# USER MANUAL 7-IN-1 SMART WIFI WEATHER STATION Item No.: 20160





# SAFETY PRECAUTIONS



Prior to operating this appliance, carefully review all safety precautions, operating guidelines, and maintenance/care instructions provided in this manual. Retain this document for future reference.

- This product is intended for adult use only and is not a toy. Keep out of reach of children.
- The primary function of this product is to provide weather information for residential use only. It is not designed for medical applications or public dissemination of information.
- Refrain from cleaning the unit with abrasive or corrosive materials.
- Do not position the appliance near open flames or heat sources, as this may result in fire, electric shock, product damage, or personal injury.
- Ensure that only fresh, new batteries are installed in the product, and avoid mixing new and old batteries.

- Do not attempt to disassemble, modify, or alter the product in any way.
- Utilize only manufacturer-approved attachments and accessories with this product.
- To prevent damage, do not immerse the unit in water. If exposed to liquid, gently wipe the product with a soft cloth.
- Protect the unit from excessive force, impact, dust, extreme temperatures, and humidity.
- Ensure that ventilation holes remain unobstructed by objects.
- The product's console is designed for indoor use only.
- Avoid positioning the indoor sensor in direct sunlight, rain, snow, or other adverse weather conditions.

# PACKAGE CONENT



- 1. Indoor receiver
- 2. USB A to DC cable
- 3. Wireless 7 in 1 outdoor sensor
- 4. Funnel
- 5. Wind direction vane with 1 screw
- 6. Wind speed cups with 1 screw

# **PRODUCT OVERVIEW**

#### Weather Console Overview

- 7. Mounting pole with 4 screws
- 8. Mounting brackets with 6 screws
- 9. Rubber pads X 2
- 10. Screwdriver
- 11. User guide



#### Console LCD Display Overview



- 1. Outdoor temperature & humidity, weather index
- 2. Wind direction & speed
- 3. Indoor temperature & humidity (CH), comfort index
- 5. light intensity (SUN)
- 6. UV index
- 7. Time & date, moon phase, alarm
- 8. Barometer
- 9. Rain

4. Weather forecast

#### Wireless 7 in 1 Outdoor Sensor Overview





- 1. Solar panel
- 2. Wind direction vane
- 3. UV/light sensor
- 4. Bubble level gradienter
- 5. Rain collector
- 6. Wind speed cups
- 7. Mounting pole
- 8. Mounting brackets
- 9. Hygro-thermo sensor
- 10. LED: Flashes when the unit transmits a reading
- 11. **RESET** button
- 12. Battery door

#### SETTING UP THE WIRELESS 7-IN-1 OUTDOOR SENSOR

The wireless 7-in-1 outdoor sensor measures wind speed, wind direction, rainfall, UV, light intensity, temperature, and humidity.

## Installing the Mounting Pole and Bracket

Secure the sensor onto a mounting pole and bracket (included) using the screws (included).



## Installing Wind Speed Cups and Wind Direction Vane

- Align the screw holes in the wind speed cups with the flat, vertical side of the metal rod.
- Insert the wind speed cups in the metal rod and screw on tight to lock it in place.
- Align the screw holes in the wind direction vane with the flat, vertical side of the metal rod.
- Insert the wind direction vane in the metal rod and screw on tight to lock it in place.



## Setting Up Rain Collector

- Align the notches on the funnel with the lock grooves inside the rain collector.
- Insert the funnel in the rain collector and screw on tight to lock it in place.



## Installing the Batteries

- Slide the switch to unlock the battery compartment at the bottom of the solar panel.
- Insert three AA batteries (not included) according to the +/- polarity labeled in the compartment.
- Lock the battery compartment back onto the compartment.



#### Mounting the Wireless 7-in-1 Outdoor Sensor

- Select an unobstructed location for the 7-in-1 outdoor sensor to ensure optimal performance.
- Attach rubber pads to the mounting bracket prior to fastening it onto the sensor, for added stability and protection.
- Before tightening the screws, ensure that the rain collector is oriented towards the north and the solar panel faces south for maximum efficiency.
- It is crucial to firmly secure the sensor to prevent movement during windy conditions, as this
  may result in inaccurate rainfall data due to transmitter vibrations.





