



GAI-TRONICS® CORPORATION
A HUBBELL COMPANY

Model 10959-201 and -203 Wall-Mount Audio Messenger Interfaces

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Model 10959-201 and -203

Wall-Mount Audio Messenger Interfaces

Confidentiality Notice

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Product Overview

The GAI-Tronics Audio Messenger Interface (AMI) tone/speech generator broadcasts live pages, telephone pages, pre-recorded alarm tones, pre-recorded speech messages, etc., for use in virtually any application.

Features

- Recorded alarm tones
- Eight inputs and eight outputs upgradeable to 40 inputs and outputs
- 600-ohm, 1 Vrms audio output
- CompactFlash® memory
- AMI Configuration Tool (ACT) PC Software
- Scheduled events
- Day/Night modes
- Live/recorded speech messages
- Integration to Page/Party® systems



Figure 1. Wall-Mount Audio Messenger Interface

Options

- Telephone access
- Integration to Page/Party® systems
- Up to 40 user defined inputs and 40 user defined outputs
- Audio routing to eight zones
- AMI redundancy for system reliability
- Integration to ADVANCE systems

Table 1. Wall-Mount AMI Models and Accessories

Model	Description
10959-201	AMI, Wall-Mount with Page/Party® Interface
10959-203	AMI, Wall-Mount with Page/Party® Interface and Telephone Interface
12584-001	I/O Control Module Option
10960-001	Zone Interface Module
10962-00x	AMI Redundancy Controller

Configurations

Alarms

The ACT tool includes pre-recorded tones suitable for almost any application. The tones include typical emergency tones (i.e., a siren, slow whoop, etc.) and signaling or process tones (i.e., a gong, steady tone, etc.). All of the tones and speech messages broadcast by the AMI are stored in MP3 file format. For applications where a required tone is not supplied, any tone recorded or stored in an MP3 file format can be used with the AMI.

Inputs/Outputs

The AMI includes eight configurable inputs and outputs. Typically, the inputs are configured to activate tones and/or speech messages, mute audio playback, or reset alarms. The outputs are typically used to activate external signaling devices, interface to automated control systems or interface to paging system equipment.

If the standard eight inputs and outputs are not sufficient for an application, an I/O Control Module can be added to the system. The I/O control module provides an additional 32 inputs and 32 digital outputs expanding the total I/O to 40 each.

Timed Events

The AMI has the capability to perform several functions based on the time of day. With the ACT software, events can be scheduled to occur at any interval (hourly, daily, weekly, monthly, etc.).

Optional Telephone Operation

The Telephone Interface has multiple operational modes. The appropriate mode is configurable by the AMI Configuration Tool software application.

The AMI can provide passcode-protected telephone access to the system. The AMI can be configured to allow telephone access only if the correct Remote Access Security Code is entered. The remote access code is used to prevent unwanted callers from directly accessing the system. If the system is configured to use a security code, callers are required to enter the correct code to gain access to the system. Day and Night modes can have different security codes.

The modes of operation are as follows:

- Page/Party[®] - Delivers a live voice page (not pre-recorded) to the page line output. The party line is held open following the page.
- Record Page - Records a page, and delivers it to the page line output.
- Mixed Mode - Records a page, delivers it to the page line output, and holds the party line open following the page.
- Live Page Mode - Delivers a live voice page (not pre-recorded) to the page line output. The party line is not open following the page.
- Ring Mode – Does not deliver a page, but instead plays a configured message on the page line to signal the incoming call.
- Manual/Disabled – The Telephone Interface does not automatically answer a phone call. However, an input can be configured for “Manual Access” to allow an attendant to manually answer the phone, and transfer calls to a party line.

The AMI can support two modes of operation: **Day and Night Mode**. The day and night modes can be configured independently of each other.

As an example of the Day and Night modes, day mode may be configured to allow callers the ability of paging and subsequent party line communications. The night mode may be configured to play a tone over the paging system alerting personnel of an incoming call. In this mode, the call can be answered at any Page/Party[®] station.

Page/Party[®] Operation

The Page/Party[®] operation allows for the AMI to play messages/alarms and connect phone calls to a Page/Party[®] system.

