Sainlogic
Quick Setup Guide

Product Includes:

-Integrated outdoor transmitter
- Display Console
- Rain collector
- Wind Cups
- Windsock
- 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：

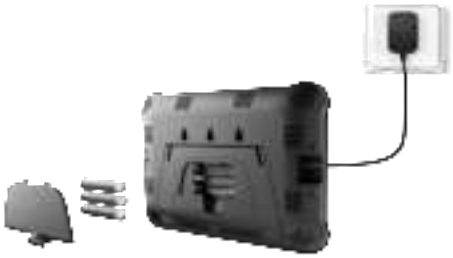
Locate the battery door on the bottom of the transmitter, remove the retaining screws on the back of the sensor, remove the battery door, insert 3 new AA batteries and close the battery door.

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:

1. Plug in the display console with the power adapter.
2. Remove the battery door on the back of the display and install three AAA (alkaline or lithium)batteries.



If outdoor data is still not displayed, press and hold the CHANNEL/+ key for three seconds until a dash is displayed.

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.

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.

Step 6：

Please check the MAC and IP address on the display.

（1） 

In normal mode, double-click the CHANNEL/+ key on the display, the MAC icon will be shown in the date area and the MAC address will blink.

（2） 

In normal mode, double-click the MAX/MIN/- key on the display, the IP icon will show in the date area and the IP address will blink.

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 7: WiFi Connection Steps

1. Bluetooth Distribution Network Mode(Recommend)

Press and hold the MAX/MIN/- 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 mode, please open the APP to start networking:

(1) Set the name and location by yourself;

(2) Browse the steps for connecting to WiFi, scan the QR code and then select the distribution method.

(3) Select Bluetooth 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.

2. WiFi Distribution Network Mode

Press and hold the MAX/MIN/- 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 mode, please open the APP to start networking:

(1) Set the name and location by yourself;

(2)Browse the steps for connecting to WiFi, scan the QR code and then select the distribution method.

(3) Select the router WiFi name (2.4g), then enter the password and click next.

3. Web page distribution network mode

Press and hold the MAX/MIN/- 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 allocation mode, please follow steps to connect the WiFi:

(1) Click Go to connect to WiFi.

(2) Automatically jump to the WiFi list screen, click Connect weatherseed WiFi.

(3) Return to the app, click the confirmation dot and click Next.

(4) Please select 2.4ghz WiFi, enter the password and click Connect.

Note：Detailed connection steps can be viewed in Section 8.6.

SA9 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 email.
Email：info@sainlogic.com

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

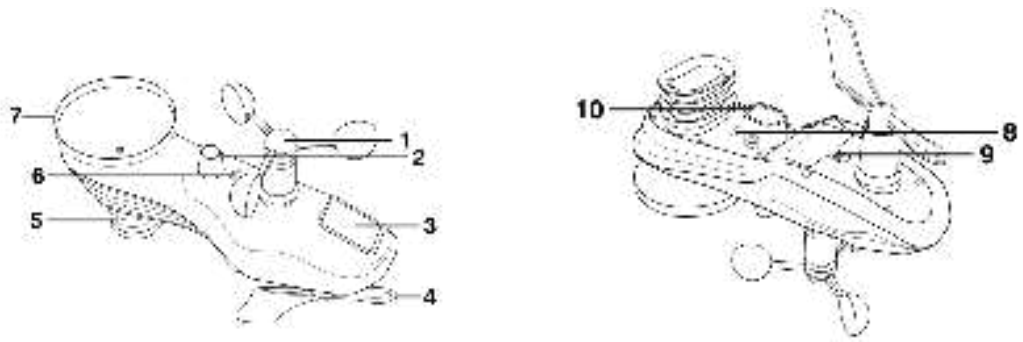


Figure 1

NO	Description	NO	Description
1	Wind Cup	7	Rain Collector
2	UV/Light Sensor	8	Reset Button/LED Indicator
3	Solar Panel	9	Battery Door
4	Wind Vane	10	Mounting Pole Socket
5	Thermometer-Hygrometer Sensor		
6	Bubble Level		

4.1.Parts List

The weather station consists of the following parts.

QTY	Item	image
1	**Display Console** **Frame Dimensions:** 8.5x6.2x1inch (216x157*25mm) **LCD Dimensions:** 6.55x4.85inch (166x123mm)	
1	**Integrated Outdoor Transmitter Dimensions:** 12.9x4x9.8inch (327*101*249mm)	

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)

(a) 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.
(b) Use a precision screwdriver to loosen the set screw in the round hole until the wind vane can be easily removed.

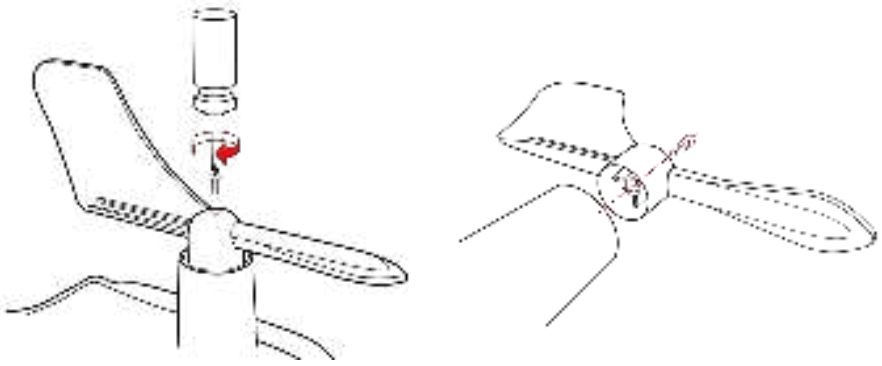


Figure 2

Install the Wind Vane:

(c) 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.
(d) 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.

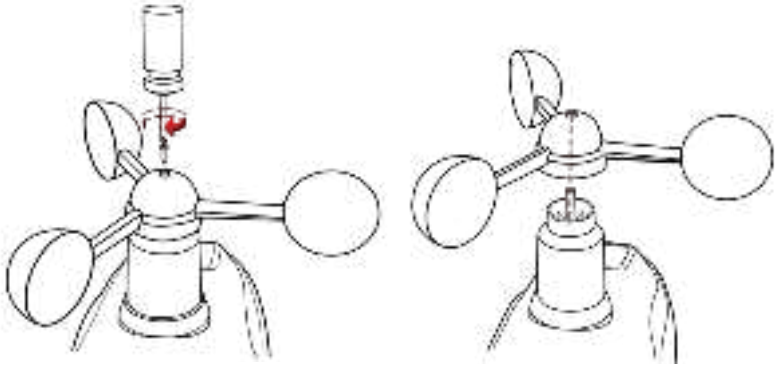


Figure 3

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) With your hand flat on top of the rain collector, grasp the entire rain collector and rotate it counterclockwise.
(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 clockwise and it will be installed successfully when you hear a click.

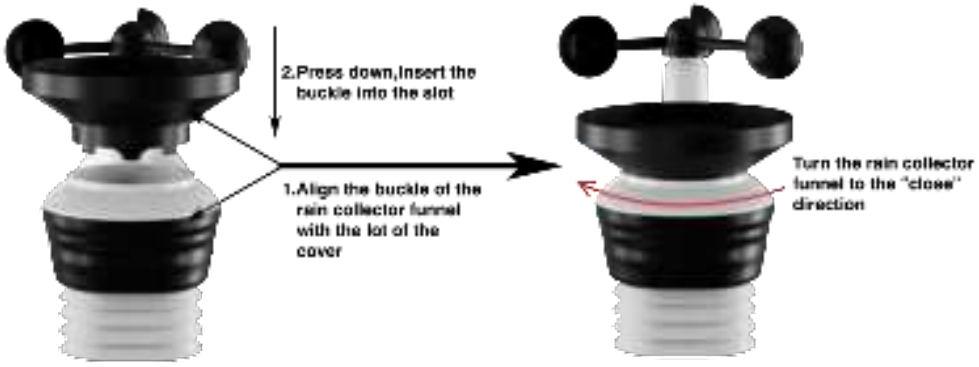


Figure 5

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.

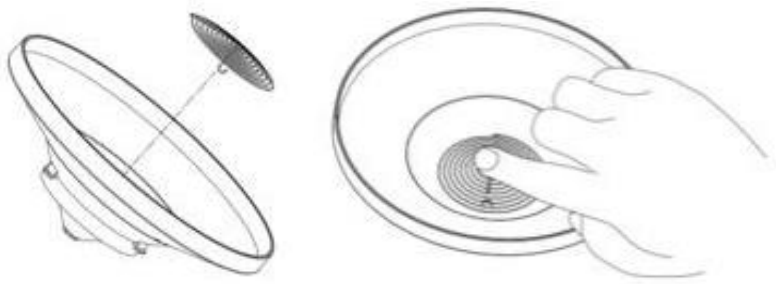


Figure 6

4.7.Install Battery

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

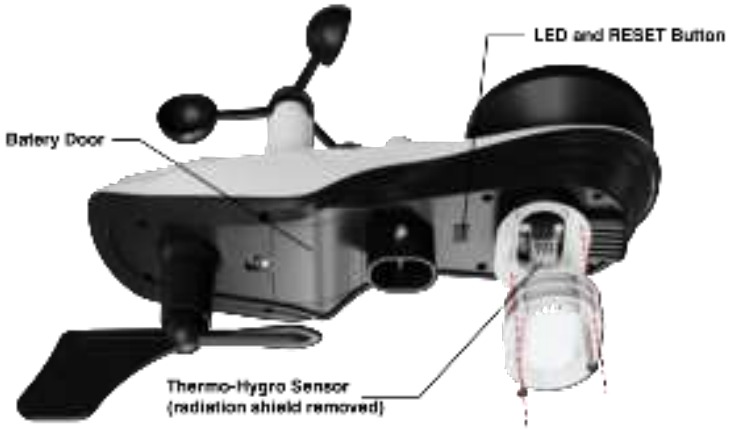


Figure 7

Note: **Do not install the batteries backwards.** You can permanently damage the outdoor sensors. The solar panel does not charge the batteries, so rechargeable batteries are not recommended.

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.

