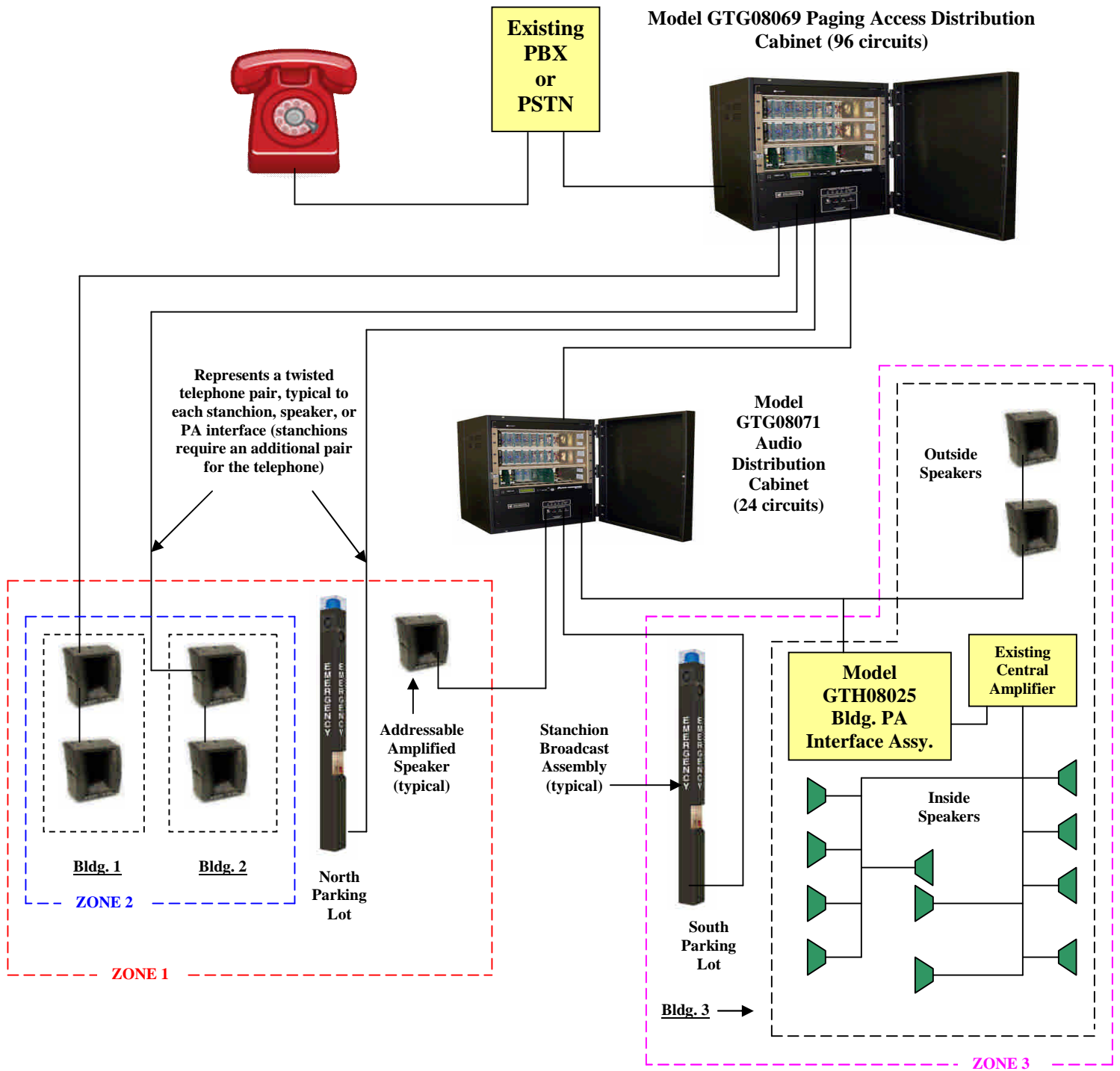


TELEPHONE ACCESS ONLY SYSTEM INTERCONNECTION



- Notes:**
1. Each Addressable Amplified Speaker will require 120 Vac (12 Vdc power supply) or solar power.
 2. Each Stanchion Broadcast Assembly will require 120 Vac power.

Telephone Access Public Address System

GENERAL

The proposed GAI-Tronics Public Address System consists of the following items:

- Model GTG08069 Paging Access Distribution Cabinet
- Model GTG08071 Audio Distribution Cabinet
- Stanchion Broadcast Assemblies (if applicable)
- Addressable Amplified Speakers (if applicable)
- Model GTH08025 PA Interface Assembly (if applicable)

The Model GTG08069 Paging Access Distribution Cabinet is designed to accept a single telephone extension input from the existing PBX or PSTN and provide 96 circuits out, each at a balanced 600 Ohm, 0 dBm audio level. Additionally, a single dry contact closure output is available when accessed. This output can be used for external device activation such as a strobe, bell, etc. Each audio output can connect to any device requiring a balanced, 600 Ohm, 0 dBm input. These include:

- GAI-Tronics' Addressable Amplified Speakers (13353)
- GAI-Tronics' Stanchion Broadcast Products (234SBA, 234SBM)
- Central Amplifier Equipment
- GAI-Tronics' Building PA Interface Assembly (GTH08025)
- GAI-Tronics' Audio Distribution Cabinet, Model GTG08071

Intermediate Audio Distribution Cabinets are designed to accept a 600 Ohm, audio signal input and provide the designated quantity of balanced 600 Ohm output circuits (96, 48, or 24).