The Page/Party[®] operation has the ability to generate the VLC tone during a message/alarm that gives Page/Party[®] stations a signal to change the volume of the message/alarm being played.

When the AMI is interfaced to a Page/Party[®] system, the operation of the telephone interface is as described above, and includes all page modes. The selected party line is hardwired in the system, and cannot be changed by the caller or the AMI configuration.

In addition to the telephone operation described above, a user on the Page/Party[®] system can initiate a call by using Party Hot Dial. When configured via the ACT tool, the AMI recognizes when a station goes off-hook on the designated party line, and automatically dials the preprogrammed telephone number. When the station goes on-hook, the call is terminated after the hang-up delay expires.

Optional ADVANCE Operation

The Page/Party[®] operation allows for the AMI to play messages/alarms and connect phone calls to an ADVANCE system.

When the AMI is interfaced to an ADVANCE system, the operation of the telephone interface is as described above, and includes all page modes. Party lines 1 and 2 must be used in an ADVANCE system, and cannot be changed by the caller or the AMI configuration.

Scheduled events and live pages can be played through the ADVANCE system to a specified zone group. Zone groups are configured using the ACT tool and the ADVANCE system configuration software. Configured zone groups can be assigned to individual events, messages, or the AMI auxiliary microphone jack.

Optional Zone Operation

The optional Zone Interface Modules provide the capability for the AMI to route audio to eight individually controlled zones. Each zone provides a 0 dBm/600-ohm output. Zones are assigned to zone groups via the ACT tool. A maximum of 60 zone groups may be created. Each zone group has a unique description, and can consist of any combination of zones. The ACT tool provides configuration of zone groups, which can then be assigned to various events and messages. Telephone callers can use DTMF signaling to select the zone group prior to making a page.

Optional AMI Redundancy

The optional AMI Redundant Controller (ARC) provides the capability to increase system reliability by using two AMI units, one as the primary and one as a back up. The ARC module(s) control which AMI is active and which is backup.

During normal alarm operation, input contacts are applied simultaneously to both the active and back-up AMIs. The ARC module(s) allow only the active generator to play the tone/speech message over the system speakers. The back up AMI is held in standby mode to prevent audio mixing of the two AMI tone/speech messages.

In the event of a failure of the active AMI, the back up AMI becomes active and plays its tone/speech message over the system speakers.

Installation



Power Disconnect. The power cord is the main power disconnect for all units.



Disjonction de l'alimentation. Le cordon d'alimentation est la disjonction d'alimentation principale tous les appareils.



Para Desconectar la Alimentación: El cable de alimentación es el medio principal de desconexión del equipo.



Netzanschluß. Wenn man das Netzkabel aus der Steckdose zieht, dann ist die Spannungszuführung zum Gerät vollkommen unterbrochen.



CAUTION



To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.



ATTENTION



Pour réduire le risque d'incendie, utiliser uniquement des conducteurs de télécommunications 26 AWG ou de section supérieure.



PRECAUCIÓN



Para aminorar la posibilidad de incendios, utilice solamente cable de telecomunicaciones de calibre 26 (sistema AWG americano) o mayor.



VORSICHT



Um die Brandgefahr zu verringern, verwenden Sie bitte nur Fernmeldekabel der Stärke Nr. 26 AWG oder höher.

Mounting

1. Loosen the four screws on the front cover. Open the front cover of the enclosure to the left.
2. Remove the cable connections between the front panel and rear enclosure.
3. Pull on the left side of the enclosure until the hinge pins pull loose to separate the front and rear sections. Set the front half of the enclosure aside.



Warning: Observe precautions for handling electrostatic sensitive devices.

4. Determine the conduit or cable gland location on the rear enclosure. Drill spots have been provided on top and bottom for use with either a chassis punch or hole saw. Cut or punch the appropriate size hole(s) in the enclosure.
5. Use Myers ST-4 (1.25 inches) Scru-Tite hubs or equivalent. Reducers must be used for smaller conduit sizes to ensure proper contact with the supplied grounding plates. The hub(s) must be connected to the conduit before being connected to the enclosure.
6. Each mounting hole in the enclosure is 0.280 inch in diameter. Secure the rear enclosure on the wall with screws or appropriate fasteners.
7. Route the dc power, audio, input/output control, and phone line through the conduit and into the enclosure allowing adequate cable length to access terminal blocks.
8. Re-install the hinged front cover and re-connect the cables to the front panel.

