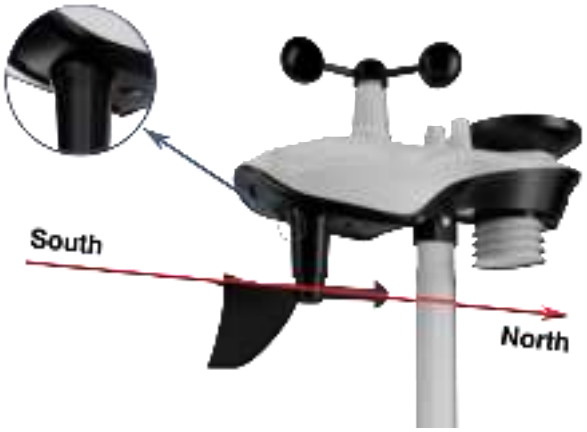
Sainlogic-SA6 Plus Quick Setup Guide



Product Includes:

-Integrated outdoor transmitter
- Display Console
- Rain collector
- Wind Cups
- Wind Vane
- Mounting brackets and accessories
- Instruction manual
- Power Adapter

Recommended Tools:

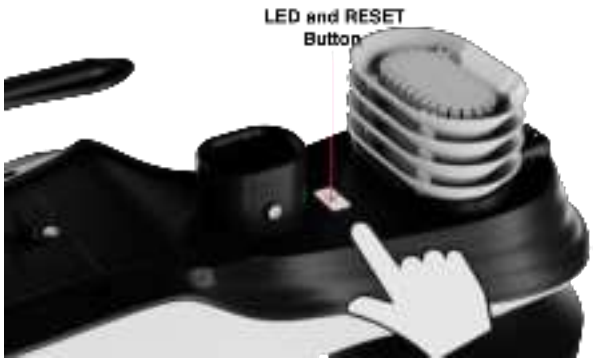
- Precision screwdriver (for small Phillips screws)
- Compass or GPS (for wind direction calibration)
- Adjustable wrench

Step 1:

Locate the battery door on the bottom of the transmitter, remove the retaining screws on the back of the sensor, remove the battery door, insert 3 new AA batteries and close the battery door.

Step 2:

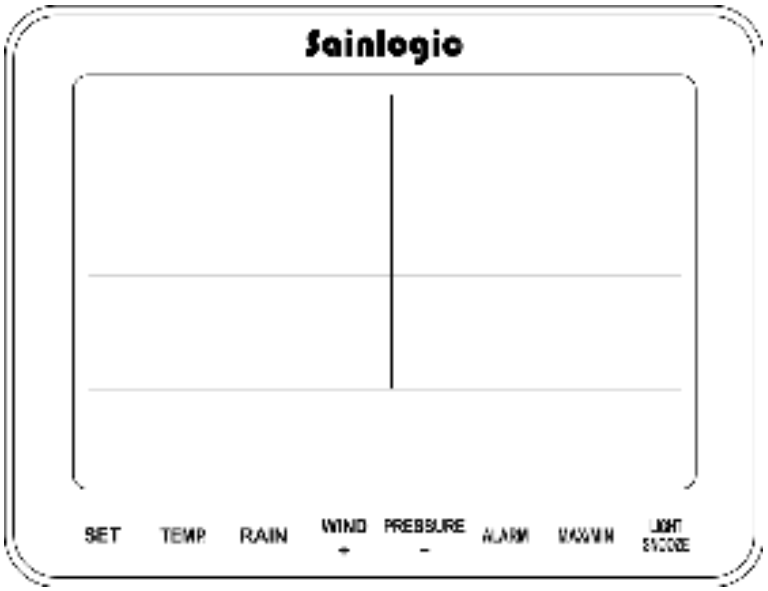
After installing the batteries, the Integrated Outdoor Sensor LED will illuminate for 3 seconds and then blink every 16 seconds. If it does not flash, press the reset button.



Step 3:

Plug in the display console with the power adapter.

We recommend viewing the console from a 20 degree to 30 degree angle from above for the best display of the screen.



Note： It is recommended that the power adapter be plugged in all the time to minimize display battery consumption and extend battery life. If you use battery power, it will not stay on constantly and will probably only last about 2 hours.

Note：
There are 3 levels of brightness of backlight. When the backlight is on, you can press SNOOZE key to switch between the 3 levels.

Referring to the instructions on the following page.

Learn how to make the display connect to WiFi and how to download the Weatherseed APP and register to log in.

Please search the "Weatherseed " APP in Google Play Store or IOS App Store.

(Android) **(IOS)**

Step 4：

Please search "Weatherseed" APP in Google Play Store or IOS App Store.

Step 5:

Register and login to your own Weatherseed account:

(1) Fill in the e-mail address;

(2)Send a verification code to the e-mail address and enter the code;

(3) Set a password;

(4)Confirm the password (must be consistent with the set password);

(5)Check the user agreement and proof of age;

(6) Register account.

Note: The display console only supports 2.4 GHz signals.

If you have a dual-band router (2.4 GHz and 5.0 GHz), make sure the router's 2.4 GHz band is turned on. And separate it from the SSID of the 5.0 GHz channel for accurate connection to 2.4 GHz.

Step 6: WiFi Connection Steps

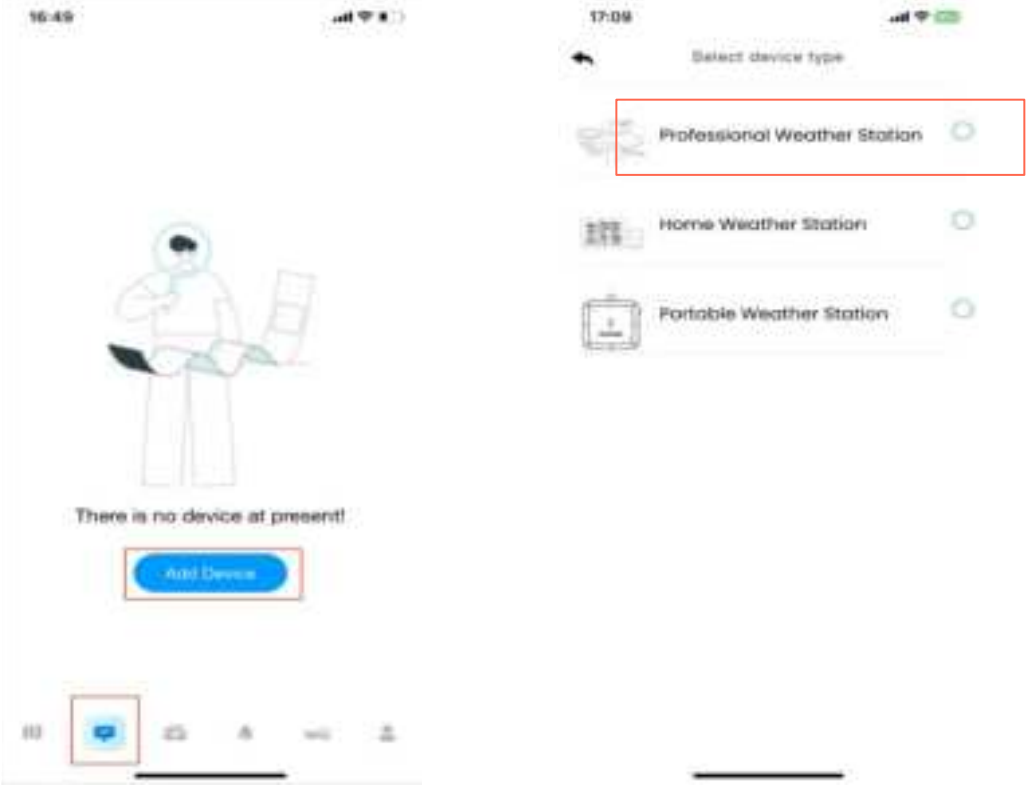
Note： Please don't choose the wrong type and model, if you choose the wrong one, you can't match the network successfully.

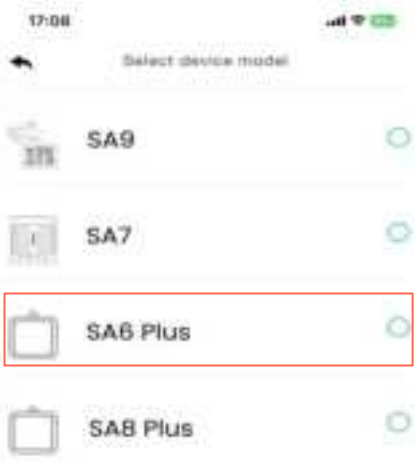
1. Bluetooth Distribution Network Mode(Recommend)

Press and hold the WIND+ key to enter the distribution network mode, the WiFi icon will flash and the BI icon will be shown in the date area.

After the display enters the " Bluetooth distribution network " mode, please open the APP to start networking:

(1) Select product model. Set the name and location by yourself;

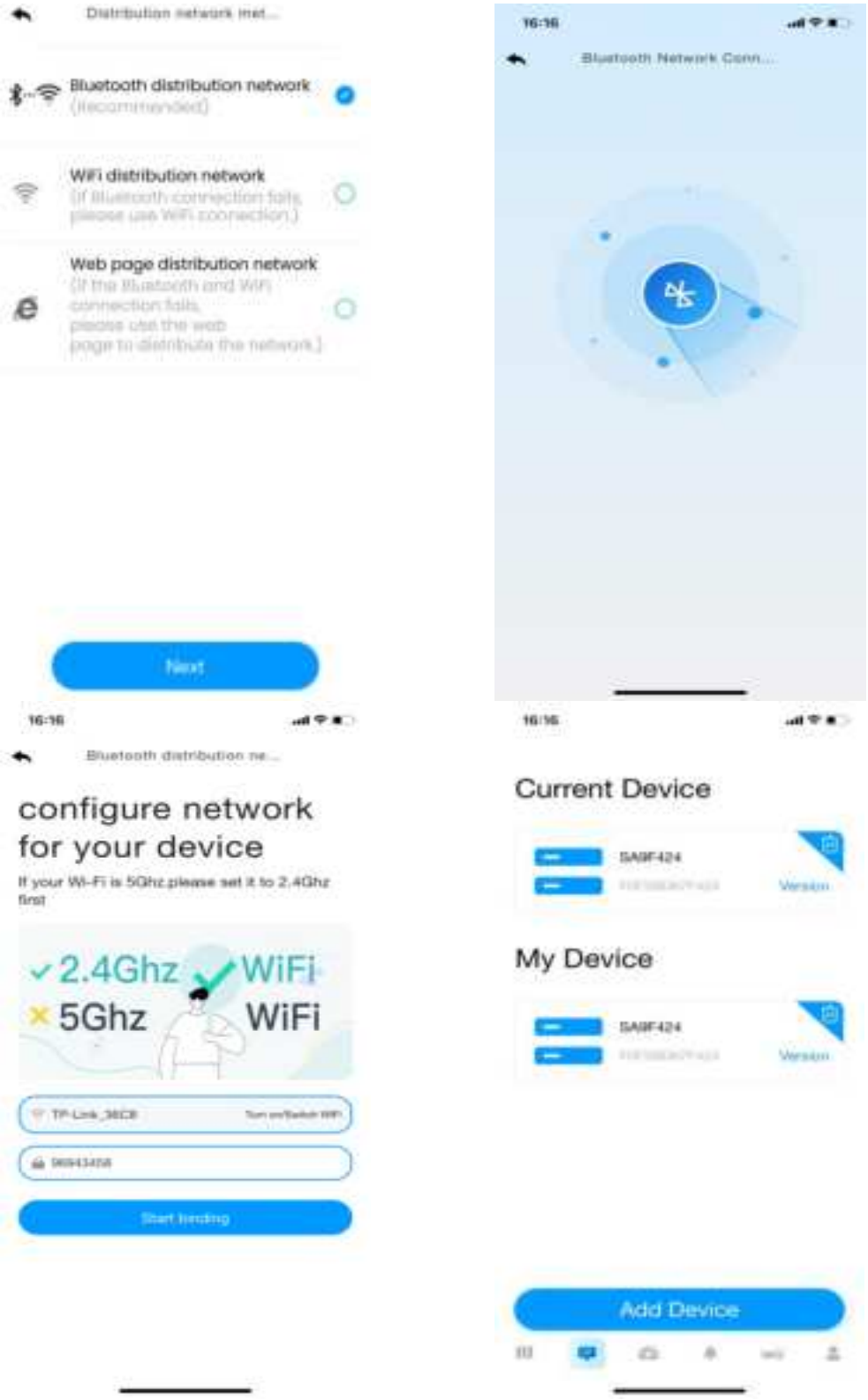




(2) Follow steps 1 through 3 for WiFi connectivity, scan the QR code and then select the distribution method.

Note： The QR code is attached to the back of the display.

(3) Select the “ Bluetooth distribution network" to automatically search for Bluetooth signals and pairing. After successful pairing, jump to WiFi interface. Please select 2.4Ghz WiFi and enter the password.



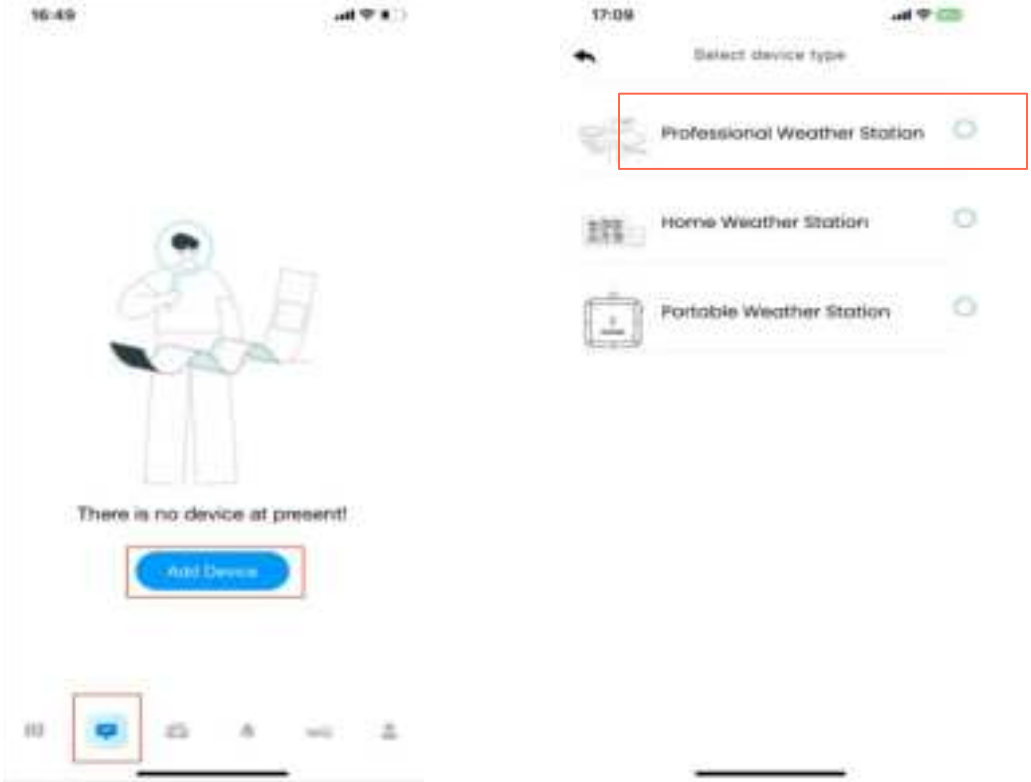
Note : If the connection via Bluetooth Distribution mode fails, please use the WiFi Distribution Network mode or Web page distribution network mode to set up the network.

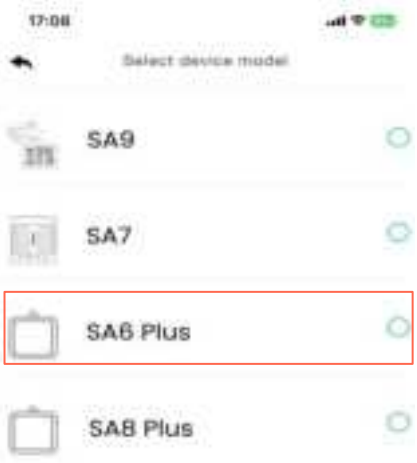
2. WiFi Distribution Network Mode

Press and hold the WIND+ key to enter the distribution network mode, the WiFi icon will flash, then short press the SET key once, and the SC icon will be shown in the date area.

After the display enters the " WiFi distribution network " mode, please open the APP to start networking:

(1) Select product model. Set the name and location by yourself;





(2) Follow steps 1 through 3 for WiFi connectivity, scan the QR code and then select the distribution method.

