Lightning Detector Sensor

Model: WH57E

Contents

1. Getting Started..... 3

1.1 Parts List..... 3

2. Overview 4

2.1 Features 5

3. Setup Guide 7

3.1 Installing batteries 7

3.2 LED Indicator..... 11

4. Sensor Placement 13

5. Wi-Fi Configuration with gateway..... 15

5.1 Pair with Gateway 15

5.2 Wi-Fi Connection for the Gateway. 16

6. View Online Data with WS View 17

7. Set Email Alerts 19

8. Specification 21

9. Warranty Information 22

1. Getting Started

1.1 Parts List

One Lightning Detector Sensor
One User Manual

2. Overview

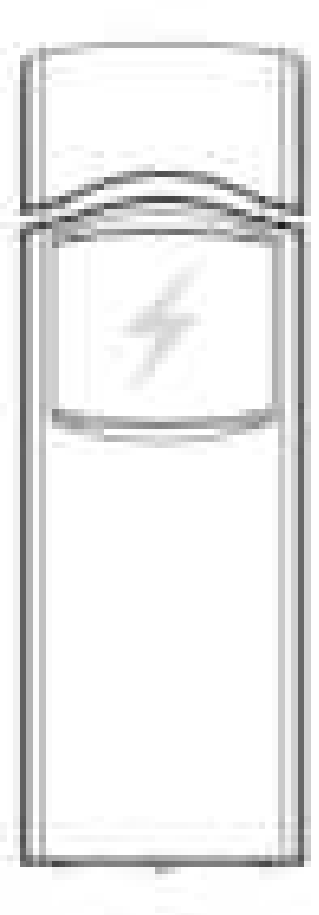


Figure 1: Lightning Detector Sensor

2.1 Features

Lightning Detector

- Detects lightning bolts and storms within 25 miles (40 kilometers)
- High or low sensor sensitivity selectable to meet different requirements.
- Long wireless range up to 330 feet (100 meters) in open areas
- Transmits readings every 79 seconds
- Easy installation includes hanging hole

When paired with a GW1000 Wi-Fi Gateway:

- Monitor number of strikes daily, and the time & distance of the last strike detected within a 25-mile radius of your location on the Live Data page of the WS View app

(requires the gateway and your phone is using the same Wi-Fi network)

- Battery power level display on the WS View App

When paired with a Weather Station Console (HP2551/HP3500/HP3501):

- View lightning data in real-time on the Display
- Get alerted to lightning strikes with the flashing lightning icon

When uploaded to Ecowitt Weather Server:

- View lightning data & history records & graph on the website
- Receive email alerts from the server
- Remote monitoring with smart phone,

