Pub. 42004-403G

GAI-TRONICS®
A HUBBELL COMPANY

Models 10959-201 and -203
Wall-Mount Audio Messenger Interface

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Confidentiality Notice

Product Overview

The GAI-TRONICS AMI (Audio Messenger Interface) 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 V_{RMS} audio output
- CompactFlash® memory
- ACT (AMI Configuration Tool) 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
- desktop paging microphone
- 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® and telephone interfaces
12584-001	I/O control module option
XDM002A	desktop paging microphone
10960-001	zone interface module
10962-00x	AMI redundancy controller

Functions

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. Inputs are typically configured to activate tones and/or speech messages, mute audio playback, or reset alarms. Outputs are typically used to activate external signaling devices, interface to automated control systems, or interface to paging system equipment.

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

Timed Events

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

Optional Telephone Operation (Model 10959-203 only)

The Model 10959-203 AMI can provide passcode-protected telephone access to the system 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. Callers must enter the correct security code to gain access to the system if the system is configured to use a security code. Day and night modes can have different security codes.

The telephone interface has multiple operational modes. Configure the appropriate mode using the ACT software application.

The operational modes of operation are as follows:

- Page/Party®—Delivers live voice pages (not pre-recorded) to the page line output.—The party line is held open following the page.
- Record Page—Records each page before delivery 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—Plays a preconfigured message on the page line to signal an 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 temporal modes of operation: *day mode* and *night mode*. The day mode and night mode can be configured independently of each other. As an example of different day and night modes; the day mode may be configured to allow callers to page and wait for a subsequent party line communication, while the night mode is configured to play a tone over the paging system alerting personnel of an incoming call. The call can be answered at any Page/Party® station in this mode.

Page/Party® Operation

Page/Party® operation allows the AMI to play messages/alarms and connect phone calls (Model 10959-203) to a Page/Party® system.

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.

The operation of the Model 10959-203 telephone interface works as described above when the AMI is interfaced to a Page/Party® system. The party line used for telephone operation is hardwired in the system, and cannot be changed by the caller or the AMI configuration.

A user on a Page/Party® system can also initiate a call using a feature called *party hot dial*. Party hot dial is configure with the ACT tool and allows the AMI to recognize when a station has gone off-hook on a designated party line. The AMI then connects that party line to the telephone interface and automatically dials a preprogrammed telephone number. The call is terminated after a hang-up delay when the station is placed back on-hook.

Optional ADVANCE Operation

Page/Party® operation allows an AMI to play messages/alarms and connect phone calls to an ADVANCE system. The operation of the telephone interface includes all page modes as described above when the Model 10959-203 AMI is interfaced to an ADVANCE system.

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.

NOTE: Party lines one and two must be used in an ADVANCE system, and cannot be changed by the caller or the AMI configuration.

Refer to the required Level Adjustments section when the AMI is used in an ADVANCE system.

Optional Zone Operation

The optional zone interface module allows the AMI to route audio to eight individually controlled zones Each zone provides a 0 dBm/600-ohm output. Use the ACT tool to assign zones to zone groups. A zone group is assigned a unique description and can consist of any combination of zones. A maximum of 60 zone groups can be created. Assign various events and messages to each zone group using the ACT tool. Telephone callers can use DTMF signaling to select the zone group prior to making a page.

Optional AMI Redundancy

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

⚠—**Disjontion 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

Warning: Observe precautions for handling electrostatic sensitive devices.

1. Loosen the four screws on the front cover.
2. Open the hinged front cover of the enclosure and turn it to the left.
3. Remove the cable connections between the front cover and the rear enclosure.
4. Pull the front cover of the enclosure up 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.
5. Determine the conduit or cable gland location on the rear enclosure.

   Drill spots have been provided on the top and bottom for use with either a chassis punch or hole saw.
6. Cut or punch the appropriate size hole(s) in the enclosure.
7. Use Myers™ ST-4 (1.25-inch) Scru-Tite® hubs or equivalent.

   Reducers must be used for smaller conduit sizes to ensure proper contact with the supplied grounding plates. Hub(s) must be connected to the conduit before being connected to the enclosure.
8. Secure the rear enclosure to the wall with screws or appropriate fasteners.

   The enclosure mounting holes are 0.280-inches in diameter.
9. Route all necessary cabling through conduit(s) and into the enclosure (see the Field Wiring section).