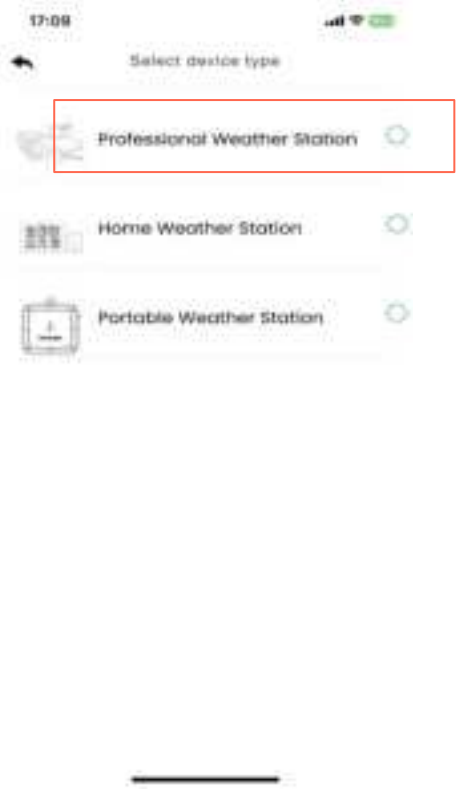
(4) Choose the " WiFi distribution network" mode, select the router WiFi name (2.4Ghz), then enter the password and click next.

3. Web page distribution network mode

Press and hold the WIND+ key to enter the distribution network mode, the WiFi icon will flash, then press the SET key briefly twice, the SC icon will be converted to WC icon .

After the display enters the " Web page distribution network" mode, please follow steps to connect the WiFi:

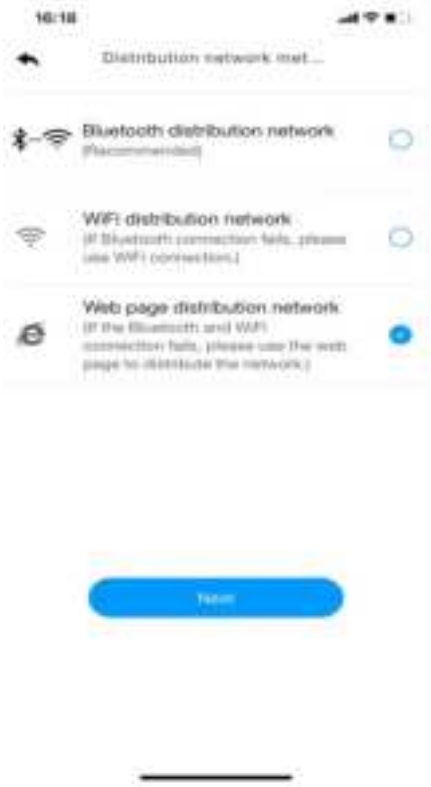
(1)Select product model. Set the name and location by yourself;



(2)Follow steps 1 through 3 for WiFi connectivity, scan the QR code and then select the distribution method.

(3)Choose the " Web page distribution network" mode. Click Go to connect to WiFi.

Automatically jump to the WiFi list screen, click Connect " weatherseed " WiFi.



(4) Return to the app, click the confirmation dot and click " Next".
Please select 2.4Ghz WiFi, enter the password and click " Connect".

📐 ***Note: Android system can select WiFi. IOS system needs to manually enter the WiFi name.***

If you have any questions, please feel free to contact us. You can reach us via Customer Support Email, Customer Support phone,or social media accounts.

Customer Support Email：info@sainlogic.com
Website: www.sainlogic.com
Customer Support Phone: +1 (888) 513-9823 (Mon-Fri 10 a.m. - 6 p.m, Eastern Standard Time)

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https://www.tiktok.com/@sainlogic.official

Sainlogic SA6 Plus Weather Station User Manual

Content

1.Introduction

Thank you for purchasing the Sainlogic Professional WiFi Wireless Weather Station. The following user guide provides detailed instructions on installation, operation and troubleshooting. This product is constantly changing and improving, especially the online services and associated applications.
To download the latest manuals and other help, please contact Customer Support.
Customer Support Email：info@sainlogic.com
Website: www.sainlogic.com
Customer Support Phone: +1 (888) 513-9823 (Mon-Fri 10 a.m. - 6 p.m, Eastern Standard Time)

2.Warning and Cautions

⚠WARNING: Lightning strikes can be caused by any metal object, including your weather station mounting pole. Mounting your weather station during a storm is prohibited.
⚠WARNING: Installing a weather station in an elevated location may result in injury or death, so perform as many preliminary checks and operations as possible on the ground and inside a building or house.
⚠WARNING: Install the weather station on a clear, dry day.

3.Quick Start Guide

The following Quick Start Guide provides the necessary steps to install and operate the weather station.

4.Assembly of sensor arrays

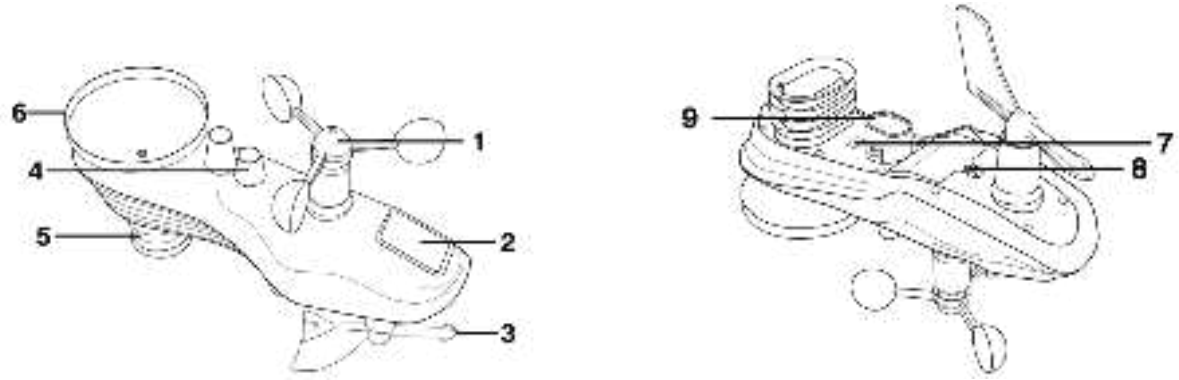


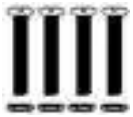
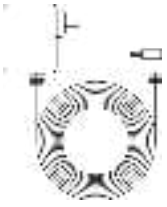
Figure 1

NO	Description	NO	Description
1	Wind Cup	7	Reset Button/LED Indicator
2	Solar Panel	8	Battery Door
3	Wind Vane	9	Mounting Pole Socket
4	Bubble Level		
5	Thermometer-Hygrometer Sensor		
6	Rain Collector		

4.1.Parts List

The weather station consists of the following parts.

QTY	Item	image
1	Display Console Frame Dimensions: 6.7x5.2x1inch (170x132*25mm) LCD Dimensions: 5.4x3.7inch (137x93mm)	
1	Integrated Outdoor Transmitter Dimensions: 12.9x4x9.8inch (327x101x249mm)	

1	Foot Mounting (with pole insert) Dimensions: 4.25x4.1x1.75inch (107x104x44.5mm)	
1	Mounting Bracket Back Plate (polemount) Dimensions: 4x3.25x1inch (101x82x25mm)	
1	Mounting Pole Dimensions: 12.8x1.3x0.9inch (325x33x22mm)	
2	Pole mounting nuts (M3) / bolts Ø3)	
4	Pole mounting nuts (M5) / bolts (Ø5)	
4	Tapping screws	
1	Manual	
1	Power Adapter	

4.2.Recommended tools

We recommend using the following tools to assist in the installation of the weather station.

1	Precision screwdriver (for small Phillips screws)	
2	Compass or GPS (for wind direction calibration)	
3	Adjustable wrench	

4.3. Remove/Install the Wind Vane

Remove the wind vane: (refer to Figure 2)

Locate the black waterproof silicone plug in the center of the round cap at the top of the wind vane and pick it out with a tool.
Use a precision screwdriver to loosen the set screw in the round hole until the wind vane can be easily removed.

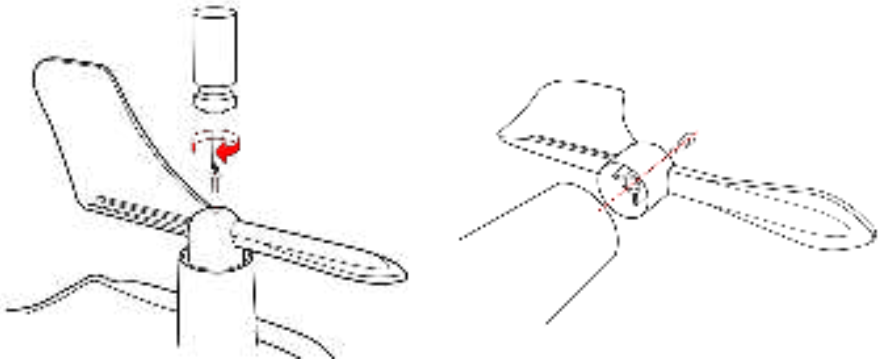


Figure 2

Install the Wind Vane:

Put the round hole at the bottom of the wind vane against the wind vane shaft and tighten the fixing screws with a precision screwdriver to make sure the wind vane can rotate freely.
Insert the black waterproof silicone plug into the round hole at the top of the wind vane and make sure it fits into the round hole to achieve waterproof effect.

Note: The wind vane axis cannot rotate freely like the wind cup, which is specially designed by us.

4.4.Remove/Install the Wind Cup

Remove the wind cup: (refer to Figure 3)

(a) Locate the black waterproof silicone plug in the center of the round cap at the top of the wind cup and pick it out with a tool.
(b) Use a precision screwdriver to loosen the set screw in the round hole until the wind cup can be easily removed.

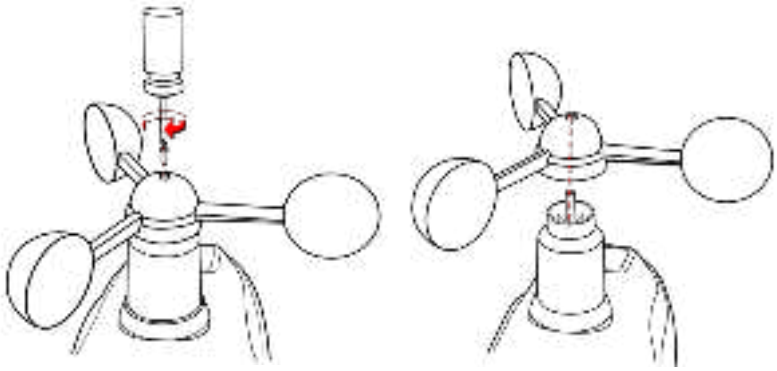


Figure 3

Install the wind cup:

(a)Place the round hole at the bottom of the wind cup against the wind vane axis and tighten the fixing screw with a precision screwdriver to ensure that the wind cup can rotate freely.
(b) Insert the black waterproof silicone plug into the round hole at the top of the wind cup and make sure it fits the hole to achieve waterproof effect.

4.5.Remove/ Install the rain collector

Remove the rain collector:（refer to Figure 4）

(a)Place your hand flat on the top of the rain collector, grasp the entire collector and rotate it clockwise.

(b) Remove the rain collector vertically upwards when a click is heard.

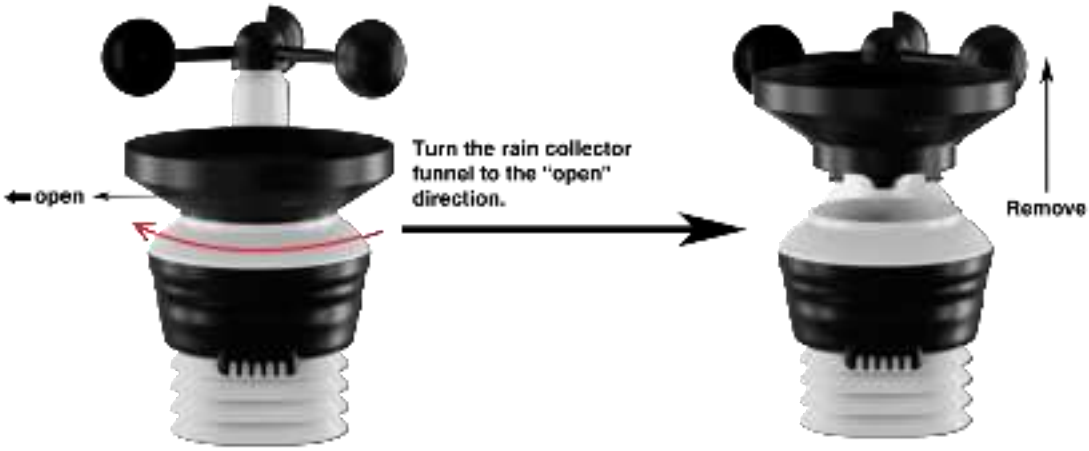


Figure 4

Remove the rain collector:（refer to Figure 5）

(a)Align the snap on the bottom edge of the rain collector with the snap notch on the transmitter so that the two fit perfectly, then press the rain collector down vertically.
(b) After placing the rain collector into the groove, rotate it counterclockwise and it will be installed successfully when you hear a click.

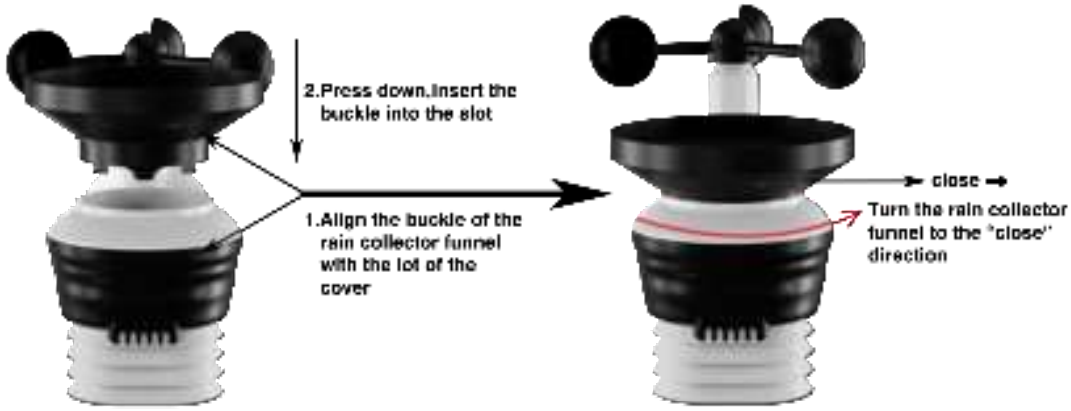


Figure 5

4.6. Installation of coil filters

(a) Place the coil vertically into the rain collector (hook facing downward) so that the coil fits snugly against the bottom of the rain collector.

(b) Gently press the coil so that it hooks into the hole at the bottom of the rain collector and locks into place. The tension of the spring will keep the filter tightly fitted to the rain collector.

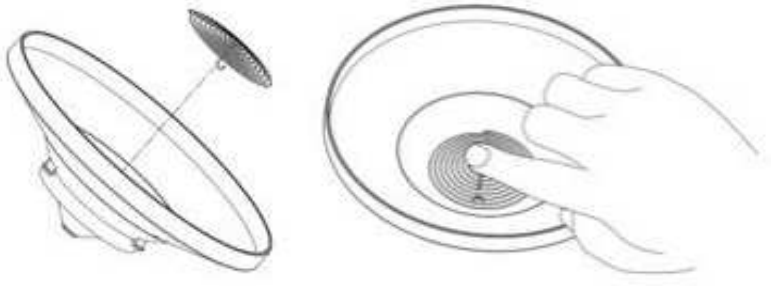


Figure 6

4.7.Install Battery

Find the battery door at the bottom of the transmitter, as shown in Figure 7.

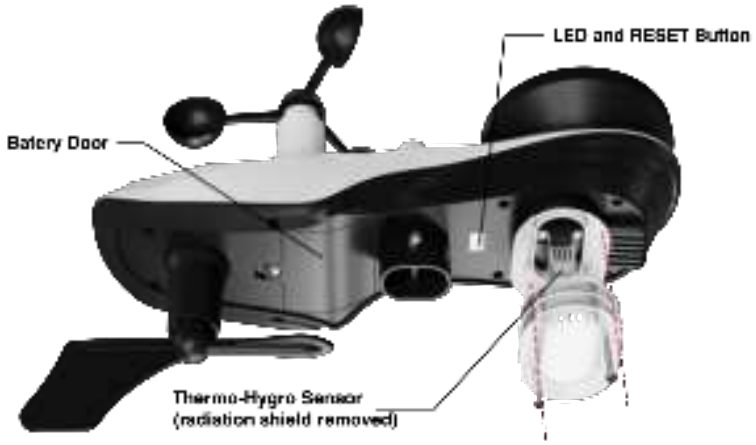


Figure 7

Note: Do not install the batteries backwards. You can permanently damage the outdoor sensors.