laptop, or computer by visiting the website

3. Setup Guide

3.1 Installing batteries

1. Remove the battery door on the back of the transmitter by taking off the cover, as shown in Figure 2

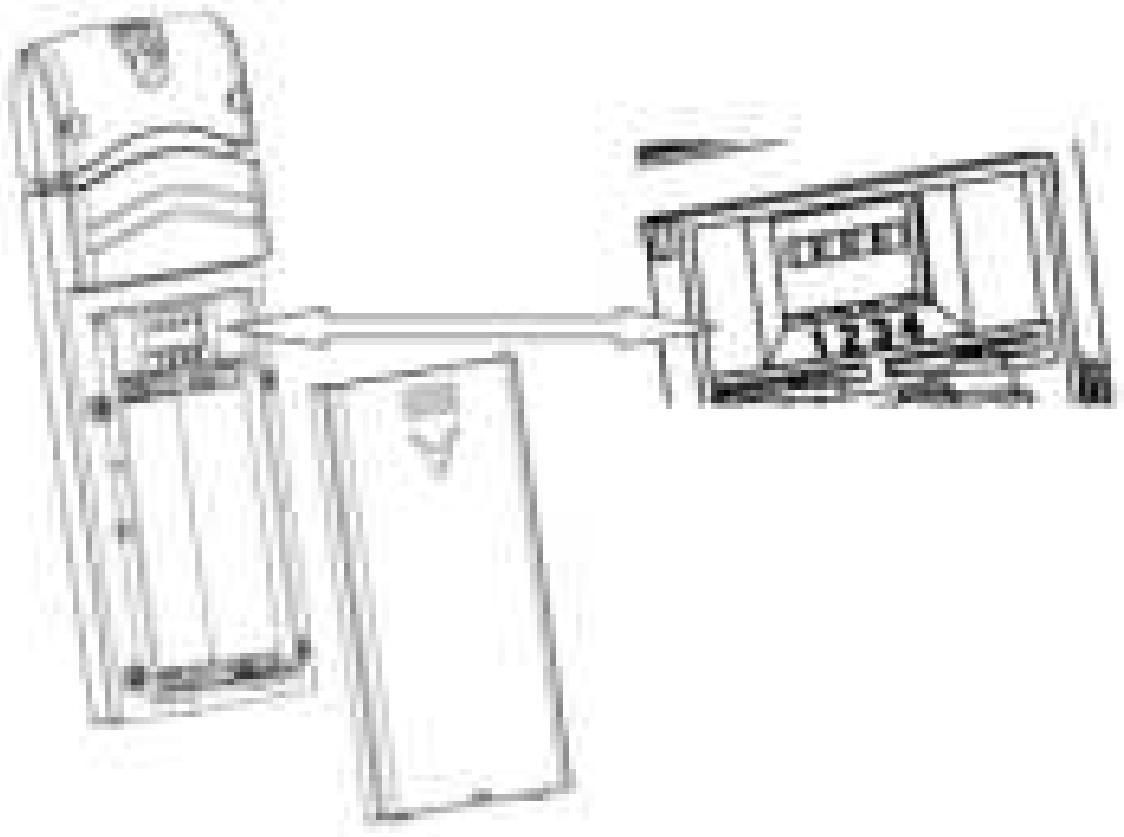


Figure 2: Battery installation

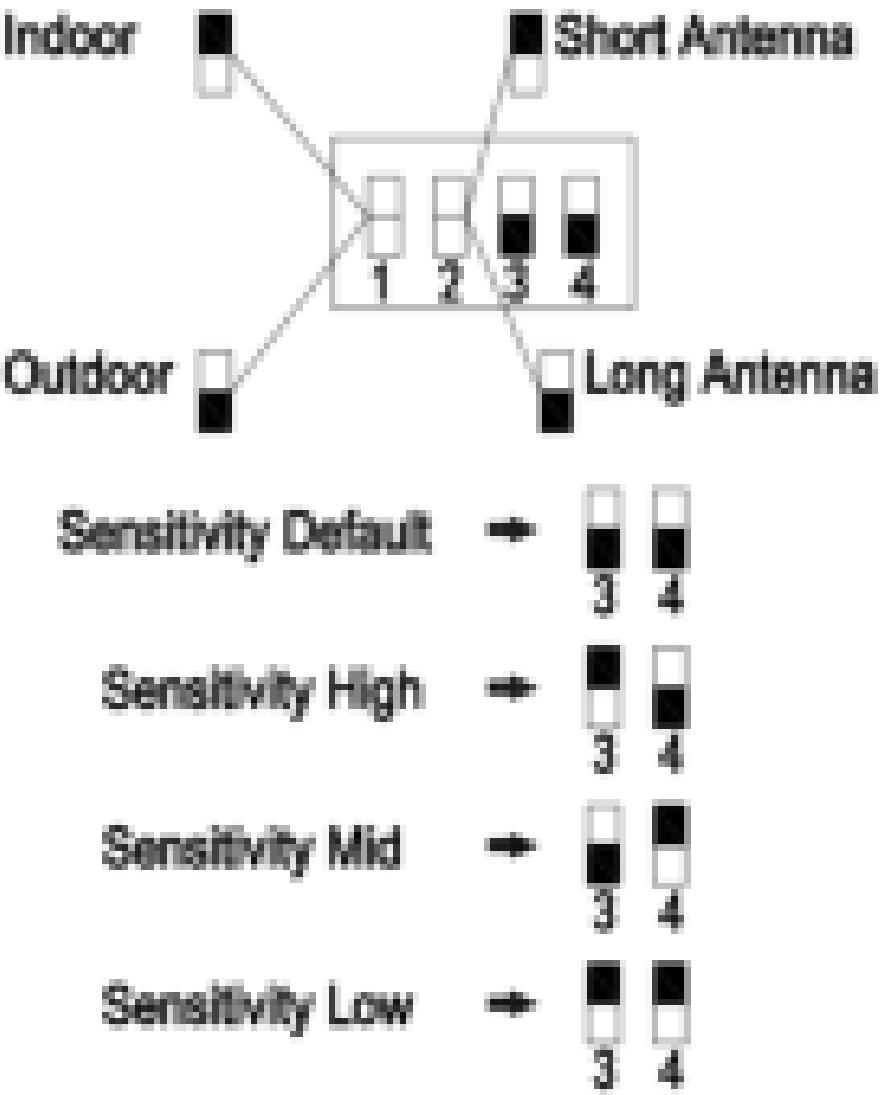
2. Before inserting the batteries, find the dip switches instruction above the battery compartment and set the following configuration:

Indoor/outdoor: Dip switch 1, default setting is for "outdoor", no matter the sensor is placed indoor or outdoor, set this dip switch to outdoor to avoid system picks up noise and triggering false lightning.

