NOTE: The replacement PCBA in this kit includes a programming update. Reference Step 13 for an explanation of this change.

Installing this kit will require complete reprogramming of the Model TS958's parameters. It is advisable to locate the installation manual originally shipped with the unit, where the original programmer should have recorded all programmed parameters. If unable to locate this information, the programmed parameters can be determined by going through each of the programming steps and reading the LEDs, which will indicate the TS958's settings.

**Installation of Kit:**

1. **REMOVE POWER TO THE UNIT BEFORE INSTALLING THIS KIT. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY.**

2. Remove the front cover by loosening the four (4) captive screws on the corners of the TS958 cover.

3. Swing the cover open. Remove the ribbon cable from J2 on the Power Supply/Termination PCBA Assembly. To remove the ribbon cable from J1 (Model 69105-001) or J2 (Models 69105-003/-004), push the latch eject levers to the side of the connector.

4. Remove the front panel completely by pulling the hinges out of the holes in the rear enclosure.

5. Remove the four (4) screws from the PCBA shield on the rear of the cover and set the shield aside.

   NOTE: If the unit is equipped with a speech PCBA, remove this PCBA and plastic standoffs, retaining these parts for later use.

6. Unplug the power supply ribbon cable from J1 on PCBA 69102-001 and retain for later use. Unplug the LED ribbon cable from J2 on PCBA 69102-001. Remove the four (4) standoffs and one (1) screw securing the PCBA. Remove and discard old PCBA.

7. Use the existing standoffs and screw to secure the new PCBA. Replace the speech PCBA if applicable.

8. Plug in the power supply ribbon cable to J1 on PCBA 69102-001. Plug in the LED ribbon cable to J2 on PCBA 69102-001. Replace the four (4) PCBA shield screws and secure the shield in place.

9. Align the hinges from the front panel to the rear enclosure and reinstall the front panel.

10. Plug in the ribbon cable at J2 on the power supply/termination board.
11. Resupply power to the unit. Reset the unit to the default parameters by setting the DIP switch (S1) on the inside front cover to CCCC (Closed, Closed, Closed, Closed). Press the Mode switch on the 69105-003 PCBA (SW8). The LEDs on the front cover will flash through three sweeps. This LED sequence notifies the programmer that the unit is resetting to the default parameters. Reset the DIP switches to OOOO (Open, Open, Open, Open.) The unit will now be set to the default parameters noted in the instruction manual originally shipped with the TS958. If you wish to change any parameters, refer to the instruction manual for further details.

12. If no parameters need to be changed, close the unit. Tighten the four captive screws in the four corners of the TS958 front panel.

13. The P.C. Board in this kit includes the following new feature: the ability to mute both tones and speech messages generated from the TS958 during a voice page. GAI-Tronics has changed the EPROM used to allow muting of tones and speech messages. Therefore, Step 6 in the Model TS958 Instruction Manual, Publication 42004-070, should read as follows:

6. Mute Attenuation and Duration

The mute feature serves two functions:
1) During speech messages, tones are automatically reduced by the amount programmed for mute attenuation. During speech messages, the tone muting is active for the length of the speech message. The tones return to full volume between speech messages;

2) When the mute input is activated, tones are reduced by the amount programmed in the Mute Attenuation section. Speech messages are suspended temporarily: speech messages will resume at the beginning of the message when the mute input is deactivated. **Activation of this mute input feature is accomplished by providing a contact closure on the unit’s mute input.** For Page/Party stations to activate the mute feature (page override), additional equipment is required. For Centra-Page stations, the provision is included in the station and no additional equipment is required. During voice pages, tones will be audible just as they are during speech messages. This feature ensures that voice pages will be clearly heard over tones and that speech messages will not interfere with voice pages.

**Mute attenuation** sets the level to which tones are muted during the broadcast of programmed speech messages or live voice pages. The default setting is -7.0 dB; the setting can be changed as described in the programming instructions below. Eight different attenuation values are available. Refer to Figure 1 for additional information.

<table>
<thead>
<tr>
<th>Attenuation (dB)</th>
<th>LED pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tone off</td>
<td>5 6 7</td>
</tr>
<tr>
<td>-13.0</td>
<td></td>
</tr>
<tr>
<td>-9.0</td>
<td></td>
</tr>
<tr>
<td>-7.0</td>
<td></td>
</tr>
<tr>
<td>-5.0</td>
<td></td>
</tr>
<tr>
<td>-3.3</td>
<td></td>
</tr>
<tr>
<td>-2.0</td>
<td></td>
</tr>
<tr>
<td>-0.6</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 1. Mute Attenuation**

Because the mute function partially disables alarm tones and suspends speech messages, the maximum length of time mute can be activated for a single contact closure can be limited to 75 seconds, preventing emergency tones from being muted too long. The mute function is active until the contact closure is removed or the programmed mute duration elapses. The user may resume page override by reactivating the contact closure, resetting the mute duration. The user may also choose "No Timeout" for the mute duration. This setting allows muting of
alarm tones and suspending of speech messages for an unlimited length of time.

Mute Attenuation and Duration Programming

Instructions

1. Set S1 to CCOC. Indicator LEDs 4 through 7 will light in a pattern to designate the mute duration time. Figure 2 shows the duration time.

2. If the duration time needs to be changed, press program switches:
   • 1 to advance the time in 5 second intervals
   • 2 to advance the time in 50 second intervals
   (Note: mute duration will advance to maximum, then reset to zero.)

3. After setting mute duration, press the Mode switch once to program mute attenuation. LEDs 5 through 7 will show the current attenuation level. Refer to Figure 1 to translate the LED pattern.

4. To change the attenuation, press programming switch 3 to advance the attenuation setting (Note: the attenuation will advance to maximum, then reset to zero).

5. Press the Mode switch to save the information. Observe LED sweeps for verification. Set S1 to OOOO.

NOTE: If a mute switch fails, through a short between contacts or a short on the mute switch interconnect cable, the maximum length of time muting will occur is limited to the time programmed (5 to 75 seconds). However, if "No Timeout" is selected for the mute duration, the muting will remain active until the short is removed.
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.