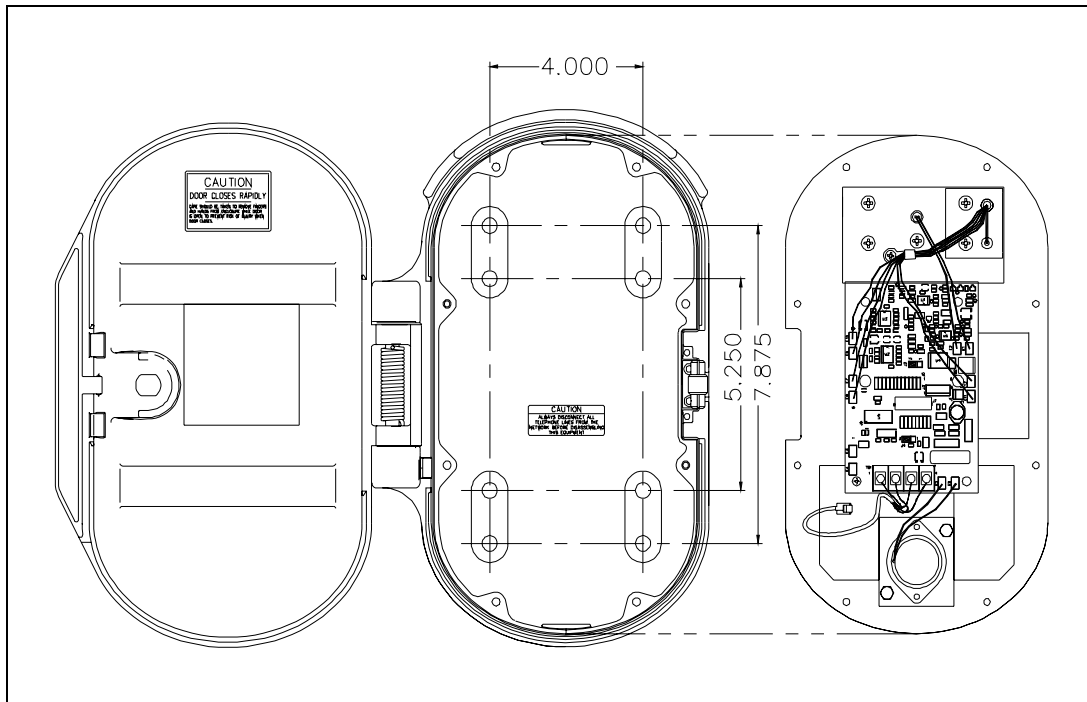


Figure 3. Mounting Diagram for Model 227-001

3. A 1/2-NPT conduit entrance is provided at both the top and the bottom of the unit. An Allen drive plug is supplied for the unused entry.
4. Replace the front panel assembly and tighten the 8 front panel screws.
5. Connect the free end of the modular telephone cord to the incoming subscriber line using the appropriate mating connector.
6. Check the telephone operation by calling to and from another telephone.

## Model 247-001 Rugged Telephone Installation

1. Remove the four front panel screws. Remove the front panel assembly until the modular telephone cord can be disconnected from the printed circuit terminal strip. Set the front panel aside.
2. Mount the enclosure on the wall using four 1/4-20 machine screws with nuts and washers or #14 wood screws of appropriate length, depending on the mounting surface. Refer to Figure 4 for details.

