# Professional Rain Gauge
# with Thermo-Hygro and RC Clock
# Model: C8536A / C3150A
# User Manual

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**Important note:**

- Read and keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not subject the unit to excessive force, shock, dust, temperature or humidity.
- Do not cover the ventilation holes with any items such as newspapers, curtains etc.
- Do not immerse the unit in water. If you spill liquid over it, dry it immediately with a soft, lint-free cloth.
- Do not clean the unit with abrasive or corrosive materials.
- Do not tamper with the unit's internal components. This invalidates the warranty.
- Only use fresh batteries. Do not mix new and old batteries.
- Only use attachments / accessories specified by the manufacturer.
- Images shown in this manual may differ from the actual display.
- When disposing of this product, ensure it is collected separately for special treatment.
- Placement of this product on certain types of wood may result in damage to its finishing for which manufacture will not be responsible. Consult the furniture manufacturer's care instructions for information.
- The contents of this manual may not be reproduced without the permission of the manufacturer.
- When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer that have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- Do not dispose old batteries as unsorted municipal waste. Collection of such waste separately for special treatment is necessary.
- Please note that some units are equipped with a battery safety strip. Remove the strip from the battery compartment before first use.
- The technical specifications for this product and the contents of the user manual are subject to change without notice.
- Operating temperature: -10° to 50°
- CAUTION: Risk of explosion if the battery is replaced by an incorrect type.
- High or low extreme temperatures that a battery cannot be subjected to during use, storage or transportation and low air pressure at high altitude.
- Replacement of a battery with an incorrect type that can defeat a safeguard.
- Disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- Leaving battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.
- A battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.
- An appliance is only suitable for mounting at height ≤ 2m.

## 1. Introduction

Thank you for selecting the Professional Rain Gauge Sensor.
This device contains a wireless self-emptying rain collector for measuring rainfall and temperature, and a display main unit. The wireless rain collector sensor is fully assembled and calibrated for your easy installation. It transmits data by a low power radio frequency to the display main unit up to 150m away (line of sight).
The display main unit displays the rainfall and temperature data received from the sensor outside. It remembers the data over a time range for you to monitor and analyze the weather status for past 24 hours. It has advance features such as the Hi / Lo Alert alarm which will alert the user when the set high or low weather criteria are met. Time and date stamps are also provided to the corresponding maximum and minimum records for each weather details.
The system also analyze the records for your convenient viewing, such as the display of total rainfall as well as indications in terms of rain rate, hourly, daily, weekly, monthly and yearly records.
With radio-controlled / atomic clock feature built-in, the system is truly a remarkable personal Professional Rain Gauge for your own backyard.

**Note:**
This instruction manual contains useful information on the proper use of this product. Please read this manual through to fully understand and enjoy its features.

## 2. Product features

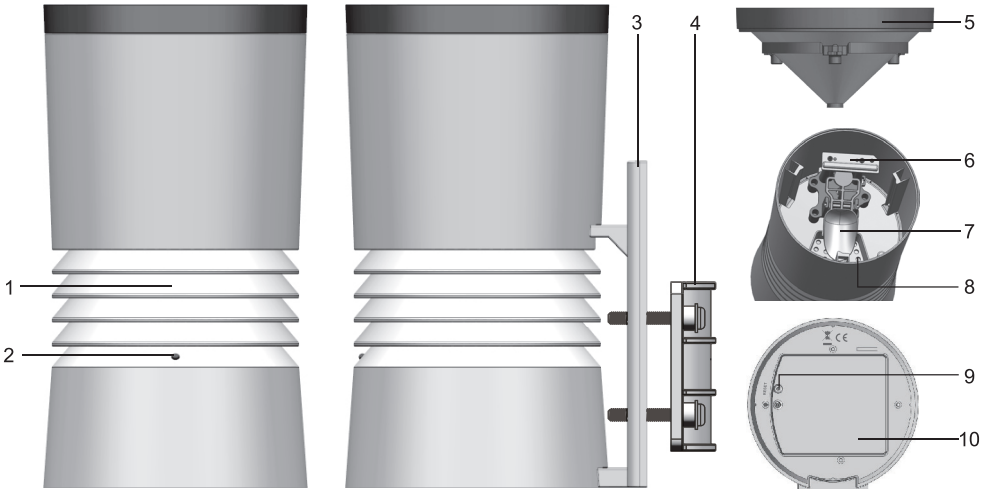
- Large backlight LCD display unit
- Rain rate display
- Custom period, hourly, daily, weekly, monthly and yearly rainfall display
- Data logger stores and gathered data to display rainfall according to your selected time-scale (current status, past 24 hours, past 31 days, past 52 weeks, past 12 months or past 5 years)
- Graphical histogram display to show variation of rainfall pattern in your selected time-scale (current status, past 12 hours, past 12 days, past 12 weeks, or past 12 months at a time)
- SINCE function to display TOTAL rainfall from a customized commencing date
- Customized daily rainfall period
- Measures outdoor temperature and humidity at the same time with indoor temperature and humidity
- Heat Index and Dew Point display
- Real time clock display with atomic radio controlled function
- Up to 150 m sensor transmission range
- Data retention storage even during batteries changes
- High / Low alert function
- Maximum / minimum memory function with time stamp
- Alarm function with ice-alert function

