

WIRELESS SOLAR POWERED RAIN GAUGE WITH IN/OUT TEMPERATURE

INSTRUCTION MANUAL

1. Introduction

Thank you for purchasing this Wireless Rain Gauge. Designed for everyday use, the weather station will prove to be an asset of great value for your personal use in the home or office. Please read this instruction manual thoroughly to fully understand the correct operation of your rain gauge and benefit from its unique feature.

1.1 Package Contents

- 1x Weather station base unit
- 1x Rain Sensor
- Mounting Screws
- Instruction manual

1.2 Feature

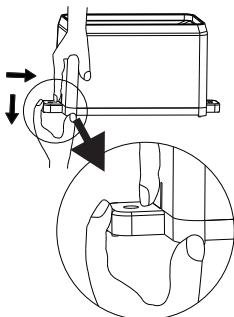
- a) Detail display of rainfall data in 1hour, 24hour, week, month, year and total since last reset(user selectable in inch or mm)
- b) Wireless outdoor and Indoor temperature measure
- c) Time and date with manual setting option
- d) 100 year calendar with weekday
- e) 12/24 hr format selected
- f) C/F unit selectable
- g) Raining indication
- h) 24h Rainfall alarm function
- i) Time alarm function
- j) Save the data when batteries is changed
- k) History rain record graph

2. Installation

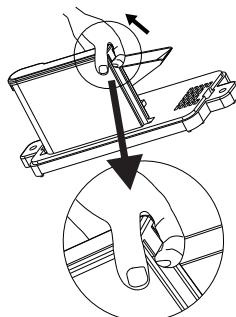
2.1 Rain Gauge battery install

Note: Please note the polarity when inserting/replacing batteries in the unit, failure to do so may result in permanent damage. Use good quality Alkaline Batteries and avoid rechargeable

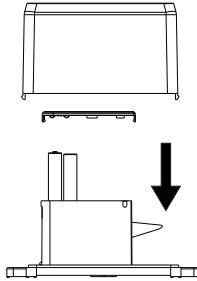
1) Remove Rain Gauge cover



2) Remove the battery cover



3) Observing the correct polarization insert 2 “AAA” Alkaline Batteries into the compartment and replace the cover.



Note: When opening the battery cover make sure that the batteries do not spring free from the contacts since this will cause start and transmission problem.

2.2 Indoor receiver battery installs

Insert two AA batteries into the indoor receiver. When the base station is powered up, a short beep will sound and all LCD segments will light up for about 3 seconds and the unit will enter RF registration mode to learn the sensors security code. Wait 3 Minutes or until the outdoor temperature is displayed in the weather station.

Every time the remote sensor is powered up (for example after a change of batteries), a random security code is transmitted and this code must be synchronized with the base station to receive weather data. **Thus if battery change happened on remote sensor side, then the base station must be power up again to re-learn the transmitter.**

Note: The transmitter will send out the data every 30s. If the RF receive is unsuccessful for six times, the outdoor temperature and rainfall display “--.-”and trigger one long reception.



Note:

Please participate in the preservation of the environment by properly disposing of all used-up batteries and accumulators at designated disposal points. Never dispose of batteries in a fire as this may cause explosion, risk of fire or leakage of dangerous chemicals and fumes

2.3 Mounting

2.3.1 Base Station

With one foldable legs at the back of the unit, the base station can be placed onto any flat surface or wall mounted at the desired location by the hanging holes at the back of the unit. It is important to check that the radio signal can be received before permanently mounting any of the units

2.3.2 Remote Sensor

Place the rain gauge in an appropriate location. The rain gauge has a range of 100meters. Keep in mind that 100 meters RF reception distance is for condition in open air with no obstructions, and rain gauge transmitter sitting one meter above ground. Real-world transmission range will vary depending on what is in the path of the signal. Each obstruction (roof, walls, floors, ceilings,

thick trees, etc.) will effectively cut signal range.

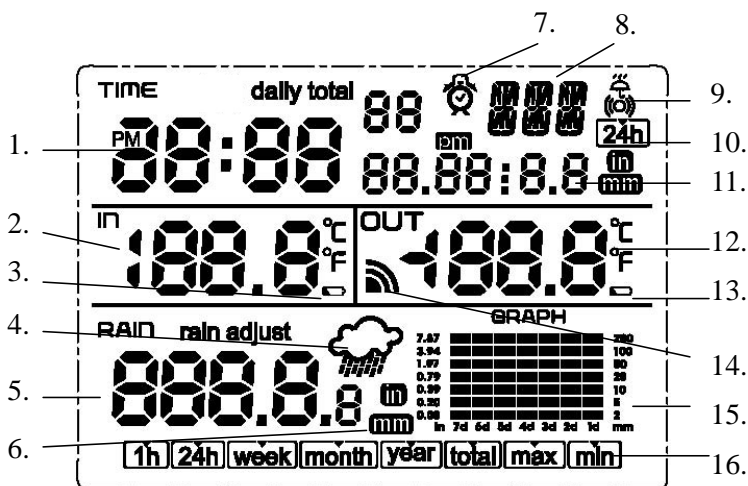
There is a NTC type temperature sensor inside the rain box, under direct sunshine condition, the temperature reading can be 3-4 degrees higher than real outdoor temperature. In order to get real correct outdoor temperature, it is recommended to install the sensor in north faced places or where there is no long time exposing to direct sun light.

The rain gauge must be level to transmit correct readings. It is recommended to mount the rain gauge 1meter or higher off of the ground. Screw the rain gauge down snugly in the holes provided.

3. Overview

3.1 Base unit-LCD

The following illustration shows a full segments of the LCD for description purposes only.