Remove the battery door on the back of the sensor by removing the set screw, as show in Figure 8.

Figure 8

Insert 3 new AA batteries and close the battery door as shown. Before closing the battery door and tightening the set screws, make sure the washers (around the inside perimeter of the battery door) are properly secured in their tracks.

Figure 9

Note: We recommend installing AA lithium batteries for the Outdoor Sensor in cold weather environments.

When the battery is installed, the Integrated Outdoor Sensor LED indicator will illuminate for 3 seconds and then blink every 16 seconds. The sensor is transmitting data each time it blinks.

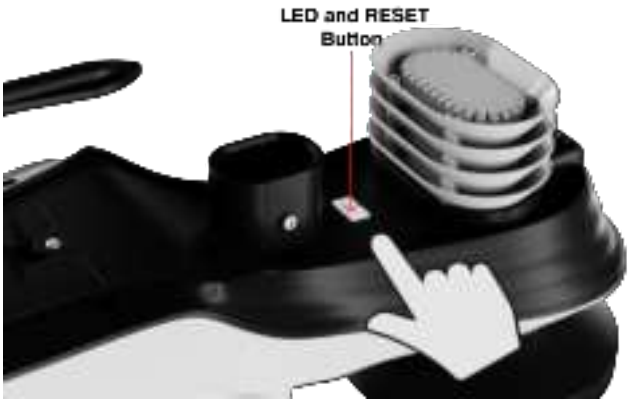


Figure 10

NOTE: If the sensor LED does not flash after inserting the batteries, press the reset button on the bottom of the sensor as shown in Figure 10.

5. Installation of the Sensor Array

5.1. Pre-installation Check

Before installing the weather station at a permanent location, we recommend running it at a temporary, easily accessible location for one week. This allows you to check all functions in advance, ensure they are operating correctly, and familiarize yourself with the weather station and calibration procedures.

5.2. Site Survey

Before installing the weather station, consider the following points during the site survey:

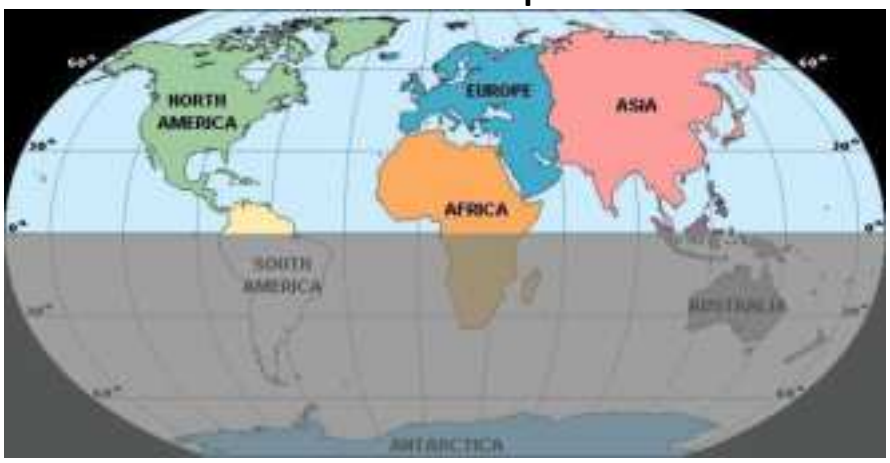
1. The rain gauge must be cleaned every 3 months and the battery should be replaced every 3 months.
2. Avoid heat radiation transfer from buildings and structures. Generally, the sensor array should be installed at least 5 feet (1.5 meters) away from any buildings, structures, ground, or roofs.
3. Avoid influencing wind speed and rainfall measurements. The installation distance of the sensor array should be at least four times the height of the highest obstacle. For example, if a building is 20 feet (6 meters) high and the installation pole is 6 feet (2 meters) high, the installation distance should be 4 x (20 - 6) = 56 feet (17 meters). If the weather station is installed close to tall buildings, wind speed and rainfall measurements will be inaccurate.
4. Radio signal range. Assuming no interference from buildings, trees, vehicles, high-voltage lines, etc., the radio communication distance between the display console and the transmitter can reach up to 330 feet (100 meters). In most cases, due to interference from buildings and walls, most wireless applications can only reach up to 100 feet (30 meters). Radio signals cannot penetrate metal buildings.
5. In the worst-case scenario, radio interference from personal computers, radios, or televisions can completely cut off radio communication. Therefore, consider this when selecting the display console or installation location.

5.3.Adjusting the Sensor Mounting Direction

This professional weather station can be used in both the Northern and Southern Hemispheres. To ensure the accuracy of the wind direction display, please secure the direction of the integrated outdoor sensor before installation.

Note: Wind direction is indicated by the letters N, E, S, and W. (N is north, E is east, S is south, W is west)

Northern Hemisphere



Southern Hemisphere

Figure 11

5.3.1.Northern Hemisphere Reference

The body of the outdoor sensor is embossed with the four cardinal directions: N, E, S, W, which are applicable only in the Northern Hemisphere.

Step 1: As shown in the diagram, there is an "S" indicator on the wind vane representing south.

Using a compass, check the direction and adjust the orientation of the entire sensor to ensure the "S" mark on the sensor aligns with the south.

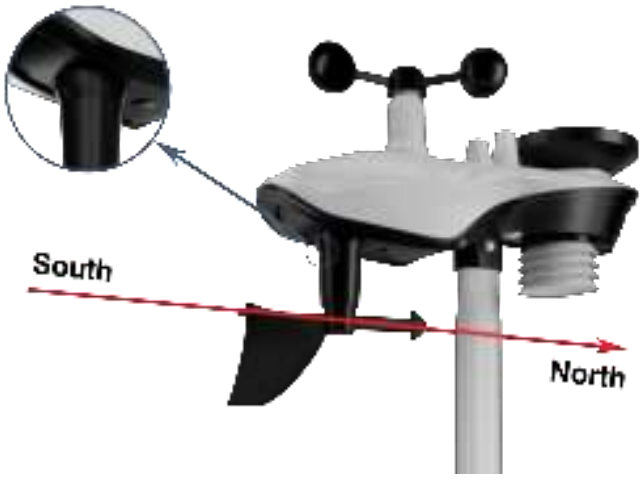


Figure 12

Step 2: On the display console, set the location region to the Northern Hemisphere (NOR will appear in the time zone).
(For detailed steps on setting the location region, see Step 18 in section 9.1).

5.3.2.Southern Hemisphere Reference

For installing the integrated outdoor sensor in the Southern Hemisphere, disregard the four directions (N, E, S, W) marked on the sensor body. When installing, adjust the orientation of the entire outdoor sensor to ensure the solar panel faces north (and is positioned to receive maximum sunlight), as shown in the diagram.

Step 1: Install the Integrated Outdoor Sensor
Ensure the solar panel is facing north.

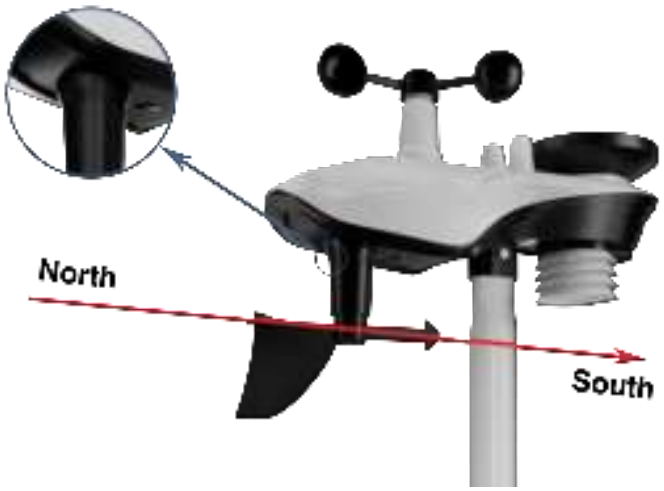


Figure 13

Step 2: Set the Location Region on the Display Console
Set the location region to the Southern Hemisphere (SOU will appear in the time zone).
(For detailed steps on setting the location region, please refer to Step 18 in section 9.1).

Note: The location region (NOR or SOU) on the display console and the direction of the sensor must be adjusted according to your actual location.
If the integrated outdoor sensor is not positioned correctly during installation, it will result in permanent wind direction errors.

5.4.Securing the Mounting Pole

Observe the bubble level next to the rain gauge to ensure the bubble is stable within the circle, keeping the sensor array completely level. If the sensor array is not level, the rain gauge will not measure accurately.

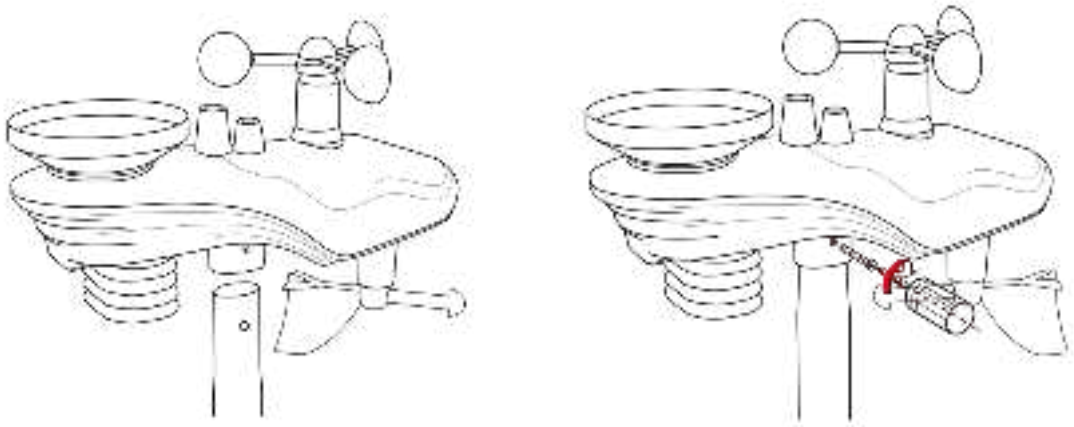


Figure 14

NOTE: If the bubble level cannot be read due to mounting limitations, a horizontal line or level can be placed across the top of the rain gauge for easier viewing.

5.4.1.Horizontal mounting and fixing sensors

Fasten the integrated outdoor sensor to the mounting bar bracket with two mounting bolts (Ø4)/nuts (M3). Then, tighten the mounting bar to your existing mounting bar with four bolts (Ø5) and nuts (M5) or secure it to a flat surface with four self-tapping screws as shown. (Figure 15)

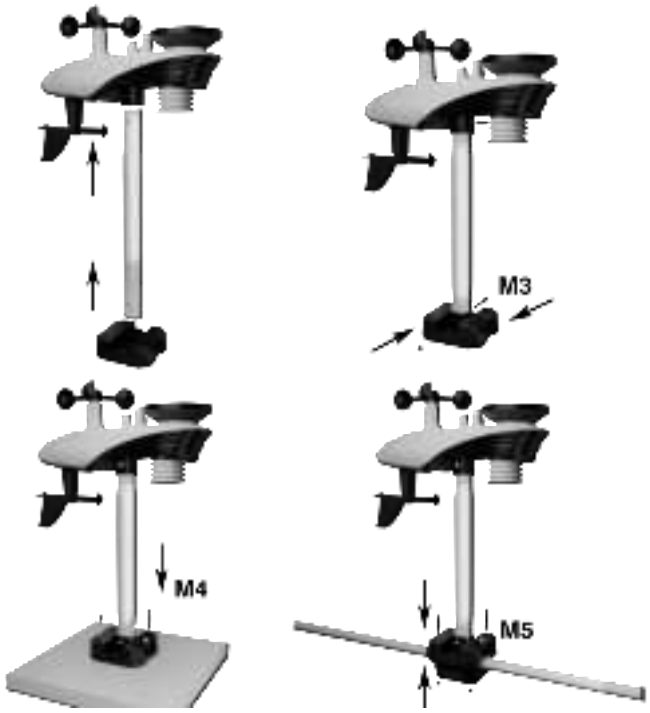


Figure 15

5.4.2.Vertical mounting and fixing sensors

Fasten the integrated outdoor sensor to the mounting bar bracket with two mounting bolts (Ø4)/nuts (M3). Then, tighten the mounting bar to your existing mounting bar with four bolts (Ø5) and nuts (M5) or secure it to a flat surface with four self-tapping screws as shown.(Figure 16)

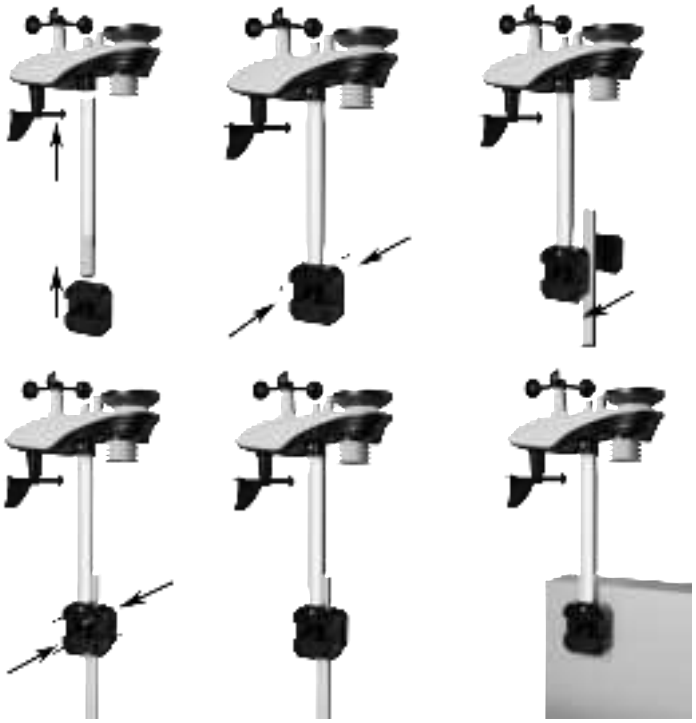


Figure 16

5.4.3.Best Practices for Wireless Communication

Wireless communication is susceptible to interference, distance, walls, and metal barriers. We recommend the following best practices for trouble-free wireless communication.

1. **Electro-Magnetic Interference (EMI)**: Keep the console several feet away from computer monitors and TVs.
2. **Radio Frequency Interference (RFI)**: If you have other 433 MHz devices and communication is intermittent, try turning off these other devices for troubleshooting purposes. You may need to relocate the transmitters or receivers to avoid intermittent communication.
3. **Line of Sight Rating**: This device is rated at 300 feet line of sight (no interference, barriers, or walls), but typically you will get 100 feet maximum. [This is under most real-world installations, which include passing through barriers or walls].
4. **Metal Barriers**: Radio frequency will not pass through metal barriers, such as aluminum siding.
If you have metal siding, align the remote and console through a window to get a clear line of sight.
The following is a table of reception loss, versus the transmission medium. Each “wall” or obstruction decreases the transmission range by the factor shown below:

Medium	Radio Frequency (RF) signal strength reduction
Glass (untreated)	5-15%
Plastic	10-15%
Wood	10-40%
Brick	10-40%
Concrete	40-80%
Metal	90-100%

6.Install the display screen

The front and back diagram of the console is shown in the figure below.

Figure 17

(1)Please plug in the display console with the power adapter.

Note： It is recommended that the power adapter be plugged in all the time to minimize display battery consumption and extend battery life. If you use battery power, it will not stay on constantly and will probably only last about 2 hours.

(2)Install the display console batteries

Remove the battery door on the back of the display (Figure 17) and install three AAA (alkaline or lithium) batteries. The display will beep and all layouts on the display will light up for a few seconds as a verification that the display is working properly.

(3) Display Stand

The folding tabletop stand on the back of the display console is at roughly 45 degrees to the display (Figure 18). We recommend viewing the console from a 20 degree to 30 degree angle from above for the best display of the screen.