## 3. Overview

### 3.1 Main Display Unit

1. LCD display: Displays current rainfall, total rainfall or rainfall history, In / outdoor temperature, In / outdoor humidity and clock / calendar
2. Alert indicator: Blinking with alert alarm is on
3. **[ HISTORY ]**: Toggle to display rainfall in the past hour, day, week, month or year
4. **[ SINCE ]**: Display total rainfall and the start day; hold to clear previous rainfall start time and reset the counter to start again
5. **[ RAIN ]**: Toggle display mode to rainfall rate, hourly, daily, weekly, monthly, and yearly rainfall
6. **[ MEM ]**: To show maximum and minimum records with time stamps for temperature, humidity and rainfall
7. **[ CLOCK ]**: Press and hold to enter clock manual setting mode
8. **[ ALARM ]**: Press to on / off clock alarm or to enable or disable the Hi / Lo alert settings
9. **[ ALERT ]**: Press to review the hi/lo alert value
10. Wall mounting hole
11. **[ DOWN ]**: To decrease the current set value
12. **[ UP ]**: Toggle display mode to outdoor temperature, heat index and dew point; to increase the current set value
13. Battery compartment
14. **°C/°F** switch: Change display in °C or °F
15. **MM / IN** switch: Change to display in MM or IN
16. **RCC** key: Press to enter RC reception mode
17. **SCAN**: Press to search for the wireless thermo-hygro rain gauge sensor
18. **RESET**: Restore factory settings
19. **[ SNOOZE / LIGHT ]**
20. Table stand

## 3.2 Wireless rain gauge sensor

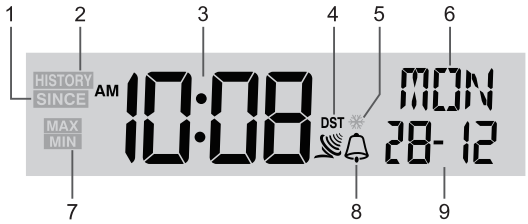



1. Radiation shield (Thermo-hygro sensor casing built inside)
2. Red LED indicator
3. Mounting base
4. Mounting claim
5. Rain collector
6. Rain sensor
7. Tipping bucket
8. Drain holes
9. **[ RESET ]** key
10. Battery door

# 4. LCD display

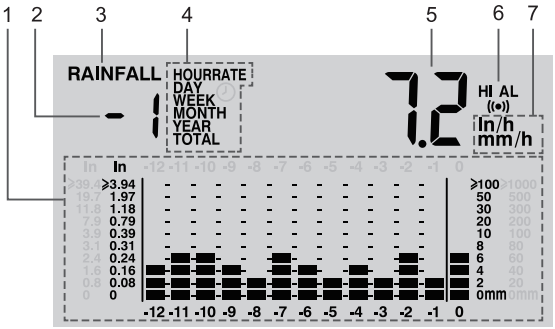
## 4.1 Time and calendar display

1. SINCE icon: for total rainfall
2. HISTORY icon: for all past records
3. Time
4. DST icon: summer time
5. Ice pre-alert clock alarm
6. Day of the week
7. MAX / MIN indicator
8. Time alarm icon
9. Calendar



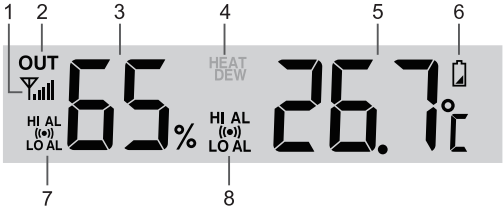

## 4.2 Rainfall display

1. Histogram
2. Past time
3. Rainfall indicator
4. Time range record indicator
5. Rainfall reading
6. HI alert and alarm
7. Rainfall unit (in/h / mm/h)



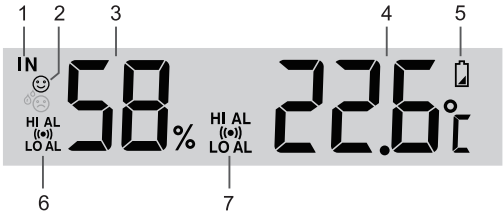
## 4.3 Outdoor temperature & humidity display

