

WIRELESS RAIN GAUGE

WITH IN/OUT TEMPERATURE

INSTRUCTION MANUAL

	Page
1. INTRODUCTION	2
1.1 PACKAGE CONTENTS.....	2
1.2 FEATURES.....	2
2. INSTALLATION	2
2.1 RAIN GAUGE BATTERY INSTALL	2
2.2 INDOOR RECEIVER BATTERY INSTALLS.....	3
2.2.1 Base Station.....	3
2.2.2 Remote Sensor.....	3
3. OVERVIEW	4
3.1 BASE UNIT-LCD.....	4
4. PROGRAM MODE	4
4.1 RAIN MODE.....	5
4.2 SETTING MODE.....	5
4.3 ALARM MODE.....	5
4.4 MIN/MAX MODE.....	6
5. TROUBLESHOOTING	6
6. SPECIFICATION	6

This Operation Manual is part of this product and should be kept in a safe place for future reference. It contains important notes on setup and operation.

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

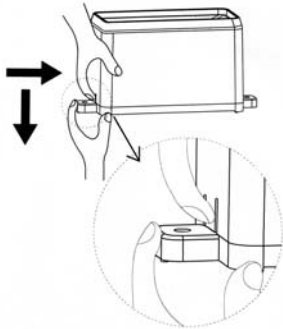
- 1) Detail display of rainfall data in 1hour, 24hour, week, month and total since last reset(user selectable in inch or mm)
- 2) Radio controlled time and date with manual setting option
- 3) Calendar (day-month-year display)
- 4) Indoor& outdoor temperature ($^{\circ}\text{C}$ or $^{\circ}\text{F}$)
- 5) Time zone setting
- 6) 12 or 24 hour time mode
- 7) Wall hanging and free standing

2. Installation

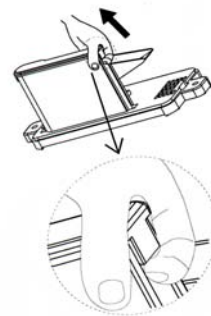
2.1 Rain Gauge battery install

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 batteries.

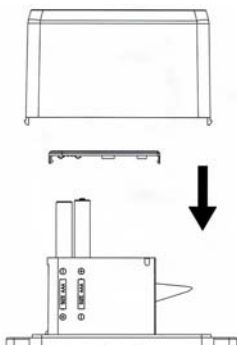
1) Remove Rain Gauge cover



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

- 1) 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 4 seconds before it enters into learning mode to learn the sensors security code. 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.**
- 2) **Do not press any keys for 10 minutes**
- 3) The receiver will start to search time signal. If there is no time signal found within 70s, the unit will turn off the receiver. If there is time signal received, then the clock will have the radio controlled time icon flashing indicating that the clock is in the time reception progress. Normally within 10 minutes the clock should have the correct time displayed.
- 4) If no time reception is possible, then manually set the time. The clock will try to make radio controlled time reception every hour. When radio controlled time is received, the radio controlled time icon will be turned on.
- 5) If your time zone is not at UTC+1:00, then manually set the time zone so that your clock time will be updated correctly after radio controlled time is received.
- 6) If the clock can't have radio controlled time received after 24 hours, then try to put the clock in a place near window. The clock should not be placed on metal table or near monitor.

Note for Radio Controlled Time:

The time and date display is based on the signal provided by the highly accurate government operated atomic clock. The rain sensor will continue to scan for the radio controlled time signal each day at 2:00, 8:00, 14:00 and 20:00 despite it being manually set. If reception has been unsuccessful, then the radio controlled time icon will not appear but reception will still be attempted continually. If reception has been successful, the received time and date will overwrite the manually set time and date.



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.

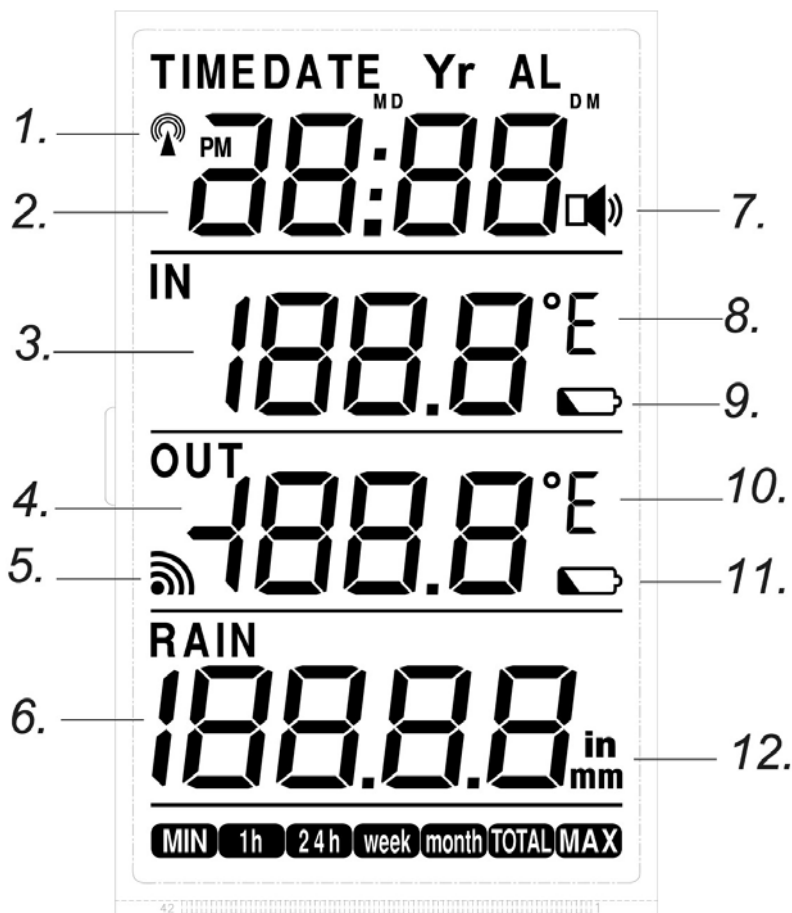
There is a NTC type temperature sensor inside the rain box,. Under direct sunshine condition, the temperature reading can be 3-4 degrees higher than real outdoor temperature. In order to get real correct outdoor temperature, it is recommended to install the sensor in north faced places or where there 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 normal LCD display for description purposes only.