Wiring

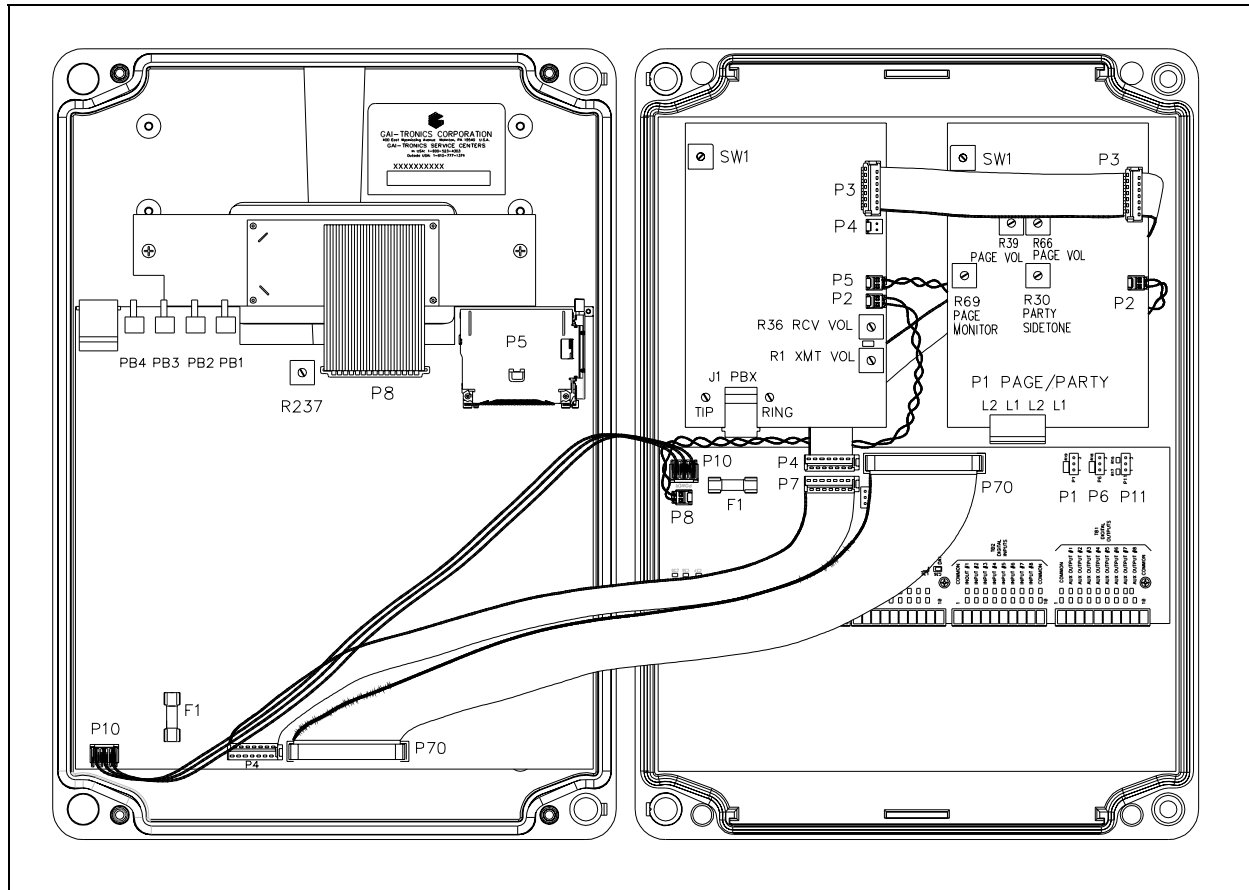


Figure 2. Wiring Connections (Model 10959-203 shown)

Digital Outputs

Terminal block TB1, labeled DIGITAL OUTPUTS is located on the termination PCBA. It provides eight digital common ground outputs. The outputs are open collector active low. The controlled circuit must use the same voltage used to power the AMI. The ground or dc common terminals for the controlled circuits must be tied to GND on the terminal block. Each output can supply 100 mA maximum current.