1. Outdoor signal strength indicator
2. Outdoor indicator
3. Outdoor humidity
4. Heat index / Dew point indicator
5. Outdoor temperature
6. Low battery indicator for sensor
7. Hi / Lo alert for outdoor humidity
8. Hi / Lo alert for outdoor temperature




## 4.4 Indoor temperature & humidity display

1. Indoor indicator
2. Comfort index
3. Indoor humidity
4. Indoor temperature
5. Low battery indicator for main unit
6. Hi / Lo alert for indoor humidity
7. Hi / Lo alert for indoor temperature

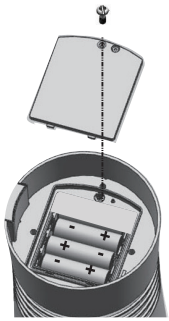



## 5. Installation of wireless rain gauge sensor

Your wireless rain gauge sensor measures rainfall, temperature and humidity for you. It's fully assembled and calibrated for your easy installation.

### 5.1 Battery and Installation

Unscrew the battery door at bottom of the unit and insert the new batteries according to the "**+/-**" polarity indicated. Screw the battery door compartment on tightly. Press **[ RESET ]** key after each battery change.

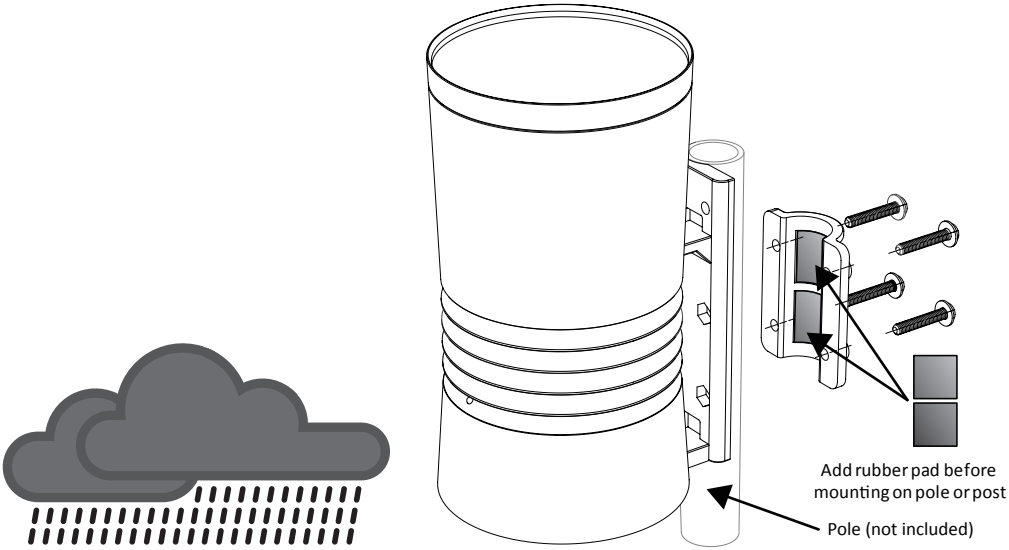


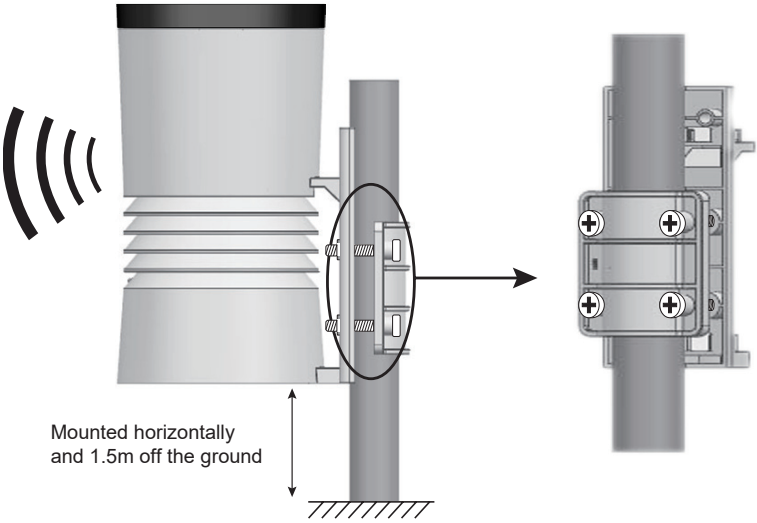
**Note:**

The red LED will begin flashing every 12 seconds.

