Wireless Air Quality Monitor with Indoor Temperature and Humidity
Model: WH0290

Contents

1. Introduction

Thanks for your purchasing of the WH0290 Wireless Air Quality Monitor with Indoor Temperature and Humidity. To ensure the best product performance, please read this manual and retain it for future reference.

2. Get Started

Note: Power up sequence can be performed in the order shown in this section (insert batteries in the Air Quality Monitor first, then Sensor(transmitter).

Attention:

- Do not mix old and new batteries
- Do not mix Alkaline, Standard, Lithium or Rechargeable batteries
- Ensure batteries are installed correctly with regard to polarity +/-
- Please fully charge the included sensor batteries overnight when first use.

2.1 Parts List

① One Air Quality Monitor (Receiver)
② One Air Quality Sensor(Wireless PM2.5 Sensor)
③ One USB Cable
④ One User Manual

⑤ Two LSD(low self discharge) Ni-MH
   Rechargeable Batteries

2.2 Air Quality Sensor Set Up

1. Remove the battery door on the base of the
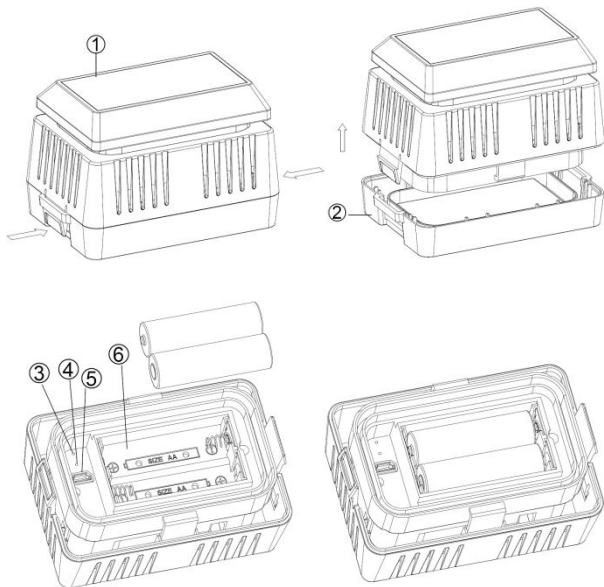   air quality sensor as shown in Figure 1

Figure 1

1   Solar panel

2   Battery Compartment Cover

3   Red LED Indicator (RF transmission)

4   Blue LED Indicator (charging status)

5   USB Port

6   Battery Compartment

2. Insert two AA battery.
3. After inserting the battery, the remote sensor LED indicator will light for 4 seconds, and then flash once per 10 minutes thereafter. Each time it flashes, the sensor is transmitting data.
4. Connect the USB cable to a standard USB power adapter and charge battery until blue LED is turned off, indicating batteries are fully charged.
5. When no sufficient solar radiation is possible, a fully charged set battery can last for about 20 days(about 500hours), and battery status monitor on display will reflect the battery power status. When battery is empty, please charge sensor again.
6. After the batteries are fully charged, remove the USB cable and close the battery door.

2.3 Display Console Set Up

1. Move the remote about 2 to 3m away from the display console (if the sensor is too close, it may not be received by the display console).
2. Remove the battery door on the back of the display, as shown in Figure 2. Insert one AA (alkaline, lithium or rechargeable) battery in the back of the display console.
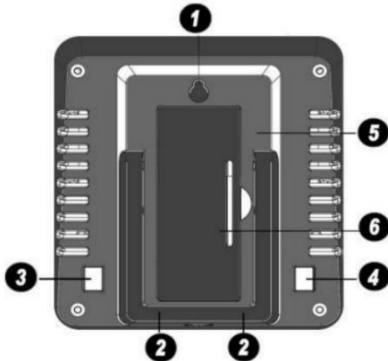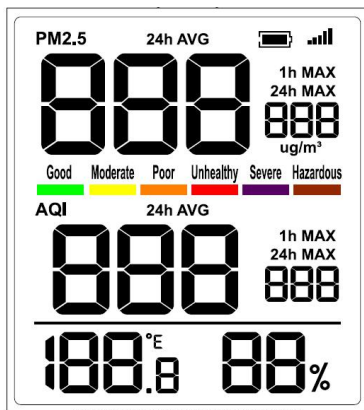

