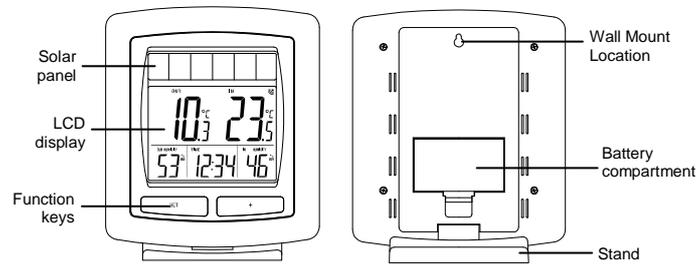


SOLAR STATION
INSTRUCTION MANUAL



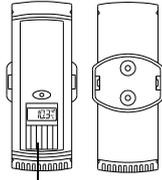
FEATURES:

SOLAR STATION:



- 24h time format display
- Solar mode setting
- Indoor and outdoor temperature display in °C with MIN/MAX records
- Indoor and outdoor humidity display in RH%
- Primary Alkaline battery or rechargeable Alkaline battery selection
- Low battery indicators
- Wall mount or freestanding

SOLAR-POWERED TRANSMITTER:



- Remote transmission of outdoor temperature and humidity to the Solar Station by 868 MHz signals
- LCD will automatically alternate and display the outdoor temperature and humidity data
- Recharge batteries by solar-powered cells
- Wall mounting case

Solar panel

Note:

- The solar-powered transmitter uses solar cells to charge the rechargeable batteries (2 x AAA rechargeable batteries).
- **Those rechargeable batteries cannot be replaced.**

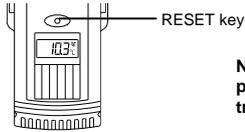
SOLAR TRANSMITTER OPERATION MODES

Important:

Users need to press the reset key to activate the solar transmitter and link the transmission to the Solar Station (receiver).

It is important to allow sufficient light to reach the solar panel while activating the solar transmitter. Make sure the lights are on in the setup room and the solar panel is facing a 60W light bulb or brighter - **do not cover with hands or other objects.**

SOLAR TRANSMITTER RESET KEY:



Note: only use a small pointed pen to press the RESET key to re-activate the transmitter into Normal Operation Mode.

The solar transmitter has 3 operations modes:

Normal Operation Mode:

- This mode occurs when the battery voltage is higher than 2.5V.
- The transmitter will measure and transmit the temperature and humidity data to the Solar Station every 5 seconds.
- If a dark environment is detected, it will measure and transmit the temperature every 10s.
- If the battery voltage is dropped lower than 2.8V, it will measure and transmit the temperature every 10s
- If battery voltage is dropped lower than 2.4V, will go into Idle mode.
- If the solar transmitter is placed into a dark environment for 72 hours, will go into Stop mode.
- If the user cover the solar cell for 10 seconds and press the reset button, "StP" will be displayed on the LCD. Then the transmitter enters STOP mode.

Idle Operation Mode:

- This mode is occurred when the battery voltage is dropped lower than 2.4V
- LCD is turned off
- Does not perform temperature measurement and transmission
- If battery voltage is raised higher than 2.5V, will go into Normal mode
- If the solar transmitter is placed into a dark environment for 72 hours, will go into Stop mode.

Stop Operation Mode:

- This mode is occurred when the solar transmitter is placed into a dark environment for 72 hours or the user cover the solar cell for 10 seconds and press the RESET button
- The transmitter is in a standby state. Without perform any operation and LCD is off
- Under a bright condition, press the reset button to wake up the transmitter into normal operation mode (battery voltage is higher than 2.5V.). If the battery is lower than 2.4V, a "Lo" icon will be shown in the LCD for a while. Then the transmitter will enter the idle mode.
- The most power saving mode.