#### Adjusting the 7-in-1 Wireless Sensor Level

- Utilize the bubble level indicator to ensure that the wireless outdoor sensor is perfectly level. An unlevel sensor may result in inaccurate readings for the gain gauge, UV, and light intensity measurements.
- To adjust the level of the wireless outdoor sensor, loosen the screws on the mounting pole.
   Carefully reposition the sensor so that the bubble is centered within the bubble level indicator
- Once the sensor is properly leveled, securely tighten the screws on the mounting pole to maintain its position.



# MAIN FEATURES

- Real Time Clock with calendar
- Alarm with snooze function.
- Time zone setting and Daylight Saving Time (DST) function.
- Wi-Fi connected to time server and weather servers.
- Automatically sync with internet time server.
- 8 Languages (EN/ DE/ FR/ ES/ IT/ NL/ RU/ DU)
- Moon Phases
- Indoor & outdoor temperature and humidity displays with trend.
- Hourly, daily, weekly, monthly, total rainfall and rainfall rate in past hour.
- Average wind speed, gust wind speed and wind direction
- Absolute and relative barometric pressure displays with trend.

# **KEY CONFIGURATION**

#### Set Button:

- Press the **Set** button to toggle between normal clock mode and alarm mode.
- In normal mode, press and hold the **Set** button for 3 seconds to enter manual time setting mode.
- In alarm mode, press and hold the **Set** button for 3 seconds to enter alarm setting mode.

#### Temp/Alarm Button:

- In normal mode, press the Temp/Alarm button to cycle through outdoor temperature, "feels like" temperature, wind chill, heat index, and dew point.
- In alarm mode, press the **Temp/Alarm** button to turn the alarm on or off.

#### **Rain Button:**

- Press the **Rain** button to cycle through rain rate (in/hr), rain event, rain day, rain week, rain month, and rain total.
- Press and hold the **Rain** button for 2 seconds to reset the rain total.

#### Wind/+ Button:

- Press the Wind/+ button to cycle through average wind speed, wind gust, and wind direction.
- In setting mode, press the Wind/+ button to increase the value. Press and hold the Wind/+ button for 2 seconds to increase the value rapidly.

- Solar radiation intensity display
- UV index display.
- Weather index display: Feel likes, Wind Chill, Heat index, Dew point
- Weather Forecasting.
- Weather alert settings Outdoor temperature Hi/Lo alert, Outdoor humidity Hi/Lo alert, Indoor temperature Hi/Lo alert, Indoor humidity Hi/Lo alert, average Hi wind speed, Hi Gust speed, UV index Hi alert, Light intensity Hi alert, Pressure drop alert, High rain rate alert, Hourly rainfall alert.
- 3- level brightness of backlight.
- Low battery indications for outdoor sensor and receiver.
- Upload weather data to Weather Underground and/or Weathercloud via Wi-Fi router.

#### **Baro/-/Wifi Button:**

- Press the **Baro/-/Wifi** button to toggle between relative pressure and average relative pressure.
- In setting mode, press the **Baro/-/Wifi** button to decrease the value. Press and hold the button for 2 seconds to decrease the value rapidly.

#### **Alert Button:**

• Press the **Alert** button to toggle between viewing high and low alarms.

#### **Max/Min Button:**

- Press the Max/Min button to toggle between minimum and maximum values.
- When displaying maximum data, press and hold the **Max/Min** button for 2 seconds to clear the max value.
- When displaying minimum data, repeat the process for Maximum to clear the value.

#### **Channel Button:**

Press and hold the **Channel** button for 2 seconds to register sensors.

# SETTING UP INSTRUCTIONS

# Setting Up Wi-Fi Connection

**Note:** The weather station operates on a 2.4GHz signal. If your router supports dual-band (2.4GHz and 5GHz), ensure that the 2.4GHz band is enabled.

Power up the console and press and hold the **BARO/-/WIFI** button for four (4) seconds. The console's LCD display will show the letters "AP" and an icon, indicating that it has entered Access Point (AP) mode. The console is now ready for Wi-Fi configuration.

 The flashing "AP" characters signify that the weather station is in AP mode.



 On a PC, open your Wi-Fi network settings. For Android or iOS devices, access the settings menu and select Connections/WI-FI to view the network settings.

# Wi-Fi Connection Status

#### Locate the display console's SSID from the list, which should appear as WWS-XXXXXX (where each X represents an integer). Tap on the SSID to initiate the connection, which may take several seconds to complete.

# WLAN WWS\_XXXXX

• Once connected to the weather station via Wi-Fi, open the settings page at the IP address (http://192.168.1.1) to configure the Wi-Fi, Weather Underground, and Weather Cloud settings.