Antenna: Dip switch 2, default setting is for long antenna, as this is the antenna used inside. **Please do not make any change with this dip switch setting**.

Sensitivity: Dip switch 3,4. Default setting is for sensitivity between high and mid. If you think the sensor picked up a lot false lightning strikes, then please try with sensitivity Mid or Low. If sensor missed lightning detection, you may try with high sensitivity setting. If set to high sensitivity and still has missed lightning detection, then you may try with Dip switch 1 for "Indoor" setting to make the system even with higher gain and make the system most sensitive.

Default for all the 4 switches are in Down Position.



Switch in down position. Switch in up position.

Figure 3: Dip Switch diagram

3. Insert two 1.5V AA batteries.

The LED indicator will turn on for four seconds and normally flash once every 79 seconds (the sensor transmission update period).

Note: If no LED lights up or stays lit permanently, make sure the batteries are inserted the correct way or a proper reset happens. Do not install the batteries backwards. You can permanently damage the sensor.

4. Close the battery door.

3.2 LED Indicator

Flash (each): Indicates one packet of RF data from a sensor was received or one lightning strike was detected.

Flash (for 2S): Indicates detection of noise signals, prompting the user that current location has high level noise. You can either set dip switch 3, 4 to mid or low sensitivity level which raised to a higher threshold level for noise filtering, or you can find another location for lower noise level.

Steady on (for 2S): Indicates detection of interference signals. It means there is lightning like signals around. You should try to find interference sources like motor, switches for all kinds electrical appliances, and place the sensor far away from these interference sources.

Steady Off : Indicates no triggering of lighting signal neither noise, nor interference.

4. Sensor Placement

The sensor can be placed both indoor or under porch, balcony.

To mount or hang the unit on a wall or wood beam:

- Use a screw or nail to affix the remote sensor to the wall, as shown on the left side of figure 4, or
- Hang the sensor using a string, as shown in right side of figure 4.

Figure 4: Indoor sensor mounting

Note: Make sure the sensor is mounted vertically and not lying down on a flat surface. This will insure optimum reception. Wireless signals are impacted by distance, interference (other weather stations, wireless phones, wireless routers, TVs and computer monitors), and transmission barriers, such as walls. In general, wireless signals will not penetrate

solid metal and earth (down a hill, for example).

5. Wi-Fi Configuration with gateway

To view the lightning data on your mobile application and receive email alerts on our weather server, you need to pair this device with our GW1000 Wi-Fi Gateway or HP2551/HP3500/HP3501 Weather Station (sold separately).

5.1 Pair with Gateway

If the GW1000 has been in operation, and you have never had any WH57 lightning detection sensor setup before, just power up the sensor and GW1000 will pick the sensor data automatically.

If one WH57 sensor has been hooked on GW1000 before, and you have a new WH57 sensor to replace the old one, just power off the old sensor and power on the new sensor, the gateway will pick up the new sensor data automatically.

You may also go to the Sensor ID page of the app (requires the Wi-Fi configuration done first) to Re-register the sensor if not picked up automatically.