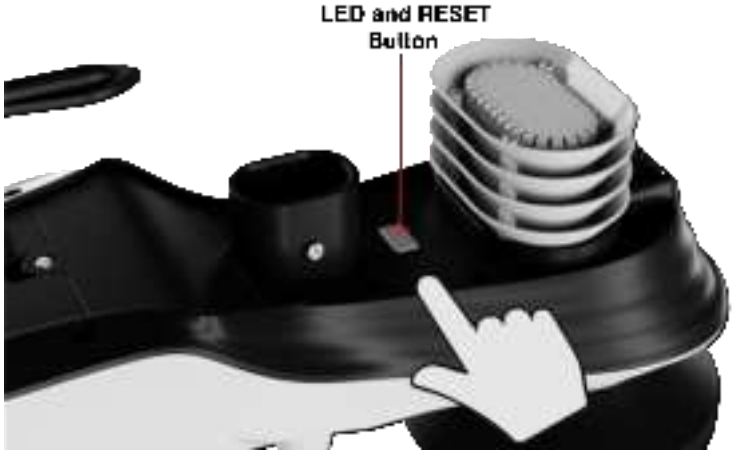


Figure 10

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:

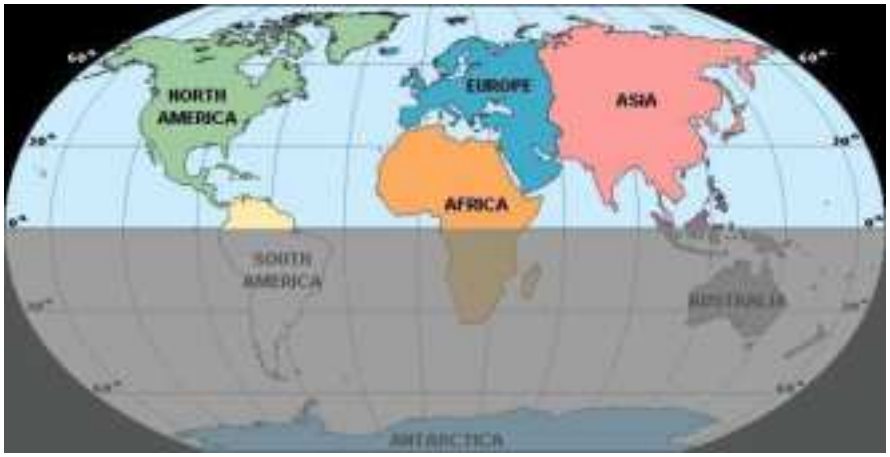
1. The rain gauge must be cleaned every 3 months and the battery should be replaced every 3 months.
2. Avoid heat radiation transfer from buildings and structures. Generally, the sensor array should be installed at least 5 feet (1.5 meters) away from any buildings, structures, ground, or roofs.
3. Avoid 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 9.2).

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 9.2).

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, UV, and solar radiation sensors will not measure accurately.

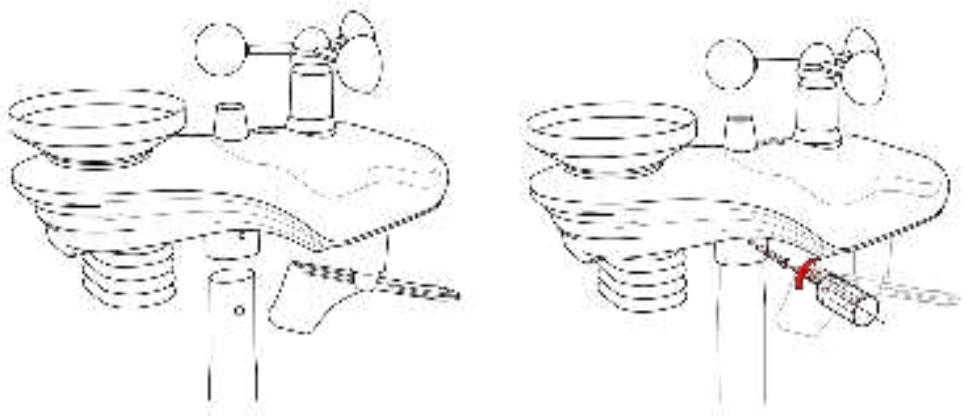


Figure 14

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)

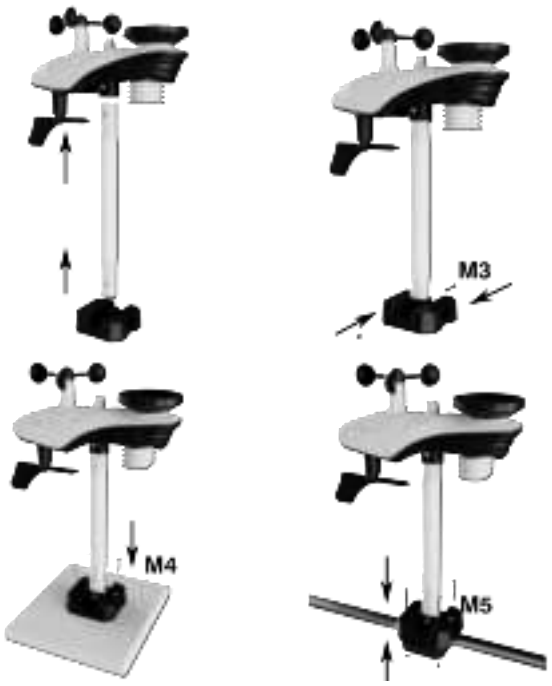


Figure 15

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)

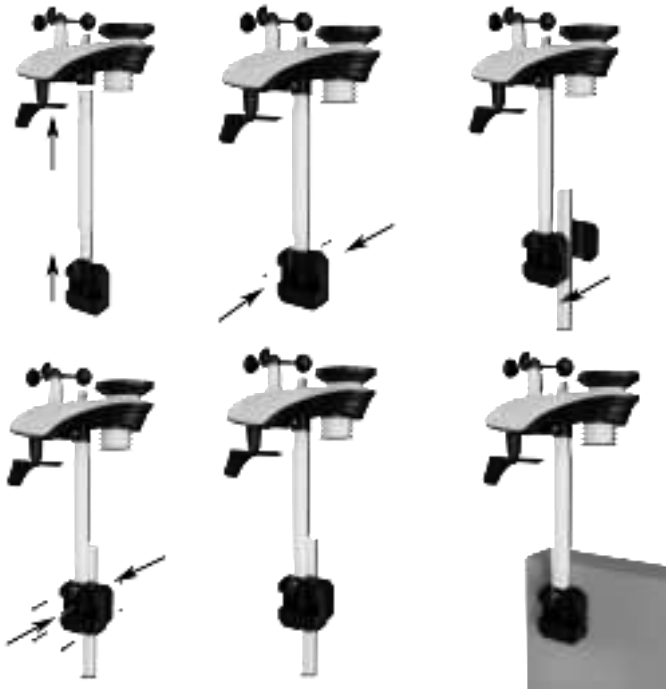


Figure 16

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 915 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. The indoor data will be updated immediately and the outdoor sensor data will be updated within a few minutes.

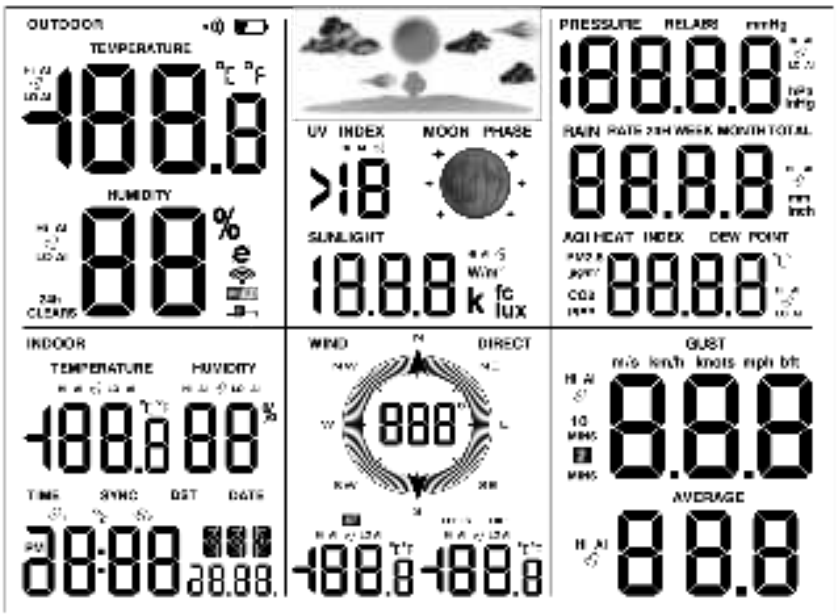


Figure 19

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, rainfall, UV and sunlight index, dew point, and sensory image) 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

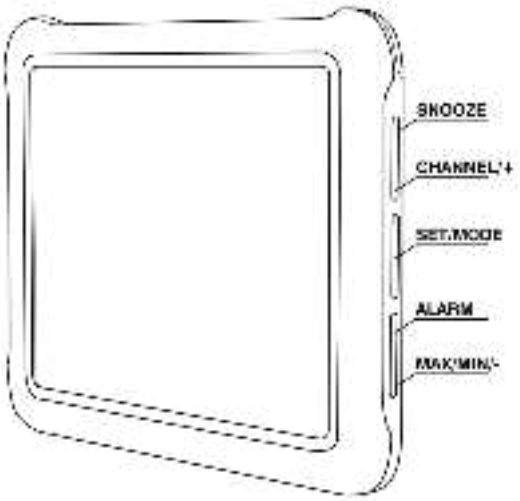


Figure 20

There are the following 5 keys on the right side of the console (from top to bottom), which are used to set the display functions by short press, long press or double click.

Note: SET/MODE is the same key and has the same function.

Key	Description
SNOOZE	1. In normal mode, short press to toggle between 3 levels of brightness. 2. In any setting mode, short press to return to normal mode.
CHANNEL/+	1. In normal mode, press and hold the SET key at the same time for 5 seconds to enter the temperature calibration mode; double-click to display the MAC address. 2. In any setting mode, short press to increase the value; long press to increase the value quickly.
SET/MODE	1. In normal mode, short press to enter fast display mode; long press to enter setting mode 2. In any setting mode, short press to skip any step to the next step.
ALARM	1. In normal mode, short press to view alarm parameters; long press to set alarm mode. 2. In calibration mode, short press to reset the calibration value.
MAX/MIN/-	1. In normal mode, short press to switch to view the maximum and minimum values; long press to enter the network mode; double-click to display the IP address. 2. In any setting mode, short press to reduce the value; long press to

	quickly reduce the value.

7.2.Display Console

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

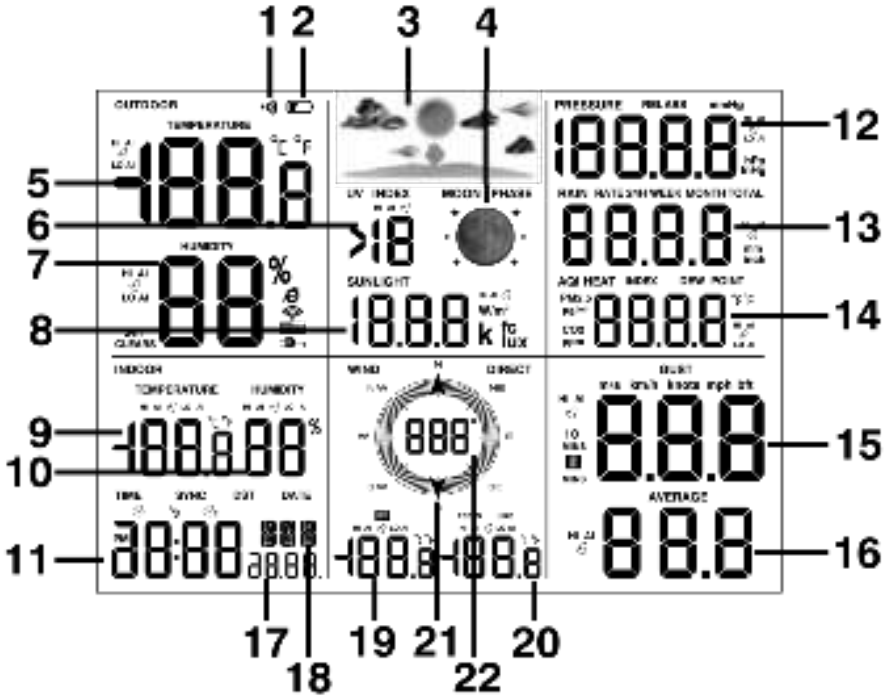


Figure 21

No	Description	No	Description
1	Search Icons	12	Barometric Pressure
2	Battery Power	13	Rainfall
3	Weather Icon	14	Indoor Dew Point
4	Moon Phase	15	Wind Gust
5	Outdoor Temperature	16	Average Wind Speed
6	UV	17	Year/Date
7	Outdoor Humidity	18	Week/Second
8	Sunlight	19	Outdoor AT/Outdoor Dew point
9	Indoor Temperature	20	Outdoor Feels Like
10	Outdoor Dew Point	21	Wind Arrow
11	Indoor Humidity	22	Wind Direction

7.3.Display Restore Factory Settings

To reset the console to factory default settings (including WiFi, weather server, and display settings), please follow these steps:
1. Remove the battery and disconnect the AC adapter to turn off the console power.
2. Connect the AC adapter and turn on the power.
3. When all layouts appear on the screen, simultaneously press and hold the MAX/MIN- button for three seconds until the console startup process is complete.
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 CHANNEL/+ button for three seconds until you hear a beep, and all data displays dashes.