## 5.2 Mounting guidelines

1. Install the thermo-hygro rain gauge sensor in an open location with no obstructions above and around the sensor for accurate rain and temperature measurement.
2. Ensure the rain gauge is installed as level as possible to achieve accurate rain measurement.
3. The sensor and the main display unit should be positioned within an effective range of 150 m in an open area

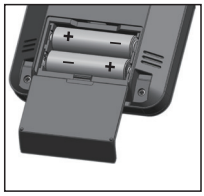


# 6. Display main unit

## 6.1 Stand and batteries installation

The unit is designed for desktop or wall mount for easy viewing.



1. Remove the battery door of the main unit.
2. Insert 2 new AA size batteries according to the “ +/- ” polarity mark on the battery compartment.
3. Replace the battery door.
4. Once the batteries are inserted, all the segments of the LCD will be briefly lighted up before entering automatic linking process with the remote sensor, as indicated by the flashing " ".
5. Press the **[ SCAN ]** key if the " " is not flashing, to manually activate the linking process.
6. Press the **[ RESET ]** key at the bottom of the sensor. After successful linking with the sensor, the clock will automatically set its time by the Radio-controlled (RC) signal, as indicated by the " ".

**Note:**

- If no display appears on the LCD after inserting the batteries, press the **[ RESET ]** key by using a pointed object.
- In some cases, you may not receive the RC signal immediately due to the atmospheric disturbance.

## 6.2 Pairing of wireless sensor with display main unit

After insertion of batteries, the main display unit will automatically search and connect the wireless sensor (antenna blinking " ").

Once the connection is successful, antenna mark " " and readings for outdoor temperature and rainfall will appear on the display.

## 6.3 Changing batteries of thermo-hygro rain gauge sensor

Whenever you changed the batteries of the wireless sensor, pairing must be done manually.

1. Change the batteries to new ones.
2. Press the **[ RESET ]** key on the wireless sensor.
3. Press the **[ SCAN ]** key on the main display unit.

**Note:**

- Pressing **[ RESET ]** key at bottom of the wireless sensor will generate a new code for pairing purpose.
- Always dispose old batteries in an environmental safe manner.

## 6.4 Radio-controlled / atomic clock function

This main unit is programmed to synchronize with Radio-controlled time signal.

| Version | Time signal | Signal broadcast |
|---|---|---|
| European version | DCF77(German) | Within 1500 km (932 miles) of Frankfurt, Germany |
| | MSF(UK) | Within 1500 km (932 miles) of Anthorn, England |
| US version | WWVB(US) | Within 3200 km (2000 miles) of Fort, Collins, Colorado |

The unit synchronizes itself automatically to the RC signal daily. The " " icon will appear on the LCD upon successful synchronization each time.

**Note:**

- The strength of radio-controlled time signal from the transmitter tower may be affected by geographical location or building around.
- Always place the unit away from interfering sources such as TV set, computer, etc.
- Avoid placing the unit next to metal plates.
- Closed areas such as airport, basement, tower block or factory are not recommended.

## 6.5 Time setting

The unit automatically set itself according to the radio controlled clock signal it received. To set the clock/calendar manually in areas where reception of signal is not permitted, users may first disable the reception by holding the **[RCC]** key for 8 seconds until the "OFF" icon display on the clock.

## 6.6 To manually set the clock / time zone selection

The setting mode can set the time, date, unit of measure and other functions.
Press and hold **[CLOCK]** for 2 seconds to enter the setting Mode. In setting mode, press **[CLOCK]** to proceed to the next setting step. Press **[UP]** or **[DOWN]** to change the value. Press and hold the key for quick-adjust. Please refer to following setting procedures below:

| Step | Mode | Setting procedure |
|---|---|---|
| **[CLOCK]+2s** | 12/24 hour format | Press **[UP]** or **[DOWN]** to select 12 or 24 hour format |
| **[CLOCK]** | Time zone | Press **[UP]** or **[DOWN]** to select time zone (US version only) |
| **[CLOCK]** | Hour | Press **[UP]** or **[DOWN]** to adjust the hour |
| **[CLOCK]** | Minute | Press **[UP]** or **[DOWN]** to adjust the minute |
| **[CLOCK]** | Year | Press **[UP]** or **[DOWN]** to adjust the year |
| **[CLOCK]** | M-D D-M | Press **[UP]** or **[DOWN]** to select “Month / Day” or “Day / Month” display format |
| **[CLOCK]** | Month | Press **[UP]** or **[DOWN]** to adjust the month |
| **[CLOCK]** | Day | Press **[UP]** or **[DOWN]** to adjust the day |
| **[CLOCK]** | Weekday language | Press **[UP]** or **[DOWN]** to select weekday display language |
| **[CLOCK]** | DST Auto / off | Press **[UP]** or **[DOWN]** to select DST Auto / off mode |
| **[CLOCK]** | Exit setting | |

**Note:**

- The unit will automatically exit setting if no key was pressed in 60 seconds.
- Time zone setting is only for US version where the unit receives **WWVB** signal. User can select **PST, MST, CST, EST, AST** or **NST**.

