WIRELESS 868 MHz TEMPERATURE STATION

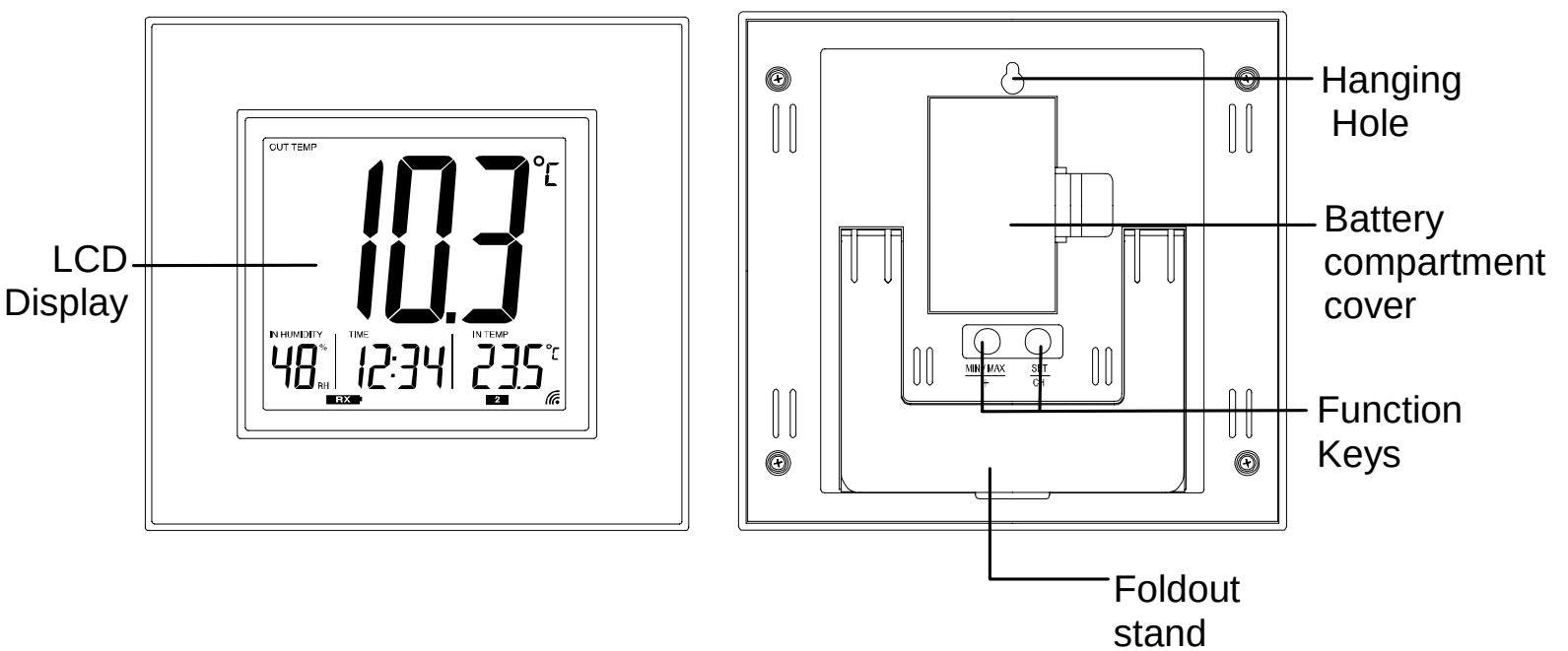
Instruction Manual

INTRODUCTION:

Congratulations on purchasing this fancy 868MHz Temperature Station which displays the time, indoor temperature and indoor humidity, and up to three outdoor temperature readings. With only two easy to use keys, this product is ideal for use in the home or office.

FEATURES:

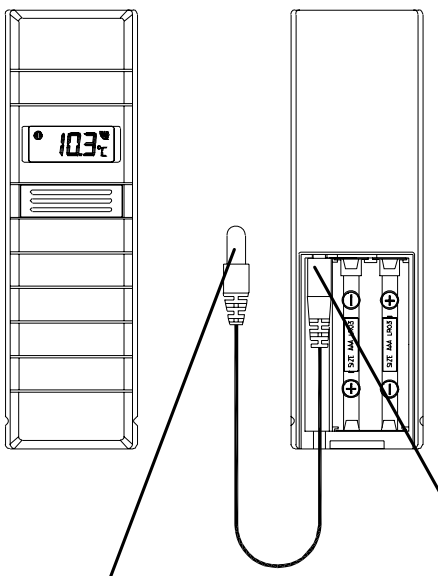
The Temperature Station



- Quartz clock in 12 or 24-hour time display (hour and minute, manually set)
- Indoor and outdoor temperature reading in Celsius (°C) or Fahrenheit (°F) degree
- Indoor humidity reading in %RH
- Can receive up to two outdoor transmitters
- Dual channel transmitter with optional 3-meters external probe for Channel 2 temperature data
- Wireless transmission at 868 MHz
- Signal reception intervals at 4.5 seconds
- Minimum and Maximum records of indoor temperature, indoor humidity and outdoor temperature
- Low battery indicator
- Wall mounting or table standing (foldout table stand included)

The Outdoor Thermo-Hygro Transmitter

- Remote transmission of outdoor temperature to Temperature Station by 868 MHz signals
- Dual channel transmitter*: one internal channel and one probe channel
- Shower proof casing
- Wall mounting stand



Optional external probe

This socket is only for the external probe. Do not apply power plug to it.

