



EAPro



2022/10/07
5:51:28 AM

HOME
WARN 1, ALARM 1



LOW
4.0

Cooler #1

HIGH
12.0



8.1° C

MIN
6.3

MAX
16.1

LOW
2.0

Cooler #2

HIGH
7.0



8.1° C

MIN
1.5

MAX
8.1



LOW
-114.0

Ultra Cold

HIGH
12.0

-93.1° C

MIN
-78.9

MAX
6.3

LOW
33.0

West Cooler

HIGH
52.0



55.2° F

MIN
34.2

MAX
67.3



WINLAND



Limitations of the Alarm System or Device.

While your alarm system or device is reliable and sophisticated, it does not offer guaranteed protection against burglary, fire or other emergency. Any security product, whether commercial or residential, is subject to compromise or failure-to-warn for a variety of reasons. These include:

- **Individuals may gain access through unprotected openings or have the technical sophistication to bypass an alarm sensor or disconnect an alarm warning device.**
- **Monitoring devices will not operate without power. Devices powered by AC will not work if their AC power supply is off for any reason. If system has battery backup, batteries that are not maintained can fail to provide the necessary power for devices to function properly.**
- **Alarm warning devices such as sirens, bells, and horns may not alert people or awaken sleepers if they are located on the other side of closed or partly closed doors. If warning devices are on a different level of the residence from the bedrooms, they are less likely to awaken or alert people inside the bedrooms.**
- **Telephone lines needed to transmit alarm signals from a premises to a central monitoring station may be out of service, and are subject to compromise by sophisticated means of attack.**
- **Signals sent by wireless transmitters may be blocked or reflected by metal before they reach the alarm receiver. Even if the signal path has been recently checked during a weekly test, blockage can occur if a metal object is moved into the path.**
- **Even if the system responds to the emergency as intended and is a monitored alarm system, the authorities may not respond appropriately.**
- **This equipment, like other electrical devices, is subject to component failure.**
- **The most common cause of an alarm system not functioning properly is due to inadequate maintenance. Your alarm system should be tested weekly to make sure all detection devices are operating properly. Your control panel and keypads should be tested as well. Installing an alarm system may make you eligible for lower insurance rates, but an alarm system is not a substitute for insurance. Homeowners, property owners, and renters should continue to insure their lives and property.**

Record of Revisions

REV NO.	DATE	DESCRIPTION
Original	May 2022	Initial Issue

Notice

This document will refer to **INSIGHT** throughout. **INSIGHT** is a cloud based platform for remote viewing and management of the EA800-ip device and the EAPro[®]. **INSIGHT** is sold separately and not required to use the EAPro[®] Gateway. The EAPro[®] can be used in standalone mode, or along with **INSIGHT** in a connected mode. The EAPro[®]-Gateway monitors the environmental conditions detected by connected sensors and provides alarm signals when monitored conditions at any sensor exceeds the user-programmable set points. Winland **INSIGHT** provides complete realtime cloudbased visibility of data from EAPro[®]-Gateway monitored critical condition environments. The systems detailed and customized response protocols, data logs, and extreme flexibility, provide the fastest resolution of incidents by making the notification immediately actionable.

NOTE: As of Firmware 22.11.11, the EAPro-Gateway sends notifications to INSIGHT, however INSIGHT does not send out notifications to text/emails as this time.

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TABLE OF CONTENTS

Foreword	1
Safety Information	1
General Information	3
Overview	3
How to Use This Manual	4
Symbols On the Product or Manual Labeling	5
Relay Block Diagram	5
EAPro®-Gateway	6
Home Screen	8
Access Control	11
Connections	12
Configuration Parameters	13
Sensors	14
Sensor Programming and Parameter Descriptions	18
Relay Operation	21
Data Logs	21
Installation	22
Installation Tools and Supplies	22
Power Requirements	22
Mount the Rear Plate	23
Connecting Power	23
Initial Start-Up Procedure	24
Install Wired Sensors	24
Connect Wired Sensors	24
Install Wireless Sensor	25
Program	27
Main Menu	27
Configure System	27
Add Sensor	28
Add User	29
Set System Time and Date Format	29
Set Date and Time	29
Set Lock Mode	30
Select RF Channel	30
Configure Relays	30
Configure Relay State	30
Set Buzzer Triggers	31
Set Light Triggers	31
Operation	32
Acknowledge Alarm	32
Clear Alarm	32
View Sensor Details	32
View Notification Log	32
View Event Log	32
View Sensor Logs	33
View User Logs	33
View About	33

Clear Notification Logs	33
Clear Sensor Logs	33
Export Logs	34
Data Logs	34
Maintenance	35
Edit Sensor	35
Replace Wireless Transmitter	38
Delete Sensor	38
Pause Sensor	39
Test Sensor	39
Edit User	39
Delete User	40
Configure User Mode	40
Sync Users	40
Save System Configuration	40
Edit Network Wi-Fi	41
Edit Ethernet Settings	41
Update Firmware	42
Reset to Factory Defaults	43
Reboot System	43
Troubleshooting	44
Winland Technical Support	44
Specifications	45
Warranty and Service Information	46

LIST OF FIGURES

Figure 1: EAPro®-Gateway	3
Figure 2: EAPro®-Gateway Block Diagram	6
Figure 3: EAPro®-Gateway Front	6
Figure 4: Home Screen Sensor Tile	9
Figure 5: Home Screen Tile Examples	9
Figure 6: Connections	13
Figure 7: Wiring Diagram for 4–20mA Sensor – Aux Power Supply	17
Figure 8: Wiring Diagram for 4–20mA Sensor – External Power Supply	17
Figure 9: Wired Sensor Connection: Temperature Probe, WaterBug®, and Dry Contact	25
Figure 10: Wired Sensor Connection: HA-III+	25
Figure 11: Wired Sensor Connection: 4–20mA	25
Figure 12: Wireless Sensor MAC Address and ID Location	26
Figure 13: Main Menu	27

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LIST OF TABLES

Table 1: Symbols on Product or Manual Labeling	5
Table 2: EAPro®-Gateway Parts: Description	7
Table 3: Icons on Touchscreen	7
Table 4: Home Screen Display	8
Table 5: Home Screen Sensor Tile	9
Table 6: Example of Sensor Status on Home Screen Tiles	9
Table 7: User Access Levels	11
Table 8: Lock Setting	12
Table 9: Connector Functions	13
Table 10: Configuration Parameters	13
Table 11: Wired Temperature Probes	14
Table 12: Wired Humidity Sensor	15
Table 13: Wired Water Sensor	15
Table 14: Dry Contact Sensors	15
Table 15: Wireless Temperature Sensor	16
Table 16: Wireless Humidity Sensor	16
Table 17: Wireless MultiFunction Transmitter	16
Table 18: Voltage Selection Matrix for 4–20mA Sensors	17
Table 19: Sensor Programming Parameter Descriptions	18
Table 20: Relay Operation Conditions	21
Table 21: Troubleshooting	44
Table 22: Specifications: EAPro®-Gateway	45
Table 23: Specifications: Sensors	46
Table 24: Specifications: Accessories	46

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FOREWORD

Please read this manual and all included material in entirety before unpacking, installing, and operating your equipment.

The image on the front cover is representative only.

In order to prevent injury or equipment damage, everyone involved in installation, operating and maintenance of the products described in this manual must be qualified and trained in the current safety standards that govern their work.

Shock hazard—do not service the product or other electrical products without disconnecting power and tagging the circuits as out of service.

SAFETY INFORMATION

Warnings on [page 27](#).

WARNING

EAPro®-Gateway relay outputs are intended only for use as low voltage, low-current alarm connections, and not for direct switching or control of AC-mains powered loads. Additionally, local codes may further dictate or limit the types of loads and associated wiring to be used with the low-current Form C relay outputs used with the EAPro®-Gateway. Connecting AC-mains type circuits to the EAPro®-Gateway may result in an electric shock and/or fire hazard.

Connect only sensors specified in this manual to the wired and wireless input connections. Using sensors not specified in this manual may damage the EAPro®-Gateway or cause improper or unreliable operation.

Do not connect a load to the OUTPUT 1 through OUTPUT 4 relay outputs that exceeds limitations stated in the Specifications section of this manual. Loads exceeding the specified limitations may damage the EAPro®-Gateway, or result in improper or unreliable operation.

The EAPro®-Gateway printed circuit board (PCB) contains electrostatic discharge (ESD) sensitive devices. To help prevent damage caused by ESD, observe appropriate ESD handling rules whenever the PCB in the EAPro®-Gateway is exposed.

Batteries shall not cause explosion or produce a fire hazard as a result of excessive charge or discharge, or if a battery is installed with incorrect polarity.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

Caution on page 28.

CAUTION

Do not connect or disconnect power, sensor, or alarm wiring while power is applied. Connecting and disconnecting sensors or alarm wiring when power is applied to the EAPro®-Gateway may damage the EAPro®-Gateway or result in improper or unreliable operation.

Connection of unsuitable loads to the EAPro®-Gateway power connection may damage the power supply and EAPro®-Gateway, or result in improper or unreliable operation.

Warning on page 46.

WARNING

Clearing the notification logs erases the information in the notification log. Clearing the notification log can result in data loss.

Warning on page 64.

WARNING

Resetting to factory defaults erases all data except the event logs. Resetting to factory defaults can result in data loss.

Warning on page 64.

WARNING

Per RSS-Gen, Section 8.4 This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 cm from all persons.

Conformément au CNR-Gen, section 8.4 Cet appareil est conforme aux normes RSS d'Industrie Canada exemptes de licence. Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas causer de brouillage, et (2) ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un fonctionnement indésirable de l'appareil.

Pour satisfaire aux exigences d'exposition aux RF, cet appareil et son antenne doivent fonctionner avec une distance de séparation d'au moins 20 cm de toutes les personnes.

GENERAL INFORMATION

OVERVIEW

The EAPro®-Gateway monitors the environmental conditions detected by connected sensors and provides alarm signals when monitored conditions at any sensor exceeds the user-programmable set points. The alarm signals are provided via relay outputs that can operate with process controls, security systems, or other similar automated equipment. The EAPro®-Gateway system can be configured with wired or wireless sensors (sold separately).

The EAPro®-Gateway provides connection of up to 4 wired and up to 30 wireless sensors.

Setup and program the system using the touchscreen, through the [INSIGHT](#) cloudbased platform (sold separately) or load a CFG file. The touchscreen assists the user during local setup and displays the measured conditions of monitored environments during operation.

The EAPro®-Gateway can monitor multiple critical environments using multiple sensor inputs. The system features four output relays to indicate a warning condition exists or a programmed alarm limit has been exceeded. An **auxiliary relay (AUX)** alerts when any sensor is in alarm status.

Using the appropriate Winland sensors (sold separately), the EAPro®-Gateway monitors and provides warnings and alarms for the following conditions:

- Temperature: from -100 °C to 150 °C (-148 °F to 302 °F)
- Humidity: from 5 to 95% RH (non-condensing)
- Presence of water
- Conditions monitored by any sensor with a 0–5V or a 4–20mA output

The EAPro®-Gateway (see Figure 1) may be mounted to a standard 3-gang electrical enclosure or directly to wall. The EAPro® wireless sensors are easily mounted to a wall.

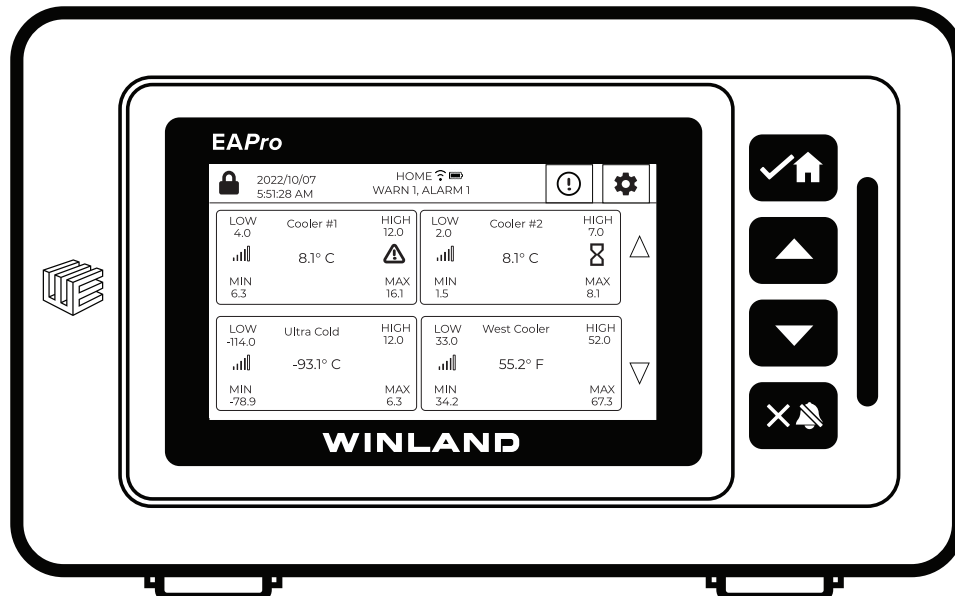


Figure 1: EAPro®-Gateway

Note: All product images shown are for illustration purposes only and may not be an exact representation of the product. Actual product may vary due to product modification.

HOW TO USE THIS MANUAL

When viewed in electronic form, this manual contains internal and external links for quick navigation to sections and procedures. Click highlighted material to navigate within the document.

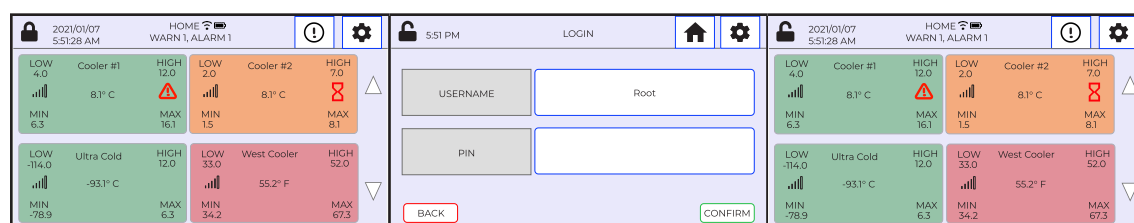
This manual is organized into sections that guide [Installation](#), [Program](#), [Operation](#), and [Maintenance](#) of the EAPro®-Gateway system. Troubleshooting guidelines are also provided as well as [Specifications](#) and [Warranty and Service Information](#).

Note: The system can be programmed and operated remotely via [INSIGHT](#) (sold separately).

This manual presents programming procedures by showing the sequence of menus and screen displays to perform the procedure, and written instruction to advance through the procedure. The successive images (left to right) indicate the direction of procedure flow. Navigation includes using the touchscreen or using soft keys or a combination of both.

Below is an example of a procedure:

1. At the Home Screen, tap the lock icon.
2. Select User (Root is default)
3. Enter 1234 or an assigned PIN (001234 is the same as 1234)
4. Tap Confirm to unlock.



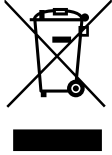
Throughout the manual:

- Buttons that appear on the touchscreen is shown like this: CONFIRM
- Quick links internal to the electronic document are shown like this: [Home Screen](#)
- Quick links to web pages from the electronic document are shown like this: [INSIGHT](#).

SYMBOLS ON THE PRODUCT OR MANUAL LABELING

Symbols appearing on the product labeling, packaging, and/or in this manual are shown and described in Table 1.

Table 1: Symbols on Product or Manual Labeling

SYMBOL	DEFINITION
	Attention, consult accompanying documents or statements.
	Indicates product complies with WEEE Directive 2002/96/EC (Waste from Electrical and Electronic Equipment) which originated in the European Union. For product disposal, ensure the following: Do not dispose of this product as unsorted municipal waste. Collect this product separately. Use collection and return systems available.
NULL	Indicates product complies with RoHS directive.
N.O.	Normally Open (N.O.) relay contact terminal.
C	Common relay contact terminal.
N.C.	Normally Closed (N.C.) relay contact terminal.
AUX / POWER	Combined single pole double throw (SPDT) relay output that activates upon an alarm from configurable setting. AUX and POWER terms may be used interchangeably.

Model: EAPro®-Gateway • FCC ID: V5SEAPGTWY-0822 • IC: 7635A-EAPROGTWY Models: EAPro®-WMFS, EAPro®-WTS, EAPro®-WHS • FCC ID: V5SEAPWLSS-0822 • IC: 7635A-EAPROWS	This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Per RSS-Gen, Section 8.4 This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. To satisfy RF exposure requirements, this device and its antenna must operate with a separation distance of at least 20 cm from all persons. Conformément au CNR-Gen, section 8.4 Cet appareil est conforme aux normes RSS d'Industrie Canada exemptes de licence. Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas causer de brouillage, et (2) ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un fonctionnement indésirable de l'appareil. Pour satisfaire aux exigences d'exposition aux RF, cet appareil et son antenne doivent fonctionner avec une distance de séparation d'au moins 20 cm de toutes les personnes. Caution Statement (per CFR 15.21): (Looking to modify to:) The user manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment Class B Product Compliance Statement (per CFR 15.105(b)): (Can we remove all of this???) This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna. • Increase the separation between the equipment and receiver. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for help.
NULL	(Looking to remove all) The TÜV certification combines electrical safety certification for Canada (SCC), United States (NRTL), and Europe (EU Directives). This product was voluntarily tested according to the relevant safety requirements and mentioned properties pertaining to this certification mark.
	The product is in conformity with all applicable requirements for its placing on the European Union market.

Figure 2 shows a block diagram of the EAPro®-Gateway interfaces and functions. The EAPro®-Gateway provides (Review) four relays plus an AUX (auxiliary) relay (Review). Program the four relays to indicate when a programmed alarm limit has been exceeded or a warning condition exists. The AUX relay provides an output signal for an optional audible alarm or strobe that is activated whenever any alarm condition exists. The EAPro®-Gateway may also be part of a larger security system.

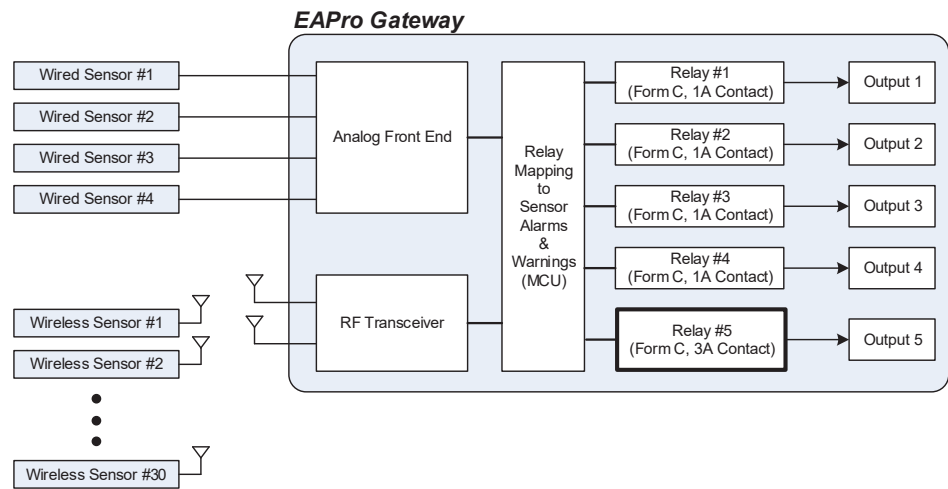


Figure 2: EAPro®-Gateway Block Diagram

EAPRO®-GATEWAY

The EAPro®-Gateway features an interactive touchscreen and has four soft keys. A USB port is located on the right side for quick access. The rear is open for ease of routing wires. Once installed, unlatch and use hinge to swing down the front for easy maintenance.