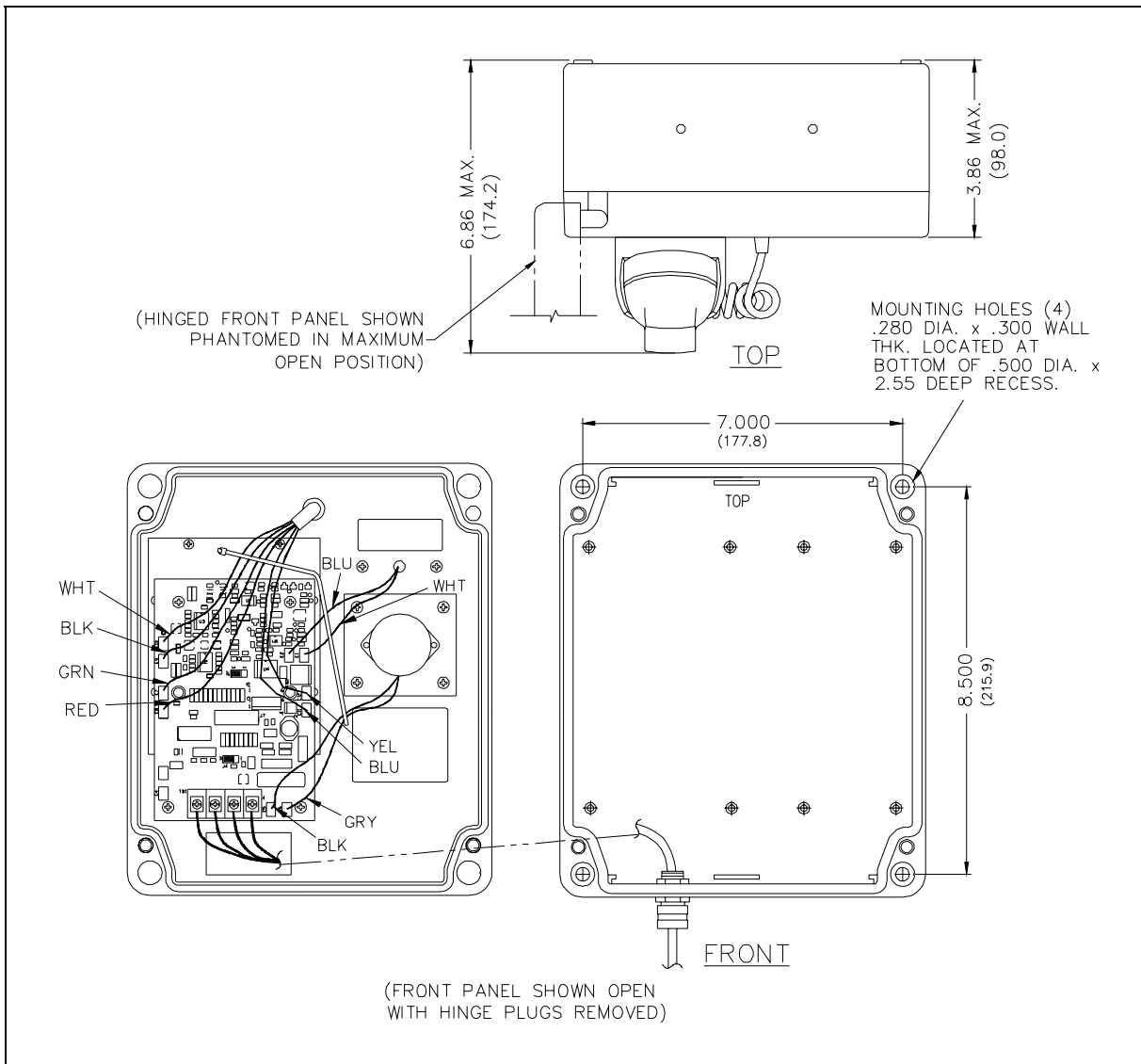


Figure 4. Model 247-001 Installation Drawing

3. Reconnect the modular telephone cord to the printed circuit board terminal strip. Refer to Figure 1 on page 3.
4. Replace the front panel assembly, and replace the four front panel screws.

5. Connect the free end of the modular telephone cord to the incoming subscriber line using a USOC RJ11C jack.
6. Check for proper telephone operation by calling to and from another telephone.

