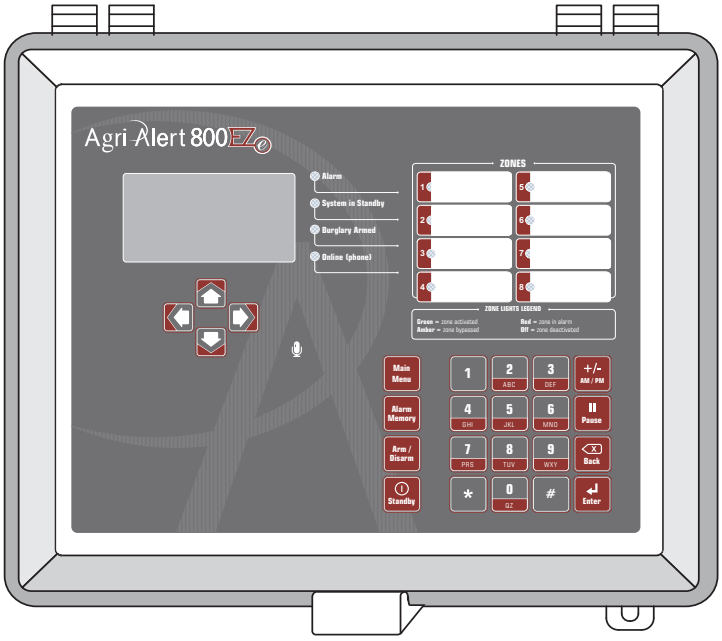
Agri-Alert 800EZe

Alarm System

User's Manual



M 890-00502 rev.15

PN895-00559 rev.15

Manufacturer:

GSI Electronics
5200, Armand-Frappier
Saint-Hubert (Qc)
Canada
J3Z 1G5

WARNINGS
The warranty can be void if this product is used in a manner not specified by the manufacturer.

Every effort has been made to ensure that this manual is complete, accurate and up-to-date. The information contained in it is however subject to change without notice due to further developments.

TABLE OF CONTENTS

1. INSTALLATION

1.1. Introduction

1.1.1. Terms of Use

Read and follow all installation, operation, and maintenance information carefully before using the product. If the product is used in a manner not specified, the protection provided by the product warranty is considered void.

1.1.2. Using the Product According to Your Function

A responsible body is an individual or group responsible for the use and maintenance of equipment, for ensuring that the equipment is operated within its specifications and operating limits, and for ensuring that operators are adequately trained.

Operators use the product for its intended function.

Maintenance personnel perform routine procedures on the product to keep it operating properly.

Service personnel are trained to work on live circuits, perform safe installations, and repair products. Only properly trained service personnel can perform installation and service procedures.

1.1.3. General Safety Usage

The following guidelines must be followed to ensure safe usage of the product:

• Installation must only be performed by qualified service personnel.

• Installation must comply with local and national safety codes.

• Repairs must only be performed by qualified service personnel.

• When replacing the fuses, use the same type and same rating as specified. Make sure the unit is disconnected from AC power.

• Do not try to operate the system if it is damaged. Disconnect the power from the unit and call your local service representative.

• Do not operate when condensation is present.

• Use of the system in a manner not specified by these instructions can impair the safety protection provided by the system. Do not operate the system outside of its rated supply voltages or environmental ranges.

• Failure to read the installation and user manuals or to comply with the warnings and references contained herein can result in serious bodily injury or controller damage.

• Do not insert metal objects into the connectors.

• Use the system only as specified.

• Carefully read all instructions.

• Do not use the system if it does not operate correctly.

• The enclosures must be closed and locked before you operate the product.

• Use only specified replacement parts.

1.1.4. General Safety Precautions

WARNING: Read and save these instructions!

Safety may be jeopardized if the equipment is used in a manner not specified by the manufacturer. Carefully read and keep the following instructions for future reference.

The room temperature where the alarm system is located must always remain between 32°F and 104°F (0°C to 40°C). For Indoor use only !

To avoid exposing the alarm system to harmful gases or excessive humidity, it is preferable to install it in a corridor.

Do not spray water on the alarm system ! In order to clean it, wipe it with a damp cloth.

The enclosure should be opened and inspected once a year for moisture. Proper care will extend the life of the system.

For Customer Use: Enter below the serial number located on the side of the alarm system and keep this information for future reference.

Model:	AA800EZe
Serial number:	_____
Date installed:	_____

1.1.5. Symbols of the Manual

Warning. Read the following text carefully; it contains important information which, if ignored, may cause the controller to operate improperly.

High Voltage. Hazard of electrical shock. Read the message and follow the instructions carefully.

Pay attention. The following text contains very useful information.

Double insulation.

Both direct and alternating current (AC/DC).

Direct current (DC).

Alternating current (AC).

Functional Ground Terminal Primarily used for functional earth terminals which are generally associated with test and measurement circuits. These terminals are not for safety earthing purposes but provide an earth reference point.

1.1.6. General Safety and Electrostatic Discharge Prevention

Electrostatic discharge (ESD) can damage equipment and impair electrical circuitry. ESD damage occurs when electrostatic components are incorrectly handled, and can result in complete or intermittent failures. Always follow ESD-prevention procedures when you remove and replace components. Wear an ESD-preventive wrist strap, ensuring that it makes good skin contact.

Connect the grounding clip to an unpainted surface of a metal chassis frame to safely ground unwanted ESD voltages.

To guard against ESD damage and shocks, the wrist strap and cord must operate correctly. If no wrist strap is available, ground yourself by touching the metal part that is grounded. For safety, periodically check the resistance value of the antistatic strap. It must be between 1 and 10 Mega ohms (Mohm).

1.2. Installation Procedure

To avoid electrical shocks and equipment damage, unplug the unit before making connections.

1. Determine where you want to install the system. You need an unswitched AC power outlet and a telephone plug nearby to operate the system.

2. Make a list of all the sensor inputs you will be using with the Agri-Alert system.

3. Mount the Agri-Alert system on the wall (see section 1.3).

4. Connect a ground wire to the ground terminal of the system (see section 1.4.9).

5. Install and connect all zone sensors and the siren. If the alarm system uses the phone, connect the phone line to the Phone Plug-in Card and then insert the card in the PHONE CARD port of the Agri-Alert. If the system uses an outside temperature sensor, connect the sensor to the Outdoor Plug-in Card and then insert the card in the OUTDOOR port of the Agri-Alert. These 2 plug-in cards are optional (see section 1.4).

6. Install the battery and then power up the Agri-Alert with the 16VAC wall transformer (note that the system will not boot when connecting the battery).

1.3. Mounting the Equipment

The Agri-Alert system should be mounted on a wall. Use 3/16" diameter screws to mount the enclosure on the wall. Fasten the black caps onto the mounting holes once the screws are tightened. Make sure the cover can be opened easily (to open the enclosure, pull the latch and lift the cover).

If outdoor connections are used, mount the enclosure as close as possible to the entry point of the outdoor wiring.

1.4. Connecting the Equipment

Electrical knockouts are located on the bottom of the enclosure for running the cables. Use a screwdriver and a hammer to punch out the holes. Additional holes made in the enclosure will void the warranty.

Strip the wires as little as possible (about 1/4") to avoid electrical shorts. Once they are connected, run them through watertight nylon cable glands at the bottom of the enclosure.

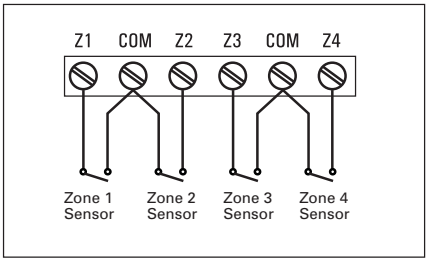
All wiring must be done by an authorized electrician and must comply with applicable codes, laws and regulations. Be sure power is off before doing any wiring to avoid electrical shocks and equipment damage.

Do not install rigid conduit into electrical knockouts. Only nylon cable glands are permitted for cable or wire fastening.

Before making the connections, pass the wires through an hermetic cable holders at the bottom of the enclosure.

1.4.1. Sensors

The terminals used for sensor inputs are numbered Z1, Z2, Z3, etc. on the removable card. Connect each sensor to a Z terminal and to the ground terminal (COM). Note that each "COM" terminal is used by two zones; for example, Z1 and Z2 share the same "COM" terminal. Make sure each sensor is connected to the proper "COM" terminal. False alarms can result if the ground wires are not properly connected.

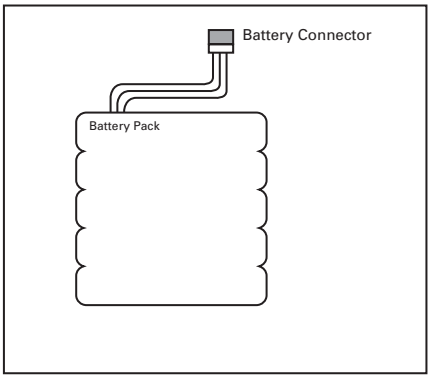


1.4.2. AC Power Connection

The terminals marked 16VAC on the main board are used for connecting the transformer. The transformer provided with the system is a 16.5VAC/40VA transformer. It must be plugged into a 120VAC 60Hz outlet. Make sure the power source is unswitched (i.e. there is no switch on the power outlet).

1.4.3. Backup Battery Connection

The Agri-Alert system uses a rechargeable 8.4V battery Ni-MH 2300 mAh (part number 112-00007). No other type of battery can be used. Plug the battery pack's male connector to the female socket located on the main board inside the enclosure. See Appendix B for normal battery life spans.

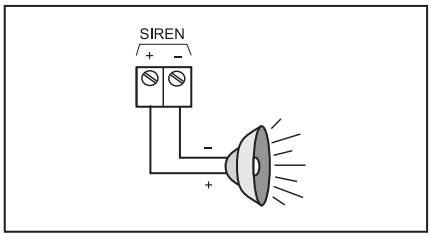


1.4.4. Siren Output

Connect the siren to the SIREN terminals on the removable circuit card. The voltage supplied is 12VDC with a maximum current of 1A. Note that the battery must be hooked up if a siren is used.

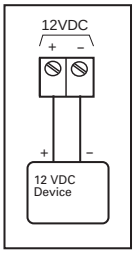
Make sure the positive wire is connected to the positive terminal of the siren. The siren circuit is monitored by the Agri-Alert system for defects and wire troubles. This may not work properly if the impedance of the siren is too high. If this is the case, you can add a 1.5KOhm resistor (1/2W) to the siren circuit as close to the siren as possible.

If no siren is used, connect a 1.5KOhm 1/2W resistor between the positive and negative terminals of the siren or disable the siren monitoring function as explained in section 3.5.



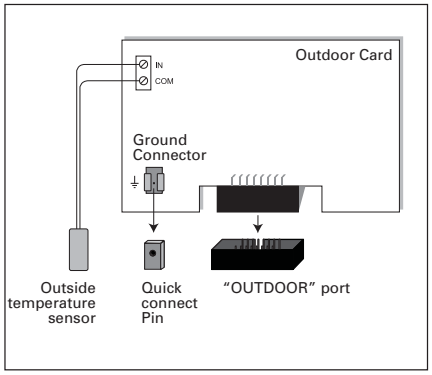
1.4.5. 12VDC Output

The terminals marked 12VDC provide 12VDC with a maximum current of 500mA. This output can be used to power other accessories such as temperature controllers or the Agri-Alert wireless module (WM-3000). In case of power failure, the battery back-up provides 12VDC to this line.