Figure 18

7. Start the Display Console

As shown in the figure, once the display console is powered up, the console will display all layouts of the screen for three seconds and then it will automatically scan all nearby integrated outdoor sensors. At the same time, press the reset button on the outdoor unit again. The indoor data will be updated immediately and the outdoor sensor data will be updated within a few minutes.

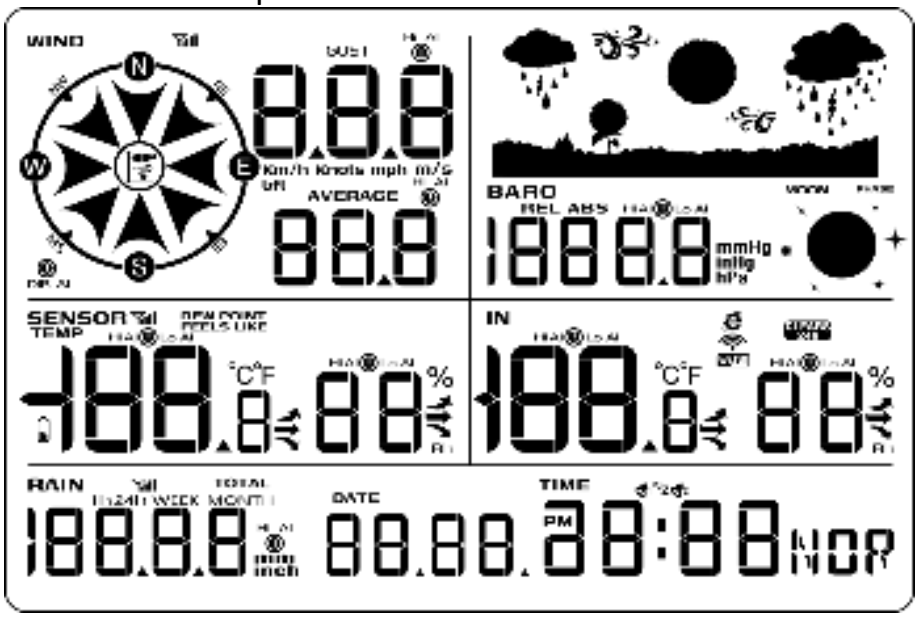


Figure 19

In Search Mode, the Remote Search icon will blink continuously and will not stop until all measurements have been received, then it will remain permanently lit. The

console will automatically switch to normal mode where all other settings can be performed.

Note: Do not touch any buttons on the display until all remote sensors have reported data on the display or the display console will terminate the connection to the remote sensors.

When the integrated outdoor sensor is connected, the measured values (outdoor temperature, humidity, wind speed, wind direction, gusts and average wind, and rainfall) will be displayed on the display console.

Note: Ensure that the distance between the weather station's sensor and the display console is between 10 feet (3 m) and 100 feet (30 m). If the weather station sensor is too close or too far away, it may not receive the proper signal.

7.1.Button Operation

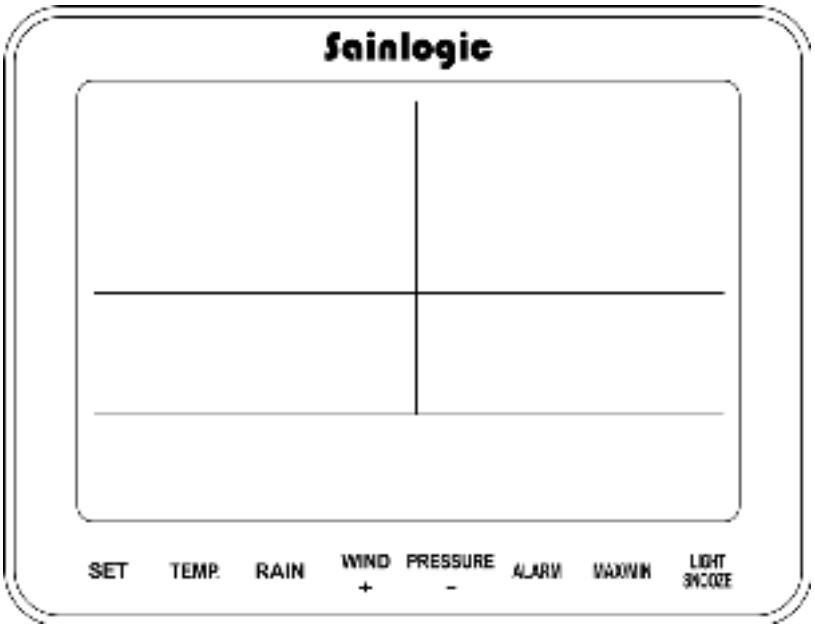


Figure 20

There are the following 8 keys on the console (from left to right), which are used to set the display functions by click, long press.

Key	Description
SET	1. Click to switch the displayed time (year, month, day, second, week) 2. Long press to enter the settings interface and click to switch to

	the next item
TEMP	1. Long press to pair the indoor and outdoor units 2. Click to switch (dew point, feels like, temp)
RAIN	1. Long press to clear rainfall 2. Click to switch rainfall display (1h, 24h, week, month, total)
WIND +	1. Long press to enter the network distribution, SET to switch to network distribution mode 2. Increase the value when setting parameters
PRESSURE -	1. Long press to view IP address 2. Click to switch to display pressure (REL/ABS) 3. Reduce the value when setting parameters
ALARM	1. Long press to set alarm information 2. Click to enter the high alarm information interface, low alarm interface 3. Set alarm parameters, long press the alarm button to clear the data
MAX/MIN	1. Click to enter the maximum/minimum value interface 2. Long press to display mac address
LIGHT SNOOZE	1. In normal mode, click to adjust the backlight brightness 2. In setting mode, click to return to normal mode 3. Long press to turn on or off the constant light mode

7.2.Display Console

The following figure shows the layout of all the data on the display.

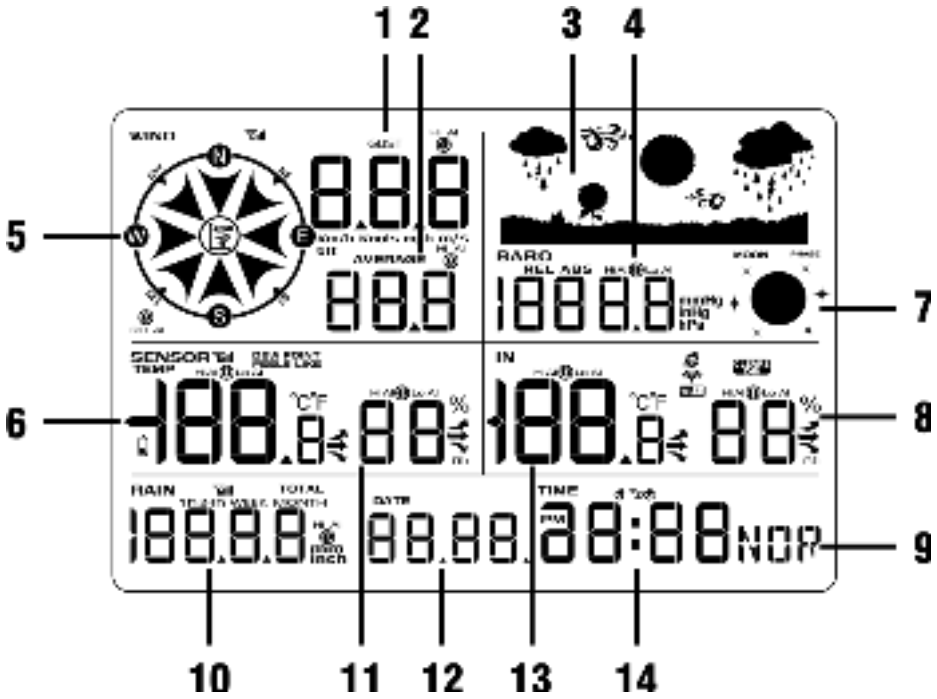


Figure 21

No	Description	No	Description
1	Wind Gust	8	Indoor Humidity
2	Average Wind Speed	9	Week/Second
3	Weather Icon	10	Rainfall
4	Barometric Pressure	11	Outdoor Humidity
5	Wind Direction	12	Date
6	Outdoor Temperature	13	Indoor Temperature
7	Moon Phrase	14	Time

7.3.Display Restore Factory Settings

To reset the console to factory default settings (including weather server and display settings), follow these steps:
1. Remove the battery and disconnect the power adapter to power off the console.
2. Connect the power adapter and power on.
3. When all layouts are displayed on the screen, press and hold the WIND + key at the same time, which will prompt two beeps until the console boot process is completed.
4. Replace the battery.

7.4.Search for Outdoor Sensor Signal

If the outdoor sensor data is not displayed on the screen, you can press and hold the TEMP button for three seconds. At the same time, press the reset button on the outdoor unit again.

At this point, the display will re-receive the signal from the outdoor sensor, and the search icon will start flashing. Once the signal is reacquired, all data will be displayed, the remote search icon will remain lit, and the screen will show the current values.

Note: Pressing the LIGHT SNOOZE button briefly can exit the signal search mode; if the search times out after 60 seconds, it will also exit the signal search mode.

8. Display connected to WiFi

8.1. Real-time Network Monitoring

The weather station can upload data to the following two platforms:

Application Services	Website	Description
Weatherseed APP	Wunderground.com	Our weather stations feature the most user-friendly design to monitor data across different platforms. Use our animated expandable modules to quickly view the details you want.
		

*Weather station use the WiFi connection to send data to the Internet.

* Please DO NOT fill in any credit card information on WU website. If a pop-up window appears when you open the Weather Underground website, please be careful and not to click it!

8.2.APP Download

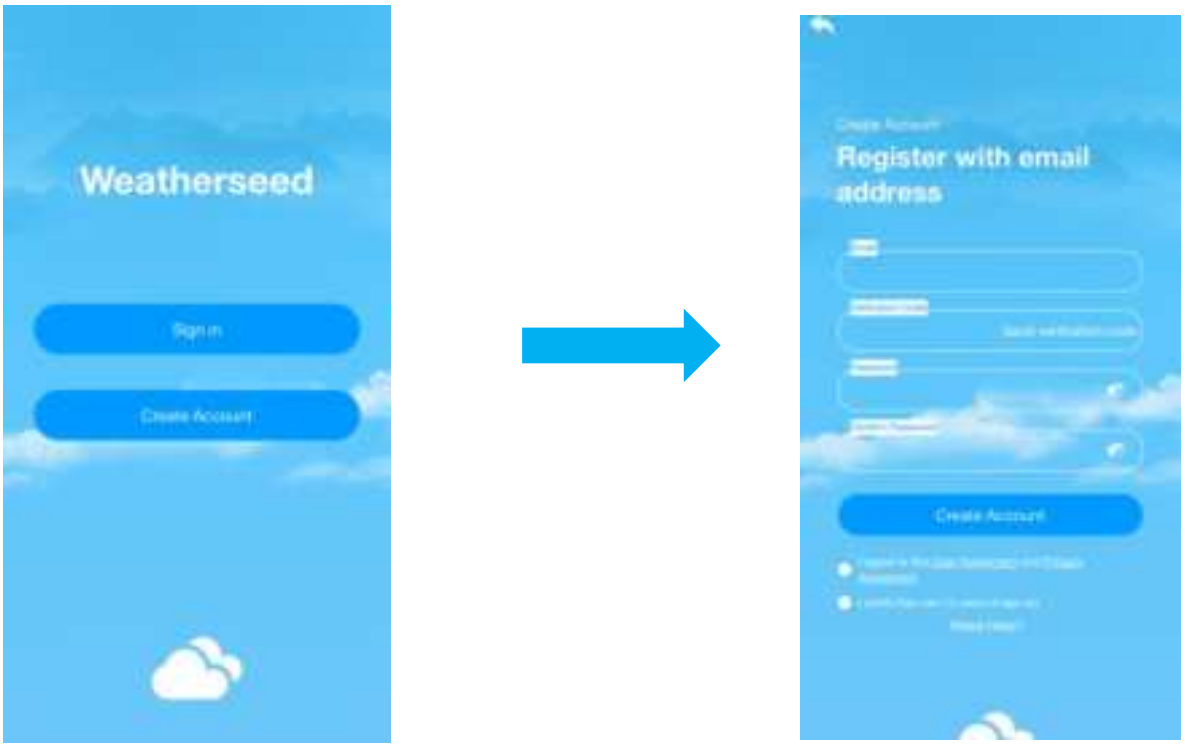
Please search "Weatherseed " APP in Google Play or IOS App Store.
After downloading, you can follow the steps of WiFi connection to connect the weather station to WiFi and then view the data on the APP!

8.3.APP Account Register and Login

After successfully downloading Weatherseed APP, please open the APP, the first time you open the APP, the login or registration screen will appear. If you don't have an account for the first time, you need to register your own account to log in later; if you have already registered a Weatherseed account, you can log in directly without registering again.

8.3.1. Registering Process

You can follow the steps and pictures below to register your Weatherseed account:
(1) Fill in your e-mail address;
(2) Send the verification code to the e-mail address;
(3) Go to the e-mail address to check the verification code and enter it;
(4) Set a password;
(5) Confirm the password (must be consistent with the set password);
(6) Check the user agreement and proof of age;
(7) Register an account.
Note: Your account will be automatically logged in the APP directly after the registration is completed.



8.3.2. Login process

You can follow the steps and picture instructions below to log in to your Weatherseed account:
(1) Enter your registered Weatherseed account (e-mail address);
(2) Enter the password you have set;
(3) Check the User Privacy Agreement;
(4) Log in to your account.

8.4. MAC Address

In normal mode, Press and hold the MAX/MIN key on the display, the MAC icon will be shown in the date area (as shown in the figure), the MAC address will flash one by one in sequence, and it will automatically return to the normal mode when all the addresses are displayed.

Note: Comparison table of numbers and letters

Numbers	0	1	2	3	4
	0	1	2	3	4
	5	6	7	8	9
	5	6	7	8	9

Letters	A	b	C	d
	A	b	C	d

	E	F		
				

8.5. IP Address

In normal mode, Press and hold the PRESSURE- key on the display, the IP icon will be shown in the date area (as shown in the figure), the IP address will flash in sequence one by one, and it will automatically return to normal mode when all the addresses are displayed.

8.6. Connecting Steps

Note: The display console only supports 2.4 GHz signals. If you have a dual-band router (2.4 GHz and 5.0 GHz), please make sure that the router's 2.4 GHz band is turned on and can be distinguished from the 5.0 GHz channel's SSID for accurate connection to the 2.4 GHz channel.

Note : The power adapter needs to be plugged into connect to WiFi.
Battery power cannot connect to WiFi.

Note： Please don't choose the wrong type and model , if you choose the wrong one, you can't match the network successfully.

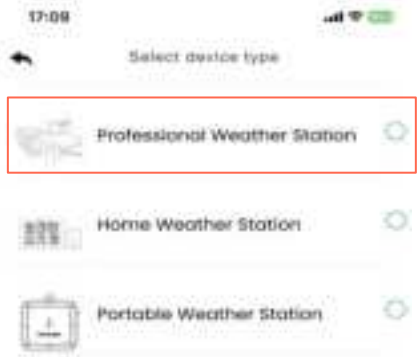
8.6.1 Bluetooth Distribution Network Mode

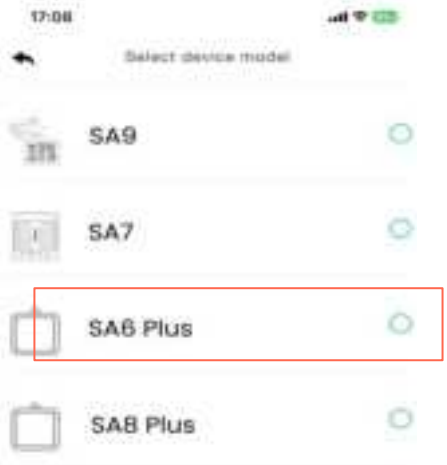
The display enters the distribution mode by pressing and holding the WIND+ key, the WiFi icon will flash and the BI icon will be shown in the date area, which indicates that the display has entered the “Bluetooth Distribution Network” Mode.