Parts and Functions

These topics illustrate the EAPro®-Gateway primary parts and key functions.

Note: All product images shown are for illustration purposes only and may not be an exact representation of the product. Actual product may vary due to product modifications.

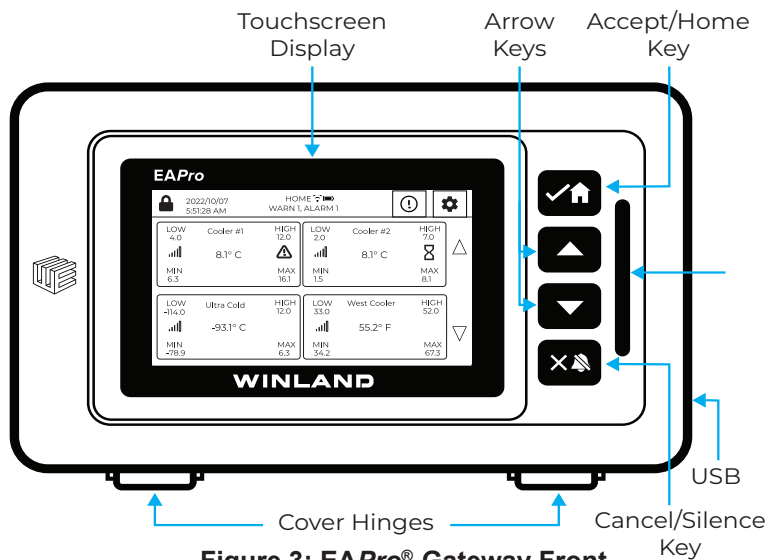


Figure 3: EAPro®-Gateway Front

Figure 3 shows the touchscreen and entry keys. The key functions are described in Table 2.

Table 2: EAPro®-Gateway Parts: Description

Part	Description/Function
Touchscreen Display	The touchscreen displays all the information needed for operation, such as the Home Screen with sensor status, navigation menus, and the date and time. The touchscreen provides menubased graphical user interface (GUI) tap navigation to all of the features and local data.
Accept/Home Key 	The Accept/Home key provides two functions when pressed: it accepts the currently entered selection or it displays the Home Screen. If the selection is a menu item, the selected item is accessed. If the current selection is an entered value, pressing the key accepts the entered value. If there is no selection made, pressing the key displays the Home Screen.
Up Arrow Key 	The up arrow key provides the scroll up function.
Down Arrow Key 	The down arrow key provides the scroll down function.
Cancel/Silence Key 	The Cancel/Silence key provides two functions when pressed: it cancels the current selection, or it temporarily silences alarms and stops light from flashing. If the selection is a value, the value is cleared. If there is no selection made, press and hold for 3 seconds the key will temporarily silence local audible alarms and deactivates a flashing light for ten minutes. If a new alarm originating from a different sensor occurs within this 10-minute period, the audible alarm and flashing lights are reactivated, and require another key press and hold of 3 seconds to silence the audible alarm and deactivate the flashing light. Note: Pressing the Cancel/Silence key does NOT reset the relay.
USB Port	See Connections.
Rear Mounting Plate	The rear mounting plate is connected with a hinge. The EAPro®-Gateway may be attached to a standard 3gang electrical enclosure or mounted directly to a wall.
Power Input	See Connections.
Aux Power Output	See Connections.
Relay Inputs	See Connections.
Relay Outputs	See Connections.
Jumpers	See Connections.

Touchscreen Display

The EAPro®-Gateway features a menu based graphical user interface (GUI) on a touchscreen display. Tap icons (see Table 3) to navigate the touchscreen display or press soft keys to navigate up or down.

Icons on Touchscreen

Icons on the touchscreen indicate status and provide operational conditions. See Table 3.

Table 3: Icons on Touchscreen

SYMBOL	NAME	DEFINITION
	Lock	The touchscreen is locked when this displays in the upper left corner of the touchscreen. Tap icon to go to Login Screen.
	Unlock	The touchscreen is unlocked when this displays in the upper left corner of the touchscreen. Tap icon to lock touchscreen.
	Home	Tap the home icon to return to the Home Screen.
	Battery	The battery icon indicates the wireless sensor has a low battery.
	Information	The information icon is a quick key to access the Data Logs.
	Alarm	The alarm icon displays during active alarm conditions.
	Signal strength	The signal strength icon indicates the strength of the wireless connection. A greater number of bars indicates a stronger connection. The recommended connection is a strength of four or five bars. "Err" will display in sensor reading if signal strength is zero bars.
	De-active	The de-active toggle indicates the option is deactivated.
	Active	The active toggle indicates the option is activated.
	Check/Accept	The Check/Accept icon is on the Accept/Home key.
	TimeDelay Warning	The warning icon indicates the sensor is in active timedelay for a warning. The warning state is active and the delay timer is counting down. An alarm state will occur if the warning is not cleared before the timer runs out.
	TimeDelay Alarm	The hourglass icon indicates the sensor is in active timedelay for an alarm. The alarm state is active and the delay timer is counting down. An alarm state will occur if the condition is not cleared before the timer runs out.
	Latched Relay Key	The key icon indicates the relay is latched.
	Gear	The gear icon is a quick key to access the Main Menu.
	Stop/Cancel	The stop or cancel icon stops a current function.

HOME SCREEN

The Home Screen displays operation information including, lock status, date and time, and sensor status data for four sensors. Tap the "home" icon from any screen to quickly navigate to the home screen. The Home Screen also has quick access buttons to Notification Log and the Main Menu.

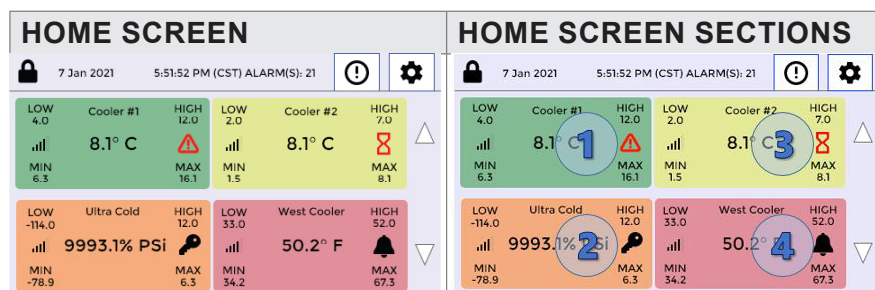


Table 4: Home Screen Display

NUMBER	NAME	DESCRIPTION
1	Lock/Unlock Icon	Tap and enter code to lock and unlock.
2	Date and Time	Current date and time. See Section 4-3 to change format.
3	Quick Access Buttons	Info Exclamation quick access button for data menu. Gear quick access button for main menu.
4	Sensor Data	Operating sensor data. The tile color is a quick visual indication of operation status.
5	Navigation Arrows	Tap up arrow or down arrow to navigate to additional programmed sensors.

Home Screen Sensor Tile

A sensor tile (Figure 4) on the Home Screen provides operational sensor limits, sensor name, signal strength (if wireless sensor), current sensor reading, notification status, and overall min and max readings (Table 5). Sensor information is displayed within a tile of color that indicates operational status.

Figure 4: Home Screen Sensor Tile**Table 5: Home Screen Sensor Tile**

NUMBER	NAME	DESCRIPTION
N/A	Tile Color	Tile color is a quick visual of operational status. Green: Operating within parameters Orange: Operating in warning status Red: Is in alarm status
1	Low Alarm Limit	Low alarm limit is the lowest temperature setting at which, when exceeded and any timedelay exceeded, the sensor would be in alarm status.
2	Sensor Name	Common or Custom name of sensor.
3	High Alarm Limit	High alarm limit is the highest temperature setting at which, when exceeded and any timedelay exceeded, the sensor would be in alarm status.

4	Signal Strength Bars	Signal strength bars indicates connection to wireless sensor. (NG Review) "Err" (NG Review) will display in sensor reading if signal strength is zero bars.
5	Sensor Reading	Current sensor reading. (NG Review) "Err" (NG Review) will display in sensor reading if signal strength is zero bars.
6	Notification Icon	Notification icon is a quick visual of detailed operational status. Warning triangle displays when in timedelay for warning. Hourglass displays when in timedelay for alarm.
7	Min Reading	Overall minimum sensor reading since last clear or reboot of device.
8	Max Reading	Overall maximum sensor reading since last clear or reboot of device.

Examples of Sensor Status on Home Screen

This section provides examples of sensor status as displayed in the tiles of the Home Screen. See Figure 5 and Table 6.

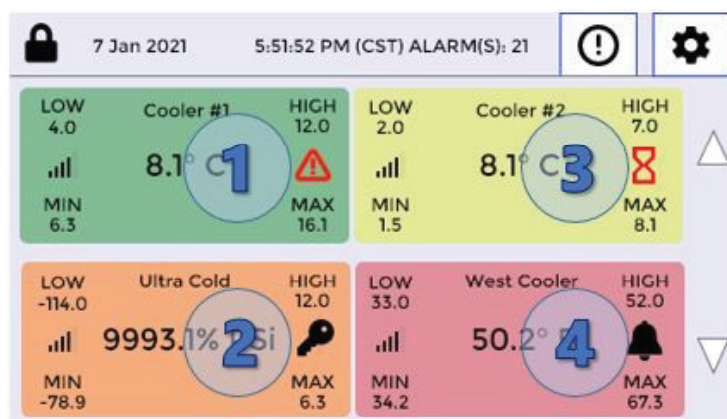


Figure 5: Home Screen Tile Examples

Table 6: Example of Sensor Status on Home Screen Tiles

NUMBER	DESCRIPTION	EXPLANATION
1	Condition is within tolerance with a pending warning status.	Tile color is green. The sensor is operating within parameters.
		LOW and HIGH sensor settings for alarm limits: when the temperature is below 4.0 °C or above 12.0 °C the sensor would be in a pending alarm status based on a timedelay, if there is no timedelay the sensor would be in alarm status.
		Signal strength bars indicate connection to a wireless sensor.
		Sensor Name is Cooler #1 and Current Reading is 8.1 °C.
		Notification icon for sensor displays a warning triangle to indicate a timedelay for a warning condition. (The temperature warning was set to 8.0 °C with a 20 minute timedelay. The tile is green to indicate the timedelay is under 20 minutes.)
		MIN is the lowest ever reading 6.3 °C and MAX is the highest sensor reading 16.1 °C since the sensor was programmed.
2	Condition is within tolerance. No pending warning or alarm.	Tile color is orange. The sensor is operating within parameters.

		LOW and HIGH sensor settings for alarm limits: when the temperature is below -114 °C or above 12 °C the sensor would be in a pending alarm status based on a timedelay, if there is no timedelay sensor would be in alarm status.
		Signal strength bars indicate connection to a wireless sensor.
		Sensor Name is Ultra Cold and Current Reading is -9993.1 PSi.
		Notification icon for sensor indicates latched status.
		MIN is the lowest ever reading -78.9 °C and MAX is the highest sensor reading 6.3 °C since the sensor was programmed.
3	Condition is within tolerance with a pending alarm status.	Tile color is yellow. The status is active alarm condition, warning timedelay has been exceeded.
		Low and High sensor settings: when the temperature is below 2.0 °C or above 7.0 °C the sensor would be in warning status, and if programmed, a timedelay timer would run.
		Signal strength bars indicate connection to a wireless sensor.
		Sensor Name is Cooler #2 and Current Reading is 8.1 °C
		MIN is the lowest ever reading 1.5 °C and MAX is the highest sensor reading 8.1 °C since the sensor was programmed.
		Notification icon for sensor displays an hourglass to indicate a timedelay for an alarm condition. Timedelay icon displays because high temperature has been exceeded for an alarm, sensor now in pending alarm base on timedelay status.
4	Condition is outside tolerance and is in alarm status.	Tile color is red. The status is active alarm condition. Both warning and alarm timedelays have been exceeded.
		Low and High sensor settings: when the temperature is below 33.0 °F or above 52.0 °F the sensor would be in warning status, and if programmed, a timedelay timer would run.
		Signal strength bars indicate connection to a wireless sensor.
		Sensor Name is West Cooler and Current Reading is 50.2 °F
		MIN is the lowest ever reading 34.2 °F and MAX is the highest sensor reading 67.3 °F since the sensor was programmed.
		Notification icon for sensor displays bell icon to indicate alarm status. A condition has been exceeded and any programmed time delay has been exceeded, sensor is in alarm status.

ACCESS CONTROL

System security to prevent unauthorized access includes three user access levels to prevent and three lock settings.

User Access

Users operate and maintain the system.

(Under Review)

Password of the Day

Technicians have the option to use the Password of the Day

(Under Review)

User Access Level

Users are assigned to one of three access levels for security. Users may be assigned a PIN to allow and record actions (see Table 7). Additionally, users may receive notifications for remote monitoring capabilities.

Table 7: User Access Levels

SECURITY LEVEL	READ	WRITE	DELETE
User	Yes	No	No
Admin	Yes	Yes	No
Super Admin	Yes	Yes	Yes

User, Admin, and Super Admin activities are recorded in the User Logs. A list of Users and their access levels can be found in the User Log.

Users are identified in the Event Log and User Log by their Username. Username is an email address. A PIN is a 4–6 digit numeric code that offers an additional layer of security to perform activities.

User information may be entered at the EAPro®-Gateway or via [INSIGHT](#) (sold separately). Once entered at either location, Sync Users to quickly maintain system users.

PIN

Users are assigned a PIN (personal identification number) as an added level of security to authorize different functions and to record who performed a given task. User PINs are 4–6 digit numeric codes assigned in the Add User procedure.

Login Screen

System security requires users to login with registered credentials. The default username is Super Admin. The Super Admin PIN is 001234. The Super Admin PIN can be changed but cannot be deleted.

1. Tap the dropdown to select username.
2. Tap into box to enter PIN.
3. Tap **Confirm** to log in.

Note: System logins are recorded in the User Log.

The screenshot shows a mobile application interface for logging in. At the top, there is a status bar with a lock icon, the time '5:51 PM', and the word 'LOGIN'. Below this is a header bar with a home icon and a settings icon. The main content area has two input fields: 'USERNAME' with a dropdown menu showing 'SUPER ADMIN', and 'PIN' with a text input field. At the bottom, there are two buttons: 'BACK' and 'CONFIRM'.

Local Lock Setting

The EAPro®-Gateway provides three progressive lock settings for access control (see Table 8). See Set Lock Mode to configure the lock setting.

Table 8: Lock Setting

LOCK LEVEL	LOCK AFTER ACTIVITY	ON BOOT	LOCK SETTINGS
No Lock	Remains unlocked after any activity.	EAPro®-Gateway is unlocked.	Few screens require PIN to modify setting: Factory Reset Configuration Change
Limited Lock	Locks after 15 minutes of inactivity.	EAPro®-Gateway is locked.	MENU to most screens are locked by default.
Full Lock	Locks after 5 minutes of inactivity.	EAPro®-Gateway is locked.	Certain settings require PIN even when unlocked.
			"CLEAR HIGH/LOW" "ACKNOWLEDGE" "SILENCE" "PAUSE"
			Cancel/Silence key does not clear any relays.

No Lock

In the No Lock level, the EAPro®-Gateway is unlocked on boot up and remains unlocked after any activity. Full access is permitted to view and modify sensors, data, and users. A PIN is required to perform a factory reset. This may be used in home installations, where security is physical and user logging in not necessary or wanted.

The Open Lock icon is displayed in the upper left corner of the touchscreen to indicate the EAPro®-Gateway is unlocked. Tap the Open Lock icon to restrict unauthorized or unintended programming changes, log downloads, and firmware uploads.

Limited Lock

In the Limited Lock level, the EAPro®-Gateway is locked on boot up and locks after 15 minutes of inactivity (no touchscreen or key activity). Access to some menus and screens is restricted to view only. A PIN is required to access some settings and to make configuration changes.

The Closed Lock icon is displayed in the upper left corner of the touchscreen to indicate the EAPro®-Gateway is locked. Tap the Closed Lock icon and enter a PIN to access restricted options.

Full Lock

In the Full Lock level, the console is locked on boot up and the EAPro®-Gateway locks after 5 minutes of inactivity (no touchscreen or key activity). Access to most menus and screens is restricted to view only and must be unlocked. A PIN is required to modify most settings and to make configuration changes.

The Closed Lock icon is displayed in the upper left corner of the touchscreen to indicate the EAPro®-Gateway is locked. Tap the Closed Lock icon and enter a PIN to access restricted options.

CONNECTIONS

Figure 6 Connections shows the EAPro®-Gateway connections and Table 9 describes the function of each connection. The EAPro®-Gateway has four output relays and one auxiliary (AUX) relay.

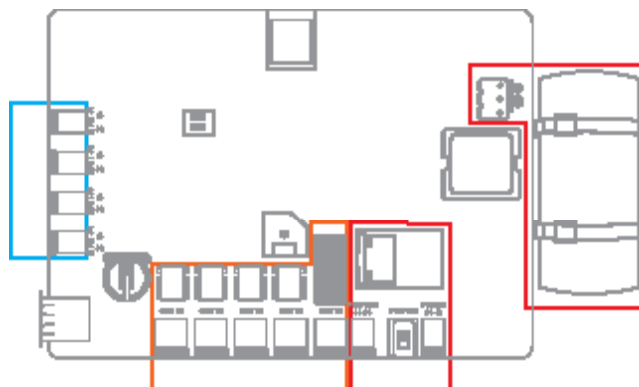


Figure 6: Connections

Table 9: Connector Functions

SECTION	DESIGNATION	FUNCTION
J2	USB	USB Type A connection used to program firmware, export logs, and export and import configuration files.
J5	Power In	11–26 VDC input power connection for EAPro®-Gateway (from accessory power supply or alarm panel). CAUTION: Observe (+) and (-) polarity markings on circuit board. EAPro®-Gateway can be damaged if power polarity is reversed.
	Aux Power Out	11–26 VDC power out connection for EAPro®-Gateway accessories requiring power (such as HA-III+ Humidity Alert). This output voltage equals that of Power In and is currentlimited to a maximum of 500 mA. CAUTION: Connect only accessories specified in this manual to the Aux Power Out connection. Connection of unsuitable loads to this connection may damage the power supply and EAPro®-Gateway, or result in improper or unreliable operation. Note: Accuracy for the HA-III+ sensor is specified at 12VDC. The accuracy of the HA-III+ is compromised if Aux Power Out powers the HAIII+ and is above 12VDC.
J8	OUTPUT 1	Form C relay alarm output for Relay 1. Corresponds to wired input 1.
	OUTPUT 2	Form C relay alarm output for Relay 2. Corresponds to wired input 2.
	OUTPUT 3	Form C relay alarm output for Relay 3. Corresponds to wired input 3.
J9	OUTPUT 4	Form C relay alarm output for Relay 4. Corresponds to wired input 4.
	AUX OUT	Form C relay output that activates upon an alarm from any of the sensors.
J13	Antenna	RF receive and transmit.

J14

Antenna

RF receive and transmit.

CONFIGURATION PARAMETERS

Configuring the settings consists of selecting a format for date and for time, and selecting an RF channel as outlined in Table 10.