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 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.

7.5. Outdoor Sensor Battery Icon

You can check the outdoor unit battery in the app. The integrated outdoor sensor display window will show a low battery indicator icon. When the low battery icon appears (indicating that the integrated outdoor sensor battery voltage is below 3.6V), please replace the sensor battery with a new one.

Note: Do not mix old and new batteries, and do not mix different types of batteries such as alkaline and lithium batteries.

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.

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

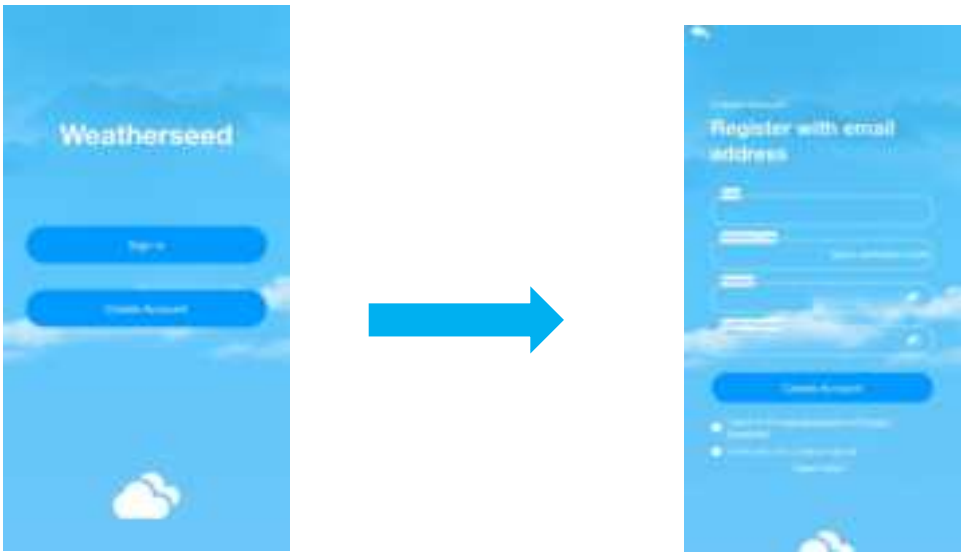
After successfully downloading Weatherseed APP, please open the APP, the first time you open the APP, the login or registration screen will appear. If you don't have an account for the first time, you need to register your own account to log in later; if you have already registered a Weatherseed account, 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.

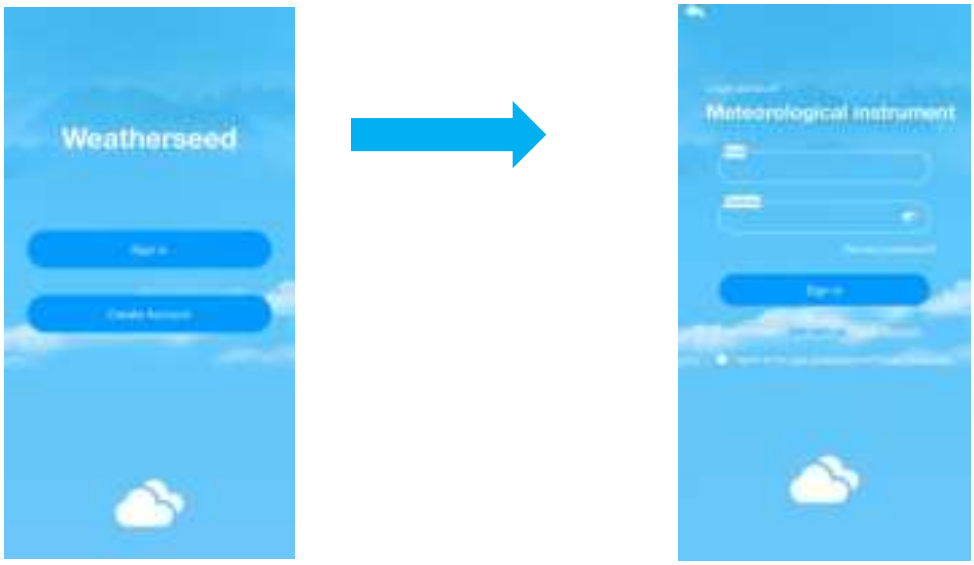
Note: Your account will be automatically logged in the APP directly after the

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, double-click the CHANNEL/+ 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		
	E	F		

8.5. IP Address

In normal mode, double-click the MAX/MIN/- 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

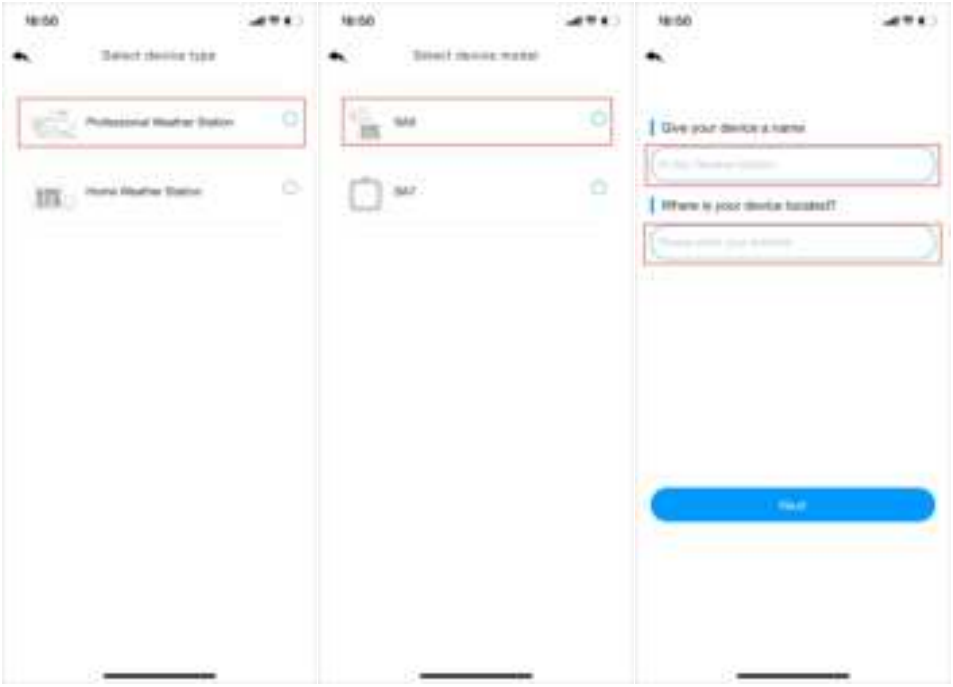
Note: The display console only supports 2.4 GHz signals. If you have a dual-band router (2.4 GHz and 5.0 GHz), please make sure that the router's 2.4 GHz band is turned on and can be distinguished from the 5.0 GHz channel's SSID for accurate connection to the 2.4 GHz channel.

8.6.1 Bluetooth Distribution Network Mode

The display enters the distribution mode by pressing and holding the MAX/MIN/- 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:

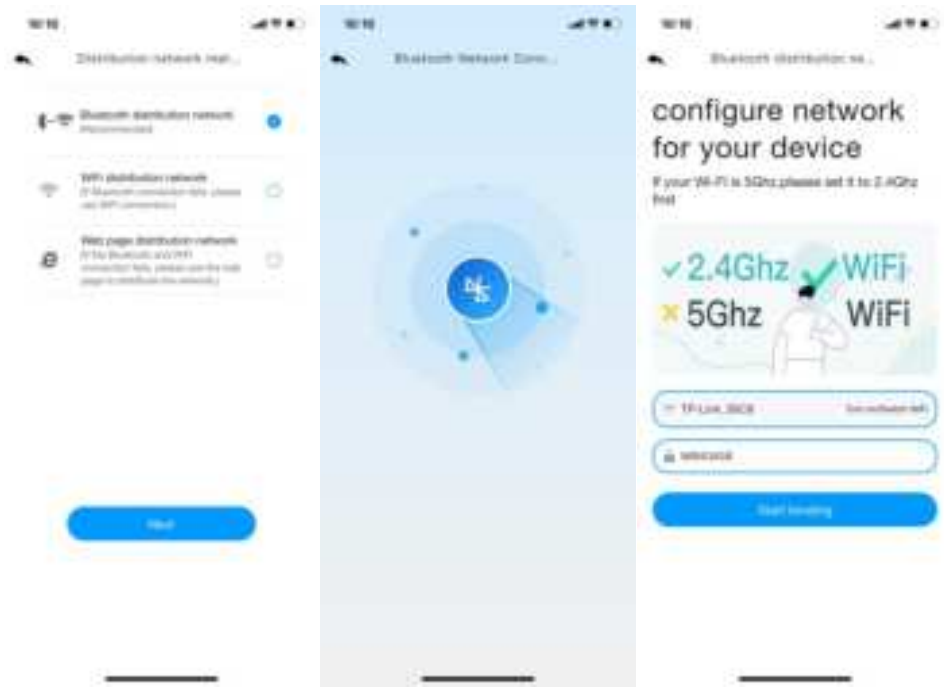
(1)Enter the networking interface, click "Add Device" to start connecting the wifi ;

(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 Bluetooth 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.

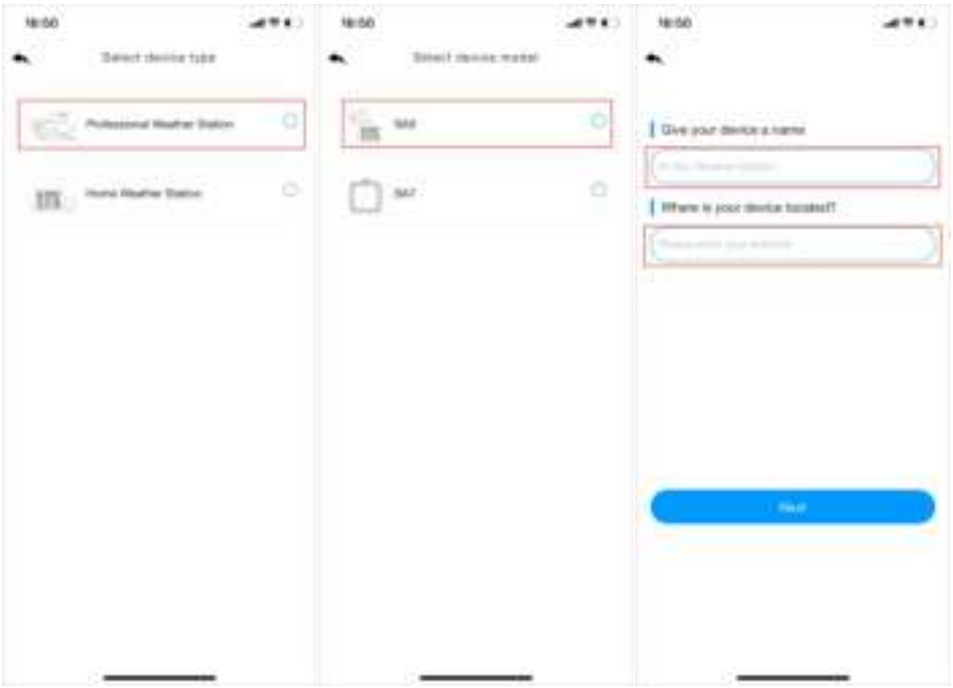


8.6.2. Wifi Distribution Network Mode

In normal mode, press and hold MAX/MIN/- key for at least 5 seconds to enter wifi distribution 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 , which indicates that the display has entered the wifi distribution network mode.

