

Weather Station

User Manual

Model: WS-SA9

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Scan to
Watch
Installation
Tutorial



Package Includes:

- Integrated Outdoor Transmitter
- Display Console
- Mounting Brackets and Accessories
- Instruction Manual
- Power Adapter

● Indoor and outdoor unit connection steps:

Step 1: Plug in the display console using the power adapter.



Step 2: 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.



Step 3: Pairing the indoor and outdoor units:

Press and hold the **CHANNEL+** button for at least 3 seconds, then press the **Reset** button on the outdoor unit once.

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.



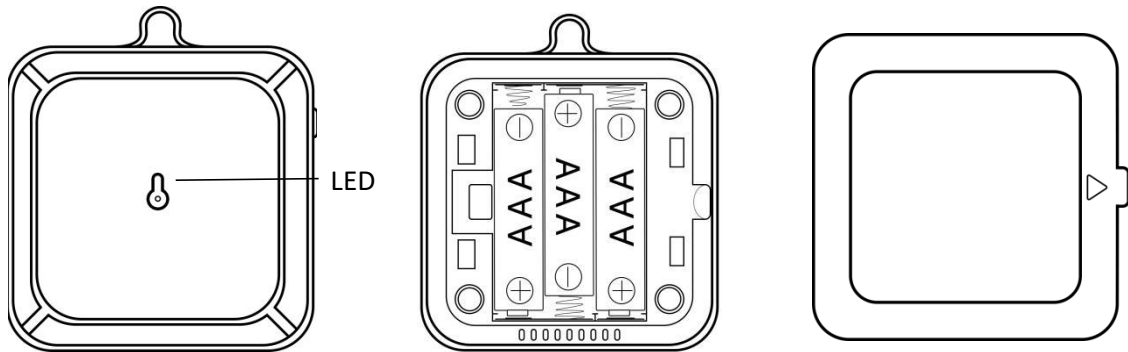
Step 4: How to connect the small sensor

 **Note:** This step is only supported for SA9 Plus. For SA9 models, please ignore this step.

 **Note:** To avoid permanent damage, please take note of the battery polarity before inserting the batteries.

 **Note:** Lithium batteries are recommended for cold weather environments.

1. Open the battery compartment, as shown below. Insert three fresh AAA batteries (with the negative terminal of the battery in contact with each spring).



2. The LED shown in the above image will light up (visible through the plastic).

For small sensor pairing:

Press and hold the **ALARM** button on the right side of the display to enter sensor pairing mode. And then long press the small sensor' button.

 **Note:** Please note that the pairing process must be performed separately from the outdoor unit.

3. It is recommended that you mount the small sensor outside in a shaded area. A north-facing wall is preferred because it is in the shade most of the day. Direct sunlight and radiant heat sources will result in inaccurate temperature readings. Although the sensor is not waterproof, it is best to mount it in a well-protected area, such as under an eave.

 **Note:** This small sensor only supports viewing data on the display screen and does not support WiFi connectivity.

● **How to connect to the inercom app:**

You can scan this QR code or store it to install the "inercom" APP.



iOS



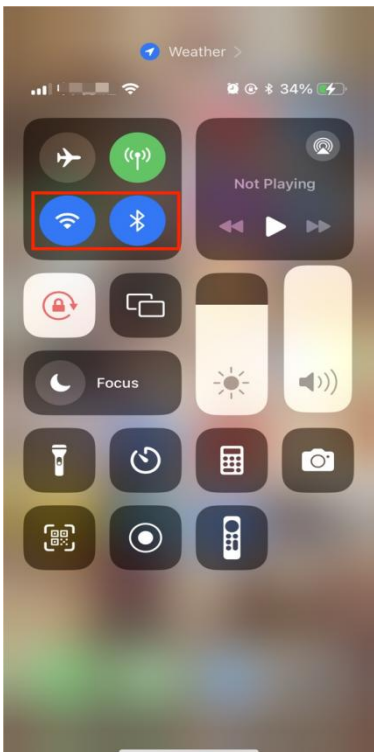
Google



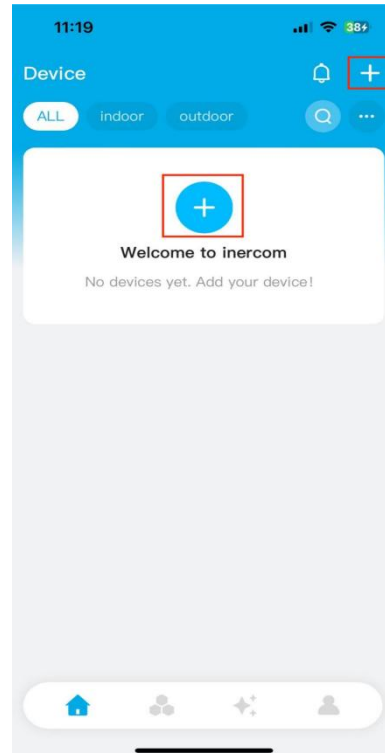
Press and hold the MAX/MIN - key to enter the distribution network mode. The WiFi icon  will flash, and the BI icon will be displayed in the date area.

 Note: Turn on the Bluetooth/WiFi on your smartphone.