Table 10: Configuration Parameters

PARAMETER	OPTIONS	FACTORY DEFAULT	DESCRIPTION
Date Format	YYYY-MM-DD	MM-DD-YYYY	Sets the desired date format for all event time stamps.
	MM-DD-YYYY		
	D.M.YY		
	DD.MM.YY		
	DD.MM.YYYY		
	YYYY/MM/D		
	m/d/YY		
	m/d/YYYY		
Time Format	HH:MM:SS	HH:MM:SS	Sets the desired time format for all event time stamps.
	HH:MM:SS XM		
	HH:MM		
	HH:MM XM		
	EPOCH		
RF Channel	11 (2045 MHz)	16 (2430 MHz)	Selects the ISM band radio frequency (RF) channel for transmission between the wireless sensors and gateway.
	(Looking for these Prior Docs. to update this)		
	12 (2410 MHz)		
	13 (2415 MHz)		
	14 (2420 MHz)		
	15 (2425 MHz)		
	16 (2430 MHz)		
	17 (2435 MHz)		

SENSORS

The EAPro®-Gateway accepts a variety of sensors to provide environmental status and information. These include wired and EAPro® wireless sensors for conditions that include temperature, humidity, and the presence of water. Additional options include dry contact closure sensors and the use of industry standard 0–5V, and 4–20mA sensors.

Note: Sensors are not programmed to a specific relay, instead relays provide an alarm for a specific condition such as an exceeded high alarm limit or an exceeded low alarm limit.

Hardwired Sensors

Wired sensors can be Wired Temperature Probe, Wired Humidity Sensor, Wired Water Sensor, Dry Contact Sensor, 0–5V or a 4–20mA Sensor.

Wired Temperature Probe

Wired temperature probe options include probes for high, low, and ultralow temperature ranges (see Table 11). Probe options are stainless steel and waterproof. Select a waterproof sensor for cooler monitoring applications.

Note: The Wireless Multi-Function Transmitter (EAPro®-WFMT) accepts the wired temperature probes for wireless monitoring.

Table 11: Wired Temperature Probes

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
TEMP-H-S	Thermistor, stainless steel probe, Red Range Sensor	32 °F to 302 °F (0 °C to 150 °C)
TEMP-H-W	Thermistor, waterproof, Red Range Sensor	32 °F to 221 °F (0 °C to 105 °C)
TEMP-L-S	Thermistor, stainless steel probe, Blue Range Sensor	-58 °F to 158 °F (-50 °C to 70 °C)
TEMP-L-W	Thermistor, waterproof, Blue Range Sensor	-58 °F to 158 °F (-50 °C to 70 °C)
TEMP-UL-S	Thermistor, stainless steel probe, White Range Sensor	-148 °F to 32 °F (-100 °C to 0 °C)

Wired Humidity Sensor

Select the HA-III+ humidity sensor for wired humidity sensing applications (Table 12).

Table 12: Wired Humidity Sensor

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
HA-III+	Wired humidity sensor	5 to 95% RH (non-condensing)

Wired Water Sensor

Select the WaterBug® supervised water sensor for wired water sensing applications (Table 13).

Table 13: Wired Water Sensor

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
W-S-S	Supervised water sensor	N/A

Note: Wired water sensors require that at least one supervised water sensor (W-S-S) be used. Up to five additional unsupervised water sensors (W-S-U) may be added in parallel on the same input where the supervised water sensor is configured.

Note: The Wireless Multi-Function Transmitter accepts the WaterBug® supervised water sensor (WSS). When connected to the Wireless Multi-Function Transmitter, the WSS cannot be used with additional supervised (WSS) or unsupervised (WSU) sensors.

Dry Contact Sensor

The EAPro®-Gateway accepts industry dry contact sensors (Table 14).

Table 14: Dry Contact Sensors

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
N/A	N.O. (Normally Open Dry Contact)	Normally Open dry contact such as door contacts, motion detectors, and glass break detectors.
N/A	N.C. (Normally Closed Dry Contact)	Normally Closed dry contact such as door contacts, motion detectors, and glass break detectors.

Wireless Sensors

EAPro® wireless sensors transmit to the EAPro®-Gateway through RF links. Each EAPro® wireless sensor is hardcoded with a serial number which the EAPro®-Gateway uses to identify that sensor in the system. The serial number is printed on a label affixed to the wireless sensor printed circuit board.

The wireless sensors are fully supervised for both communication drop out and low battery condition. The power relay can be configured to give a low-battery indication (see Configure Relays). **The wireless sensor's assigned relay will change state if communication drops out for more than 20 minutes. (waiting confirmation TFS #468)**

Wireless sensors can be standalone temperature (EAPro®-WTS) or humidity (EAPro®-WHS). Hardwired sensors can be wired to a wireless multifunction transmitter (EAPro®-WMFT).

Wireless Temperature Sensor

EAPro®-WTS (wireless temperature sensor) is a standalone wireless sensor for temperature (Table 15). This sensor cannot be placed inside coolers or freezers.

Note: To monitor coolers and freezers use a wired temperature probe (Table 11), or use a wireless multi-function transmitter (Table 17) with a waterproof temperature probe (Table 11).

Table 15: Wireless Temperature Sensor

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
EAPro®-WTS	Standalone wireless temperature sensor. Not for use in coolers or freezers.	32 °F to 122 °F (0 °C to 50 °C)

Wireless Humidity Sensor

EAPro®-WHS (wireless humidity sensor) is a standalone wireless sensor for humidity (Table 16). The wireless humidity sensor cannot be placed inside coolers or freezers.

Table 16: Wireless Humidity Sensor

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
EAPro®-WHS	Standalone wireless humidity sensor. Not for use in coolers or freezers.	5 to 95% RH (non-condensing)

Wireless Multi-Function Transmitter

The EAPro®-WMFT (wireless multi-function transmitter) requires a wired probe or wired sensor for operation (Table 17).

Note: To monitor coolers and freezers use a Wired Temperature Probe with a Wireless Multi-Function Transmitter.

Table 17: Wireless MultiFunction Transmitter

MODEL	DESCRIPTION	OPERATING RANGE/PARAMETERS
EAPro®-WMFT	Wireless transmitter for sensors.	Dependent on connected probe or sensor, including: Temperature (Wired Temperature Probe) Water (Wired Water Sensor) Dry Contact (Dry Contact Sensor)

4–20mA Sensor

The EAPro®-Gateway accepts hardwired industry standard 4–20mA sensors. Before installing, it is important to verify that this type of sensor will operate properly over the entire output range.

Operation Diagrams

Figure 7 shows an example of the loop circuit for a 4–20mA sensor whose minimum operating voltage is 8V or less when connected to an EAPro®-Gateway that is powered with 12VDC.

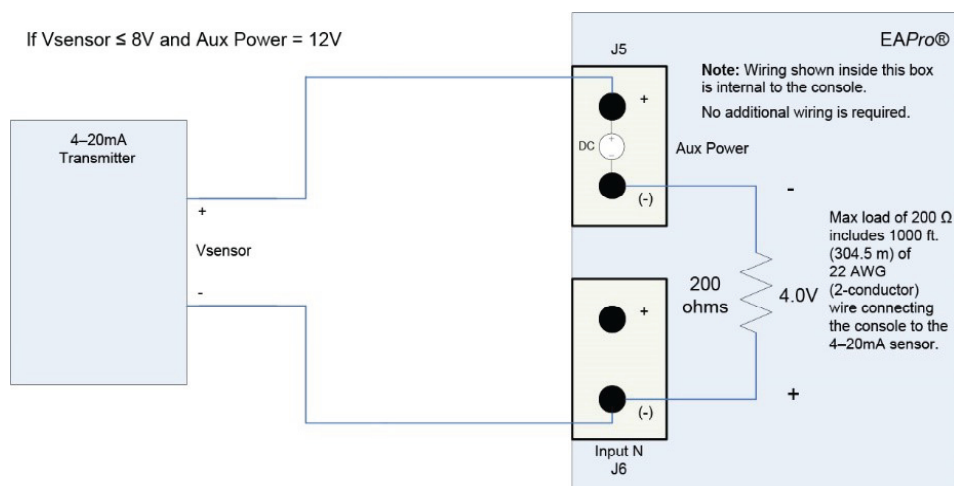


Figure 7: Wiring Diagram for 4–20mA Sensor – Aux Power Supply

Figure 8 shows an example of the loop circuit for a 4–20mA sensor whose minimum operating voltage is greater than 8V when connected to an EAPro®-Gateway that is powered with 12VDC.

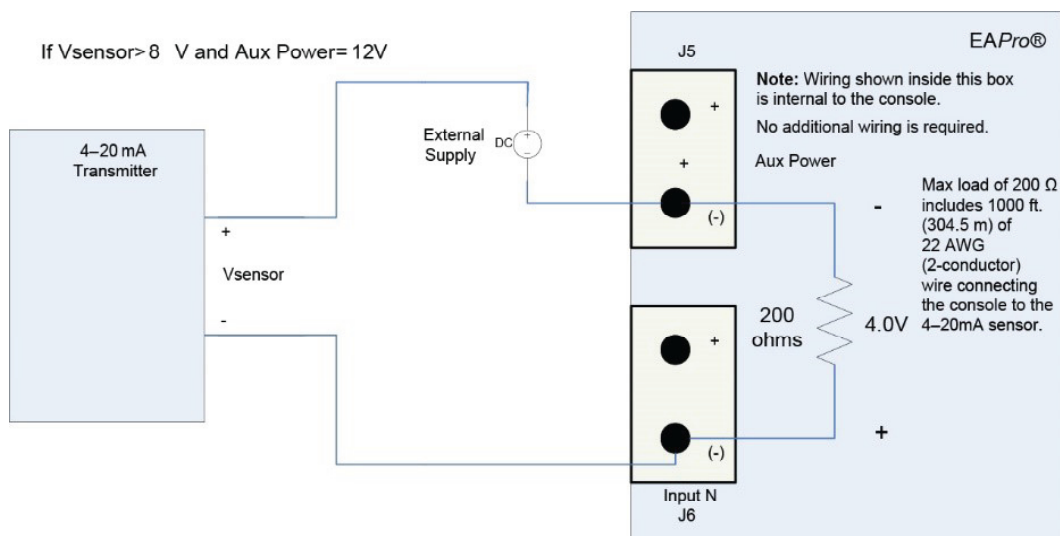


Figure 8: Wiring Diagram for 4–20mA Sensor – External Power Supply**Power Supply / Sensor Voltage Selection**

To determine the power supply voltage required for correct full-scale operation of a given 4–20mA sensor, first identify all of the voltage drops within the current loop.

Figure 7 and Figure 8 each show a drop of 4.0 VDC which is the voltage drop generated by connecting the 4–20mA sensor to the EAPro®-Gateway using 1000' of 22 AWG wire.

To determine the power supply voltage, add the minimum operating voltage to the 4.0V voltage drop of the EAPro®-Gateway (plus wire). Then calculate the entire operating range to ensure correct fullscale operation.

Example:

Assume a 4–20mA sensor with an operating input voltage range of 10–30V is selected for use. The minimum operating voltage of the sensor is 10V (V_{sensor}). When the 4.0V drop of the EAPro®-Gateway (and wire) is added, at least 14VDC is needed to power the loop.

If the EAPro®-Gateway is connected to a 12VDC power supply, the sensor in the example now requires an external power supply of at least 16V as shown in Figure 29.

It is important not to exceed the maximum operating voltage of the 4–20mA sensor as specified within the sensor's product specification.

The following formula provides the basis for the voltage selection matrix shown in Table 18.

$$R_L \leq (V_{cc} - x) \cdot 0.023$$

where:

R_L = Loop resistance of 200Ω

V_{cc} = Power supplied to EAPro®-Gateway or Aux Power Out

X = Sensor voltage (max)

Reference Table 18 to select either the proper sensor rating to be used with a known power supply, or to select a power supply for a known sensor rating.

Table 18: Voltage Selection Matrix for 4–20mA Sensors

POWER SUPPLIED TO EAPRO®-GATEWAY OR AUX POWER OUT	V_{SENSOR} (MAX) [MAXIMUM SENSOR VOLTAGE RATING]
11 VDC	7 VDC
12 VDC	8 VDC
13 VDC	9 VDC
14 VDC	10 VDC
15 VDC	11 VDC
16 VDC	12 VDC
17 VDC	13 VDC
18 VDC	14 VDC
19 VDC	15 VDC
20 VDC	16 VDC
21 VDC	17 VDC

22 VDC	18 VDC
23 VDC	19 VDC
24 VDC	20 VDC
25 VDC	21 VDC
26 VDC	22 VDC

SENSOR PROGRAMMING AND PARAMETER DESCRIPTIONS

This section provides a description of each sensor parameter (see Table 19) for sensor programming.

Table 19: Sensor Programming Parameter Descriptions

PARAMETER	APPLICABLE SENSORS	DESCRIPTION
Type	<u>Hardwired Sensors</u>	TEMP-L-S (BLUE) TEMP-L-W (BLUE) TEMP-H-S (RED) TEMP-H-W (RED) TEMP-UL-S (WHITE) HA-III+ (HUMIDITY) 4–20mA (CUSTOM) 0–5 VOLTS (CUSTOM)
	<u>Wireless Sensors</u>	BLUE WHITE RED NORMALLY OPEN NORMALLY CLOSED PS110 4–20mA TD
	Custom	0–5V 4–20mA RTD
Sensor Name	All Sensors	A name to identify the sensor in the alarm system for the viewer. The sensor name is displayed on the View Sensors screen. Two name choice types are available: Common Name: These are preprogrammed names, including: Cooler Freezer Fridge Warehouse Storage Door Water Custom Name: Enter any name if the preprogrammed common names do not adequately identify the sensor in the system (limited to 16 characters). Note: Duplicate sensor names are not permitted.
Unit of Measure	<u>Wired Temperature Probe</u>	°F (Fahrenheit), °C (Celsius)
	<u>Wireless Temperature Sensor</u>	°F (Fahrenheit), °C (Celsius)
	0–5V <u>4–20mA Sensor</u>	Common units of measure: °F (Fahrenheit), °C (Celsius), K (Kelvin), % RH (percent relative humidity), psi (pounds per square inch), Pa (Pascals), kPa (kilo Pascals), lb (pound), kg (kilogram)
		Custom units of measure: Enter the appropriate units for the connected 4–20mA sensor via the keypad.

Collection Frequency	All Sensors	Sets the interval for collecting and recording data from the sensors. The data collection frequency is set per sensor. The system provides a minimum of approximately (TFS 470) 10,000 collected data points (TFS 470) regardless of the frequency selected. The estimated time duration covered for each data collection frequency is: 30 seconds = 3.5 days 1 minute = 1 week 5 minutes = 1 month 10 minutes = 1.75 months 15 minutes = 3 months (default) 20 minutes = 4.5 months 30 minutes = 6 months 60 minutes (1 hour) = 1 year 120 minutes (2 hours) = 2 years 240 minutes (4 hours) = 4 years 360 minutes (6 hours) = 5.5 years															
Resolution	4–20mA Sensor	Resolution determines the range that may be used for the 4–20mA sensor. The full scale range is determined by the values entered in the 4mA value and the 20mA value. Select the correct resolution to set the true range limits for the sensor. The available values are as follows: <table> <tr> <th>Resolution</th><th>Max 4mA</th><th>Min 20mA</th></tr> <tr> <td>1.0</td><td>-9999.</td><td>+9999.</td></tr> <tr> <td>0.1</td><td>-999.9</td><td>+999.9</td></tr> <tr> <td>0.01</td><td>-99.99</td><td>+99.99</td></tr> <tr> <td>0.001</td><td>-9.999</td><td>+9.999</td></tr> </table>	Resolution	Max 4mA	Min 20mA	1.0	-9999.	+9999.	0.1	-999.9	+999.9	0.01	-99.99	+99.99	0.001	-9.999	+9.999
Resolution	Max 4mA	Min 20mA															
1.0	-9999.	+9999.															
0.1	-999.9	+999.9															
0.01	-99.99	+99.99															
0.001	-9.999	+9.999															
4mA Value	4–20mA Sensor	This parameter equals the environmental reading that results in a sensor output of 4mA or its minimum valid reading. This is dependent on the setting of the resolution as discussed above.															
20mA Value	4–20mA Sensor	This parameter equals the environmental reading that results in a sensor output of 20mA or its minimum valid reading. This is dependent on the setting of the resolution as discussed above.															
Hysteresis	Wired Temperature Probe	Hysteresis helps prevent alarms from being set and reset continually if the environment is at or near the alarm set point by providing an acceptable variance. Example: If hysteresis is set at 2 and the sensor high limit is set at 50, the sensor reading must decrease to 48 (50 minus 2) for the alarm condition to reset to a no-alarm condition.															
	Wireless Temperature Sensor																
	Wired Humidity Sensor																
	Wireless Humidity Sensor																
	0–5V 4–20mA Sensor																
Low Alarm Limit	Wired Temperature Probe	The value that when exceeded, trips the low alarm.															
	Wireless Temperature Sensor																
	Wired Humidity Sensor																
	Wireless Humidity Sensor																
	0–5V 4–20mA Sensor																
High Alarm Limit	Wired Temperature Probe	The value that when exceeded, trips the high alarm.															
	Wireless Temperature Sensor																
	Wired Humidity Sensor																

	Wireless Humidity Sensor	
	0–5V 4–20mA Sensor	
Alarm Time Delay	All	A period of time that an alarm condition can exist before the alarm is triggered. This helps to prevent false alarms in situations where normal activities cause conditions to temporarily exceed alarm thresholds. Example: The temperature in a freezer may temporarily rise above the high alarm limit while the freezer door is open for restocking. The Alarm TimeDelay prevents the alarm trip until the delay time is exceeded thus allowing the door to be closed and the temperature to be re-cooled. Note: When temperature monitoring is critical, such as pharmaceuticals, use TEMPGB and TEMPBT to stabilize temperature around probe.
Buzzer (audible alarm)	All	Enables and disables the buzzer when an alarm limit has been exceeded or a warning condition exists. WARNING Selecting Disable for this parameter completely turns off the audible alarm buzzer. No audible alarm tone will sound when an alarm occurs when DISABLE is selected.
Light (visual alarm)	All	Enables and disables the visible flashing light when an alarm limit has been exceeded or a warning condition exists. WARNING Selecting Disable for this parameter completely turns off the visible alarm. No visible alarm light will flash when an alarm occurs when DISABLE is selected.
Relay	?	
Warning	?	

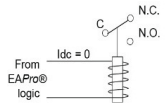
RELAY OPERATION

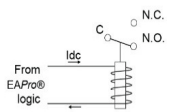
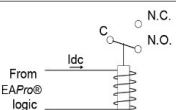
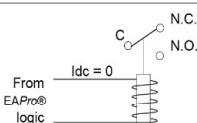
This section describes the operation of the relays in the EAPro®-Gateway. Relays are programmed to provide the desired signal to the alarm panel. Relays are not programmed to a specific sensor, instead they provide an alarm for a specific condition such as an exceeded high alarm limit or an exceeded low alarm limit.

The default operation of a relay is deenergized (Table 20). Deenergized relays trigger only upon alarm, they do not trigger on loss of power. A EAPro®-Gateway powered by an alarm panel that has backup power may not be concerned with loss of power.

Energized relays trigger upon alarm and upon loss of power. It's important to note that polarity is reversed when the relay is energized. Thus, a N.C. connection to your alarm panel will be connected to the C and N.O. terminals.