The following icons on the LCD display screen show the Wi-Fi® status:



Flashing

The weather station is attempting to connect to your wireless router.



The weather station has been connected to your wireless router.



# Setting Up Weather Server Connection

Upon successfully connecting to the display console via Wi-Fi and accessing the settings page at http://192.168.1.1, please input the designated information into the web interface setup page. In case you have opted not to utilize the services of Weather Underground or Weathercloud, kindly ensure that the respective check boxes remain unselected.

### Setting:

- 1. Web interface Logo
- 2. Select your Wi-Fi Router(SSID) from the list
- 3. Router's password
- 4. Check to confirm upload to Weather underdground server
- 5. Enter Your underdground ID
- 6. Enter Your underdground Key/Password
- 7. Check to confirm upload to Weathercloud.net
- 8. Enter Your Weathercloud ID
- 9. Enter Your Weathercloud Key/Password
- 10. Time Zone Settings
- 11. DST on/off
- 12. Internet time sever
- 13. Press Save to confirm the settings

#### Note:

- 1. In AP mode, hold BARO/-/WIFI for 4 seconds to exit the AP mode. The display will simply restore the previous AP setting.
- 2. <u>Time server URL: nist.time.gov</u>

|   | SETUP   | ADVANC   | ED                                     |
|---|---|--|--|
|   | Wi-Fi   | network setup  |  |
| Network   | Financial   | ×  | <u> </u>                               |
|   | Select the menu and c<br>or type in your ro   | hoose your 2.4 GHz WIFI router,<br>uter's name (SSID) above. |  |
| Password  |   | ø ——   | — 3                                    |
| Status:   |   |  |  |
|   | 18/coth   |  |  |
|   | weath   | er server setup  |  |
| pload wund  | erground.com  | er server setup  | — 4                                    |
| pload wund<br>ID  | KKSHILLC18  | er server setup  | — 4<br>— 5                             |
| pload wund<br>ID<br>Password  | KKSHILLC18  | er server setup  | — 4<br>— 5<br>— 6                      |
| pload wund<br>ID<br>Password<br>pload weatt                             | KKSHILLC18  | er server setup  | — 4<br>— 5<br>— 6<br>— 7               |
| pload wund<br>ID<br>Password<br>pload weath<br>ID                       | KKSHILLC18<br>XXXXXX<br>herCloud.net Z  | er server setup  | 4<br>5<br>6<br>7<br>8                  |
| pload wund<br>ID<br>Password<br>pload weatt<br>ID<br>Key                | KKSHILLC18<br>XXXXXX<br>PerCloud.net Z<br>7/17dc0799ef42ea<br>XXXXXX  | er setup   |  |
| pload wund<br>ID<br>Password<br>pload weath<br>ID<br>Key                | Veeun<br>erground.com ☑<br>NKSHILC18<br>000000X<br>7//76c0799e142ea<br>X00000X<br>Time  | z Zone Setup   | 4<br>5<br>6<br>7<br>8<br>9             |
| pload wund<br>ID<br>Password<br>pload weatt<br>ID<br>Key<br>Ime Zone .  | vecen     vecen | er server setup  | 4<br>5<br>6<br>7<br>8<br>9             |
| pload wund<br>ID<br>Password<br>pload weath<br>ID<br>Key<br>Time Zone . | Veedun      erground.com     Z      vocsHILC18      vocs0000      vocs000      vocs000      Time     *8.00      Autematically adjust of   | er server setup  | 4<br>5<br>6<br>7<br>8<br>9<br>10<br>11 |
| pload wund<br>ID<br>Password<br>ID<br>ID<br>Key<br>Time Zone .          | vector     erground.com     Z     occsHILLC18     voccocc     voccocc     voccocc     Time     +8.00     Autematically adjust o     Internet T  | er server setup  |  |

## Setting The Time Zone

To ensure that the time display is automatically synced to your specific time zone, navigate to the Time Server Setup section on the SETUP page and adjust the time zone accordingly (e.g. +0:00 for London). The default time zone is set to '0:00'.

|             |      | Time Zone Setup                                     |    |
|-------------|------|---|----|
| Time Zone . | 0.00 |   | →← |
|             |      | Automatically adjust clock for Daylight Saving Time |    |

## 

The weather station is capable of uploading weather data to Weather Underground and/or Weather Cloud through your Wi-Fi Router.

#### Create Weather Underground Account

**Note:** VORSPRUNG does not own Weather Underground or Weathercloud. As a result, the instructions provided here may be subject to change without notice due to updates on either website.