- The hour offset is for DCF(German), MSF(UK) version and Australian version. Its range is between -23 and +23 hours.
- The language options are English (EN), French (FR), German (DE), Spanish (ES), Italian (IT), Dutch (NL) and Russian (RU).
- DST (Daylight Saving Time) feature is set to Auto (factory set). The clock has been programmed to automatically adjust its time forward by one hour when the daylight saving time (DST) is in effect. User can set the DST to OFF to disable the feature.

## 6.7 Disable / enable RCC signal reception

1. Press and hold **[RCC]** key 8 seconds to disable the reception.
2. Press and hold **[RCC]** key 8 seconds to enable automatic RCC reception.

| | |
|---|---|
| ON MON 28-12 | OFF MON 28-12 |
| RC on | RC off |

## 6.8 To turn on / off alarm clock (with ice-alert function)

1. Press **[ALARM]** key any time to show the alarm time.
2. Press **[ALARM]** key to activate the alarm.
3. Press **[ALARM]** key again to activate alarm with ice-alert function.
4. To disable the alarm, press until the alarm icon disappears.

| | | |
|---|---|---|
| Alarm off | Alarm on | Alarm with ice-alert |

## 6.9 To set the alarm time

1. Press and hold **[ALARM]** key for 2 seconds to enter alarm setting mode. HOUR will begin flashing.
2. Use **[UP] or [DOWN]** key to adjust HOUR, and press **[ALARM]** key to proceed to set MINUTE.
3. Repeat 2 above to set MINUTE, then press **[ALARM]** key to exit.

**Note:**

- Once the alarm time is set, alarm function will be activated automatically.
- Pressing the **[ALARM]** key twice when alarm time is being displayed will activate the temperature-adjusted pre-alarm. The alarm will sound 30 minutes earlier if it detects outside temperature at below -3°C.

## 7. Rainfall

The device displays how many millimeters / inches of rainfall are accumulated over a time period, based on current rainfall and rain rate that is updated every minute.

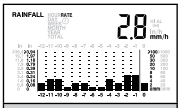
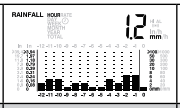
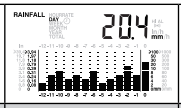
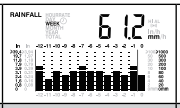
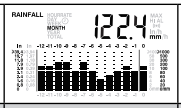
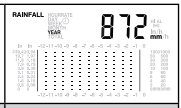
### 7.1 To select the rain display mode

Press **[RAIN]** key to toggle between:

| Step | Mode | Screen | Description |
|---|---|---|---|
| **[RAIN]** | RATE | RAINFALL HOURRATE DAY WEEK MONTH YEAR TOTAL 2.8 HI AL in/h mm/h | Current rain rate (base on 10 min rain data) |
| **[RAIN]** | HOUR | RAINFALL HOURRATE DAY WEEK MONTH YEAR TOTAL 1.2 HI AL in/h mm/h | The HOUR display indicates the total rainfall for current hour (from the hour) |
| **[RAIN]** | DAY | RAINFALL HOURRATE DAY WEEK MONTH YEAR TOTAL 20.4 HI AL in/h mm/h | The DAY display indicates the total rainfall within a day (from midnight) |
| **[RAIN]** | WEEK | RAINFALL HOURRATE DAY WEEK MONTH YEAR TOTAL 61.2 HI AL in/h mm/h | The WEEK display indicates the total rainfall within a week (from midnight of Sunday) |
| **[RAIN]** | MONTH | RAINFALL HOURRATE DAY WEEK MONTH YEAR TOTAL 122.4 MAX HI AL in/h mm/h | The MONTH display indicates the total rainfall within a month (from first day of the month) |
| **[RAIN]** | YEAR | RAINFALL HOURRATE DAY WEEK MONTH YEAR TOTAL 872 HI AL in/h mm/h | The YEAR display indicates the total rainfall within a year (from first day of the year) |

### 7.2 Graphical Histogram Display

Histogram presents an easy view of rainfall change pattern over a period of time in a graphical manner. The time scale of the graph automatically changes according to the rainfall display modes:
Rate ⟶ Hour ⟶ Day ⟶ Week ⟶ Month ⟶ Year

| | | | | | |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| Rate rainfall | Hour rainfall | Day rainfall | Week rainfall | Month rainfall | Year rainfall |

**Note:**
- By default, the graph is presented in Hourly scale when rainfall is in Rain Rate.
- There is no graphical display when Yearly Rainfall is selected.