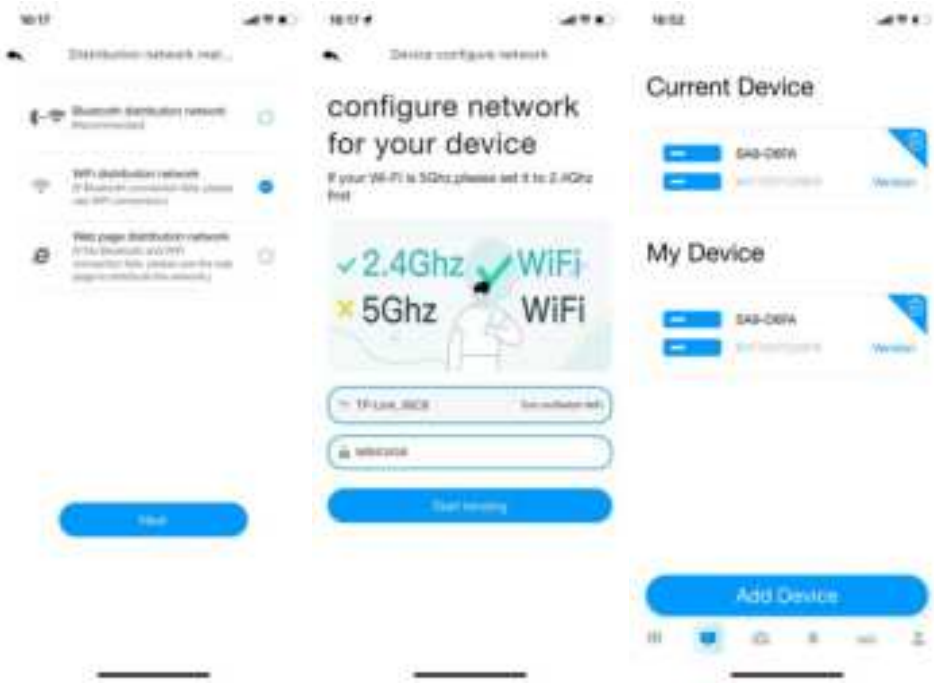
(1)Enter the networking interface, click "Add Device" to start connecting the wifi ;

(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 distribution network mode: WiFi distribution network.
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.



8.6.3. Web page distribution network mode

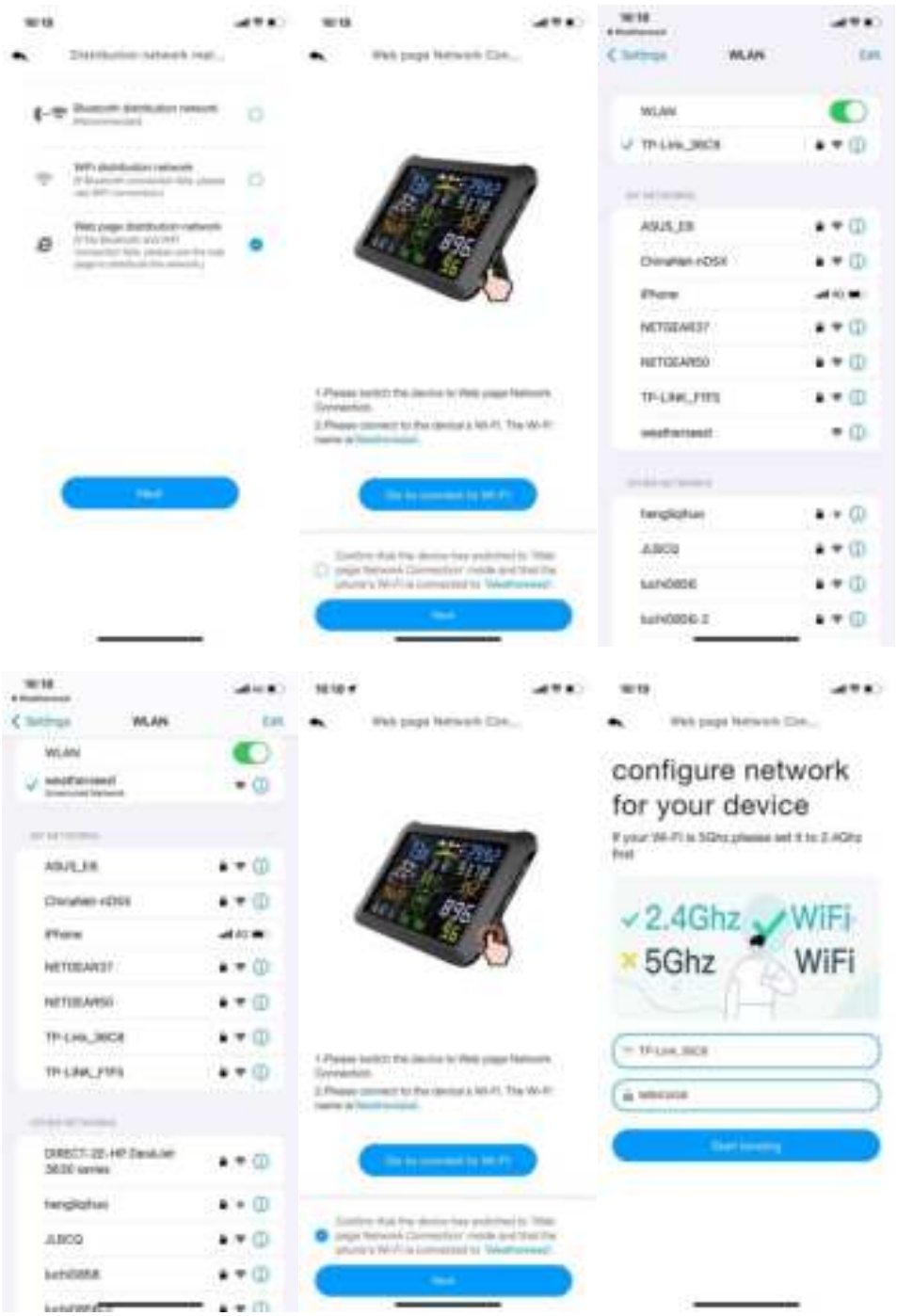
In normal mode, press and hold MAX/MIN/- key for at least 5 seconds to enter wifi distribution mode, the WiFi icon will be flashing and the BI icon will be displayed in the date area, then short press the SET key twice, the icon will be converted to the

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)Select web page distribution network , 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.



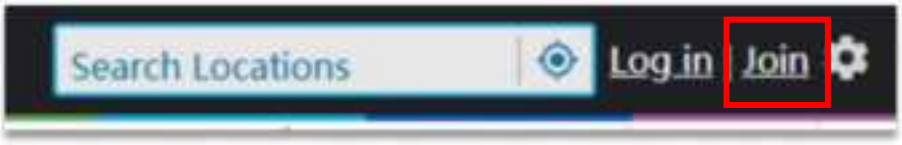
NOTE: Android system can select WiFi. IOS system needs to manually enter the WiFi name.

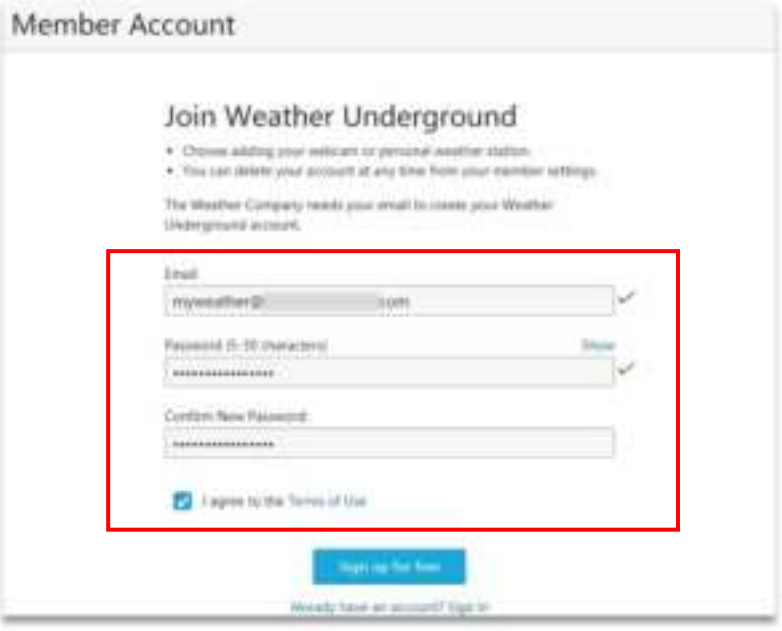
8.7.Firmware Upgrade

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

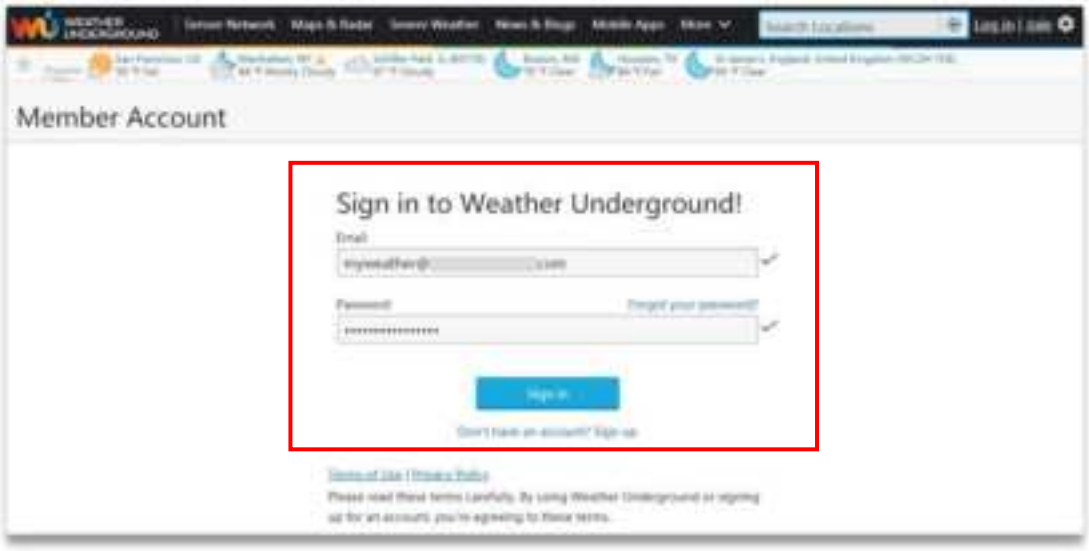
8.8. Sign up on Wunderground.com

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.