1. Visit the Weather Underground website at https://www.wunderground.com and click on the JOIN link. Follow the on-screen instructions to create an account.



Important: Use a valid email address when registering your account.

Once your account has been created and the email validation process is complete, return to the Weather Underground website. Click on the dropdown link at the top of the site labeled My Profile, and then select My Devices from the dropdown menu. Click on "Add New Device" to add your weather station.

| WEATHER<br>UNDERGROUND Sensor Network Maps & Radar | Severe Weather News & Blogs Mobile Apps Mor                               | e V Search Locations                               | My Profile      |
|--|---|--|-----------------|
| Popular San Francisco, CA Manhattan, NY Schill     | Park, IL (60176) Boston, MA A Houston, TX A<br>Partly Cloudy 66 *F Cloudy | St James's, England, United Kingdom<br>56 *F Sunny | Welcome back!   |
|  |   |  | Member Settings |
| Member Settings                                    |   |  | My Devices      |
| EMAIL & PASSWORD HOME & FAVORITES                  | MY DEVICES API KEYS   |  | Sign Out        |
|  |   |  |                 |
| Change Your Email                                  | Change Your Password  | Your Membership                                    |                 |

2. Follow the on-screen instructions to input your weather station information. In Step 2, you will be prompted to enter a name for your weather station (feel free to be creative, but remember the name you chose!) and select your station hardware (choose "other"). After completing this section, click NEXT to generate your unique Station ID and key. When the status displays "online," this indicates that your device has been successfully added.

| Add a New Device                      | Add a New PWS   |
|---------------------------------------|---|
| Personal Weather Station Other Cancel | Congratulations! Your personal weather station is now registered with<br>Weather Underground.<br>Inter the information below to your weather station software.<br>Your PWS<br>Station ID: KKSHILLC18<br>Station Key: Srijjoojii<br>Copy credentials |

3. Kindly document or capture a screenshot of your Station ID and Station Key/Password for future reference and to successfully complete the setup process.

#### Create Your Weather Cloud Account

1. Please visit the Weather Cloud website at https://www.weathercloud.net, and provide the necessary information in the "Join Us Today" section. Follow the instructions to create an account.

Note: Please use a valid email address to register your account.

- 2. After successfully creating your account, please sign in and click on "+New" to add a new device.
- 3. Proceed to fill in the requested information on the "Create New Device" page.



4. Provide your station's details, and then click on "Create." **Note:** Fields marked with a red asterisk (\*) are mandatory.

| https://app.weathercloud. | net/device/create |   |          |                    |          |              |            |         | AN SO    |
|---------------------------|-------------------|---|----------|--------------------|----------|--------------|------------|---------|----------|
| weathercloud              |                   |   |          |                    | 🖌 Home   | 😧 Мар        | 🛢 Database | Reports | M Plots  |
| Create new                | device            |   |          |                    |          |              |            |         | < Back   |
| Basic information         |                   |   |          | Location           |          |              |            |         |          |
| Name *                    | My device         |   |          | Country *          | Select c | ountry       | ~          |         |          |
| Model *                   | Select model      | ~ |          | State / Province * |          |              | ~          |         |          |
| Link type *               | Select link type  | ~ |          | City *             |          |              |            |         |          |
| Website                   | www.example.com   |   |          | Time zone *        | (UTC+0   | 0.00) UTC    | ~          |         |          |
| Description               |                   |   |          | Coordinates        |          |              |            |         |          |
|                           |                   |   |          |                    | Q        | Get coordina | ates       |         |          |
|                           |                   |   | <i>A</i> | Latitude *         |          |              |            |         |          |
|                           |                   |   |          | Longitude *        |          |              |            |         |          |
|                           |                   |   |          | Elevation          | 0.0      |              | m          |         |          |
|                           |                   |   |          | Height             | 0.0      |              | m          |         |          |
|                           |                   |   |          |                    |          |              |            |         |          |
|                           |                   |   |          |                    |          |              |            |         | ✓ Create |

Note: You may choose any model number and link type in the provided fields

5. It is recommended to document or capture a screenshot of your Weathercloud ID and Station Key/Password for future reference and to successfully complete the setup process.



The link details for your device weather station are provided below:

Weathercloud ID

7ff7dc0799ef42ea

Key

aab52cbb02cb5aab005c005/aca0c/1/

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# **VIEW YOUR WEATHER DATA**

### In Weather Underground

To view your weather station data, live via PC or mobile web browser, visit http://www.wunderground.com, and then enter the Station ID you were provided during account setup in the search box. Your weather data will show up on the next page. Alternately, you can log in to your Weather Underground account to view and download the recorded data from your weather station.