### 7.3 Total rainfall SINCE function

Press **[SINCE]** key to display the total rainfall record. The commencing date and year will be shown.
To clear the existing commencing date and reset it to re-start again, press and hold **[SINCE]** until the record is cleared. The total rainfall will now be equal to Day rainfall of today and the unit will start again to collect the rainfall data.

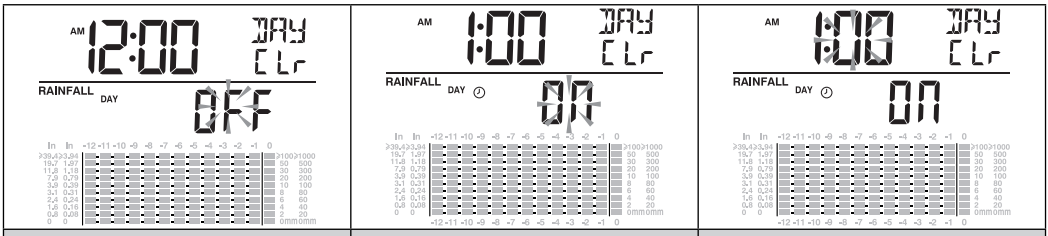
### 7.4 To select the measurement unit for the rainfall

1. Slide the **[MM / IN]** switch to <MM> position to select millimeter unit.
2. Slide the **[MM / IN]** switch to <IN> position to select inch unit.

## 7.5 Customized daily rain

Instead of clearing rainfall at midnight, user may customize the clearing time.

1. Press and hold **[RAIN]** 2 seconds to enter setting.
2. Press **[UP]** or **[DOWN]** to toggle between OFF and ON, followed by **[RAIN]**.
3. Press **[UP]** or **[DOWN]** to set the daily rainfall cleaning time, between 1:00 am to 11:00 pm, followed by **[RAIN]** to confirm and exit setting.




| Step 1 | Step 2 | Step 3 |
|---|---|---|

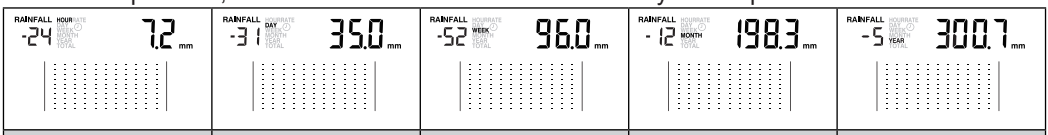
## 8. History data of all record

Data logger stores and gathers data to display historical rainfall according to your selected time-scale (e.g. up to past 24 hours, past 31 days, past 52 weeks, past 12 months or past 5 years)

## 8.1 To check history data:

1. Press **[ RAIN ]** key to select rainfall display modes.
2. Press **[ HISTORY ]** key repeatedly to read the data for each period of time scale selected backward.

When HOUR time scale is selected, the LCD will display the past indoor temperature & humidity, outdoor temperature, for each hour on the hour simultaneously for the past 24 hours.




| -24 hour rainfall | -31 Day rainfall | -52 Week rainfall | -12 Month rainfall | -5 Year rainfall |
|---|---|---|---|---|

**Note:**

The main unit can check the records according to the time and calendar of the clock, i.e. it can display the records of the past, but not any records in the future.

E.g. The main unit recorded data from Jan. 1st, 2012 to Feb. 31st, 2014. If the time is changed to Jan. 1st, 2013, then only data in 2012 can be displayed.

## 9. Temperature & humidity display

The main display unit displays outdoor temperature and humidity received from the wireless Thermo-hygro Rain Gauge sensor, as well as indoor temperature and humidity from the built-in sensors. User may select temperature unit by sliding the **[ °C / °F ]** switch.

## 9.1 To view Heat Index and Dew Point

1. Press **[ UP ]** to view Heat Index and Dew Point.
2. Press and hold **[ UP ]** for 2 seconds for auto loop.

## 9.2 Comfort indication

The comfort indication is a pictorial indication based on indoor air temperature and humidity in an attempt to determine comfort level.

| | | |
|---|---|---|
| Too cold | Comfortable | Too hot |

## 10. Maximum / minimum memory function

### 10.1 To Check the Memory:

Press **[ MEM ]** key repeatedly to check the maximum / minimum records:

| **Area** | Outdoor Temperature | Outdoor Humidity | Heat Index | Dew point | Indoor Temperature | Indoor Humidity | Hour/Day/Week/ Month/Year rainfall |
|---|---|---|---|---|---|---|---|
| **Type of memory** | Max. Min. | Max. Min. | Max. | Max. Min. | Max. Min. | Max. Min. | Max. |

**Note:**

- When maximum or minimum reading is displayed, the corresponding time and date stamp will be shown.