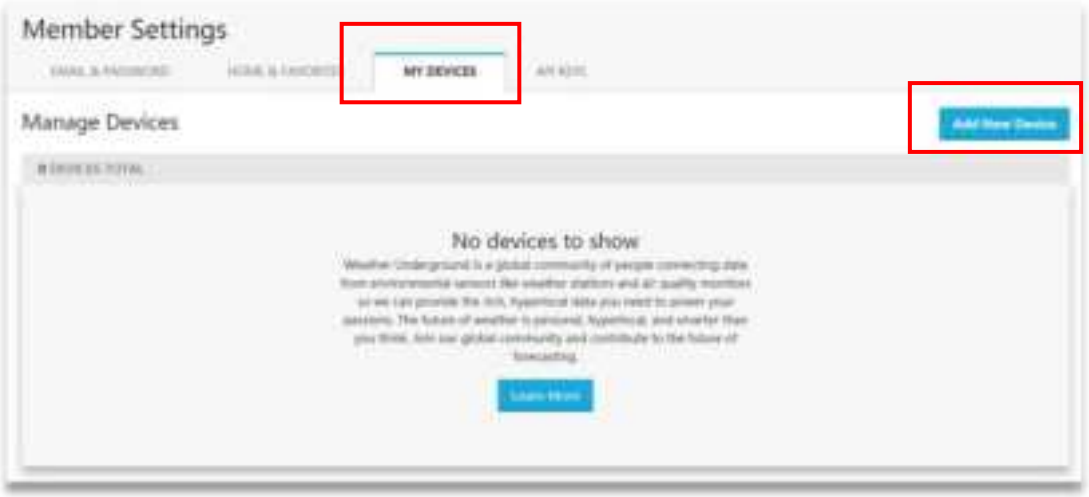


2.Click ***"Sign in"*** button to login, and switch to **Member Settings** page.

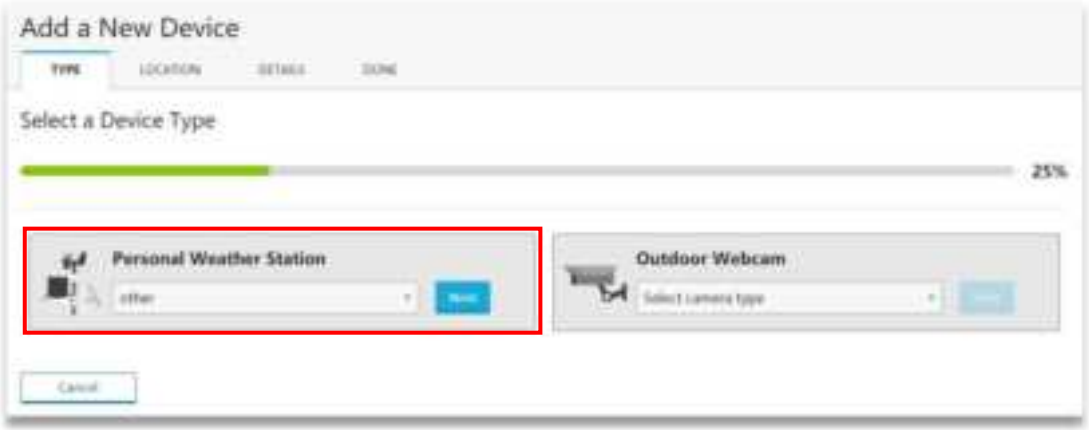


3.Select **My Devices** tab and click **“Add New Devices”.**

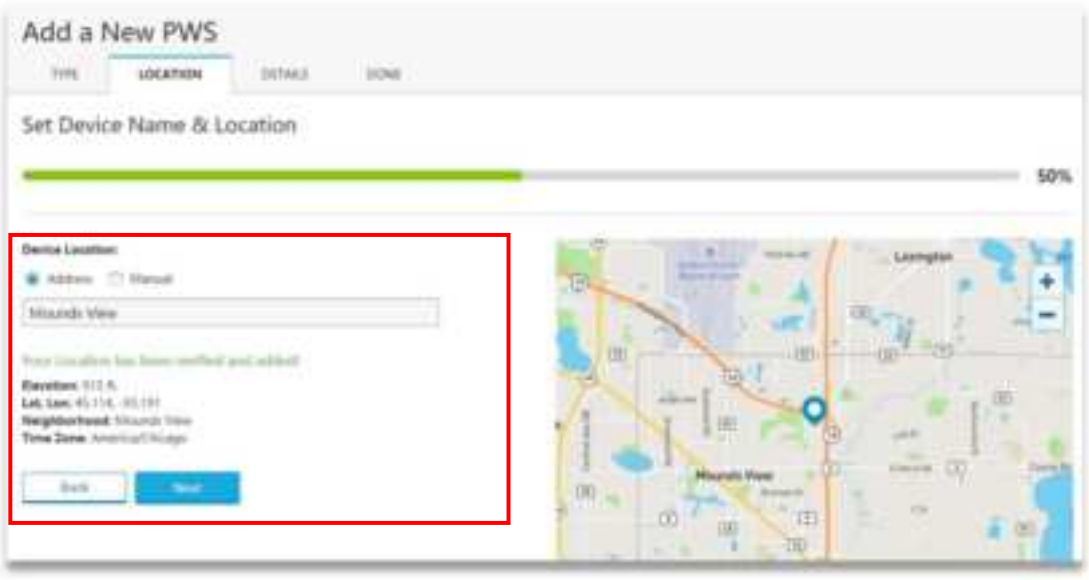
Note: in “**Add New Devices**" page, set the “**TYPE**”, “**LOCATION**",“**DETAILS**” and“**DONE**" page step by step until 100% completion.



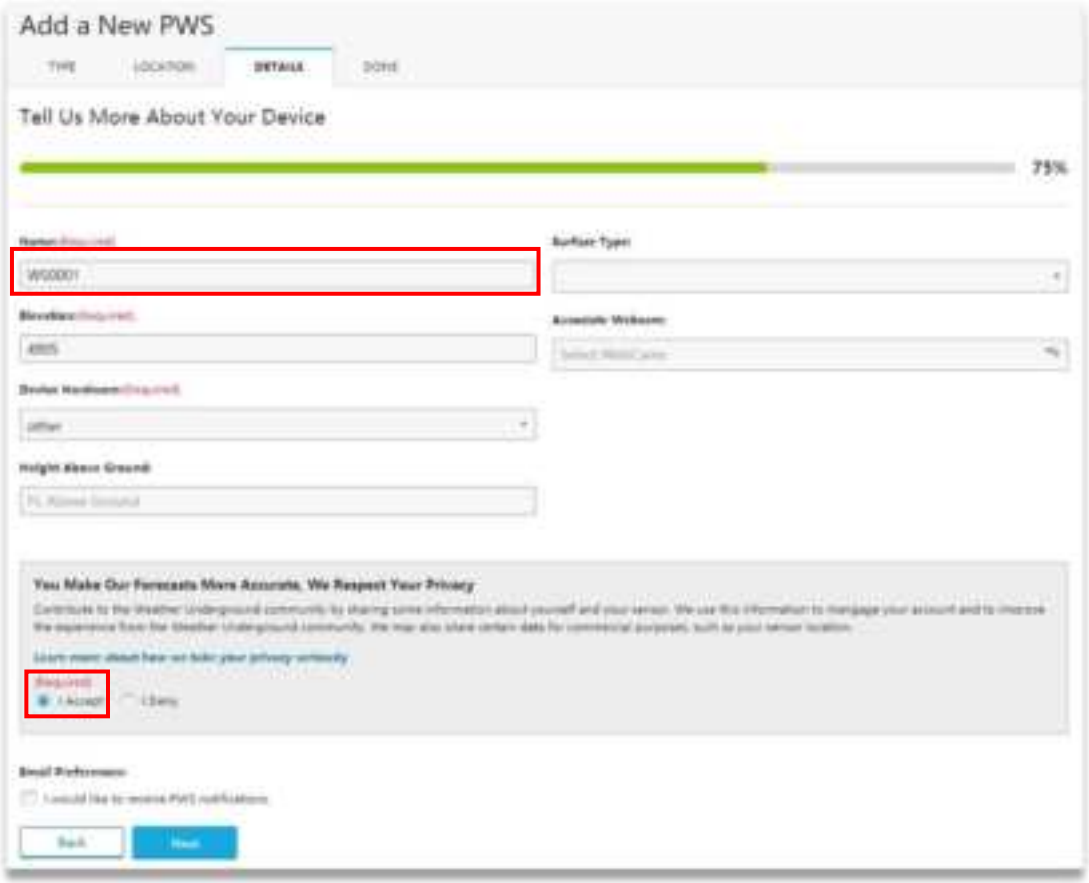
4. In **TYPE** Page, click“**Personal Weather Station**” drop down list to select “**Other**”.



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



6. In **DETAILS** Page ,Fill in the "**Required**" information and Press "**Next**".



7. In **DONE** Page, the device "**Station ID**" and "**Station Key**" are shown, copy and record the information for late use.

9. Display Console Operation

9.1. Quick Display Mode

In normal mode, press (do not hold) the SET/MODE key to enter quick display mode. To skip any step to the next setting, press the SET/MODE key continuously and the current setting parameter will flash.

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

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

NO	Command	Mode	Settings	Image
1	[SET]	Time/week and seconds	Press the CHANNEL/+ or MAX/MIN/- key to toggle between time/week and seconds.	
2	[SET]	Outdoor Dew Point	Press the CHANNEL/+ or MAX/MIN/- key to toggle between AT (surface temperature) and dew point.	
	[SET]	Absolute and Relative Pressure	Press the CHANNEL/+ or MAX/MIN/- key to toggle between absolute and relative pressure.	

3	[SET]	Rain period view mode	Press the CHANNEL/+ or MAX/MIN/- key to toggle between rainfall, 24-hour, weekly, monthly and total rainfall. To clear the rainfall for each time period, press the CHANNEL/+ or MAX/MIN/- key to display to the time period you want to clear. When the rain amount is flashing, press and hold the SET/MODE key for five seconds until the rain amount is displayed as 0.0.	
4	[SET]	Average wind speed	Press the CHANNEL/+ or MAX/MIN/- key to toggle between current, 2 minutes and 10 minutes.	

*[SET] means press the SET button.

9.2. Set Mode

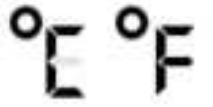
In normal mode, press and hold the SET/MODE key for at least 3 seconds to enter set mode and the first setting will flash. To skip any step to the next setting, keep pressing the SET/MODE key and the current setting parameter will flash.

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

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

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

NO	Command	Mode	Settings	Image
1	[SET]+3 sec	Time SYNC (default: ON)	- Press the CHANNEL/+ key or MAX/MIN/- key to toggle the synchronized time on/off. - Synchronize the device with the time and date via WiFi.	