Table 2. Digital Output Assignment

Termination PCBA Label	Internal Terminal Pin-Out	Function or ACT Description
GND	TB1-1	Ground or dc common
1	TB1-2	Output 1
2	TB1-3	Output 2
3	TB1-4	Output 3
4	TB1-5	Output 4
5	TB1-6	Output 5
6	TB1-7	Output 6
7	TB1-8	Output 7
8	TB1-9	Output 8
GND	TB1-10	Ground or dc common

Digital Inputs

Terminal block TB2, labeled **DIGITAL INPUTS** is located on the termination PCBA. It provides eight digital common ground inputs. The input contacts may be any combination of momentary (pulsed) switches and maintained (latched) switches. They can be either normally open or closed dry contacts rated at 5 mA or better. The ground or dc common terminals for the controlled circuits must be tied to GND on the terminal block.

For the inputs to operate reliably, the cable loop resistance connecting the relay/switch contact closures cannot exceed 200 ohms.

Table 3. Digital Input Assignment

Termination PCBA Label	Internal Terminal Pin-Out	Function or ACT Description
GND	TB2-1	Ground or dc common
1	TB2-2	Input 1
2	TB2-3	Input 2
3	TB2-4	Input 3
4	TB2-5	Input 4
5	TB2-6	Input 5
6	TB2-7	Input 6
7	TB2-8	Input 7
8	TB2-9	Input 8
GND	TB2-10	Ground or dc common

Audio

Terminal block TB3, labeled AUDIO is located on the termination PCBA. It provides connections for audio inputs and outputs, and for local RS-485 data connections. Audio connections to a public address amplifier require shielded pair conductors. Local Data connections are used with the I/O control module and/or Zone Interface Module.

Table 4. Audio Assignment

Termination PCBA Label	Internal Terminal Pin-Out	Function or ACT Description
600 ohm L1	TB3-1	Page output audio to public address amplifier, ADVANCE or Zone Interface module audio
600 ohm L2	TB3-2	
AUDBUS2 L1	TB3-3	Internal audio bus and ADVANCE, ARC, or party audio from AMI
AUDBUS2 L2	TB3-4	
AUDBUS1 L1	TB3-5	Internal audio bus and ADVANCE party audio to AMI
AUDBUS1 L2	TB3-6	
PGND	TB3-7	Power supply ground
RS485 INT GND	TB3-8	Data/Gnd connection for I/O control module
RS485 INT -	TB3-9	
RS485 INT +	TB3-10	

System

Terminal block TB4, labeled SYSTEM is located on the termination PCBA. It provides connection for system applications such system reboot, fault indicator and external data communications.

Table 5. System Assignment

Termination PCBA Label	Internal Terminal Pin-Out	Function or ACT Description
EXT DATA GND	TB4-1	No connection
EXT DATA-	TB4-2	Data connection for ADVANCE or external CPU control
EXT DATA+	TB4-3	
FLT	TB4-4	Active high signal representing a fault with AMI
REBOOT	TB4-5	Momentary active low signal to reboot AMI
GND	TB4-6	Ground reference for FLT and REBOOT.
AUD ACT 1	TB4-7	Isolated SSR. Closed during AMI page. On resistance = 30 ohms
AUD ACT 2	TB4-8	

Ethernet

The Ethernet connector, plug J1, is located on the termination PCBA, and is reserved for future implementation.

Power

The terminal block TB6, labeled CLASS 2 12 –24 VDC is located on the termination PCBA. It provides power connection for the AMI.

Table 6. Power Assignment

Metalwork Label	Internal Terminal Pin-Out	Function or ACT Description
+	TB6-1	Positive terminal of external power supply (Black wire with white stripe from power supply)
-	TB6-2	Negative terminal of external power supply (Solid black wire from power supply)
GND	TB6-3	Frame ground

Optional PBX Connection

The PBX connector is located on the optional telephone interface PCBA, and provides connection to a standard PBX analog station port. It may be used as a plug-in connection or with the terminal screws designated for tip (green) and ring (red).

Page/Party®

The connector P1 is located on the Page/Party® Interface PCBA and provides connection to a Page/Party® system.