Figure 2

1. Integrated Hanging Hole
2. Tabletop Stand
3. °C/°F Button
4. MAX Button
5. Battery Compartment
6. Battery Compartment Cover

All of the LCD segments will light up for a few seconds to verify all segments are operating properly.

Full Display

3. Replace the battery door, and fold out the desk stand and place the console in the upright position.

   The console will instantly display indoor temperature and humidity. The PM 2.5 value will update on the display within a few minutes.

   While in the search mode, the reception search icon 📶 flash.

If the remote does not update, please contact our Customer Service for support.

2.3.1 Display Console Layout

Figure 3

1. Current PM2.5 Concentration
2. Air Quality Level
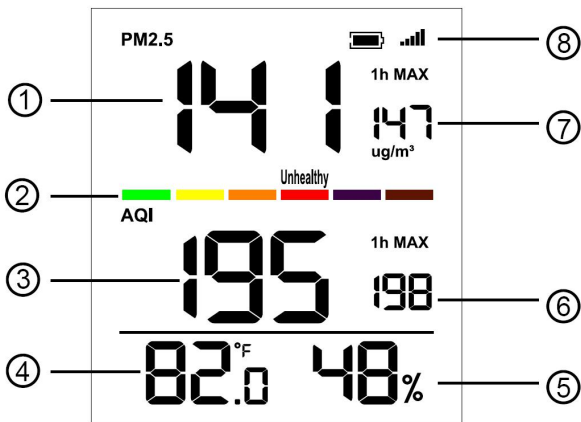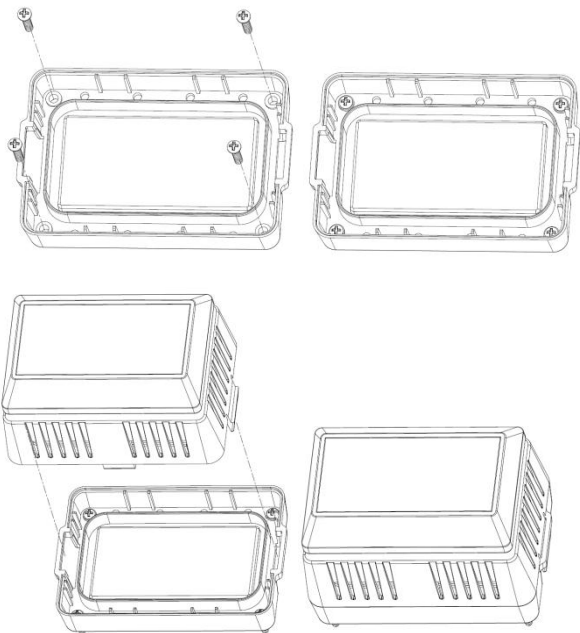3. Current AQI
4. Indoor Temperature
5. Indoor Humidity
6. 1h Max AQI
7. 1h Max PM2.5 Concentration
8. Outdoor Reception Icon

3. Wireless Sensor Installation

Outdoor Installation

Use four screws to fix the base of the outdoor sensor on a flat surface.

4. Console Operation

Note: The console has two buttons for easy operation: 【°C/°F】 button (on the left), and 【MAX】button (on the right).

4.1 °C/°F

Short press 【°C/°F】button: switch between display of temperature unit: °C/°F

Press and hold the 【°C/°F】button for 2 seconds: switch between display of the 24H average value of the PM2.5 concentration and AQI.

4.2 MAX

Short press the 【MAX】button: switch between display of the 1h MAX / 24h MAX / MAX(since last reset) value of the PM2.5 concentration and AQI.