2	[SET]	DST (default: ON)	Press the CHANNEL/+ key or MAX/MIN/- key to toggle DST on/off.	
3	[SET]	12/24 hour format (default: 12h)	Press the CHANNEL/+ key or MAX/MIN/- key to toggle between 12-hour and 24-hour.	
4	[SET]	Hour	Press the CHANNEL/+ key or MAX/MIN/- key to adjust the hours up or down. The PM icon will be displayed during the afternoon hours.	
5	[SET]	Minute	Press the CHANNEL/+ key or MAX/MIN/- key to adjust the minutes up or down.	
6	[SET]	Date format (default: M-D)	Press the CHANNEL/+ or MAX/MIN/- key to toggle between M-D and D-M.	
7	[SET]	Month	Press the CHANNEL/+ or MAX/MIN/- key to adjust the calendar month.	
8	[SET]	Day	Press the CHANNEL/+ or MAX/MIN/- key to adjust the calendar day.	
9	[SET]	Year	Press the CHANNEL/+ key or MAX/MIN/- key to adjust the calendar year.	
10	[SET]	Max/Min clearing (default: ON)	The maximum/minimum value can be set to daily (midnight) or manually cleared. Press the CHANNEL/+ key MAX/MIN/- key to toggle between ON (24-hour clearing) and OFF (manual).	
11	[SET]	Temperature measurement unit (default value: ° F)	Press the CHANNEL/+ or MAX/MIN/- keys to toggle between ° F and ° C measurement units.	
12	[SET]	Sunlight unit (default value: W/m2)	Press the CHANNEL/+ key or MAX/MIN/- key to toggle the daylight display unit between W/m2 , fc or lux.	

13	[SET]	Barometric pressure unit (default value: InHg)	Press the CHANNEL/+ key or the MAX/MIN/- key to toggle the pressure unit between mmhg, inHg or hPa.	
14	[SET]	Rainfall measurement unit (default value: inch)	Press the CHANNEL/+ key or MAX/MIN/- key to toggle the rainfall unit between mm and inch.	
15	[SET]	Wind speed measurement unit (default value: mph)	Press the CHANNEL/+ key or MAX/MIN/- 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 levels)	Press the CHANNEL/+ key or the MAX/MIN/- key to change the pressure threshold from 2 hPa to 4 hPa. (See 12.3 for more information on this section).	
17	[SET]	Weather icon settings (default value: few clouds)	Press the CHANNEL/+ key or the MAX/MIN/- key to select the initial weather icon for a sunny, less cloudy, cloudy, or rainy day (see 12.1 for more information on this section).	
18	[SET]	Location area (default value: Northern Hemisphere)	Press the CHANNEL/+ key or the MAX/MIN/- 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/MODE or 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.

9.3. 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

9.4. Max/Min mode

9.4.1. Viewing and Resetting Maximum Values

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, UV and sunshine, ABS barometric pressure, outdoor temperature, humidity, and sensory image, outdoor AT temperature, and indoor

temperature, humidity, and dew point.

Press SET/MODE to toggle through the maximum values of rainfall (24 hours, week or month), REL barometric pressure, and outdoor dew point (the rest of the parameters remain unchanged).

Figure 22

Press the MAX/MIN/- key for three seconds to clear all maximum values (rainfall, wind speed, gusts, barometric pressure, UV and sunshine, temperature and humidity maximums).

Press the SNOOZE key to exit the Maximum View and Reset mode and return to the normal display mode.

The following charts summarize the sequence and instructions for viewing and resetting the mode settings in Maximum:

Command	Mode	Settings	Image
[MAX/MIN/-]	Maximum View Mode	The MAX icon is displayed in the date area; The display shows a portion of the parameter maxima: Rainfall rate, gust and average wind speed, UV and insolation, ABS barometric pressure, outdoor temperature and humidity, AT temperature and sensory image, indoor temperature and humidity and dew point	

[SET]		The display switches to show the maximum value of another part of the parameter (the rest of the parameters remain unchanged): 24-hour rainfall, REL air pressure, outdoor dew point.	
[SET]		The display switches to show the maximum value of the other part of the parameter (the rest of the parameters remain unchanged): rainfall for a week	
[SET]		The display switches to show the maximum value of another part of the parameter (the rest of the parameters remain unchanged): rainfall in January	
[MAX/MIN/-] +3 Sec	Reset Maximum Mode	The date area will show the CLR icon; Clears all maximum (rainfall, wind speed, gusts, barometric pressure, UV and sunshine, temperature and humidity maximum)	
[SNOOZE]	Exiting Maximum View and Reset Mode	Return to normal mode	

NOTE: After resetting the maximum values, the display maximums will show the current values.

The following charts summarize the sequence and commands for Maximum View and Reset mode settings:

*[MAX/MIN/-] means press the MAX/MIN/- button；
*[SET] means press the SET button.
*[MAX/MIN/-] + 3 seconds means press and hold the SET button for three seconds.

9.4.2.Viewing and Resetting Minimum Values

In normal mode, press the MAX/MIN/- key briefly once and the date area will show the MAX icon. Press the MAX/MIN- key once more, the date area will show the MIN icon, and the display will show the ABS barometric pressure, outdoor temperature, humidity and sensory image, outdoor AT temperature, indoor temperature, humidity

and dew point minimum values.

Press SET/MODE to toggle the view of REL barometric pressure and outdoor dew point minima (the rest of the parameters remain unchanged).

Press the MAX/MIN/- key for three seconds to clear all minima (barometric pressure, temperature and humidity, dew point and sensory image minima).

Press the SNOOZE key to exit the Minimum Values View and Reset mode and return to the normal display mode.

NOTE: After resetting the minimum value, the display minimum value will show the current value.

The following charts summarize the sequence and instructions for viewing and resetting the mode settings in Minimum:

Command	Mode	Settings	Image
[MAX/MIN/-]	Minimum View Mode	The MAX icon is displayed in the date area;	
[MAX/MIN/-]		- The MIN icon is displayed in the date area; - The display shows a portion of the parameter minimum values: ABS air pressure, outdoor temperature and humidity, AT temperature and sensory image, indoor temperature and humidity and dew point	
[SET]		The display switches to show the minimum value of another part of the parameter (the rest of the parameters remain unchanged): REL air pressure, outdoor dew point	
[MAX/MIN/-]+3 Sec	Reset Minimum Mode	A CLR icon will be displayed in the date area; Clear all minimum (barometric pressure, temperature and humidity, dew point and sensory image minimum)	
[SNOOZE]	Exiting Maximum View and Reset Mode	Return to normal mode	

*[MAX/MIN/-] means press the MAX/MIN/- button；
*[SET] means press the SET button.
*[MAX/MIN/-] + 3 seconds means press and hold the SET button for three seconds. 、

9.5. 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	16	UV	6
8	Average wind speed	HI：5.0 m/s	17	Sunlight	789 W/㎡
9	Rainfall rate	1.0 mm/h			

9.5.1. 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.

9.5.2. Viewing High/Low Alarm Values

(1) Viewing High Alarm Values
To view the current alarm value, press the ALARM key to enter the Alarm View mode, which is currently the High Alarm View mode.

As shown, the date area will display HI AL 1 and Alarm 1 time. The display shows indoor temperature and humidity, outdoor temperature and humidity, rain rate, AT, feel, gust, average wind speed, absolute pressure, UV index, and sunshine high alarm parameters.

Press SET/MODE and the date area will show HI AL 2 and Alarm 2 time. The display will toggle to show the high alarm parameters for rainfall (24 hours, week, or month), outdoor dew point, and relative barometric pressure (the remaining parameters remain unchanged).

Figure 23

Press the ALARM key again to return to normal mode.

Note: Press the SNOOZE key at any time during the High/Low Alarm mode to return to Normal mode.

The following chart summarizes the sequence and commands for the High Alarm View mode setting:

Command	Mode	Settings	Image
[ALARM]	High Alarm View Mode	The date area will show the HI AL 1 icon and the Alarm 1 time; The display will show high alarm values for some parameters: Indoor temperature and humidity, Outdoor temperature and humidity, Rain rate, AT, Feeling like, Gust, Average wind speed, Absolute pressure, UV index, Sunlight	
[SET]		The date area displays the HI AL 2 icon and the time of Alarm 2; The display switches to show another part of the parameter high alarm values:	

		High alarm parameters for 24-hour rainfall, outdoor dew point and relative barometric pressure (the rest of the parameters remain unchanged)	
[SET]		The display switches to show the high alarm value for another part of the parameter (the rest of the parameters remain unchanged): Weekly rainfall	
[SET]		The display switches to show the high alarm value for another part of the parameter (the rest of the parameters remain unchanged): Monthly rainfall	
[ALARM]/ [SNOOZE]	Exit High Alarm View Mode	Return to normal mode	

*[ALARM] means press the ALARM button.
*[SET] means press the SET button.
*[ALARM]/[SNOOZE] means press the ALARM or SNOOZE button.

(1) Viewing Low Alarm Values

To view the current alarm value, press the ALARM key to enter the Alarm View mode, which is currently the High Alarm View mode. Press the ALARM key again to enter the Low Alarm View mode.

The date area will display LOW AL 1 and the Alarm 1 time as shown. The display shows the low alarm parameters for indoor temperature and humidity, outdoor temperature and humidity, indoor dew point, AT, sensation, and ABS pressure.

Press the SET/MODE key and the date area will show LOW AL 2 and Alarm 2 time. The display will toggle to show the low alarm parameters for outdoor dew point and REL barometric pressure (the remaining parameters remain unchanged).

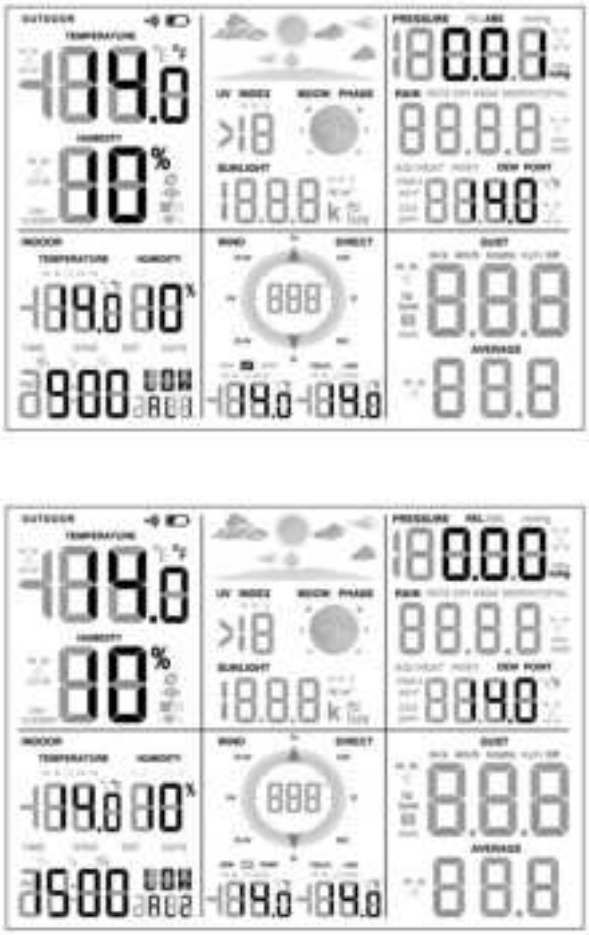


Figure 24

Press ALARM again to return to normal mode.

NOTE: In high/low alarm mode, press the SNOOZE key at any time to return to normal mode.

The following diagrams summarize the sequence and instructions for setting up the Low Alarm View mode:

Command	Mode	Settings	Images
[ALARM]	High Alarm View Mode	The date area will display the HI AL 1 icon and the Alarm 1 time	
[ALARM]	Low Alarm View Mode	The date area will show the LOW AL 1 icon and the Alarm 1 time; The display will show low alarm values for some parameters: Indoor temperature and humidity, outdoor temperature and humidity, indoor dew point, AT	

		temperature, feels like , ABS pressure	
[SET]		The date area will show LOW AL 2 and Alarm 2 times; The display will toggle to show another portion of the parameter low alarm values: Outdoor dew point and REL air pressure (the rest of the parameters remain unchanged)	
[ALARM]/ [SNOOZE]	Exit Low Alarm View Mode	Return to normal mode	

*[ALARM] means press the ALARM button.
*[SET] means press the SET button.
*[ALARM]/[SNOOZE] means press the ALARM or SNOOZE button.