INITIAL SETUP

It is very important to **follow these steps**:

1. Open the battery compartment, and **make sure** that the battery switch is in the **BATTERY** position (not the SOLAR position).
2. Battery switch in the **BATTERY** position
3. Now locate the battery insulator tab, and gently pull to remove it.
4. Slide the battery switch to the SOLAR position
5. Battery switch in the **SOLAR** position
6. Continue to section titled "**Setup After Changing/Installing the Batteries**"

TO INSTALL / REPLACE BATTERY IN THE SOLAR STATION

The Solar Station can use either the included 2 x Alkaline rechargeable batteries (charged by solar panel) or 2 x AA Alkaline batteries (non-rechargeable; not included).

Important: the battery type selection (rechargeable or non-rechargeable) must be made BEFORE inserting the battery into the compartment otherwise it may cause damage to the station!

The included Alkaline rechargeable batteries should provide you with many years of service.

If you choose to use non-rechargeable batteries, the battery switch MUST be moved to the **BATTERY** position (not the SOLAR position). In this position, the solar cells do not charge the batteries.

REGARDLESS OF THE TYPE OF BATTERY INSTALLED, THE BATTERY SWITCH MUST BE IN THE BATTERY POSITION WHEN THE BATTERY IS INSERTED.

If rechargeable batteries are used, the Battery switch should be moved to the SOLAR position **AFTER** they have been inserted.

To use the included rechargeable Alkaline batteries (charged by solar panel):

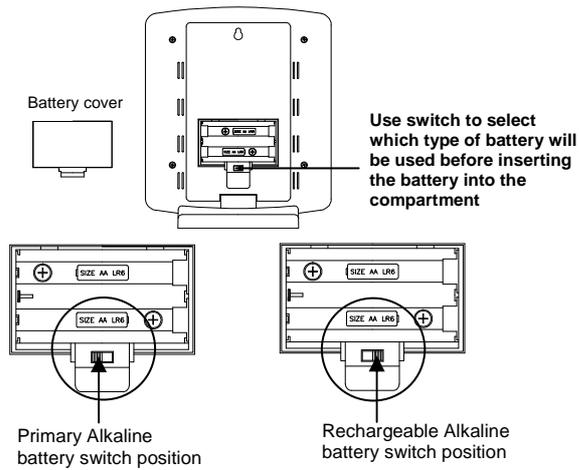
1. Remove the insulation tape.
2. Replace battery cover
3. Remove the black protective foil on the solar panel.

DO NOT SET THE CLOCK.

To use non-rechargeable Alkaline batteries:

1. Remove the included rechargeable AA batteries from the compartment.
2. Use the switch to select the Alkaline battery (see below).
3. Insert 2 x AA Alkaline batteries into the compartment, observing the correct polarity (see marking inside battery compartment.)
4. Replace battery cover

DO NOT SET THE CLOCK.



Note: For best performance, batteries should be replaced at least once every 2 years to maintain the best running accuracy. Ensure that the batteries used are new and the correct size.



Please help in the preservation of the environment and return used batteries to an authorized depot.

SETUP AFTER CHANGING/REPLACING THE BATTERIES IN THE SOLAR STATION

1. First, press the reset button on the Solar Transmitter. All segments of the LCD will light up briefly. The code number and the security code (for example, "20") will be displayed sequentially. Next, the batteries voltage will be shown on the LCD, it should be higher than 2.4V in order to maintain the normal operation. The current temperature/humidity will be display on the transmitter, and the transmitter starts the transmission of signal.
2. Within 2 minutes of the start up of transmitter, insert the batteries to the Solar Station. Once the batteries of the Solar Station are in place, all segments of the Solar Station's LCD will light up briefly and the time (00:00), date, indoor temperature will be displayed on the Solar Station. If they are not shown in the LCD after 30 seconds, reinstall the batteries of the Solar Station again. Once the indoor data is displayed, the Solar Station will start receiving the outdoor data.
3. The outdoor temperature and humidity data should then be displayed on the Solar Station. If this does not happen after 2 minutes, the batteries will need to be removed from the display and reset from step 1.
4. In order to ensure better reception and transmission, the distance between the Solar Station and the transmitter should not be more than 100m to ensure sufficient 868 MHz transmission. (see notes on "**Positioning**" and "**868 MHz Reception**").

