WS037C Professional Wireless Weather Station

User Manual

1.Introduction

Thank you for your purchase of the Professional Wireless Weather Station. The following user guide provides step by step instructions for installation, operation and troubleshooting.

2.Warnings and Cautions

⚠ **Warning:** Any metal object may attract a lightning strike, including your weather station mounting pole. Never install the weather station in a storm.

⚠ **Warning:** Installing your weather station in a high location may result in injury or death. Perform as much of the initial check out and operation on the ground and inside a building or home. Only install the weather station on a clear, dry day.

3.Getting Started

The professional weather station consists of a display console, a sensor array with Integrated Outdoor Sensor, and mounting hardware.

3.1 Parts List

The weather station consists of the following parts (as referenced in Figure 1).

QTY	Item	Image
1	**Display Console** Frame Dimensions (LxHxW): 7.6x5.5x1.1inch (193X140X28mm) LCD Dimensions (LxW): 6.3x 3.7inch (160X93mm)	

3.4 Display Console

3.4.1 Layout of Display Console

The following illustration shows the segment of LCD display for feature description purposes only in Figure 7.

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Figure 7

1) Outdoor temperature display 2) Outdoor humidity HI/LO alarm 3) Channel 1-8 indicator 4) Outdoor humidity display 5) WIFI network 6) Indoor temperature display 7) Indoor humidity display 8) Date 9) Time 10) Week 11) Moon phases	12) Outdoor temperature change indication 13) Outdoor dew point and feels like temperature display 14) Temperature units (°F or °C) 15) Weather forecast 16) Rainfall units of measure 17) Wind gust HI alarm 18) Wind direction 19) Wind speed average HI alarm Pressure (REL and ABS) display

3.4.2 Setup the Display Console

1. Plug in the display console with power adapter.

BL ON will display in the time area for three seconds when powered up. Conversely, The **AC OFF** icon will display .

Note: It is recommended to plug in the power adapter to reduce the battery consumption and extend the service life.

2. Display Console Batteries Installation

Remove the battery door on the back of the display, as shown in Figure 8. Install three AAA (alkaline or lithium)) batteries. The display will beep once and layout of display will light up for a few seconds to verify all segments are operating properly.

Note:The transmitter of Wifi2.4G & other wireless functions can not work when using the battery.

Figure 8

Replace the battery door, and unfold out the desk stand to place the console in the upright position.

Note: The battery is a back-up of weather station console, saving console settings when powered off from adaptor

3.4.3 Connect Sensor with Display Console

Once the display console is powered up, it will automatically scan all the nearby Integrated Outdoor sensors.

Note: Do not press any button until all the remote sensors report in the display screen, otherwise the display console will terminate to connect with remote sensors.

Note: While in the search mode, the remote search icon will be constantly displayed until all the measured values received. The console will automatically switch to the normal mode from which all further settings can be performed.

When connected with the Integrated Outdoor Sensor, the measured value (Indoor temperature,humidity,pressure,moon phase,time,wind speed,wind gust,wind direction,rain,outdoor temperature and humidity) will show up on the display console.

Note: Make sure that the distance between weather station sensors and display console should be within 10ft (3m) to 100ft (30m). If the weather station sensors is too close or too far away, it may not receive a proper signal.

3.5 Sensor Operation Verification

The following steps verify proper operation of the sensors prior to install the sensor array.

1. **Verify proper operation of the rain gauge.** Tip the Integrated outdoor sensor back and forth several times. You will heard a “ticking” sound within the rain gauge. Verify the rain reading on the display console is not reading 0.00. Each “ticking” represents 0.1 inch of rainfall.

2. **Verify proper operating of the wind speed.** Rotate the wind cups manually or with a constant speed fan. Verify the wind speed is not reading 0.0.

3. **Verify proper operation of in/outdoor temperature.** Verify the indoor and outdoor temperature match closely with the console and sensor array in the same location (about 5 to 10’ (1.5 to 3 meters) apart).The sensors should be within 4°F /2°C (the accuracy is ± 2°F/1°C). Allow about 30 minutes for both sensors to stabilize.

4. **Verify proper operation of in/outdoor humidity.** Verify the indoor and outdoor humidity match closely with the console and sensor array in the same location (about 5 to 10’ (1.5 to 3 meters) apart).The sensors should be within 10% (the accuracy is ± 5%). Allow about 30 minutes for both sensors to stabilize.