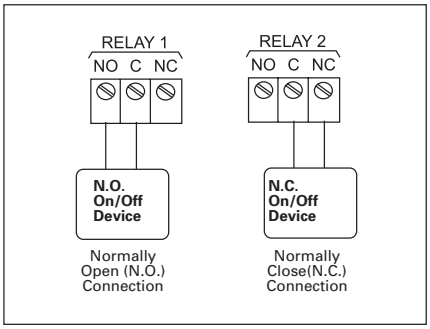
1.4.6. Outdoor Temperature Sensor

In order to use an outside temperature sensor a plug-in card must be inserted in the "Outdoor" port of the Agri-Alert (be sure to line up the ground connector of the card with the quick connect pin of the bottom board). The outdoor temperature plug-in card is optional.



1.4.7. Relays

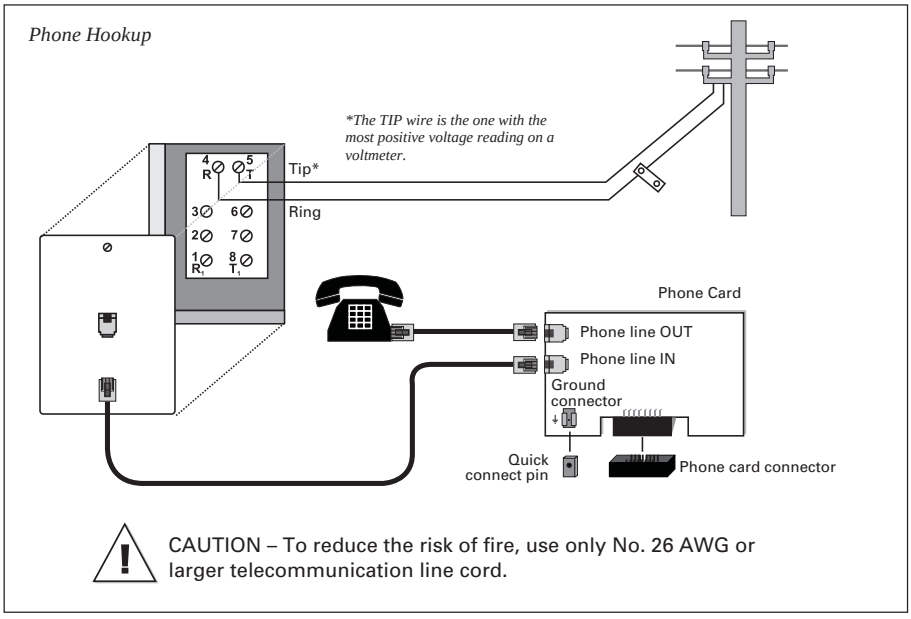
The Agri-Alert has 2 built-in relays which can be used to control various on/off devices. Relay outputs provide 24VDC or AC with a maximum current of 2A. They can either be activated manually or when an alarm occurs in a zone.



1.4.8. Phone Hookup

A plug-in card must be inserted in the "Phone Card" port of the Agri-Alert to use dialing functions (be sure to line up the ground connector of the card with the quick connect pin of the bottom board). The phone plug-in card is optional.

If dialing functions are used, the system has priority over other users when dialing out. This means the system disconnects all other phones on the line when dialing out in case of emergency.



1.4.9. Connecting the Earth Ground

The earth ground terminal of the Agri-Alert must be connected to the earth ground as follows.

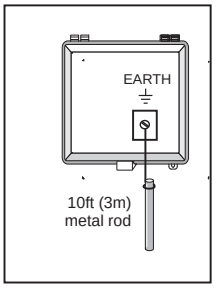
Use a rod at least 5/8 inches (16 millimeters) in diameter at least 10 feet (3 meter) long. The rod must have a clean metal surface free of paint, enamel or other nonconducting substances. Drive the rod at least 10 feet (3 meters) into the ground. If the bedrock is more than 47 inches (1.2 meters) deep, drive the rod into the ground to bedrock level and bury any remainder horizontally at least 2 feet (600 millimeters) below ground level. If the bedrock is less than 47 inches (1.2 meters) deep, bury the rod horizontally at least 2 feet (600 millimeters) below ground level (ref. Article 10-702, 3d of the Canadian Electricity Code C22.10-99).

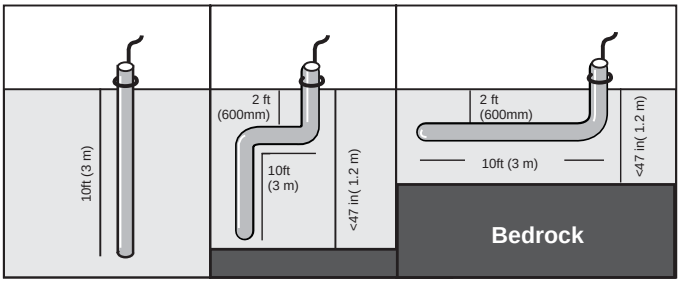
The rod must be connected to the wire described above. It is recommended to let the rod going out of the ground to connect it. The wire length must not exceed 50 feet (15 meters).

⚠ ***IMPORTANT: The earth ground terminal must be connected to a proper ground to protect the electronic components from damage due to lightning surges and electrostatic discharges. Do not use the electrical ground for this purpose***

⚠ ***If outdoor connections are used, mount the enclosure as close as possible to the entry point of the outdoor wiring***

⚠ ***A faulty earth ground connection immediately voids the system warranty without further notice.***





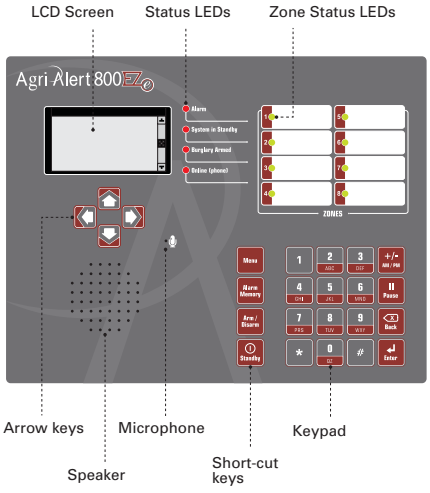
1.5. Power Up the System

After executing the paragraph 1.4, the system is ready to power up for the first time. Read other paragraphs before powering the system for its configuration.

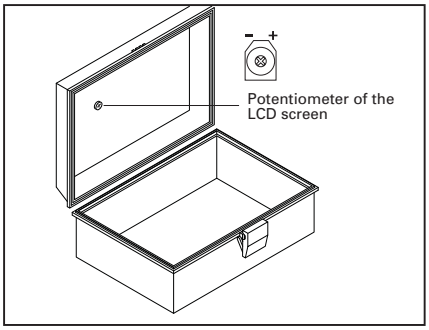
The power up is done by plugging the wall transformer into a 120VAC 60Hz outlet.

2. USER INTERFACE

2.1. Front Panel



Graphic LCD Screen: A graphic LCD screen is used to provide and collect information. The contrast of this screen can be adjusted with the potentiometer located behind the display. Turn the potentiometer with a screwdriver to adjust the contrast of the screen.



Arrow Keys: These keys are used to step through menu items.

Speaker: The speaker delivers the system identification and alarm messages.

Integrated Microphone: The microphone is used to record ID messages and gives an on-site listening input.

Keypad: The keypad is used to enter data and to enable/disable the various functions of the system.

Hot Keys: The hot keys bring you to specific pre-defined menus. These menus are not accessible from the main menu.

Zone Status LEDs:

Zone LED	Meaning
Red	Zone is in alarm
Green	Zone is activated
Amber	Zone is bypassed
Off	Zone is disabled

System LEDs:

System Status LED	Meaning
Alarm	This LED is On when one or more alarm conditions are detected (the individual zone LED on the right side of the panel tells which zone is in alarm).
System in Standby	This LED is ON when the Agri-Alert system is in standby mode (the system does not monitor alarm conditions). It turns OFF when normal monitoring is resumed.
Burglary Armed	This LED is ON when the burglar zone is armed.
Phone	This LED is ON when the system uses the phone line.

2.2. Modifying a Parameter

Use the numeric keypad and/or the up and down arrow keys to modify the value of a parameter and then press Enter to validate the new value.

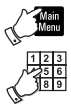
A password may be required to change the value of a parameter. Refer to section 3.2.2 to enter/change your password or to disable the protected access.

2.3. Navigation

Menus items can be accessed with the arrow keys or by pressing the proper number on the numeric keypad. A highlight bar indicates which item is selected on screen. You can move this bar up and down using the arrow keys and then press *"Enter"* to select the menu item. Press *"Back"* to exit from a menu.

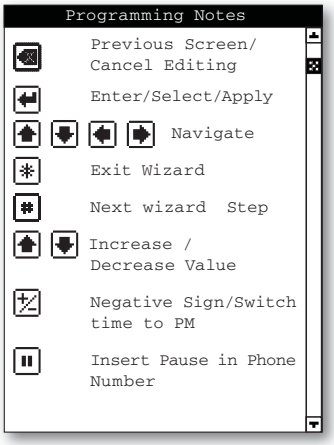
To get further information about the navigation process, select the help menu:

1. Select:



- **Main Menu**
- **Help Menus**
- **Programming Notes**

The system gives the meaning of all possible navigation icons:

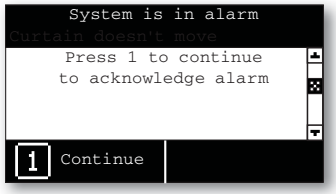


2.4. Acknowledging an Alarm

The Agri-Alert knows an alarm message has been received when a user acknowledges the alarm. There are several ways of doing this. If you are on-site when an alarm is detected, enter your password (if the password feature is enabled) or simply press <1> key on the front panel to acknowledge the alarm. You can also acknowledge an alarm over the phone when the Agri-Alert system reports the alarm or you can call the Agri-Alert system yourself between phone dialouts if the intercall time is greater than zero (see section 2.5).

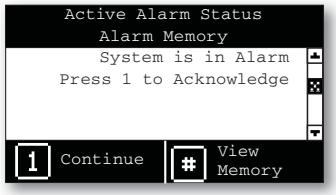
Follow this sequence to acknowledge an alarm from the keyboard:

1. If this screen is not already displayed, press the **Alarm Memory** button.



2. Press 1 to continue.

3. If you have not been identified by the system yet, the Agri-Alert may prompt for a password. Type in your password and then press Enter.



4. Press "#" to get details about the active alarm situation or type 1 to acknowledge it right away. Note that the dialout sequence automatically starts when an alarm is set off (if the zone in alarm uses the dialout function).

The siren stops ringing when the alarm is acknowledged. If the alarm is not acknowledged at the end of the dialout sequence, the Agri-Alert automatically acknowledges it and stops the siren.

2.5. Telephone Interface

The Agri-Alert system sends alarm reports over the phone. You can also call the system to get some status reports. When calling the Agri-Alert, make sure the *"Phone Call-in"* parameters are set properly (see section 4.7).

2.5.1. Alarm Report Call

When an alarm occurs, the Agri-Alert system tries to reach you by phone and dials all numbers of the dialout sequence (see chapter 4). It puts an end to the dialout sequence when the alarm is acknowledged.

The following section outlines the dialog session when a number is reached. Note that a touch-tone phone is required to respond to the system prompts and that the system automatically hangs up when the session is over.

2.5.2. Status Report over the Phone

You can dial into the Agri-Alert system and obtain status reports over the phone. A touch-tone phone is needed to respond to the system prompts.