Table 20: Relay Operation Conditions

RELAY SETTING	CONDITION	DESCRIPTION	
De-Energized (default)	No Alarm		Power is removed from the relay coil.

	Alarm		Power is applied to the relay coil.
Energized	No Alarm		Power is applied to the relay coil.
	Alarm		Power is removed from the relay coil.

DATA LOGS

The EAPro®-Gateway collects data which can be viewed or exported for reporting purposes. Logged data includes notifications, events, sensors, and users. View the logged data points on the EAPro®-Gateway, export a log to USB, or view via [INSIGHT](#) (sold separately).

Notification Log

The notification log contains time and date of warning and alarm notifications for all sensors. The EAPro®-Gateway displays the ten latest notifications in chronological order starting with the most recent. Logged information includes the sensor name, date and time of the warning or alarm, and the trigger.

Event Log

The event log contains the time, date, and user responsible for events, including: sensor maintenance, relay triggers, device updates, network changes, power cycles, RF issues, and system clears.

Sensor Log

The sensor log contains a time and date stamped list of sensor(s) reading data recorded according to the specified collection frequency for each sensor.

User Log

The User Log contains a list of activities by users who have credentials programmed into the system. User Log information includes email address (username) and PIN, log in/out timestamps, and timestamps for clearing logs, and for editing, pausing, and deleting sensors.

INSTALLATION

This section provides instructions for installing the EAPro®-Gateway.

Note: Read the [Installation](#) and [Program](#) sections in entirety prior to starting any installation or programming work.

Note: All product images shown are for illustration purposes only and may not be an exact representation of the product. Actual product may vary due to product modification.

INSTALLATION TOOLS AND SUPPLIES

The following tools and supplies may be necessary for the installation:

- Phillips screwdriver
- Mounting hardware for the EAPro®-Gateway and any optional sensor units
- If required, a drill and the appropriate drill bits
- Wire stripper
- Sensors (not supplied; see Sensors)
- Sensor wiring (typically 18–22 AWG twisted-pair; not supplied)
- Power sources

POWER REQUIREMENTS

All power terminals must be connected to a Class 2 power limited circuit which complies with the [National Electric Code NFPA 70, Article 725](#). Where required, this equipment is to be isolated from the mains supply by a limited power source as specified in EN60950.

WARNING

EAPro®-Gateway relay outputs are intended only for use as lowvoltage, low-current alarm connections, and not for direct switching or control of AC-mains powered loads. Additionally, local codes may further dictate or limit the types of loads and associated wiring to be used with the low-current Form C relay outputs used with the EAPro®-Gateway. Connecting AC-mains type circuits to the EAPro®-Gateway may result in an electric shock and/or fire hazard.

Connect only sensors specified in this manual to the wired and wireless input connections. Using sensors not specified in this manual may damage the EAPro®-Gateway or cause improper or unreliable operation.

Do not connect a load to the [AUX OUT](#) or [OUTPUT 1](#) through [OUTPUT 4](#) relay outputs that exceeds limitations stated in the [\(Link to Specs\) Specifications \(Link to Specs\)](#) section of this manual. Loads exceeding the specified limitations may damage the EAPro®-Gateway, or result in improper or unreliable operation.

The EAPro®-Gateway printed circuit board (PCB)

contains electrostatic discharge (ESD) sensitive devices. To help prevent damage caused by ESD, observe appropriate ESD handling rules whenever the PCB in the EAPro®-Gateway is exposed.

Batteries shall not cause explosion or produce a fire hazard as a result of excessive charge or discharge, or if a battery is installed with incorrect polarity.

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

MOUNT THE REAR PLATE

The EAPro®-Gateway has a rear plate on a hinge that may be attached to a standard 3-gang electrical enclosure or mounted directly to a wall.

Dropdown the rear mounting plate of the EAPro®-Gateway:

Pull the rear mounting plate down and hinge away from the EAPro®-Gateway main chassis. The top retainer tabs on the main chassis disengage from the holes in the rear plate.

Completely remove the mounting plate from the EAPro®-Gateway by disengaging the mounting plate hinges from the mating tabs.

Install the rear mounting plate:

If mounting to 3-gang enclosure: Use four (4) machine screws to secure the mounting plate to the mating holes in the 3-gang enclosure.

If mounting to drywall surface: Hold the mounting plate in mounted position. Mark the locations of the four mounting holes. Install drywall anchors and secure the mounting plate to the anchors.

(Review) **Note:** If wall-mounted, prepare a wiring access hole at this time. All wiring must pass through the opening in the center of the rear mounting plate.(Review)

CONNECTING POWER

CAUTION

Do not connect or disconnect power, sensor, or alarm wiring while power is applied. Connecting and disconnecting sensors or alarm wiring when power is applied to the EAPro®-Gateway may damage the EAPro®-Gateway or result in improper or unreliable operation.

Connection of unsuitable loads to the EAPro®-Gateway power connection may damage the power supply and EAPro®-Gateway, or result in improper or unreliable operation.

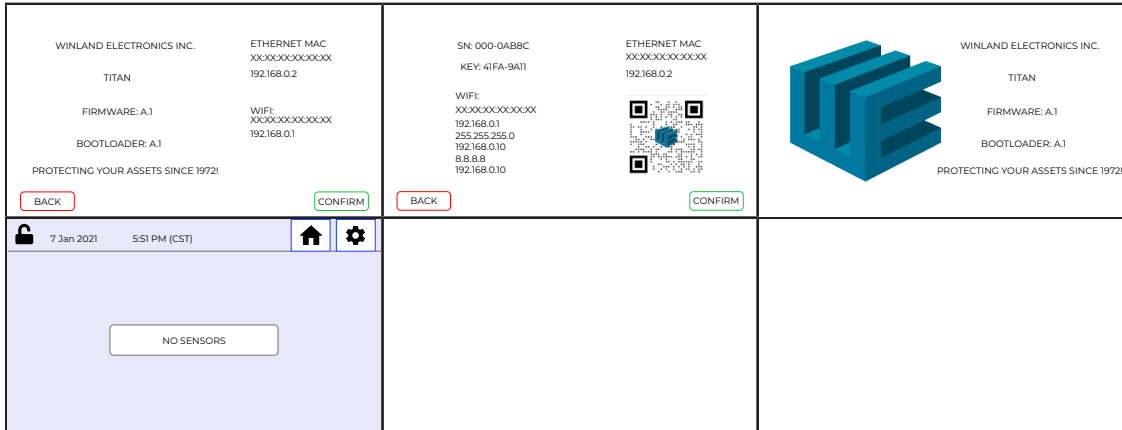
Note: Do not connect power to the EAPro®-Gateway until you are ready to begin programming sensors. The EAPro®-Gateway has a 30-minute timer that starts when power is first applied. If at least one sensor is not added and programmed within the 30-minute time period, an alarm will occur.

Use a terminal block adapter to connect power supply + and - leads to POWER IN (+) and (-) on J5. Observe proper polarity.

If **Aux** Power Out is to be used, connect + and - leads to **AUX** POWER OUT (+) and (-) on J5 using a terminal block adapter.

INITIAL START-UP PROCEDURE

When power is first applied to the EAPro®-Gateway, the touchscreen will flash the splash screens as the system verifies memory and conducts internal checks. Since no sensors are installed, the initial boot up process will end at the null sensor screen. This indicates the EAPro®-Gateway is ready for programming.

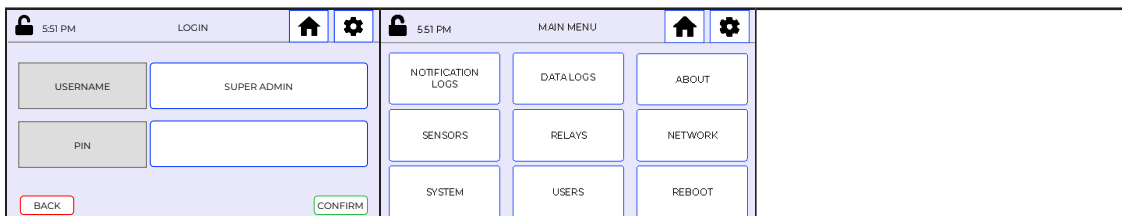


Note: Do not connect power to the EAPro®-Gateway until you are ready to begin programming sensors. The EAPro®-Gateway has a 30-minute timer that starts when power is first applied. If at least one sensor is not added and programmed within the 30-minute time period, an alarm will occur.

Unlock the EAPro®-Gateway

Tap on the lock icon and enter a PIN to unlock the EAPro®-Gateway and proceed to the first menu.

(Deletion) Note: The universal PIN is 001234. This PIN is permanent and cannot be changed or deleted. **(Deletion)** Users may be assigned a PIN as an added level of security to authorize different functions and to record who performed a given task.



Note: If the PIN entered was not valid, **(REVIEW)** the INVALID PIN screen displays. If this happens, press the Accept/Home key to try again. **(REVIEW)**

(Deletion) Note: If there are no sensors programmed into the EAPro®-Gateway, an audible buzzer will sound after the 30minute timer reaches 00:00 seconds. Press Cancel/Silence key to temporarily silence the buzzer. **(Deletion)**

INSTALL WIRED SENSORS

Install wired sensors according to the instructions provided with the wired sensor.

Mount the wired sensor in its designated location.

Label the sensor wires for easy identification.

Route the wires from the sensor to the EAPro®-Gateway and dress the wires as required by local code. Ensure the wires are protected and supported along their entire length, and they are not stressed at any point.

Pass the wires through the rear plate.

CONNECT WIRED SENSORS

Ensure the sensor wiring is routed through the rear plate.

Remove the pluggable terminal block from the correct input header connector by pulling it up and off of the circuit board.

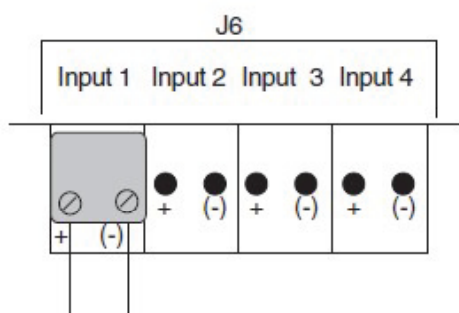
Strip the ends of the sensor wires 1/4" (6.4 mm). If stranded, twist strands after stripping. Insert the stripped wire ends into screw terminals of the terminal block. See Figure 9, Figure 10, and Figure 11.

Note: Temperature probes, dry contact sensors, and the WaterBug® sensor are not polarity sensitive.

Secure the connections using the setscrews on the terminal block. Check the connection by pulling lightly on each connection.

After connecting the wire ends to the terminal block, align the terminal block to the correct header pins, and press to fully seat the block onto the header connector pins.

Figure 9: Wired Sensor Connection: Temperature Probe, WaterBug®, and Dry Contact (REVIEW)



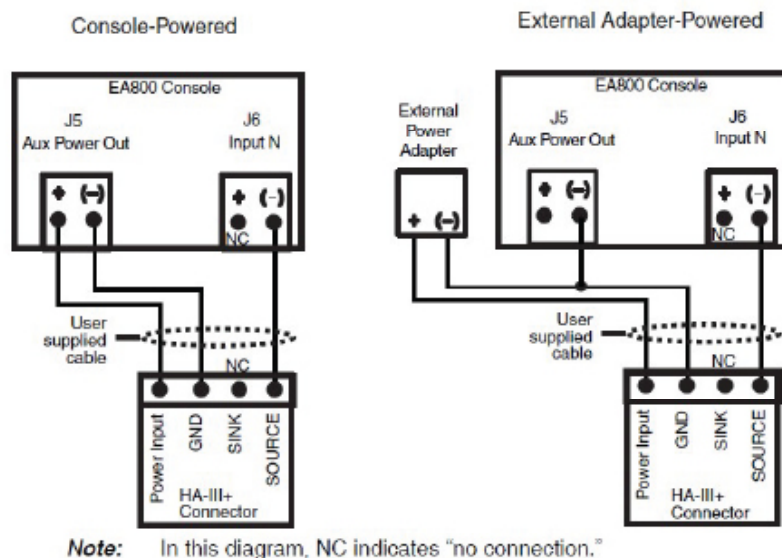


Figure 10: Wired Sensor Connection: HA-III+

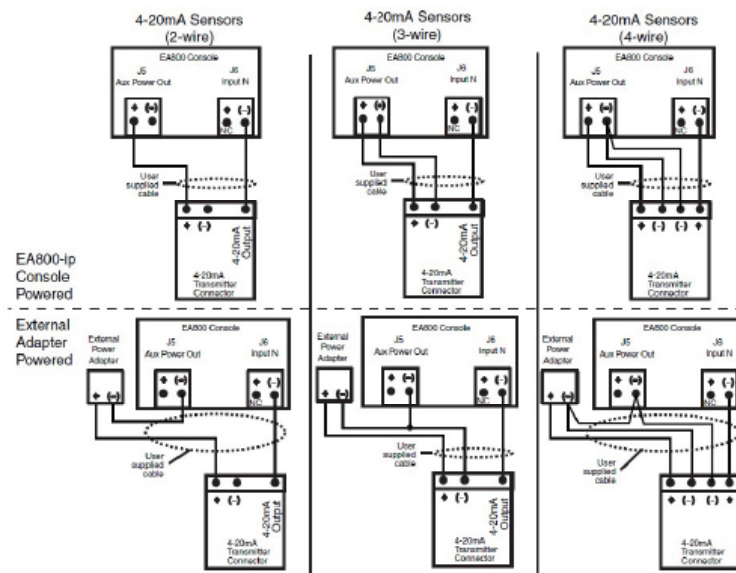


Figure 11: Wired Sensor Connection: 4-20mA

INSTALL WIRELESS SENSOR

Install wireless sensors after connecting power and then unlocking the EAPro®-Gateway. Install wireless sensors one at a time.

CAUTION

Do not connect or disconnect power, sensor, or

alarm wiring while power is applied. Connecting and disconnecting the EAPro®-Gateway with power connected may damage the console or result in improper or unreliable operation.

Connection of unsuitable loads to this connection may damage the power supply and EAPro®-Gateway, or result in improper or unreliable operation.

If the EAPro®-Gateway will be connected to a remote alarm panel, do not connect to the alarm panel until after sensor connection and configuration is complete. Connecting the remote alarm panel before configuring the EAPro®-Gateway sensors may result in false alarms at the remote panel.

Note: Verify the wireless sensor can communicate with the EAPro®-Gateway before permanent mounting.

Record Serial Number

Wireless sensors have a model ID code (e.g. EAPro®-WTS for Wireless Temperature Sensor) and they are assigned a unique serial number (MAC address) for identification during programming. The model ID code is printed on a white sticker affixed to the printed circuit board (PCB). The serial number is printed on an orange label affixed to the PCB. Record the model ID number and the serial number prior to applying power to the wireless sensor.

Remove the cover from the wireless sensor.

Locate and record the model ID code (see Figure 12).

Locate and record the serial number (see Figure 12).

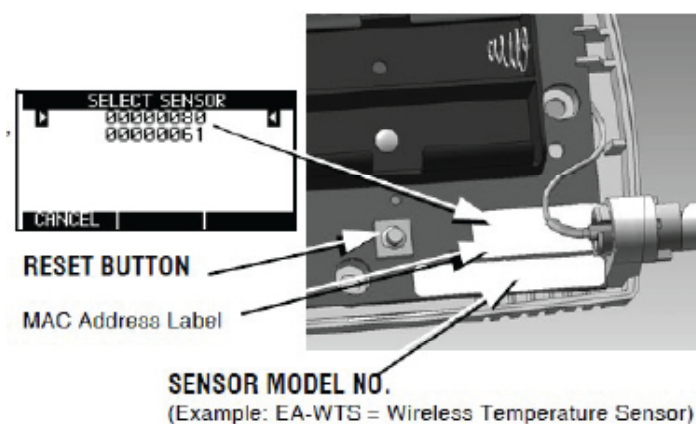


Figure 12: Wireless Sensor MAC Address and ID Location

Temporarily Power EAPro®-Gateway and Wireless Sensor

Temporarily mount the EAPro®-Gateway.

Connect power to the EAPro®-Gateway. After the boot process completes, the Home Screen or Null Screen (if there are currently no sensors installed) displays.

With the EAPro® wireless sensor located near the console, connect power to the wireless sensor.

Unlock the EAPro®-Gateway (if necessary).

At the Main Menu, tap Sensors > Add Sensor > Wireless and allow time for detection of the wireless sensor.

Note: The keypad locks automatically after inactivity (no key or touchscreen activity) according to the Local Lock Setting. If the detection and programming process for a sensor is not completed before the keypad lockout, entered values are lost and the programming procedure must be restarted for the sensor from the beginning. It is recommended that the EAPro®-Gateway identifies wireless sensors one at a time, with the sensors unmounted and in close proximity to the EAPro®-Gateway.

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PROGRAM

This section provides instructions for programming the EAPro®-Gateway.

The EAPro®-Gateway may be programmed locally (by default) or remotely via [INSIGHT](#) (sold separately). When the EAPro®-Gateway is installed and powered-up, it is ready to program.

Note: Read the [Installation](#) and [Program](#) sections in entirety prior to starting any installation or programming work.

Note: All product images shown are for illustration purposes only and may not be an exact representation of the product. Actual product may vary due to product modification.

MAIN MENU

The Main Menu is a gateway menu for programming or viewing settings (see Figure 13). The Main Menu is also the starting point to modify settings, and to perform some Maintenance tasks. Tap the gear icon from any screen to quickly navigate to the Main Menu.

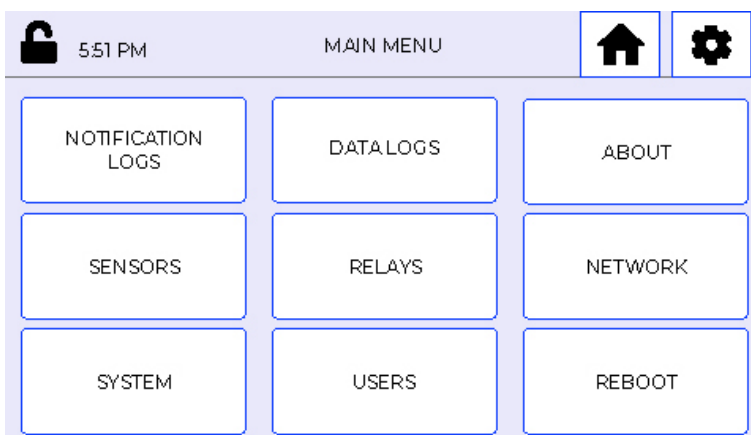


Figure 13: Main Menu

CONFIGURE SYSTEM

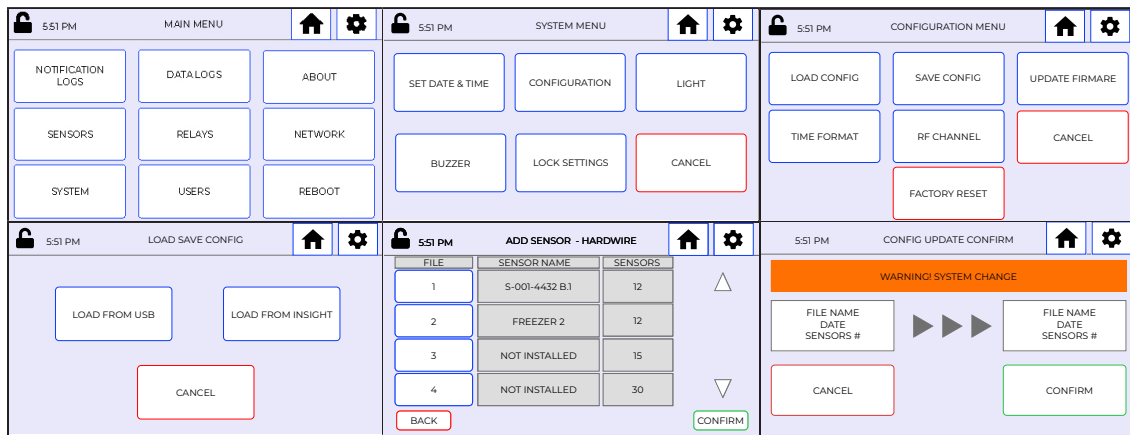
System configurations, which include the system parameters shown in [Configuration Parameters](#) and any programmed sensor parameters, can be saved from other installations and then loaded into current installations. To configure a system by loading settings from other installations, [Load System Configuration from USB](#) or [Load System Configuration from INSIGHT](#) (sold separately).