After the display has entered the “Bluetooth Distribution Network” Mode, please open the APP, select the second icon on the lower left to enter the networking interface to start networking, the specific steps and picture instructions are as follows:

(1)Enter the networking interface, click "Add Device" to start connecting the wifi ;

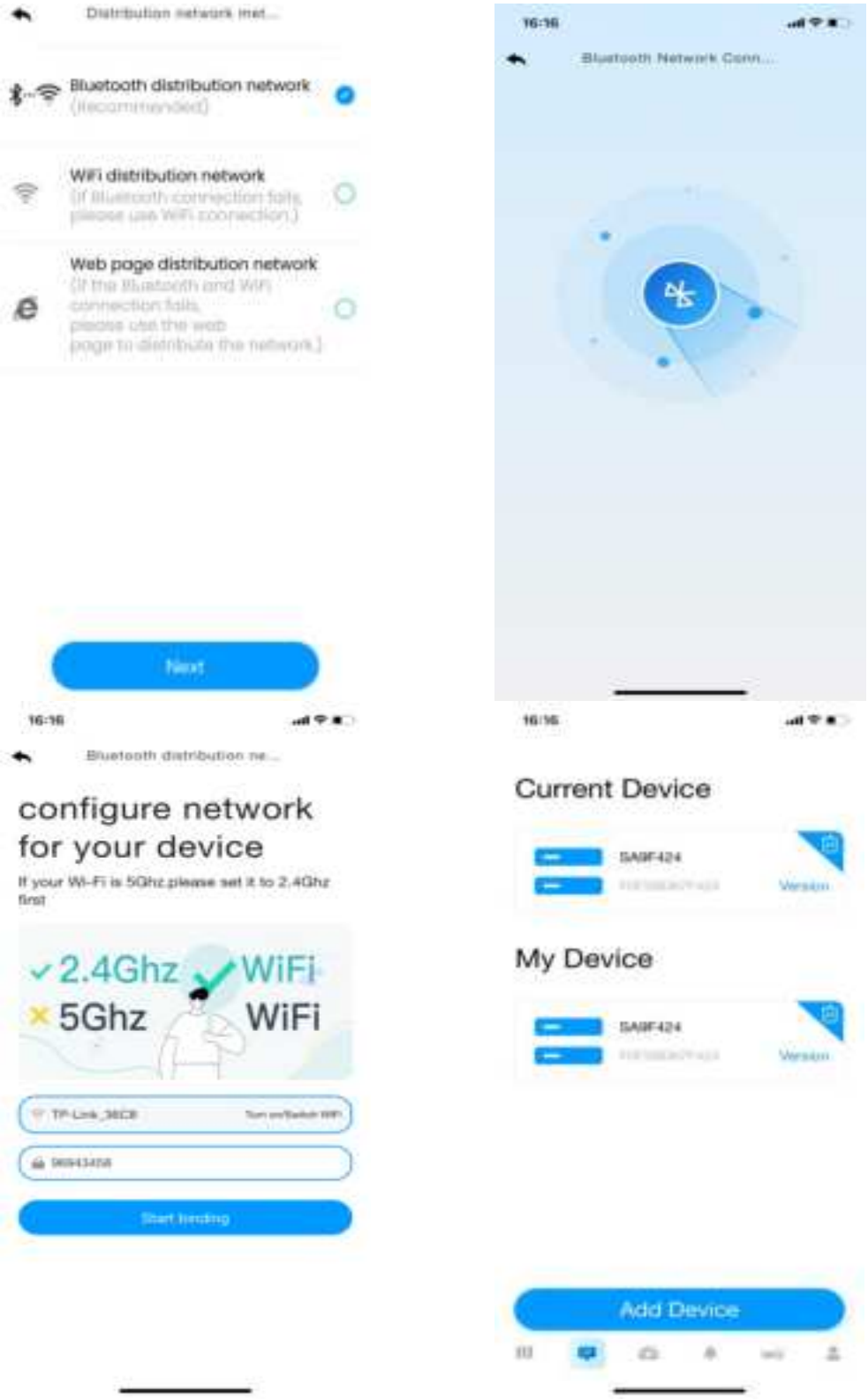
Add the device in the app, select the device type and model, and set a weather station name, enter your location.





(3)Enter the network configuration interface and click “Next” to complete the three steps of network configuration. Then need to scan the QR code (Mac address) of the device.

(4)Select “Bluetooth distribution network” mode to automatically search for Bluetooth signals and pairing.
After successful pairing, jump to WiFi interface. Please select 2.4ghz wifi and enter the password.



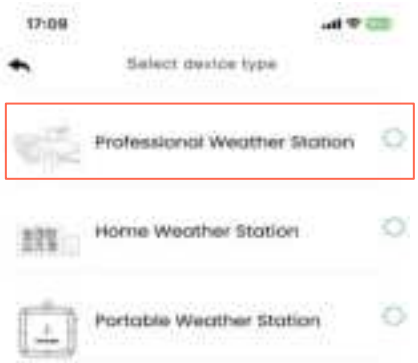
8.6.2. Wifi Distribution Network Mode

In normal mode, press and hold WIND+ key for at least 3 seconds to enter the “Bluetooth Distribution Network” Mode, the WiFi icon will be flashing and the BI

icon will be displayed in the date area, then short press the SET key once, the BI icon will be converted to the SC icon SC, which indicates that the display has entered the “Wifi distribution network” mode.

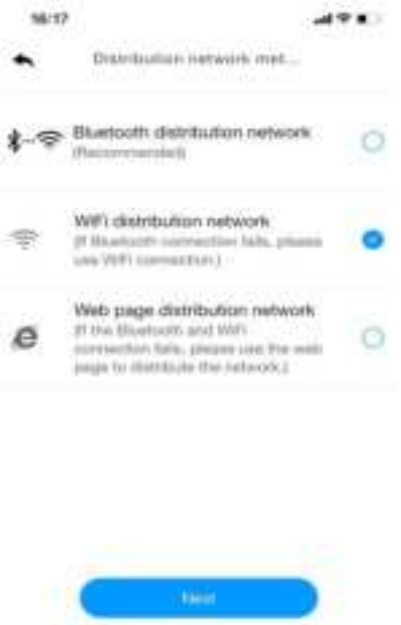
(1)Enter the networking interface, click "Add Device" to start connecting the wifi ;

(2)Add the device in the app, select the device type and model, and set a weather station name, enter your location.



(3)Enter the network configuration interface and click “Next” to complete the three steps of network configuration. Then need to scan the QR code (Mac address) of the device.

(4)Select the “WiFi distribution network” mode.
Select your own WiFi (2.4g), enter the correct password and connect the device.
After the connection is successful, you will go back to Device page.


Bluetooth distribution network
WiFi distribution network
Web page distribution network
Next


Device configure network
configure network for your device
If your Wi-Fi is 5Ghz,please set it to 2.4Ghz first
2.4Ghz WiFi
5Ghz WiFi
Start binding

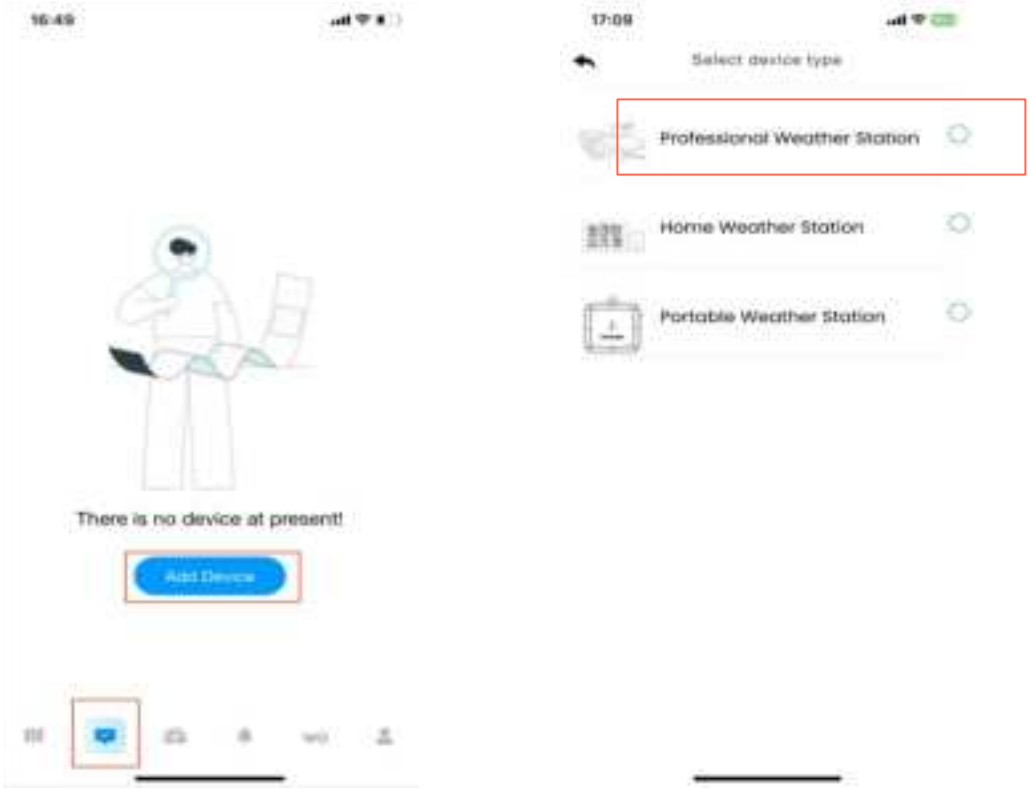

Current Device
SA9F424
Version
My Device
SA9F424
Version
Add Device

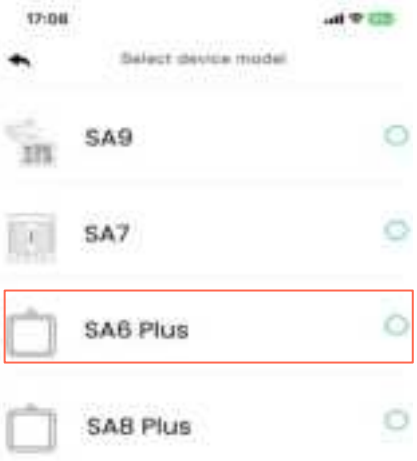
8.6.3. Web page distribution network mode

In normal mode, press and hold WIND+ key for at least 3 seconds to enter the “Bluetooth Distribution Network” mode, the WiFi icon will be flashing and the BI icon will be displayed in the date area, then short press the SET key twice, the icon will be converted to the WC icon , which indicates that the display has entered the “WiFi distribution network” mode.

After the display has entered the “Web page distribution network” mode, please follow the steps below and the picture instructions to connect:

(1) Add device in the dashboard interface. Select device type and model, and set a weather station name, enter your location. Enter the network configuration interface and click “Next” to complete the three steps of network configuration.





(2)Enter the network configuration interface and click “Next” to complete the three steps of network configuration. Scan the QR code.

(3)

(3)Select the “Web page distribution network” mode , Click Go to connect WiFi. Then will automatically jump to the WiFi list screen, click Connect “weatherseed” WiFi.

Return to the app, click the confirmation dot and click “Next”. Please select 2.4ghz WiFi, enter the password and click “Connect”.

NOTE: Android system can select WiFi. IOS system needs to manually enter the WiFi name.

8.7.Firmware Upgrade

When your app receives a firmware upgrade notification, follow the steps below to remotely upgrade the firmware.


Current Device
SA8F424
Version
My Device
SA8F424
Version

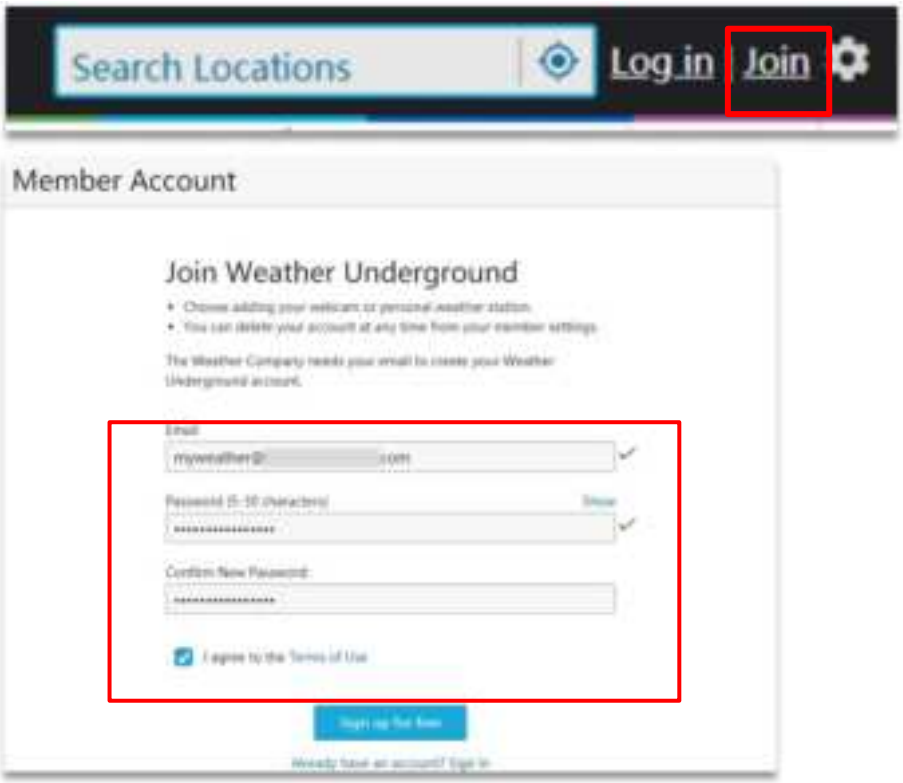

Device version
Current version number : WS-0310-2.3-240801
Detection


Add Device

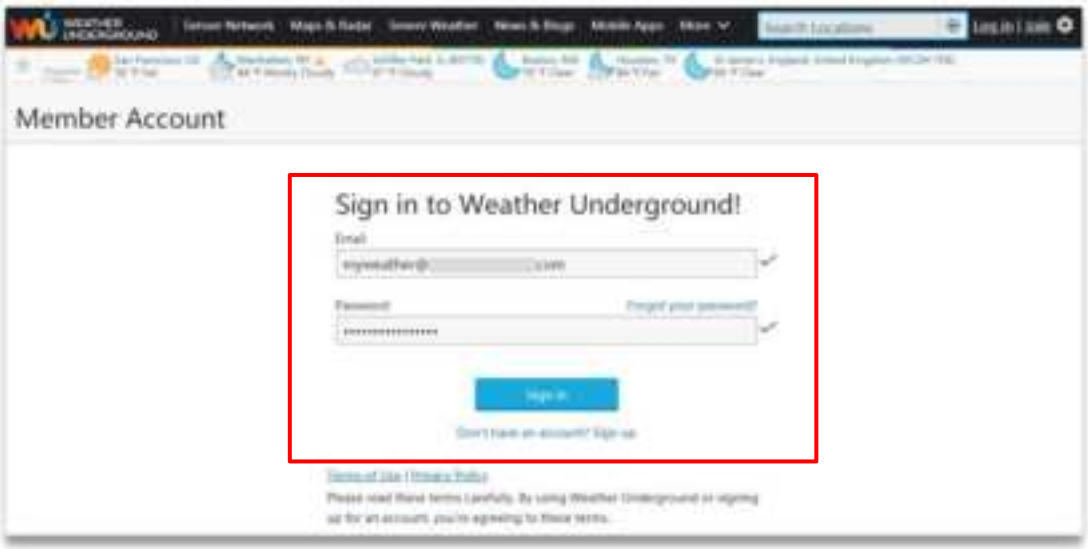

Firmware detection
Current version number : WS-0310-2.3-240801
Upgradation

8.8. Sign up on Wunderground.com

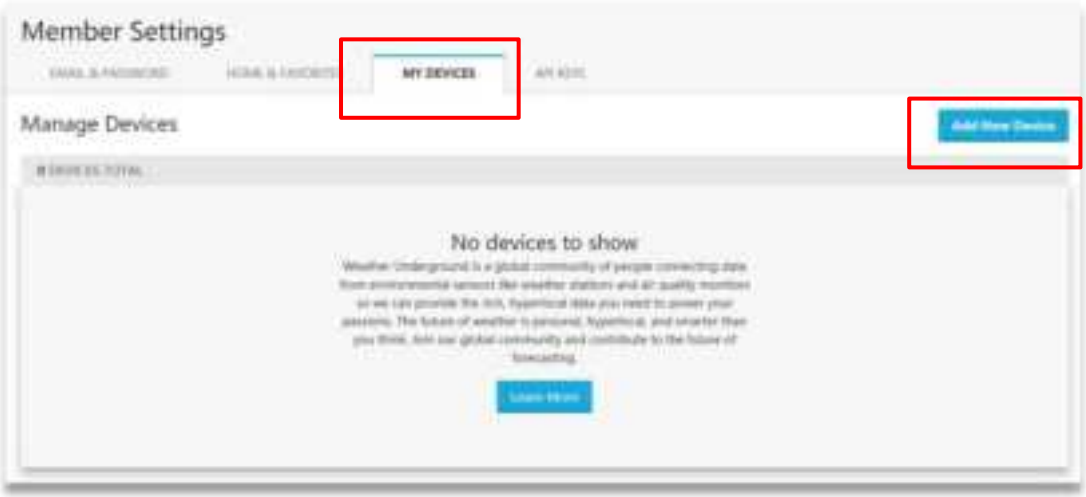
1.Visit the “https://www.wunderground.com” website, and click “Join" button,input the Email and password, and select “Sign up for free” button to create your own account.