The following section outlines the dialogue session when the Agri-Alert system answers the call. The system automatically hangs up when the status report is finished.

2.5.3. Acknowledge upon call-back

If the parameter "Ack. on callback?" is set to "Yes" (see section 4.7), you can acknowledge an alarm without using the touch-tones. The following sequence should be respected:

1. The Agri-Alert calls you to report an alarm.

2. Listen to the complete message and wait until the Agri-Alert hangs up.

3. Call the Agri-Alert back within 30 seconds from hanging up.
- As soon as the Agri-Alert answers, the alarm will automatically be acknowledged.
- You can then hang up or wait on the line to listen to a complete status report.

Telephone Session – Alarm Call

Hello, this is Agri-Alert

ID message of the Agri-Alert system (if applicable)

Description of the alarm condition
(e.g.: "Alarm Zone 1").

On-site Listening
[Microphone input is sent over the phone for on-site listening if enabled].

To acknowledge the alarm message, enter your password and press Star (*)

The user enters a four-digit password on the phone keypad and presses start (*). If an incorrect password is entered, the system replies *"Wrong password"*; if it is correct, the system replies *"OK"*. The system automatically acknowledges the alarm when a correct password is entered.

Main Menu:
- For a complete status report, press 1;
- For a status report on a particular zone, press 2;
- To select relay, press 3;
- For on-site listening, press 4;
- To activate/bypass a zone, press 5;
- For a new selection, press 8;
- To hang-up, press 0.

The user selects the desired menu on the keyboard.

Telephone Session Status Report

Hello, this is Agri-Alert

ID message of the Agri-Alert system (if applicable)

Enter your password and press star (*)

The user enters a four-digit password on the phone keypad and presses start (*). If an incorrect password is entered, the system replies *"Wrong password"*; if it is correct, the system replies *"OK"*.

Main Menu:
- For a complete status report, press 1;
- For a status report on a particular zone, press 2;
- To select relay, press 3;
- For on-site listening, press 4;
- To activate/bypass a zone, press 5;
- For a new selection, press 8;
- To hang-up, press 0.

The user selects the desired menu on the keyboard.

Complete Status Report

[...]

Status of each zone:
- Activated;
- Bypassed;
- Deactivated;
- Not installed;
- Alarm (if the zone is in alarm);
- Temperature (if this is a T° zone).

Status of the system:
- Low battery / Battery OK;
- System power down / System power OK;
- System trouble;
- Relay 1-2 activated / deactivated.

[System returns to the main menu]

Zone Status Report

[...]

Enter zone number and press star (*).

The user types in the zone number on the keypad and presses star (*).

Status of the chosen zone:
- Activated;
- Bypassed;
- Deactivated;
- Not installed;
- Alarm (if the zone is in alarm);
- Temperature (if this is a T° zone).

[System returns to the main menu]

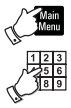
3. SYSTEM INITIALIZATION

3.1. Installation Wizard

The Installation Wizard guides you through the process of initializing your Agri-Alert system. When it is launched, the Wizard displays all setup menus in turn. You can choose to perform or to skip each programming step and can exit from the Wizard at any time.

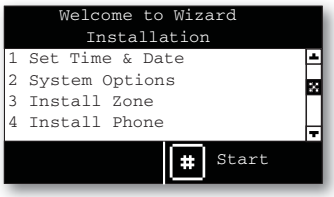
To run the Installation Wizard:

1. Select:



- **Main Menu**
- **Install Programming***
- **Use Program Wizard**

**Accessible with the Installer or Master password only (see section 3.2).*



2. All programming steps are displayed.

3. Press the pound key "#" to launch the Installation Wizard or press Back to cancel.

4. Follow the prompts to configure your Agri-Alert system.

Programming steps — Here is a list of all programming steps of the Installation Wizard. Refer to the proper section of this manual to get information about each of them.

• Time and date (section 3.3)

• System options
  Units of measurement (section 3.4)
  Volume: speaker & phone line (section 3.6)
  Phone line volume (section 3.6)
  Passwords (section 3.2)

• Setup Zones (section 3.7)

• Zone's Vocal Identification (section 3.7.7)

• Outdoor Temp. compensation (sec. 5.3)*
** Accessible if a zone uses the outside temperature sensor (sec. 3.7).*

• Phone numbers (sections 4.3 & 4.4)

• Auto-Test Schedule (section 4.9)

• Burglar arming options (section 5.4)

• Siren options (section 3.5)

• Zone's Activation (section 3.7.8)

3.2. Password

The Agri-Alert can use a password protection to limit access to certain menus and can identify 4 different levels of users (the password protection is optional):

LEVEL 1– System:
This user level is automatically selected after 5 minutes of inactivity. It gives a read-only access to the current condition menu and to the system version menu.

LEVEL 2 – User:
This user level gives access to all functions of the controller except for the *"Install Programming"* menu. Up to 8 different password can be assigned to the users.

LEVEL 3 – Installer:
This user level gives a read/write access to all functions of the system, except for the event buffer .

LEVEL 4 – Master:
This user level gives a read/write access to all functions of the system, including the event buffer menu.

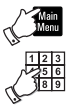
Default Passwords:

Master	0800
Installer	0801
User 1	----
User 2	----
User 3	----
User 4	----
User 5	----
User 6	----
User 7	----
User 8	----

IMPORTANT
Choose easy-to-remember passwords and write them down in a safe place!

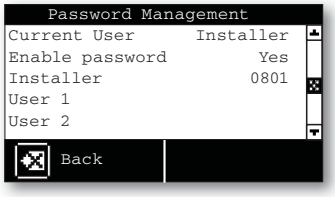
3.2.1. Setting the Passwords

1. Select:



- **Main Menu**
- **System Auxiliaries**
- **Password Management***

**Accessible with the Installer or Master password only (see section 3.2).*



2. Set the following parameters:

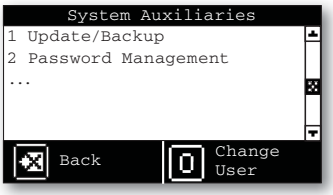
Enable password — Select *"Yes"* to use the password protection or select *"No"* to disable it.

Users — Use the numeric keypad to specify the password of each users.

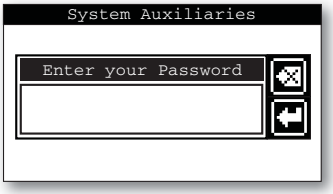
3.2.2. Changing the User Level

1. Select:

- **Main Menu**
- **System Auxiliaries**



2. Press "0" to change the user level in use.

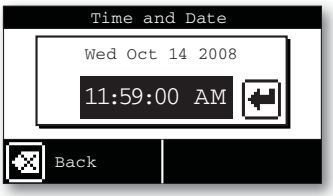


3. Enter the password of the desired user.

3.3. Time & Date

1. Select:

- **Main Menu**
- **System Auxiliaries**
- **User Preferences**
- **Time and Date**



2. Press Enter to start editing the time and date.

3. Set the following parameters:
Use the arrow key and/or the numeric keypad to change the value of the parameter displayed on screen. When it is set, press Enter to validate the new value and to step to the next parameter.

Month, Day & Year;

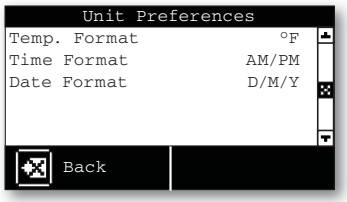
Time of day — Use the numeric keypad to enter the time of day. If required, press the AM/PM button to change the AM/PM status.

3.4. Units of Measurement

1. Select:

- **Main Menu**
- **System Auxiliaries**
- **User Preferences**
- **Units**

Use the arrow keys to select the desired parameter on screen and then, use the arrow keys and/or the numeric keypad to change its value. When the parameter is set, press Enter to validate the new value.



2. Set the following parameters:

Temperature Units — Celsius (°C) or Fahrenheit (°F).

Time Format — AM/PM or 24-hour.

Date Format — Select the proper date format (Year/ Month/ Day).

3.5. Siren

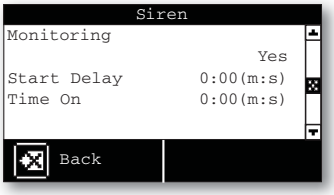
The system activates the siren output when an alarm is set off. The procedure below allows the Agri-Alert to use the siren output.

It is possible to disable the siren output in specific zones (see sec. 3.7.6).

1. Select:

- **Main Menu**
- **View/Modify**
- **Siren Settings**

Use the arrow keys to select the desired parameter on screen and then use the arrow keys and/or the numeric keypad to change its value. When the parameter is set, press Enter to validate the new value.



2. Set the following parameters:

Monitoring — Select "*No*" if no siren is connected to the siren output. This way, the Agri-Alert will never send a "*defective alarm*" error. By default, the siren's monitoring feature is enabled.

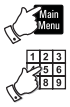
Start Delay — This parameter is used to postpone the moment at which the Agri-Alert activates the siren when an alarm is detected. It ranges from 0 to 15 minutes. The default is 0 minute.

Time ON — When an alarm is declared, the siren sounds during this length of time. It ranges from 1 to 15 minutes and is set to 5 minutes by default.

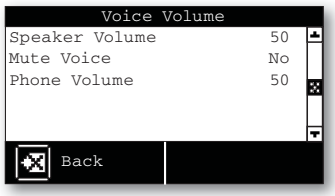
3.6. Volume

When an alarm condition is validated, an alarm message is immediately delivered through the unit speaker. You can adjust the volume of the system's voice and can turn the speaker on or off. By default, the mute function is disabled and the speaker enabled.

1. Select:



- **Main Menu**
- **System Auxiliaries**
- **User Preferences**
- **Voice Volume**



2. Set the following parameters:

Speaker Volume — Set the speaker volume to the desired intensity.

Mute Voice — Select *"Yes"* to mute the system's voice or select *"No"* to allow spoken message to be delivered through the speaker. If an alarm situation occurs while the voice is mute, the system sends out an alarm sound instead of a vocal message.

Phone Volume — This parameter represents the volume at which the messages are delivered over the phone. Do not increase this value unless otherwise informed by your dealer. By default the phone volume is set to 50.

3.7. Configuring the Zones

3.7.1. Introduction

The Agri-Alert system is a device used to detect alarm conditions. It can monitor several types of sensors and can launch a dialout sequence each time an alarm is detected on one of its inputs.

When an alarm is detected, the system reports the alarm on-site and starts the dialout sequence. It maintains the alarm active up until a user acknowledges it, either on-site or on the phone. In addition, the Agri-Alert stores all relevant information regarding the incident: the zone number, the type of alarm, the moment at which it occurred/was acknowledged and the identity of the user who has acknowledged it.

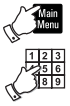
Zone Definition:
A zone is an input configured to respond to the type of sensor connected to it. In all, the Agri-Alert can monitor 8 different zones on which dry contact, dry contact burglar, or temperature sensors can be connected.

Note that when you reconfigure a zone, the system automatically deactivates this zone input. Refer to section 3.7.8 to reactivate it.

3.7.2. Number of Zones & Outside T° Sensor

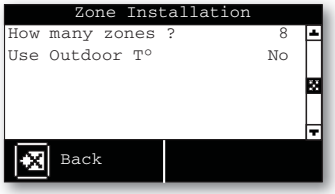
The Agri-Alert can monitor up to 8 different zone inputs and 1 outside temperature sensor. This section explains how to activate these inputs.