- | | |
|---|---|
| 1. Radio Controlled Time icon | 7. Time alarm icon |
| 2. Time / Date | 8. Temperature display unit (°C or °F) |
| 3. Indoor temperature | 9. Lower battery indicator |
| 4. Outdoor temperature | 10. Temperature display unit (°C or °F) |
| 5. Remote sensor transmits signal indicator | 11. Lower battery indicator |
| 6. Rainfall | 12. Rainfall display unit (mm or in) |

4. Program Mode

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

The setting mode will return to normal display mode while key idle 30s.

4.1 RAIN Mode

- While in normal mode, press **RAIN** key, 1hour rainfall record will be displayed. Press **RAIN** key again, 24hour rainfall record will be displayed. Press **RAIN** key the third time, week rainfall record will be displayed. Press **RAIN** Key the fourth time, month rainfall record will be displayed. Press **RAIN** key the fifth time, TOTAL rainfall record will be displayed.

Reset Rain Data

Press **RAIN** key for approx 2 seconds at 1hour rainfall mode, 1hour rainfall record will be reset to 0. Press **RAIN** key for approx 2 seconds at 24hour rainfall mode, 1hour and 24hour rainfall record will be reset to 0. Press **RAIN** key for approx 2 seconds at week rainfall mode, 1hour, 24hour and week rainfall record will be reset to 0. Press **RAIN** key for approx 2 seconds at TOTAL rainfall mode, 1hour, 24hour, week and TOTAL rainfall record will be reset to 0

4.2 SETTING Mode


-While in normal mode, press the **SET** key shortly to shift the display between Time, Date, Year and Alarm time. 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
 - The default time zone setting value is 1
 - based on Germany DCF time (GMT+1)
 - Time zone option +/-12 hours
 - For countries not at the same time zone area of Germany, it is needed to set the correct time zone so that correct time can be displayed after radio controlled clock time is received successfully.
2. 12/24 hour format
3. Manual time setting (hours/minutes)
4. 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]
5. Temperature display unit degree Celsius or Fahrenheit
6. Rainfall unit mm or inch


In the above setting modes, press **RAIN** key or **MIN/MAX** key to change or scrolls the value. Hold the **Rain** key or **MIN/MAX** 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

4.3 Alarm Mode

- While in normal time display mode, press **ALARM** key shortly to on/off the alarm function. If  show in the TIME display area indicating the alarm function has been enabled.

- While in normal time display mode, press **ALARM** key for 2s to enter alarm time setting mode

1. The hour digit will start flashing, press **Rain/+** key or **-/MIN/MAX** key to increase/decrease the hour value.

2. Press and release **ALM** key again, the minute digits start flashing. Press **Rain/+** key or **-/MIN/MAX** key to set the minutes.
3. Confirm with **ALM** key and  will show in the TIME display area indicating the alarm function has been enabled.

Canceling the alarm while sounding

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

4.4 MIN/MAX value

Press the **MIN/MAX** shortly, the indoor MAX value is displayed while outdoor temperature and rain display area is cleared, presses **MIN/MAX** key again, indoor MIN value is displayed.

Press **MIN/MAX** key will trigger the LCD to display outdoor temperature, 1h and 24h rain Max and Min value accordingly.

Reset MIN/MAX value

Press the **MIN/MAX** key for 3 seconds, the current displayed minimum or maximum record will be reset to current value.

5. Troubleshooting

Q 1. No signal from remote sensor

A There can be many reasons for this, the following steps should help you troubleshoot this problem.

1.1 Make sure that the batteries in the remote sensor are not depleted.

1.2 Reduce the distance between transmitter and receiver

1.3 Remove the batteries from the base station and the remote sensor and reset the weather station in the right order as described in section 2 of this manual.

1.4 This problem could also be a result of radio interference in your neighborhood, try relocating the sensor and the base station

Q 2 Remote sensor drops off intermittently

A Possible interference from other sources, try relocating the sensor or the base station. Radio device operation on the same frequency can also cause interference.

Q 3 Temperature is incorrect.

A Check/ Replace the batteries. Also make sure that the remote sensor is not place near objects that can act as sources of heat or cold.

6. Specifications

Outdoor data

Transmission distance in open field	:	100meter max.
Frequency	:	433.9MHz +/-250kHZ
Temperature range	:	-40°C to +65°C (show OFL if outside range)
Resolution	:	0.1°C
Measuring interval remote sensor	:	48 sec

Water proof level : IPX3
Current : 15mA (HF transmitting), 10uA (Standby)

Indoor data

Pressure / temperature : 48 sec
Indoor temperature range : -9.9°C to +80°C
Resolution : 0.1°C
Alarm duration : 120 sec

Power consumption

Base station : 2XAA 1.5V LR6 Alkaline batteries
Remote sensor : 2xAAA 1.5V LR03 Alkaline batteries
Battery life : Minimum 12 months for both sensor and receiver