9.5.3. Setting High/Low Alarms

Press the ALARM key to enter Alarm View mode. Then press and hold the SET/MODE key for three seconds to enter the alarm setting mode, the first parameter will start flashing (hourly). To save the setting and move to the next parameter setting, press the SET/MODE key continuously and briefly.

To adjust an alarm parameter, press the CHANNEL/+ key or the MAX/MIN/- key to increase or decrease the value, or press and hold the CHANNEL/+ key or the MAX/MIN/- key for three seconds for a quick increase or decrease.

Press the ALARM key to turn the alarm on (the alarm icon will display) or off (the alarm icon will disappear).
Press the SNOOZE key at any time to return to normal mode. If nothing is done for 30 seconds, the alarm mode will time out and return to normal mode.

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

Command	Mode	Settings
[ALARM]	Enter alarm viewing mode	
[SET]+3 sec	Enter alarm setting mode; Hour setting (alarm 1)	·Press the CHANNEL/+ button or the MAX/MIN/- 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
[SET]	Minute setting (alarm 1)	
[SET]	Hour setting (alarm 2)	

[SET]	Minute setting (alarm 2)	icon will be displayed; when the alarm is off, the alarm time icon will disappear.
[SET]	Outdoor temperature high alarm	·Press the CHANNEL/+ key or the MAX/MIN/- 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 will be displayed next to the parameter. If the alarm is turned off, the icon will disappear.
[SET]	Outdoor temperature low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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 will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor humidity high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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 will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor humidity low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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 will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor AT high alarm	·Press the CHANNEL/+ key or the MAX/MIN/-

		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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor AT low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor dew point high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor dew point low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor feels like high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Outdoor feels like low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Indoor temperature high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Indoor temperature low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Indoor humidity high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will

		disappear.
[SET]	Indoor humidity low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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 dew point high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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 dew point low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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]	UV index high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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]	Sunlight high alarm	
[SET]	Absolute air pressure high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Absolute air pressure low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Relative air pressure high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Relative air pressure low alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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  will be displayed next to the parameter. If the alarm is off, the icon will disappear.
[SET]	Rainfall (RATE) high alarm	· Press the CHANNEL/+ key or the MAX/MIN/- 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
[SET]	Rainfall (24H) high alarm	
[SET]	Gust high alarm	
[SET]	Average wind speed high alarm	

		alarm is on, an icon  will be displayed next to the parameter. If the alarm is off, the icon will disappear.

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

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.

9.5.4. Alarm and Key Sound Switches

If the alarm sounds, press any key to turn off the alarm sound.

In normal mode, press and hold the ALARM key for three seconds to turn the alarm/key sound on or off according to the current setting, and BZ ON and BZ OFF will be displayed in the date area correspondingly.

The display console will return to normal mode within three seconds without any action.

9.6. Calibration mode

9.6.1. Temperature Calibration

In normal mode, press and hold the SET key and the CHANNEL/+ key simultaneously for 5 seconds to enter temperature calibration mode.The CRL icon will be displayed in the date area and the room temperature will begin to flash.

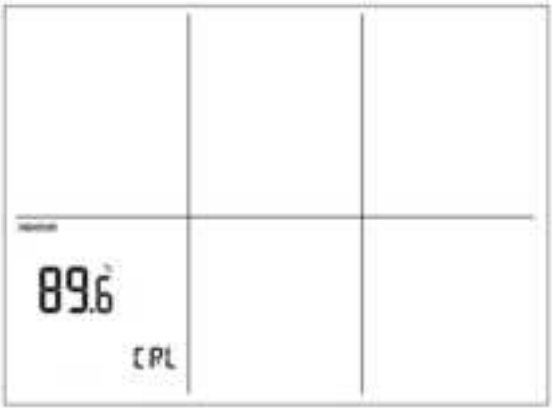


Figure 25

Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the temperature reading (in 0.1 increments).
Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the temperature reading.

Press the ALARM key to reset the current value. Press the SET key to switch to outdoor temperature calibration mode.
To exit temperature calibration mode at any time, press the SNOOZE key. If no action is performed, the calibration mode will time out and exit after 30 seconds.

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

Command	Mode	Settings
[SET]and[CHANNEL/+] +5 sec	Enter the temperature calibration mode; Indoor temperature calibration	- Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the temperature reading (in 0.1 increments). - Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.
[SET]	Outdoor temperature calibration	- Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the temperature reading (in 0.1 increments). - Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the temperature reading. - Press the ALARM key to reset the current value.

[SNOOZE]	Exit temperature calibration mode	If no operation is performed, the calibration mode will time out and exit after 30 seconds.

*[SET] and [CHANNEL/+]+5 sec means press and hold SET and CHANNEL/+ key for at least 5 seconds；
*[SET] means press the SET button.

9.6.2. Humidity Calibration

In normal mode, press and hold the SET key and the MAX/MIN/- key simultaneously for 5 seconds to enter the humidity calibration mode.The CRL icon will be displayed in the date area and the indoor humidity will begin to flash.

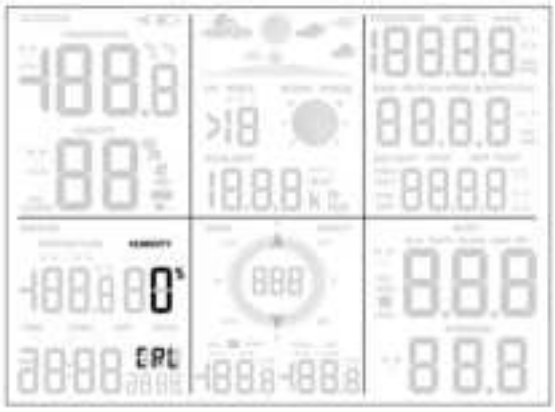


Figure 26

Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the temperature reading in 1% increments.
Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the humidity reading.

Press the ALARM key to reset the current value. Press the SET key to switch to outdoor humidity calibration mode.
To exit the humidity calibration mode at any time, press the SNOOZE key. If no action is performed, the calibration mode will time out and exit after 30 seconds.

The following chart summarizes the sequence and commands for the humidity calibration mode.

Command	Mode	Settings
[SET]and[MAX/MIN/-]+5 sec	Enter the Humidity Calibration Mode; Indoor humidity calibration	- Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the humidity reading (in 1% increments). - Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the humidity reading.

		- Press the ALARM key to reset the current value.
[SET]	Outdoor humidity calibration	- Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the humidity reading (in 1% increments). - Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the humidity reading. - Press the ALARM key to reset the current value.
[SNOOZE]	Exiting Humidity Calibration Mode	If no operation is performed, the calibration mode will time out and exit after 30 seconds.

*[SET] and [MAX/MIN/-] +5 sec means press and hold SET and CHANNEL/+ key for at least 5 seconds；
*[SET] means press the SET button.

9.6.3. Sensor Mode Calibration

In Normal Mode, press and hold the SET and ALARM keys simultaneously for 5 seconds to enter Pressure, Gust, Rainfall and Sunshine calibration modes.

The CRL icon will be displayed in the date area and the first calibration parameter (Absolute Pressure) will flash. Press the SET key to skip any parameter and proceed to the next parameter calibration setting.

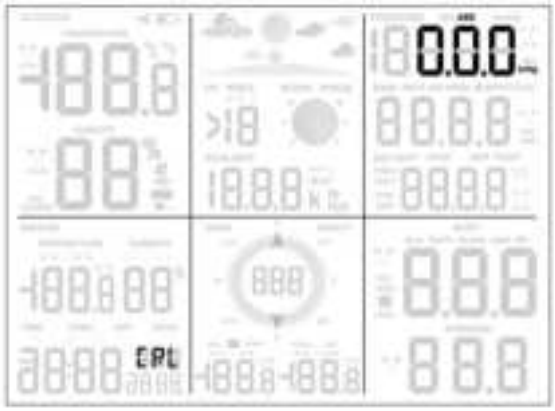


Figure 27

Press the CHANNEL/+ key or MAX/MIN/- key to increase or decrease the value.
Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease the value.

Press the ALARM key to reset the current value. To exit the calibration mode at any time, press the SNOOZE key. If no action is performed, the calibration mode will time out and exit after 30 seconds.

The following chart summarizes the setup sequence and commands for the sensor calibration mode.

Commad	Mode	Settings
[SET]and[ALARM]+5 sec	Enter Sensor Mode Calibration; Absolute pressure calibration	- The Pressure Section will display the "ABS" symbol and the absolute pressure value will flash. (Default value is 0.00 inHg). - Press the CHANNEL/+ key or the MAX/MIN/- key to increase or decrease the absolute pressure value (in increments of 0.01 inHg). -Press and hold the CHANNEL/+ or MAX/MIN/- key for three seconds to quickly increase or decrease the absolute pressure value. -Press the ALARM key to reset the current value. Example: Calibration pressure source measures 28.37 inHg. display console pressure reading is 28.75 inHg. offset = 28.37 - 28.75 = - 0.38 inHg
[SET]	Relative Pressure Calibration	- The pressure section will display the "REL" symbol and the relative pressure value will flash. (Default value is 0.00 inHg). - Press the CHANNEL/+ key or the MAX/MIN/- key to increase or decrease the relative pressure value (in increments of 0.01 inHg). - Press and hold the CHANNEL/+ or MAX/MIN/- key for three seconds to rapidly increase or decrease. -Press the ALARM key to reset the current value. Example: The calibration pressure source measured 25.00 inHg. The display console pressure reading is 24.85 inHg. offset = 25.00 - 24.85 = 0.15 inHg.
[SET]	Wind Speed Calibration	- The wind speed value will flash (default value is 1.00). - Press the CHANNEL/+ key or the MAX/MIN/- key to adjust the wind speed calibration factor from 0.75 to 1.25. (Calibrated Wind Speed = Calibration Factor x Measured Wind Speed) - Press and hold the CHANNEL/+ or MAX/MIN/- key for three seconds to rapidly increase or decrease. - Press the ALARM key to reset the current value.
[SET]	Rainfall Calibration	- The rainfall value will flash (default value is 1.00). - Press the CHANNEL/+ key or the MAX/MIN/- key to adjust the rainfall calibration factor from 0.75

		to 1.25. (Calibrated Rain = Calibration Factor x Measured Rain) - Press and hold the CHANNEL/+ or MAX/MIN/- key for three seconds to quickly increase or decrease. - Press the ALARM key to reset the current value.
[SET]	Sunlight Calibration	- The sunlight value will blink (default value is 1.00). - Press the CHANNEL/+ key or the MAX/MIN/- key to adjust the insolation calibration factor from 0.75 to 1.25. (Calibrated Insolation = Calibration Factor x Measured Insolation) - Press and hold the CHANNEL/+ or MAX/MIN/- key for three seconds to quickly increase or decrease. - Press the ALARM key to reset the current value.
[SNOOZE]	Exit Sensor Calibration Mode Setting	If no operation is performed, the calibration mode will time out after 30 seconds.

*[SET] and [ALARM] +5 sec means press and hold SET and ALARM key for at least 5 seconds；
*[SET] means press the SET button.