   Allow adequate cable lengths to reach the terminal blocks.
10. Terminate all necessary field wiring (see the Field Wiring section).
11. Reconnect the front cover to the rear enclosure by pushing the hinge pins on the front cover into the rear enclosure until a click is heard.
12. Re-install the cable connections between the front cover and the rear enclosure.
13. Rotate the front cover to close the enclosure and tighten the four screws on the front cover.

Field Wiring

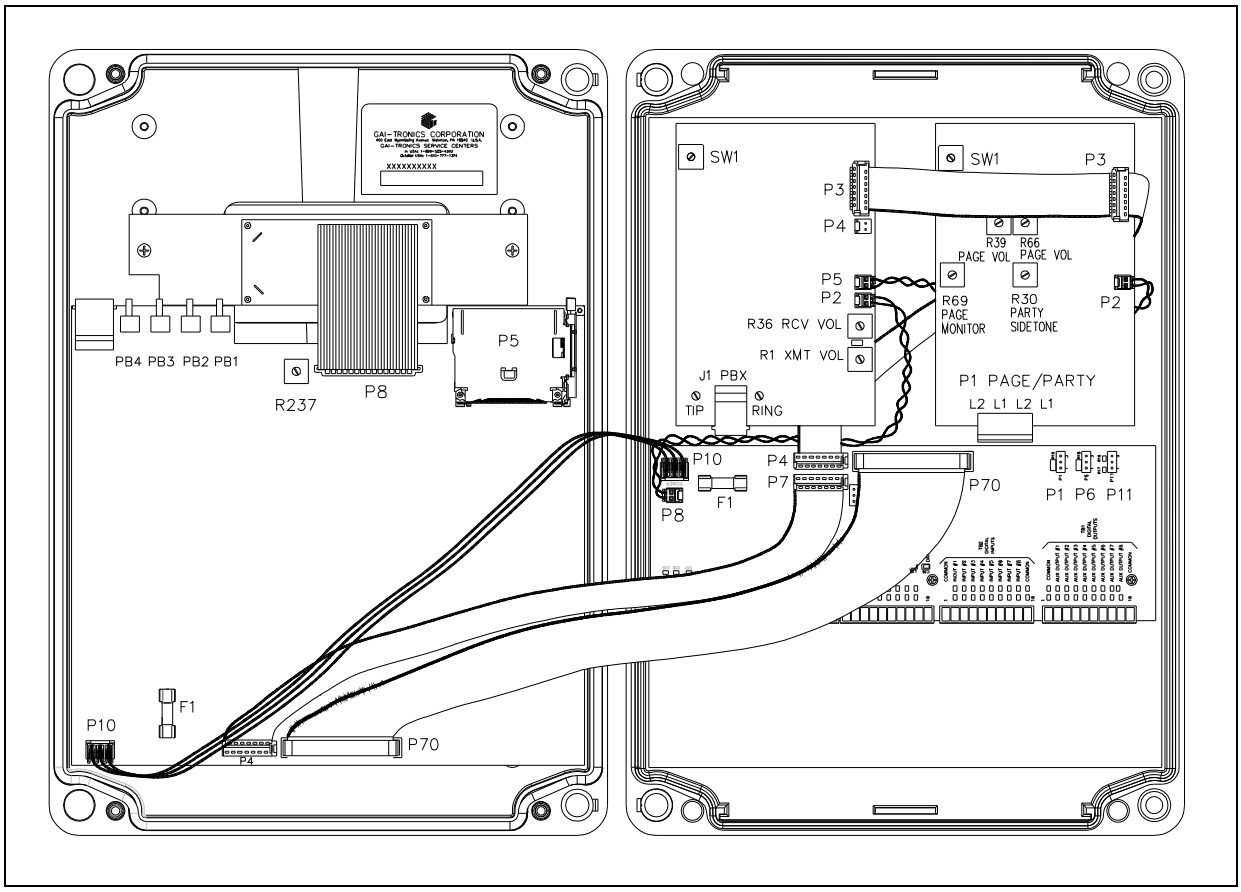


Figure 2. Wiring Connections (Model 10959-203 shown)

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 Connections

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 are configured as any combination of momentary (pulsed) switches and/or maintained (latched) switches. They can be either NO (normally open) or NC (normally 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.

NOTE: The cable loop resistance connecting the relay/switch contact closures cannot exceed 200 ohms for the inputs to operate reliably.

Table 3. Digital Input Connections

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, audio outputs, and 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 the zone interface module.

