

# WINLAND™ ELECTRONICS, INC. Quick Start Guide

Tech Support 8:00am - 5:00pm Central Time  
(800) 635-4269 www.winland.com



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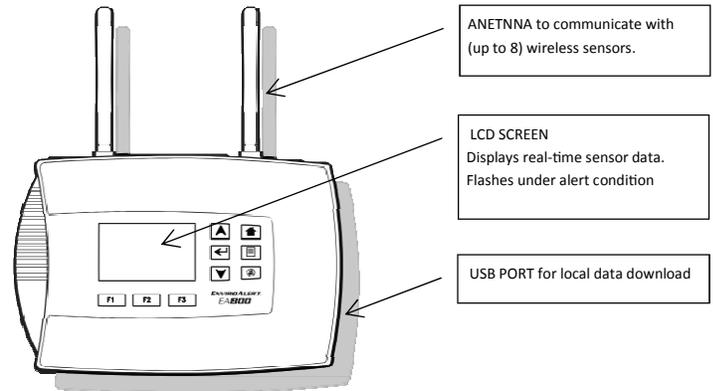
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D-011-0153 Rev J

This guide provides basic setup instructions for the EA800-ip Critical Environment Monitoring System and associated sensors. Installers should refer to the Installation Manual (found on-line at [www.winland.com](http://www.winland.com)) for more information, specifications, and to become familiar with the device features. The device allows connection of up to 4 wired and 8 wireless sensors and has 8 assignable dry contact alarm loop connections. Cloud Based Monitoring: The EA800-ip utilizes a cloud computing architecture, no client software is required. This version describes features only available on the INSIGHT system using the firmware version C15f or higher.

## SPECIFICATIONS

Device Input Voltage	11 to 26VDC @ ≤ 500mA current draw
Wireless Sensor Input Voltage (EA-WMFS, EA-WTS, EA-WHS)	12VDC @ ≤ 100mA current draw via 2.1 mm barrel plug, center positive OR 2 AA Alkaline Batteries (1.5V Cell)
Device Auxiliary Output Voltage	Equivalent to DC Input Voltage used: 11 to 26VDC. (Maximum output current 0.5A).
Device and Wireless Sensor Environmental Operating Range	Temperature: 0°C to 50°C (32°F to 122°F). Not for installation inside coolers or freezers. Humidity: 5% to 95% RH, non-condensing.
Ambient Environmental Quality	Indoor use intended, non-corrosive environment.
Relay Contact Ratings	Max 30VDC @ 1 Amp, resistive
Real-Time Clock Battery	CR2032 (3V Cell)
Ethernet (wired)	10/100BASE-TX/FX; fully compliant to IEEE 802.3u standard

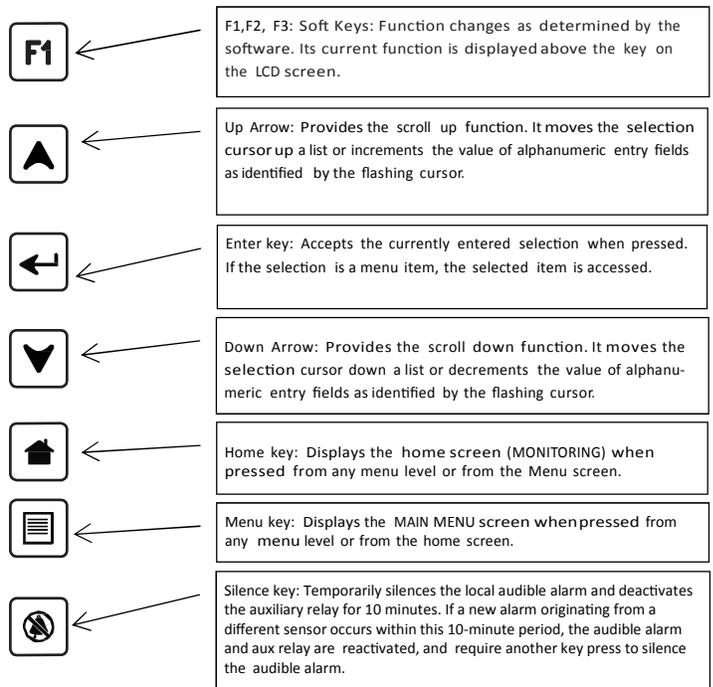
## ENVIROALERT® EA800-ip



ANETNNA to communicate with (up to 8) wireless sensors.