Note: When changing the batteries:

1. Be careful that they do not spring free from the contacts.
2. Press any button 20 times with the batteries removed.
3. Always wait at least 10 minutes after removing batteries before re-inserting; otherwise start up problems may occur.

FUNCTION KEYS

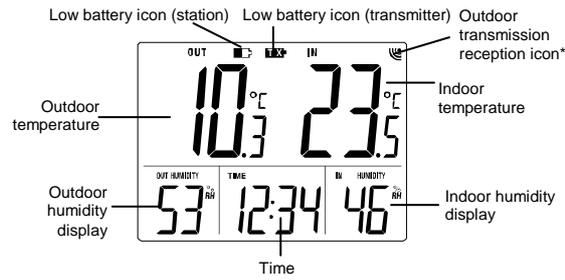
The solar station has 2 easy to use keys:

- SET** key : To enter into the set modes for: time and solar modes
 To toggle between the display modes

- + key : To change any values in manual set modes
To reset all the MIN/MAX temperature records to current temperatures

LCD SCREEN DESCRIPTIONS

The solar station LCD is divided into 2 sections and once the batteries are inserted, all the segments will light up briefly before displaying the information for time, indoor and outdoor temperature and indoor and outdoor humidity.



* When the signal from the transmitter is successfully received by the Solar Station, this icon will be switched on. (If not successful, the icon will not be shown on the LCD). User can therefore easily see whether the last reception was successful ("ON" icon) or not ("OFF" icon). On the other hand, the short blinking of the icon shows that a reception is being done at that time.

LOW BATTERY INDICATOR:

- RX Low battery indicator is displayed on the LCD when the Solar Station batteries voltage is low.
- TX Low battery indicator is displayed on the LCD when the Solar Transmitter batteries voltage is low.

MANUAL SETTINGS

After completion of the above described procedures in “**Setting-up**” the manual setting modes can be entered by pressing the **SET** key. The following settings can now be programmed:

- Manual time setting
- Solar mode setting

MANUAL TIME SETTING

1. Press and hold the **SET** key for 3 seconds to enter the time setting mode.
2. The hour digits start flashing.
3. Set the desired hours by pressing and releasing the **+** key followed by pressing the **SET** key.
4. Now the minute digits start flashing.
5. Set the desired minutes by pressing and releasing the **+** key. If the **+** key is held, the units will increase by 5.
6. Press the **SET** key again to confirm and enter the Solar Mode setting.

SOLAR MODE

The Solar Mode is used for saving the power consumption of the rechargeable battery (Default setting ON):

1. The characters “**ON**” or “**OFF**” will start flashing. By use of the **+** key select “**ON**” or “**OFF**” to set the solar mode.
2. Press and release the **SET** key to exit the setting mode and switch back to the normal display mode.

If the solar mode setting is ON:

- LCD will automatically turn OFF if the environment is too dark
- LCD will automatically turn ON if the environment is bright enough; the surrounding environment brightness is checked every 5 seconds.
- No information will be displayed when the LCD is OFF, but all the settings and operations will remain, except for the temperature and humidity measurements.
- The outdoor data will not be received if the LCD is OFF for more than 10 minutes.
- If the user wants to check data while the display is automatically turned off, because the environment is not bright enough, take the solar station into a brighter environment. The display will turn on again.

If the solar mode setting is OFF:

- LCD will remain ON constantly.
- All outdoor data reception and measurements will be performed even if a dark environment is detected.

STOP MODE

If the Solar Station is placed in a dark environment for 72 hours continually, the solar station will go to the stop mode:

- The most power saving condition.
- The Solar Station will not perform any operation and the LCD will also be OFF.
- Users need to press any key to wake up the Solar Station and to re-activate the transmission with the solar transmitter.