1. Select:



- **Main Menu**
- **Install Programming***
- **Program Zones**

**Accessible with the Installer or Master password only (see section 3.2).*



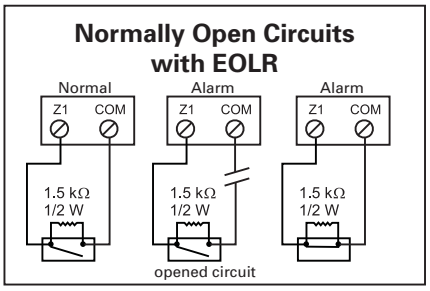
2. Set the following parameters:

How many zones ? — Select how many zones are required (from 1 to 8 zones).

Use Outdoor Temperature Sensor ? — Select *"Yes"* if an outside temperature sensor is connected to the Agri-Alert.

3.7.3. Dry Contact Inputs & Burglar Zone Settings

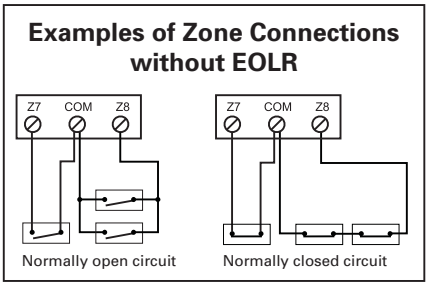
Dry contacts can be either normally open (NO) or normally closed (NC) circuits. In addition, they can be configured for an end of line resistor (EOLR). Adding an end of line resistor will help the system detect wiring problems. This is illustrated in the figure below. In the center diagram, an open wire has occurred. The system detects this by reading the resistance on the circuit and sets off an alarm when this happens. The figures below shows three possible states for a normally open circuit with EOLR.

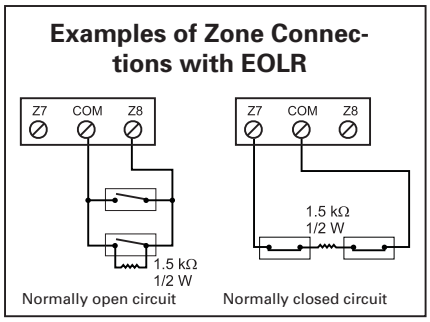


The following figures show different zone connection examples. Note that if you add an EOLR to a circuit, the resistor must be connected to the sensor that is furthest from the Agri-Alert system.

Dry Contact Burglar Input

Dry contact inputs can be configured as burglar zones. These zones are armed or disarmed as a group using a password and they are connected just as regular dry contact inputs. Burglar zones can be configured in 2 different ways:





1. Instant burglar zone: in this type of zone, alarms are declared as soon as they are detected.

2. Delayed burglar zone: in this type of zone, alarms are declared only after an entry delay has elapsed. This way, the authorized user has time to disarm burglar zones before an alarm is declared (the delay is common to all delayed burglar zones). Similarly, all zones are armed after the exit delay has elapsed.

When the system is arming, the speaker starts beeping and the Agri-Alert displays a countdown of the exit delay. After the exit delay has elapsed, the *"Burglary Armed"* pilot light turns red, the system arms all burglar zones and sets off an alarm as soon as an alarm situation occurs in any burglar zone.

If an alarm occurs in a burglar zone with an entry delay, the Agri-Alert displays a countdown of the entry delay. The speaker beeps during this delay and stops beeping when the key sequence is entered. If no one has disarmed the system after the entry delay has elapsed, an alarm is declared; if someone has correctly disarmed the system, all burglar zones are disarmed at once and the *"Burglary Armed"* pilot light turns off.

Assigning Dry Contact & Burglar Zones

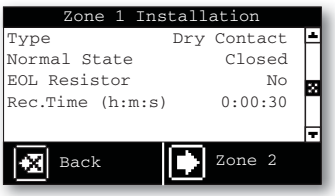
1. Select:

- **Main Menu**
- **Install Programming***
- **Program Zones**

**Accessible with the Installer or Master password only (see section 3.2).*

2. Press Next [#] to display a table showing all zones in use.

3. Use the numeric keypad to select the desired zone number.



4. Set the following parameters:

Type of Zone — Select *"Dry Contact"* to assign a regular dry contact input ; select *"Delayed Burglar"* to assign a dry contact burglar zone which uses a delay or select *"Instant Burglar"* to assign a dry contact burglar zone which uses no delay.

Normal State (NO / NC) — Select the normal state of the zone contact: Normally open or normally closed contact.

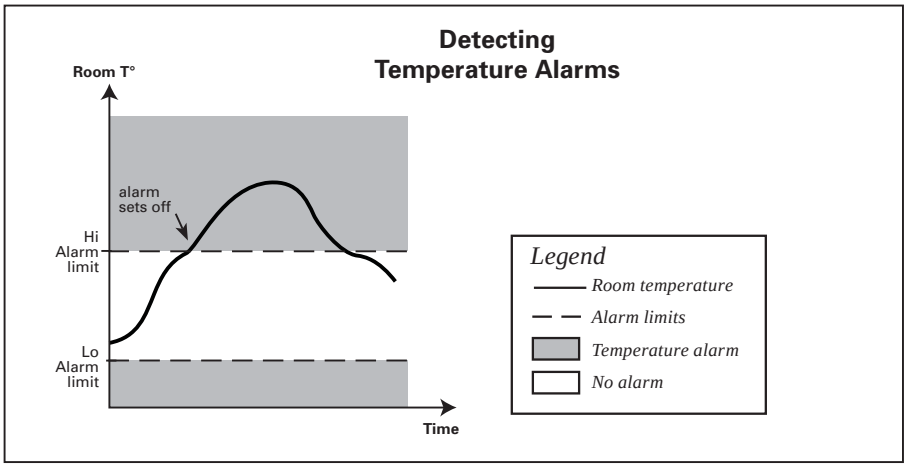
EOL Resistor — Specify if the input has an end of line resistor or not.

Recognition Time — Determine during how much time the alarm condition must be maintained before it constitutes a valid alarm situation. **For regular dry contact inputs only.*

Refer to section 5.4 to set the entry and exit delays of burglar zones.

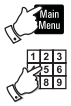
3.7.4. Temperature Zone Settings

A temperature zone responds to changes in temperature readings from a sensor. The system sets off an alarm if the temperature of a zone exceeds the user-defined temperature range (the acceptable temperature range is bounded between a low and a high temperature set point).



Assigning Temperature Zones

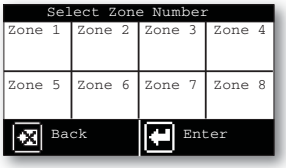
1. Select:



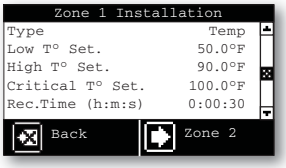
- **Main Menu**
- **Install Programming***
- **Program Zones**

**Accessible with the Installer or Master password only (see section 3.2).*

2. Press Next [#] to display a table showing all zones in use.



3. Use the numeric keypad to select the desired zone number.



4. Set the following parameters:

Type of Zone — Select *"Temp"* to assign a temperature zone.

Low / High Set Points — Set the lower and upper values of the normal temperature range. The low set point ranges from -60°F to 150°F (-50°C to 65°C); the high set point ranges from the low set point to 150°F (65°C).

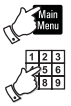
Critical Temperature — This is the absolute temperature limit for room temperatures. It is used in conjunction with the outdoor temperature compensation feature. When the room temperature reaches this point and the outdoor temperature compensation feature is enabled, an alarm is set off, no matter what the outdoor temperature is. The critical temperature ranges from the high set point to 150°F (65°C) with an accuracy of 0.1°F (0.1°C). Enter the critical temperature and press Enter. To enter a negative value, use the "+/-" key. * *Accessible if the outside temperature sensor is enabled in section 3.7.2.*

Recognition Time — Determine during how much time the alarm condition must be maintained before it constitutes a valid alarm situation.

3.7.5. Assigning a Relay to a Zone

The Agri-Alert has 2 relay outputs to activate different devices when an alarm occurs in a zone. This section shows how to assign a relay to a zone.

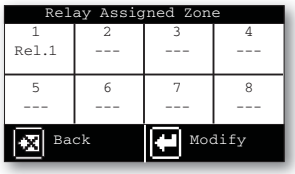
1. Select:



- **Main Menu**
- **Install Programming***
- **Program Auxiliaries**
- **Relay Assigned Zone**

**Accessible with the Installer or Master password only (see section 3.2).*

2. Press the zone number on the keypad to change the relay assignment of that zone.



3. Select *"Rel.1"* or *"Rel.2"* to assign the 1st or 2nd relay to the selected zone; select *"None"* if no relay is assigned to that zone.

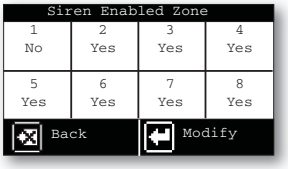
3.7.6. Disable the Siren

This function allows disabling the siren in specific zones. By default, the siren is enabled on all zones.

1. Select:

- **Main Menu**
- **Install Programming***
- **Program Auxiliaries**
- **Siren Enabled Zone**

**Accessible with the Installer or Master password only (see section 3.2).*



2. To change the siren status on a zone, simply press the zone number on the keypad. Select *"Yes"* to use the siren on the zone or *"No"* to disable it.

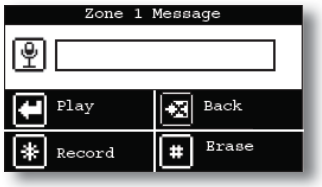
3.7.7. Zones' Vocal Identification

When giving status reports and alarm messages, the system identifies the zones with a voice recording provided by the user. This section shows how to record these messages.

1. Select:

- **Main Menu**
- **System Auxiliaries**
- **User Preferences**
- **Voice ID**
- **Zone Messages**

2. Use the arrow keys to select the desired zone.



Recording a New ID Message — To record a new message, press star (*) and record the ID message (8 seconds maximum). The Agri-Alert then plays the new message over the speaker.

Original ID Message — Press the pound key "#" to retrieve the original ID message.

3.7.8. Initial Activation of the Zones

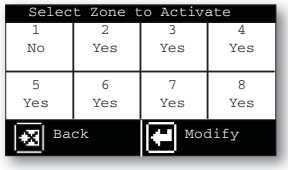
This section explains how to activate the zones when running the system <u>for the first time</u>. If you want the Agri-Alert to stop monitoring alarms in a zone afterwards, use the "Bypass Zone" function instead of deactivating the zone (see sec. 5.5.1).

After having been initialized, all zones are disabled. To start using them, you must activate each zone as shown below (except for burglar zones: this type of zone is automatically activated). The pilot light of a disabled zone is off on faceplate of the controller.

1. Select:

- **Main Menu**
- **Activate / Bypass**
- **Activate Zones**

The zones that have been initialized are displayed on screen. Refer to section 3.7.1 to create new zones.



2. Press the zone number on the keypad to change the zone status. Select *"Yes"* to activate it.

3.8. System Setup

3.8.1. Standby Mode

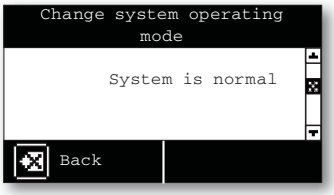
When it is in standby mode, the Agri-Alert stops monitoring all alarm inputs and the *"System in Standby"* LED turns on the front panel. It also removes access to most of its menus.