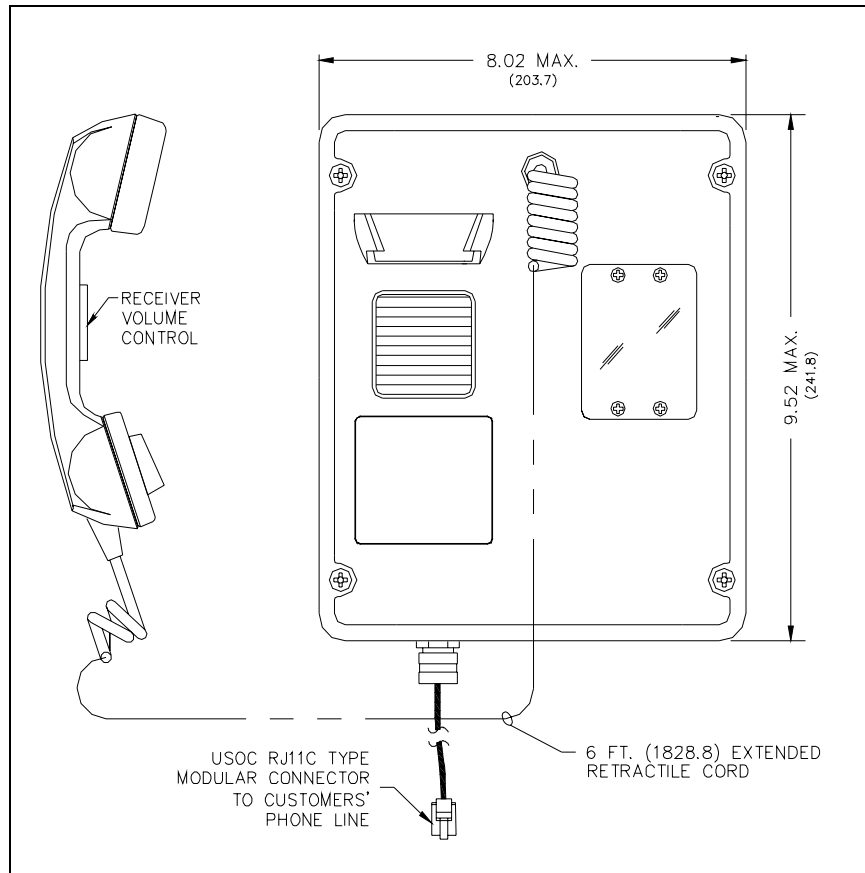


Figure 5. Model 247-001 Outline Drawing

## Model 257-001 Weatherproof Rugged Telephone Installation

**NOTE:** When installing the Model 257-001 Weatherproof Rugged Telephone, select a modular jack (RJ11C) designed for outdoor use. Additionally, a lightning arrestor assembly should be installed close to the outdoor modular jack.

1. Open the front door of the enclosure. Locate the 4 outermost screws.
2. Remove the four screws, and carefully pull the enclosure apart until encountering a slight resistance on the left side.
3. Open the front half of the enclosure to the left until the length of modular telephone cord inside the enclosure can be disconnected from the printed circuit board terminal strip. See Figure 6. Pull on the left side of the enclosure until the hinge plugs pull loose to separate the front half from the rear half. Set the front half of the enclosure aside.