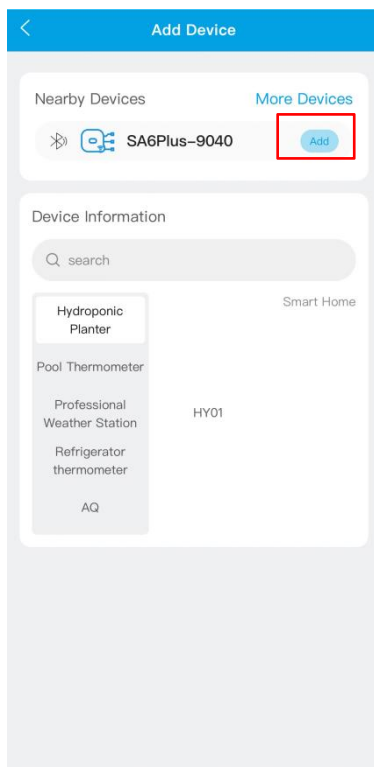
1. Turn on the Bluetooth/WiFi



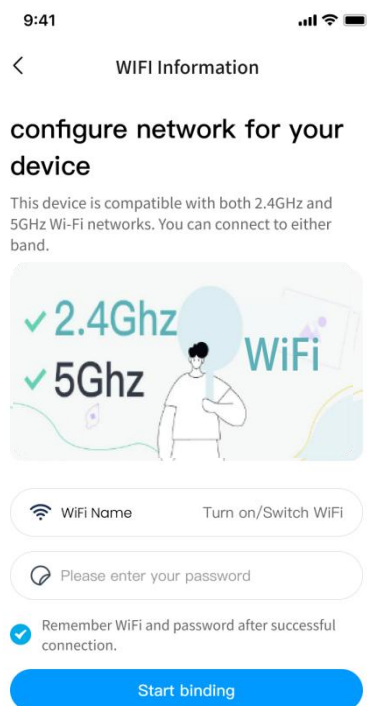
2. Search for the device



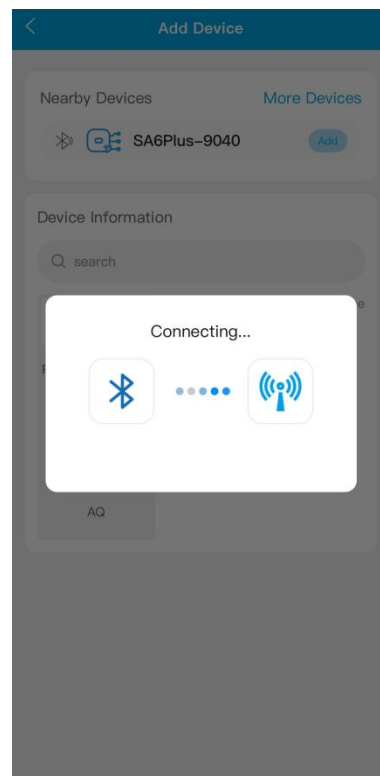
3. Add device



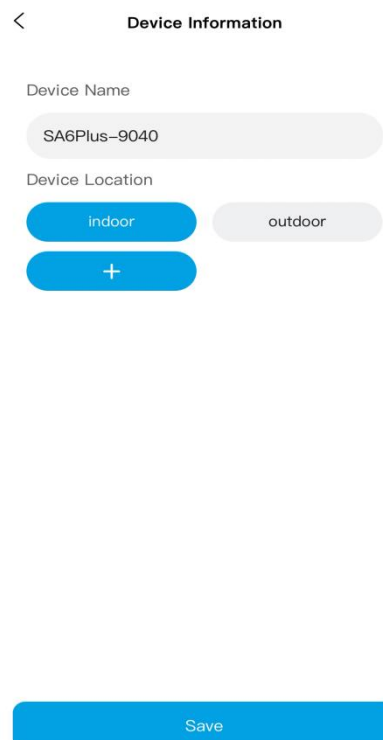
4. Enter your WiFi passwords

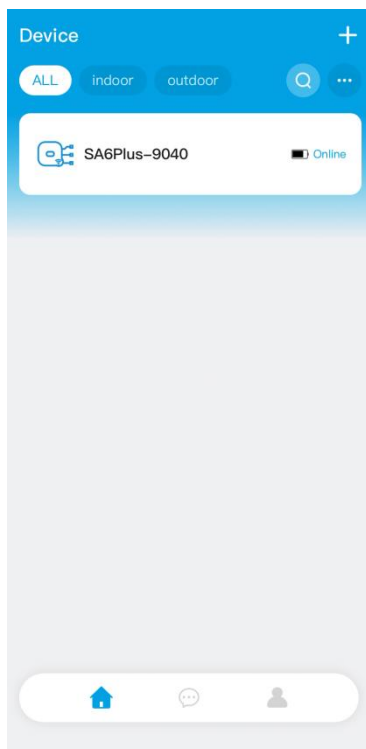


6. Connection successful



5. Custom device name



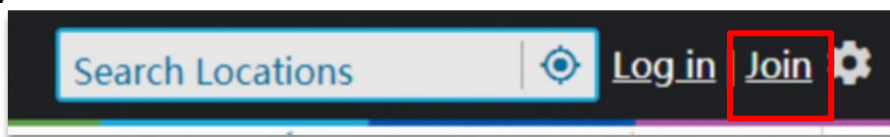


 Note: Routers that support 2.4 GHz and 5 GHz frequency bands.

* Sign up on Wunderground.com

The device supports connection to the Weather Underground platform.

1. Visit the “<https://www.wunderground.com>” website. Click the “Join” button, input your e-mail and password, and select the “Sign up for free” button to create your own account.



Member Account

Join Weather Underground

- Choose adding your webcam or personal weather station.
- You can delete your account at any time from your member settings.

The Weather Company needs your email to create your Weather Underground account.

Email
myweather@com ✓

Password (5-30 characters) [Show](#) ✓

Confirm New Password:

.....

☒ I agree to the Terms of Use

[Sign up for free](#)

[Already have an account? Sign in](#)

2. Click the **“Sign in”** button to log in, and switch to the **Member Settings** page.

[Sensor Network](#)
[Maps & Radar](#)
[Severe Weather](#)
[News & Blogs](#)
[Mobile Apps](#)
[More](#)

[Log in](#)
[Join](#)

Popular Cities
San Francisco, CA 56°F Fair
Manhattan, NY 84°F Mostly Cloudy
Schiller Park, IL (60176) 67°F Cloudy
Boston, MA 76°F Clear
Houston, TX 84°F Fair
St James's, England, United Kingdom (WC2H 7DE) 64°F Clear

Member Account

Sign in to Weather Underground!

Email
myweather@com ✓

Password [Forgot your password?](#) ✓

.....

[Sign in](#)

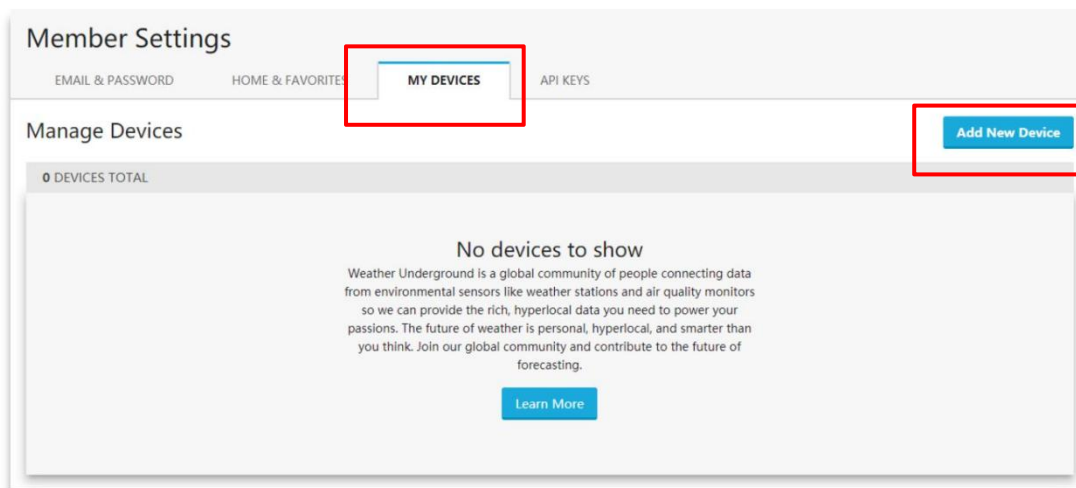
[Don't have an account? Sign up](#)

[Terms of Use](#) | [Privacy Policy](#)

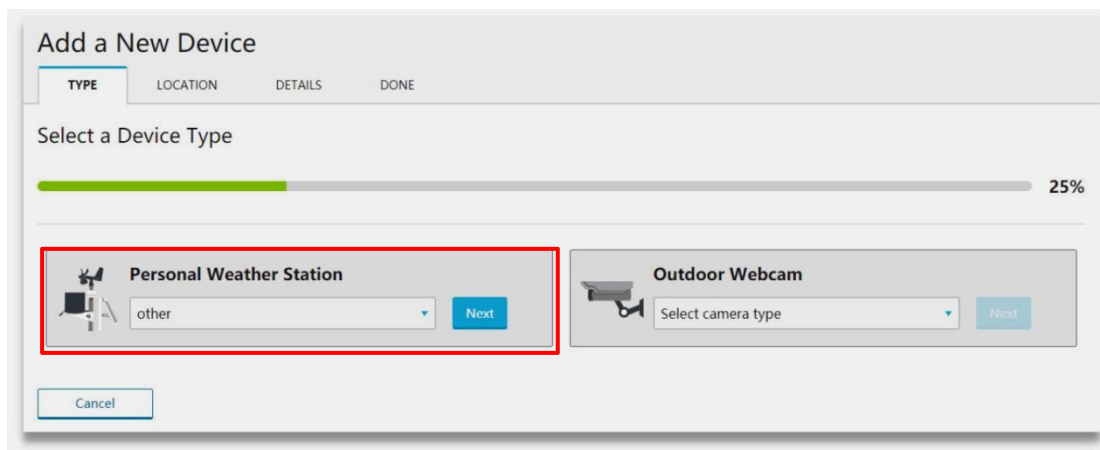
Please read these terms carefully. By using Weather Underground or signing up for an account, you're agreeing to these terms.

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

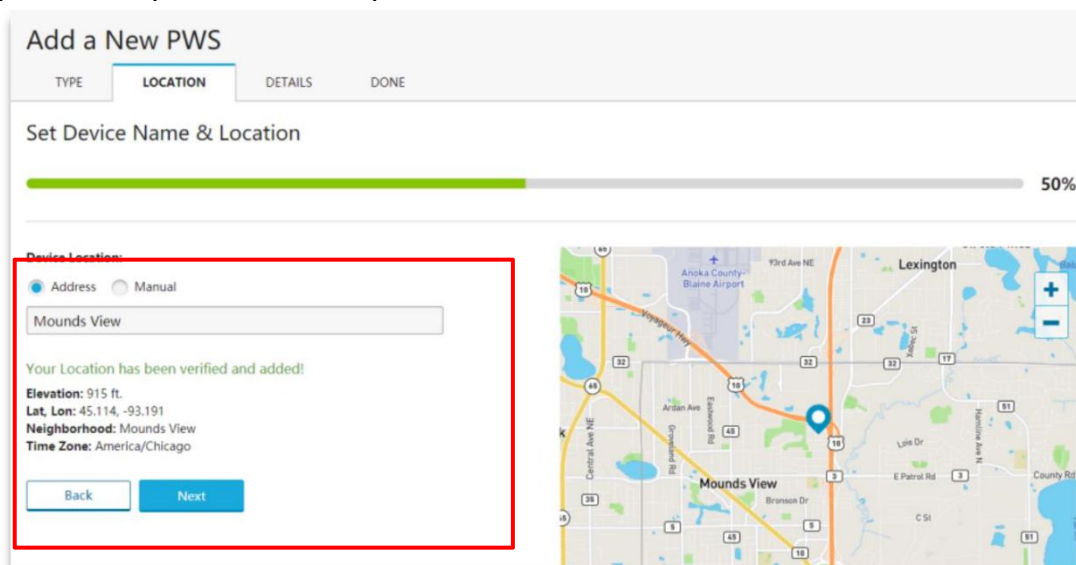
Note: On the **“Add New Devices”** page, set the **“TYPE”**, **“LOCATION”**, **“DETAILS”**, and **“DONE”** pages step-by-step until 100% completed.