The Public Address speaker system will be capable of being accessed from the existing telephone system (live voice access only). The system is completely addressable utilizing the calling telephone's DTMF keypad.

OPERATION

Addressable Amplified Speakers, Stanchion Broadcast Products, and PA Interface Assemblies

Each Addressable Amplified Speaker (13353) and Stanchion Broadcast Product (234SBA or 234SBM) includes an addressable (via DTMF), integral amplifier. The Model GTH08025 PA Interface Assembly also includes internal circuitry that permits addressability. Each unit is capable of being programmed for up to eight (8) DTMF access codes. The first programmed access code will always be the individual unit's address. This address will be used not only to broadcast specifically from that unit, but also to remotely adjust that unit's output volume level (volume adjustment pertains to stanchion broadcast products and amplified speakers only).

Each unit's amplifier circuitry will remain in a rest or sleep mode until it receives a valid DTMF access code (address). Once a valid address is received, the amplifier circuitry will become active and continue to broadcast until audio is no longer detected. With the loss of audio for a pre-programmed amount of time, the amplifier circuitry will return to sleep.

The Model GTH08025 PA Interface Assembly is designed to provide a 600 Ohm audio output to existing or new central amplifier equipment intended to power a series of connected speakers. These units will provide an output to the amplifier equipment only when the appropriate DTMF access code is received. Like the amplified speakers and stanchion broadcast products, the interface will return to sleep mode when the audio signal is lost for a pre-programmed amount of time. This interface, and consequently the

building or area it controls, is accessible in the same format as are the Addressable Amplified Speaker and the Stanchion Broadcast Products.

Head-End Equipment

The system head-end will consist of the Model GTG08069 Paging Access Distribution Cabinet. This assembly will accept an analog telephone extension or C.O. line input and provide 96 individual output circuits for distribution to desired speakers and/or stanchions. Each circuit will be a balanced 600 Ohm, 0 dBm signal.

The calling party will dial the telephone number assigned for system access. The system will provide a splash tone, indicating to the calling party to proceed. The calling party will then enter the multi-digit DTMF code associated with the particular speaker, zone, or area to which access is desired and begin speaking. The speakers/stanchions programmed with the dialed access code will activate and broadcast the spoken message.

TELEPHONE ACCESS ONLY INTERCONNECTION DIAGRAM

The Telephone Access Only Interconnection Diagram depicts the signal flow and operation. A system telephone dials the access telephone number via the Model GTG08069 Paging Access Distribution Cabinet. The GTG08069 amplifies the signal and passes it through to another distribution cabinet; amplified speakers; stanchion broadcast products; or PA interfaces. Only those assemblies programmed for the transmitted DTMF access code will activate and broadcast the received audio. This operation will provide live voice access only.

For example purposes, the system noted on the interconnection diagram has been divided into three distinct areas or Zones; Zone 1, Zone 2, and Zone 3. Each zone includes the following areas:

- Zone 1 includes Zone 1 (Bldg. 1 and Bldg. 2) and the Stanchion Broadcast Assembly and Addressable Amplified Speaker located in the North Parking Lot area (access code **1001**)
- Zone 2 includes Building 1 and Building 2 only (access code **1002**)
- Zone 3 includes both internal and external speakers located in/on Building 3 and the Stanchion Broadcast Assembly located in the South Parking Lot area (access code **1003**)
- All Zones (access code **2222**)

Note: Access codes used in the example are arbitrary and can be programmed for 2 to 8 digits (all codes must be the same number of digits).

Each device installed in the example system will be programmed for a minimum of three access codes (individual, zone, all). The speakers installed at buildings 1 and 2 will be programmed for four codes, due to the fact that they are part of two separate zones. Building 1 and Building 2 each have two speakers mounted to them. These two buildings, combined with a Stanchion Broadcast Assembly and an Addressable Amplified speaker located near the North Parking Lot, are considered Zone 1. Building 1 and Building 2, as a stand-alone entity, are considered a zone itself (Zone 2). Transmitting the Zone 1 access code would cause all four speakers on the buildings, the stanchion, and the single amplified speaker to broadcast. If the access code for Zone 2 is transmitted, only the speakers on Buildings 1 and 2 would broadcast. It is also possible to access any single speaker or stanchion within these zones, if desired.

Here are the steps needed from a telephone desiring system access. In this scenario, the person broadcasting intends to perform a live voice broadcast into Zone 1 (code **1001**).

- Dial the extension assigned to system access
- Wait for the splash tone, then dial the code **1001** and begin speaking
- Hang up when broadcast is complete

The described operation allowed the operator to generate a live voice broadcast into Zone 1 (Buildings 1 and 2 and the North Parking Lot). To broadcast only into Zone 2 (Buildings 1 and 2), enter **1002**; Zone 3 (Building 3 and the South Parking Lot), enter **1003**. To broadcast to all zones, code **2222** would be entered. Assuming the amplified speaker located in the North Parking lot has an access code of **3001**, entering this code will access only this speaker. Note that this is the access code that would be used to remotely adjust this unit's output volume.