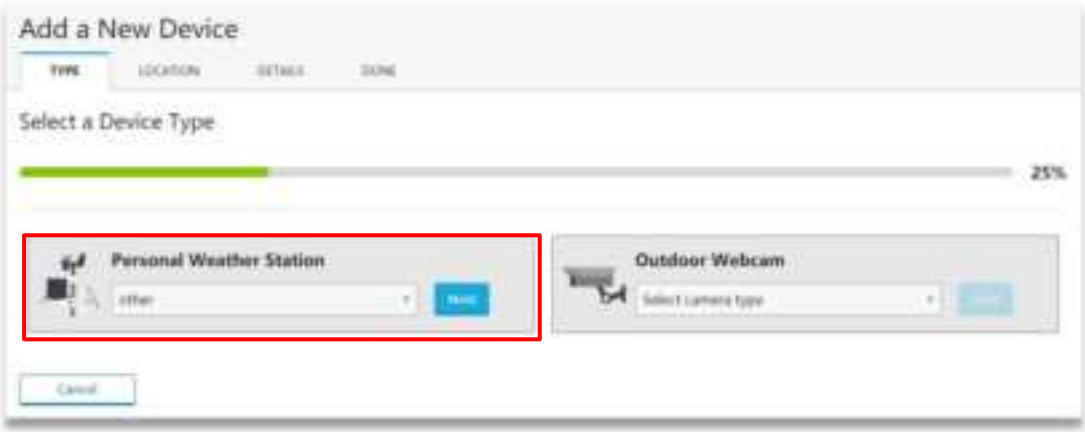
2.Click “Sign in” button to login, and switch to Member Settings page.



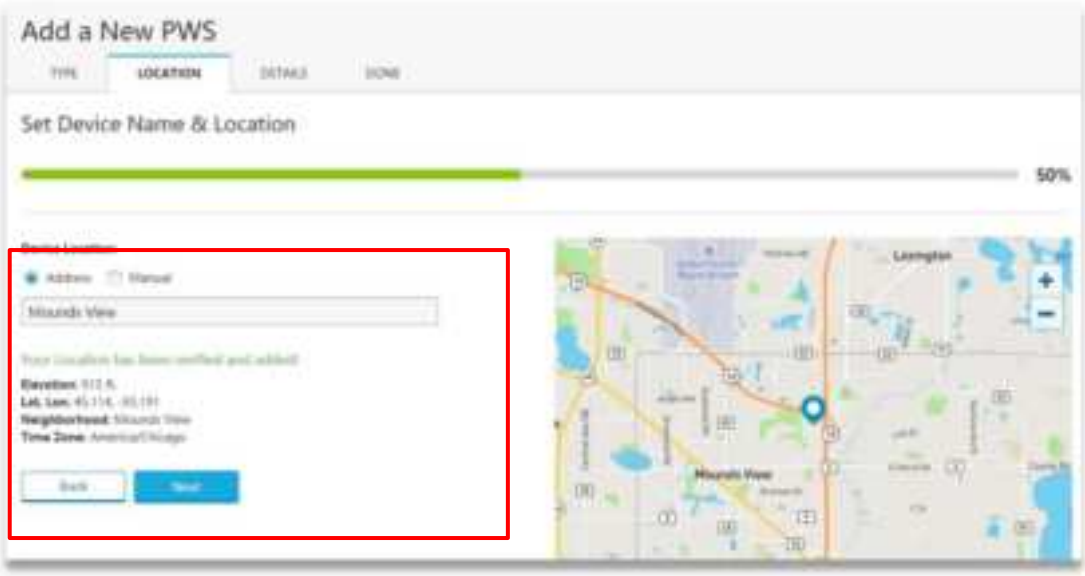
3.Select My Devices tab and click “Add New Devices”.
Note: in “Add New Devices" page, set the “TYPE”, “LOCATION",“DETAILS” and“DONE" page step by step until 100% completion.



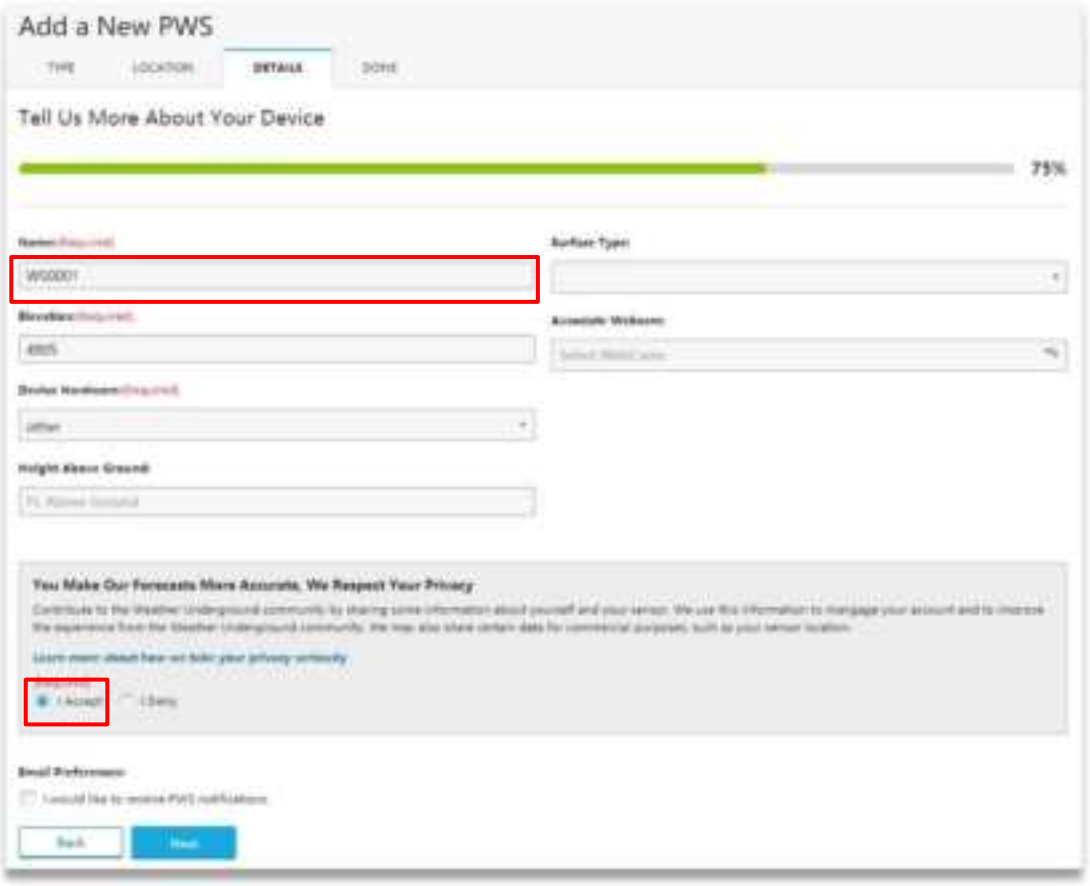
4. In TYPE Page, click“Personal Weather Station” drop down list to select “Other”.



In LOCATON Page, Select “Address” or “Manual” Option, find and input your local position and press “Next”.



In DETAILS Page ,Fill in the “Required” information and Press “Next”.



In DONE Page, the device “Station lD” and “Station Key” are shown, copy and record the information for late use.

9. Display Console Operation

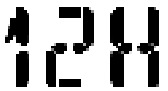
9.1. Set Mode

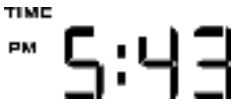
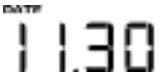
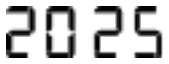
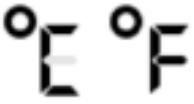
In normal mode, press and hold the SET key for at least 3 seconds to enter set mode and the first setting will flash. To skip any step to the next setting, keep pressing the SET key and the current setting parameter will flash.

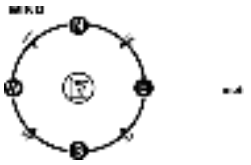
NOTE: In Set Mode, press the WIND+ key or the PRESSURE- key to change or scroll the setup value. Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease.

NOTE: To exit Set Mode at any time, press the LIGHT SNOOZE key on the display console.

The sequence and commands for the Set mode are summarized in the following charts:

NO	Com mand	Mode	Settings	Image
1	[SET]+ 3 sec	Enter Set Mode, Beep On or Off	Press [WIND +] or [PRESSURE/-] to switch OFF and ON. This will prevent the beep from sounding when pressing any button	
2	[SET]	Time SYNC	- Press the[WIND +] key or [PRESSURE/-] to toggle the synchronized time on/off. - Synchronize the device with the time and date via WiFi.	
3	[SET]	DST	Press the [WIND +] or [PRESSURE/-] to toggle DST on/off.	
4	[SET]	12/24 hour format	Press the [WIND +] or [PRESSURE/-] key to toggle between 12-hour and 24-hour.	

5	[SET]	Hour	Press the [WIND +] or [PRESSURE/-] key to adjust the hours up or down. The PM icon will be displayed during the afternoon hours.	
6	[SET]	Minute	Press the [WIND +] or [PRESSURE/-] key to adjust the minutes up or down.	
7	[SET]	Date format (default: M-D)	Press the [WIND +] or [PRESSURE/-] key to toggle between M-D and D-M.	 
8	[SET]	Month	Press the [WIND +] or [PRESSURE/-] key to adjust the calendar month.	
9	[SET]	Day	Press the [WIND +] or [PRESSURE/-] key to adjust the calendar day.	
10	[SET]	Year	Press the [WIND +] or [PRESSURE/-] key to adjust the calendar year.	
11	[SET]	Max/Min clearing (default: ON)	The maximum/minimum value can be set to daily (midnight) or manually cleared. Press the [WIND +] or [PRESSURE/-] key to toggle between ON (24-hour clearing) and OFF (manual).	 
12	[SET]	Temperature measurement unit (default value: °F)	Press the [WIND +] or [PRESSURE/-] keys to toggle between °F and °C measurement units.	
13	[SET]	Barometric pressure unit (default value: InHg)	Press the [WIND +] or [PRESSURE/-] key to toggle the pressure unit between mmhg, inHg or hPa.	

14	[SET]	Rainfall measurement unit (default value: inch)	Press the [WIND +] or [PRESSURE/-] key to toggle the rainfall unit between mm and inch.	
15	[SET]	Wind speed measurement unit (default value: mph)	Press the [WIND +] or [PRESSURE/-] key to toggle the wind speed unit between m/s, km/h, mph, knots bft or ft/s.	
16	[SET]	Pressure threshold setting (default value: 2 hPa)	Press the [WIND +] or [PRESSURE/-] key to change the pressure threshold from 2 hPa to 4 hPa. (See 11.3 for more information on this section).	
17	[SET]	Weather icon settings	Press the [WIND +] or [PRESSURE/-] key to select the initial weather icon for a sunny, less cloudy, cloudy, or rainy day (see 11.1 for more information on this section). Note: The weather icon does not change immediately, wait 4 hours for it to change.	
18	[SET]	Location area (default value: Northern Hemisphere)	Press the [WIND +] or [PRESSURE/-] key to toggle the geographic location of the Northern Hemisphere (NOR) or Southern Hemisphere (SOU). (Refer to 5.3 Sensor Mounting Orientation).	
19	[SET]	Exit Set Mode	Press the SET or LIGHT SNOOZE key to exit setup mode.	

*[SET] + 3 seconds means press and hold the SET button for three seconds.
*[SET] means press the SET button.

9.2. Time Zone

The following table summarizes time zones around the world:

Hours from GMT	Time zone	Cities
-12	IDLW: International Date Line West	---
-11	NT: Nome	Nome, AK, USA
-10	AHST: Alaska-Hawaii Standard CAT: Central Alaska HST: Hawaii Standard	Honolulu, HI, USA
-9	YST: Yukon Standard	Yukon Territory
-8	PST: Pacific Standard	Los Angeles, CA, USA
-7	MST: Mountain Standard	Denver, CO, USA
-6	CST: Central Standard	Chicago, IL, USA
-5	EST: Eastern Standard	New York, NY, USA
-4	AST: Atlantic Standard	Caracas, Venezuela
-3.5	Newfoundland Time (NT)	Newfoundland, Canada
-3	---	São Paulo, Brazil
-2	AT: Azores	Azores, Cape Verde Islands
-1	WAT: West Africa	---
0	GMT: Greenwich Mean WET: Western European	London, England
1	CET: Central European	Paris, France
2	EET: Eastern European	Athens, Greece
3	BT: Baghdad	Moscow, Russia
3.5	Iran Standard Time (IRST)	Tehran, Iran
4	---	Abu Dhabi, UAE
5	---	Tashkent, Uzbekistan
5.45	Nepal Standard Time	Nepal
5.5	Indian Standard Time (IST)	India
6	---	Astana, Kazakhstan
7	---	Bangkok, Thailand
8	CCT: China Coast	Beijing, China
9	JST: Japan Standard	Tokyo, Japan
9.5	Australian Central Standard Time (ACST)	Adelaide, Australia
10	GST: Guam Standard	Sydney, Australia

11	---	Magadan, Russia
12	IDLE: International Date Line East NZST: New Zealand Standard	Wellington, New Zealand

9.3.Viewing Max/Min mode

In normal mode, press the MAX/MIN key once briefly, the MAX icon will be shown in the date area, and the display will show the maximum values for rainfall rate, gust and average wind speed, ABS barometric pressure, outdoor temperature, humidity, and indoor temperature, humidity. As shown in Figure 22(a).

To view the MIN values, press the [MAX/MIN] button again, and the minimum values will be displayed, as shown in Figure 22 (b).

To clear the minimum values, press and hold the [MAX/MIN] button while the minimum values are displayed.

Press the LIGHT SNOOZE key to exit the Max/Min View and Reset mode and return to the normal display mode.

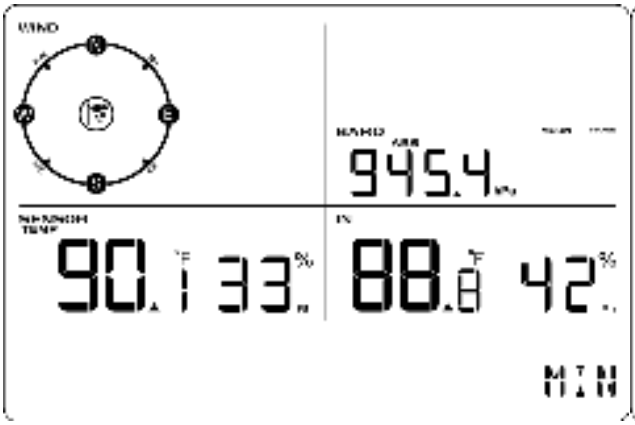


Figure 22(a)

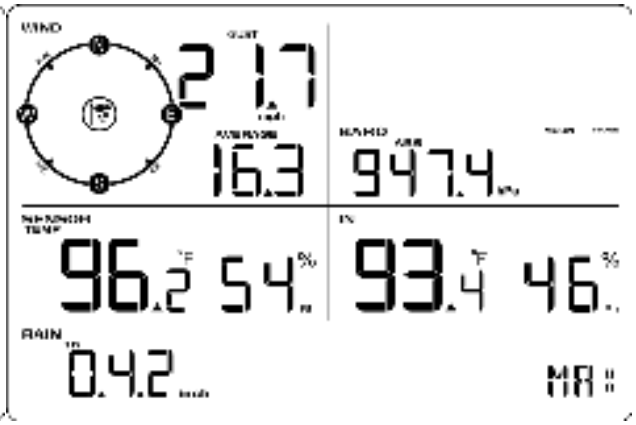


Figure 22 (b)

9.4. Alarm Mode

The weather station contains the following alarms:

No	Parameter	Default	No	Parameter	Default
1	Time (Alarm 1 and Alarm 2)	00:00	10	24-hour rainfall	50.0mm

2	Outdoor temperature	HI：30℃ Low：-10℃	11	Absolute Pressure	HI：1040.0hpa Low：960.0hpa
3	Outdoor humidity	HI：75% Low：45%	12	Relative Pressure	HI：1040.0hpa Low：960.0hpa
4	Outdoor Apparent Temperature	HI：26.7℃ Low：0.0℃	13	Indoor temperature	HI：20.0℃ Low：0.0℃
5	Outdoor Dew Point	HI：10.0℃ Low：-10.0℃	14	Indoor humidity	HI：65% Low：35%
6	Outdoor Feels Like Temperature	HI：26.7℃ Low：0.0℃	15	Indoor Dew Point	HI：10.0℃ Low：-10.0℃
7	Wind Speed	HI：10.0 m/s			
8	Average wind speed	HI：5.0 m/s			
9	Rainfall rate	1.0 mm/h			

9.4.1. Alarm Trigger

If the current value reaches the alarm condition, the alarm icon will flash (visual) and the alarm buzzer will sound (audible).
If you want to turn off the buzzer, press any key.