7. Display Console Operation

7.1 Quick Display Mode

Note: The display console has five keys for easy operation: ***CHANNEL/+*** key, ***SET*** key, ***SNOOZE/LIGHT*** key, ***ALARM*** key and ***MAX/MIN/-*** key.

Note: To exit the Quick Display Mode at any time, press the ***SNOOZE/LIGHT*** key of the display console.

While in Normal Mode, press (do not hold) the ***SET*** key to enter the Quick Display Mode as follows:

- once for time, time/week and second
- Twice for rainfall
- three for pressure
- four for sensor temperature

1. Time, Time/Week and Second. Press the *CHANNEL/+* or *MAX/MIN/-* key to toggle between time, time/week and second.
2. Rainfall. Press the *CHANNEL/+* or *MAX/MIN/-* key to toggle between 1h,24h week, month and total.
To clear the total rain, press the *CHANNEL/+* or *MAX/MIN/-* button until total rain is displayed. The total rain will flash. Press and hold the ***SET*** button for five seconds until total rain reads 0.0.
3. Absolute Pressure and Relative Pressure. Press the *CHANNEL/+* or *MAX/MIN/-* key to toggle between absolute pressure and relative pressure.
4. Outdoor Temperature. Press the CHANNEL/+ or MIN/MAX/- key to toggle between dew point and feels like.

7.2 Set (Program) Mode

While in Normal Mode, **press and hold** the ***SET*** key for at least three seconds to enter the Set Mode. The first setting will begin flashing. You can press the ***SET*** key again to skip any step, as defined below.

Note: In the Set mode, press the ***CHANNEL/+*** key or ***MAX/MIN/-*** key to change or scroll the setting value. Hold the ***CHANNEL/+*** key or ***MAX/MIN/-*** key for three seconds to increase/decrease rapidly.

Note: To exit the Set mode at any time, press the ***SNOOZE/LIGHT*** button of the display console.

1. **12/24 Hour Format (default: 24h).** Press the ***SET*** key again to adjust the 12/24 hour format setting (FMT). Press the *CHANNEL/+* key or *MAX/MIN/-* key to change between 12 hour and 24 hour format.
2. **Change Hour.** press the ***SET*** key again to set the hour. Press the *CHANNEL/+* key or *MAX/MIN/-* key to adjust the hour up or down.
3. **Change Minute.** Press the ***SET*** key again to set the minute. Press the *CHANNEL/+* key or *MAX/MIN/-* key to adjust the minute up or down.
4. **Date Format (default: D-M). Press** the ***SET*** key again to enter the Day/Month format mode. Press the *CHANNEL/+* or *MAX/MIN/-* key to switch between M-D, D-M.
5. **Change Month.** Press the ***SET*** key again to set the calendar month. Press the *CHANNEL/+* key or *MAX/MIN/-* key to adjust the calendar month.
6. **Change Day.** Press the ***SET*** key again to set the calendar day. Press the *CHANNEL/+* key or *MAX/MIN/-* key to adjust the calendar day.
7. **Change Year.** Press the ***SET*** key again to set the calendar year. Press the *CHANNEL/+* key or *MAX/MIN/-* key to adjust the calendar year.

8. **Max/Min Clearing (default: ON)**. Press the ***SET*** key again to set the Max/Min clearing mode (CLR). The Max/Min can be programmed to clear daily (at midnight) or manually. Press the *CHANNEL/+* key or *MAX/MIN/-* key to switch between ON (Clears 24h) and OFF (Manually).

9. **Temperature Units of Measure (default:** °C**).** Press the ***SET*** key again to change the temperature units of measure. Press the *CHANNEL/+* key or *MAX/MIN/-* key to switch between °F and °C units of measure.

10. **Wind Speed Units of Measure (default:** m/s**)**. Press the ***SET*** key again to change the wind speed units of measure . Press the *CHANNEL/+* key or *MAX/MIN/-* key to toggle the wind speed units between m/s, bft,knots,mph or km/h.

11. Rainfall Units of Measure (default: mm**)**. Press the ***SET*** key again to change the Rainfall units of measure. Press *CHANNEL/+* key or *MAX/MIN/-* key to toggle the rainfall units between mm and inch.

12. **Barometric Pressure Display Units(default:** hPa**)**. Press the ***SET*** key again to change the pressure units of measure. Press the *CHANNEL/+* key or *MAX/MIN/-* key to toggle the pressure units between mmHg, inHg or hPa.