LCD SCREEN  
Displays real-time sensor data.  
Flashes under alert condition

USB PORT for local data download



F1, F2, F3: Soft Keys: Function changes as determined by the software. Its current function is displayed above the key on the LCD screen.

Up Arrow: Provides the scroll up function. It moves the selection cursor up a list or increments the value of alphanumeric entry fields as identified by the flashing cursor.

Enter key: Accepts the currently entered selection when pressed. If the selection is a menu item, the selected item is accessed.

Down Arrow: Provides the scroll down function. It moves the selection cursor down a list or decrements the value of alphanumeric entry fields as identified by the flashing cursor.

Home key: Displays the home screen (MONITORING) when pressed from any menu level or from the Menu screen.

Menu key: Displays the MAIN MENU screen when pressed from any menu level or from the home screen.

Silence key: Temporarily silences the local audible alarm and deactivates the auxiliary relay for 10 minutes. If a new alarm originating from a different sensor occurs within this 10-minute period, the audible alarm and aux relay are reactivated, and require another key press to silence the audible alarm.

Note: Alarms cannot be cleared and will continue to recur until the monitored conditions are within the programmed parameters.  
Note: Local audible alarm can be disabled via local or web programming.

## Before Installation

- Local device password is 0800.
- In order to access the device on the Web Portal the device needs to be communicating with our host server.
- A 30 minute timer starts on the device as soon as power is applied. At least one (1) sensor must be programmed locally or remotely within the 30 minutes or an alarm will occur. This timer is in place to remind installers the device requires programmed sensors for functionality; it can be canceled by pressing "timer" (F3 button).
- Wired sensor inputs are numbered 1 - 4. Wireless sensors are in positions 5-12.
- Wireless output relays are assignable and numbered 1 - 8.
- Wireless sensors must be set up locally at the device to ensure communication.

# CAUTION

## Read the Installation Manual for Details.

Installation Manual can be found online at [www.winland.com](http://www.winland.com)

- All power terminals must be connected to a Class 2 power limited circuit complying with National Electrical Code NFPA 70, Article 725. Where required, this equipment is to be isolated from the main supply by a limited power source as specified in EN60950.
- Batteries shall not cause explosion or produce a fire hazard as a result of excessive charge or discharge.
- Ensure all wiring for wired sensor connections is done before powering on or programming the device.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

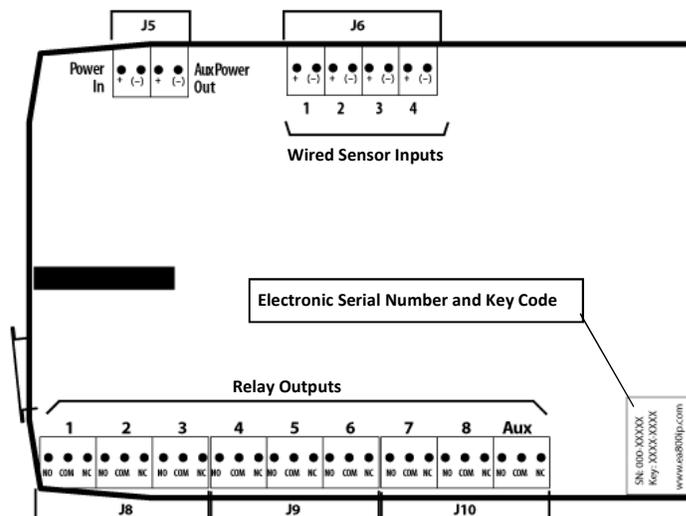


FIGURE 1: Device Connections Shown From Back

# INSTALLATION OVERVIEW

## 1. Install EA800-ip Device

Do not connect or disconnect sensors or wiring to a security panel while power is applied to the device. Connecting and disconnecting the Device with power connected may damage the Device or result in improper or unreliable operation.

- Connection of unsuitable loads to the AUX Power Out connection may damage the power supply and Device, or result in improper or unreliable operation.

