

WIRELESS SOLAR POWER WEATHER STATION
INSTRUCTION MANUAL

MODEL NO.: WH0250/ WH0251

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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.

**NOTE: This is a combined operation manual for WH0250 and WH0251. WH0250 can receive and display the radio controlled time and date (RCC function). WH0251 maintain all the functions of WH0250 but without RCC function.*

1. Introduction

Thank you for purchasing this Wireless Weather Station. 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 weather station and benefit from its unique feature.

1.1 Package Contents

- 1x Weather station base unit
- 1x remote Sensor with mounting bracket
- Mounting Screws
- Instruction manual

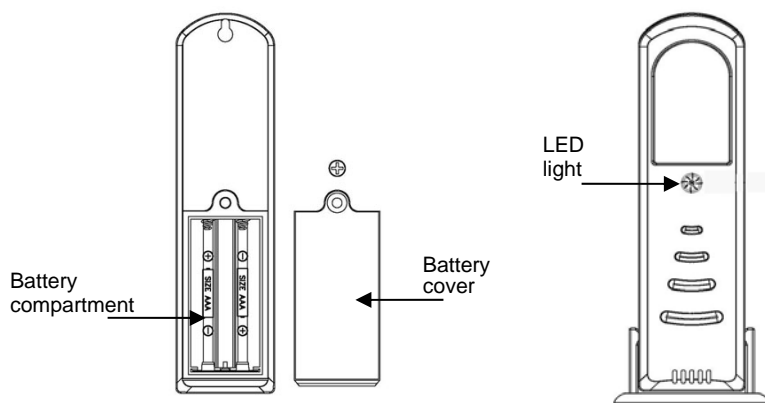
1.2 Feature

- 1) Wireless outdoor and indoor temperature (°F or °C)
- 2) Records min. and max. temperature
- 3) Receive and displays the Radio controlled time (DCF, WWVB) and date with manual setting option (WH0250)
- 4) Time and date with manual setting (WH0251)
- 5) Time Alarm and Zone Setting
- 6) 12 or 24-hour time display
- 7) 100 year calendar with week (2000-2099)
- 8) Can receive up to 3 sensors

2. Installation

2.1 Installing the Batteries

Temperature sensor



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) Open the battery compartment of the display unit and the transmitter and place both instruments on a desk with a distance of approximately 1.5 meter. Check that no other electronic devices are close.
- 2) Insert 2XAAA 1,5V Alkaline batteries first into the battery compartment of the transmitter and immediately afterwards 2XAA 1,5 V in the display unit, observing the correct polarity. When battery is first inserted, the red LED light will be light up for 3-4 seconds. (If no LED light up or is lighted permanently, make sure the battery is inserted the correct way or a proper reset is happened)

2.2 Reception of outdoor temperature and RCC time

RF (Radio Frequency) Receiving mode

1. When the base station is powered up, all LCD segments will light up for about 4 seconds after the "beep". The weather station begins to register the outdoor transmitter, enter RF receiving state for 3minutes
2. Base station receive the outdoor temperature each 48s. If there is no new effective signal from the sensor in constancy reception failure 6 times, the outdoor temperature will displays "--."
3. Do not press any key before outdoor sensor data received, otherwise the outdoor sensor learning mode will be terminated.
4. If the outdoor weather data is not displayed or if any key is pressed before the weather station receives the signal, or when changing batteries you will need to follow the battery installation procedure again. **Please wait 10 seconds before re-insert the battery again to make a proper reset for both transmitter and receiver.**

RCC (Radio Controlled Clock) Receiving Mode

1. During the RF receiving mode, if any key is pressed or time out (3minute), the unit will enter the RCC receiving mode(maximum 8 minutes). Press any key to exit the RCC receiving mode.
2. If no RCC signal is detected, the base station will try once every hour to get an RCC signal until a signal is received. Once the base station receives the RCC signal it will overwrite the manually set time and date, on the base station the RCC tower icon will be display.
3. If RCC signal is detected successfully, the base station will continue to scan for the RCC signal each day at 2:00, 8:00, 14:00 and 20:00, despite if you manually set the date and time.
4. The best condition for reception is at night, between midnight and 6:00am – when there is less atmospheric interference.