13. **Pressure Threshold Setting (default level 2).** Press the ***SET*** key again to change the pressure threshold. Press the *CHANNEL/+* key or *MAX/MIN/-* key to change pressure threshold 2 hPa to 4 hPa. (For detailed information of this part please refer to 10.5)

14. **Weather Icons Setting (default: partly cloudy).** Press the ***SET*** key again to change the initial weather icon. Press the *CHANNEL/+* key or *MAX/MIN/-* key to select the initial weather

icon of Sunny, Cloudy, Partly Cloudy or Rainy. (For detailed information of this part please refer to 10.2)

15. **Time SYNC(default:ON)**. Press the SET key again to set the network time sync. Press the [+] key or [-] key to switch between SYNC time ON and SYNC time OFF of measure.

16. **Location Division. (default: Northern Hemisphere).** Press the ***SET*** key again to change the location division. Press the *CHANNEL/+* key or *MAX/MIN/-* key to toggle the position of the earth Northern Hemisphere (NOR) or Southern Hemisphere (SOU). (**Refer to 5.0 Final Installation of Sensors**)

7.3 Sensor Search Mode

If Integrated Outdoor Transmitter data is lost, press and hold the ***CHANNEL/+*** button for 3 seconds, the search icon will be displayed constantly for 3 minutes. Once the signal is reacquired, the remote search icon will turn off, and the current values will be displayed.

7.4 Max/Min Viewing and Reset Mode

7.4.1 Max Record Viewing and Reset

In normal mode, press (do not hold) the ***MAX/MIN/-*** key**,** the **MAX** icon will be displayed in date area.

Press the ***SET*** key to view max values of rainfall (1h, 24h, week or month), wind gust and average, pressure (ABS or REL), outdoor temperature and humidity (dew point or feels like) and indoor temperature and humidity.

Press the ***MAX/MIN/-*** key for three seconds to clear all Max values.(Rainfall, wind gust and average, pressure, temperature and humidity maximum values).

Press the ***SNOOZE/LIGHT*** key to exit the min/max checking and clearing mode, return to normal display mode.

Note: The Maximum values will display the current values after reset.

7.4.2 Min Record Viewing and Reset

Press the ***MAX/MIN/-*** key again (do not hold), the **MIN** icon will be displayed. Press the ***SET*** key to view min values of pressure (ABS or REL), outdoor temperature and humidity (dew point or feels like), and indoor temperature and humidity.

Press the ***MAX/MIN/-*** key for three seconds to clear all Min values.(pressure, temperature and humidity minimum values).

Press the ***SNOOZE/LIGHT*** key to exit the min/max checking and clearing mode, return to normal display mode.

Note: The Minimum values will display the current values after reset.

7.5 Snooze Mode

If the alarm sounds, and you wish to silence the alarm, press the ***SNOOZE/LIGHT*** key, the backlight will turn on. The alarm icon will continue to flash and the alarm will silence for five minute.

Press any key (***MAX/MIN/-, SET, ALARM, CHANNEL/+***) to permanently exit the ***Snooze*** mode.

7.6 Backlight Mode

7.6.1 Adjustable Brightness of Backlight

1. There are 3 levels of brightness of display backlight. When the backlight is on, press ***SNOOZE/LIGHT*** key to switch between the 3 levels.

2. When backlight is off, press the ***SNOOZE/LIGHT*** key , the backlight will turn on permanently.

3. To turn off the display backlight at any time, press the SNOOZE/LIGHT key for again ..

Note: If the display console plugged into AC adapter power, the time area will display BL ON and the backlight will remain on. It is not recommended leaving the display backlight on for a long period of time when operating on batteries only, or the batteries will run out quickly.

Note: The backlight operation is different when operating on batteries to save power.

3. If the display console only powered by battery, and backlight is off, Press the ***SNOOZE/LIGHT*** button once. The backlight will turn on for five seconds, and if no operation is performed for three seconds, the backlight will turn off.

8. Alarm Mode

The weather station includes the following alarms:

- Time (Alarm 1 and Alarm 2)
- Wind Gust
- Wind Average
- Outdoor Temperature
- Outdoor Humidity
- Outdoor Feels Like Temperature
- Outdoor Dew Point
- Hourly Rainfall
- 24 Hour Rainfall
- Absolute Pressure
- Relative Pressure
- Indoor Temperature
- Indoor Humidity

8.1 Alarm Triggered

When an alarm condition is exceed, the alarm icon will flash

(visual) and the alarm beeper will sound (audible). To silence the beeper, press any key.