Table 7. Page/Party® Assignment

Metalwork Label	Internal Terminal Pin-Out	Function or ACT Description
Party L1	P1-1	The 33-ohm line interface to GAI-Tronics party line. Internal 33-ohm termination.
Party L2	P1-2	
Page L1	P1-3	The 33-ohm line interface to GAI-Tronics page line. External 33-ohm termination required.
Page L2	P1-4	

NOTE: Pin 1 on this connector is on the right side.

Settings and Adjustments

Opening the Unit

Loosen the four screws on the front cover. Open the front cover of the enclosure to the left.

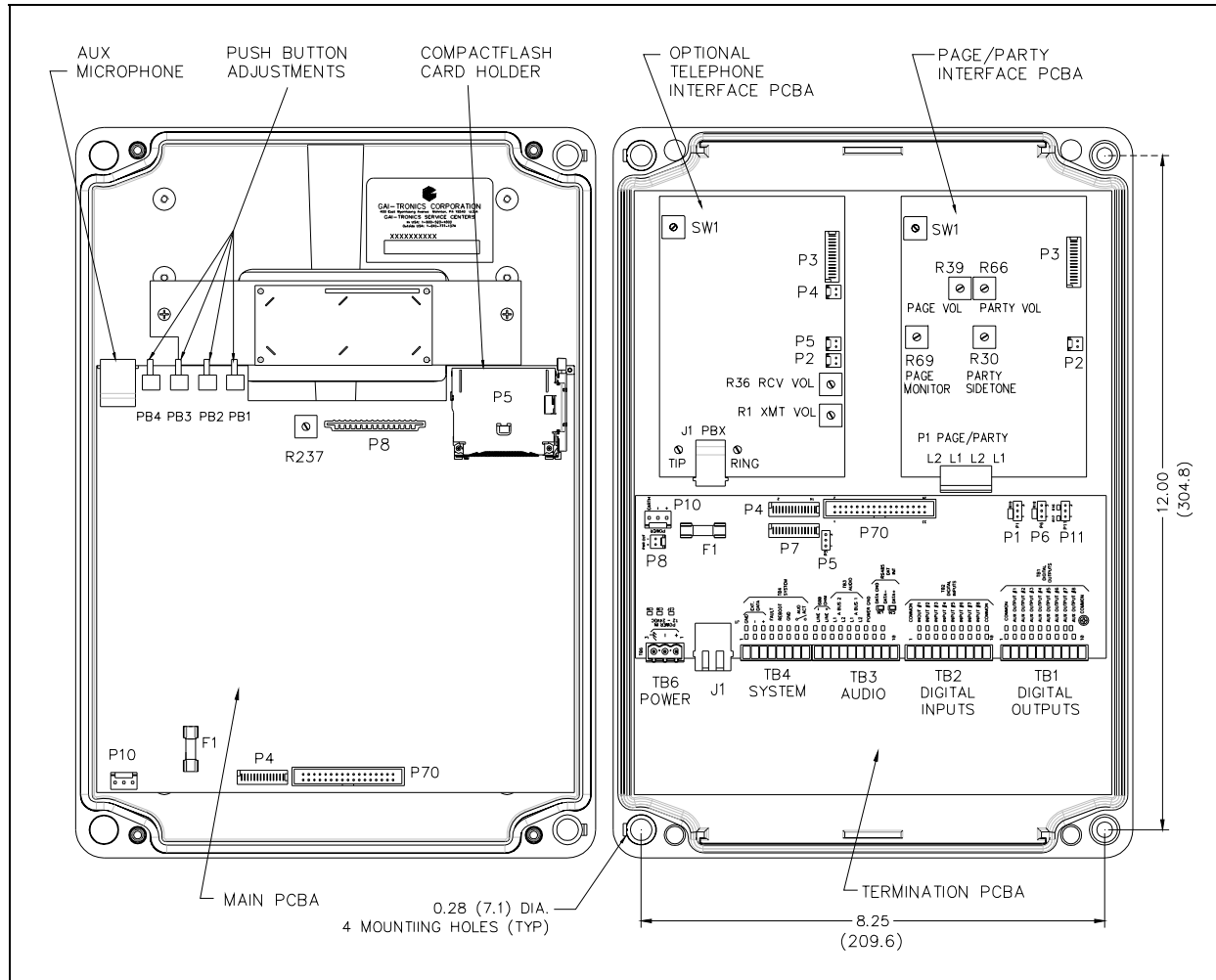


Figure 3. Model 10959-203 AMI (opened with connections and adjustments labeled).