## In Weathercloud

- 1. To view your weather station data, live via PC or mobile web browser, visit http://www.weathercloud.net and sign into the account which you created.
- 2. Click on the tab at the top of the page titled Devices.
- 3. Click on the Settings menu at the top right of the page, and select the option, View.
- 4. Click on either Current, Wind, Evolution, or Inside to view your weather station's data.

# **OPERATING INSTRUCTIONS**

#### Power Up the Weather Station

When providing power to the weather station, the LCD will display the current version number, Version (US/EU) and the frequency. Then, it will turn on all LCD for 2s and enter to the normal mode and will automatically entering pairing mode.

#### Pairing the Wireless 7-in-1 Sensor and Indoor Sensor(s) (indoor sensors are not included with all of our products, so this section may not apply to you)

- The outdoor weather stations console should automatically search for and connect to the additional wireless sensor, if both are powered on within 10 minutes of each other.
- If the outdoor weather station does not connect within 10 minutes, unplug it and plug in the power again in order to re-enter pairing mode. Or press and hold CHANNEL 2s to start the manual pairing process.
- During the pairing process, an icon of antenna should be flashing on the Additional Sensors' CH/Outdoor temperature & humidity section of the display.
- Once the pairing process completes, the antenna icon will appear as solid, and the outdoor temperature, humidity, wind speed, wind direction, UV, light intensity and rainfall will appear in their designated sections of the LCD display.

# Re-Pairing Sensors

If the connection fails, press and hold **CHANNEL** to enter pairing mode, the weather station will re-register all the sensors that have already been registered to it before. (i.e., the weather station will not lose the connection of the sensors that you have paired up before).

## Pairing Additional Wireless Sensors

Press and hold **CHANNEL** to enter pairing mode and register new sensor(s) to pair to weather station.

# Setting Time

- In normal clock mode, press and hold **SET** 2s to enter the setting mode.
- To exit the set mode at any time, press the LIGHT/SNOOZE button.
- Press WIND/+ or BARO/-/WIFI to adjust the value up or down.
- Press **Set** key to confirm and jump to next setting.
- Setting procedure is following.

Beep On/Off  $\rightarrow$  NTP On/Off  $\rightarrow$  Language  $\rightarrow$  Time Zone  $\rightarrow$  DST On/Off  $\rightarrow$  Date Format  $\rightarrow$  Year  $\rightarrow$  Month  $\rightarrow$  Date  $\rightarrow$  12/24 hr  $\rightarrow$  Hour  $\rightarrow$  Minute  $\rightarrow$  Temp Unit  $\rightarrow$  Pressure Unit  $\rightarrow$  Relative Pressure Calibration  $\rightarrow$  Light Unit  $\rightarrow$  Rain Unit  $\rightarrow$  Wind Unit  $\rightarrow$  Hemisphere  $\rightarrow$  End of Set (return to normal mode).

NTP: Get internet time from NTP server of NIST.

## Moon Phase

The weather station calculates the moon phase according to your time, data and time zone. The table below explains the corresponding phases and their icons for both Northern and Southern hemispheres.

| Nothern Hemisphere Icons | Moon Phase           | Southern Hemisphere Icons |
|--------------------------|----------------------|---------------------------|
|                          | New Moon             |                           |
|                          | Waxing Crescent Moon |                           |
|                          | First Quarter Moon   |                           |
|                          | Waxing Gibbous Moon  |                           |
|                          | Full Moon            |                           |
|                          | Waning Gibbous Moon  |                           |
|                          | Third Quarter Moon   |                           |
|                          | Waning Crescent Moon |                           |

# 📕 Alarm Mode

- In normal clock mode, press **SET** toggle to alarm mode.
- Press **TEMP/ALARM** to turn on/off alarm function. If alarm is set as on, the alarm bell icon will show on the display.
- In alarm mode, if no key is pressed for **10** seconds, it will auto switch to normal mode.

## Alarm Time Setting

- In alarm mode, press and hold **SET** 2s to enter the alarm setting mode. To exit the alarm setting mode at any time, press the **LIGHT/SNOOZE** button.
- Setting procedure is following:
- Alarm hour  $\rightarrow$  Alarm minute  $\rightarrow$  end of alarm setting mode (return to alarm mode)
- Press **WIND/+** or **BARO/-/WIFI** to adjust the value up or down.
- Press Set key to confirm and jump to next setting.