4. On the **TYPE** page, click the “**Personal Weather Station**” drop-down list to select “**Other**”.



5. On the **LOCATION** page, select the “**Address**” or “**Manual**” option, find and input your local position, then press “**Next**”.



6. On the **DETAILS** page, fill in the “**Required**” information, then press “**Next**”.

Add a New PWS

TYPE LOCATION DETAILS DONE

Tell Us More About Your Device

75%

Name:(Required)
WS0001

Surface Type:
[Dropdown]

Elevation:(Required)
4905

Associate Webcam:
Select WebCams [Dropdown]

Device Hardware:(Required)
other [Dropdown]

Height Above Ground:
Ft. Above Ground [Text]

You Make Our Forecasts More Accurate, We Respect Your Privacy
Contribute to the Weather Underground community by sharing some information about yourself and your sensor. We use this information to manage your account and to improve the experience from the Weather Underground community. We may also share certain data for commercial purposes, such as your sensor location.
[Learn more about how we take your privacy seriously](#)

☒ I Accept ☐ I Deny

Email Preferences:
☐ I would like to receive PWS notifications.

Back Next

7. On the **DONE** page, the device “**Station ID**” and “**Station Key**” are shown. Copy and record the information for later use.

Add a New PWS

TYPE LOCATION DETAILS DONE

Registration Complete!

100%

Congratulations! Your personal weather station is now registered with Weather Underground.
Enter the information below to your weather station software.

Your PWS
Station ID: K[Redacted]1
Station Key: D[Redacted]d
Copy credentials

View Devices

Configure Your Software

8. Click to view the API keys.

Member Settings

[PROFILE](#)
[SUBSCRIPTION](#)
[HOME & FAVORITES](#)
[MY DEVICES](#)
[API KEYS](#)

Your API Key

.....

Expires: Fri, 24 May 2024 06:41:51 GMT

Copy to Clipboard

[Show Key](#)

Ready to use your key?

[View API Documentation](#)

☐ I agree to the [Terms of Service](#)

Regenerate Key

Delete Key

9. After registration, please copy and paste the API KEYS, ID, and KEYS to the WU board. Due to the network speed problem, you may need to wait for a period of time (about 2-5 minutes) before data is synchronized.

After a successful connection, the weather station will be online at Weather Underground. If it is not online in time, please check the API KEYS, ID, and KEYS carefully to see if they are entered correctly. Please exit the app and re-enter to try again.

15:58

82%

More Operations

WU

Export Data

Comparison Of Historical Data

Multi Device Data Comparison

Equipment Information

Alarm Settings

Calibration

Firmware Version

Switch WiFi

Delete The Device

My Weather Station

D46

Whether to share with Weather Underground?

☒ Yes ☐ No

Weather Underground Info

03bd34e7c:.....

KT.....

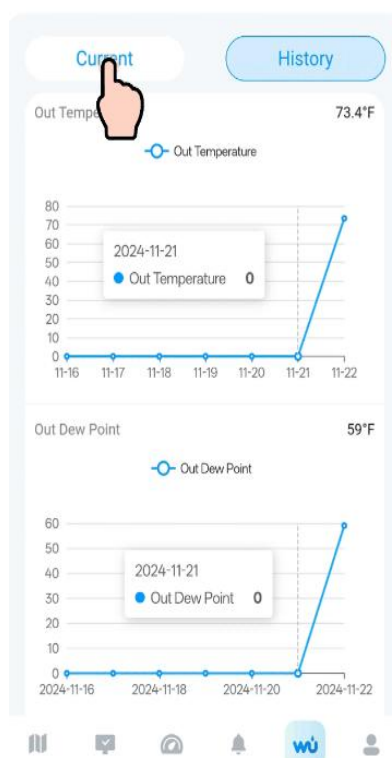
KYc.....

Connect

Please report to www.weatherPin.com to verify your device.

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

Weather Underground has challenged the conventions around how weather information is shared with the public since 1993. Weather Underground is the Internet's 1st weather service. It's safe, free and reliable.

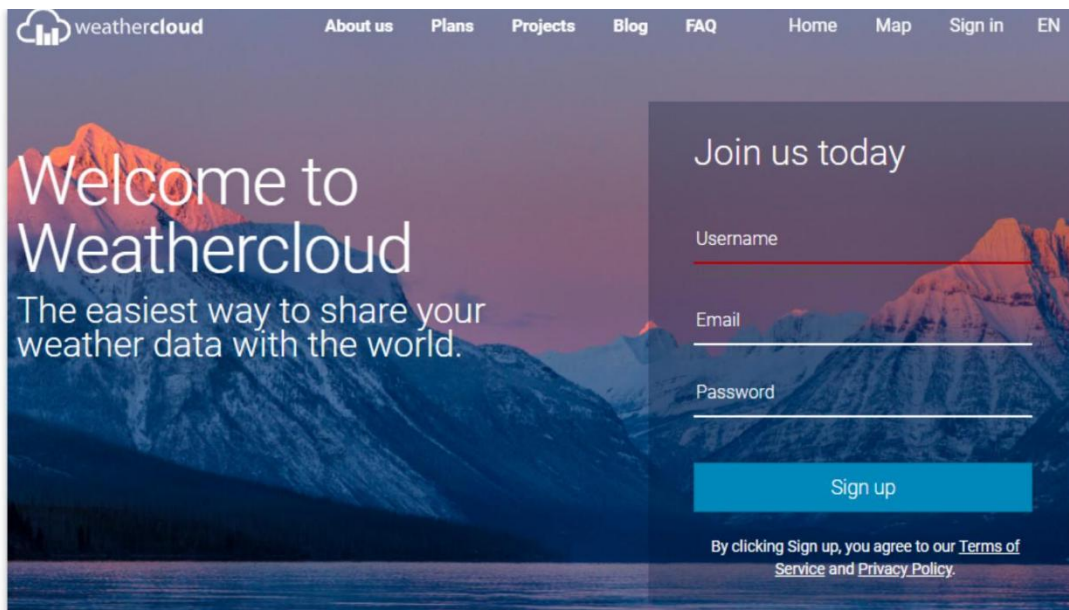


* Sign up on Weathercloud.net

 **Note:** This is best done on a computer desktop or laptop.

1. **Visit** : <https://weathercloud.net/> and enter a Username, Email, and Password (It is *your login password for the website. It is not your email password. So no privacy will be exposed*).

Check your email and click the verification link to activate your account.



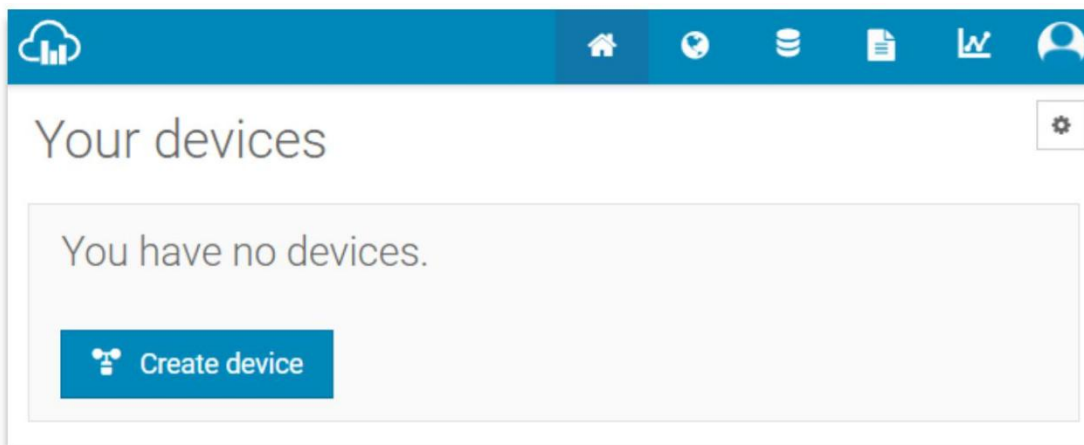
2. Create Device

Log in and click "**Create device**" in the top right corner.

Fill in the device information:

- Name: Name of your weather station
- Model: Select your device model (you can choose "**other**")
- Location: Pin your installation site on the map

Click Create to save.