Load System Configuration from USB

To configure system with file from USB, perform the following procedure starting at the Main Menu:

1. Insert the USB.
2. At [Main Menu](#) tap **System** > **Configuration** > **Load Config** > **Load from USB**.
3. Scroll to desired file and tap file name to select.
4. Tap **Confirm** to activate.
5. Review warning and tap **Confirm** to load from USB.
6. Remove USB.

Note: System configuration changes are recorded in the Event Log.

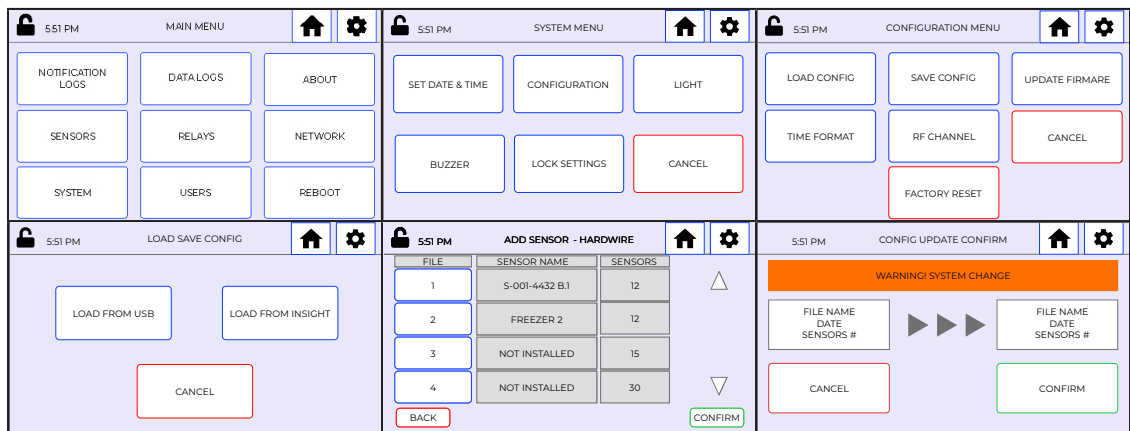


Load System Configuration from **INSIGHT**

To configure system from **INSIGHT** (sold separately), perform the following procedure starting at the **Main Menu**:

1. At **Main Menu** tap **System** > **Configuration** > **Load Config** > Load from **INSIGHT**.
2. Scroll to desired file and tap file name to select.
3. Tap **Confirm** to activate.
4. Review warning and tap **Confirm** to load from **INSIGHT** (sold separately).

Note: System configuration changes are recorded in the **Event Log**.



ADD SENSOR

Add Hardwire Sensor

To add a hardwire sensor, perform the following procedure starting at the **Main Menu**:

1. At **Main Menu** tap **Sensors** > **Add Sensor** > **Hardwire** and tap the appropriate Input relay.
2. Tap the dropdown and select the probe type.
3. Tap the dropdown and select (a common) name or type the probe name.
4. Tap the dropdown and select the data collection frequency (in minutes) and tap **Confirm** to advance.
5. If 4–20mA sensor, tap the dropdown to select the resolution and the Unit of Measure and tap **Confirm** to advance.
6. Toggle and set the unit of measure, hysteresis, light, and buzzer and tap **Confirm** to advance.

7. Toggle relays and warnings and tap **Confirm** to advance.
8. Toggle and set low limit, low limit delay, low limit warning, and low limit warning delay and tap **Confirm** to advance.
9. Toggle and set high limit, high limit delay, high limit warning, and high limit warning delay and tap **Confirm** to advance.

The sensor has been added. Tap screen to navigate as desired.

Note: Adding a sensor is recorded in the [Event Log](#).

The screenshots illustrate the following steps:

- Main Menu:** Shows options like Notification Logs, Data Logs, About, Sensors, Relays, Network, System, Users, and Reboot.
- Sensor Menu:** Options include Add Sensor, View Sensor, Replace Transmitter, Edit Sensor, Delete Sensor, Signal Performance, Pause Sensor, Test Sensor, and Cancel.
- Add Sensor:** Choice between Hardware and Wireless.
- Sensor Type & Name:** Fields for Default, Setting Name, and Drop Down.
- Sensor Type & Name:** Fields for Resolution, Unit of Measure, Min Value, and Max Value.
- Sensor General:** Settings for Degree, Fahrenheit, Hysteresis, Lights, and Buzzer.
- Sensor Triggers:** Settings for Relays and Warnings.
- Sensor Low Limits:** Settings for Low Limit, Low Limit Delay, Low Warning, and Low Warning Delay.
- Sensor High Limits:** Settings for High Limit, High Limit Delay, High Warning, and High Warning Delay.
- Sensor Added:** Confirmation screen with options to Add Another Sensor, Adjust Sensor Details, Home, or Delete Sensor.

Add Wireless Sensor

To add a wireless sensor, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Sensors** > **Add Sensor** > **Wireless**.
2. The EAPro®-Gateway will begin searching for wireless sensors that have been powered on. The sensor and wireless connection frequency strength are displayed when a sensor connection is made. Tap on the sensor name to begin programming the sensor.
3. Tap the dropdown and select the probe type.
4. Tap the dropdown and select (a common) name or type the probe name.
5. Tap the dropdown and select the data collection frequency (in minutes) and tap **Confirm** to advance.
6. If 4–20mA sensor, tap the dropdown to select the resolution and the Unit of Measure and tap **Confirm** to advance.
7. Toggle and set the unit of measure, hysteresis, light, and buzzer and tap **Confirm** to advance.
8. Toggle relays and warnings and tap **Confirm** to advance.
9. Toggle and set low limit, low limit delay, low limit warning, and low limit warning delay and tap **Confirm** to advance.

10. Toggle and set high limit, high limit delay, high limit warning, and high limit warning delay and tap **Confirm** to advance.

The sensor has been added. Tap screen to navigate as desired.

Note: Adding a sensor is recorded in the Event Log.

The following screenshots illustrate the process of adding a sensor:

- MAIN MENU:** Shows the main navigation options including Notification Logs, Data Logs, About, Sensors, Relays, Network, System, Users, and Reboot.
- SENSOR MENU:** Provides options to Add, View, Replace, Edit, Delete, Pause, Test, or Cancel a sensor.
- ADD SENSOR:** Allows selection between Hardware and Wireless sensor types.
- SCANNING SENSORS:** Displays a list of detected sensors with signal strength indicators.
- SENSOR NAME:** Shows a list of available sensor models (e.g., 18AB, 254F, B1AA) for selection.
- SENSOR TYPE & NAME:** Configures default settings, probe type, name, and collection frequency.
- SENSOR GENERAL:** Sets general parameters like resolution, unit of measure, min/max values, and hysteresis.
- SENSOR TRIGGERS:** Configures triggers for relays and warnings.
- SENSOR LOW LIMITS:** Sets low limit, low limit delay, low warning, and low warning delay.
- SENSOR HIGH LIMITS:** Sets high limit, high limit delay, high warning, and high warning delay.
- SENSOR ADDED:** Confirms the sensor has been successfully added and provides options to add another sensor, adjust details, or return home.

ADD USER

To add users, perform the following procedure starting at the Main Menu:

- At Main Menu tap **Users** > **Add User** and enter:
 - Username (email address)
 - PIN (unique code of 4–6 alphanumeric characters)
- Tap on security dropdown to select User Access Level (User, Admin, Super Admin).
- Tap **Confirm** to activate.

Note: Adding a user is recorded in the Event Log.

The following screenshots illustrate the process of adding a user:

- MAIN MENU:** Shows the main navigation options.
- USER MENU:** Provides options to Add, Edit, or Delete a user.
- ADD USER:** A form to enter the user's Username, PIN, and select a Security level from a dropdown.
- RELAY SETTING:** Allows configuration of settings for Relay 1, Relay 2, Relay 3, Relay 4, and Aux.
- RELAY TRIGGERS:** Configures triggers for Relay 1, including sensor name, ultra cold, and west cold room settings.

SET SYSTEM TIME AND DATE FORMAT

To set the system time and date format, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System** > **Configuration** > **Time Format**.
2. Tap on dropdown to select new date format.
3. Tap on dropdown to select new time format.
4. Tap **Confirm** to activate.

Note: System time and date format changes are recorded in the Event Log.

The first screenshot shows the **MAIN MENU** with a lock icon and the time 5:51 PM. It contains buttons for NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The second screenshot shows the **SYSTEM MENU** with a lock icon and the time 5:51 PM. It contains buttons for SET DATE & TIME, CONFIGURATION, LIGHT, BUZZER, LOCK SETTINGS, and CANCEL. The third screenshot shows the **CONFIGURATION MENU** with a lock icon and the time 5:51 PM. It contains buttons for LOAD CONFIG, SAVE CONFIG, UPDATE FIRMWARE, TIME FORMAT, RF CHANNEL, CANCEL, and FACTORY RESET. Below these are three screenshots of the **SET DATE & TIME FORMAT** screen. The first shows the DATE FORMAT and TIME FORMAT dropdowns. The second shows the BACK and CONFIRM buttons.

SET DATE AND TIME

To set the date and time, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System** > **Set Date & Time**.
2. Tap on date, month, and year to set and tap **Next** to advance.
3. Tap on hour and min to set.
4. Tap on **GMT Offset** to set time zone.
5. Tap **Confirm** to activate.

Note: Setting the date and time is recorded in the Event Log.

The first screenshot shows the **MAIN MENU** with a lock icon and the time 5:51 PM. It contains buttons for NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The second screenshot shows the **SYSTEM MENU** with a lock icon and the time 5:51 PM. It contains buttons for SET DATE & TIME, CONFIGURATION, LIGHT, BUZZER, LOCK SETTINGS, and CANCEL. The third screenshot shows the **SET DATE & TIME** screen with a lock icon and the time 5:51 PM. It contains a table with columns SETTING NAME and SET POINT. The table has rows for DATE (15), MONTH (9), YEAR (2021), HOUR (12), MIN (14), and GMT OFFSET (-6(CDT) CHICAGO). Below the table are BACK and NEXT buttons. Below these are two screenshots of the **SET DATE & TIME** screen. The first shows the SETTING NAME and SET POINT columns. The second shows the BACK and CONFIRM buttons.

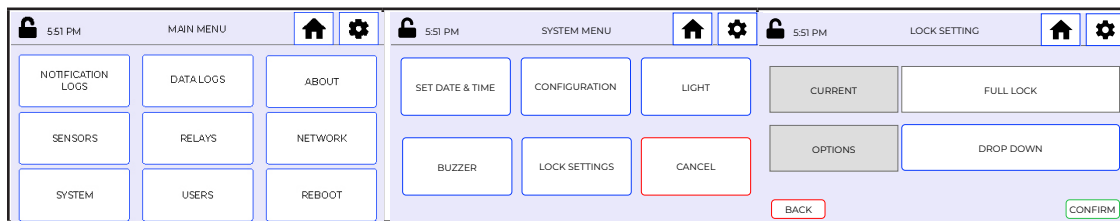
SET LOCK MODE

To configure lock mode, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System** > **Lock Settings**.
2. Tap to select lock mode (see Access Control).

3. Tap to select options.
4. Tap **Confirm** to activate.

Note: Configuring lock modes is recorded in the Event Log.

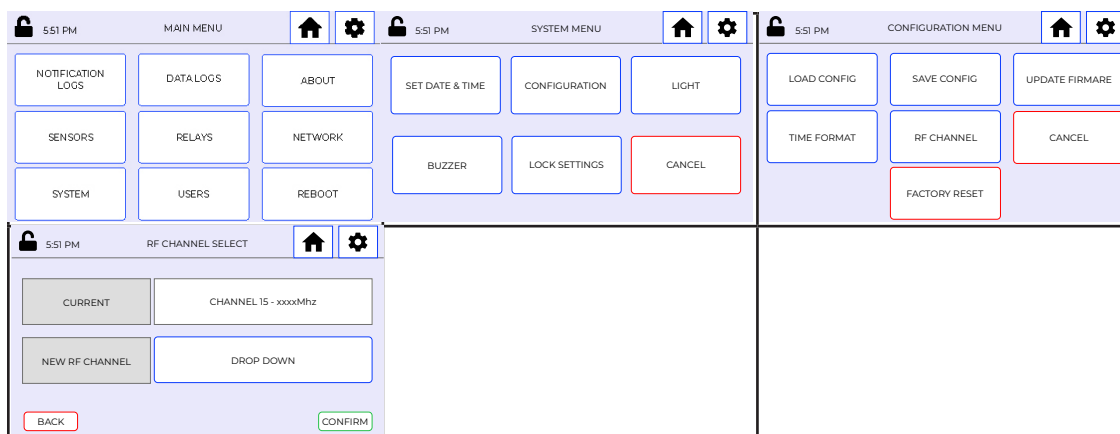


SELECT RF CHANNEL

To select RF channel, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System** > **Configuration** > **RF Channel**.
2. Review current RF channel and tap on dropdown. Tap to select new RF channel.
3. Tap **Confirm** to activate.

Note: RF channel changes are recorded in the Event Log.



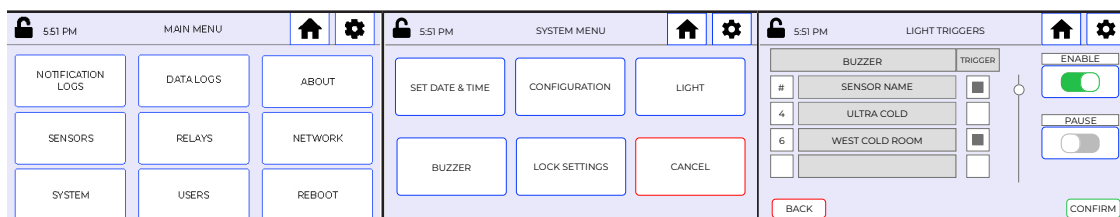
CONFIGURE RELAYS

When all sensors have been added and programmed, configure the sensors to relays to warn or alarm for specific conditions. The EAPro®-Gateway contains four relays.

To configure relays, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Relays** and tap on tap on desired relay.
2. Tap into dropdown box to select sensor.
3. Select type of alert desired for the specific relay.
4. Tap **Confirm** to return to Relay Setting menu.

Note: Configuring relays is recorded in the Event Log.



CONFIGURE RELAY STATE

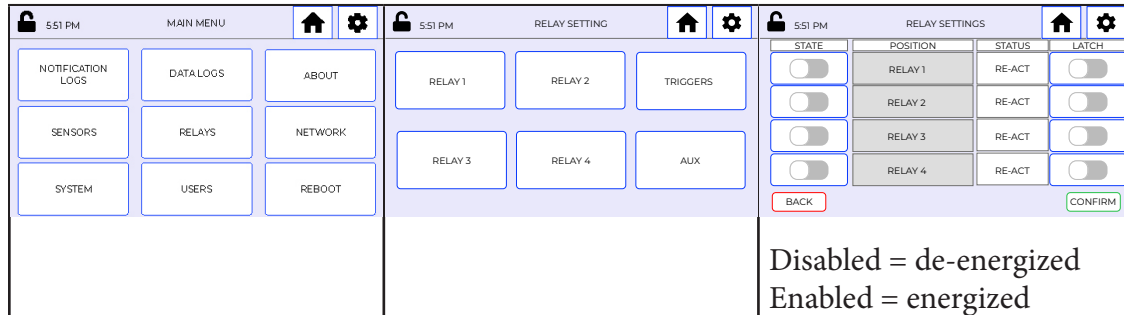
Relays must be programmed correctly to provide the desired signal to the alarm panel. Relay states by default are set to de-energized (normally closed relay).

To configure relay states, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Relays > State**.
2. Tap to toggle state (energized or deenergized) for desired relay.
3. Tap **Confirm** to activate.

Note: Latch is disabled by default. Latch requires a “Reset” by the user to clear the relay.

Note: Configuring relays is recorded in the Event Log.

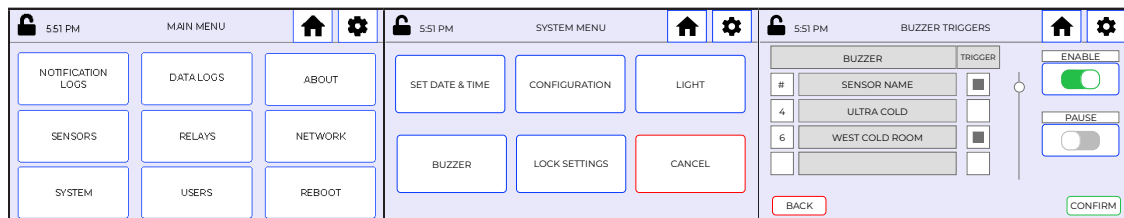


SET BUZZER TRIGGERS

To modify system buzzer triggers, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System > Buzzer** and scroll to desired sensor and check trigger box to activate trigger.
2. Tap to Enable or Disable buzzer triggers.
3. Tap to Pause or reactivate buzzer triggers.
4. Tap **Confirm** to activate.

Note: Buzzer trigger changes are recorded in the Event Log.



SET LIGHT TRIGGERS

To modify system light triggers, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System > Light** and scroll to desired sensor and check trigger box to activate trigger.
2. Tap to Enable or Disable light triggers.
3. Tap to Pause or reactivate light triggers.
4. Tap **Confirm** to activate.

Note: Light trigger changes are recorded in the Event Log.



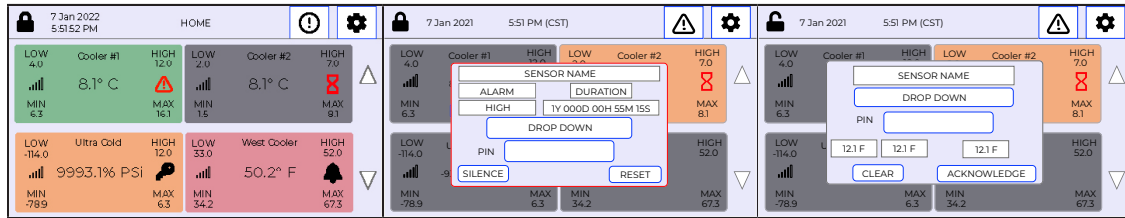
OPERATION

This chapter provides instructions for general system operations.