## ■ Hi/Lo Alert Setting

- In normal mode, press and hold ALERT 2s to enter the alert setting mode. To exit the alert setting mode at any time, press the LIGHT/SNOOZE button.
- Press WIND/+ or BARO/-/WIFI to adjust the value up or down.
- Press ALERT to turn on/off the alert.
   Press ALERT to confirm and jump to next setting.
- Setting procedure is following:

\*\*Indoor Hi Temp alert  $\rightarrow$  \*\*Indoor Low Temp alert  $\rightarrow$  \*\*Indoor Hi Humidity alert  $\rightarrow$ 

\*\*Indoor Low Humidity alert  $\rightarrow$  Outdoor Hi Temp alert  $\rightarrow$  Outdoor Low Temp alert  $\rightarrow$ Outdoor Hi Humidity alert  $\rightarrow$  Outdoor Low Humidity alert  $\rightarrow$  High Wind Speed alert  $\rightarrow$ High Wind Gust alert  $\rightarrow$  Pressure Drop Alert  $\rightarrow$  High Rain Rate alert  $\rightarrow$  High Daily Rain alert  $\rightarrow$  UV index High Alert  $\rightarrow$  Light Intensity High Alert  $\rightarrow$  end of alert setting.

| Alert Setting                           | Setting Range  | Display Section                   | Default                                      |
|---|--|-----------------------------------|--|
| Indoor current Channel<br>Temp Hi Alert | -9.9°C - 50°C  |                                   | 50°C (122°F)                                 |
| Indoor current Temp<br>Lo Alert         | (14.18 F - 122 F)  | Indoor CH temperature &           | -9.9°C (14.1°F)                              |
| Indoor current Humidity<br>Hi Alert     | 10/ 000/   | Humidity                          | 80%  |
| Indoor current Humidity<br>Lo Alert     | 1% - 99%   |                                   | 40%  |
| Outdoor Temp Hi Alert                   | -40°C – 70°C   |                                   | 40°C (104°F)                                 |
| Outdoor Temp Lo Alert                   | (-40°F – 158°F)  |                                   | 0°C (32°F)                                   |
| Outdoor Humidity<br>Hi Alert            | 10/ 000/   | Outdoor temperature<br>& Humidity | 80%  |
| Outdoor Humidity<br>Lo Alert            | 1% - 99%   |                                   | 40%  |
| High Wind Speed Alert                   | 0 – 50m/s<br>2– 180 km/h<br>1 – 111mph<br>1 – 97 knots<br>0~60BFT  | Wind Speed                        | 17m/s<br>62km/h<br>38mph<br>33knots<br>20BFT |
| High Wind Gust alert                    | 0 – 50m/s<br>2 – 180 km/h<br>1 – 111mph<br>1 – 97 knots<br>0~60BFT | Wind Speed                        | 17m/s<br>62km/h<br>38mph<br>33knots<br>20BFT |
| Pressure Drop Alert                     | 1 hpa – 10hpa<br>0.03~0.3 inHg<br>0.7~7.5mmHg                      | Barometer drop                    | 3hpa<br>0.09inHg<br>2.2mmHg                  |
| High Rain Rate alert                    | 1mm/hr – 1000mm/hr<br>(0.03in/hr – 39.37 in/hr)                    | Rainfall Rate                     | 101mm/hr<br>(4 in/hr)                        |
| High Daily Rain alert                   | 1mm – 1000mm<br>(0.03 in – 39.37 in)                               | Rainfall Rate                     | 101mm<br>(4 in)                              |
| UV index High Alert                     | 1 - 15   | UV Index                          | 10   |
| Light Intensity High Alert              | 1Klux – 200.0 Klux<br>7~1580 W/M2<br>0~185 KFC                     | Light Intensity                   | 100 Klux<br>790 W/M2<br>92 FC                |

## Weather Index

In normal mode, press TEMP/ALARM to switch different weather indexes in the following order:

Feels Like  $\rightarrow$  Heat Index  $\rightarrow$  Wind Chill  $\rightarrow$  Dew point  $\rightarrow$  Outdoor temperature

#### **Feels Like**

The "Feels Like" temperature index represents the perceived outdoor temperature, taking into account contributing factors such as wind chill and heat index.

#### Wind Chill

Wind Chill is determined by a combination of the wireless weather sensor's temperature and wind.