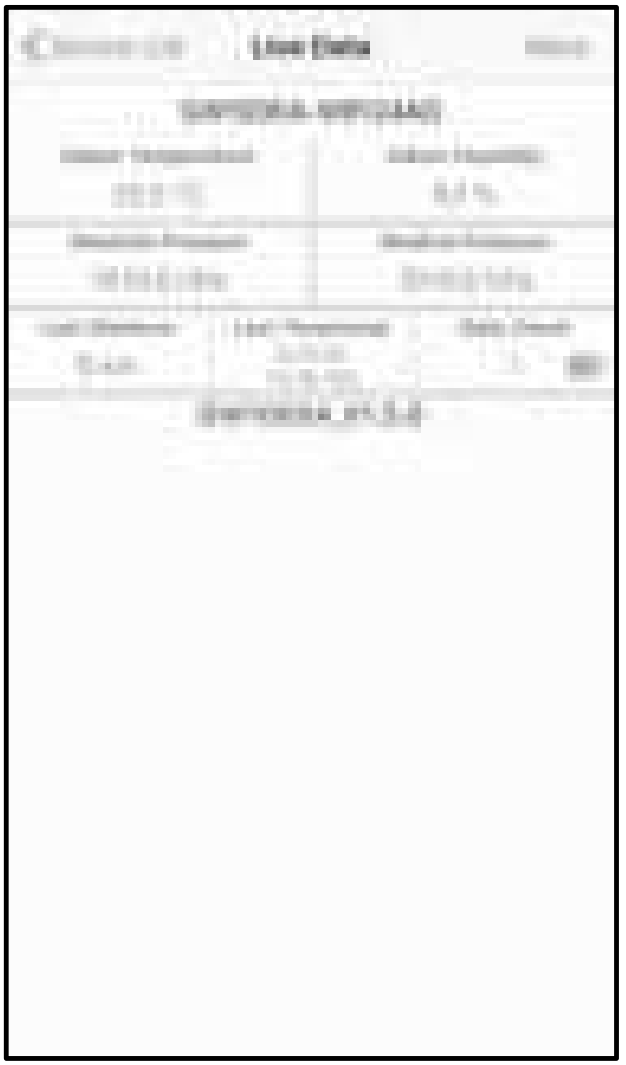
5.2 Wi-Fi Connection for the Gateway

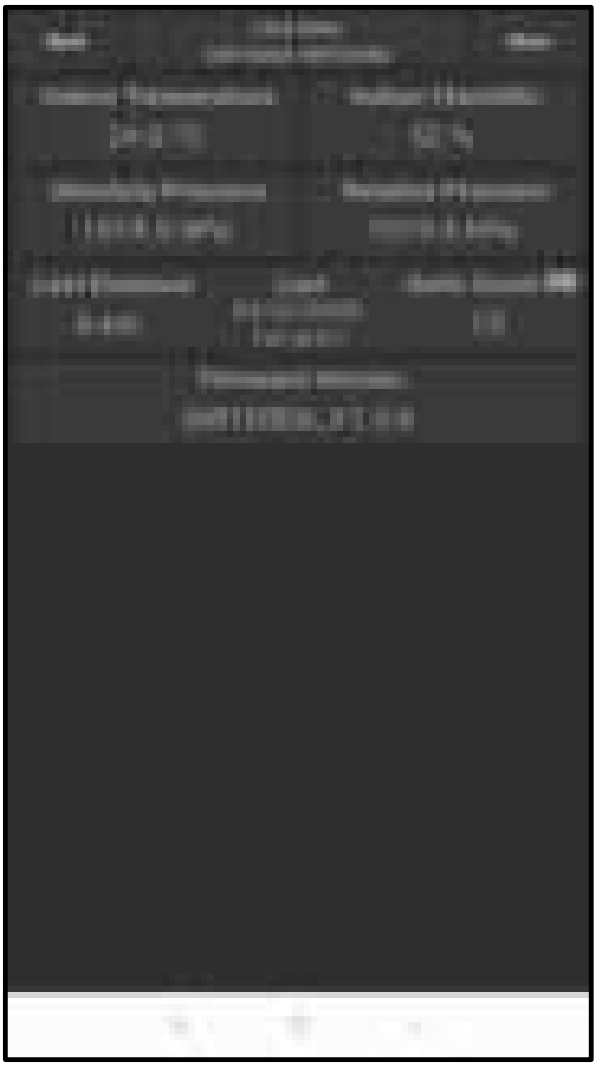
For this part, please refer to the manual of the GW1000 Wi-Fi gateway.

Any question, please contact the customer service.

6. View Online Data with WS View

When the Wi-Fi configuration is done, you may view lightning data as well as the sensor battery level on WS view App at the live data page.





Note: It requires your phone and the gateway using the same network to view your sensor data on the WS View app.

To remote monitor the sensor data, please upload the data to our free Ecowitt Weather Server: https://www.ecowitt.net.

Detailed operation instructions can be found on the GW1000 manual.

7. Set Email Alerts

Once your device is added successfully on the Ecowitt Weather server, you may set alerts for the lightning distance and daily count on the website to get email notifications.


Alerts

8.Specification

Power: 2x1.5V AA batteries(not included)
Sensor Size: 123x42x14mm
Frequency: 915MHz
Wireless transmitting range: 100M (300feet)
Lightning detection range: 0-25 miles/0-40km
Sensor reporting interval: 79 seconds
Working temperature: 0~50C(32~122F)

Note: Once lightning strikes detected, the led light will flash once, and the ecowitt.net will push email alerts at the same time.

9.Warranty Information

We disclaim any responsibility for any technical error or printing error, or the consequences thereof.

All trademarks and patents are recognized.

We provide a 1-year limited warranty on this product against manufacturing defects, or defects in materials and workmanship.

This limited warranty begins on the original date of purchase, is valid only on products purchased, and only to the original purchaser of this product. To receive warranty service, the purchaser must contact us for problem determination and service procedures.

This limited warranty covers only actual defects within the product itself and does not

cover the cost of installation or removal from a fixed installation, normal set-up or adjustments, or claims based on misrepresentation by the seller, or performance variations resulting from installation-related circumstances.

FCC Statement

Statement according to FCC part 15.19:

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.

2.This device must accept any interference received, including interference that may cause undesired operation.

Statement according to FCC part 15.21:
Modifications not expressly approved by this company could void the user's authority to operate the equipment.
Statement according to FCC part 15.105:
NOTE: 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 instructions, 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.