ACKNOWLEDGE ALARM

To acknowledge an alarm, perform the following procedure starting from the Home Screen:

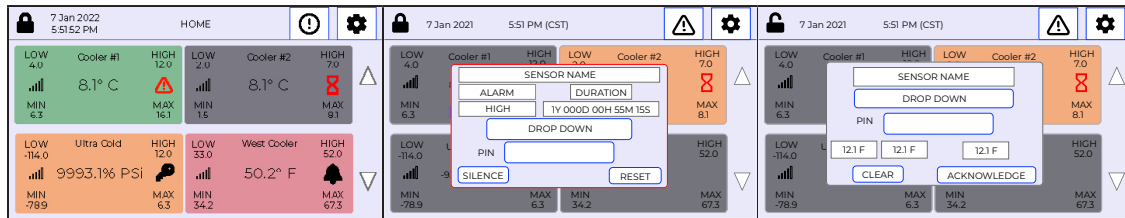
1. At Home Screen, tap on sensor tile that is in alarm.
2. At popup, enter PIN (if using), and press:
 - a. Clear: to clear alarm.
 - b. Acknowledge: to acknowledge alarm.



CLEAR ALARM

To clear an alarm, perform the following procedure starting from the Home Screen:

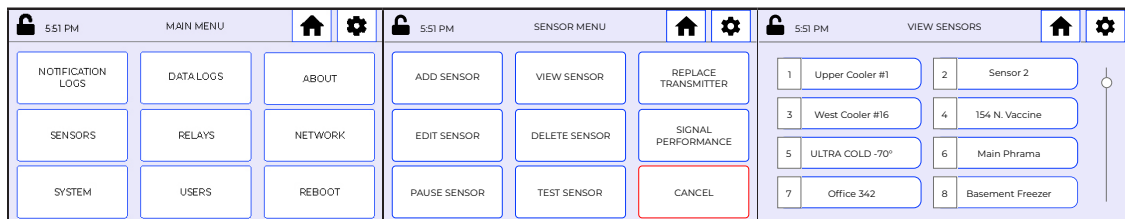
1. At Home Screen, tap on sensor tile that is in alarm.
2. At popup, enter PIN (if using), and press:
 - a. Clear: to clear alarm.
 - b. Acknowledge: to acknowledge alarm.



VIEW SENSOR DETAILS

To view programming details of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **View Sensor** and tap on desired sensor.
2. Tap Next to advance through settings.



VIEW NOTIFICATION LOG

The notification logs consists of both warnings and alarms. To view notification logs, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Notification Logs > Notifications**.
2. Tap on dropdown and select desired Notification Log.

SEQ	EVENT NAME	DATE	TIME	TRIGGER
0	204x30	70x30	66x30	77x30
52x30	180x30	22-22-2021	22:22 XM	RELAY 1
4	ULTRA COLD	22-22-2021	22:22 XM	^WARN
61507	WEST COLD ROOM	22-22-2021	22:22 XM	^WARN
		22-22-2021	22:22 XM	^WARN

VIEW EVENT LOG

To view event logs, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Notification Logs > Events**.
2. Tap on dropdown and select desired Event Log.

Note: The Event Log cannot be cleared.

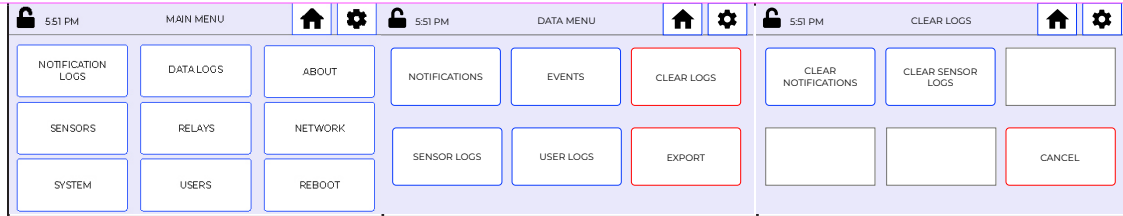
SEQ	EVENT NAME	DATE	TIME	TRIGGER
0	204x30	70x30	66x30	77x30
52x30	180x30	22-22-2021	22:22 XM	RELAY 1
4	ULTRA COLD	22-22-2021	22:22 XM	^WARN
61507	WEST COLD ROOM	22-22-2021	22:22 XM	^WARN
		22-22-2021	22:22 XM	^WARN

VIEW SENSOR LOGS

To view sensor logs, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Notification Logs > Sensor Logs**.
2. Tap on dropdown and select desired Sensor Log.

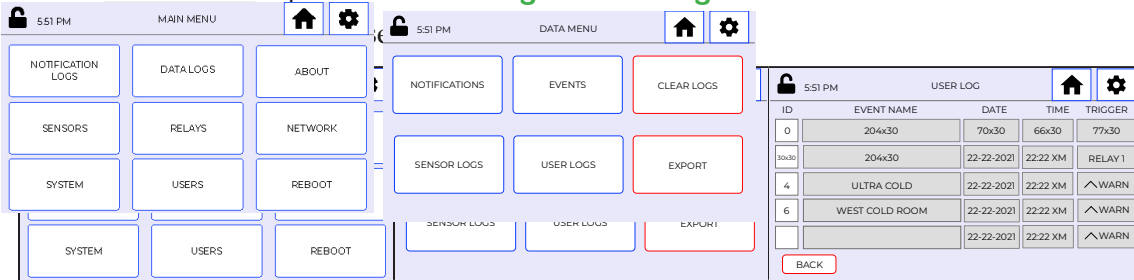
Note: Go to Export Logs view more than one week (7 days) of data.



VIEW USER LOGS

To view user logs, perform the following procedure starting at the Main Menu:

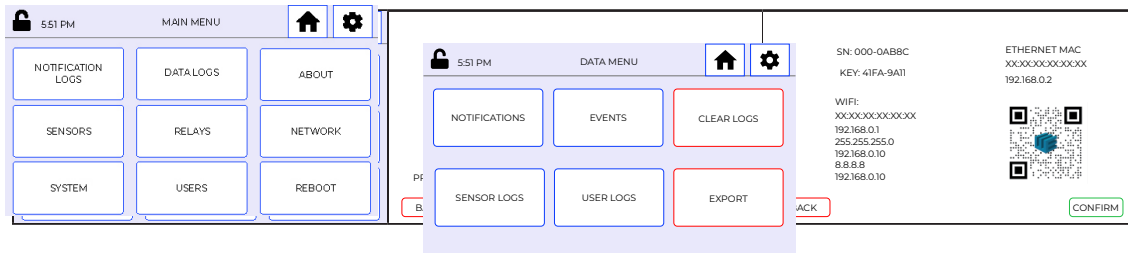
1. At Main Menu tap **Notification Logs** > **User Logs**.



VIEW ABOUT

To view the about information, perform the following procedure starting at the Main Menu:

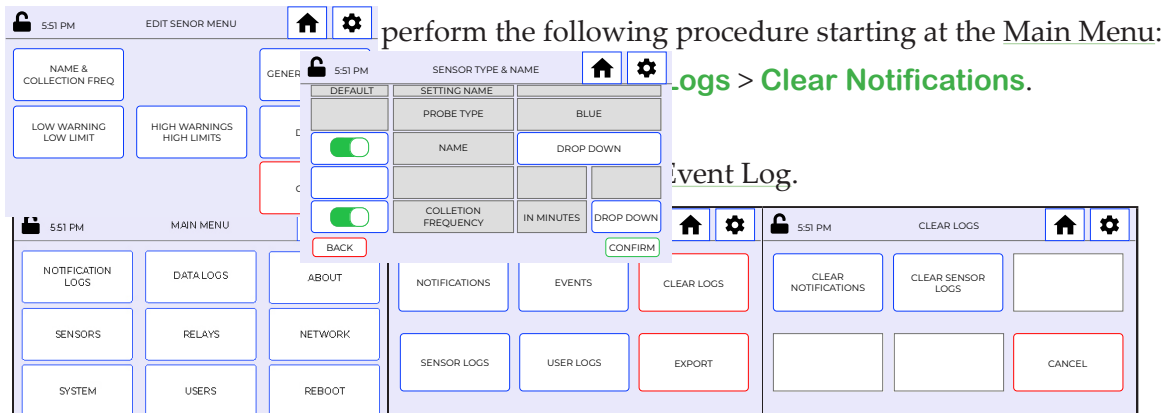
1. At Main Menu tap **About**.
2. Tap Confirm to advance.



CLEAR NOTIFICATION LOGS

WARNING

Clearing the notification logs erases the information in the notification log. Clearing the notification log can result in data loss.



CLEAR SENSOR LOGS

To clear the sensor log, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Notification Logs > Clear Logs > Clear Sensor Logs**.

Note: Clearing sensors logs is recorded in the Event Log.

>	>	
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EXPORT LOGS

To export logs, perform the following procedure starting at the Main Menu:

1. Insert storage device to USB port.
2. At Main Menu tap **Notification Logs > Export**.

Note: Exporting logs is recorded in the Event Log.

>	>	
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DATA LOGS

The data logs consists of both warnings and alarms. To view notification logs, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Data Logs > Notifications**.
2. Tap on dropdown menu and select:

>	>	
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MAINTENANCE

This chapter provides instructions for maintaining the system.

EDIT SENSOR

Occasionally the parameters of a sensor may need to be edited. Use the Edit Sensor menu to quickly edit the desired parameters.

Note: Editing sensor parameters is recorded in the [Event Log](#).

Edit Sensor Name

To edit the parameters of a sensor, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Name & Collection Frequency**.
3. Tap on desired feature to edit.
4. Tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the [Event Log](#).

The figure consists of three screenshots of a mobile application interface for sensor maintenance.

- First Screenshot (Main Menu):** Shows the 'MAIN MENU' with a grid of buttons: NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The 'SENSORS' button is highlighted.
- Second Screenshot (Sensor Menu):** Shows the 'SENSOR MENU' with buttons: ADD SENSOR, VIEW SENSOR, REPLACE TRANSMITTER, EDIT SENSOR, DELETE SENSOR, SIGNAL PERFORMANCE, PAUSE SENSOR, TEST SENSOR, and CANCEL. The 'EDIT SENSOR' button is highlighted.
- Third Screenshot (Edit Sensor Menu):** Shows the 'EDIT SENSORS' screen with a list of sensors: 1 Upper Cooler #1, 2 Sensor 2, 3 West Cooler #16, 4 154 N. Vaccine, 5 ULTRA COLD -70°, 6 Main Pharma, 7 Office 342, and 8 Basement Freezer. A scroll bar is on the right.

Edit Sensor Collection Frequency

To edit the parameters of a sensor, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Name & Collection Frequency**.
3. Tap on desired feature to edit.
4. Tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the [Event Log](#).

The figure consists of three screenshots of a mobile application interface for sensor maintenance, identical to the ones above.

- First Screenshot (Main Menu):** Shows the 'MAIN MENU' with a grid of buttons: NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The 'SENSORS' button is highlighted.
- Second Screenshot (Sensor Menu):** Shows the 'SENSOR MENU' with buttons: ADD SENSOR, VIEW SENSOR, REPLACE TRANSMITTER, EDIT SENSOR, DELETE SENSOR, SIGNAL PERFORMANCE, PAUSE SENSOR, TEST SENSOR, and CANCEL. The 'EDIT SENSOR' button is highlighted.
- Third Screenshot (Edit Sensor Menu):** Shows the 'EDIT SENSORS' screen with a list of sensors: 1 Upper Cooler #1, 2 Sensor 2, 3 West Cooler #16, 4 154 N. Vaccine, 5 ULTRA COLD -70°, 6 Main Pharma, 7 Office 342, and 8 Basement Freezer. A scroll bar is on the right.

Edit Sensor Unit of Measure

To edit the parameters of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensors Menu tap **General Settings**.
3. Tap on desired feature to edit.
4. Tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log.

Edit Sensor Resolution

To edit the parameters of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **General Settings**.
3. Tap on desired feature to edit.
4. Tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log.

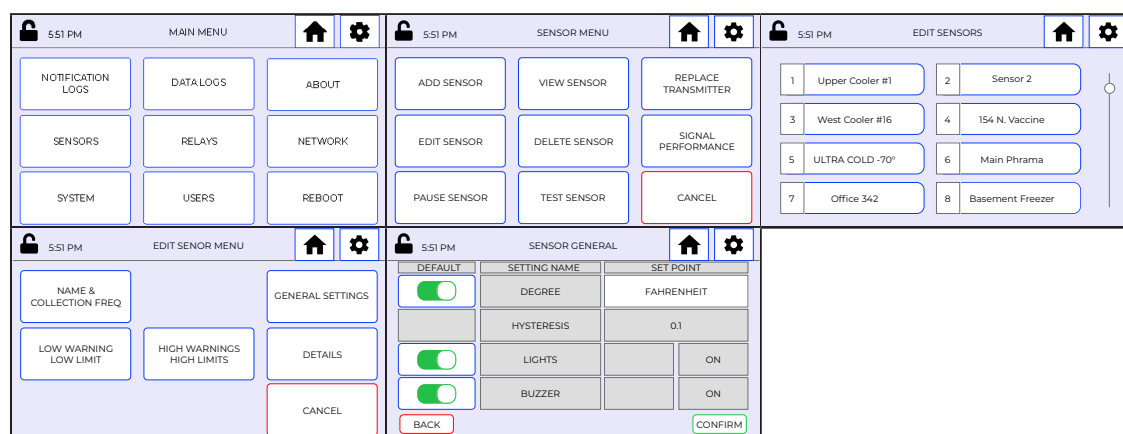
>

Edit Sensor Light (Visual Warning)

To edit the parameters of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **General Settings**.
3. Tap on desired feature to edit.
4. Tap Confirm to activate.

Note: Editing sensor parameters is recorded in the Event Log.

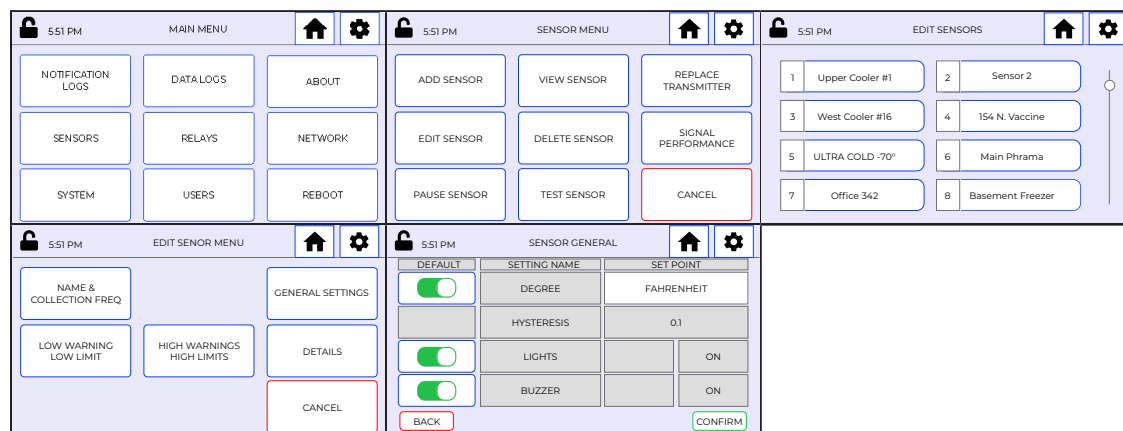


Edit Sensor Buzzer (Audible Warning)

To edit the parameters of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **General Settings**.
3. Tap on desired feature to edit.
4. Tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log.



Edit Sensor Relay Assignment

To edit the parameters of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **General Settings**.
3. Tap on desired feature to edit (degrees, hysteresis, lights, and buzzer) and tap **Confirm** to activate.
4. Tap on desired feature to edit (relay, warnings) and tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log

The image displays three sequential screenshots of the Winland Electronics app interface, illustrating the process of editing a sensor relay assignment.

Screenshot 1: MAIN MENU
 The top bar shows the time as 5:51 PM. The main menu contains buttons for NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The **SENSORS** button is highlighted.

Screenshot 2: SENSOR MENU
 The top bar shows the time as 5:51 PM. The sensor menu contains buttons for ADD SENSOR, VIEW SENSOR, REPLACE TRANSMITTER, EDIT SENSOR, DELETE SENSOR, SIGNAL PERFORMANCE, PAUSE SENSOR, TEST SENSOR, and CANCEL. The **EDIT SENSOR** button is highlighted.

Screenshot 3: EDIT SENSORS
 The top bar shows the time as 5:51 PM. The edit sensors screen shows a list of sensors: 1 Upper Cooler #1, 2 Sensor 2, 3 West Cooler #16, 4 154 N. Vaccine, 5 ULTRA COLD -70°, 6 Main Phrama, 7 Office 342, and 8 Basement Freezer. The **ULTRA COLD -70°** sensor is selected.

Screenshot 4: EDIT SENSOR MENU
 The top bar shows the time as 5:51 PM. The edit sensor menu contains buttons for NAME & COLLECTION FREQ, GENERAL SETTINGS, LOW WARNING LOW LIMIT, HIGH WARNINGS HIGH LIMITS, DETAILS, and CANCEL. The **GENERAL SETTINGS** button is highlighted.

Screenshot 5: SENSOR GENERAL
 The top bar shows the time as 5:51 PM. The sensor general settings screen shows options for DEFAULT, SETTING NAME, and SET POINT. The **DEGREE** option is selected under SETTING NAME, and the **FAHRENHEIT** option is selected under SET POINT. The **CONFIRM** button is highlighted.

Screenshot 6: SENSOR TRIGGERS
 The top bar shows the time as 5:51 PM. The sensor triggers screen shows options for DEFAULT, SETTING NAME, and SET POINT. The **RELAYS** option is selected under SETTING NAME, and the **ON** option is selected under SET POINT. The **CONFIRM** button is highlighted.

Edit Sensor Warnings

To edit the parameters of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **General Settings**.
3. Tap on desired feature to edit (degrees, hysteresis, lights, and buzzer) and tap **Confirm** to activate.
4. Tap on desired feature to edit (relay, warnings) and tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log.

The image displays three sequential screenshots of the Winland Electronics app interface, illustrating the process of editing a sensor warning.

Screenshot 1: MAIN MENU
 The top bar shows the time as 5:51 PM. The main menu contains buttons for NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The **SENSORS** button is highlighted.

Screenshot 2: SENSOR MENU
 The top bar shows the time as 5:51 PM. The sensor menu contains buttons for ADD SENSOR, VIEW SENSOR, REPLACE TRANSMITTER, EDIT SENSOR, DELETE SENSOR, SIGNAL PERFORMANCE, PAUSE SENSOR, TEST SENSOR, and CANCEL. The **EDIT SENSOR** button is highlighted.

Screenshot 3: EDIT SENSORS
 The top bar shows the time as 5:51 PM. The edit sensors screen shows a list of sensors: 1 Upper Cooler #1, 2 Sensor 2, 3 West Cooler #16, 4 154 N. Vaccine, 5 ULTRA COLD -70°, 6 Main Phrama, 7 Office 342, and 8 Basement Freezer. The **ULTRA COLD -70°** sensor is selected.

Screenshot 4: EDIT SENSOR MENU
 The top bar shows the time as 5:51 PM. The edit sensor menu contains buttons for NAME & COLLECTION FREQ, GENERAL SETTINGS, LOW WARNING LOW LIMIT, HIGH WARNINGS HIGH LIMITS, DETAILS, and CANCEL. The **GENERAL SETTINGS** button is highlighted.

Screenshot 5: SENSOR GENERAL
 The top bar shows the time as 5:51 PM. The sensor general settings screen shows options for DEFAULT, SETTING NAME, and SET POINT. The **DEGREE** option is selected under SETTING NAME, and the **FAHRENHEIT** option is selected under SET POINT. The **CONFIRM** button is highlighted.