9.4.2. Viewing High/Low Alarm Values

To view the high alarm settings, press (do not hold) the [ALARM] button, and the high alarms will be displayed, as shown in Figure 23 (a).

To view the low alarm settings, press the [ALARM] button again, and the low alarms will be displayed, as shown in Figure 23 (b).
To return to normal mode, press the [ALARM] button again.

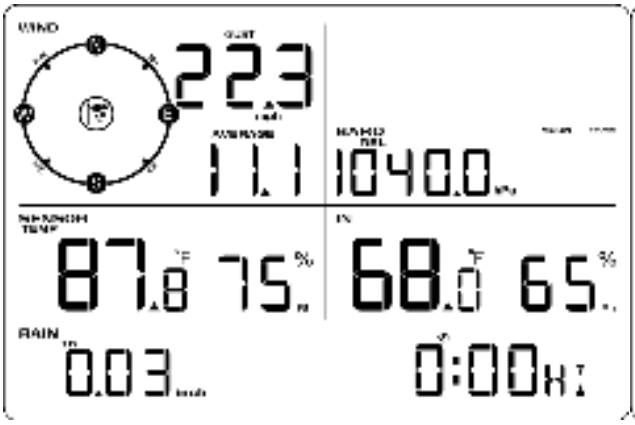


Figure 23 (a)

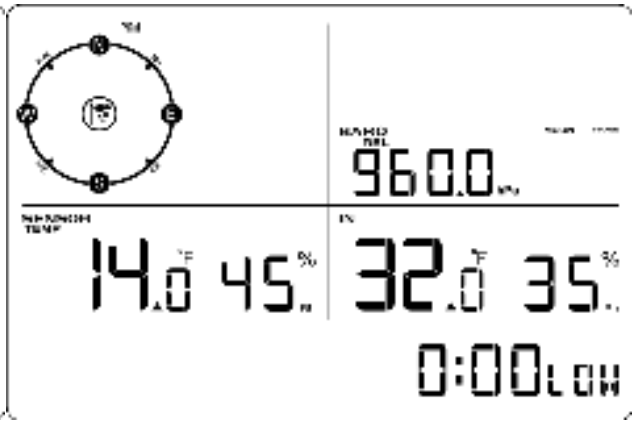


Figure 23(b)

9.4.3. Setting High/Low Alarms

Press and hold the [ALARM] button for three seconds to enter the ALARM Set Mode. To save and proceed to the next
alarm setting, press (do not hold) the SET button.

The following diagrams summarize the sequence and instructions for setting alarms.

Command	Mode	Settings
[ALARM]+3 seconds	Enter Alarm Set Mode	
[SET]	Enter alarm setting mode; Hour setting (alarm 1)	·Press the WIND+ button or the PRESSURE- button to increase or decrease the value. Long press to increase or decrease quickly. ·Press the ALARM button to turn the time alarm on or off. When the alarm is on, the alarm time icon will be displayed; when the alarm is off, the alarm time icon will disappear.
[SET]	Minute setting (alarm 1)	
[SET]	Hour setting (alarm 2)	
[SET]	Minute setting (alarm 2)	

[SET]	Outdoor temperature high alarm	·Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. ·Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is turned on, an icon HI AI will be displayed next to the parameter. If the alarm is turned off, the icon will disappear.
[SET]	Outdoor temperature low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor dew point high alarm	·Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. ·Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is turned on, an icon HI AI will be displayed next to the parameter. If the alarm is turned off, the icon will disappear.
[SET]	Outdoor dew point low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.

[SET]	Outdoor Feels Like high alarm	·Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. ·Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is turned on, an icon HI AI will be displayed next to the parameter. If the alarm is turned off, the icon will disappear.
[SET]	Outdoor Feels Like low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor humidity high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor humidity low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.

[SET]	Indoor temperature high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Indoor temperature low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Indoor humidity high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Indoor humidity low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.

[SET]	Gust high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Average wind speed high alarm	
[SET]	Absolute air pressure high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Absolute air pressure low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Relative air pressure high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AI will be displayed next to the parameter. If the alarm is off, the icon will disappear.

[SET]	Relative air pressure low alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display LOW ON/OFF. If the alarm is on, an icon LO AL will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Rainfall (RATE) high alarm	· Press the WIND+ key or the PRESSURE- key to increase or decrease the value. Long press to increase or decrease quickly. · Press the ALARM key to turn the alarm on or off. The time area will display HI ON/OFF. If the alarm is on, an icon HI AL will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Rainfall (24H) high alarm	

*[ALARM]+3 sec means press and hold the [ALARM] key for three seconds;
*[SET] means press the SET button.
*[ALARM] means press the [ALARM] button

NOTE: A tolerance of 0.9 °F (0.5°C) is set to prevent repeated temperature alarms. For example, if a high temperature alarm is set to 26.7°C (80.0°F) and the alarm is silenced, the alarm icon will continue to flash until the temperature drops below 26.7°C (80.0°F). At this point the alarm will reset and must rise above 26.7°C (80.0°F) to activate again.

NOTE: To prevent repeat humidity alarms, the humidity alarm has a 4% tolerance range.
For example, if the high alarm is set to 60% and the alarm is silenced, the alarm icon will continue to flash until the humidity drops below 56%. At this point the alarm will reset and must rise above 60% to become active again.

9.5. Calibration mode

9.5.1. Calibration Settings

Press and hold the [TEMP] and [MAX/MIN] buttons at the same time for 3 seconds to enter calibration mode. The CAL icon will be displayed.
To proceed to the next calibration setting, press (do not hold) the [SET] button.

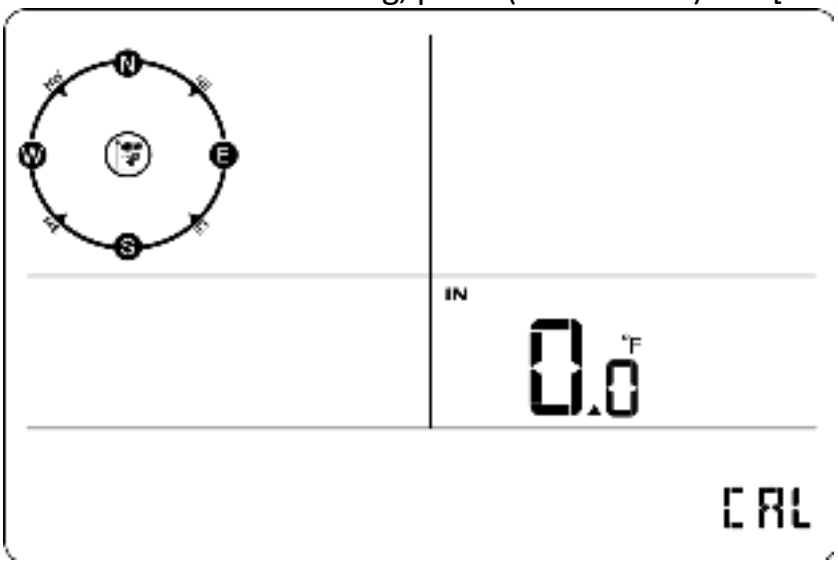


Figure 24

The following chart summarizes the temperature calibration mode sequence and commands.

Command	Mode	Settings
[TEMP] and [MAX/MIN] +3 sec	Enter the temperature calibration mode; Indoor temperature calibration	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.

[SET]	Indoor humidity calibration	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading. - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[SET]	Outdoor Temperature	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[SET]	Outdoor Humidity	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[SET]	Absolute Pressure	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the

		temperature reading. - Press the ALARM key to reset the current value.
[SET]	Relative Pressure	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[SET]	Wind Speed	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[SET]	Rain Factor	- Press the WIND+ key or PRESSURE- key to increase or decrease the temperature reading - Press and hold the WIND+ key or PRESSURE- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[LIGHT SNOOZE]	Exit temperature calibration mode	If no operation is performed, the calibration mode will time out and exit after 30 seconds.

9.5.2. Calibration ranges

The following chart summarizes the calibration ranges allowed for weather stations.

Parameter	Range
Indoor temperature	± 9 °F (± 5 °C)
Outdoor Temperature	± 9 °F (± 5 °C)
Indoor humidity	± 9 %
Outdoor humidity	± 9 %
Absolute pressure	± 0.27 inHg (± 6.8hpa)
Relative Pressure	± 0.27 inHg (± 6.8hpa)
Wind Speed	0.5-1.5
Rainfall	0.5.1.5

 Note: The calibration range (0.5-1.5) for wind speed, rainfall, and sunlight are coefficients, and the calibration formula is: Calibration value = Calibration coefficient x Measured value.

9.5.3.Calibration Discussion

 NOTE: The calibration value can only be adjusted on the display console, the outdoor remote sensor always displays an uncalibrated or measured value.

The purpose of calibration is to fine-tune or correct any sensor errors associated with the device's error range. Errors can result from electronic changes (e.g., temperature sensors are resistive thermistors or RTDs, humidity sensors are capacitive devices), mechanical changes or degradation (e.g., moving parts wear or sensor contamination). Calibration is only useful when there is a known calibration source to compare it to.

This section will discuss practices, procedures, and sources for sensor calibration to minimize manufacturing and degradation errors. Do not compare data with results obtained from sources such as the Internet, radio, television, or newspapers.

The purpose of a weather station is to measure the surrounding environmental conditions, which vary greatly from location to location.

Parameter	Type of Calibration	Default	Typical Calibration Source
Temperature	Offset	Current Value	Red Spirit or Mercury Thermometer (1)
Humidity	Offset	Current Value	Sling Psychrometer (2)
ABS Barometer	Offset	Current Value	Calibrated Laboratory-Grade Barometer
REL Barometer	Offset	Current Value	Local Airport (3)
Wind Speed	Gain	1.0	Calibrated Laboratory-Grade Wind Meter (4)
Rainfall	Gain	1.0	Sight Glass Rain Gauge with an aperture of at least 4” (5)

(1)
Temperature errors can occur when a sensor is placed too close to a heat source (such as a building/structure, the ground, or trees).
To calibrate temperature, we recommend a mercury or red spirit (fluid) thermometer. Bi-metal (dial) and digital thermometers (from other weather stations) are not a good source and have their own margin of error.
Using a local weather station in your area is also a poor source due to changes in location and timing (airport weather stations are only updated once per hour).
Place the sensor in a shaded, controlled environment next to the fluid thermometer and allow the sensor to stabilize for 48 hours. Compare this temperature to the fluid thermometer and adjust the console to match the fluid thermometer.

(2)
Humidity is a difficult parameter to measure electronically and drifts over time due to contamination. In addition, location has an adverse effect on humidity readings (installation over dirt vs. a lawn, for example).
Official stations recalibrate or replace humidity sensors on a yearly basis. Due to manufacturing tolerances, the humidity is accurate to ± 5%. To improve this accuracy, the indoor and outdoor humidity can be calibrated using an accurate source, such as a sling psychrometer.

NOTE: The measured humidity range is between 10% and 99%. Humidity cannot be measured accurately outside of this range. Therefore, it is not possible to calibrate humidity below 10% or above 99%.

(3)
The display console shows two different pressures: absolute pressure (measured value) and relative pressure (corrected for sea level).

In order to compare air pressure conditions at different locations, meteorologists correct air pressure to sea level pressure. Because barometric pressure decreases with elevation, the sea level corrected pressure (the pressure at your location if you are at sea level) is usually higher than your measured pressure.

Thus, at an elevation of 1,000 feet (305 meters), the absolute barometric pressure may be 28.62 inHg (969 mb), but the relative barometric pressure is 30.00 inHg (1016 mb).

The standard sea level pressure is 29.92 inHg (1013 mb). This is the average sea level pressure for the entire world. A relative pressure measurement greater than 29.92 inHg (1013 mb) is considered high pressure, and a relative pressure measurement less than 29.92 inHg is considered low pressure.

To determine the relative barometric pressure at your location, look for an official reporting station near you (the Internet is the best source for real-time barometric conditions, such as the Weather.com or Wunderground.com websites) and set your weather station to match the official reporting station.

NOTE: The calibration settings will be saved to the display console until a factory reset is performed. If the console location altitude is changed, the barometric pressure will need to be recalibrated.

(4)
Wind speed is the most sensitive to installation constraints. The guideline for properly installing a wind speed sensor is 4 x the distance of the tallest obstruction. For example, if your house is 20’ tall and you mount the sensor on a 5’ pole:

Distance = 4 x (20 – 5)’ = 60’.

Many installations are not perfect, and installing the weather station on a roof can be difficult. Thus, you can calibrate for this error with a wind speed multiplier.

In addition to the installation challenges, wind cup bearings (moving parts) wear over time.
Without a calibrated source, wind speed can be difficult to measure. We recommend using a calibrated wind meter and a consistent, high speed fan.

(5)
The rain collector is calibrated to the funnel diameter at the factory. The internal unit of the rain collector records 0.01 inches of rainfall (called resolution) for each pour. Accumulated rainfall can be compared to a sight glass rain gauge with an aperture of at least 4 inches.

The rain cycle view is calculated as follows:

View Period	Description	Example
1H	One hour delay from current time	If the current time is 08:25, the 1-hour rainfall refers to the rainfall from 08:25 to 09:25.
24H	Same time from current time to the day after	If the date is October 20 and the time is 08:25, the 24-hour rainfall is the amount of rainfall from 08:25 (10.20) to 08:25 (10.21).
Week	From the beginning of the week to the current time	If the current time is 08:25 on Thursday, the weekly rainfall refers to the rainfall from 00:00 on this Sunday to 08:25 on this Thursday.
Month	From the beginning of the month to the current time	If the current time is 08:25 on October 20, the monthly rainfall refers to the rainfall from 00:00 on October 1 to 08:25 on October 20.
Total	Total rainfall since the most recent start	If the start time is now October 20, 2024, then the total rainfall is October 20, 2024 to October 20, 2025.

NOTE: Debris and insects can collect in the dump unit (they can form spider nests), so carefully remove the rain collector and check for debris in the dump unit before calibrating.
NOTE: The rain gauge does not change with time.

For example, 1h rainfall, after manually changing the time does not change (5.16 pm 4 pm, the rainfall value is 0.16inch, adjust the time to 5.16 pm 6 pm, the rainfall value is still 0.16inch).

10. Moon Pharse

The following moon phases are displayed according to the calendar date.

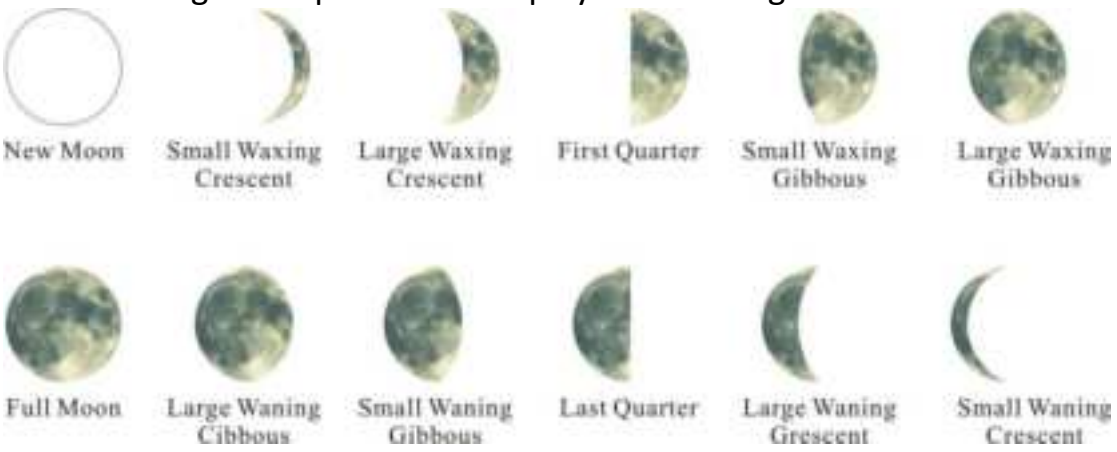


Figure 25

Note: The new moon does not show the phases of the moon.