8.2 View High/Low Alarm Value

To view the current alarm settings, press the ***ALARM*** key to enter the alarm mode. HI AL 1 will be displayed in the date area. At the same time Alarm 1 time and HI alarm parameters of indoor temperature and humidity, outdoor temperature and humidity, outdoor feels like , 1h rainfall, absolute pressure, wind gust, wind average are displayed.

Press ***SET*** key to view Alarm time and HI alarm parameters of indoor temperature and humidity, outdoor temperature and humidity ,outdoor dew point, 24h rainfall, relative pressure, wind gust, wind average are displayed.

Press ***ALARM*** key again to view the LOW alarms along with the alarm clock time in the same way as HI alarms.

Press ***ALARM*** key again to return to normal mode.

Note: Press the ***SNOOZE/LIGHT*** key at any time to return to the normal mode in HI/Low alarm mode.

8.3 Setting the Alarms

Press ***ALARM*** key to enter the alarm mode.
Press and hold the ***SET*** key for three seconds. The first alarm parameter will begin flashing (alarm hour).

To save the alarm setting and proceed to the next alarm parameter, Press (do not hold) the ***SET*** key.

To adjust the alarm parameter, press the ***CHANNEL/+*** key or ***MAX/MIN/-*** key to increase or decrease the alarm settings, or press and hold the ***CHANNEL/+*** key or ***MAX/MIN/-*** key for three seconds to increase or decrease the alarm settings rapidly.

Press the ***ALARM*** key to turn on (the alarm icon will appear) and off the alarm.

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 normal mode.
The following is a list of the individual alarm parameters that are set (in order):

1.Alarm hour(alarm 1)
2.Alarm minute(alarm 1)
3.Alarm hour(alarm 2)
4.Alarm minute(alarm 2)
5.Wind Gust HI alarm
6.Wind average HI alarm
7.Outdoor temp HI alarm
8.Outdoor temp low alarm
10.Outdoor humidity low alarm
11.Outdoor feels like HI alarm
12.Outdoor feels like low alarm
13.Outdoor dew point HI alarm
14.Outdoor dew point low alarm
15.Rainfall (1h) HI alarm
16.Rainfall (24h) HI alarm
17.Absolute pressure HI alarm

19.Relative pressure HI alarm
20.Relative pressure low alarm
21.Indoor temperature HI alarm
22.Indoor temperature low alarm
23.Indoor humidity HI alarm
24.Indoor humidity low alarm

Note: To prevent repetitive temperature alarming, there is a 0.9 °F(0.5°C) tolerance band. For example, if you set the high alarm to 80.0°F(26.7°C) and silence the alarm, the alarm icon will continue to flash until the temperature falls below 80.0°F (26.7°C), at which point, the alarm will reset and must increase above 80.0°F(26.7°C) to activate again.

Note: To prevent repetitive alarming of humidity, there is a 4% tolerance band in humidity alarm. For example, if you set the high alarm to 60% and silence the alarm, the alarm icon will continue to flash until the humidity falls below 56%, at which point, the alarm will reset and must increase above 60% to activate again.

8.4 Alarm and Key Beeper ON/OFF

Press any button to silence the alarm sound.

In normal mode, press and hold the ***ALARM*** key for three seconds to toggle the **BZ ON** (beeper on) or **BZ OFF** (beeper off) depending on the current setting.

Display console return to normal mode without any operation in three seconds.

9. Optional Calibration Mode

Note: The calibrated value can only be adjusted on the display console.The outdoor remote sensor(s) always displays the un-calibrated or measured value.

Note: The measured humidity range is between 10% and 99%. Humidity cannot be accurately measured outside of this range. Thus, the humidity cannot be calibrated below 10% or above 99%.

The purpose of calibration is to fine tune or correct for any sensor error associated with the devices margin of error. The measurement can be adjusted from the console to calibrate to a known source.

Calibration is only useful if you have a known calibrated source you can compare it against, and is optional. This section discusses practices, procedures and sources for sensor calibration to reduce manufacturing and degradation errors. Do not compare your readings obtained from sources such as the

internet, radio, television or newspapers. They are in a different location and typically update once per hour.

The purpose of your weather station is to measure conditions of your surroundings, which vary significantly from location to location.
The profession weather station supports up to eight remote thermo-hygrometer sensors. Each of the eight sensors can be calibrated.

9.1 Calibration of Temperature Mode

In normal mode, press and hold the ***SET*** and ***CHANNEL/+*** keys at the same time for five seconds to enter the temp calibration mode. The indoor temperature will begin flashing.

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

Press the ***ALARM*** key to reset current value.