Basic information

Name * SA68

Model * Other

Link type * Other

Website www.example.com

Description

Location

Country * Select country

State / Province * Select state / province

City *

Time zone * (UTC+00:00) UTC

Coordinates

Get coordinates

Latitude *

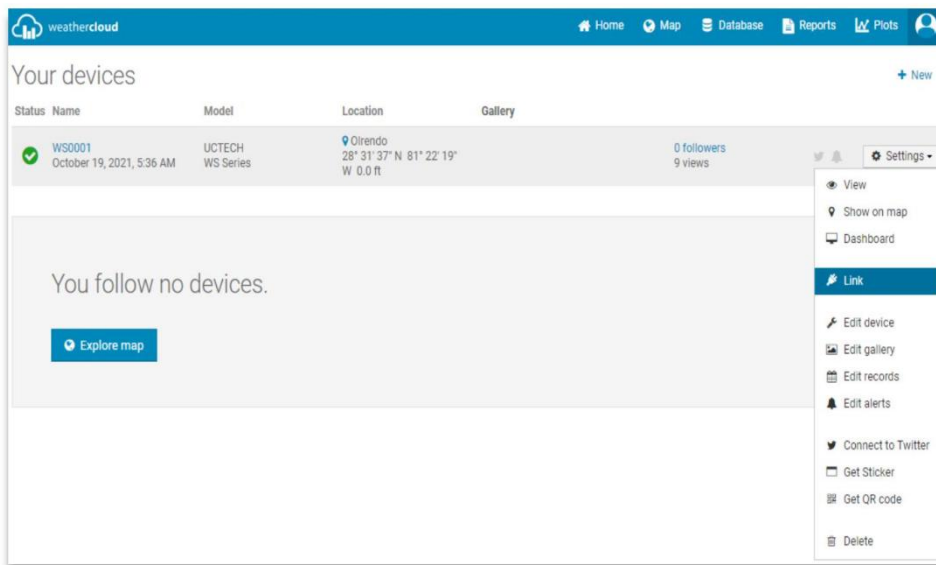
Longitude *

Elevation 0.0 m

Height 0.0 m

3. Get ID & Key

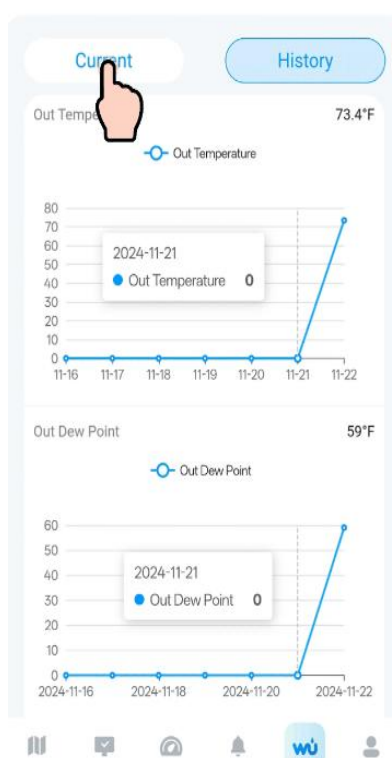
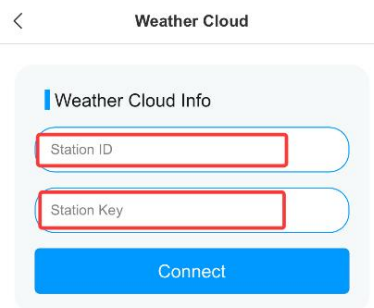
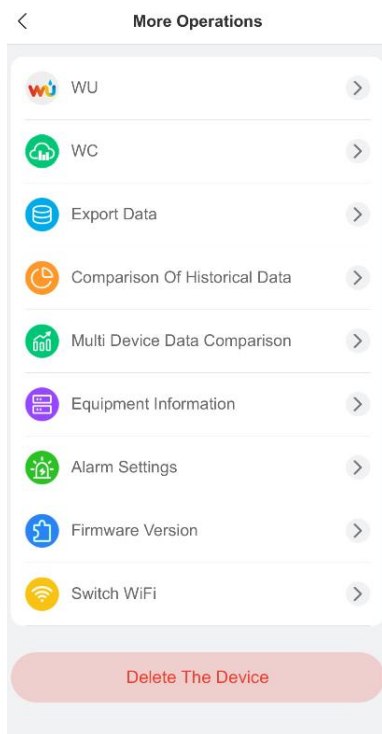
- Find your station in the device list and click **Settings** -> **Link**.
- Copy and save the **Weathercloud ID** and **Key**.



4. Configure Device/App

 **Note:** Please update your device to the **latest firmware**; otherwise, data will not be successfully uploaded to Weather Cloud.

Paste the copied Weathercloud ID and Key, then tap "**Connect**".



* Firmware Upgrade

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

 Export Data >

 Comparison Of Historical Data >

 Multi Device Data Comparison >

 Equipment Information >

 Alarm Settings >

 Calibration >

 Firmware Version >

 Switch WiFi >

Delete The Device



Current version: sa6p-c5t-3.0.4.260526

Latest version: [sa6p-c5t-3-0-4-260526.bin](#)

OTA Update Content:

Update

1.Introduction

Thank you for purchasing the Professional WiFi Wireless Weather Station. The following user guide provides detailed instructions on installation, operation, and troubleshooting. This product is continually evolving and improving, particularly in its online services and associated applications.

To download the latest manuals and other information, please contact Customer Support.

Customer Support E-mail: info@sainlogic.com

Website: www.sainlogic.com

Customer Support Phone: +1 (888) 513-9823 (Mon-Fri 10 a.m. - 6 p.m., Eastern Standard Time)

2. Warning and Cautions

 **WARNING:** Lightning strikes can be caused by any metal object, including your weather station mounting pole. Mounting your weather station during a storm is prohibited.

 **WARNING:** Installing a weather station in an elevated location may result in injury or death, so perform as many preliminary checks and operations as possible on the ground and inside a building or house.

 **WARNING:** Install the weather station on a clear, dry day.

3. Quick Start Guide

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

1	Assembling and Activating the Outdoor Sensor Array	4
2	Installing and Activating the Display Console to Connect to the Outdoor Sensors	5-6
3	Display Function Setup	7
4	Calibration Functions	7.3
5	Troubleshooting	10

4. Assembly of Sensor Arrays

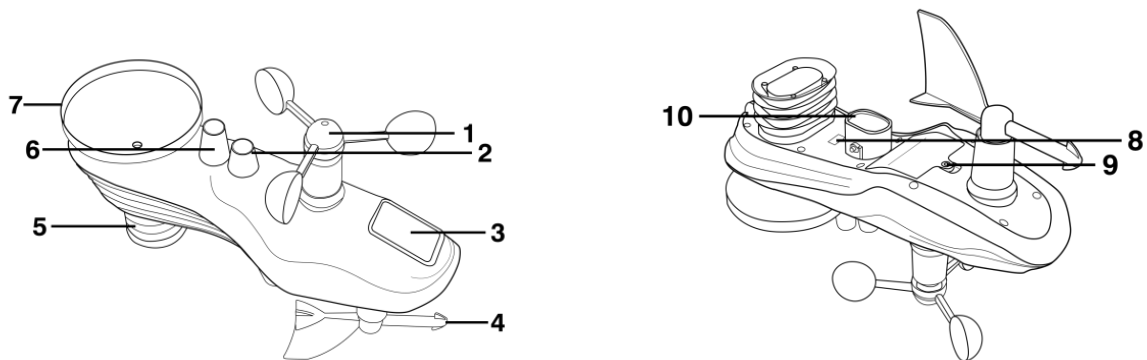


Figure 1

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

5. Button Operation

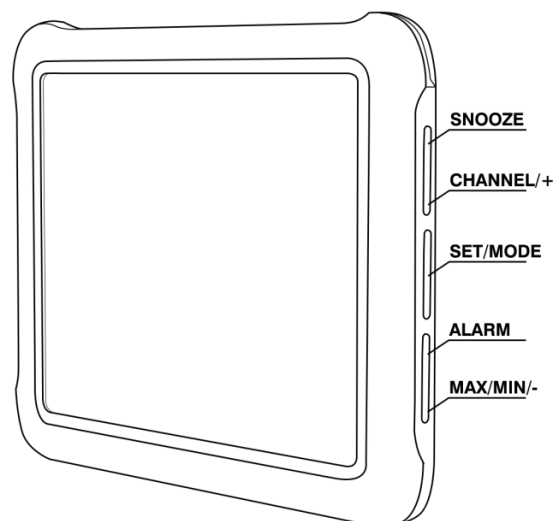


Figure 2

The following 5 keys can be found on the right side of the console (from top to bottom) and 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 three levels of brightness. 2. In any setting mode, short press to return to normal mode. 3. Long press to keep the display on or turn off the backlight.
CHANNEL/+	1. In normal mode, press and hold the SET key at the same time for 5 seconds to enter the temperature calibration mode. 2. double-click to display the MAC address. 3. In any setting mode, short press to increase the value; long press to increase the value quickly. 4. Long press to enter the outdoor unit and indoor unit pairing mode.
SET/MODE	1. In normal mode, short press to enter fast display mode. 2. Long press to enter the setting mode. 3. 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. 2. In calibration mode, short press to reset the calibration value. 3. Long press to enter sensor pairing mode. 4. In normal mode, press and hold the SET button for 5 seconds to enter the sensor calibration mode;
MAX/MIN/-	1. In normal mode, short press to switch to view the maximum and minimum values. 2. Long press to enter the network mode (BT; WIFI; Web); double-click to display the IP address. 3. In any setting mode, short press to reduce the value; long press to quickly reduce the value. 4. In normal mode, press and hold the SET button for 5 seconds to enter the humidity calibration mode;