1. Select:

- **Main Menu**
- **Press the Standby key**

**Accessible with the Installer or Master password only (see section 3.2).*

2. Press Enter to select the desired system status.

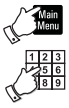


3. Use the arrow keys to select the normal mode or standby mode. Press Enter again to validate.

3.8.2. System's Vocal Identification

When giving status reports and alarm messages, the system identifies itself with a voice recording provided by the user. This section shows how to record this message.

1. Select:



- **Main Menu**
- **System Auxiliaries**
- **User Preferences**
- **Voice ID**
- **System Message**

Recording a New ID Message — To record a new message, press star (*) and record the ID message (8 seconds maximum). The Agri-Alert then plays the new message over the speaker.

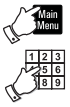
Original ID Message — Press the pound key "#" to retrieve the original ID message.

3.8.3. High Noise Alarms

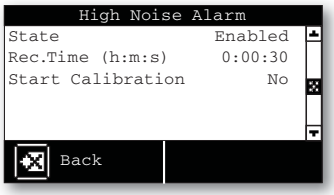
The Agri-Alert can trigger an alarm if the level of noise around surrounding it gets too high. High noise alarms can be used warn you if a generator's motor starts running for instance.

In order to use high noise alarms, you must calibrate the regular level of sound surrounding the Agri-Alert and then specify the recognition time for this type of alarm.

1. Select:



- **Main Menu**
- **View/Modify**
- **High Noise Alarm**



2. Set the following parameters:

State — Select *"Enabled"* to use high noise alarms or select *"Disabled"* to disable this function.

Recognition Time — Determine during how much time the alarm condition must be maintained before it constitutes a valid alarm situation.

Start Calibration — Select *"Yes"* for the Agri-Alert to record a sample of the regular sound level surrounding it (this process takes about 10 seconds). Once the calibration is over, the Agri-Alert starts monitoring the level of sound and triggers an alarm if it gets higher than the sample sound for a period of time exceeding the recognition time.

3.8.4. Relay Status

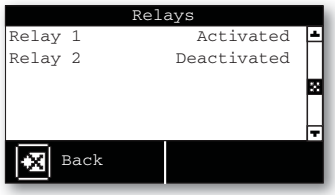
The Agri-Alert has 2 built-in relays which can be used to control various on/off devices. Relay can either be activated manually (i.e., the user activates or deactivates it manually) or they can be activated only when an alarm occurs in a zone. Note that it is not possible to change the status of a relay that is associated with a zone.

Refer to section 3.7.5 to assign a relay to a zone.

The following steps allow seeing the current status of the relays. Their status can be change if they are not assigned to a zone.

1. Select:

- **Main Menu**
- **View/Modify**
- **Output Relays**



The status of both relays is displayed. If a relay is not assigned to a zone, you can change its status by pressing Enter and using the up or down-arrow key.

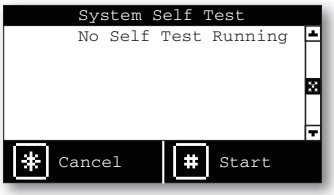
3.8.5. System Self Test

The Agri-Alert system has the capability of testing some of its functions. To start the test, select the following menus:

1. Select:

- **Main Menu**
- **System Self Test**

2. Press [#] to launch the test.



Outline of the test :

1. Test LEDs — The system makes each zone LED go from red to green. It then turns on each status pilot light in red.

2. Test LCD — The system tests the LCD display. The LCD backlight is turned off and the display displays a rectangular pattern.

3. Test Siren — Two short beeps are sent to the siren (if a siren is hooked up).

4. Test Relays — The Agri-Alert opens and closes relays 1 and 2.

5. Test 12 VDC Output — The Agri-Alert activates and then deactivates the 12VDC output.

6. Audio (Record / Play) — The Agri-Alert records surrounding sounds while the message "Record" is displayed. It then plays the recorded sound through the speaker.

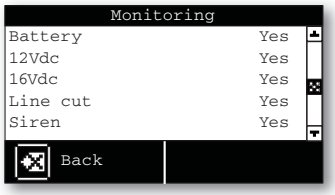
7. Dialout Sequence — The system launches the dialout sequence.

3.8.6. System Alarm Monitoring

The Agri-Alert generally launches the alarm and the call sequence when it detects an internal system failure. It is possible to disable the alarm monitoring for some of these failures.

1. Select:

- **Main Menu**
- **Install Programming***
- **Program Auxiliaries**
- **Monitoring**



2. Set the following parameters:

Battery / 12Vdc Output / 16Vac Supply / Line cut / Siren — Select *"No"* if you do not want the alarm to sound when one of these system failure occurs.

3.8.7. Software Version

The following menu gives the actual version of your Agri-Alert software.

1. Select:

- **Main Menu**
- **System Auxiliaries**
- **Software Version**

4. COMMUNICATION PARAMETERS

4.1. Introduction

This chapter shows how to configure your Agri-Alert system so that it can transmit alarm or status reports over the phone line. For example, the user can call the Agri-Alert system in order to obtain a status report in the form of voice messages. The system can also be programmed to dial a series of phone numbers and deliver a voice message when an alarm situation occurs. Make sure to set your communication parameters properly for these features to work with your phone system.

Phone communication is only possible if a plug-in card is inserted in the "PHONE CARD" port of the Agri-Alert (sec. 1.4.8). This card is optional.

4.2. Dialout Sequence

When an alarm is set off, the Agri-Alert launches the dialout sequence (sequence of phone numbers that are called in case of an alarm). After a call is answered, the Agri-Alert either delivers the alarm message as a voice message or as a pager code.

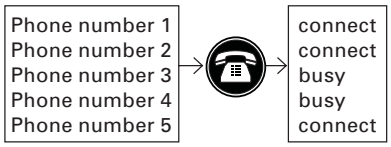
The system puts an end to the dialout sequence when the alarm is acknowledged by a user (see section 2.4). Otherwise, it keeps dialing and repeats the dialout sequence following the number of repetitions defined by the user.

If a phone number is busy, the Agri-Alert puts it at the bottom of the list and calls all busy numbers at the end of the sequence (the number of time busy numbers are called is defined by the user).

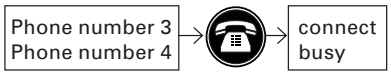
Dialout Sequence Example

Settings:
# of phone numbers = 5;
Call repetitions = 2;
Busy tries = 2

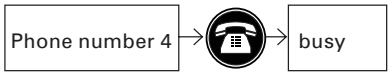
Start of Dialout Sequence 1



The Agri-Alert calls all phone numbers and places busy numbers at the bottom of the list. It calls back all busy numbers at the end of the sequence (Busy Tries parameter=2).



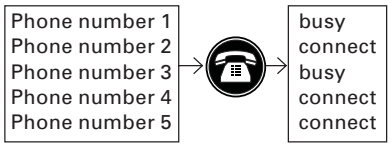
Since phone number #4 is still busy and the Busy Tries parameter is set to 2, the Agri-Alert calls phone number #4 once again.



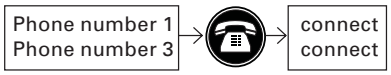
Phone number #4 is still busy. It is not redialed since the number of busy line tries has been reached.

Since the number of call repetitions is set to 2, the Agri-Alert repeats the whole dialout sequence from the start:

Start of Dialout Sequence 2



The Agri-Alert calls all phone numbers and places busy numbers at the bottom of the list. It calls back all busy numbers at the end of the sequence (Busy Tries parameter=2).



End of Dialout Sequence

The Agri-Alert puts an end to the dialout sequence when the number of call repetition is reached or if someone acknowledges the alarm (the alarm can either be acknowledged on the phone or on site). If no acknowledgment is received for the alarm at the end of the dialout sequence, the Agri-Alert automatically acknowledges it.

4.3. Dialing Information

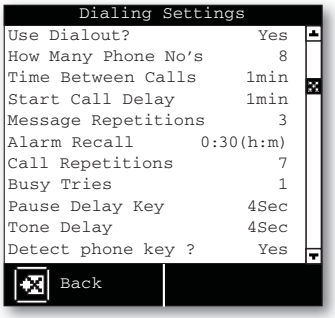
The following dialing parameters are used to establish communications over the telephone network when the dialout sequence is used.

Phone communication is only possible if a plug-in card is inserted in the "PHONE CARD" port of the Agri-Alert (sec. 1.4.8). This card is optional.

1. Select:

- **Main Menu**
- **Install Programming***
- **Program Dialer**

** Accessible with the Installer or Master password only (see sec. 3.2).*



2. Set the following parameters:

Refer to the previous section to get further information about the dialing sequence.

Use Dialout ? — Select *"Yes"* to use the dialout sequence. The dialout sequence allows the Agri-Alert to call all stored phone numbers when there is an alarm.

The dialing parameters below are accessible if the dialout option is enabled above.

How Many Phone Numbers? — When an alarm occurs, the Agri-Alert calls up the phone numbers in memory to report the alarm situation. It can either communicate the alarm condition with a voice message or with a pager code. The Agri-Alert can memorize 8 phone numbers and the order in which they are stored defines the order of the dialout sequence (i.e. the first number stored is the first number called when an alarm occurs).

Time Between Calls — After having dialed a phone number, the Agri-Alert waits until the end of this delay before calling the next number in the dialout sequence. This delay allows a user to reach the system by phone when the system is between 2 calls (if the system was continuously dialing out, it would not be possible to reach it by phone to acknowledge an alarm). This parameter ranges from 0 to 59 minutes. By default, it is set to 1 minute. If the parameter "Acknowledge upon callback" is set to Yes, the lower limit of "Time Between Calls" is automatically set to 1 minute.

Start Call Delay — This parameter represents the time left before the Agri-Alert launches the dialout sequence when an alarm situation occurs. It allows someone on-site to acknowledge an alarm before the dialout sequence starts. This parameter ranges from 0 to 59 minutes. By default, it is set to 1 minute.

Message Repetitions — This is the number of times a voice message is delivered by the system when an alarm condition is reported. It applies to the messages given over the phone and on the unit speaker. The number of repetitions ranges from 2 to 15 times and is set to 3 by default. If the parameter "Acknowledge upon callback" is set to Yes, the higher limit of "Message Repetitions" is automatically set to 2.

Alarm Recall Time — The alarm recall time is the time left before the Agri-Alert restarts the dialout sequence when an alarm condition that has been acknowledged is still valid. The recall time is set to 30 minutes by default.

Call Repetitions — When an alarm is validated, the system starts calling the phone numbers stored in memory to deliver the alarm message. The # of Call Repetitions determines the number of times the system repeats the dialout sequence. The value ranges from 1 to 7 times. The default is 7.

Busy Tries — This parameter represents the number of times a phone number is called when the line is busy. It applies to all phone numbers in the dialout sequence and ranges from 0 to 3 tries. The default is 1 try. When a phone number is busy, the system places it at the bottom of the list and tries reaching it again at the end of the dialout sequence.

Pause Delay Key — This parameter is associated with the Pause key. The Pause key is used to introduce a pause in a telephone number when dialing. The Pause Delay is the length of the pause. For example, if you need to exit a local phone network before reaching an outside line, you can use the Pause key after entering the access code (usually '9' — see section 4.4). The range is from 1 to 255 seconds. The default is 4 seconds.

Tone Delay — This is the time the system waits after hooking up to a line before dialing a number. This ensures that the line is ready before dialing. The system can be set to wait from 1 to 15 seconds after hookup. The default is 4 seconds.