Press the ***SET*** key switch to outdoor Temperature.

To exit the temperature calibration mode at any time, press the ***SNOOZE/LIGHT*** button of the display console. If no operation is performed, the calibration mode will timeout in 30 seconds.

9.2 Calibration of Humidity Mode

In normal mode, press and hold the ***SET*** and ***MAX/MIN/-*** keys at the same time for five seconds to enter into the humidity calibration mode. The indoor humidity will begin flashing.

Press the ***CHANNEL/+*** key or ***MAX/MIN/-*** key to increase or decrease the humidity reading (in increments of 1%). Press and hold the ***CHANNEL/+*** key or ***MAX/MIN/-*** key for three seconds to increase or decrease rapidly.

Press the ***ALARM*** key to reset current value.

Press the ***SET*** key switch to outdoor humidity.

To exit the humidity calibration mode at any time, press the **SNOOZE/LIGHT** button on the top of the display console. If no operation is performed, the calibration mode will timeout in 30 seconds.

Note: The Humidity is a difficult parameter to measure accurately and drifts over time. The calibration feature allows you to zero out this error. To calibrate humidity, you will need an accurate source, such as a sling psychrometer or Humidipaks One Step Calibration kit.

9.3 Calibration of Sensors Mode

In normal mode, press and hold the ***SET*** and ***ALARM*** keys at the same time for five seconds to enter the pressure, wind gust, rainfall calibration mode. The letter “CAL” will appear at the bottom of the screen.

Press the ***SET*** key to skip over a parameter to the next.

◆ Absolute Pressure Calibration

In the calibration mode, the “ABS” symbol will display at the pressure section, the absolute pressure value will flash. (The default value is 0.00 inHg)
Press the ***CHANNEL/+*** key or ***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 increase or decrease rapidly.

Press the ***ALARM*** key to reset current value.

Example: The calibrated pressure sources measure 28.37 inHg. The display console pressure reads 28.75 inHg.
Offset = 28.37 - 28.75 = - 0.38 inHg

◆ Relative Pressure Calibration

In the calibration mode, press the ***SET*** key once, the “REL” symbol will display at the pressure section, the relative pressure value will flash. (The default value is 0.00 inHg)

Press the ***CHANNEL/+*** key or ***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 increase or decrease rapidly.

Press the ***ALARM*** key to reset current value.

Example: The calibrated pressure sources measure 25.00 inHg. The display console pressure reads 24.85 inHg.
Offset = 25.00 - 24.85 = 0.15 inHg

Note: The display console displays two different pressures: absolute (measured) and relative (corrected to sea-level).

To compare pressure conditions from one location to another, meteorologists correct the pressure to sea-level conditions. Because the air pressure decreases as you rise in altitude, the sea-level corrected pressure (the pressure your location would be at if located at sea-level) is generally higher than your measured pressure.

Thus, your absolute pressure may read 28.62 inHg (969 mb) at an altitude of 1000 feet (305 m), but the relative pressure is 30.00 inHg (1016 mb).

The standard sea-level pressure is 29.92 in Hg (1013.2hpa). This is the average sea-level pressure around the world. Relative pressure measurements greater than 29.92 inHg (1013.2hpa) are considered high pressure and relative pressure measurements less than 29.92 inHg are considered low pressure.

To determine the relative pressure for your location, locate an official reporting station near from you (the internet is the best source for real-time barometer conditions, such as the website

of Weather.com or Wunderground.com), and set your weather station to match the official reporting station.

◆ Wind Speed Calibration

In the calibration mode, press the ***SET*** button twice and the wind speed value will flash (the default is 1.00).
Press the ***CHANNEL/+*** key or ***MAX/MIN/-*** key to adjust the wind speed calibration factor from 0.75 to 1.25, where:

Calibrated Wind Speed = Calibration factor x Measured Wind Speed

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

Press the ***ALARM*** key to reset current value.

Note: The wind gust is also affected by the wind speed calibration factor.

Discussion: Wind speed and wind gust are adversely affected by installation constraints. The rule of thumb is to install the weather station four times the distance of the height of the tallest obstruction (for example, a 6m(20ft) house would require an installation 24m(80ft) away).

In many instances, due to trees and other obstructions, this is not possible. The wind speed calibration allows you to correct for these obstructions.

In addition to installation challenges, wind speed bearings (any moving part) wears over time. To correct for wear, the correction value can be increased until the wind cups must be replaced.