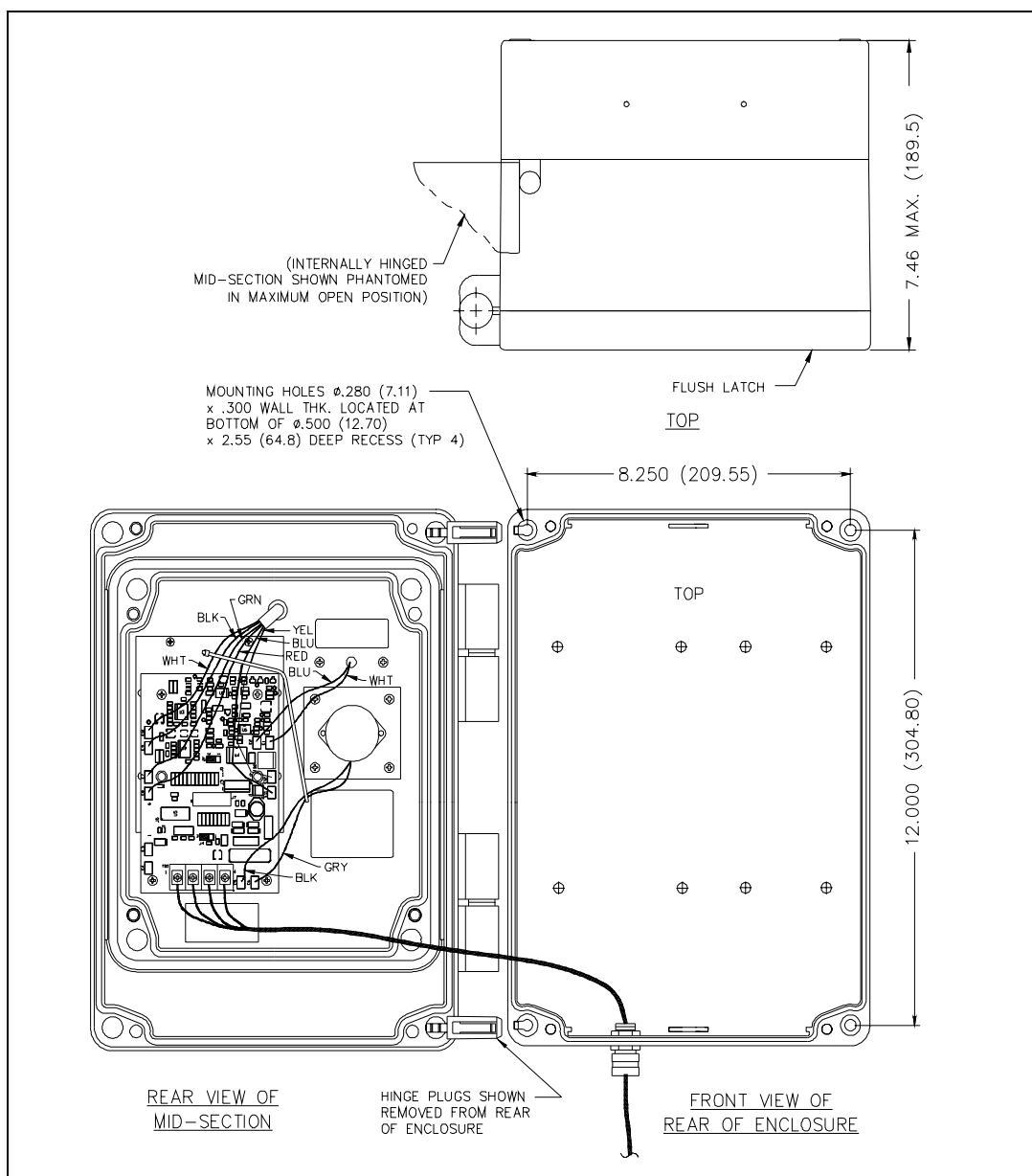


Figure 6. Model 257-001 Installation Drawing

4. Mount the enclosure on the wall using four 1/4-20 machine screws with nuts and washers or #14 wood screws of appropriate length, depending on the mounting surface.
5. Reconnect the modular telephone cord to the printed circuit board terminal strip. See Figure 1 for details.
6. Close the front half of the enclosure, and secure it by replacing the four outermost screws.
7. Connect the free end of the modular telephone cord to the incoming subscriber line using a USOC RJ11C jack. Check the telephone by calling to and from another telephone.