**Web Based Monitoring:** To manage or monitor the Device through the cloud-based software application, it must be connected to a wired Ethernet connection with Internet access. The Device works in the same way as a PC with the Device being a client. The Device is hosted on our customized Web Services Platform. The Device will only connect to this server. It is not possible to connect to an internal server.

- Location: Device should be installed in a clean, non-condensing environment.
- Using the terminal block adapter supplied, connect power supply + and - leads to POWER IN (+) and (-) on J5. Observe proper polarity.
- EA800-ip Input Voltage: 11 to 26VDC at ≤ 500mA **Note:** The input voltage specification does not include requirements for loads connected to the Aux Power Out.
- When Device is powered, a 30-minute timer starts. The Device will alarm after this timer expires unless one or more sensors are set-up.
- If Aux Power Out is to be used, connect + and - leads to AUX POWER OUT (+) and (-) on J5 using a terminal block adapter.

## 2. Test Network Connection

Connect the Device Ethernet cable to a laptop computer that is set for a wired Internet connection. Browse to a reliable website to validate Internet connectivity.

## 3. Connect Wired Ethernet to Device

The Device requires a wired 10/100BASE-TX/FX Ethernet connection to communicate with the cloud application and is conforms to IEEE 802.3u standards.

## 4. Verify Network Connectivity

Device Network Settings: Unless a static IP address is needed, you will not need to modify the Device's network settings.

On power-up the Device first automatically attempts to obtain an IP address using DHCP. It will then attempt to contact a DNS server to get the host IP address. Then it will contact out Host Server.

To verify Internet connection, troubleshoot connection, or to manually assign the Device's IP settings, navigate to the Network menu. The Device must first be unlocked to access this menu. (Press F1 and enter password.)

## 5. Verify the Internet Connection

When successfully connected to the Host Server, the "DIAGNOSTICS" screen should look similar to this:

```

DIAGNOSTICS
Time: 08/20 08:38:37
IP-v: 192.168.001.024
IP-^: 023.096.008.019
Sync-^: 08/20 08:38:00
Xfer-^: 08/20 08:37:00
Xfer: 0% upd: pts
OK
    
```

A "IP-^" (Host Server) address must be present for the Device to communicate with the Host Server (the actual address may be different than the illustration).

## Information for Network Administrators

The device needs to be able to make a DNS query. It also needs to make an outbound TCP/HTTP or HTTPS connection to the host using a URL programmed into the firmware, on port 443.

DNS: If DHCP is enabled, the device makes a DNS query to the DNS server based on assigned network settings. If DHCP is disabled (i.e. static IP is enabled) it will use the DNS server at the specified IP address. DNS uses UDP and connects to the DNS server on port 53. There are situations where the DNS may get reissued using TCP on port 53.

Once installed and configured the EA800-ip communicates to the Host System on a 30-second interval. It does not accept any inbound connections.

**Attention:** Experience has shown that some firewall rules may consider this frequent traffic as abnormal and cause the connection to be shut down. To avoid connection trouble, check with your network administrator.

# INSTALL OVERVIEW (continued)

## 6. Troubleshoot Internet Connection

If no "IP-^:" address is present, do the following checks:  
 - Ensure the "CLOUD" setting is selected in the CLIENT MODE screen.  
 Then go back to Step 2 "Test Network Connection."

The Device is designed for plug-and-play functionality. If the Device does not connect after above steps have been taken, it may be necessary to obtain help from a network technician to perform the following steps:  
 - Go to "About EA800" screen, press F2 to Select "ENET" screen, then press F2 again for the "MORE" Screen. Check that the "IP", "Subnet" and "Gateway" addresses are appropriate for your network.

- Using a PC on the same local network as the Device, try to ping the "IP" address. Failure indicates the local network is not connecting.  
 - If your network requires a static IP address, go to the NETWORK screen, Select "CLIENT MODE" then select "CLOUD" then "DISABLED." You will be prompted to enter the Static IP address, Subnet address, Gateway address and DNS address. You will be prompted to press "OK" to reboot.

Note: Once your account has been activated, the Device can be configured using Winland's secure online web service.