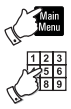
Detect phone key ? — Pressing a key on the touch tone can be taken into account or can be ignored while the system sends a vocal message over the phone. Select *"Yes"* to enable the touch tone during the message transmission or select *"No"* to block it. In either case, the dialer is enabled after the message is delivered.

Dial out priority ? — Select "Yes" to prioritize the dial out sequence by blocking the calls made to the Agri-Alert while the sequence is on or select "No" to allow the Agri-Alert to pick up a call during its dial out sequence.

4.4. Phone Numbers

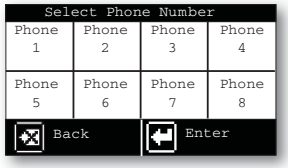
The Agri-Alert uses the phone numbers to report alarm conditions. It can either send the alarm condition by means of a voice message or on a pager. The order in which phone numbers are stored defines the order of the dialout sequence, i.e. the first number stored is the first number called when an alarm occurs.

1. Select:

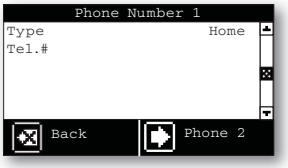


- **Main Menu**
- **View / Modify**
- **Phone Numbers**

2. Use the numeric keypad to select the desired phone number.



3. Set the following parameters:



Type — Press Enter to select the type of system associated with the selected number:

- **Home —** When this type of number is called, the system delivers a voice message describing the alarm condition.

- **Cellular —** When this type of number is called, the system delivers a voice message describing the alarm condition.

- **Pager —** When this type of number is reached, the system sends a pager code on the pager screen. The code is associated with the type of alarm. **Refer to the following section to get further information about the pager.*

Telephone Number — Type in the phone number. Special characters such as the Asterisk (*) or Pound (#) can also be included in a phone number. It is also possible to add one or many pauses in the dialing (the pause is identified by letter "P" in the phone number):

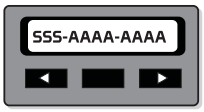
Inserting pauses in a phone number — Inserting a pause is useful if you need to enter an access code to reach an external phone line (e.g., if you have to dial "9" to access the external phone line and then have to wait 4 seconds before dialing the number). Refer to section 4.3 to set the delay associated with the Pause key.

4.5. Pager Setup

When a pager is paged, a code number is displayed on the pager screen. The Agri-Alert uses this number to transmit information to the user. The code is displayed in the form of a telephone number and contains the following information:

"SSS" is the identification number of the site where the Agri-Alert is installed. The site number is defined by the user and can contain up to 32 digits. For example, if 2 Agri-Alert controls are installed on separate sites, the user can identify each site with a unique code number.

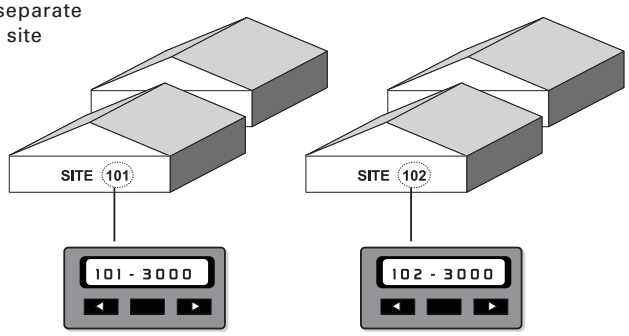
"AAAA" is an alarm code generated by the Agri-Alert. If more than 1 alarm is active, alarm codes are displayed one after the other. In the example below, alarm code 3000 identifies a test call.



SSS Three-digit code of the site where the alarm occurred.

AAAA: Four-digit code describing the type of alarm.

Pager Code Components



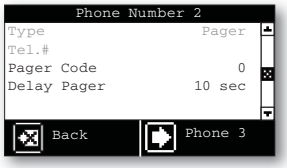
PAGER CODE		MEANING
1001, 1002, ... , 1008		Alarm Zone 1, 2, ... , 8
3001		Test call
Problem encountered	8001	Low battery
	8002	16VAC failure
	8005	Siren defect
	8006	12VDC output defect
	8010	High Noise alarm
	8011	Outdoor probe failure

Pager Settings

1. Select:

- **Main Menu**
- **View / Modify**
- **Phone Numbers**

2. Use the numeric keypad to select a phone number that uses a pager.



3. Set the following parameters:

Pager Code — Assign an identification number to the site where this Agri-Alert device is located. The ID number of the site can contain up to 32 digits.

Delay Pager — When the pager system responds, the Agri-Alert waits for the end of this delay before sending the event code. This delay represents the duration of the voice message of the pager. Set it to the desired value.

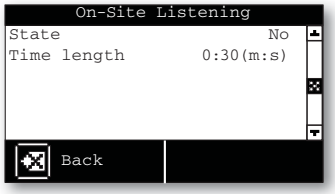
4. Press the right-arrow key to step to next phone number.

4.6. On-Site Listening

This feature allows the user to listen to on-site sounds during a status or alarm report. The integrated microphone on the control panel is used for this purpose. The user can enable or disable on-site listening and adjust the listening time.

1. Select:

- **Main Menu**
- **View / Modify**
- **On-Site Listening**



2. Set the following parameters:

State: — Select *"Yes"* to enable the On-site listening function or select *"No"* to disable it. By default, the on-site listening function is disabled.

Time Length — Set the listening time to the desired value. By default this parameter is set to 30 seconds.

4.7. Phone Call-in

It is possible to set the number of rings before the Agri-Alert answers an incoming call. The number of rings ranges between 1 and 20 rings.

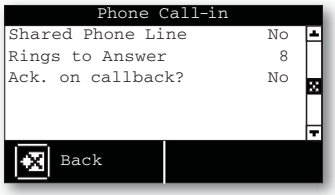
In addition, the Agri-Alert system can share the phone line with another phone device (such as an answering machine or fax). When the line is shared, the Agri-Alert system answers incoming calls only if a special ring sequence is respected. Otherwise, the other phone device takes the call. Here is how the special ring sequence works:

- Dial the Agri-Alert phone number and hang-up after one ring;
- Redial the number after 15 seconds. The Agri-Alert will answer the call on firs ring.

The number of rings before the fax or answering machine answers the call must be set to more than 1 ring for this sequence to work.

1. Select:

- **Main Menu**
- **View / Modify**
- **Phone Call-in**



2. Set the following parameters:

Shared Phone Line — Select *"Yes"* if the Agri-Alert shares the phone line with another phone device (fax, answering machine or else); select *"No"* if no other device is used on the phone line. By default this function is disabled.

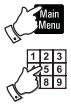
Rings to Answer — If the Agri-Alert does not share the phone line, set the number of rings at which it answers a call. By default, the number of rings is set to 8.

Acknowledge upon callback – Select "Yes" to enable acknowledgement of alarms by calling the Agri-Alert during the inter-call delay. By default, this function is disabled.

4.8. Disable the Dialer

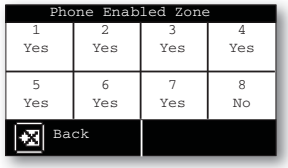
This function allows disabling the dialing sequence in specific zones. The dialout sequence will not be launched when an alarm occurs in a zone that has a disabled dialer.

1. Select:



- **Main Menu**
- **Install Programming***
- **Program Auxiliaries**
- **Phone Enabled Zone**

**Accessible with the Installer or Master password only (see sec. 3.2).*

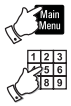


2. Press the zone number on the keypad to change its dialer status. By default, the dialer is enabled on all zones.

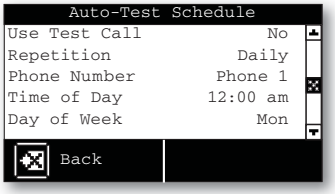
4.9. Test Report

The Agri-Alert can send a test report by phone on a regular basis. The phone number that is chosen to receive the report can be the phone number of a central alarm monitoring facility for instance. The report confirms that everything is functioning normally and that no alarms are pending.

1. Select:



- **Main Menu**
- **View / Modify**
- **Auto-Test Schedule**



2. Set the following parameters:

Use Test Call? — Select *"Yes"* to receive test calls or select *"No"* to disable this option.

Repetition — Select the frequency at which test calls are made: daily/weekly/monthly/every # days.

Phone number — Select the phone number where the test call must be sent.

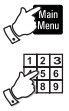
Time of Day — Set the time of day at which the test call is made.

Day of Week — If test calls are made on a weekly basis, select on what day of the week they must be sent.

4.10. Precision of the Phone Signals (DTMF)

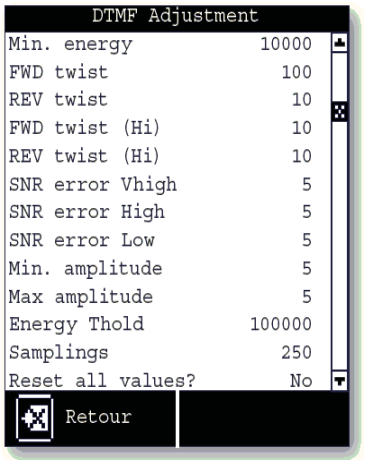
The precision of the phone signals can be adjusted through the DTMF menu if required.
Note that these advanced parameters must only be changed if instructed to do so by our service department. Do not modify these values if not otherwise instructed.

1. Select:



- **Main Menu**
- **System Auxiliaries**
- **User Preferences**
- **DTMF***

**Accessible with the Installer password only (see sec. 3.2).*



Do not modify the DTMF parameters unless instructed by our service department. You can go back to the default DTMF values using the reset parameter displayed at the bottom of the screen.

5. ALARM PARAMETERS

5.1. Summary of Events

1. An alarm is detected:

The system waits for the end of the *Recognition Time* before validating the alarm.

2. An alarm is validated:

When the *Recognition Time* has elapsed, the Agri-Alert activates the siren output (if applicable) and delivers a message on-site to report the alarm (unless the voice mute function is enabled). It then waits for the end of the *Start Call Delay* before launching the dialout sequence.

3. Dialout Begins:

When the *Start Call Delay* has elapsed, the system calls each phone number in the dialout sequence (each call is separated by the *Time Between Calls* delay). If a phone number is busy, the Agri-Alert places it at the end of the dialout sequence and redials it later if required *(Busy Tries* parameter).

If the Agri-Alert reaches a home phone or cell phone, it communicates the alarm message orally (the *Message Repetitions* parameter tells the number of time the message is repeated) In addition, if the speaker is enabled, the Agri-Alert also delivers the alarm message on-site.

If the system reaches a pager, it sends an alarm code which tells the nature of the alarm.

The Agri-Alert goes on with the dialout sequence as long as the number of calls of the dialout sequence is not reached or as long the alarm is not acknowledged (the alarm can either be acknowledged on site or over the phone).

4. The alarm is acknowledged:

When the alarm is acknowledged, the system stops the dialout sequence and the siren. If the alarm was acknowledged by phone, the user can listen to on-site sounds during the delay defined for the on-site listening.

5.2. Internal System Alarms

The Agri-Alert system can detect certain internal alarm conditions. When an internal problem occurs, the Agri-Alert acts as if it was a zone alarms: it activates the siren, launches the dialout sequence, etc.