Press and hold the 【MAX】button for 2s to clear all the 1h MAX / 24h MAX / MAX(since last reset) value.

5. Sensor Resynchronization

When the remote sensor lost reception, holding the °C/°F and MAX button for 5s, will register new outdoor for 12 minutes.

While in the search mode, the reception search icon **.ıll** flash.

You can also re-sync the two units by removing all the batteries and then wait for several minutes. Then install the batteries again to register faster.

6. Best Practices for Wireless Communication

Note: To insure proper communication, place the remote sensor on a flat surface. Do not lean or upside down it to avoid any damage.

Keep the console several feet away from computer monitors and TVs.

7. Function

1) Indoor temperature and humidity
2) Every 60 second the unit will measure indoor temperature and humidity.
3) Display current / 24H average PM 2.5 concentration and AQI.
4) Display 1h MAX / 24h MAX / MAX (since last reset) PM 2.5 concentration and AQI.
5) Air quality level indicator color bar based on AQI.
6) IPx4 rainproof sensor, can be used both indoor and outdoor.

Lost the signal once

Received the signal once
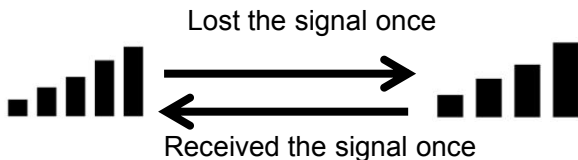
8. Appendix

About the Air Quality Levels

AQI	Air Pollution Level	PM2.5 Concentration ug/m3	Health Implications	Cautionary Statement (for PM2.5)
0 - 50	Good	0.0-12.0	Air quality is considered satisfactory, and air pollution poses little or no risk	None
51 -100	Moderate	12.1-35.4	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
101-150	Poor	35.5-55.4	Members of sensitive groups may experience health effects. The general public is not likely to be affected.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
151-200	Unhealthy	55.5-150.4	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects	Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion
201-300	Severe	150.5-250.4	Health warnings of emergency conditions. The entire population is more likely to be affected.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
300+	Hazardous	250.5+	Health alert: everyone may experience more serious health effects	Everyone should avoid all outdoor exertion

9. Specifications

9.1 Wireless Specifications

- Line of sight wireless transmission (in open air): 300feet(100meters)
- Frequency: 433/915/868 MHz (optional)
- Update Rate: 10 minutes

9.2 Measurement Specifications

The following table provides specifications for the measured parameters.

Measurement	Range	Accuracy	Resolution
Indoor temperature	14 to 140 °F (-10 to 60°C)	± 1 °F (±1°C)	0.1 °F (±0.5°C)
Indoor Humidity	1 to 99 %	Accuracy +/- 3% RH (@25°C. , 30%RH to 80%RH). Accuracy +/- 5% RH (@25°C. , 1%RH to29%RH；80%RH to 99%RH)	1%
PM 2.5	0~999ug/m3	0~100ug/m3　±15ug/m3 >100ug/m3　±15%	1ug/m3

9.3 Power Consumption

- Base station (display console) : 1 x AA Alkaline or Lithium batteries (not included)
- Remote sensor : 2 x AA 1.2V LSD type NI-MH batteries (included) Solar panel for backup power

    Note:
    1. Battery type for charging: 2 x AA 1.2V NI-MH batteries(battery life: 3 weeks)
    2. It's recommended to recharge the outdoor sensor every two week.
    3. Charge time: 3h (The blue LED indicator will light when in charge and be off when full charged)
    4.Charge Method: USB charge(USB Cable included)

10. 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:
Any changes or 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.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in
accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

11. Warranty Information

We disclaim any responsibility for any technical error or printing error, or their consequences.
All trademarks and patents are recognized.

We provide a 1-year limited warranty on this product against manufacturing 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 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, claims based on misrepresentation by the seller or performance variations resulting from installation-related circumstances.