*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	0.75-1.25
Rainfall	0.75-1.25
Sunlight	0.75-1.25

Note: The calibration range (0.75-1.25) for wind speed, rainfall, and sunlight are coefficients, and the calibration formula is: Calibration value = Calibration coefficient x Measured value.

9.6.4.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 current time is 08:25 on October 20 and the last start time is 06:20 on October 5, the total rainfall refers to the rainfall from 06:20 on October 5 to 08:25 on October 20.

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.

9.7. Snooze Mode

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

Press any key (MAX/MIN/-, SET/MODE, ALARM, CHANNEL/+) to permanently exit Sleep mode.

10. Feels Like and AT Temperatures

10.1. Feels Like Temperatures

The Feels Like Temperature is a combination of the Heat Index and the Wind Chill Index.

(1) When the air temperature is below 4.4°C (40°F), the Wind Chill Index is displayed, as shown in the following National Weather Service Wind Chill Index table:

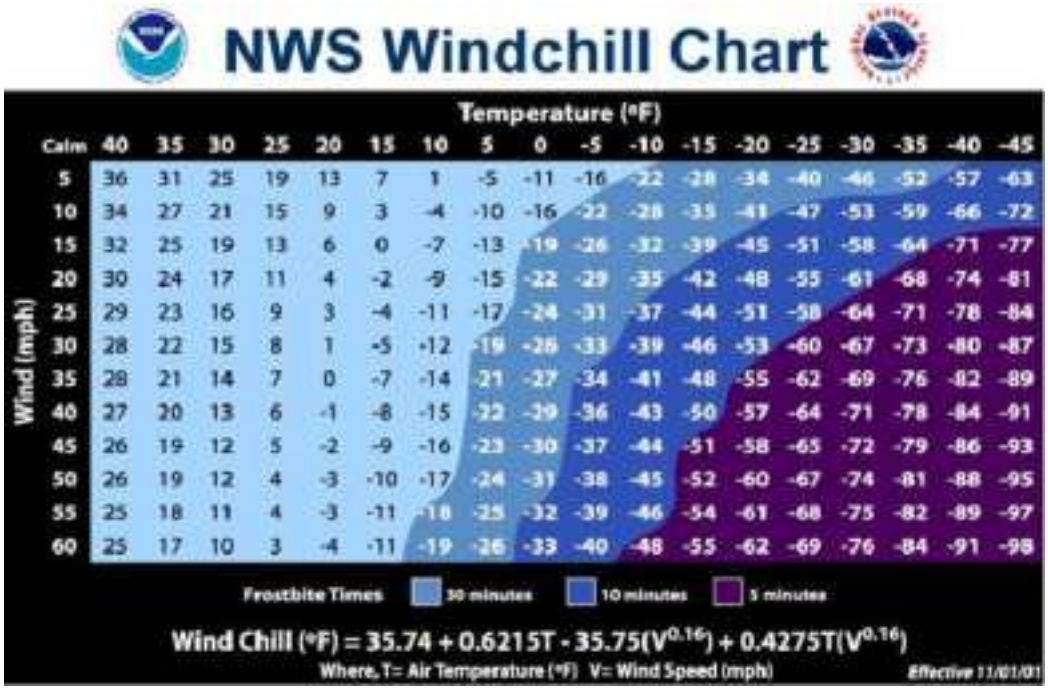


Figure 28

(2) When the temperature is above 26.7°C (80°F), the heat index is displayed, as shown in the following National Weather Service heat index chart:

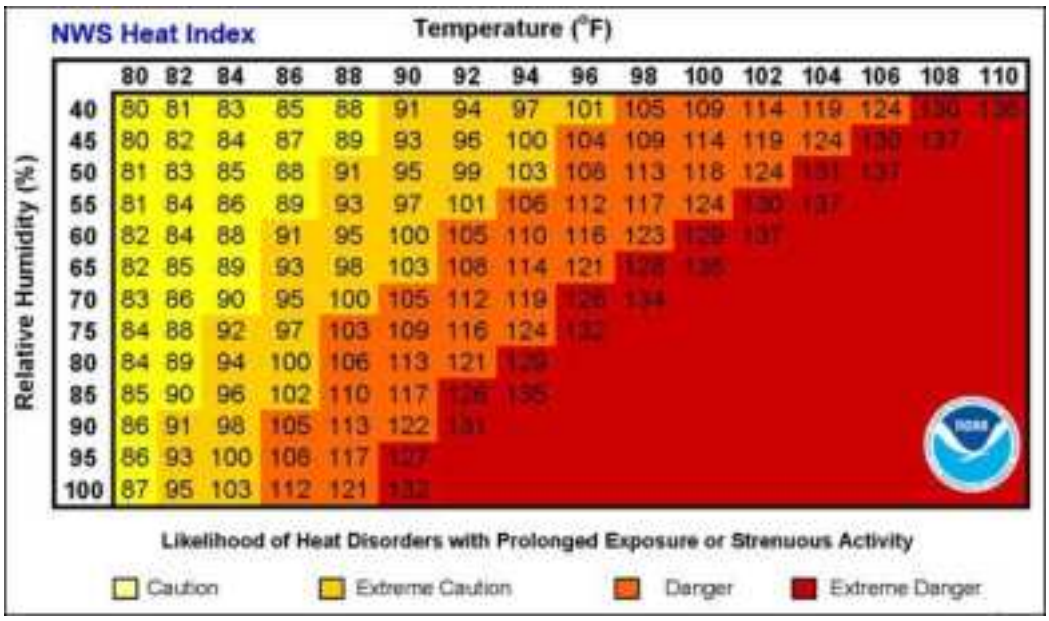


Figure 29

Note: Both the Wind Chill and Heat Index are displayed uniformly as it feels like.

10.2. Apparent Temperature (AT)

AT is a linear regression that is not restricted, and is more appropriate to outside conditions because it includes wind, and was intended as an assessment of what exposed body surfaces feel like in cold, windy conditions.

Regression equations of this universal scale are formulated for indoors, outdoors in shade but exposed to wind, and outdoors exposed to wind and solar radiation. Of these, outdoors in shade but exposed to wind, has been chosen as most informative.

11. Moon Pharse

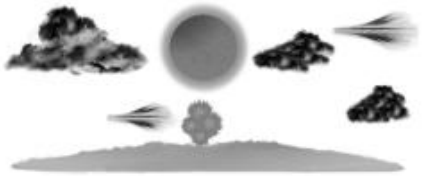
The following moon phases are displayed according to the calendar date.

Figure 30

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

12.Weather Forecasting

12.1.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.

12.2.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.

12.3.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.

13.Backlight Operation

13.1.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 SNOOZE button to switch between the 3 levels of backlight.

When the backlight is off, press and hold the 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 SNOOZE button for two seconds. The BL OFF icon will appear in the date area for 3 seconds.

13.2.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 SNOOZE key once. The backlight will turn on for 5 seconds and will turn off after 3 seconds of inactivity.

14. 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
Apparent temperature (heat index)	The heat index, sometimes called the apparent temperature, is a measure of how hot it actually feels when the relative humidity is compared to the actual air temperature. To find the heat index

	temperature, look at the heat index chart (reference 10.1). For example, if the air temperature is 96°F and the relative humidity is 65%, the heat index (how hot it feels) is 121°F. **NOTE: Because heat index values are designed for shaded, breezy conditions, heat index values may increase by up to 15 degrees Fahrenheit in full sun conditions.** In addition, strong winds and especially very hot, dry air can be extremely hazardous. The shaded area above 105 degrees Fahrenheit shows levels where continued exposure or physical activity could lead to increasingly severe heat disorders. The heat index is not calculated for temperatures below 80 degrees Fahrenheit.
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.
Solar radiation	Solar radiation sensors measure solar energy from the sun. Solar radiation is the radiant energy emitted by the sun through the production of electromagnetic energy from nuclear fusion reactions. The spectrum of solar radiation is close to that of a black object with a temperature of about 5,800 K. The other half is mainly in the near infrared part, with some in the ultraviolet part of the spectrum. A wind vane is a device that measures wind direction, usually in conjunction with an anemometer.
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.

15.Specifications

15.1. 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

15.2. 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%
UV	1 to 15+	± 1	± 1
Sunlight	0 to 200klux	± 15%	± 15%
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	0.1 m/s

		m/s: ±10% (whichever is greater)	
Barometric Pressure	300 to 1100 hpa	± 3 hpa	0.1 hpa

15.3. 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	6V-500mA (Included)
Battery Life	If the base station signal reception is good, the transmitter battery can last at least 12 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).

16. Maintenance

(1)We recommend cleaning the rain gauge once every 3 months. Twist the funnel counterclockwise 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.

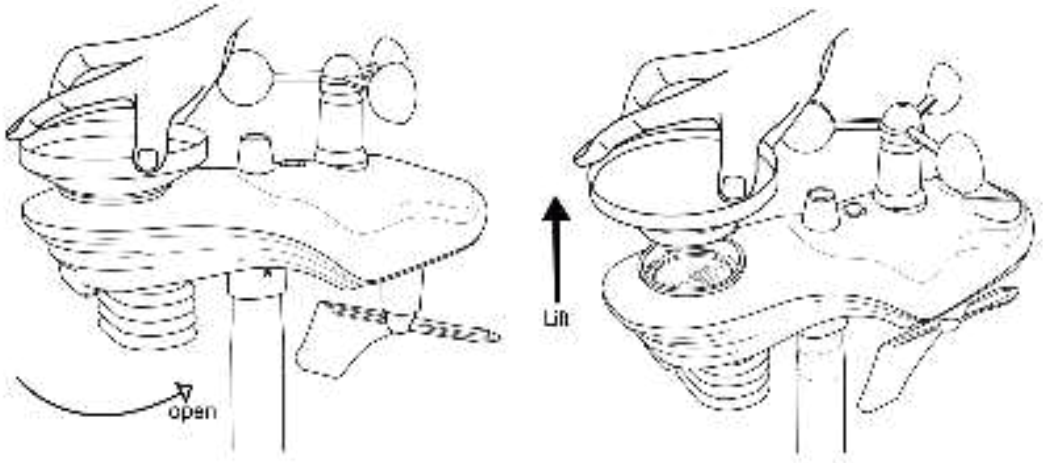


Figure 31

(2) Clean the solar radiation sensor and 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, and UV rays. Therefore, we recommend spraying Teflon spray on the rain gauge funnel and coil filter to reduce the surface tension of the water.

17. Troubleshooting Guide

If your question is not answered here, you can contact us by phone, email or official website:

（1） Email：info@sainlogic.com
（2） Website：https://www.sainlogic.com/
（3） Phone number（Skype）：+1(508)758-0493（10 a.m.–2 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 CHANNEL/+ button for 3 seconds, select the lost sensor, and the remote search icon will display

	continuously. When the signal is reacquired, the remote search icon will turn off and the current value will be displayed. 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 MAX/MIN/- 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 CHANNEL/+ 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 13). 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. (Refer to 9.2)
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.

18. 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.

19. 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 email.
Email：info@sainlogic.com

FCC Warnning:

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 againstharmful interference in a residential installation. This equipment generates, uses and can radiateradio frequency energy and, if not installed and used in accordance with the instructions, maycause harmful interference to radio communications. However, there is no guarantee thatinterference will not occur in a particular installation. If this equipment does cause harmfulinterference to radio or television reception, which can be determined by turning the equipmentoff and on, the user is encouraged to try to correct the interference by one or more of thefollowing 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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

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.