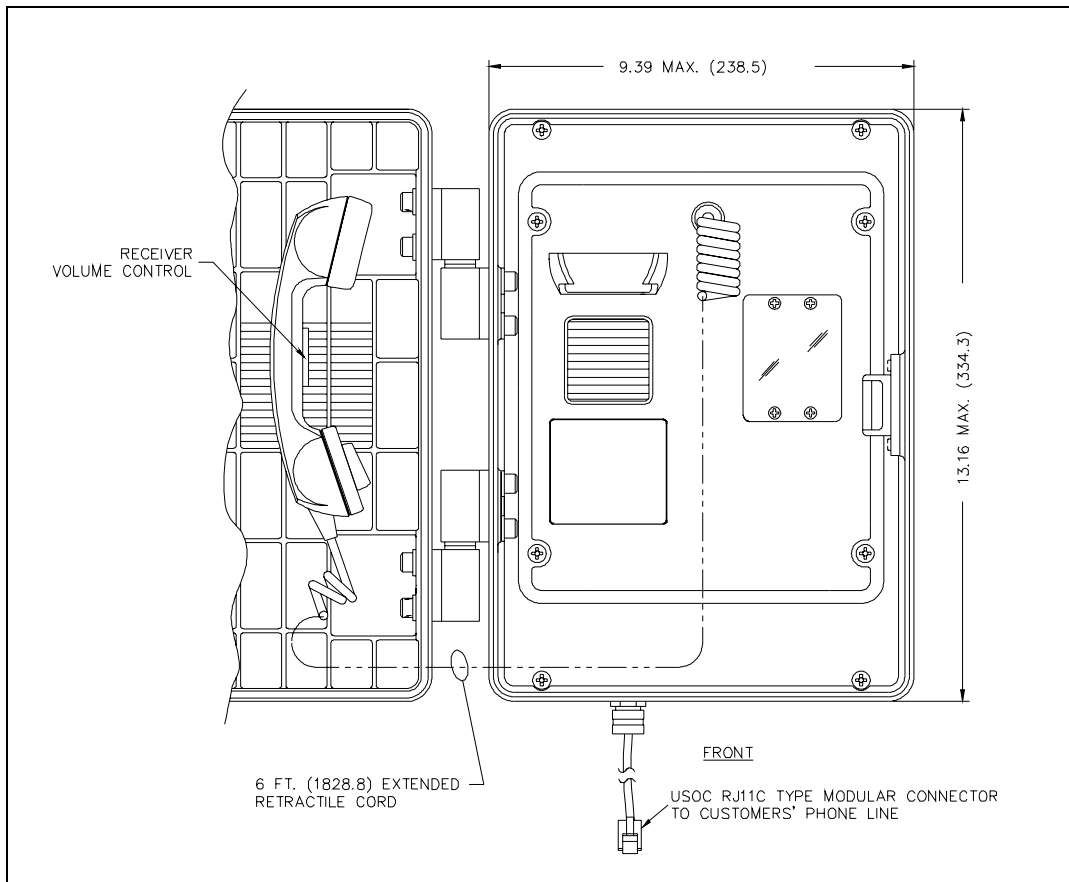


Figure 7. Model 257-001 Outline Drawing



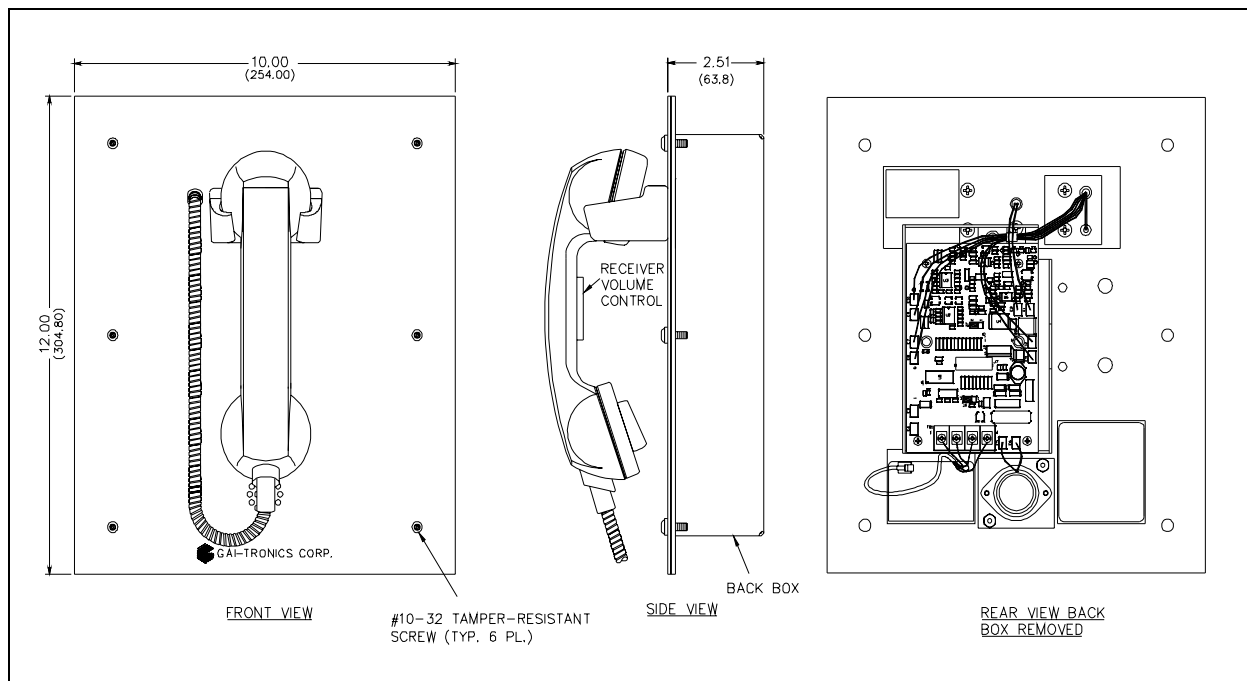


Figure 9. Model 277-001 Outline Drawing

## Model 277-001 Surface-Mount Applications

1. The back box is not required for use with a Model 236 Surface Mount Enclosure and should be removed.
2. Drill or punch conduit entries.