EXIT THE MANUAL SETTING MODES

If no keys are pressed for at least 15 seconds in setting mode, the solar station will automatically switch back to normal display mode.

TO VIEW THE INDOOR AND OUTDOOR MIN/MAX TEMPERATURES

1. From normal display, press the + key once to view the MIN/MAX outdoor temperature.
2. Press the + key again to view the MIN/MAX indoor temperature.
3. Press the + key a third time to return to normal display.

Note:

- The resolution for the MIN/MAX temperature records is 0.5°C
- If no keys are pressed for 15 seconds, the Solar Station will automatically switch back to normal display.

TO RESET THE MIN/MAX TEMPERATURE RECORDS:

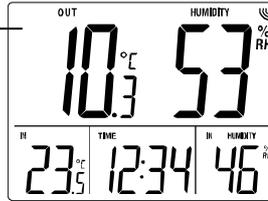
Press and hold the + key for 3 seconds to reset the MIN/MAX temperature records. This will reset all the indoor and outdoor MIN/MAX records to current temperatures.

CHANGING THE DISPLAY MODE

The Solar Station can be set to show different displays:

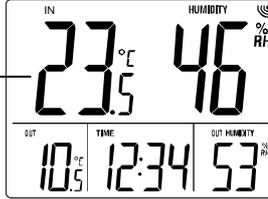
1. From normal display, press the **SET** key:

The LCD1 will now display:
*outdoor temperature/ outdoor
humidity*



2. Press the **SET** key again

The LCD1 will display: *indoor
temperature/ indoor humidity*



3. Press the **SET** key again and the display will return to the normal display

868MHZ RECEPTION CHECK FOR OUTDOOR SOLAR TRANSMITTER

The Solar Station will receive the outdoor data every 50 seconds. If the temperature data is not being received 2 minutes after setting up (or the display shows "- -"), then please check the following points:

1. The distance of the Solar Station or outdoor transmitter should be at least 2 meters away from any interfering sources such as computer monitors or TV sets.
2. Avoid placing the receiver onto or in the immediate proximity of metal window frames.

3. Using other electrical products such as headphones or speakers operating on the same signal frequency (868MHz) may prevent correct signal transmission and reception.
4. Neighbors using electrical devices operating on the 868MHz signal frequency can also cause interference.

Note: When the 868 MHz signal is received correctly, do not re-open the battery cover of the Solar Station, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see **"TO INSTALL / REPLACE BATTERY IN THE SOLAR STATION"** and **"INITIAL SETUP"** above) otherwise transmission problems may occur.

The maximum transmission range is 100m from the outdoor transmitter to the Solar Station (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see **"TO INSTALL / REPLACE BATTERY IN THE SOLAR STATION"** and **"INITIAL SETUP"**).

POSITIONING THE SOLAR STATION:

Before permanently mounting, ensure that the Solar Station is able to receive 868MHz signals from the desired location. In addition, the Solar Station should be placed in a bright environment for the rechargeable batteries to be able to recharge.

There are two possible ways to mount the solar station:

- use of the detachable stand, or
- wall mounting

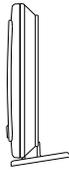
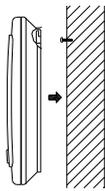


TABLE STANDING

The Solar Station comes attached with a table stand, which provides the option of table standing the unit in addition to wall mounting.

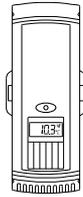


WALL MOUNTING

1. Install a mounting screw (not included) into a wall—leaving approximately 5mm extended from the wall.
2. Place the Solar Station onto the screw, using the hanging hole on the backside. Gently pull the Solar Station down to lock the screw into place.

Note: Always ensure that the Solar Station locks onto the screw before releasing.

POSITIONING THE SOLAR TRANSMITTER:



It is important to place the solar transmitter in a bright environment for the rechargeable batteries to be able to recharge. Do not place the sensor directly in the sun!