**NOTE:** Only when the temperature is below 50°F(10°C) and the wind speed is over 4.8km/h (3mph), will display the wind chill value, otherwise it will display "--.-".

#### **Heat Index**

The Heat Index is determined by the wireless weather sensor's temperature and humidity readings.

#### **Dew Point**

- The Dew Point refers to the specific temperature at which water vapor present in the air, under constant barometric pressure, transitions into a liquid state at an equal rate of evaporation. This process results in the formation of dew on solid surfaces.
- The Dew Point temperature is determined from the temperature and humidity data collected from the wireless weather sensor.

#### 🔳 Rain

In normal mode, press RAIN to switch among

Rain Rate (in/hr)  $\rightarrow$  Hour Rain  $\rightarrow$  Daily rain  $\rightarrow$  Week rain  $\rightarrow$  Month rain  $\rightarrow$  Total rain  $\rightarrow$  Event

In normal mode, press and hold **RAIN** 2s.

Resetting the weekly rain also resets the daily rain

Resetting the monthly rain also resets the daily and weekly rain.

Resetting the total rain also resets the monthly, weekly and daily rain.



### Pressure

In normal mode, press BARO/-/WIFI to review absolute and relative pressure.



## 📕 Max/Min

- In normal mode, press MAX/MIN switching between maximum and minimum value.
- To clear the max value, press and hold **MAX/MIN** 2s while max values are displayed.
- To clear the min value, press and hold MAX/MIN 2s while min values are displayed.
- If no key is pressed for 10 seconds, it will auto switch to normal mode

### Indoor Comfort Index

The indoor comfort displays a pictural representation based on the indoor air temperature and humidity levels to determine the approximate comfort level.



#### Weather Forecast

- The built-in barometer notices atmospheric pressure changes, can predict the weather conditions in the forthcoming 12-24 hours, based on all the data it has collected.
- There are 6 weather icons Sunny, Partly Cloudy, Cloudy, Rainy, Stormy and Snowy.



### Freezing Alert

When temperature received by outdoor sensor is lower than  $1^{\circ}C/33.8^{\circ}F$  (excluding  $1^{\circ}C/33.8^{\circ}F$ ), the freezing symbol is  $4^{\circ}C/33.8^{\circ}F$  displayed.



## Tendency Arrow

Tendency arrows allow you to quickly determine if the temperature, humidity has been rising or falling in the last one-hour update period (TBD). This is updated every hour.

| Tendency<br>Indicators | Condition | Temp Change per 1 hours | Humidity Change per 1 hours |
|------------------------|-----------|-------------------------|-----------------------------|
| 7                      | Rising    | Rising > 3%             | Rising > 1°C/2°F            |
| $\rightarrow$          | Steady    | Change≤±3%              | Change ≤ ±1°C/2°F           |
| И                      | Falling   | Falling > 3%            | Falling >1°C/2°F            |

| Tendency<br>Indicators | Condition | Temp Change per 1 hours |
|------------------------|-----------|-------------------------|
| 7                      | Rising    | Rising > 2hpa/0.06inHg  |
| $\rightarrow$          | Steady    | Change≤±2hpa/0.06inHg   |
| И                      | Falling   | Falling > 2hpa/0.06inHg |

#### Backlight

- 1. With AC Adaptor (not always included dependent on product model)
- The backlight can only be continuously on when the AC adaptor is permanently on. When the AC adaptor is disconnected, the backlight can be temporarily turned on.
- Press LIGHT/SNOOZE to adjust the backlight brightness, High, Low and Off.
- 2. With battery only
- Press LIGHT/SNOOZE temporarily turn on the backlight for 15 seconds.
- To reduce power consumption, the weather station will automatically enter sleep mode, when only battery power, and will NOT send data to the Internet whilst in this mode.
- Wi-Fi can't be connected if battery power only.