**⚠ WARNING ⚠ To prevent accidentally damaging equipment, drill all holes before mounting the telephone.**

3. *Recommendation*—Use silicone sealant or equivalent around the telephone gasket and the mounting surface for an effective perimeter seal. This is particularly important if the mounting surface is uneven.
4. Install the telephone line suppressor (customer-supplied) on the telephone line, if applicable.
5. Connect the USOC RJ11C modular connector of the 7-foot supplied telephone cord to the incoming subscriber line or the telephone line suppressor (if applicable) using the appropriate mating connector.
6. Attach the telephone's front panel to the mounting flanges of the Model 236 Surface Mount Enclosure using the six supplied #10 tamper-resistant screws and the six black flat washers. A Model 233 Tamper-Resistant Screwdriver (sold separately) is required for installing the tamper-resistant screws.

## Programming Auto-Dial Numbers

1. Remove the front panel assembly by following the appropriate instructions provided in this manual for your phone.
2. Insert the supplied keypad and cable into J7.
3. Install the plug-in jumper on the connector header J2 between pins 2 and 3.
4. Connect the telephone line cable from the phone to an active telephone line.
5. Remove the handset from the cradle (off-hook) and enter the desired telephone number into memory using the keypad mounted on the back of the front panel assembly.
6. Once the number is entered, replace the handset in its cradle (on-hook) and move the plug-in jumper on J2 to pins 1 and 2.
7. Test the auto-dial number by removing the handset from its cradle (off hook)—the telephone should automatically dial the preprogrammed number.
8. Once the auto-dial number is verified, remove the keypad and cable and store in a safe location.
9. Reattach the front panel to the enclosure.

**NOTE:** The programmed number remains in memory until it has been reprogrammed. Disconnecting the telephone line does not erase the programmed number. The number is stored in a nonvolatile electronic memory. Standby batteries are not required.

## Ringdown Operation

For ringdown operation, install the plug-in jumper on the connector header J2 between pins 2 and 3.

# Operation

## Auto-dialing

To auto-dial the stored telephone number, follow these instructions:

1. Lift the handset. After approximately one second, the preprogrammed number is dialed automatically.
2. The handset receiver volume control, which is located on the handset, can be adjusted to the desired level by pressing the handset pressbar.

**NOTE:** Pressing the handset pressbar increases the volume in 3-dB increments. The volume starts at 0 dB and increases to a maximum volume of 18 dB. Pressing the pressbar a seventh time returns the volume to 0 dB.

3. To redial, place the handset on-hook and wait approximately three seconds. Lift the handset and the preprogrammed number is redialed.

## Volume Control Jumper Setting

The handset receiver volume control is factory set to default to its original setting (0dB) when the telephone is hung up. To save the volume control setting, jumper J4, which is factory set at positions 2 and 3, must be moved to positions 1 and 2.

# Specifications

Models 227-001, 247-001, 257-001, and 277-001

### Electrical

Auto-dialer .....	Maximum 31 digits, with internal 12-button pad, field-programmable
Frequency response.....	300 to 3,000 Hz
Inter-digit pause.....	100 ms
Minimum loop current .....	20 mA
Operation .....	Loop start
Signaling tone (DTMF).....	100 ms tone duration
Supervisory dc current .....	Minimum 20 mA dc; maximum 60 mA dc
Supervisory dc voltage.....	24 V dc to 60 V dc (not polarity sensitive)

### Environmental

Operating temperature .....	-40° F to +140° F (-40° C to +60° C)
Humidity .....	90% non-condensing

### Approvals

Safety of Information Technology Equipment.....	UL 60950 and CAN/CSA-C22.2 NO. 60950-00
Enclosures for Electrical Equipment.....	UL 50 TYPE 3R/NEMA 3R

FCC Information

FCC Registration Number ..... US: ADGTE10A-46048HAC  
Ringer Equivalence Number (REN)..... 1.0A/1.3B  
Network connection (USOC)..... RJ11  
Meets hearing aid compatibility magnetic field intensity and volume control technical standards per FCC Sections 68.316 and 68.317.