After both outdoor temperature and radio controlled time are displayed you can place your remote sensor outdoors at the final destination.

Note for Radio Controlled Time:

The DCF WWVB or MSF time signal is an AM modulated time-of-day signal broadcasted by the Federal Government of Germany, NIST from USA or National Physical Laboratory. The time base is generated from an atomic time generator which is accurate to 10 billions of one second.

Please take note of the following for RCC time reception:

- Recommended distance to any interfering sources like computer monitors or TV sets is a minimum of 1.5-2 meters.
- Within ferro-concrete rooms (basements, superstructures), the received signal is naturally weakened. In extreme cases, please place the unit close to a window and/or point its front or back towards the Frankfurt transmitter.

2.3 Additional transmitters

The wireless weather station can receive up to 3 temperature sensors. If you have purchased additional remote sensors, repeat step 1) for all extra sensors. However, ensure that you **leave 10 seconds in between the reception of the last sensor and the set-up of the following sensor**. The wireless weather station will number the sensors in the order of set-up automatically, i.e. the first temperature sensor will have the temperature displayed with **1**. If only have one sensor, **1** won't be display.

2.4 Mounting

2.4.1 Base Station

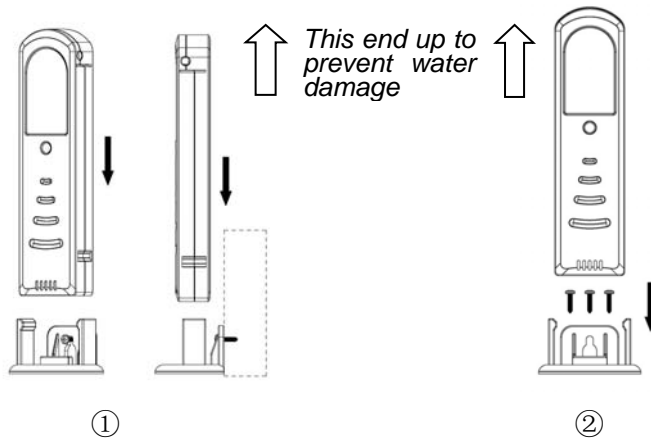
With one foldable leg at the back of the unit, the base station can be placed onto any flat surface or wall mounted at the desired location by the hanging holes at the back of the unit. It is important to check that the radio signal can be received before permanently mounting any of the units

2.4.2 Remote Sensor

Note: To achieve a true temperature reading, avoid mounting remote sensor in

direct sunlight. We recommend that you mount the remote sensor on an outside North-facing wall; obstacles such as walls, concrete, and large metal objects will reduce the range.

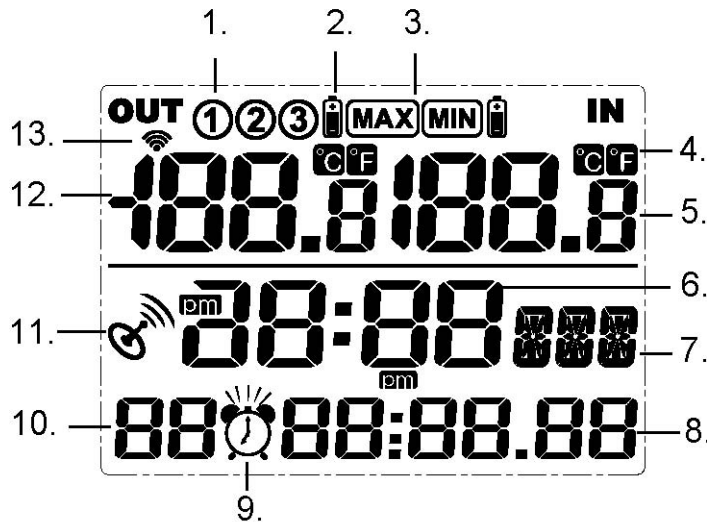
The outdoor temperature sensor bracket can be affixed by screws in 2 ways:



3. Overview

Base unit-LCD

The following illustration shows the full segments of the LCD for description purposes only and will not appear like this during normal operation.