5.1. Display Console

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

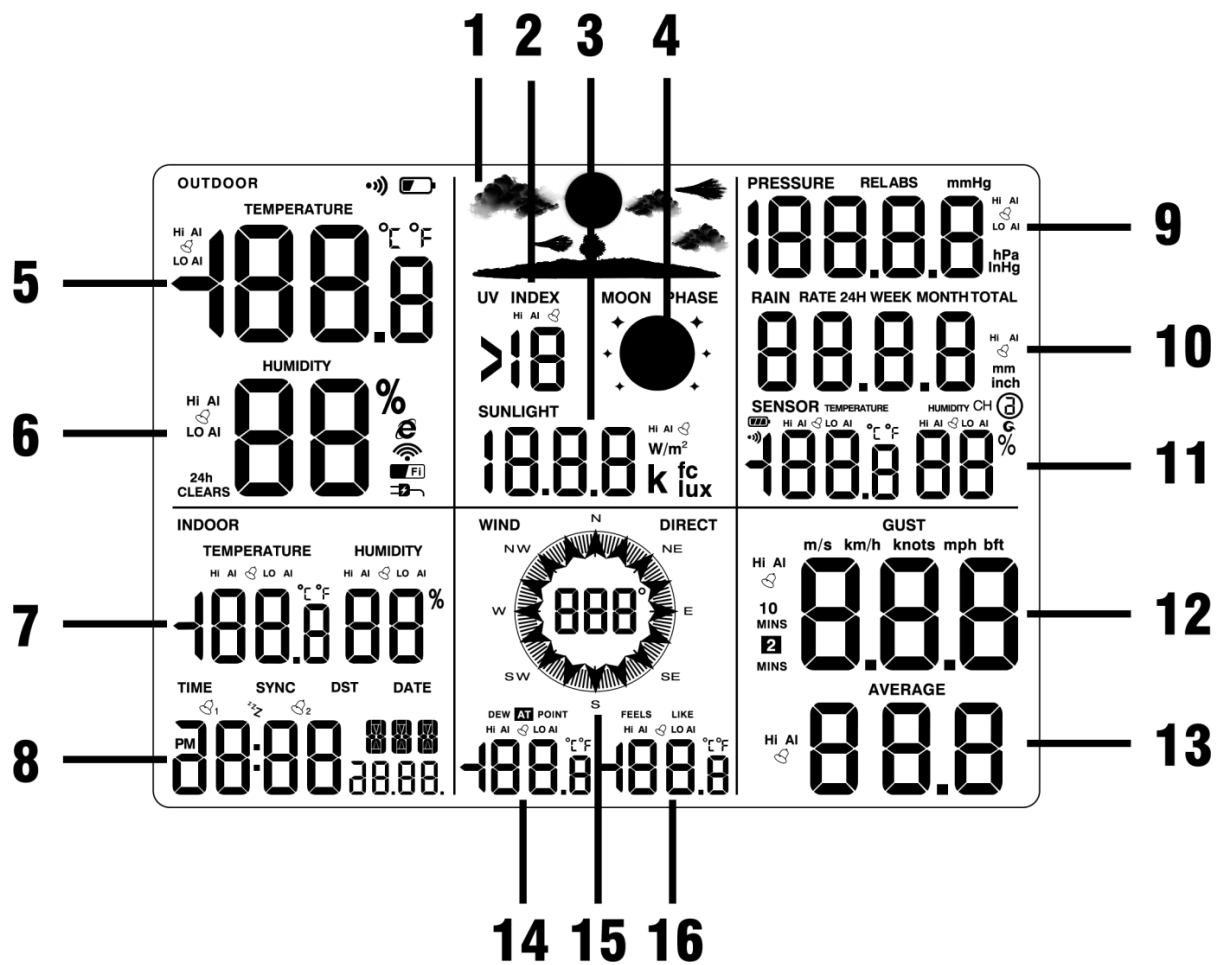


Figure 3

No	Description	No	Description
1	Weather Icon	9	Barometric Pressure
2	UV	10	Rainfall
3	Sunlight	11	Sensor data (For SA9 Plus)
4	Moon Phase	12	Wind Gust
5	Outdoor Temperature	13	Average Wind Speed
6	Outdoor Humidity	14	Outdoor AT/Outdoor Dew point
7	Indoor Data	15	Wind Direction
8	Time	16	Outdoor Feels Like

5.2. Backlight Operation

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.

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

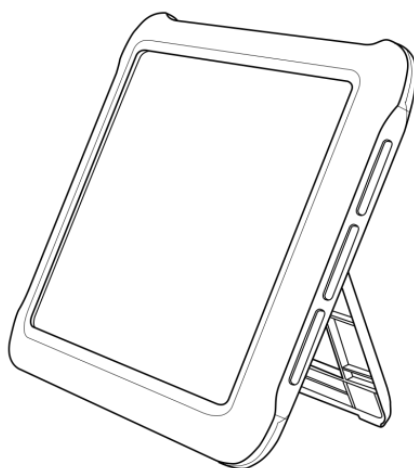


Figure 4

6. Install Outdoor Unit

Locate the battery door at the bottom of the transmitter, as shown in Figure 5.

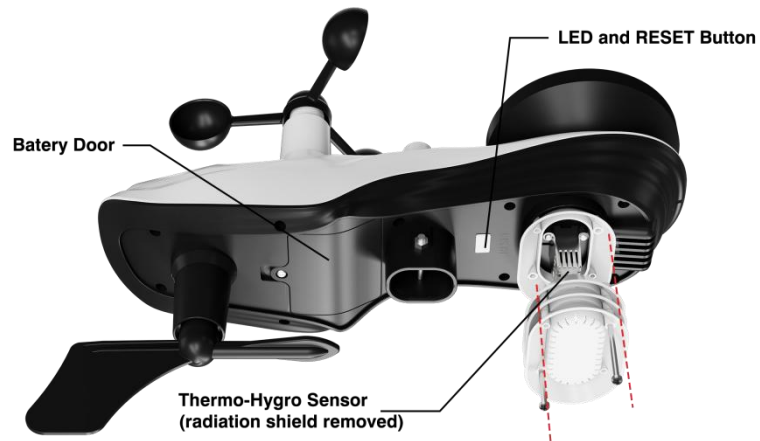


Figure 5

Remove the battery door on the back of the sensor by removing the set screw, as shown in Figure 6.



Figure 6

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.

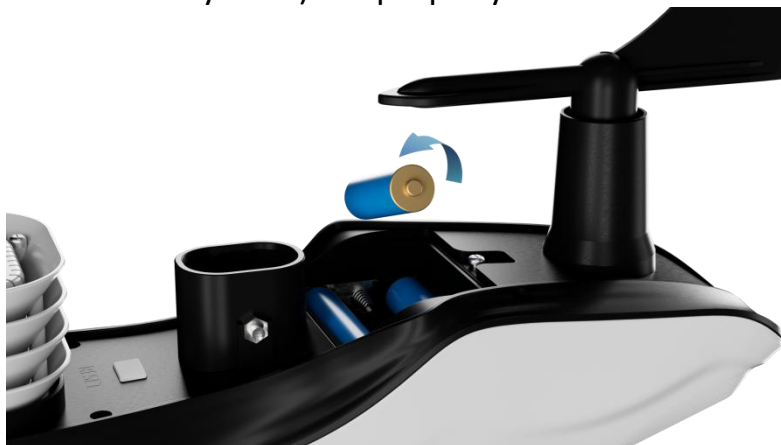


Figure 7

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

Once the battery is installed, the Integrated Outdoor Sensor LED indicator will illuminate for 3 seconds and then blink every 60 seconds. The sensor is transmitting data each time it blinks.