Without a calibrated source, wind speed is a difficult parameter to measure. We recommend using a calibrated wind meter and constant, high speed fan.

◆ Rain Calibration

In the calibration mode, press the ***SET*** button three times and the rain value will flash (the default is 1.00).
Press the ***CHANNEL/+*** key or ***MAX/MIN/-*** key to adjust the rain calibration factor from 0.75 to 1.25, where:

Calibrated Rain = Calibration factor x Measured Rain

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

Press the ***ALARM*** key to reset current value.

Discussion: The rain collector is calibrated at the factory based on the funnel diameter. The bucket tips every 0.01” of rain (referred to as resolution). The accumulated rainfall can be compared to a sight glass rain gauge with an aperture of at least 4”.

Note: that debris and insects can collect inside the tipping mechanism (they make a good spiders nest). Carefully remove the funnel and inspect the tipping mechanism for debris prior

to calibration.

10.Other Features of Display Console

10.1 Weather Forecasting

Note: The weather forecast or pressure tendency is based on the rate of change of barometric pressure. In general, when the pressure increases, the weather improves (sunny to partly cloudy) and when the pressure decreases, the weather degrades (cloudy to rain).

The weather forecast is an estimation or generalization of weather changes in the next 24 to 48 hours, and varies from location to location. The tendency is simply a tool for projecting weather changing conditions and is never to be relied upon as an accurate method to predict the weather.

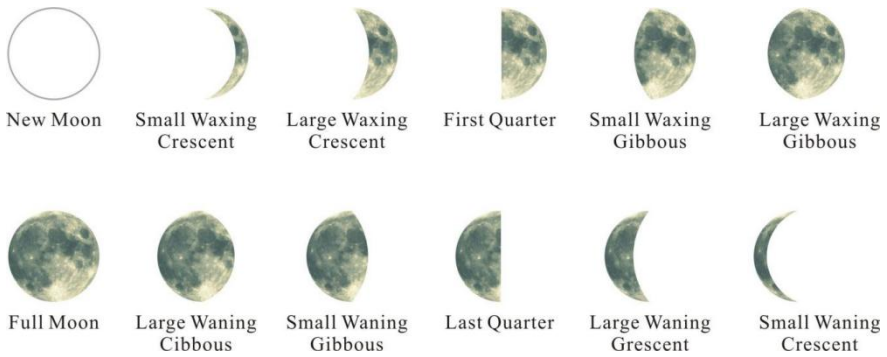
10.2 Weather Icons

Condition	Icon	Description
Sunny		Pressure is rising and the previous condition is partly cloudy.

Partly Cloudy		Pressure is falling and the previous condition is sunny or Pressure is rising and the previous condition is cloudy
Cloudy		Pressure is falling and the previous condition is partly cloudy or Pressure is rising and the previous condition is rainy.
Rainy		Pressure is falling and the previous condition is cloudy。（snowy icon will display on rainy day and outdoor temperature below 0℃)

10.3 Moon Phase

The following moon phases are displayed based on the calendar date.



10.4 Feels Like Temperature

10.4.1 Feels Like Temperature

Feels like temperature is a combination of Heat Index and Wind Chill.

1. Temperatures less than 4.4°C(40°F), the wind chill is displayed, as shown in the National Weather Service Wind Chill Table below:

NWS Windchill Chart

Wind (mph) \ Temperature (°F)	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Frostbite Times: 30 minutes, 10 minutes, 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01

2. Temperatures greater than 26.7°C(80°F), the heat index is displayed, as shown in the National Weather Service Heat Index Table below:

NWS Heat Index

Relative Humidity (%) \ Temperature (°F)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

Caution | Extreme Caution | Danger | Extreme Danger

10.5 Pressure Threshold Setting

The pressure threshold (the negative or positive rate of change of pressure signifying a change in the weather) can be adjusted from 2 hPa to 4 hPa (default level 2 hPa).

The lower the level pressure threshold setting, the higher sensitivity for weather forecast changes. Locations that experience frequent changes in air pressure require a higher setting compared to locations where the air pressure is typically stagnant.

10.6 Restore Factory Default

To reset the display console to factory default, press the ***MAX/MIN/- key*** while plugging in power adaptor at the same time (Take out batteries before starting the reset operation).

FCC Statement

Statement according to FCC part 15.19:

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

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

Statement according to FCC part 15.21:

Modifications not expressly approved by this company could void the user's authority to operate the equipment.

Statement according to FCC part 15.105:

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

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

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

Warning: The user should be 20CM away from the product when it is used.