Screenshot 6: SENSOR TRIGGERS
 The top bar shows the time as 5:51 PM. The sensor triggers screen shows options for DEFAULT, SETTING NAME, and SET POINT. The **RELAYS** option is selected under SETTING NAME, and the **ON** option is selected under SET POINT. The **CONFIRM** button is highlighted.

Edit Sensor High Warnings or High Limits

To edit sensor high warnings or high limits, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **High Warning High Limits**.
3. Modify desired defaults and tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log.

ON - OFF	SETTING NAME	SET POINT	SELECT RELAY
☒	HIGH LIMIT	15.0	15
☒	HIGH LIMIT DELAY	IN MINUTES	15
☒	HIGH WARNING	17.0	RELAY1 *
☒	HIGH WARNING DELAY	IN MINUTES	15

Edit Sensor Low Warnings or Low Limits

To edit sensor low warnings or low limits, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Low Warning Low Limits**.
3. Modify desired defaults and tap **Confirm** to activate.

Note: Editing sensor parameters is recorded in the Event Log.

ON - OFF	SETTING NAME	SET POINT	SELECT RELAY
☒	LOW LIMIT	15.0	15
☒	LOW LIMIT DELAY	IN MINUTES	15
☒	LOW WARNING	17.0	RELAY1 *
☒	LOW WARNING DELAY	IN MINUTES	15

Edit Sensor Hysteresis

To edit sensor schedule, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Details**.
3. Modify desired defaults and tap **Confirm** to activate.

The sequence of screenshots for editing sensor hysteresis is as follows:

- Main Menu:** Shows a grid of system options including Notification Logs, Data Logs, About, Sensors, Relays, Network, System, Users, and Reboot.
- Sensor Menu:** Shows options to Add, View, Edit, Delete, Pause, or Test a sensor, along with Replace Transmitter, Signal Performance, and a Cancel button.
- Edit Sensors:** A list of sensors including Upper Cooler #1, Sensor 2, West Cooler #16, 154 N. Vaccine, ULTRA COLD -70°, Main Phrama, Office 342, and Basement Freezer.
- Edit Sensor Menu:** Shows Name & Collection Freq, General Settings, Low Warning Low Limit, High Warnings High Limits, Details, and a Cancel button.
- Edit Sensor General:** A settings screen for hysteresis with toggle switches for Default, Degree, Hysteresis, Lights, and Buzzer. It also includes a Set Point section with Fahrenheit and 0.1, and a Confirm button.

Edit Sensor Offset

To edit sensor schedule, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Details**.
3. Modify desired defaults and tap **Confirm** to activate.

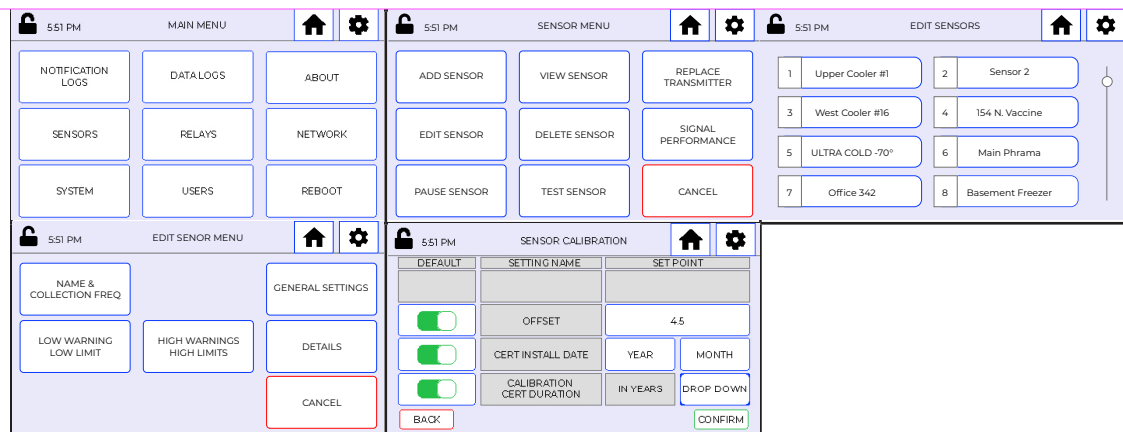
The sequence of screenshots for editing sensor offset is as follows:

- Main Menu:** Same as above.
- Sensor Menu:** Same as above.
- Edit Sensors:** Same as above.
- Edit Sensor Menu:** Same as above.
- Sensor Calibration:** A settings screen for offset with toggle switches for Default, Offset, Cert Install Date, and Calibration Cert Duration. It includes a Set Point section with 4.5, Year, Month, In Years, and a Drop Down menu, along with a Confirm button.

Edit Sensor Certificate Install Date

To edit sensor schedule, perform the following procedure starting at the Main Menu:

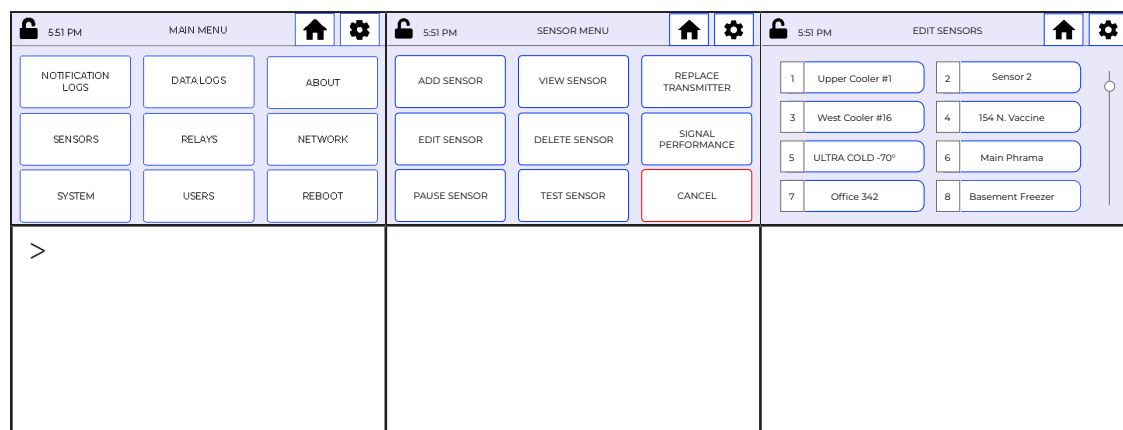
1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Details**.
3. Modify desired defaults and tap **Confirm** to activate.



Edit Sensor Calibration Certification Duration

To edit sensor schedule, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Edit Sensor** and tap on desired sensor.
2. At Edit Sensor Menu tap **Details**.
3. Modify desired defaults and tap **Confirm** to activate.

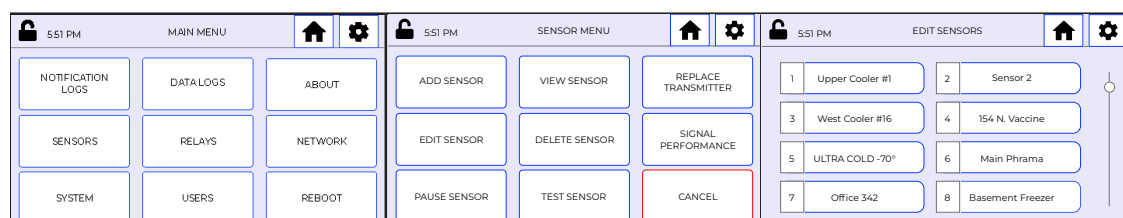


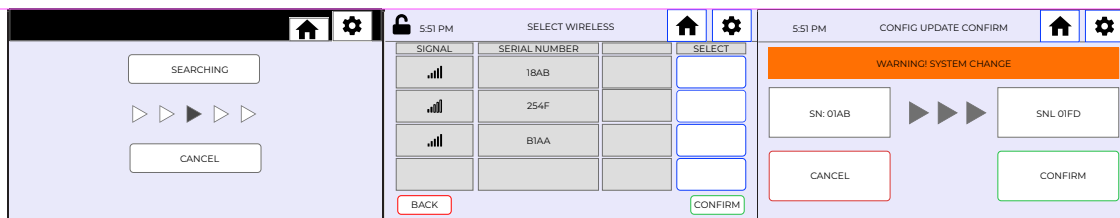
REPLACE WIRELESS TRANSMITTER

To replace an existing wireless transmitter with new wireless transmitter of the same kind, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Replace Transmitter**.
2. At Edit Sensors, verify the transmitter ID number shown on screen is the same as the ID number on the transmitter PCB board, and then tap on desired transmitter.
3. Tap **Confirm** to activate.

Note: Replacing a wireless transmitter is recorded in the Event Log.



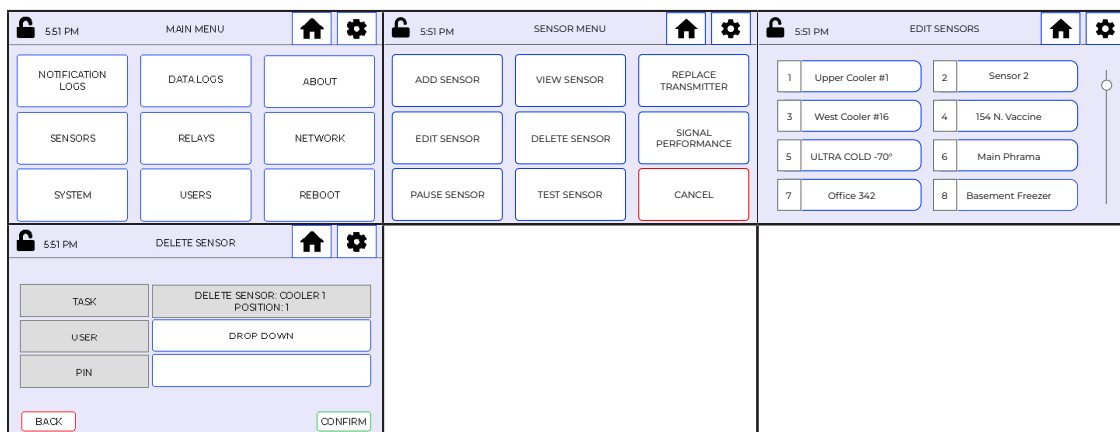


DELETE SENSOR

To delete a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Delete Sensor** and tap on desired sensor.
2. Tap on dropdown to select user.
3. Enter PIN code.
4. Tap **Confirm** to delete sensor.

Note: Deleting a sensor is recorded in the Event Log.



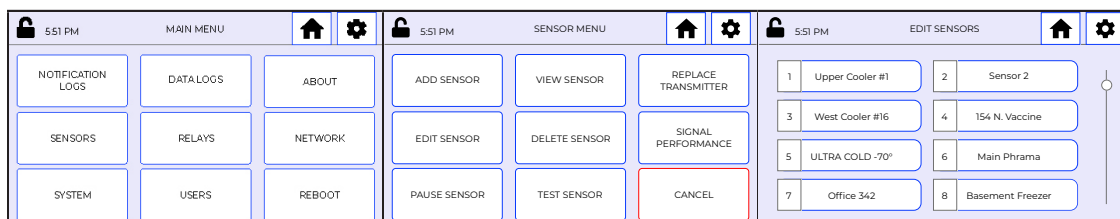
PAUSE SENSOR

To prevent false alarms when performing maintenance, pause monitoring of specific sensors. Pausing a sensor stops monitoring and ignores active alarms for a specified period of time in onehour increments. Default is 2 hours and the maximum is 120 hours (5 days). When the pause function times out or is cancelled, monitoring automatically starts.

To pause monitoring of a sensor, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Sensors** > **Pause Sensor** and tap on desired sensor.
2. Set the desired pause time in 1hour increments or set to zero (0) to cancel the pause function.
3. Tap on dropdown to select user.
4. Enter PIN code.
5. Tap **Confirm** to activate.

Note: Pausing a sensor is recorded in the Event Log.



TEST SENSOR

The system will test a sensor's functionality. To test a sensor, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Sensors** > **Test Sensor** and tap on desired sensor.
2. Tap on desired function to test:
 - a. Low Warning
 - b. High Warning
 - c. Low Limit
 - d. High Limit
3. Tap **Cancel** to return to sensor menu.

Note: Testing a sensor is recorded in the [Event Log](#).

EDIT USER

User PIN or security level may need to be modified. If a user email address (name) needs to be modified, delete the user and add a new user.

To edit users, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Users** > **Edit User**.
2. Modify as desired.
3. Tap **Confirm** to activate.

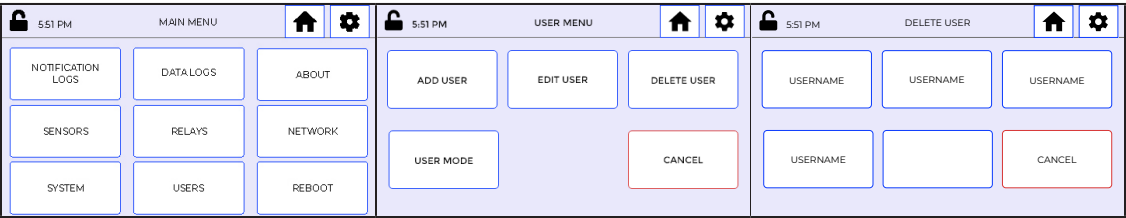
Note: Editing a user is recorded in the [Event Log](#).

DELETE USER

To delete users, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Users** > **Delete User** and tap on desired user to select for deletion.
2. Enter PIN number.
3. Tap **Confirm** to activate.

Note: Deleting a user is recorded in the Event Log.

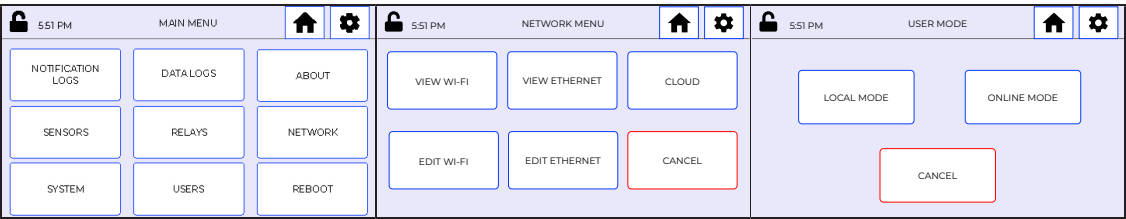


CONFIGURE USER MODE

To configure user mode, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Users** > **User Mode**.
2. At User Mode select **Local Mode** or **Online Mode**.

Note: Configuring user modes is recorded in the Event Log.

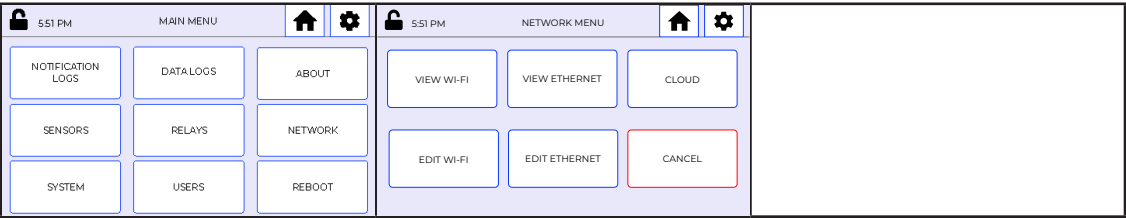


SYNC USERS

To sync users between **INSIGHT** (sold separately) and local programming, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Users** > **Sync Users**.

Note: Syncing users is recorded in the Event Log.



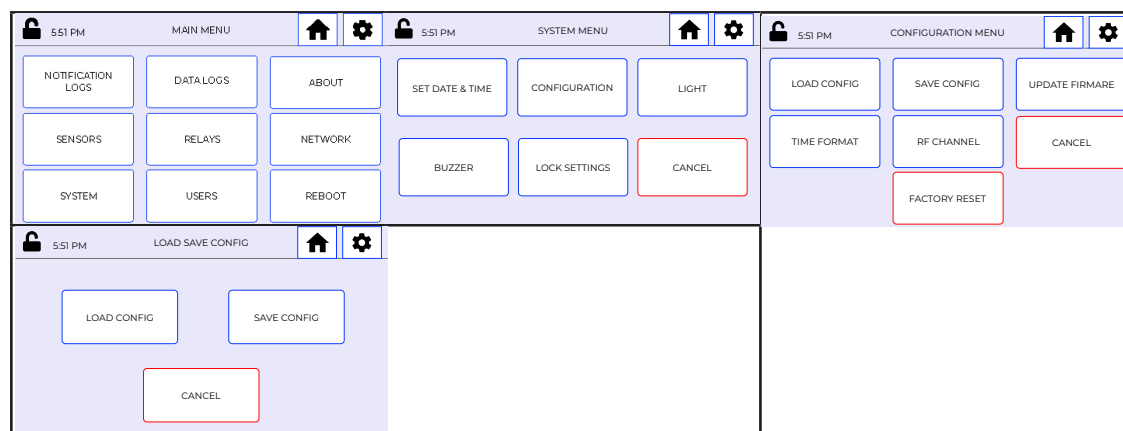
SAVE SYSTEM CONFIGURATION

Save System Configuration to USB

To save system configuration to USB, perform the following procedure starting at the [Main Menu](#):

1. Insert USB.
2. At [Main Menu](#) tap **System** > **Configuration** > **Save Config** > **Save to USB**.
3. Configuration file will save to main directory of USB and screen will revert to Configuration Menu.
4. Remove USB.

Note: System configuration changes are recorded in the [Event Log](#).

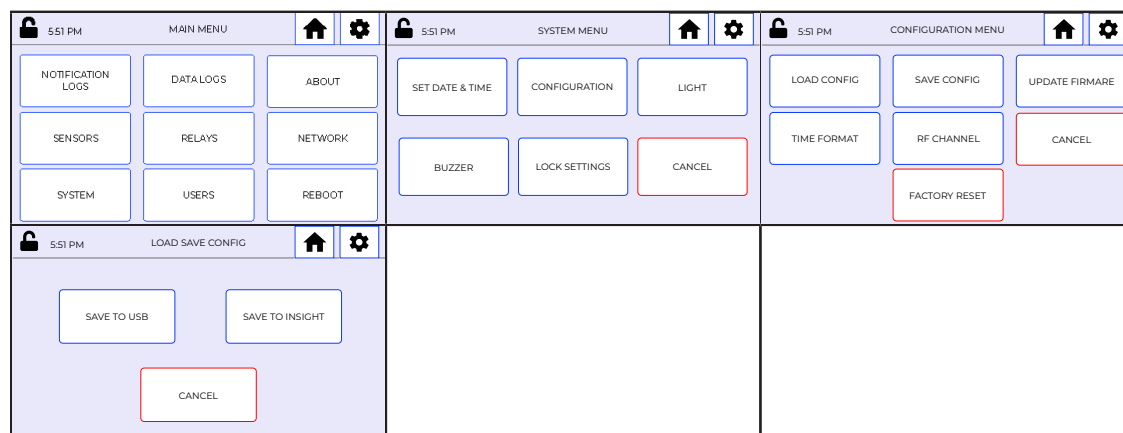


Save System Configuration to **INSIGHT**

To save system configuration to **INSIGHT** (sold separately), perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **System** > **Configuration** > **Save Config** > Save to **INSIGHT**.
2. Configuration file will save to **INSIGHT** (sold separately) and screen will revert to Configuration Menu.