Table 4. Audio/RS485 Connections

Termination PCBA Label	Internal Terminal Pin-Out	Function or ACT Description
600 OHM L1	TB3-1	page output audio to public address amplifier, ADVANCE system, or zone interface module
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	no connection
RS485 INT −	TB3-9	data/ground connection for I/O control module
RS485 INT +	TB3-10	

System

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

Table 5. System Connections

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, jack J1, is located on the termination PCBA, and is reserved for future implementation.

Power

Terminal block, **TB6**, labeled CLASS 2 12–24 VDC, is located on the termination PCBA. It provides the required 12–24 V dc power connection to the AMI.

Table 6. Input Power Connection

Termination PCBA 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 (Model 10959-203 only)

Termination for the optional PBX connection is located on the telephone interface PCBA. This jack provides connectivity to a standard PBX analog station port. Connect the telephone cable to the PBX jack with an RJ-11 plug-in connector or screw the wires to the appropriate terminals; tip (green), and ring (red).

Page/Party®

Connector P1, located on the PPI (Page/Party® Interface) PCBA, provides connectivity to a Page/Party® system.

Table 7. Page/Party® Connections

PPI PCBA Label	Internal Terminal Pin-Out	Function or ACT Description
PARTY L1	P1-1	33-ohm line interface to GAI-TRONICS party line internal 33-ohm termination
PARTY L2	P1-2	
PAGE L1	P1-3	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.

Auxiliary Microphone

Jack J1, located on the upper left corner of the main PCBA, provides connectivity for an auxiliary microphone. The pinout for the microphone jack is as follows:

Table 8. Auxiliary Microphone Jack Pinout

Pin	Label	Function
1	HEADSET_RX_AUD	headset receive audio
2	RS232_RXD	RS-232 receive
3	PTT	Push-to-Talk
4	MIC_HI	microphone high
5	MIC_LO	microphone low
6	MONITOR	Monitor
7	RS232_TXD	RS-232 transmit
8	PGND	Ground