Jumper Settings

600-Ohm Line Termination

The unit can terminate the 600-ohm line with 600 ohm for impedance matching. P5 on the termination board in position 1-2 terminates the line to 600 ohm. P5 in position 2-3 (default) does not terminate the line.

AUDBUS1 Termination

The unit can terminate the AUDBUS1 with 600 ohm for impedance matching. P1 on the termination board in position 1-2 terminates the line to 600 ohm. P1 in position 2-3 (default) does not terminate the line.

AUDBUS2 Termination

The unit can terminate the AUDBUS2 with 600 ohm for impedance matching. P6 on the termination board in position 1-2 terminates the line to 600 ohm. P6 in position 2-3 (default) does not terminate the line.

Audio Contact Supervision

The unit can configure the audio contact (AUD ACT) to an unsupervised or a supervised contact. P11 on the termination board in position 1-2 configures the audio contact to be supervised for use with an ADVANCE control cabinet. P11 in the position 2-3 (default) configures the audio contact to an isolated SSR contact.

Level Adjustments

Display Brightness

R237 on the Main PCBA adjusts the brightness of the LCD display on the front of the assembly.

Phone Line Levels

On the optional Telephone Interface PCBA two potentiometers adjust phone audio levels. The Receiver Volume potentiometer, R36, adjusts the volume level from the telephone line. The Transmit Volume Potentiometer, R1, adjusts the volume to the telephone line.

Party Line Levels

On the Page/Party[®] Interface PCBA two potentiometers adjust party line audio levels. The Party Volume potentiometer, R66, adjusts the volume level to the party line. The Party Sidetone Potentiometer, R30, adjusts sidetone level from the party line.

Page Line Levels

On the Page/Party[®] Interface PCBA two potentiometers adjust page line audio levels. The Page Volume potentiometer, R39, adjusts the volume level to the page line. The Page Monitor potentiometer, R69, adjusts monitor level of audio activity from the page line.

Date and Time Set Up

Date Set Up

Push buttons on the top edge of the Main PCBA of the unit allows for date set up. Complete the following procedure to set the date. Refer to Figure 3 for the locations of the push buttons on the Main PCBA.

- Press <ENTER>, PB4, to enter the menu system.
- Press <SELECT>, PB3, to scroll to the DATE: display.
- Press <ENTER>, PB4, to enter the DATE set up.
- Press <ENTER>, PB4, to confirm choice.
- Press <UP>, PB1 or <DOWN>, PB2 to select the desired day.
- Press <SELECT>, PB3, to scroll to the month.
- Press <UP>, PB1 or <DOWN>, PB2 to select the desired month.
- Press <SELECT>, PB3, to scroll to the year.
- Press <UP>, PB1 or <DOWN>, PB2 to select the desired year.
- Press <ENTER>, PB4, to accept the DATE setting.

Time Set Up

Push buttons on the top edge of the Main PCBA of the unit allows for date set up. Complete the following procedure to set the date.

- Press <ENTER>, PB4, to enter the menu system.
- Press <SELECT>, PB3, to scroll to the TIME: display.
- Press <ENTER>, PB4, to enter the TIME set up.
- Press <ENTER>, PB4, to confirm choice.
- Press <UP>, PB1 or <DOWN>, PB2 to select the desired hour.
- Press <SELECT>, PB3, to scroll to the minute.
- Press <UP>, PB1 or <DOWN>, PB2 to select the desired minute.

Operation

Once the CompactFlash[®] is programmed and installed into the unit, the unit operates based on system inputs and outputs or by manual operation.