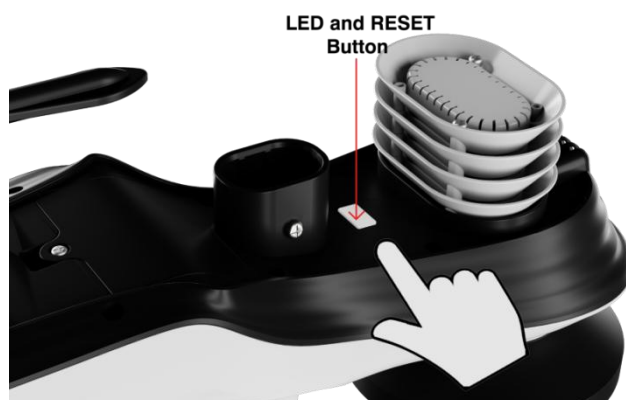


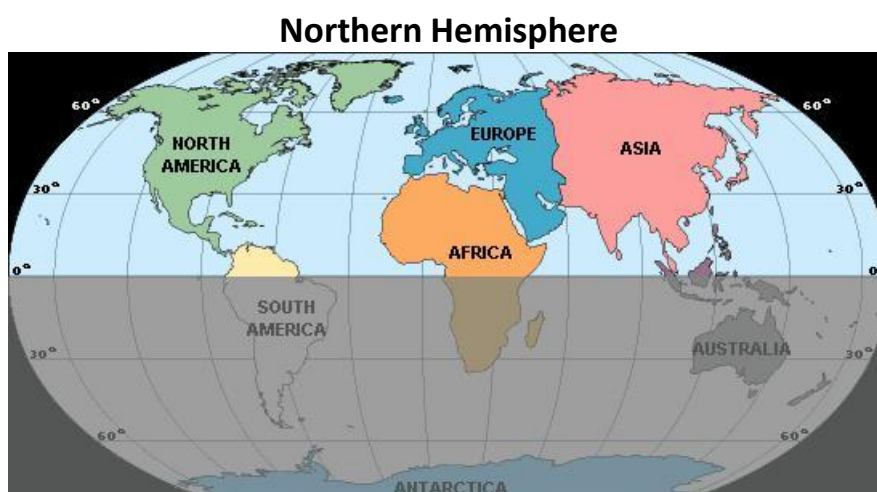
Figure 8

 **NOTE:** If the sensor LED does not flash after inserting the batteries, press the reset button located at the bottom of the sensor, as shown in Figure 9.

6.1. Adjusting the Sensor Mounting Direction

This professional weather station is suitable for use 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)



Southern Hemisphere

Figure 9

6.1.1. 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.

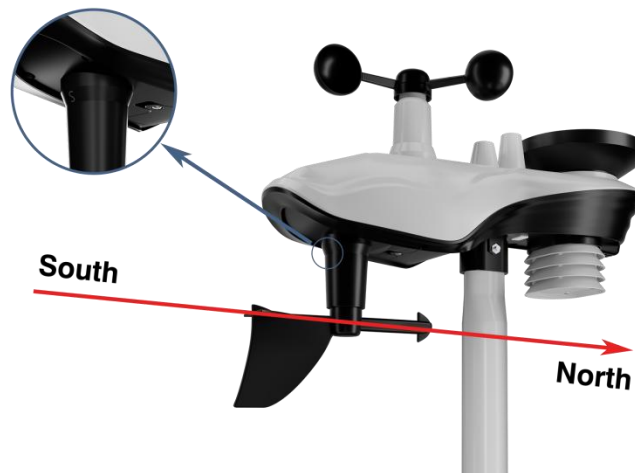


Figure 10

Step 2: On the display console, set the location region to the Northern Hemisphere (NOR will appear in the time zone).

6.1.2. Southern Hemisphere Reference

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 positioned to face north.

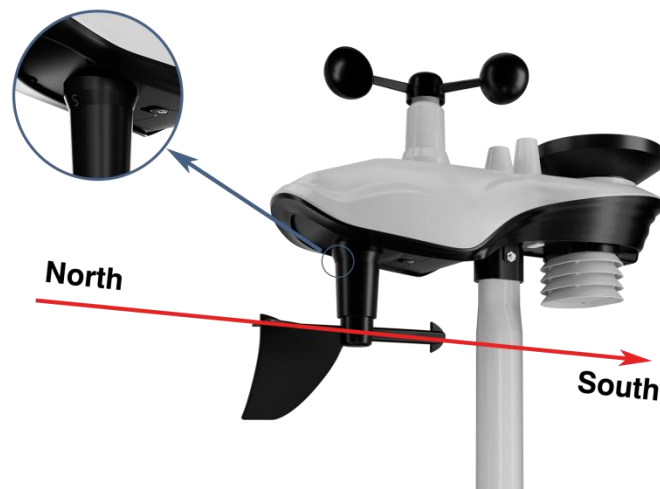


Figure 11

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).



Note: The location region (NOR or SOU) on the display console and the sensor direction 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.

6.2. Securing the Mounting Pole

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

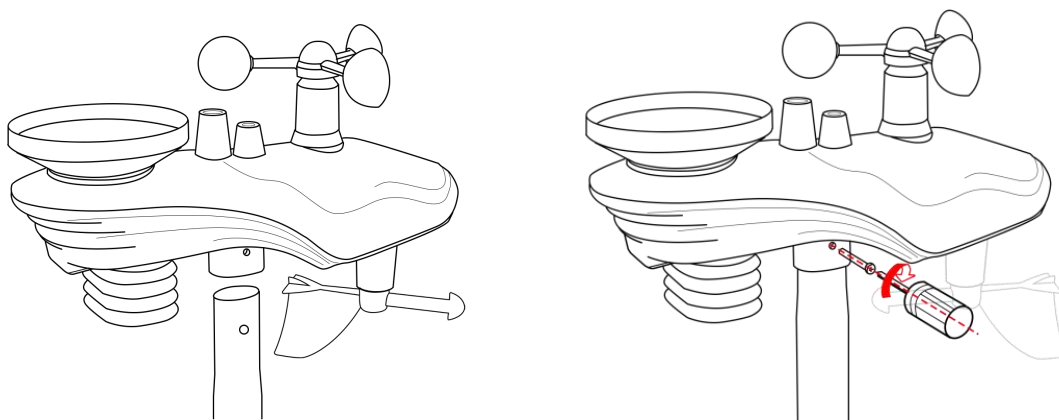


Figure 12

 **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.

6.2.1. Horizontal Mounting and Fixing Sensors

Fasten the integrated outdoor sensor to the mounting bar bracket with two mounting bolts ($\varnothing 4$) and nuts (M3). Then, tighten the mounting bar to your existing mounting bar using four bolts ($\varnothing 5$) and nuts (M5), or secure it to a flat surface with four self-tapping screws, as shown. (Figure 13)

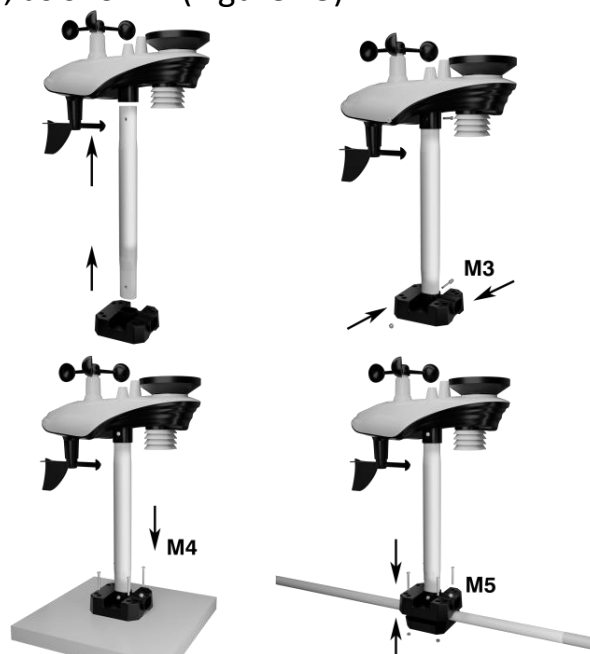


Figure 13

6.2.2. Vertical Mounting and Fixing Sensors

Fasten the integrated outdoor sensor to the mounting bar bracket with two mounting bolts ($\varnothing 4$) and nuts (M3). Then, tighten the mounting bar to your existing mounting bar with four bolts ($\varnothing 5$) and nuts (M5), or secure it to a flat surface with four self-tapping screws, as shown. (Figure 14)

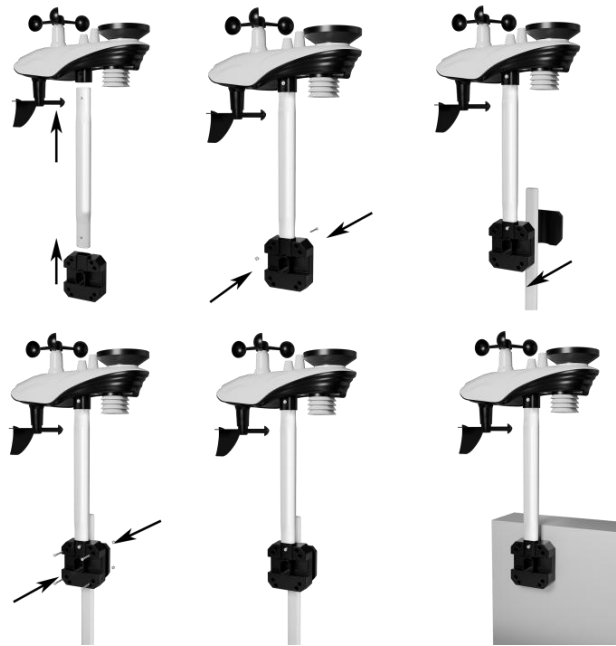


Figure 14

7. Display Console Operation

7.1. Set Mode

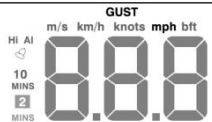
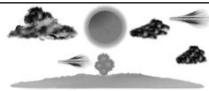
 NOTE: In Set Mode, press the CHANNEL/+ key or the MAX/MIN/- key to change or scroll the setup value. Press and hold the CHANNEL/+ key or MAX/MIN/- key for three seconds to quickly increase or decrease.