# SPECIFICATION

|                                     | General Specification   |
|-------------------------------------|---|
| Receiver Dimensions (W x H x D)     | 191.6x127x28.8mm (7.54" x 5" x 1.13")   |
| Transmitter Dimensions (W x H x D): | 408x350x 367mm (16.06" x 13.78" x 14.45")   |
| Weight                              | approx. 1180g (2.60LBS)   |
|                                     | Power supply  |
| Receiver                            | 1.5M USB Cable, 3 x AAA batteries (backup power, not included)  |
| Transmitter                         | 3 x AA battery (not included), Solar power (backup power)   |
| Indoor operation temp               | -9.9°C – 50°C (14.18°F – 122°F)   |
| Wireless                            | s Sensor Communication Specifications   |
| RF frequency                        | 868MHz  |
| Modulation method                   | FSK   |
| RF transmission range               | 150m (open area)  |
|                                     | Time Function Specifications  |
| Time display                        | HH: MM  |
| Hour format                         | 12 hour or 24 hour  |
| Date display                        | DD/MM or MM/DD  |
| Time synchronization method         | Synchronizes with UTC clock via internet time server  |
| Weekday languages                   | EN / DE / FR / ES / IT / NL / RU / DU   |
| Time zones                          | GMT +12 ~ GMT -12   |
| DST                                 | AUTO/ OFF   |
| Barom                               | eter Display & Function Specifications  |
| Barometer units                     | hPa, inHg and mmHg  |
| Measuring range                     | 600 – 1100 hPa (relative setting range 930 – 1050hPa)   |
| Accuracy                            | 600 –1100 hPa ± 5 hPa<br>17.7inHg~32.48inHg± 0.15 inHg<br>450 – 825 mmHg ± 3.8 mmHg<br>Typical at 25°C (77°F) |
| Resolution                          | 1hPa/ 0.01inHg/ 0.1mmHg   |
| Weather forecast                    | Sunny, Partly Cloudy, Cloudy, Rainy, Stormy and Snowy   |
| Display mode                        | Current   |
| Memory mode                         | Daily Max/ Min  |
| Alert                               | Pressure change alert   |

| Indoor/Outdoor         | Temperature Display & Function Specifications  |
|------------------------|--|
| Temperature unit       | °C and °F  |
| In Door Display range  | -9.9°C – 50°C (-14.1°F – 122°F)  |
| Out Door Display range | -40°C – 70°C (-40°F – 158°F)   |
| Temp accuracy          | 10 - 50°C ±1°C / 50 - 122°F ±1.8°F<br>-20 - 10°C ±1.5°C / -4 - 50°F ±2.7°F<br>others : ±2°C / ±3.6°F |
| Resolution             | 0.1°C / 0.1°F  |
| Display mode           | Current  |
| Memory mode            | Daily Max / Min  |
| Alert                  | High/Low temperature alert   |
| Indoor/Outdo           | or Humidity Display & Function Specifications  |
| Display range          | %  |
| In/Outdoor accuracy    | 40 – 80% RH ± 5% RH @25°C (77°F)<br>Others : ± 8% RH @25°C (77°F)                                    |
| Resolution             | 1%   |
| Display mode           | Current  |
| Memory mode            | Daily Max / Min  |
| Alert                  | High/Low humidity alert  |
| Wind Speed a           | nd Direction Display & Function Specifications   |
| Wind Speed unit        | mph, m/s, km/h, knots  |
| Display range          | 0 -112mph, 50m/s, 180km/h, 97 knots  |
| Resolution             | 0.1mph, 0.1m/s, 0.1km/h, 0.1knots  |
| Speed accuracy         | <5m/s: ±0.5m/s, >5m/s : ±6% (whichever is greater)   |
| Display mode           | Gust/Average   |
| Memory mode            | Daily Gust/Average   |
| Alert                  | High Wind Speed Alert (Gust/Average)   |
| Wind direction         | 16 directions  |

| Rai                   | n Display & Function Specifications            |
|-----------------------|--|
| Unit of rainfall      | mm, in   |
| Range of rainfall     | 0 – 12999mm (0 – 511.7 in)                     |
| Accuracy of rainfall  | ±7%  |
| Resolution            | 0.01 in (0.254mm)                              |
| Display mode          | Current  |
| Memory mode           | Daily Max.                                     |
| Rainfall display mode | Hourly/ Daily/ Weekly/ Monthly/ Total Rainfall |
| Alert                 | High Daily Rainfall alert                      |
| UV In                 | dex Display & Function Specifications          |
| Display range         | 0 - 15   |
| Accuracy              | ±1   |
| Resolution            | 1  |
| Display mode          | Current  |
| Memory mode           | Daily Max.                                     |
| Alert                 | High UVI alert                                 |
| Light Int             | ensity Display & Function Specifications       |
| Light Intensity unit  | Klux, Kfc and W/m2                             |
| Display range         | 0 – 200 Klux                                   |
| Resolution            | 0.01 Klux, 0.01 Kfc and 0.01 W/m2              |
| Display mode          | Current  |
| Memory mode           | Daily Max.                                     |
| Alert                 | High Light intensity alert                     |

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