- | | |
|------------------------------------|---------------------------------------------|
| 1. Time | 9. Raining alarm icon |
| 2. Indoor temperature | 10. 24h rainfall alarm icon |
| 3. Receiver low battery indicator | 11. Date / alarm time |
| 4. Raining indicator | 12. Outdoor temperature |
| 5. Rainfall | 13. Remote sensor lower battery indicator |
| 6. Rainfall display unit(mm or in) | 14. Remote sensor transmit signal indicator |
| 7. Time alarm icon | 15. History rain graph |
| 8. Date of week / time zone | 16. Min/Max |

4. Program Mode

The base station has four keys for easy operation: **SET** key, **+** key, **-** key, **ALARM** key. And there are four program modes available: Setting Mode, Rain Mode, Alarm Mode and MIN/MAX mode

4.1 Setting Mode

- While in normal mode, press the **SET** key shortly to shift the display between Time, Alarm time and Rainfall alarm. It will return to Time display if longer than 10s no key operation.

- While in normal mode, press the **SET** key for 2 seconds to enter the following setting modes in the following order:

1. Time Zone Setting
2. 12/24 hour format
3. Manual time setting (hours/minutes)
4. MM-DD/DD-MM format
5. Calendar setting(in the order of year /month/ day)

[after year setting, month and date position can be selected before month and date value to be set]


6. Temperature display unit degree Celsius or Fahrenheit
7. Rainfall unit mm or inch

In the above setting modes, press **+** key or **-** key to change or scrolls the value. Hold the **+** key or **-** key for 3 second will increase/decrease digits in great steps. Press the **SET** key to accept the change and advance to the next setting mode. Continue to press the **SET** key to toggle through the setting mode until return to the normal Mode.

The setting mode will return to normal display mode while key idle 15s.

Alarm time setting

While in normal mode, press the **SET** key shortly to shift to the display of Alarm time.


- Press the **ALARM** key shortly to on/off the alarm time function.  icon shows in the TIME display area indicating the alarm function has been enabled.

- Press the **SET** key for 2 seconds to enter the alarm time setting mode. Press **+** key or **-** key to change or scrolls the value. Hold the **+** key or **-** key for 3 second will increase/decrease digits in great steps. The alarm time setting mode will return to normal display mode while key idle 15s.

- When time alarm is triggered, the alarm will sound for 120seconds. Press any key to mute the alarm

24H Rainfall alarm setting

While in normal mode, press the **SET** key shortly to shift to the display of 24H Rainfall alarm.

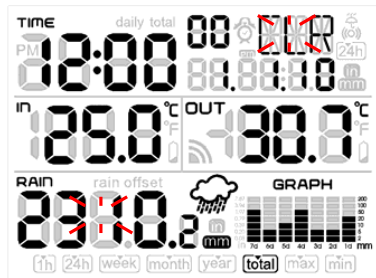
- Press the **ALARM** key shortly to on/off the alarm time function.  icon shows in the TIME display area indicating the alarm function has been enabled.

- Press the **SET** key for 2 seconds to enter the rainfall alarm setting mode. Press **+** key or **-** key to change or scrolls the value. Hold the **+** key or **-** key for 3 second will increase/decrease digits in great steps. The alarm time setting mode will return to normal display mode while key idle 15s.

- When time alarm is triggered, the alarm will sound for 60seconds. Press any key to mute the alarm

4.2 Rain Mode

- While in normal mode, press + key to alternate the display between 1 hour, 24 hour, week, month, year and total rain increments.
- While display the total rain value, press the + key for 8 seconds to enter the rainfall clear mode. The word of "CLR" and total rainfall value will be flashing. Press the + key again to clear the rainfall. The rainfall clear mode will return to normal display mode while key idle 15s or press **SET** key.



display ready to clear rainfall

Rain calibration

Customer can select to calibrate the rainfall of 1 hour, 24 hour, week, month, year or total. Press the + key to alternate the display between 1 hour, 24 hour, week, month, year and total rain increments. Press the **ALARM** key for 8 seconds to enter the rainfall calibration mode. Press **SET** key to skip the digit. Press + key or - key to change the value.

Raining indicator

When It's raining, the raining indication icon will flash on the LCD, if continuously 10 minutes not raining, the icon will be hide.

4.3 MIN/MAX Mode

- While in Normal Mode, press the - key to enter the **MIN/MAX** mode,
- While in the **MIN/MAX** Mode, Press the - key to display the following values together with the time and date stamp when these values were recorded: (if press - key for 4 seconds in the following individual value will be reset to current reading together with the current time and date.)
 1. Indoor temperature max. daily
 2. Indoor temperature min. daily
 3. Indoor temperature max. total
 4. Indoor temperature min. total
 5. Outdoor temperature max. daily
 6. Outdoor temperature min. daily
 7. Outdoor temperature max. total
 8. Outdoor temperature min. total
 9. Rainfall max. 1h
 10. Rainfall max. 24h
 11. Rainfall max. week
 12. Rainfall max. month
 13. Rainfall max. year

Reset MIN/MAX value

Press the - key for 4 seconds, the current displayed minimum or maximum record will be reset to current value

Reset To Factory Default Settings

Press and hold the + and – key then power on the base station, all EEPROM data clear and reset to factory default setting.

Transmission distance in open field	:	100meter max.
Frequency	:	433.9MHz +/-250kHz
Outdoor temperature range	:	-40°C to +60°C (show OFL if outside range)
Indoor temperature range	:	-9.9°C to +60°C
Resolution	:	0.1°C
Measuring interval remote sensor	:	30 sec

Power consumption

Base station	:	2xAA 1.5V LR6 Alkaline batteries
Remote sensor	:	2xAAA 1.5V LR03 Alkaline batteries