### 10.2 To clear individual records

While displaying the maximum / minimum records, press and hold **[ MEM ]** key for 2 seconds to clear the individual record.

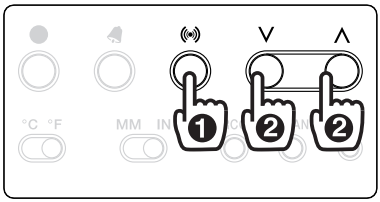
## 11. Hi / Lo alert

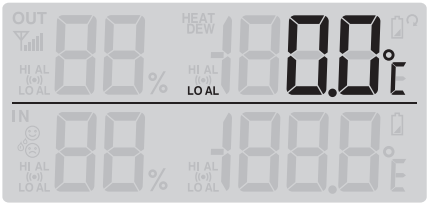
HI/LO are used to alert the users of certain weather conditions. Once activated, the alarm will turn on and red LED starts flashing when a certain pre-set criterion is met. The following are areas and type of alert provided.

| Area | Type of Alert available |
|---|---|
| Outdoor temperature | HI and LO alert |
| Outdoor humidity | HI and LO alert |
| Heat index | HI alert |
| Dew point | HI and LO alert |
| Indoor temperature | HI and LO alert |
| Indoor humidity | HI and LO alert |
| Rain Rate | HI alert |

### 11.1 To set the Hi / Lo alert

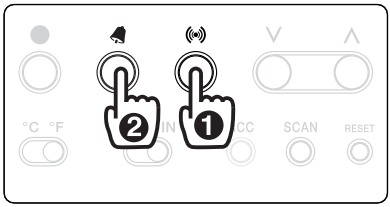
1. Press **[ ALERT ]** key to until the desired area is selected.
2. Use **[UP]** / **[DOWN]** keys to adjust the setting.
3. Press **[ALERT]** key to confirm and continue to next setting.

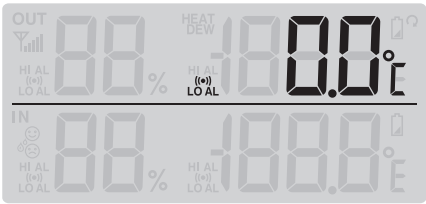


## 11.2 To enable / disable the Hi / Lo alert

1. Press **[ALERT]** key until the desired area is selected.
2. Press **[ALARM]** key to turn the alert on or off.
3. Press **[ALERT]** key to continue to next setting.




**Note:**

1. The unit will automatically exit setting mode in 60 seconds if no key is pressed.
2. When alert alarm is on, the alert LED indicator, the area and type of alarm that triggered the alarm will be flashing and the alarm will sound for 2 minutes.
3. To silence the alert alarm beeping, press the **[SNOOZE / LIGHT]** key, or let the beeping alarm automatically turn off after 2 minutes.

## 12. Wireless signal reception

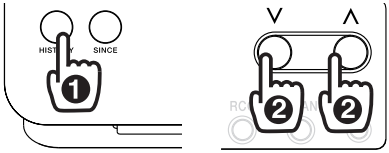
| | | | | |
|---|---|---|---|---|
| No sensor | Signal searching | Strong signal | Weak signal | Signal lost |

The wireless sensor is capable of transmitting data over an approximate operating distance of 150m range (line of sight).
Occasionally, due to intermittent physical obstruction or other environment interference, the signal may be weaken or lost.
In the case that the sensor signal is lost completely, you will need to relocate the display main unit or the wireless sensor closer to each other.

## 13. Data clearing

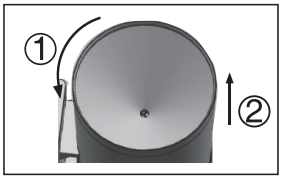
During installation of the wireless sensor, the sensor was likely to be triggered, resulting in erroneous rainfall measurements. After the installation, user may clear out all the erroneous data from the Display Main Unit, without needing to reset the clock and re-establish pairing.

1. Press and hold **[HISTORY]** key for 8 seconds.
2. Press **[UP]** or **[DOWN]** key to choose “YES” or “NO”.
3. Press **[HISTORY]** key to confirm. This will clear out any rainfall data recorded before.



## 14. Maintenance of rain gauge

1. Rotate the rain collector in anticlockwise direction.
2. Gently remove the rain collector.
3. Clean and remove any debris or insects.