 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	Com mand	Mode	Settings	Image
1	SET]+ 3 sec	BZ ON/OFF	Press the CHANNEL/+ key or MAX/MIN/- key to toggle BZ on/off.	 

2	[SET]	Time SYNC	- 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.	
3	[SET]	DST	Press the CHANNEL/+ key or MAX/MIN/- key to toggle DST on/off.	
4	[SET]	12/24-Hour Format	Press the CHANNEL/+ key or MAX/MIN/- key to toggle between 12-hour and 24-hour.	
5	[SET]	Hour	Press the CHANNEL/+ key or MAX/MIN/- key to adjust the hours up or down. The PM icon will be displayed during afternoon hours.	
6	[SET]	Minute	Press the CHANNEL/+ key or MAX/MIN/- key to adjust the minutes up or down.	
7	[SET]	Date Format	Press the CHANNEL/+ or MAX/MIN/- key to toggle between M-D and D-M.	
8	[SET]	Month	Press the CHANNEL/+ or MAX/MIN/- key to adjust the calendar month.	
9	[SET]	Day	Press the CHANNEL/+ or MAX/MIN/- key to adjust the calendar day.	
10	[SET]	Year	Press the CHANNEL/+ key or MAX/MIN/- key to adjust the calendar year.	
11	[SET]	Max/Min Clearing	The maximum/minimum value can be set to daily (midnight) or manually cleared.	24h CLEARS 

			Press the CHANNEL/+ key MAX/MIN/- key to toggle between ON (24-hour clearing) and OFF (manual).	
12	[SET]	Temperature Measurement Unit	Press the CHANNEL/+ or MAX/MIN/- keys to toggle between °F and °C measurement units.	
13	[SET]	Sunlight Unit	Press the CHANNEL/+ key or MAX/MIN/- key to toggle the daylight display unit between W/m2, fc, or lux.	
14	[SET]	Barometric Pressure Unit	Press the CHANNEL/+ key or the MAX/MIN/- key to toggle the pressure unit between mm Hg, inHg, or hPa.	
15	[SET]	Rainfall Measurement Unit	Press the CHANNEL/+ key or MAX/MIN/- key to toggle the rainfall unit between mm and inches.	
16	[SET]	Wind Speed Measurement Unit	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.	
17	[SET]	Pressure Threshold Setting	Press the CHANNEL/+ key or the MAX/MIN/- key to change the pressure threshold from 2 hPa to 4 hPa.	
18	[SET]	Weather Settings Icon	Press the CHANNEL/+ key or the MAX/MIN/- key to select the initial weather icon for a sunny, less cloudy, cloudy, or rainy day	

19	[SET]	Location Area	Press the CHANNEL/+ key or the MAX/MIN/- key to toggle the geographic location of the Northern Hemisphere (NOR) or Southern Hemisphere (SOU).	
20	[SET]	Exit Setup 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.

7.2. Viewing Max/Min Mode

In normal mode, press the MAX/MIN key once briefly; the MAX icon will be shown in the date area, and the display will show the maximum values for rainfall rate, gust, and average wind speed, ABS barometric pressure, outdoor temperature, humidity, and indoor temperature, humidity, etc. As shown in Figure 15(a).

To view the MIN values, press the [MAX/MIN] button again, and the minimum values will be displayed, as shown in Figure 15(b).

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

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

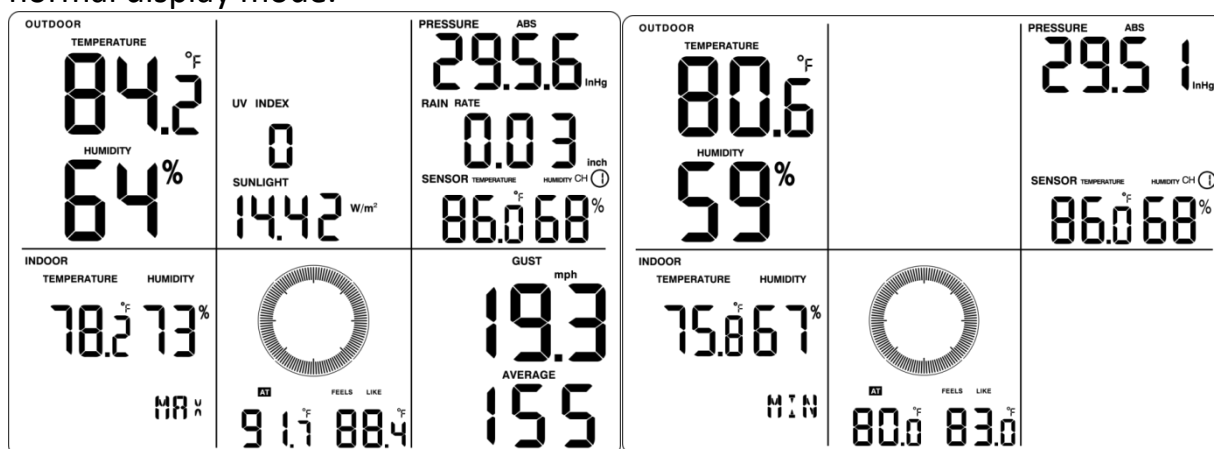


Figure 15(a)

Figure 15 (b)

7.2.1. Alarm Trigger

If the current value reaches the alarm condition, the alarm icon will flash (visual) and the alarm buzzer will sound (audible).

To turn off the buzzer, press any key.

7.2.2. Viewing High/Low Alarm Values

To view the high alarm settings, press (do not hold) the [ALARM] button, and the high alarms will be displayed, as shown in Figure 16 (a).

To view the low alarm settings, press the [ALARM] button again, and the low alarms will be displayed, as shown in Figure 16 (b).

To return to normal mode, press the [ALARM] button again.

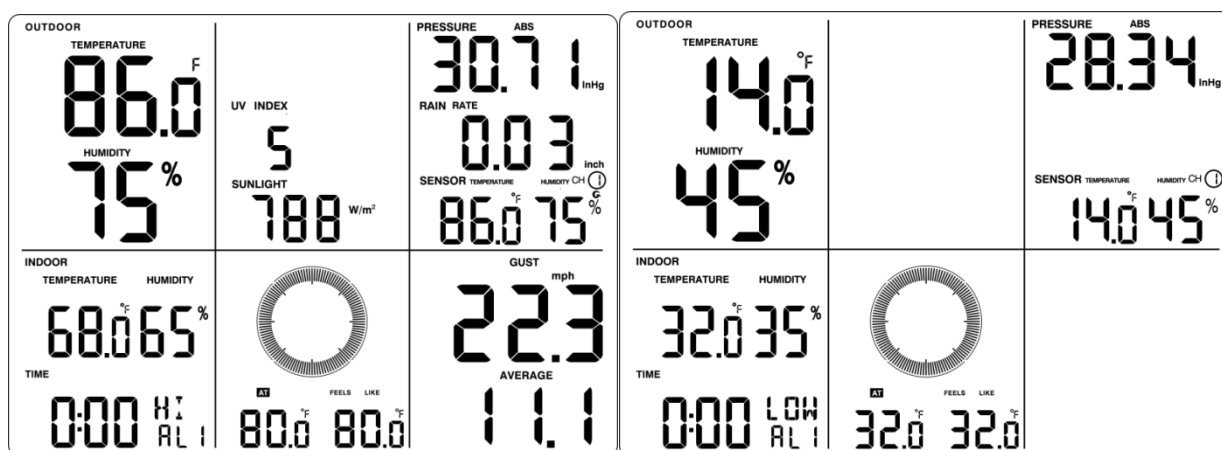


Figure 16(a)

Figure 16(b)

7.2.3. Setting Alarm Value

Please follow the steps below to set the wind speed alarm value.

1. Press the ALARM key to enter the alarm mode.
2. Next, press and hold the SET key for five seconds, and the first alarm parameter will begin flashing (alarm hour).

Please keep pressing the Set button briefly until the wind speed value is blinking.