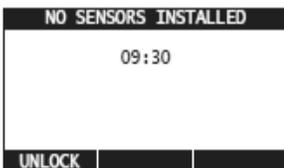
Note: If configuring online, ensure the NO SENSORS INSTALLED timer is canceled after powering the Device. ( Wireless sensors must be configured at the keypad. )

## 7. Place and Connect Wired Sensors

Place wired probes and connect cables to Device. Sensor cables may be extended up to 1,000' (305 m) using 22 AWG twisted pair. Wired input terminals 1 - 4 are located at the top of the Device ( see Figure 1 ). Wire alarm loops to relay output terminals located at the bottom of the Device ( see Figure 1 ). It would be best to determine ahead of time which relay will be assigned to which sensor.

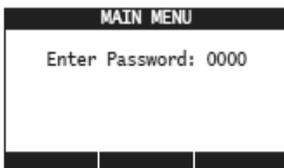
## 8. Unlocking/Locking Device

Press F1 to unlock Device. The default password is 0800.



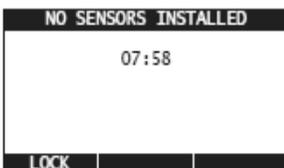
See Installation/Owner's Manual to customize password.

To enter password, press F3 (Next) to move the cursor one digit to the right.



Use the arrow keys to change the numeric value to 0800, then press ← .

The Device is now unlocked.

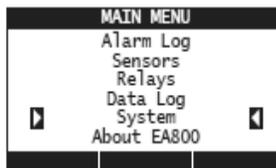


After completion of set-up, press F1 to lock the Device, if desired.

The Device locks automatically if no keys are pressed within 30 minutes.

## 9. Set Date and Time

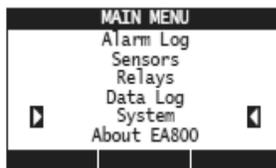
**NOTE:** When connected to the Winland Web Service, the Date and Time are set automatically and cannot be changed. To manually set the Date and Time when not using INSIGHT, the "Cloud" setting in the "CLIENT MODE" menu must be set to: DISABLED.



To set time and date format: The defaults are 24-hour clock (military time) and mm/dd/yyyy format. To change to 12-hour clock or dd/mm/yyyy format if desired, go to MAIN MENU, select SYSTEM: ← ; select Configuration: ← ; select Date Format or Time Format ← ; then select the preferred configuration. Press F3 (OK) to set.

To set time and date: go to MAIN MENU, select System, 8 ; select Set Date or Set Time, 8 ; follow menu prompts and use PREV and NEXT soft keys to select the desired values. Press F3 (OK) to set.

## 10. Add Sensors



At device, press Menu key, then ← , use arrow keys to select SENSORS and press: ← . Select ADD NEW SENSOR, and press: ← . Follow procedure 10a if adding a wired sensor and procedure 10b if adding a wireless sensor.

Note: Wired sensors can be programmed at the Device or via web. Wireless sensors must be programmed at the Device to ensure connection.

### 10a. Add Wired Sensors

Wired Sensors can be programmed locally. Wired Sensors can also be programmed via INSIGHT account before or after being connected to Device.



If wired Sensors were programmed via INSIGHT, and wired correctly before Device site installation, the timer does not apply. Select Wired, ← . Next select the output

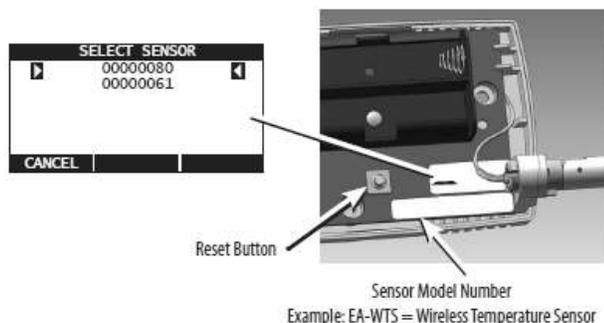
relay you wish to use for this sensor (1-8 or Aux only). Select the type of sensor being connected. You can opt to select from a list of Common names or create a Custom name (16 characters or less). After assigning a name, continue to follow the on-screen prompts to complete the sensor programming. See Installation/Owner's Manual for details. Repeat setup for each additional wired sensor. The steps may vary depending on the sensor type being added. **Note:** A single relay can be assigned to more than one sensor.