## 15. Troubleshooting

| Problem / Symptom | Solution |
|---|---|
| Strange or no measurement of Rain Sensor | 1. Check the drain hole in the rain collector.<br>2. Check the balance of the rain gauge. |
| Strange or no measurement of Thermo Sensor | 1. Check the radiation shield.<br>2. Check the sensor casing. |
| display on the outdoor temperature display | 1. Change new batteries to the rain gauge.<br>2. Relocate the main unit and sensor closer to each other.<br>3. Make sure the main unit is placed away from other electronic appliances that may interfere with the wireless communication (TVs, computers, microwaves).<br>4. If problem continues, reset both main unit and the sensor. |
| and - - - (Signal lost for 15 minutes) | |
| and Er (Signal lost for 1 hour) | |

## 16. Specifications

### 16.1 Main unit

| | |
|---|---|
| **General specification** | |
| Dimensions | 95 x 155 x 23 mm (W x H x D) |
| Weight | 212g without batteries |
| Battery | 2 x AA size 1.5V batteries (Alkaline recommended) |
| Support channels | Wireless sensor (Rain gauge, thermo sensor) |
| Operating temperature range | -5°C to 50°C (-40°F to 140°F) |
| Operating humidity range | RH 10% to 90 % non-condensing |
| **Radio-controlled / atomic clock** | |
| Synchronization | Auto or disabled |
| Clock display | HH : MM / Weekday |
| Hour format | 12hr AM/PM or 24hr |
| Calendar | DD / MM / YR or MM / DD / YR |
| Weekday | 7 languages: EN, FR, DE, ES, IT, NL, RU |
| Time signal | DCF, MSF, WWVB (Factory set) |
| Time zone | PST, MST, CST, EST, AST, NST (WWVB version only) |
| Hour offset | -23 to +23 hours (DCF / MSF / Australian versions) |
| DST | AUTO / OFF |

| | |
|---|---|
| **Indoor temperature** | |
| Temperature unit | °C or °F |
| Displayed range | -40°C to 70°C (-40°F to 158°F) (< -40°C: LO; > 70°C: HI) |
| Operating range | -10°C to 50°C (14°F to 122°F) |
| Resolution | 0.1°C or 0.1°F |
| Accuracy | +/- 1°C or 2°F typical @ 25°C (77°F) |
| **Indoor humidity** | |
| Displayed range | 20% to 90% RH (< 20%: LO; > 90%: HI) (Temperature between 0°C to 60°C) |
| Operating range | 20% to 90%RH |
| Resolution | 1% |
| Accuracy | ±8%RH (20~39% RH) (@25°C)<br>±5%RH (40~70% RH) (@25°C)<br>±8%RH (71~90% RH) (@25°C) |
| **Outdoor temperature** | |
| Temperature unit | °C or °F |
| Resolution | °C / °F (1 decimal place) |
| Accuracy | 0.1 ~ 60°C ± 0.4°C (32.2 ~ 140°F ± 0.7°F)<br>-19.9 ~ 0°C ± 0.7°C (-3.8 ~ 32°F ± 1.3°F)<br>-40 ~ -20°C ± 1°C (-40 ~ -4°F ± 1.8°F) |
| **Outdoor humidity** | |
| Humidity unit | % |
| Accuracy* | 1 ~ 9% RH ± 5% RH @ 25°C (77°F)<br>10 ~ 90% RH ± 3.5% RH @ 25°C (77°F)<br>91 ~ 99% RH ± 5% RH @ 25°C (77°F) |
| Resolution | 1% |
| **Rain gauge** | |
| Unit for rainfall | in and mm |
| Range for rainfall | 0~29999 mm (max) |
| Resolution | 0.01” (0.254 mm) |
| Accuracy | < 0.01” (0.2 mm): +/- 7% or 1 tip; 5” (127 mm): +/- 7% |
| Hi display | Hour rainfall > 999.9 mm; Day rainfall > 9999 mm; Week/Month/Total rainfall > 29999 mm |

## 16.2 Wireless rain gauge sensor

| | |
|---|---|
| Dimensions | 109 x 200 x 109 mm (W x H x D) |
| Weight | 372g without batteries |
| RF transmission range | 150m (line of sight) |
| Battery | 3 x AA size 1.5V battery (non-rechargeable Lithium battery recommended) |
| Frequency | 868 MHz (European) / 915 MHz (US) / 917 MHz (Australian) |
| Transmission interval | Every 12 seconds |
| Operating temperature range | -40°C to 60°C (-40°F to 140°F) |
| Operating humidity range | RH 1% to 99 % non-condensing |

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-- Reorient or relocate the receiving antenna.
-- Increase the separation between the equipment and receiver.
-- Connect the equipment 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.
" FCC RF Radiation Exposure Statement
Caution: To maintain compliance with the FCC's RF exposure guidelines, place the unit at least 20cm from nearby persons.