Settings and Adjustments

Opening the Unit

1. Loosen the four screws on the front cover.
2. Open the hinged front cover of the enclosure and turn it to the left.

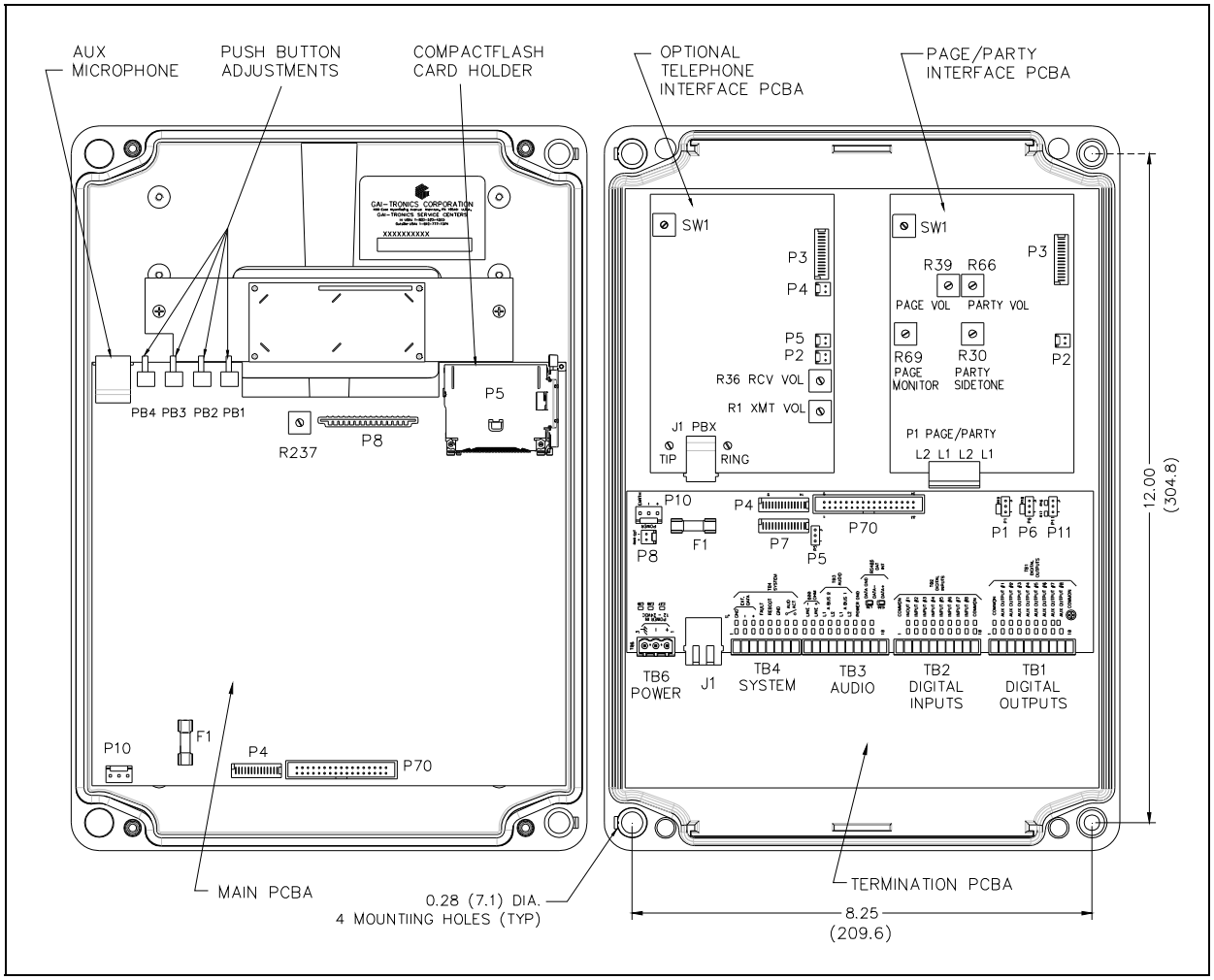


Figure 3. Model 10959-203 AMI (opened with connections and adjustments labeled).

Level Adjustments

Display Brightness

Adjust potentiometer R237, on the main PCBA, to change the brightness of the LCD display on the front of the assembly.

Phone Line Levels

Two potentiometers on the optional telephone interface PCBA adjust the telephone audio levels:

- **Volume level from telephone line**—Adjust the receiver volume potentiometer, R36.
- **Volume to telephone line**—Adjust the transmit volume potentiometer, R1.

Party Line Levels

Two potentiometers on the Page/Party® Interface PCBA adjust the party line audio levels:

- **Volume level to party line**—Adjust the party volume potentiometer, R66.
- **Sidetone level from party line**—Adjust the party sidetone potentiometer, R30.

Page Line Levels

Two potentiometers on the Page/Party® Interface PCBA adjust the page line audio levels:

- **Volume level to the page line**—Adjust the page volume potentiometer, R39.
- **Page line audio monitor level**—Adjust the page monitor potentiometer, R69.

Jumper Settings

600-Ohm Line Termination

Terminate the 600-ohm audio lines with 600 ohms for impedance matching. Use jumper P5, located on the termination board (see Figure 4), to enable/disable impedance matching on the 600-ohm audio line connections (see Table 9).

AUDBUS1 Termination

Terminate the AUDBUS1 connection with 600 ohms for impedance matching. Use jumper P1, located on the termination board (see Figure 4), to enable/disable impedance matching on the AUDBUS1 connection (see Table 9).

AUDBUS2 Termination

Terminate the AUDBUS2 connection with 600 ohms for impedance matching. Use jumper P6, located on the termination board (see Figure 4), to enable/disable impedance matching on the AUDBUS2 connection (see Table 9).

Audio Contact Supervision

Configure the audio contact (AUD ACT) as supervised or unsupervised. Use jumper P11, locate on the termination board (see Figure 4), to configure the audio contact as supervised for use with an ADVANCE cabinet, or as an isolated SSR (solid state relay) contact (see Table 9).