- | | |
|---|---------------------------------|
| 1. Number showing sensor unit | 7. Day of week |
| 2. Outdoor sensor low battery indicator | 8. Calendar / alarm time |
| 3. MAX MIN information | 9. Alarm icon |
| 4. Temperature display unit | 10. Second display |
| 5. Indoor temperature display | 11. RCC Tower icon |
| 6. Time display | 12. Outdoor temperature display |
| | 13. Outdoor reception signal |

4. Program Mode

The base station has four keys for easy operation: **SET** key, **CH/+** key, **MIN/MAX** key and **ALARM** key.

Press **CH/+** key to toggle between the outdoor sensor CH1, CH2, and CH3 (if more than 1 sensor is used)

4.1 Setting Modes

- While in the normal mode, press the **SET** key shortly to select ALARM TIME or calendar display.

- While in the normal mode, press the **SET** key for 2 seconds to enter the setting modes. Temperature display unit °C or °F digits will start flashing. Press the **MIN/MAX** or **C/H+** key to select the temperature unit.

- Press the **SET** key to select the following setting:

- RCC on/off
- Time Zone Setting

At Europe, 0 for GMT+1 time zone, 1 for GMT+2 time zone, -1 for GMT time

zone.

At America, -4 for Atlantic time zone, -5 for Eastern Time zone, -6 for Central Time Zone, -7 for Mountain Time zone, -8 for Pacific time zone, -9 for Alaska time zone, -10 for Hawaii time zone.

- 12/24 hour format
- Manual time setting (hours/minutes)
- Date display format DM or MD (default DM format for DCF and MSF version, default MD format for WWVB and JJY version)
- Calendar setting(in the order of year /month/ date)

Press **MIN/MAX** or **CH/+** key to select the units or scrolls the value. Holding the keys 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 20s.

4.2 MIN/MAX Mode

- While in the normal mode, press **MIN/MAX** key to display the following values in sequence:

- maximum indoor temperature
- minimum indoor temperature
- maximum CH1 outdoor temperature
- minimum CH1 outdoor temperature
- maximum CH2 outdoor temperature (If 2 sensors are used)
- minimum CH2 outdoor temperature (If 2 sensors are used)
- maximum CH3 outdoor temperature (If 3 sensors are used)
- minimum CH3 outdoor temperature (If 3 sensors are used)

Hold the **MIN/MAX** key for 2 seconds, the above individual minimum or maximum record will be reset to current temperature.

- The MIN/MAX mode will return to normal display mode while key idle 5s.


4.3 Time Alarm Mode

- While in normal mode, press and hold the **ALARM** key for 2 seconds to enter time alarm mode. The alarm hour will start flashing, press **MIN/MAX** or **CH/+** key to adjust the alarm hour up or down. Confirm with **ALARM** key and skip to alarm minutes, press **MIN/MAX** or **CH/+** key to adjust the alarm minute. Press **ALARM** key again to confirm and exit the setting.

- While in normal mode, press the **ALARM** key to activate or de-active the alarm. If the alarm is active, the alarm icon  will be displayed.

Cancelling the alarm

When an alarm has been triggered, the alarm will sound and the alarm icon will

flash for 120seconds. Press any of the SET, MIN/MAX/- key or CH/+ keys to silence the alarm. Press **ALARM** key to enter the SNOOZE mode,  will start flashing indicating that the alarm is active but in snooze mode. The alarm will sound again in 5 minutes.

If longer than 20s no key operation, the unit will switch itself to normal display mode automatically.

5. Battery replacement

- When the batteries of the outdoor sensor are used up, the low battery indicator appears on the display
- If battery change happened on remote sensor side, then the base station must be powered up again to re-learn the transmitter.
- Please use Alkaline Batteries, do not use rechargeable batteries. Please take note of correct battery polarity.



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

6. 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 placed near objects that can act as sources of heat or cold.

7. Specifications

Outdoor data

Transmission distance in open field : 100meter max.
Frequency : 433MHz
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

Indoor data

Temperature : 30 sec
Indoor temperature range : -9.9°C to +60°C
Resolution : 0.1°C
Alarm duration : 120 sec

Power consumption

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

Battery life

Minimum 12 months for base station
Minimum 12 months for remote sensor