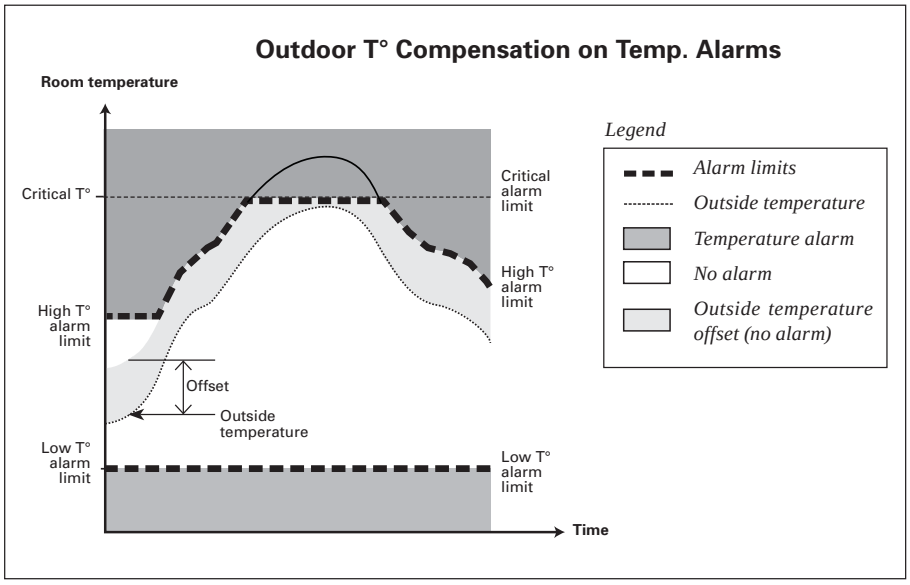
The table below gives a list of possible internal alarms:

Alarm type	Recognition Time
Low battery	30 seconds
Siren defect	30 seconds
12VDC output defect (The device connected to the 12VDC output exceeds 500mA)	60 seconds
16 VAC input defect	60 seconds
Phone card disconnected	30 seconds
Phone line cut	30 seconds
Outdoor card disconnected / defect	30 seconds
No dial tone	3 trials

5.3. Outdoor Temperature Compensation

The outside temperature probe can be used to prevent false temperature alarms that are due to warm weather conditions. When the outside temperature is already warmer than the high alarm limit, the controller automatically changes the high temperature alarm limit. The high limit becomes the outside temperature + offset. In other words, when the outside temperature is too high, the high temperature alarm is only set off if the zone temperature exceeds the outside temperature by more than X degrees (X being the offset value). The graph below illustrates this situation.

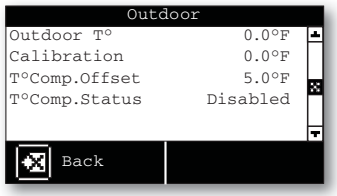
Critical Temperature:
The critical temperature is the absolute maximum temperature allowed in a zone. No matter what the outside temperature is, the zone temperature must never exceed the critical temperature. Refer to section 5.5.2 to set this absolute temperature limit.



Outdoor Comp. Settings

1. Select:

- **Main Menu**
- **View/Modify**
- **Outdoor Probe**



2. Set the following parameters:

Outdoor T° — This is the current outdoor temperature reading (read only value).

Calibration — This parameter allows adjusting the reading of the outside temperature probe: the calibration value is added or removed from all readings made by the probe. If required, set the calibration parameter to the desired value (use the +/- button once to enter a negative value). By default, this parameter is set to 0.0°F (0.0°C).

T° Comp. Offset — The offset is the number of degrees the zone temperature can rise above the outdoor temperature without setting off an alarm.

T° Comp. Status — Select *"Yes"* to enable the outdoor compensation function or select *"No"* to disable it.

Make sure the "Outdoor" card is plugged in the controller before enabling the compensation function. This card is sold separately.

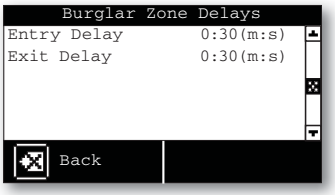
5.4. Burglar Zones

5.4.1. Entry/Exit Delays

In a delayed burglar zone, alarms are declared only after an Entry Delay has elapsed. Similarly, they are armed after the Exit Delay has elapsed. Entry and exit delays are common to all delayed burglar zones and are both set to 30 seconds by default.

1. Select:

- **Main Menu**
- **View/Modify**
- **Burglar Zone Delays**



2. Set the following parameters:

Entry & Exit Delays — Set the entry and exit delays to the desired value.

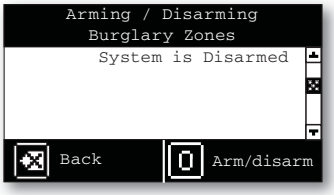
5.4.2. Arming/Disarming the System

When arming or disarming the system, all burglar zones are armed or disarmed simultaneously.

1. Select:

- **Arm / Disarm***

**Accessible with the Installer or Master password only (see sec. 3.2).*



2. The Agri-Alert prompts for a password. Enter the Installer or Master Password to access this menu.

3. Press *"0"* to arm or disarm the system or press *"Back"* to exit from this menu.

5.5. Zone Status

5.5.1. Bypass / Activate

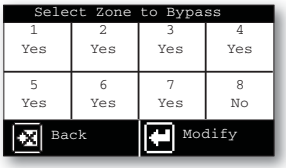
The Agri-Alert only monitors alarms in active zones (the pilot light of an active zone is steady green when there is no alarm or is red if there is an alarm).

The system can also stop the alarm monitoring temporarily in chosen zones. To disable the alarm detection in a zone, set the zone status to "bypassed" (the pilot light of a bypassed zone is amber). Only active zones can be bypassed.

If the pilot light of a zone is off, it either means the zone has not been activated after having been initialized or it has not been initialized at all. Refer to section 3.7.8 to activate a zone for the first time or to section 3.7 to create a new zone.

1. Select:

- **Main Menu**
- **Activate / Bypass**
- **Bypass Zones**



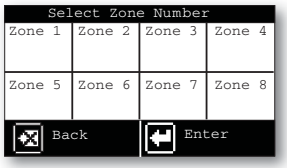
2. Press the zone number on the keypad to change its status. Select *"Yes"* to bypass a zone or select *"No"* to reactivate it.

5.5.2. View/ Modify Zone Settings

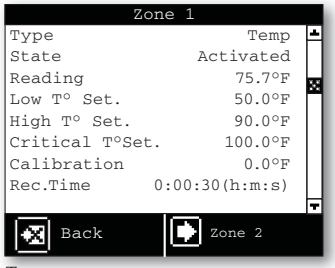
You can display zone status information at any time and/or modify certain zone parameters such as set points and recognition time without having to reconfigure the zone.

1. Select:

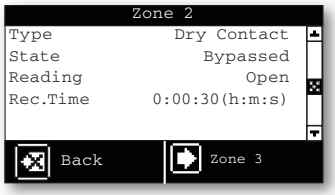
- **Main Menu**
- **View/Modify**
- **Zone Settings**



2. Use the numeric keypad to select the desired zone. The following parameters and status informations are displayed:



Temperature zone



Dry contact zone

Type — This is the type of input used by the zone: dry contact, temperature, instant burglar or delayed burglar input. **Refer to section 3.7 to modify the type of input of a zone.*

Status — This is the current status of the selected zone. Here is a list of all possible status:

Activated — The zone is activated and there is no alarm. **Refer to section 5.5.1 to activate a zone.*

Alarmed — The zone is activated and there is an alarm situation in it. **Refer to section 5.4 to get information about the alarm situation.*

Bypassed — The zone is activated but temporarily bypassed. The system does not monitor this zone input. **Refer to section 5.5.1 to bypass or to reactivate a zone.*

Disabled — The zone has been initialized but has never been activated. The system does not monitor this zone input. **Refer to section 3.7.8 to activate a zone for the first time.*

Reading — This is the current reading of the zone input. If you have selected a temperature zone, the Agri-Alert show the current temperature reading of the sensor; if it is a dry contact zone (burglar zone or not), the system gives the current open/close state of the contact.

Low / High (temperature zones only) — The Agri-Alert displays the high and low temperature set points. To modify these limits, press Enter and then use the numerical keyboard to set them. **Refer to section 3.7.4 for further information about temperature set points.*

Critical (temperature zones only) — If an outside temperature sensor is used, the Agri-Alert displays the critical temperature (absolute high temperature limit). To modify it, press Enter and then use the numerical keyboard to enter the desired value. **Refer to section 3.7.4 for further information about the critical temperature limit.*

Calibration (temperature zones only) — The calibration parameter allows adjusting the reading of a temperature probe input: the calibration value is added or removed from all temperatures readings made in the selected zone. If the zone's probe needs to be calibrated, press enter and then use the numerical keyboard to set the calibration value (use the +/- button once to enter a negative value). By default, the calibration value is set to 0.

Recognition Time — Determine during how much time the alarm condition must be maintained before it constitutes a valid alarm situation.

6. MONITORING FUNCTIONS

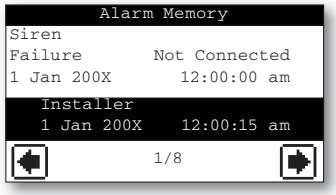
6.1. Alarm Memory

The Agri-Alert has an alarm log menu in which details about the previous 50 alarm situations are kept in memory. Below is a list of alarm information saved in the alarm log:

- Zone number;
- Type of alarm;
- Moment at which the alarm was declared (time & date);
- Identity of the user who acknowledged the alarm (if applicable);
- Moment at which the alarm has been acknowledged (time & date).

1. Select:

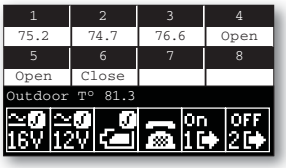
• **Alarm Memory**



2. Use the right and left arrow keys to step from an alarm entry to another.

6.2. Current Conditions

The Current Condition menu gives the current status of the inputs and outputs of the Agri-Alert system:



Zones 1-8:
The Agri-Alert show the current status of each zone input (open/close status of a dry contact or temperature reading).

Outdoor Temperature Reading:
If an outside temperature sensor is used, the system displays the current outside temperature; this reading is replaced by 3 question marks if the sensor is not connected correctly.

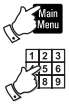
Status Icons:

16VAC power is OK	Battery fully charged
16VAC power is down	Battery in discharge (the system runs on the battery)
16VAC power is unstable	Low battery (the system runs on the battery)
12VDC output is OK	Battery is recharging
12VDC output problem	Recharge suspended
12VDC output unstable	Battery is disconnected (or not detected)
Phone is on hook	Relay 1 is off (deactivated)
Phone line is disrupted	Relay 1 is on (activated)
Phone card is not connected	Relay 2 is off (deactivated)
Phone is off hook (The system uses the phone line)	Relay 2 is on (activated)

6.3. Event Buffer

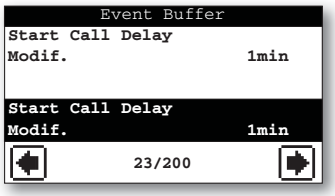
The Agri-Alert keeps a record of all system events such as alarms, arming/disarmings, acknowledgments, dialouts, calls made to the system, parameter adjustments, etc. The event buffer can contain up to 500 events. When the buffer is full, the oldest events are replaced by most recent events.

1. Select:



- **Main Menu**
- **System Auxiliaries**
- **Event Buffer***

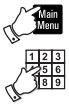
**Accessible with the Master password only (sec. 3.2).*



7. INSTALLATION CHECK LIST

The help menu is there to remind you of all installation steps.