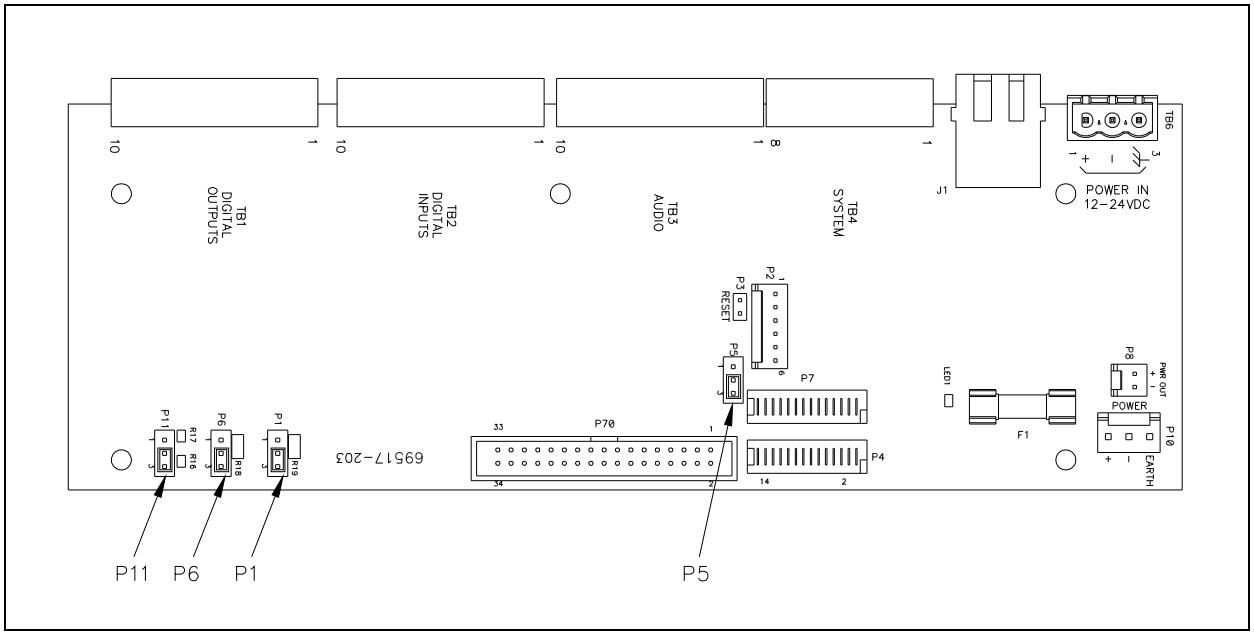


Figure 4. Termination PCBA

Table 9. Termination PCBA Jumper Functions

Jumper	Output	Position	Function
P1	TB3-5, 6 Audio bus 1	1-2	600-ohm resistor connected (ADVANCE position)
		2-3	Default: unterminated
P5	TB3-1, 2 600 ohms	1-2	600-ohm resistor connected (ADVANCE position)
		2-3	Default: unterminated
P6	TB3-3, 4 Audio bus 2	1-2	600-ohm resistor connected (ADVANCE position)
		2-3	Default: unterminated
P11	TB4-7, 8 Audio contact	1-2	Supervision resistor network, 4.7k in series, 15k in parallel (ADVANCE position)
		2-3	Default: unsupervised

Date and Time Set Up

Date Set Up

Use the push buttons located on the top edge of the main PCBA to set the date (see Figure 3 for the locations of the push buttons). Complete the following procedure to set the date:

1. Press <**ENTER**>, PB4, to enter the menu system.
2. Press <**SELECT**>, PB3, to scroll to the DATE: display.
3. Press <**ENTER**>, PB4, to enter the DATE set up.
4. Press <**ENTER**>, PB4, to confirm choice.
5. Press <**UP**>, PB1 or <**DOWN**>, PB2 to select the desired day.
6. Press <**SELECT**>, PB3, to scroll to the month.
7. Press <**UP**>, PB1 or <**DOWN**>, PB2 to select the desired month.
8. Press <**SELECT**>, PB3, to scroll to the year.
9. Press <**UP**>, PB1 or <**DOWN**>, PB2 to select the desired year.
10. Press <**ENTER**>, PB4, to accept the DATE setting.

Time Set Up

Use the push buttons located on the top edge of the main PCBA to set the time. Complete the following procedure to set the time:

1. Press <**ENTER**>, PB4, to enter the menu system.
2. Press <**SELECT**>, PB3, to scroll to the TIME: display.
3. Press <**ENTER**>, PB4, to enter the TIME: set up.
4. Press <**ENTER**>, PB4, to confirm choice.
5. Press <**UP**>, PB1 or <**DOWN**>, PB2 to select the desired hour.
6. Press <**SELECT**>, PB3, to scroll to the minute.
7. Press <**UP**>, PB1 or <**DOWN**>, PB2 to select the desired minute.
8. Press <**ENTER**>, PB4, to accept the TIME: setting.

AMI Configuration Tool (ACT)

Overview

The ACT (Audio Messenger Interface Configuration Tool) software is used to define and change configurations for the 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 ACT software online help for specific instructions.

System Requirements

The ACT software must be installed on a Windows PC (Windows® XP/7/10) 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 audio fragments stored in 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

Input circuits must be enabled or disabled. Program each enabled input circuit with the following parameters:

- title containing a brief text description of the input and its use
- type of switch contact being used to activate the input (NO, NC)
- action of the switch (maintained, momentary, toggle on/off)
- function of the input (activate a message, reboot, mute, etc.)