The solar transmitter can be placed onto any flat surface or wall mounted using the bracket which doubles as a stand or wall mount base.



TO WALL MOUNT

1. Secure the bracket onto a desired wall using the screws and plastic anchors.
2. Clip the solar transmitter onto the bracket.

Note:

The mounting surface can affect the transmission range. If, for instance, the unit is attached to a piece of metal, it may then either reduce or increase the transmitting range. For this reason, we recommend not to place the unit on any metal surfaces or in any position where a large metal or highly polished surface is in the immediate vicinity (garage doors, double glazing, etc.). Before securing in place, please ensure that the Solar Station can receive the 868MHz signal from the solar transmitter at the positions that you wish to place them.

CARE AND MAINTENANCE:

- Avoid placing the units in areas prone to vibration and shock as these may cause damage.
- Avoid areas where the units can be exposed to sudden changes in temperature, i.e. direct sunlight, extreme cold and wet/moist conditions as these will lead to rapid changes which reduce the accuracy of readings.
- When cleaning the LCD and casing, use a soft damp cloth only. Do not use solvents or scouring agents.
- Do not submerge the units into water.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended size.
- Do not make any repairs to the units. Please return them to the original point of purchase. Opening and tampering with the units may invalidate the warranty.

SPECIFICATIONS:

Temperature measuring range

Indoor : -9°C to 59.9°C with 0.1°C or 1°C resolution, depending on the display location ("--.-" or "--.0" displayed if outside this range)

Outdoor : -39°C to 59.9°C with 0.1°C or 1°C resolution, depending on the display location resolution ("--.-" or "--.0" displayed if outside this range)

Temperature checking interval:

Indoor : every 2 minutes

Outdoor : every 50 seconds

Humidity measuring range

Indoor : 20% to 95% with 1% resolution

("—" displayed if the indoor temperature is OFL; "19%" displayed if below 20%, "96%" displayed is above 95%)

Outdoor : 1% to 99% with 1% resolution

("—" displayed if temperature is OFL; "1%" displayed if below 1%, "99%" displayed is above 99%)

Humidity checking interval :

Indoor humidity : every 2 minutes

Outdoor humidity : every 50 seconds

Power consumption

Solar Station :

Alkaline rechargeable battery : 2 x AA, 1.5V (included), rechargeable by solar cell

Rechargeable Alkaline battery life : 18 – 60 months, depending on usage

Primary Alkaline battery : 2 x AA, 1.5V battery (not included)

Primary Alkaline battery life : about 24 months

Solar transmitter : 2 x AAA, 1.5V (included), rechargeable by solar cell

Rechargeable Alkaline battery life : 18 – 60 months, depending on usage

Dimensions (L x W x H)

Solar Station : 135.4 x 30.6 x 153.9mm

Solar transmitter : 36 x 16 x 102.6mm

LIABILITY DISCLAIMER

- The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment
- Please contact your local or/and regional authorities to retrieve the addresses of legal dumping grounds with selective collection
- All electronic instruments must from now on be recycled. User shall take an active part in the reuse, recycling and recovery of the electrical and electronic waste.
- The unrestricted disposal of electronic waste may do harm on public health and the quality of environment.
- This product must however not be thrown in general rubbish collection points.
- As stated on the gift box and labeled on the product, reading the "User manual" is highly recommended for the benefit of the user.
- The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.
- This product is not to be used for medical purposes or for public information.

- This product is only designed to be used in the home as indication of the future weather and is not 100% accurate. Weather forecasts given by this product should be taken only as an indication and not as being totally accurate.
- The specifications of this product may change without prior notice.
- This product is not a toy. Keep out of the reach of children.
- No part of this manual may be reproduced without written consent of the manufacturer.



R&TTE DIRECTIVE 1999/5/EC

Summary of the Declaration of Conformity : We hereby declare that this wireless transmission device does comply with the essential requirements of R&TTE Directive 1999/5/EC.