Note: System configuration changes are recorded in the [Event Log](#).



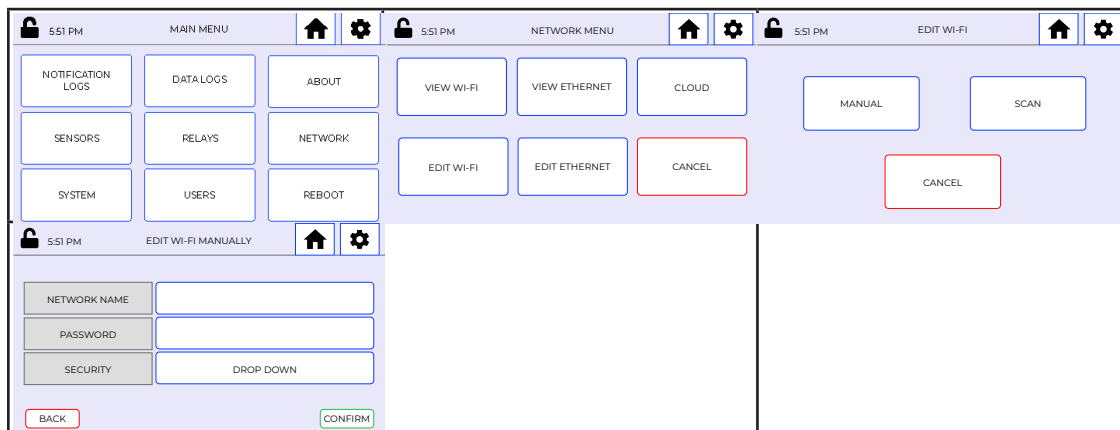
EDIT NETWORK WI-FI

Edit Network Wi-Fi Manually

To edit network Wi-Fi settings manually, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Network** > **Edit Wi-Fi** > **Manual**.
2. Enter Network Name.
3. Enter network Password.
4. Tap to select Security.
5. Tap **Confirm** to activate.

Note: Editing network Wi-Fi is recorded in the Event Log.



Edit Network Wi-Fi Scan

To edit network Wi-Fi settings by scanning, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Network** > **Edit Wi-Fi** > **Scan** and tap to select network.
2. Enter network Password.
3. Tap **Confirm** to activate.

Note: Editing network Wi-Fi is recorded in the Event Log.

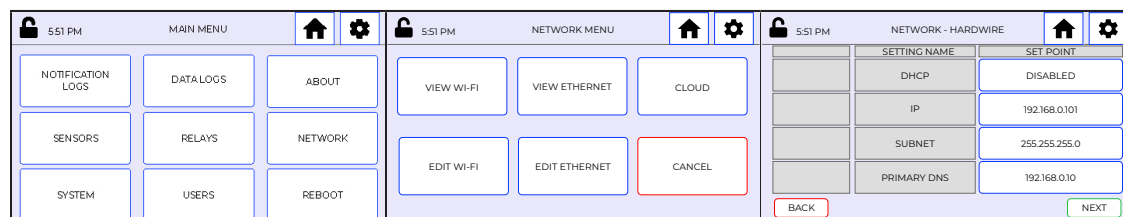


EDIT ETHERNET SETTINGS

To edit network Ethernet settings, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Network** > **Edit Ethernet**.
2. Modify settings as needed.
3. Tap **Confirm** to return to Network menu.

Note: Editing Ethernet settings is recorded in the [Event Log](#).

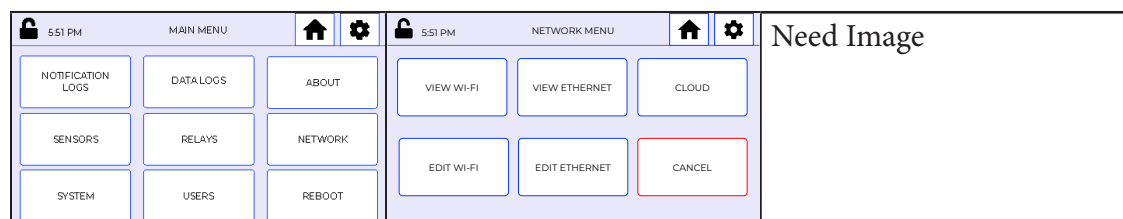


Enable/Disable Ethernet

To enable or disable Ethernet, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Network** > **Enable Disable**.

Note: Enabling and disabling the Ethernet is recorded in the [Event Log](#).

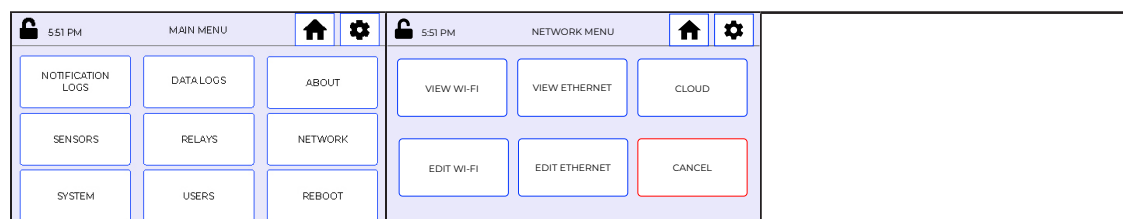


Troubleshoot Ethernet (Review)

To troubleshoot Ethernet settings, perform the following procedure starting at the [Main Menu](#):

1. At [Main Menu](#) tap **Network** > **Troubleshoot Ethernet**.
2. Modify settings as needed.
3. Tap **Confirm** to return to Network menu.

Note: Troubleshooting Ethernet is recorded in the [Event Log](#).



UPDATE FIRMWARE

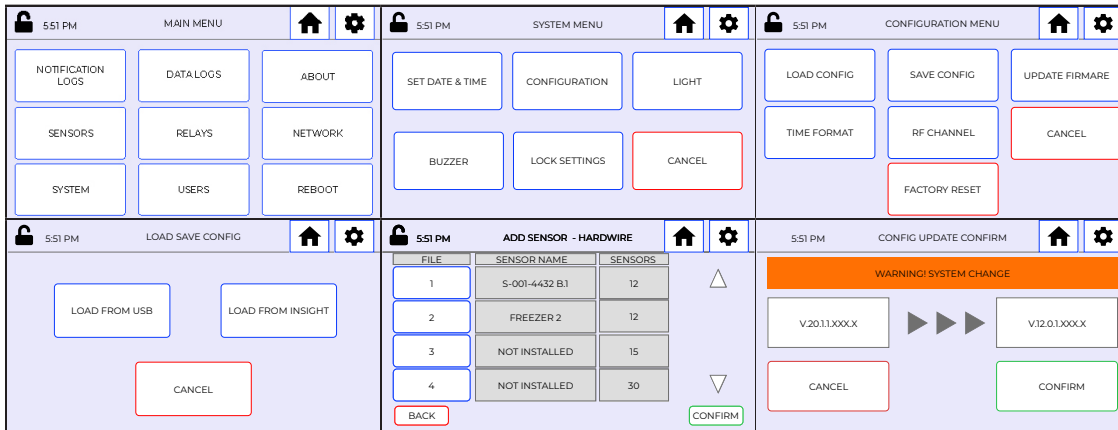
Update Firmware from USB

To update the firmware from USB, perform the following procedure starting at the [Main Menu](#):

Insert USB.

1. At **Main Menu** tap **System** > **Configuration** > **Update Firmware** > **Load from USB**.
2. Scroll to and tap on desired firmware file and tap **Confirm** to activate.
3. Review warning and tap **Confirm** to load from USB.
4. Remove USB.

Note: Firmware updates are recorded in the **Event Log**.

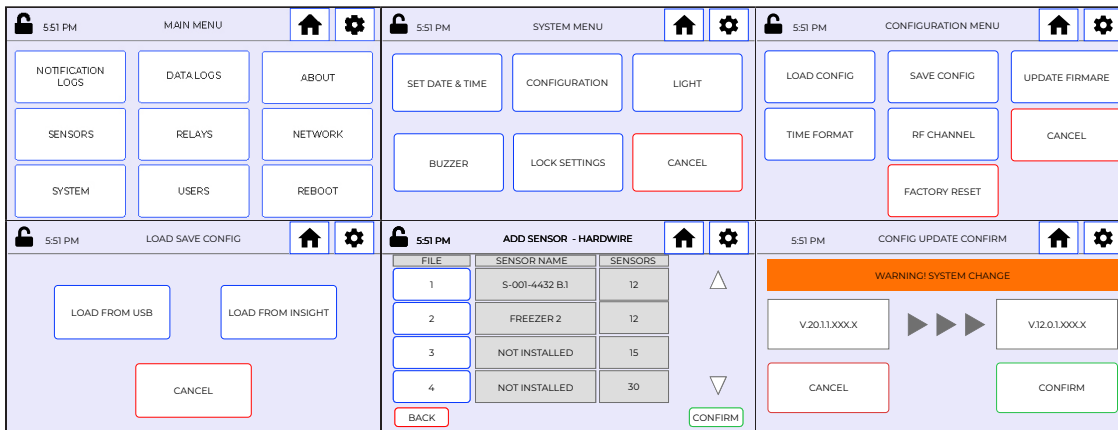


Update Firmware from **INSIGHT**

To update the firmware from **INSIGHT** (sold separately), perform the following procedure starting at the **Main Menu**:

1. At **Main Menu** tap **System** > **Configuration** > **Update Firmware** > Load from **INSIGHT**.
2. Scroll to and tap on desired firmware file and tap **Confirm** to activate.
3. Review warning and tap **Confirm** to load from **INSIGHT**.

Note: Firmware updates are recorded in the **Event Log**.



RESET TO FACTORY DEFAULTS

WARNING

Resetting to factory defaults erases all data except the event logs. Resetting to factory defaults will result in data loss.

(REVIEW) Occasionally, an EAPro®-Gateway may need to be reset to factory defaults.(REVIEW)

Resetting to factory defaults does not delete the Event Log.

To reset all parameters to factory defaults, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **System > Configuration > Factory Reset**.
2. Enter PIN number and tap **Confirm** to activate.

Note: Factory resets are recorded in the Event Log.

The first screenshot shows the **MAIN MENU** with options: NOTIFICATION LOGS, DATA LOGS, ABOUT, SENSORS, RELAYS, NETWORK, SYSTEM, USERS, and REBOOT. The second screenshot shows the **SYSTEM MENU** with options: SET DATE & TIME, CONFIGURATION, LIGHT, BUZZER, LOCK SETTINGS, and CANCEL. The third screenshot shows the **CONFIGURATION MENU** with options: LOAD CONFIG, SAVE CONFIG, UPDATE FIRMWARE, TIME FORMAT, RF CHANNEL, CANCEL, and FACTORY RESET. Below these is a detailed view of the **FACTORY RESET** screen, which includes a 'TASK' section with 'FACTORY RESET PIN REQUIRED', a 'USER' dropdown menu, a 'PIN' input field, and 'BACK' and 'CONFIRM' buttons.

REBOOT SYSTEM

Occasionally the system will need to be rebooted.

To reboot the system, perform the following procedure starting at the Main Menu:

1. At Main Menu tap **Reboot**.
2. Tap **Confirm** to activate.

Note: Rebooting the system takes a few minutes. The system will flash the boot screen as the reboot process occurs. When the reboot process is completed, a login screen displays.

Note: System reboots are recorded in the Event Log.

The first screenshot shows the **MAIN MENU** with the 'REBOOT' option highlighted. The second screenshot shows the **LOGIN** screen with the Winland Electronics Inc. logo and text: 'WINLAND ELECTRONICS INC.', 'TITAN', 'FIRMWARE: A.1', 'BOOTLOADER: A.1', and 'PROTECTING YOUR ASSETS SINCE 1972!'. The login form includes fields for 'USERNAME' (pre-filled with 'SUPER ADMIN') and 'PIN', and 'BACK' and 'CONFIRM' buttons.

TROUBLESHOOTING

Operating or setup errors are indicated by flashing data on the display. A programming error may result in an alarm for a misprogrammed relay. Table 21 lists and describes common error symptoms, causes, and corrective actions. For updated information, go to the FAQ on the EAPro®-Gateway website.

Table 21: Troubleshooting

SYMPTOM	CAUSE	CORRECTIVE ACTION
Temperature reading indicate maximum when temperature is actually less.	Wired sensor is shorted.	Ensure the sensor connection is not shorted. A short equals zero resistance and thus the maximum value.
	Wire sensor cable has a short.	Replace damaged cable.
	Sensor has failed.	Replace if physically damaged. Contact Winland Technical Support.
Temperature reading indicates minimum when temperature is actually greater.	Wired sensor is not connected.	Ensure the sensor is connected to the correct header pins. An open connection equals an infinite resistance and thus the minimum value.
	Wired sensor cable has an open.	Replace damaged cable.
	Sensor has failed.	Replace if physically damaged. Contact Winland Technical Support.
Temperature display does not equal actual temperature.	Incorrect sensor programmed.	Verify the actual sensor connected to the sensor input is programmed appropriately. Each temperature sensor is limited to a specific operating range.
	Incorrect temperature scale.	Verify display and known correct value are both in same scale (example: both in C).
Display flashes repeatedly between the Winland Electronics Inc. screen and a blank screen.	The EAPro®-Gateway reboots repeatedly and fails to successfully complete the boot process.	Cycle power to the EAPro®-Gateway and wait for a period of time before reapplying power. If a USB drive is attached to the USB port, remove it and cycle power as noted above. If problem recurs, contact Winland Technical Support.
The display flashes while displaying the Active Alarms screen.	A sensor's reading has exceeded a set limit.	Verify the environmental condition of the sensor.
	A wireless sensor is not communicating with the EAPro®-Gateway.	Verify the received signal strength.
		Verify the wireless sensor has a charged battery.

WINLAND TECHNICAL SUPPORT

Winland Technical Support is available Monday through Friday from 8:00am to 5:00pm Central at 1-800-635-4269, techsupport@winland.com and eapro.winland.com.

SPECIFICATIONS

This section lists the specifications for the EAPro®-Gateway, sensors, and accessories

EAPro®-Gateway Specifications

Specifications for the EAPro®-Gateway are listed in Table 22.

Table 22: Specifications: EAPro®-Gateway

ITEM	SPECIFICATION																		
Dimension	8.13" H x 5.52" W x 1.93" D (20.6cm x 14.0cm x 4.9cm) (Subject to Change)																		
Weight	1.1 lbs (1 lb, 2oz) Including the battery pack (unconfirmed)																		
Mounting	Standard 3gang electrical box or mount directly to drywall or similar surface using appropriate anchors (not included). (unconfirmed)																		
Case Material	ABS, UL94V-0 rated																		
Power In Specification (see Notes 1 and 2)	11 to 26VDC @ 1A. Note: Standard commercial filtered and regulated power supply suitable supplied by AC adapter (not included; see Accessories) or alarm panel. (confirm?) Note: Power supply requirement does not include additional requirements for loads switched through alarm output relays, or third party sensors such as 4-20mA where power is derived from terminal strip connections. (confirm?)																		
Power Out	Equivalent to DC input voltage used: 11 to 26VDC (Maximum output current 100mA).																		
RealTime Clock Battery	CR2032 (3V Cell)																		
Radiating Power (minimum at PCB antenna input)	Max EIRP (US): Gateway = 15.44 dBm Sensor = 10.95 dBm Max EIRP (CE) Gateway = 8.48 dBm Sensor = 5.996 dBm																		
Wireless Sensitivity (minimum at PCB antenna input)	-94.5 dBm																		
8 RF Channels (Both CE/US)	<table> <tr> <th>Channel</th><th>Frequency (MHz)</th></tr> <tr><td>1</td><td>2405</td></tr> <tr><td>2</td><td>2414</td></tr> <tr><td>3</td><td>2427</td></tr> <tr><td>4</td><td>2440</td></tr> <tr><td>5</td><td>2453</td></tr> <tr><td>6</td><td>2466</td></tr> <tr><td>7</td><td>2479</td></tr> <tr><td>8</td><td>2492</td></tr> </table>	Channel	Frequency (MHz)	1	2405	2	2414	3	2427	4	2440	5	2453	6	2466	7	2479	8	2492
Channel	Frequency (MHz)																		
1	2405																		
2	2414																		
3	2427																		
4	2440																		
5	2453																		
6	2466																		
7	2479																		
8	2492																		
Sensors	Up to four (4) wired sensors Up to 30 wireless sensors																		
Cable Length	Wireless Multi-Function Transmitter: 1000' (304 m) max																		
	Wired Temp Sensor: 2-wire; 1000' (304 m) max. Using 22 AWG twisted pair recommended.																		
	Wired Humidity Sensor: 3-wire; 1000' (304 m) max. Using 22 AWG recommended.																		

	Wired Water Presence Sensor: 2-wire; 1000' (304 m) max using 22 AWG minimum (confirm?)
	Wired 4–20mA sensor: EAPro®-Gateway load (160Ω maximum)
Relay Outputs	Five (5) Form C with 3-terminal N.C./C/N.O. connections Note: There are 5 primary relays and 1 auxiliary relay.
Relay Contact Ratings	Four (4) Form C @ 1A resistive. One (1) Form C @ 3A resistive.
Relay Logic	Each relay is user configurable.
Touchscreen Display	480 x 272 px touchscreen
Ethernet	10/100BASE-TX/FX; fully compliant to IEEE 802-3u standard
Device Operating Range	Temperature: 32 F to 122 F (0 C to 50 C) Not for installation inside coolers or freezers, use sensors/probes to go inside coolers or freezers.
	Humidity: 5 to 95% RH, non-condensing
	Ambient Environmental Quality: Indoor use intended, noncorrosive environment
Conformity Certifications	FCC Part 15, Subpart C, Class B RSS 102 Issue 5 RSS 247 Issue 2 NRTL MET certification mark
Warranty	One (1) year limited warranty. See Warranty and Service Information.
Note 1: Where required, this equipment is to be isolated from the mains supply by a limited power source as specified in EN60950.	
Note 2: All terminals must be connected to a Class 2 Power Limited Circuit complying with the National Electric Code NFPA 70, Article 725.	

Sensor Specifications

Specifications for Winland sensors used with the EAPro®-Gateway are listed in Table 23.

Table 23: Specifications: Sensors

ITEM	SPECIFICATION
Dimension	Wireless sensor: 3.67" x 2.65" x 1.17" (9.3 x 6.7 x 2.9 cm) HA-III+: 3.25" x 1.5" x 1" (8.2 x 3.7 x 2.5 cm) W-S-S: 2" x 3" x 0.88" (5.1 x 7.6 x 2.2 cm)
Weight	Wireless sensor: 0.26 lb (0.11 kg) with batteries HA-III+: 5 oz (0.14 g) W-S-S: 2.4 oz (0.07 kg)
Power Specification	Wireless sensor: 12 VDC @ 100mA using a 2.1 mm barrel plug, center positive, OR 2xAA Alkaline Batteries (1.5V Cell)
Wireless Sensor Radiation (minimum, at PCB antenna connector)	-2.5 dBm
Wireless Sensitivity (minimum, at PCB antenna connector)	-95.5 dBm

Accessory Specifications

Accessories available for use with the EAPro®-Gateway are listed in Table 24.

Table 24: Specifications: Accessories

ITEM (MODEL NUMBER)	DESCRIPTION
TEMP-G-B	Glycerin Bottle

TEMP-B-T	Buffer Tube
TEMP-S-K	Flat Cable Splice Kit

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