3. Press the [+] or [-] key to increase or decrease the alarm settings.

4. Press the ALARM key to turn on (the alarm icon will appear) and off the alarm.
 5. Press the SNOOZE/LIGHT key once at any time to return to the normal mode.
- After 30 seconds of inactivity, the alarm mode will time out and return to the normal mode.

7.3. Calibration Mode

7.3.1. Temperature Calibration

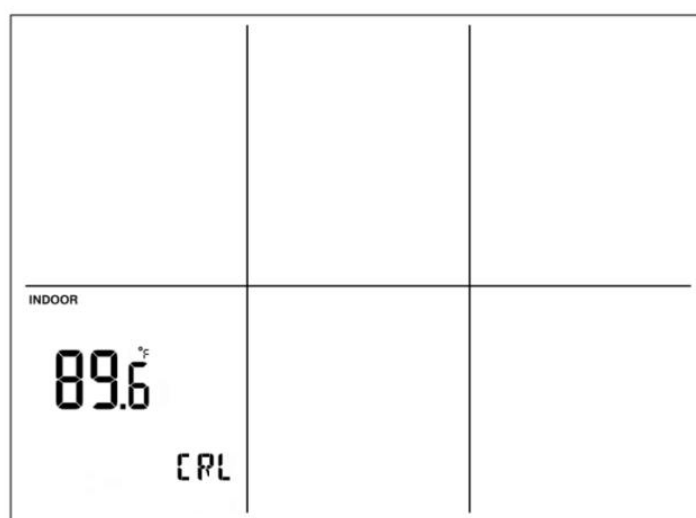


Figure 17

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.
[SET]	Sensor Temperature Calibration (For SA9 Plus)	- 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 automatically exit after 30 seconds.

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

*[SET] means press the SET button.

7.3.2. Humidity Calibration

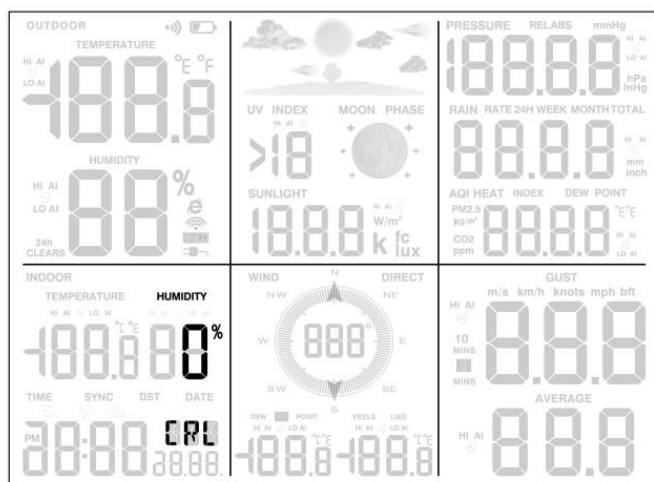


Figure 18

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

Command	Mode	Settings
[SET] and[MAX/MIN] IN/-]+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.
[SET]	Sensor Humidity calibration (For SA9 Plus)	- 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 automatically exit after 30 seconds.

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

*[SET] means press the SET button.

7.3.3. Sensor Mode Calibration

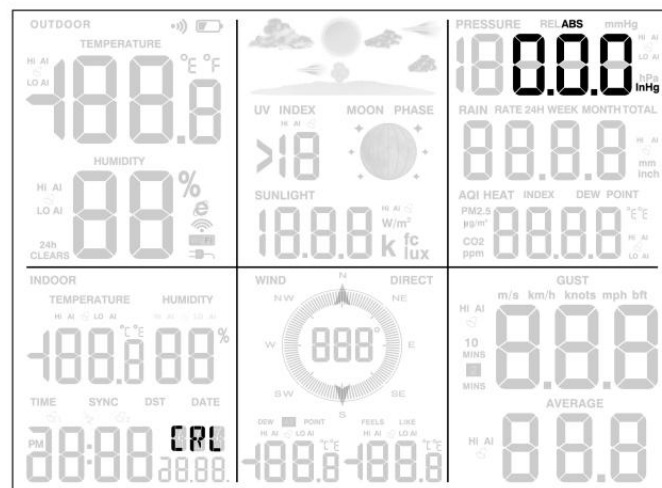


Figure 19

The following chart summarizes the setup sequence and commands for Sensor Calibration mode.

Command	Mode	Settings
[SET] and [ALARM]+5 sec	Enter Sensor Calibration Mode. 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: The calibration pressure source measures 28.37 inHg. The 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. (The 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 quickly 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 (the default value is 1.00). - Press the CHANNEL/+ key or the MAX/MIN/- key to adjust the wind speed calibration factor from 0.5 to 1.5. (Calibrated Wind Speed = Calibration Factor x Measured Wind Speed) - 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]	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 0.5 to 1.5 (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 0.5 to 1.5. (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 automatically time out after 30 seconds.

7.3.4. 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

Relative Pressure	± 0.27 inHg
Wind Speed	0.5-1.5
Rainfall	0.5.1.5

8. Moon Phase

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

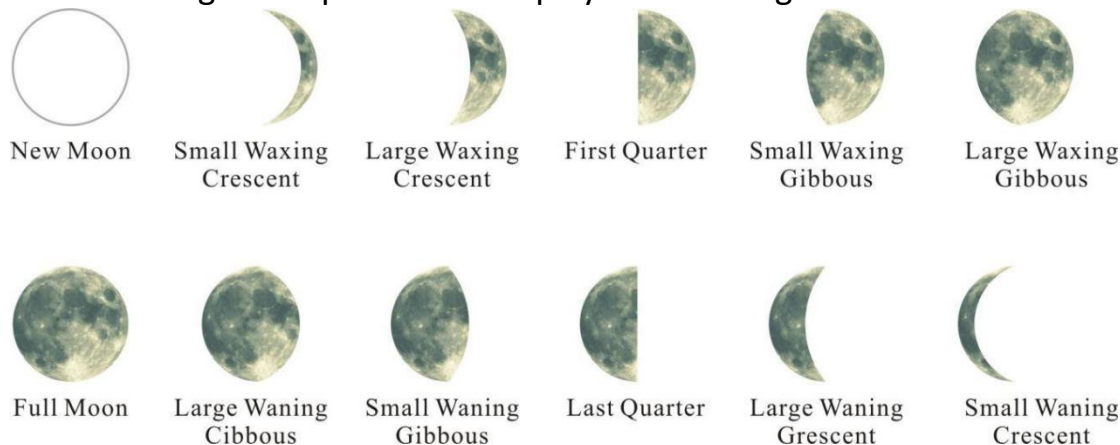


Figure 20

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

9. Specifications

The table below provides the specifications of the measured parameters.

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

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

10. Troubleshooting Guide

If your question is not answered here, you can contact us by E-mail, phone, and on our website:

Customer Support Phone and Website:

Customer Support E-mail: info@sainlogic.com

Website: www.sainlogic.com

Customer Support Phone: +1 (888) 513-9823 (Mon-Fri: 10 a.m. - 6 p.m. EST)

Problem	Solution
The wireless remote control is not reporting to the console. The display console has dotted lines; dashes (--.).	If any sensor communication is lost, dashes (--.) will appear on the screen. To reacquire the signal, press and hold the 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. You can also press the reset button. After the transmitter is powered on, if the indicator light blinks every 60 seconds, it means the outdoor unit is working properly. Also, you can replace the batteries in the transmitter with new ones. 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 Restore Factory Settings	To reset the console to factory default settings (including weather server and display settings), follow these steps: 1. Remove the battery and disconnect the power adapter to power off the console. 2. Connect the power adapter and power on. 3. When all layouts are displayed on the screen, press and hold the MAX/MIN-key at the same time, which will prompt two beeps until the console boot process is completed. 4. Replace the battery.
Indoor temperature and humidity data are 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.
The display is very dim	Adjust the backlight: If the brightness cannot be adjusted, it means that the power adapter or the display interface has a poor contact problem.
The weather forecast is inaccurate	The Weather Forecast icon predicts conditions for the next 12 to 24 hours, not current conditions. If you are just starting to use the weather station,

	wait for about a week for the pressure sensor to slowly adapt to the environment, and then adjust the data and weather forecast. After using it for a while, if the weather forecast is still inaccurate, you can follow the steps in the manual to manually set the weather icon to show the actual weather.
Rainfall display is incorrect/zero	Please check and verify the following points when you find your 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 readings or even non-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 is blocked by tree leaves or debris. Remove the rain collector to check whether the rain tip is 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 for different periods.

11. Warranty Information

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

This limited warranty takes effect 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 us to determine the problem and service procedure.

Warranty service is provided solely by us. Please provide the original sales invoice (with the date shown) as proof of purchase if required.

Our 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;

FCC Statement

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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