Outputs

Output circuits must be enabled or disabled. Program each enabled output circuit with the following parameters:

- title containing 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

Use the event-scheduling feature to set up messages to automatically play at certain dates and times. Set the following parameters when scheduling events:

- start and stop times
- start and stop dates
- event duration and intervals

Optional Telephone Interface

Configure the following parameters if using the telephone interface:

- 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. Complete the following instructions to install the memory card:

1. Insert the memory card through the rectangular MEMORY CARD slot on the AMI main board with the label on the memory card facing up.
2. 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*.

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

Operation

The AMI operates based on system inputs and outputs or by manual operation after the CompactFlash® has been programmed and installed in the unit.

LCD Display at Initial Power Up

The AMI completes a self-diagnostic of its settings at initial power up. 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

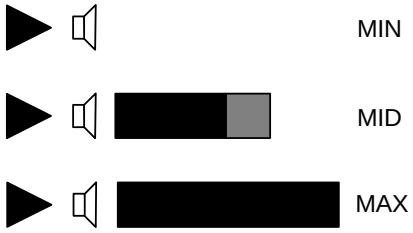
LCD Display during Operation

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 Menu Operation

Front panel push buttons provide menu access for various control features including; play a message, stop a message, and firmware update.

Stop Message

This menu item halts the currently playing message. The button sequence is:

1. Press <**ENTER**>, PB4, to enter the menu system.
2. Press <**ENTER**>, PB4, to select the STOP: item.
3. Press <**ENTER**>, PB4, to confirm the selection.

Play Message

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

1. Press <**ENTER**>, PB4, to enter the menu system.
2. Press <**SELECT**>, PB3, to scroll to the PLAY: item.
3. Press <**ENTER**>, PB4, to enter the PLAY: item.
4. Press <**SELECT**>, PB3, to scroll to the message.
5. Press <**ENTER**>, PB4, to play the selected message.

Firmware Update

This menu item facilitates updating the firmware of the AMI main board. The button sequence used is:

1. Press <**ENTER**>, PB4, to enter the menu system.
2. Press <**SELECT**>, PB3, to scroll the menu to the FIRMWARE UPDATE: item.
3. Press <**ENTER**>, PB4, to select the FIRMWARE UPDATE: item.
4. Press <**ENTER**>, PB4, to confirm the selection.

Reset AMI

Complete the following menu sequence to restart the AMI:

1. Press <**ENTER**>, PB4, to enter the menu system.
2. Press <**SELECT**>, PB3, to scroll the menu to the SYSTEM REBOOT: item.
3. Press <**ENTER**>, PB4, to select the SYSTEM REboot: item.
4. Press <**ENTER**>, PB4, to confirm the selection.

Return

Select this menu item to return the system to normal operation mode:

1. Press <**ENTER**>, PB4, to enter the menu system
2. Press <**SELECT**>, PB3, to scroll the menu to the RETURN item
3. Press <**ENTER**>, PB4, to select the RETURN menu item and return to normal operating mode.

Specifications

Power Supply

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

Audio

Speech capacity ..... 500 min with 512 Mb CompactFlash® card
Scheduled events ..... 29 maximum
Frequency response ..... 250–6500 Hz, +0/−3 dB ref. to 1 kHz
Distortion ..... <1% THD @ 1 kHz @ nominal settings

Outputs

600-ohm output ..... 1 V_{RMS} nominal
33-ohm page output ..... 1.5 V_{RMS} nominal
33-ohm party output ..... 1.5 V_{RMS} nominal
Telephone line output ..... −10 dBm nominal

Inputs

Telephone line input ..... −10 dBm nominal
33-ohm party input ..... 1.5 V_{RMS} nominal

Microphone

Type ..... passive input
Input impedance ..... > 2 kΩ
Nominal input level ..... −20 dBm
Input Adjustment Range ..... N/A

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 material ..... high-impact, glass-reinforced polyester, gray
Mounting ..... wall mounting; four 0.28-inch mounting holes
Connections ..... four drill spots for location of conduit
Dimensions ..... 13.00 H × 9.25 W × 4.00 D in; (330 × 235 × 102 mm)
Weight ..... 5 lb (2.27 kg)

Environmental

Temperature range ..... +32 ºF to +122 ºF (0 ºC to +50 ºC)

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 10. 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.