1. Select:



- **Main Menu**
- **Help Menus**
- **Install Check List**

A list of all installation steps is displayed:

- System Ground Connected
- Zone Inputs Wired
- Phone / Siren / Relays connected
- System Programmed
- System Function Tested
- End User Instructed

8. UPDATE / BACKUP

The AA800EZe can read and write on standard memory cards (SD/MMC cards). These cards allow saving your system configuration or uploading a new configuration in your Agri-Alert for instance. Once your system's configuration is saved on a memory card, it can then be transferred on a home computer or palm pilot

No memory card is provided with the system. You can purchase one in any good electronic store. Refer to the table below to see the list of compatible models.

Connecting the Memory Card:
Position the memory card as shown above Insert it in the connector located behind top cover of the Agri-Alert. A click will sound when the card is properly inserted. To remove the card from the connector, simply press on it.

Memory Card Files:
Each time you save your system configuration on a memory card, the Agri-Alert creates a new AA800~X.PKG file. If this file name already exists, the file will be saved under a different name ("AA800~1.PKG" for instance). This way, the Agri-Alert will never erases an existing file. In order to erase or rename a file, you must access your memory card files via a computer (or palm pilot).

The Agri-Alert can only read the files located at the root of the memory card; it cannot access any sub-directory.

List of Compatible Memory Cards (FAT or FAT32 format):

Picture	Family	Organization	Type	Main Features
	Secure Digital	Panasonic, SanDisk, Toshiba	SD / SDHC	Small (32 mm x 24 mm x 2.1 mm).
	Secure Digital	Panasonic, SanDisk, Toshiba	miniSD	Compact size (21.5 mm x 20 mm x 1.4 mm). ***__Important:__ an adaptor to SD card standard mechanical format is needed for this card.
	Secure Digital	Panasonic, SanDisk, Toshiba	micro SD	Sub compact size (11 mm x 15 mm x 1 mm). ***__Important:__ an adaptor to SD card standard mechanical format is needed for this card.

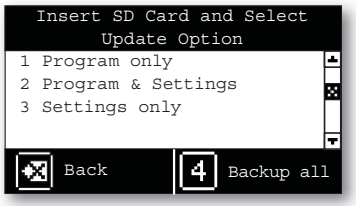
1. Select:

- **Main Menu**

- **System Auxiliaries**
- **Update/Backup***

**Accessible with the Installer or Master password only (see sec. 3.2).*

2. Make sure the memory card is inserted in the Agri-Alert and then select the desired option:



Upload Program Only — Press 1 to load a new software in your Agri-Alert system and then select the desired program file on the memory card (*.PKG file). This transfer will not affect your parameter settings.

Upload Program & Settings — Press 2 to load a new program and parameter settings in your Agri-Alert system and then select the desired program file on the memory card (**.PKG file).*

Settings Only — Press 3 to load new parameter settings in your Agri-Alert system and then select the desired program file on the memory card (*.PKG file). This transfer will not affect your Agri-Alert software.

Backup All — Press 4 to save your Agri-Alert software and parameter settings on the memory card. This will create a new AA800~X.PKG file (where "X" represents the number of the file when there is more than one 1 on the card).

Do not unplug the memory card until the end of the transfer !!!

9. TECHNICAL SPECIFICATIONS

TYPE: **AA800EZe**
Operating Temperature: .....32 to 104°F (0 to 40°C)
Indoor use only
Pollution Degree: 2
Installation Category: 2
Altitude: .....2000 Meters Max (6561 Ft. Max)
Humidity: .....95% max
Cleaning:.....Gentle soap and water

SUPPLY:
Transformer:.....16.5 VAC, 40 VA, 60Hz
Battery:.....Rechargeable, 8.4V Ni-MH 2300 mAh

OUTPUTS:
Siren : .....12VDC, 1A max
12VDC Output :.....500mA DC max
Relays 1-2:.....24VDC or AC, 2A max

Mains supply voltage fluctuations shall not exceed
+/- 10% of the nominal supply voltage.

10. TROUBLESHOOTING GUIDE

10.1. System Troubles

Problem		Solution
	The "16V disconnected" or "16V unstable" icon is displayed and electrical power is OK.	Make sure the 12VDC output and siren do not exceed the circuit capacity.
		Check the wall transformer and wiring.
		Use a voltmeter to check voltage at the 16VAC input terminals (16VAC minimum).
		If the problem persists, contact your dealer.
	The "12V failure" or "12V unstable" icon is displayed.	Make sure the load connected to the 12VDC does not exceed the circuit capacity.
		Check the wiring of the 12VDC output.
		If the problem persists, contact your dealer.
	The "Low battery" icon is displayed and electrical power is OK.	Check the transformer and wiring.
		Use a voltmeter to check voltage at the 16VAC input terminals (16VAC minimum).
		Check the battery wiring.
		Use a voltmeter to check voltage at the battery (between 6 and 9 V).
		Make sure the battery respects the electrical specifications.
		If the problem persists, contact your dealer.
	The "Recharge suspended" icon is displayed.	That is not a problem. The system automatically stops charging the battery when the battery's temperature gets too high.
	The "No battery" icon is displayed.	Make sure a battery is connected to the controller.

Problem		Solution
	The "Disconnected line" icon is displayed.	Make sure the entry line is plugged in the right phone jack of the phone plug-in card.
		Make sure the plug-in card is properly inserted in the "PHONE CARD" connector.
		If the problem persists, unplug the telephone jack from the phone plug-in card and contact you dealer.
	The "Phone Card Disconnected" icon is displayed.	Make sure the plug-in card is properly inserted in the "PHONE CARD" connector.
		Check the phone line wiring.
		If the problem persists, unplug the phone card and contact your dealer.
The outside temperature reading is replaced by 3 question marks.		Make sure the outdoor card is properly inserted in the "OUTDOOR" connector.
		Check the wiring of the outdoor probe.
		If the problem persists, contact you dealer.
The SIREN does not work.		Make sure the siren load does not exceed the circuit capacity.
		If no siren is connected to the siren terminals, a resistor must be connected in its place (1.5kΩ,½ W) or you can disable the siren output as shown in section 3.7.6 of this manual).
		If the siren impedance is too high, add a 1,5K Ω, ½W resistor to the siren circuit, as close to the siren as possible.
		The siren wire or the siren may be defective.
		If the problem persists, contact your dealer.
I plugged the battery into the controller and it doesn't start.		On first startup, the controller needs to be powered with the 16VAC wall transformer.
The system does not detect any probe.		Make sure the flat cable between the top and the bottom board inside the enclosure is properly connected.
		Make sure the removable terminal plate is properly inserted on the bottom board.
		Check the wiring of the zone inputs.
		If the problem persists, contact your dealer.
The system shuts down as soon as I unplug the wall transformer.		Make sure the battery is correctly connected.
		Let the system recharge the battery for about 3 hours and a half.
		Make sure the load connected to the siren and 12VDC output do not exceed the circuit capacity.
		If the problem persists, contact your dealer.
The system refuses to arm.		Make sure a burglar zone is programmed.
		Make sure there is no active alarm in any burglar zone.
		Login with the installer or master password.
		If the problem persists, contact your dealer.

10.2. Memory Card Troubles

Problem	Cause		Solution
Memory card error messages	No SD card (-1)	There is no memory card in the connector.	Insert a memory card in the Agri-Alert connector.
		The memory card is not compatible.	Make sure the card is compatible (see chapter 8).
		The memory card is defective.	Change the memory card.
	Invalid CRC (-2)	The file on the memory card is invalid or contains an error.	Try saving the file on the card once again. If the file comes from a PC, wait a couple of seconds at the end of the transfer before removing the card.
	Incompatible data version (-3)	The file you are trying to upload is not compatible with your controller's software.	A complete update is required. Select the "Update Program and Settings" option in the transfer menu.
	Cannot open file (-4)	The card has bad sectors.	Change the memory card.
	Invalid file (-5)	The file is incompatible or corrupted.	Save the file on the card once again.
			Change the memory card.
	Cannot read file (-6)	The card has bad sectors.	Save the file on the card once again.
			Change the memory card.
	SD card is write protected (-7)"	The protection switch of the memory card is in the "Locked" position.	Set the protection switch in the "Unlocked" position.
	File already exists (-8)	The memory card contains more than 64 AA800.pkg files.	Erase all unused AA800.pkg files.
	Cannot write to file (-9)	The card has bad sectors.	Change the memory card.
There is no AA800.pkg file on the memory card.		There is no memory card in the connector.	Insert a memory card in the Agri-Alert connector.
		The memory card is not compatible.	Make sure the card is compatible (see chapter 8).
		The file is not located in the root folder.	Put back the AA800.pkg file in the root folder.
The system froze during a backup (fatal error).		The memory card was removed before the end of the transfer.	1. Make sure the memory card is properly inserted in the connector.
			2. Unplug the wall transformer and the battery and then replug them. The Agri-Alert will reboot.
			3. Try uploading the file once again.
			If the problem persists, contact your dealer.

10.3. Phone Communication Troubles

Problem	Cause	Solution
I cannot change the relay status on the phone.	The relay is assigned to a zone	When a relay is assigned to a zone, it is not possible to change its status on the phone (the relay status is related to the zone status).
I cannot stop the on-site listening on the phone.	This is normal	The On-Site listening automatically ends after a user-defined delay (On-Site Listening delay); it cannot end sooner.
The system cannot recognize my password or selection over the phone.	Phone compatibility	If the Agri-Alert does not recognize your selection, try typing your choice slower (leave about 1/2 seconds between each key).

11. MAINTENANCE

11.1. Inspecting and Cleaning the Controller

Inspecting the controller and its units and keeping them clean can help prolong the proper functioning of the controller.

Before You Begin

⚠ ***CAUTION: Disconnect supply before servicing or performing any maintenance operations.***

Lock the enclosure once the wiring is completed or when servicing. Use the included nut and bolt or a padlock (not included) to lock the enclosure.

• Every few months, open and inspect the enclosures for moisture or dust build-up.

• Using a damp cloth, wipe clean the exterior of the enclosures.

11.2. Replacing the Battery Pack

After reaching the battery pack Life Span, the battery pack must be replaced.

Before You Begin

⚠ ***CAUTION: Disconnect supply before servicing or performing any maintenance operations.***

Lock the enclosure once the wiring is completed or when servicing. Use the included nut and bolt or a padlock (not included) to lock the enclosure.

1. Unplug the wall transformer from the 120VAC 60Hz outlet.
2. Unlock the AA800Eze enclosure.
3. Unplug the battery pack from battery pack connector (J20) and unfasten the battery pack from the printed circuit board.
4. Replace it by a new one by reconnecting it in the battery pack connector (J20).
5. Fasten the battery pack on the printed circuit board.
6. Lock the AA800Eze enclosure.
7. Plug the wall transformer into the 120VAC 60Hz outlet.

12. APPENDIX

12.1. Wire Length

Wire Type	Tempera-ture Probe	Other Probe	Siren / 12VDC Output
#16 AWG	250 m (820')	2000 m (6560')	50 m (164')
#18 AWG	125 m (410')	1300 m (4265')	30 m (98')
#20 AWG	62 m (205')	800 m (2624')	N.A.
#22 AWG	31 m (102')	500 m (1640')	N.A

12.2. Backup Battery Life Span

Conditions	25°C / 77°F
Average shelf life	6 months
Average life span	3 years
Siren and 12VCD output not used	6 hours
Siren - 1000mA 12VDC - 500mA	1/2 hour

12.3. Replacement Parts Specifications

NiMH Battery Replacement on AA800EZe

GSI Electronics part number	GSI Electronics part description	Reference
112-00007	Rechargeable 8.4V battery NiMH 2300 mAh	Battery pack Conn (J20)

13. INDEX

Notes