LCD Display at Initial Power Up

At initial power up, the AMI unit completes a self-diagnostic of its settings. The LCD display cycles through the following messages:

- AMI firmware version
- Boot DSP
- Media detected
- EEPROM firmware version
- DSP firmware version
- Progress bar/LOAD CONFIG
- Configuration version
- Configuration date and time
- Configuration file name
- HIO (I/O control module) board firmware version or “HIO not installed.”
- ASM (Zone Interface Module) board firmware version or “ASM not installed.”
- Page/Party[®] board firmware version
- AMI Main board firmware version
- Telephone Interface Mode (if telephone interface installed)
- Telephone Interface Board firmware version or “Telephone Interface not installed.”
- Telephone Interface Greeting file name (if recording a new greeting)
- AMI ready
- Time, page symbol/date

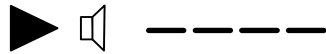
LCD Display during Operation

The LCD uses various symbols to indicate AMI activity.

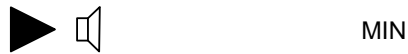
- The VU meter indicates the volume of a page playing.



- Mute indicates the page audio is muted.



- Progress bar indicates remaining time for the party line connection timeout.



- Telephone handset indicates the AMI unit is being accessed via a telephone connection.



- Microphone indicates a page from the auxiliary jack.



- Off hook indicates that a digital input designated as party line off hook is active.



- Right/left arrows indicate transmit and receive activity on the auxiliary jack or external RS-485.



- Text display (scrolling) displays current system status, such as the name of the current message playing, telephone connection status, and party connection status.

- Rotating slash, when visible, indicates the AMI has a lower priority message pending, ready to be played.



Push-Button Operation

The front panel push buttons allow for various control features including, Play a Message, Stop a message, and Firmware Update.

Stop Message

This function halts the currently playing message. The button sequence is used:

- Press <ENTER>, PB4, to enter the menu system.
- Press <ENTER>, PB4, to select the Stop: item.
- Press <ENTER>, PB4, to confirm the selection.

Play Message

This menu item is selected to play a specific message. Messages are grouped by priority (1 through 7). This button sequence allows the user to select a message to be played from a specific priority group:

- Press <ENTER>, PB4, to enter the menu system.
- Press <SELECT>, PB3, to scroll to the Play: item.
- Press <ENTER>, PB4, to enter the Play: item.
- Press <SELECT>, PB3 to scroll to the message.
- Press <ENTER>, PB4, to play the selected message.

Firmware Update

This menu item provides the means for updating the firmware of the AMI main board. This button sequence is used:

- Press <ENTER>, PB4, to enter the menu system.
- Press <SELECT>, PB3, to scroll the menu to the Firmware Update: item.
- Press <ENTER>, PB4, to select the Firmware Update: item.
- Press <ENTER>, PB4, to confirm the selection.

Reset AMI

- Press <ENTER>, PB4, to enter the menu system.
- Press <SELECT>, PB3, to scroll the menu to the System Reboot: item.
- Press <ENTER>, PB4, to select the System Reboot: item.
- Press <ENTER>, PB4, to confirm the selection.

Return

Selecting this menu item returns the system to normal operation mode.

- <ENTER>, PB4, to enter the menu system
- <SELECT>, PB3, to scroll the menu to the Return item
- <ENTER>, PB4, to select the Return menu item and return to normal operating mode.

AMI Configuration Tool (ACT)

Overview

The Audio Messenger Interface Configuration Tool (ACT) software is used to define and change configurations for the Audio Messenger Interface (AMI), and is included with all models of AMI. To retrieve configurations and play audio messages, the AMI accesses a CompactFlash® card. Each AMI is shipped with a CompactFlash® card pre-programmed with the **AMI Factory Default** configuration.

Please refer to the online help for specific instructions.

System Requirements

The ACT software must be installed on a Windows PC (Windows 98 SE/XP/2000) equipped with a USB port. A reader/writer capable of programming CompactFlash® memory cards must be connected to the USB port. The CompactFlash® reader/writer is not included with the AMI.

Configurable Parameters

Fragments

All tones and voice messages are digitally recorded and stored on the CompactFlash® card as MP3 files.