11.Weather Forecasting

11.1.Weather Icon

Conditions	Icon	Description
Sunny		The pressure rises, and the weather in the previous period was less cloudy.
Partly Cloudy		The pressure drops, and the weather in the previous period was sunny; The pressure rises, and the weather in the previous period was cloudy.

Cloudy		The pressure drops, and the weather in the previous period was less cloudy; The pressure rises, and the weather in the previous period was rainy.
Rainy		The air pressure dropped and the weather was cloudy in the previous period.

11.2.Weather Forecast Instructions and Limitations

Note: Weather forecasts or pressure trends are based on the rate of change of air pressure. Generally speaking, as air pressure increases, the weather improves (from sunny to partly cloudy), and as air pressure decreases, the weather deteriorates (from cloudy to rainy).

The reason the current conditions don't match the forecast icon is that the forecast is an estimate or summary of how the weather will change over the next 24-48 hours, which varies from place to place. Weather trends are only a tool to predict how the weather will change, and should never be relied upon as an accurate method of predicting the weather. In most areas, these predictions are only 70% accurate, so it's best to consult the National Weather Service for a more accurate weather forecast.

11.3.Pressure Threshold

The pressure threshold (the rate of negative or positive pressure change that indicates weather changes) can be adjusted between 2 hPa and 4 hPa (default is 2 hPa).

The lower the pressure threshold is set, the more sensitive it is to changes in the weather forecast. Locations where the pressure changes frequently require a higher pressure threshold than locations where the pressure is usually stagnant.

12.Backlight Operation

12.1.Connect the power adapter

The display will remain on only when the power adapter is connected. The display backlight has 3 levels of brightness.

When the backlight is on, short press the LIGHT SNOOZE button to switch between the 3 levels of backlight.

When the backlight is off, press and hold the LIGHT SNOOZE button for 3 seconds and the backlight will turn on permanently. The BL ON icon will be displayed in the date area for 3 seconds.

To turn off the display backlight at any time, press and hold the LIGHT SNOOZE button for two seconds. The BL OFF icon will appear in the date area for 3 seconds.

12.2. SNOOZE Mode

If the alarm sounds and you wish to silence the display, press the LIGHT SNOOZE key. The alarm icon will continue to flash, the alarm will be silent for three minutes, and the backlight will turn on.

Press any key (PRESSURE-, SET, ALARM, WIND+) to permanently exit Sleep mode.

12.3.Power adapter not connected

When the display is not connected to the power adapter and is operated only by batteries, we do not recommend leaving the display backlight on for long periods of time, otherwise the batteries will be exhausted quickly.

 Note: To save power, the backlight operates differently when using batteries.

If the display console is powered only by batteries and the backlight is off, briefly press the LIGHT SNOOZE key once. The backlight will turn on for 3 seconds and will turn off after 3 seconds of inactivity.

13. Glossary of Terms

Terms	Definition

Absolute pressure	Absolute pressure is the measured atmospheric pressure and is a function of altitude and, to a lesser extent, changes in weather conditions. Absolute air pressure is not corrected for sea level conditions. See relative air pressure for details.
Relative pressure	The measured air pressure relative to your location or environmental conditions.
HectoPascals (hPa)	A unit of pressure measured in the SI (International System of Units). Same as the millibar (1 hPa = 1 mbar).
Inches of Mercury (inHg)	Pressure expressed in imperial units. (1 inHg = 33.86 mbar).
Dew point	Dew point refers to the temperature at which water vapor condenses into water after cooling in air of a certain humidity under constant air pressure. The condensed water is called dew, and the dew point is a saturation temperature. Dew point is related to relative humidity. A high relative humidity means the dew point is closer to the current air temperature. A relative humidity of 100% means the dew point is equal to the current temperature and the water in the air reaches maximum saturation. When the dew point remains constant and the temperature rises, the relative humidity decreases
Rain gauge	A rain gauge is a device that measures liquid precipitation (rain) over a period of time, rather than solid precipitation (snow, hail, or ice). All digital rain gauges are self-emptying or self-dumping (also called dumping rain gauges). The accuracy of a rain gauge depends on the amount of rain that falls during each emptying cycle.
Accuracy	Precision is defined as the ability of a measurement to match the actual value of the quantity being measured.
Calibration	Calibration is the comparison between measurements made by a device (standard) of known magnitude or correctness with another device (instrument) in a manner as similar as possible.

Range	Range is defined as the number and interval of measurable values.
Resolution	Resolution is defined as the number of significant digits (decimal digits) that can be reliably measured.
Wind vane	Wind direction refers to the direction the wind is blowing from. For example, if the display shows the wind direction as south, it means the wind is blowing from the south.

14.Specifications

14.1. Wireless specifications

Wireless transmission	Specifications
Line of sight wireless sensor array RF transmission (open air)	330 ft, 100 ft in most cases
Line of sight Wi-Fi RF transmission (open air)	80 ft
Outdoor sensor update frequency	16 sec
Sensor array RF frequency	433 MHz
Wi-Fi console RF frequency	2.4 GHz

14.2. Measurement Specifications

The table below provides the specifications of the measured parameters.

Measurement	Range	Accuracy	Resolution
Indoor Temperature	0 to 60 °C (32 to 140°F)	± 1 °C (± 2°F)	0.1 °C(°F)
Outdoor Temperature	-40 to 60 °C (-40 to 140°F)	± 1 °C (± 2°F)	0.1 °C(°F)
Indoor humidity	10 to 99 %	± 5% (only guaranteed between 20 to 90%)	1%
Outdoor Humidity	10 to 99 %	± 5% (only guaranteed between 20 to 90%)	1%
Rainfall	0 to 9999mm	<15mm: ±1 mm, 15mm to 9999mm: ±7%	<1000mm (0.3mm) >1000mm

			(1mm)
Wind direction	0 - 360º	± 10º (16 point compass)	± 1º (16 point compass)
Wind Speed	0 to 50 m/s	2 m/s ~10 m/s:±0.3m/s , 10m/s ~50 m/s: ±10% (whichever is greater)	0.1 m/s
Barometric Pressure	300 to 1100 hpa	± 3 hpa	0.1 hpa

14.3. Power Consumption

Display Console	3 x AAA 1.5V alkaline or lithium batteries (not included)
Integrated Outdoor Sensor:	3xAA alkaline or lithium batteries (not included) provide backup power when solar power is limited. Note: The solar panel does not charge the battery, it is an auxiliary power source.
Power Adapter	5V ~ 1000mA (included)
Battery Life	If the base station signal reception is good, the transmitter battery can last at least 3 months. If the base station reception signal is intermittent, the transmitter battery life may be reduced. We recommend using lithium batteries for the transmitter in cold climates below -20°C (-4°F).

15. Maintenance

(1)We recommend cleaning the rain gauge once every 3 months. Twist the funnel clockwise and lift it vertically to expose the rain gauge assembly (see the image below). Then wipe the internal rain gauge assembly with a damp cloth to remove any

dirt, debris, or insects. If insect infestation is a concern, you can lightly spray the array with an insecticide.

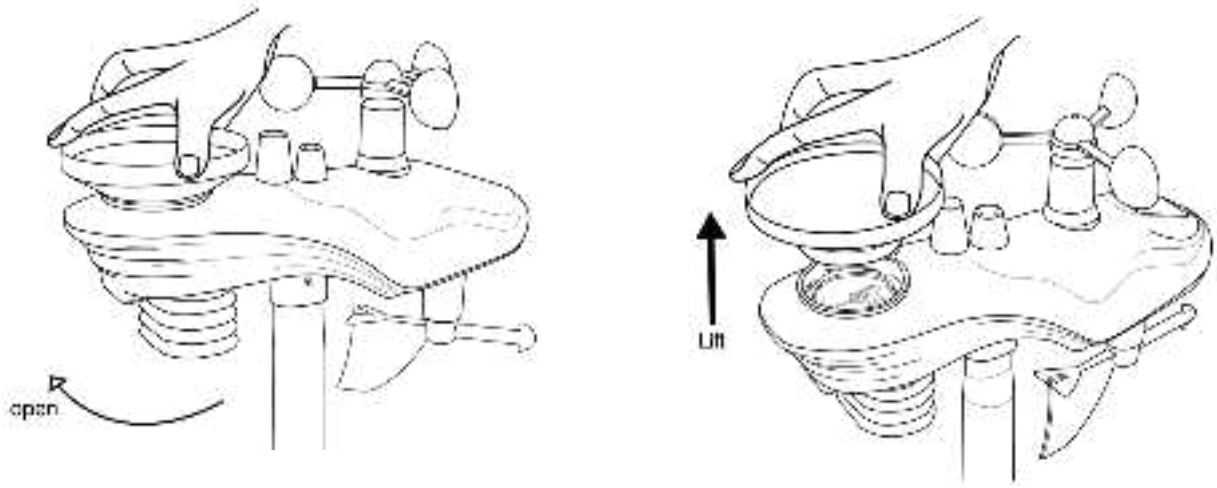


Figure 26

(2) Clean the solar panel with a damp cloth every 3 months. Replace the battery every 3 months. If left for too long, the battery may leak due to environmental factors. In harsh environments, check the battery every 3 months (when cleaning the solar panel).

(3) When replacing the battery, apply anti-corrosion compound to the battery terminals, which is available on Amazon and most hardware stores.

(4) In snowy conditions, spray the top of the weather station with anti-icing silicone spray to prevent snow accumulation.

(5) Over time, the smoothness of the rain gauge funnel surface will degrade due to dirt, debris. Therefore, we recommend spraying Teflon spray on the rain gauge funnel and coil filter to reduce the surface tension of the water.

16. Troubleshooting Guide

If your question is not answered here, you can contact us by Customer Support Email, Customer Support Phone and Website:
Customer Support Email：info@sainlogic.com
Website：https://www.sainlogic.com/
Customer Support Phone：+1 (888) 513-9823 (Mon-Fri:10 a.m. - 6 p.m. EST)

Problem	Solution

The wireless remote control is not reporting to the console. The display console has dotted lines; dashes (--.-).	If any sensor communication is lost, dashes (--.-) will appear on the screen. To reacquire the signal, press and hold the TEMP button for 3 seconds, select the lost sensor, and the remote search icon will display continuously. Press the reset button on the outdoor unit again to pair. When the signal is reacquired, the remote search icon will turn off and the current value will be displayed. When the signal is reacquired, the remote search icon will turn off and the current value will be displayed. You can also reset the transmitter. After the transmitter is powered on, if the indicator light blinks every 16 seconds it means the outdoor unit is working properly. After the transmitter is powered on and working pr operly, the display has to be re-plugged in to re-receive the transmitter signal. It usually takes 1-3 minutes to receive the data, do not operate the k eys or power off until the transmitter data is receiv ed. If this still does not help, please follow the steps below to reconnect the transmitter and display to troubleshoot poor connections. 1. Please remove the batteries of the transmitter and the display. 2. Please unplug the display from the power supply. 3. Please put batteries in the transmitter. 4. Please plug in the power of the display. 5. Please put the batteries in the display after the display lights up and the data show dashes. Also, you can replace the batteries in the

	transmitter with new ones. In most cases, the maximum line-of-sight communication distance is 100 meters (330 feet) and 30 meters (100 feet), move the sensor assembly closer to the display console. If the sensor assembly is too close (less than 1.5 meters/5 feet), move the sensor assembly away from the display console. Install a new set of batteries for the remote sensor. In cold weather environments, install lithium batteries. Make sure the remote sensor is not transmitting through solid metal (as an RF shield) or earth barriers (under a mountain). Keep the display console away from devices that generate electrical noise, such as computers, televisions, and other wireless transmitters or receivers.
Display console has weak contrast	Replace the console batteries with a new set of batteries.
Indoor temperature and humidity data is incorrect/the display shows incomplete data	You can reset the display console to factory defaults by pressing and holding the PRESSURE- key for at least three seconds while plugging in the power supply. Then unplug the display and plug it back in. (Remove the batteries before doing this). If any data is not displayed, press and hold the WIND+ key for three seconds until a click is heard and all data is displayed as dashed lines. The display will reacquire the signal from the transmitter. Once the signal is reacquired, all data will be displayed.
Display brightness is very dim	Adjust the backlight (refer to Section 12). If the brightness cannot be adjusted, it means that the power adapter or the display interface has a

	poor contact problem.
Weather forecast is inaccurate	The weather icon is a weather forecast, an estimate or summary of weather changes in the next 24 to 48 hours, which varies from place to place. This trend is only a tool to predict how the weather will change, and it should never be used as an accurate method to predict the weather. If you are just starting to use the weather station, wait for about a week for the pressure sensor to slowly adapt to the environment, and then adjust the data and weather forecast. After using it for a while, if the weather forecast is still inaccurate, you can follow the steps in the manual to manually set the weather icon to show the actual weather.
Rainfall display is incorrect/zero	Please check and verify the following points when you find you rainfall is not working or inaccurate: 1.Make sure that the level bubble is seated in the small black circle in the installation. Sloping installation might cause incorrect reading or even not working. 2. Shake the sensor array back and forth. After hearing the click sound inside the sensor array, observe whether the rainfall reading in the console changes. 3. Check whether the funnel in the rain collector was blocked by tree leaves or debris. Remove the rain collector to check whether the rain tip was blocked by insects or debris. 4. Check whether different rainfall histories are correct. Check the Quick Mode part in the instruction manual to know how to get rainfall histories in different periods. 5. An example on how rainfall histories for different

	periods are calculated. Presume that the current time is 08:42 22rd Sept. 2023 Rainfall Hour: 08:42-09:42 Rainfall Day: 08:42 on September22 to 08:42 on September 23 Rainfall Week: 00:00 Sunday to 08:42 today Rainfall Month: 00:00 1st Sept. to 08:42 today Rainfall Total: Total rainfall amount from the latest powering on 6. How to verify the rainfall accuracy A： Use a bottle containing 500g or 500ml of water. B： Drip water slowly into the rain collector. DO NOT POUR WATER QUICKLY. C. Observe the rainfall reading of the console after the water is completely dripped out. It should be 5.46cm +/-5%. （5.46cm=54.6mm） 7. The rain gauge could not measure rainfall below 0.3mm due to limited resolution.

Note: One transmitter can connect to multiple displays of the same model, but one display cannot be connected to multiple transmitters at the same time.

Note: Please carefully check whether the model is consistent before purchasing. If you have any questions, please consult after-sales service in advance.

17.Disclaimer

Please protect the environment by returning used batteries to an authorized recycling station. Electrical and electronic waste contains hazardous substances. Disposal of e-waste in the natural environment and/or in unauthorized locations can damage the environment.

Reading the user manual is strongly recommended and the manufacturer and supplier cannot be held responsible for any incorrect readings or consequences resulting from failure to read the manual carefully.

This product is intended for home use only and is not intended for medical purposes or public safety information. This product is not a toy and should be kept out of the reach of children.

We assume no liability for accidental, consequential, punitive or other similar damages related to operation or malfunction.

18. Warranty Information

Sainlogic provides a 1-year limited warranty against manufacturing defects in materials and workmanship on this product.

This limited warranty begins on the date of original purchase and is valid only for the product purchased and only for the original purchaser of this product. To obtain warranty service, the purchaser must contact Sainlogic to determine the problem and service procedure.

Warranty service can only be performed by Sainlogic. The original dated bill of sale must be presented to Sainlogic upon request as proof of purchase.

Sainlogic's warranty covers all defects in materials and workmanship except:
(1) Damage caused by accident, unreasonable use or neglect (lack of reasonable and necessary maintenance);
(2) Damage caused by failure to follow the instructions in the user's manual;
(3) Damage caused by self-repair or alteration;
(4) Equipment not intended for personal use;
(5) Applications and uses of this product that do not correspond to the intended use;
(6) The product is unable to receive signals due to any source of interference or metal obstruction;

If you need to register or apply for a warranty, please contact us by Customer Support.
Customer Support Email：info@sainlogic.com
Website：https://www.sainlogic.com/
Customer Support Phone：+1 (888) 513-9823 (Mon-Fri:10 a.m. - 6 p.m. EST)

19. FCC Statement

1. 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.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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 equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.