Note: For detailed information on configuring a 4-20mA sensor, please refer to the Installation/Owner's Manual.

Non-Internet Connected Installations: Disable the Internet functionality by going to the NETWORK screen, select "CLIENT MODE" then select "DISABLED." You will be prompted to press "OK" to reboot.

## INSTALL OVERVIEW (continued)

### 10b. Add Wireless Sensors



Remove cover from wireless sensors until setup is complete. On Device, select Wireless, press **←**. The Device begins searching for a connection with the wireless sensor. With the wireless sensor unmounted and located near the Device, apply power to the sensor using remote power supply or 2 AA batteries. It is recommended that power is applied to one sensor at a time, and that the setup is completed for that sensor before adding subsequent wireless sensors. The search may take a few minutes.

Note: Press the Reset Button on the sensor to restart the search process if necessary. Verify the number shown on the Device screen matches the number on the sensor's PC board. Press: **←**. If the list the screen does not contain the number found on the sensor's PC board, press F1 (Cancel) to continue the search process. Select the output relay to which the wireless sensor is to be assigned, (1-8 or Aux only) then press: **←**. Continue the setup based upon the type of wireless sensor being added.  
**Note:** A single relay can be assigned to more than one sensor.

### Wireless Multi-Function Sensor (EA-WMFS)

Wireless multi-function sensors provide a wireless transmitter for connection to a wired probe. Select the type of probe to be connected to the wireless multi-function sensor, then press: **←**.

Assign a Common name or Custom name to the probe, and continue to follow on-screen prompts to complete the setup.

Note: Custom names are limited to 16 characters for all sensors.

Note: The Wireless Multi-Function Sensor (EA-WMFS) supports the following probe types:

- White Temperature Probe (TEMP-UL-S)
- Blue Temperature Probe (TEMP-L-W and TEMP-L-S)
- Red Temperature Probe (TEMP-H-W and TEMP-H-S)
- Supervised WaterBug® Sensor (W-S-S and W-UC-S)
- Contact Sensors (N.O. and N.C.)

### Wireless Temperature Sensor (EA-WTS)

Assign a Common name or Custom name to the sensor, and continue to follow on-screen prompts to complete the setup.

Note: Custom names are limited to 16 characters for all sensors.

### Wireless Humidity Sensor (EA-WHS)

Assign a Common name or Custom name to the sensor, and continue to follow on-screen prompts to complete the setup.

Note: Custom names are limited to 16 characters for all sensors.

Repeat setup for each additional wireless sensor. The steps will vary depending on the type of sensor being added.

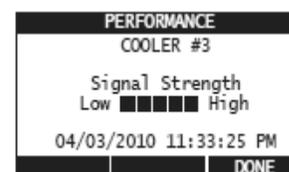
### Verifying Signal Strength

After temporarily mounting the wireless sensors in the desired location, verify the signal strength at the Device by pressing MENU, select Sensors, **←** select Performance, **←** then select the wireless sensor to be checked, **←** It may take as long as 30 seconds to acquire the current signal strength.

If "No Data" is displayed in place of bars, it indicates that recent signal strength information has not been received. If this persists for 1-2 minutes without displaying any performance bars, it is a strong indication that your Sensor is placed out of range with the Device.

If fewer than two bars are shown, first try a different wireless channel setting (see note below). Otherwise, the wireless transmitter should be relocated to obtain a better signal. Refer to the instruction sheet included with the wireless sensor for details on ensuring optimum signal strength.

**NOTE:** If drop-outs occur or signal strength remains low it is recommended that the RF Channel be set to 25, or 26 ( preferred ) or at least 5 channels above or below the currently selected channel.



## 11. Advanced Settings

Refer to the Installation Manual found online at [www.winland.com](http://www.winland.com) for configuring the following advanced EA800-ip settings:

- Configure Relays
- Pause Monitoring
- Replace a Sensor
- Editing Sensor Parameters
- Change Sensor Data Collection Frequency
- Change the Buzzer Setting
- Clear the Alarm/Sensor Logs
- Save or Load Configuration Settings
- Export Stored Logs

# WINLAND<sup>TM</sup> ELECTRONICS, INC.

## ENVIROALERT<sup>®</sup> EA800-ip