Messages

Each message is a collection of fragments. The content of each message must be defined by selecting the fragment(s) to be incorporated into the message. Other message parameters include:

- Message title
- Priority
- Volume
- Play mode and repeat interval

Inputs

Each input circuit must be enabled or disabled. If enabled, it must be programmed with several parameters such as:

- Title containing a brief text description of the input and its use
- The type of switch contact being used to activate the input (normally open, closed)
- The action of the switch (maintained, momentary, toggle on/off)
- Function of the input (activate a message, reboot, mute, etc.)

Output

Each output circuit must be enabled or disabled. If enabled, it must be programmed with several parameters such as:

- Title, which contains a brief text description of the output and its use
- Mode of operation when active (maintained, flash, momentary, flicker)
- Activation assignment from an input or scheduled event

Event Scheduling

Using the event-scheduling feature, messages can be set up to automatically play at certain dates and times. When scheduling events several parameters must be set:

- Start and stop times
- Start and stop dates
- Event duration and intervals

Optional Telephone Interface

If using the telephone interface, several parameters must be set:

- The number of rings before answer
- Paging mode (live or recorded)
- Page delay, if recorded
- Maximum page duration
- Selection of a greeting message to be played to the caller
- Selection of a pre-announcement tone to be played to the PA system

Page/Party[®] Interface

The following parameters can be set for the Page/Party[®] Interface:

- VLC activation
- Party Hot Dial

Optional Zone Groups

Zone groups are configured with a unique description, and assigned any combination of the eight available output zones.

CompactFlash®

The CompactFlash® memory card stores the system configuration, speech messages, and alarm tones.

Formatting

All new CompactFlash® memory cards must be formatted specifically for use with the AMI. Formatting is accomplished using the following DOS-format command from Windows command prompt:

Format <drive>:/a: 16K, where <drive> is the drive letter of the PC's CompactFlash®.

NOTE: Successful formatting of the CompactFlash® card can be performed only on Windows 2000 and Windows XP workstations.

Card Installation

When the memory card is being installed, complete the following instructions:

Insert the memory card through the rectangular MEMORY CARD slot on the AMI main Board. Ensure the label on the memory card faces up and slide the memory card in until it is fully seated in the slot. When seated properly, the card protrudes approximately ¼ inch from the front of the socket.

NOTE: The memory card and its socket are keyed for proper insertion – *do not force the card into the socket.*

Reboot the system so the AMI unit can read the memory card.

Specifications

Power Supply Requirements

Voltage.....	12 to 24 V dc (UL listed) Class 2 power source (plug-in 12 V dc power supply included with AMI)
Current	1 amp minimum
Power consumed	10 watts maximum

Audio

Speech capacity.....	500 minutes with 512 Mb CompactFlash® card
Frequency response.....	250–6500 Hz, +0/-3 dB ref. to 1 kHz
Distortion	<1% THD @ 1 kHz @ nominal settings

Outputs

600-ohm output.....	1 Vrms nominal
33-ohm page output	1.5 Vrms nominal
33-ohm party output.....	1.5 Vrms nominal
Phone line output	-10 dBm nominal

Inputs

Phone line input	-10 dBm nominal
33-ohm party input.....	1.5 Vrms nominal

Communications

ADVANCE.....	RS-485
Phone line	DTMF

I/O Control

Digital outputs..... Open collector
 Maximum output sink current..... 100 mA per output
 Maximum output voltage..... AMI input voltage
 Isolated output..... Dry contact or GAI-Tronics proprietary supervision
 Digital inputs..... Open collector or dry contact

Mechanical

Enclosure materialHigh-impact, glass-reinforced polyester, gray
 Mounting.....Wall mounting; four 0.28 mounting holes
 Connections.....Four drill spots for location of conduit
 Dimensions 13.00 H × 9.25 W × 4.00 D inches; (330 × 235 × 102 mm)
 Weight..... 5 lbs. (2.27 kg)

Environmental

Temperature range +32° F to +122° F (0° C to +50° C)

FCC Information

Complies with CFR47, Part 15 Class A

Approvals

Safety of Information Technology Equipment.....UL 60950, CAN/CSA-C22.2 No. 60950-00, IEC 60950

Replacement Parts

Table 8. Replacement Parts

Model Number	Description
69517-204	Termination PCBA
69462-001	Telephone Interface PCBA
69463-001	AMI Single-Party Interface
49100-007	CompactFlash [®] Card (blank)

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.