IC Information (Canada)

IC Certification Number 82211754  
Ringer Equivalence Number (REN)..... 1.0A/1.3B  
Connecting method ..... CA11A

### Mechanical Specifications

Model 227-001

Enclosure..... Thick-walled cast aluminum with protective gray coating  
Handset/cord .....G-style with armored cord and internal lanyard cable (800 lbs. pull strength)  
Dial pad..... Chrome-plated zinc  
Panel ..... 0.125-inch brushed anodized aluminum  
Hookswitch.....Chrome-plated zinc with stationary switching mechanism

Models 247-001 and 257-001

Connections ..... 6.5 foot (1.98 m) modular line cord  
Dimensions, outside ..... Model 247-001 ..... 8 W × 9.5 H × 6.9 D inches (204 × 242 × 174 mm)  
Model 257-001 ..... 9.4 W × 13.2 H × 7.4 D inches (239 × 334 × 188 mm)  
Enclosure..... High-impact, glass-reinforced polyester  
Handset cord..... PVC, 6-foot extended length  
Mounting..... Four 0.28-inch diameter holes  
Weight..... Model 247-001 ..... 6.0 lbs. (2.7 kg)  
Model 257-001 ..... 8.2 lbs. (3.72 kg)

Model 277-001

Enclosure construction: Front panel..... 14-gauge (0.075 inch) brushed stainless steel  
Enclosure construction: Back box..... 16-gauge (0.060 inch) cold-rolled steel with black polyester finish  
Dimensions: Front panel..... 12.00 H × 10.00 W inches (305 × 254 mm)  
Dimensions: Back box ..... 10.06 H × 8.43 W × 2.44 D inches (256 × 214 × 62 mm)  
Dimensions: Back box (depth from mounting surface) ..... 2.38 inches (60 mm)  
Dimensions: Back box (cutout required for mounting) ..... 10.13 H × 7.63 W inches (257 × 194 mm)  
Weight..... 6.5 lbs. (3.0 kg)  
Handset/cord .....G-style with armored cord and internal lanyard cable (800 lbs. pull strength)  
Hookswitch.....Chrome-plated zinc with stationary switching mechanism

## Replacement Parts & Accessories

### Model 227-001 Public Auto-Dial Telephone

Part Number	Description
233	Tamper-Resistant Screwdriver
232	Pole Mount Kit
12512-002	Hookswitch/Cradle Kit
10117-001	Handset Kit, 15-inch Armored Cord
51035-011	Replacement Keypad
61504-048	Keypad Cable Assembly
13707-006	Replacement Ringer
28299-007	Tamperproof Screws
69147-104	PCBA
Accessories	
233	Tamper-Resistant Screwdriver

### Models 247-001 and 257-001 Telephones

Part Number	Description	247-001	257-001
10111-101	Handset Assembly	■	■
12512-001	Proximity-Detecting Hookswitch Assembly	■	■
14242-016	Rear Enclosure	■	
12513-006	Door Replacement Kit		■
12513-002	Mid/Rear Enclosure Kit		■
12513-003	Interior Hinge Plugs		■
25701-002	Valox Latch Replacement Kit		■
51035-011	Replacement Keypad	■	■
61504-048	Keypad Cable Assembly	■	■
69147-104	PCBA	■	■
13707-004	Replacement Ringer	■	■

## Model 277-001 Flush-Panel Auto-Dial Telephone

Part Number	Description
10117-003	Replacement Handset Assembly (AC)
13707-004	Ringer
14560-013	Back Box
28299-007	Tamperproof Screws
51035-005	Replacement Keypad
61504-048	Keypad Cable Assembly
69147-104	PCBA, Auto-dial Telephone
Accessories	
233	Tamper-resistant Screwdriver

# 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.