*DUAL CHANNEL TRANSMITTER -

There are an internal channel and an external probe channel in the transmitter. The data measured by the internal sensor and the measuring probe will be shown on the transmitter's display as Channel "1" and "2" respectively. The two readings will be automatically toggled to display. However, if the probe is unplugged, the transmitter' s display will only show the reading from the inner sensor.

Once the transmitter is successfully recognized by the temperature station, Channel 1 of the Temperature station will display the temperature data measured by internal sensor and Channel 2 will display the temperature estimated by the probe.
If the measuring probe is unplugged, the "probe channel" on Temperature station will show "---", yet the data from the internal sensor will still be shown on Channel 1 .
The probe can be connected to the remote temperature sensor anytime after initial setup. There is no need to reset the units, should the probe be unplugged or re-plugged again. The Temperature Station will automatically detect the temperature probe data and will display the temperature data on Channel 2 after the probe is plugged.

SETTING UP:

When one transmitter is used:

1. First, insert the batteries into the transmitter (see “**How to install and replace batteries in the Temperature transmitter**” below).
2. Within 2 minutes of powering up the transmitter, insert the batteries to the Temperature Station (see “**How to install and replace batteries in the Temperature Station**” below). Once the batteries are in place, all segments of the LCD will light up briefly. Then the indoor temperature and the time as 0:00 will be displayed. If they are not shown on LCD after 60 seconds, remove the batteries and wait for at least 60 seconds before reinserting them. Once the indoor data is displayed, user may proceed to the next step.
3. After the batteries are inserted, the Temperature Station will start receiving data signal from the transmitter.

4. If the optional probe has been plugged to the dual channel transmitter, the outdoor temperature should then be displayed on the Temperature Station on channel 1 and 2. Also, the signal reception icon will be displayed. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1.

Note:

- Channel 1 will show the reading from the internal sensor of the dual channel transmitter; Channel 2 will show the reading sensed by the probe. If the probe is not plugged to the transmitter, " - -" will be shown on Channel 2.
- In order to ensure sufficient 868 MHz transmission, the final position between the Temperature Station and the transmitter should not be more than 100 meters (see notes on **"Positioning"** and **"868 MHz Reception"**).

When two transmitters are used

1. User shall remove all the batteries from the Temperature Station and transmitters and wait 60 seconds (if setting has been done with one transmitter before).
2. Insert the batteries into the first transmitter.
3. Within 2 minutes of powering up the first transmitter, insert the batteries into the Temperature Station. Once the batteries are in place, all segments of the LCD will light up briefly. Then the indoor temperature and the time as 0:00 will be displayed. If they are not shown on the LCD after 60 seconds, remove the batteries and wait for at least 60 seconds before reinserting them.
4. The outdoor temperature readings from the first transmitter (Channel 1 and 2) should then be displayed on the Temperature Station (if probe

sensor has been installed onto the first transmitter). If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1.

5. Insert the batteries into the second transmitter as soon as the outdoor temperatures from the first transmitter are displayed on the Temperature Station.

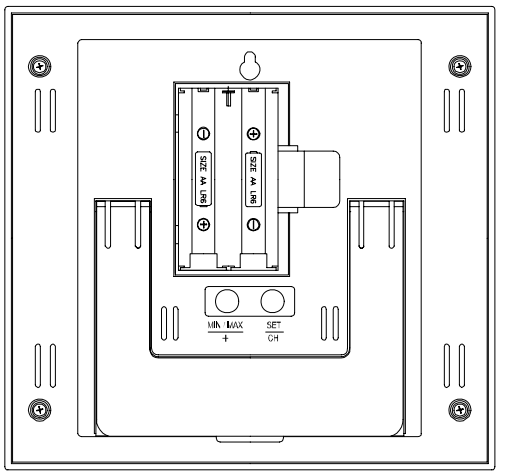
Note: User must insert the batteries into the second transmitter within 45 seconds of reception of the first transmitter.

6. The outdoor temperature reading from the second transmitter will be shown on the LCD and the Channel No. will shift back to "1", indicating that all three channels are running successfully. If this does not happen after 2 minutes, the batteries will need to be removed from all the units and reset from step 1.

Note: After the Temperature Station has successfully received the second transmitter, Channel 3 will display the data measured by the internal sensor of the second dual channel transmitter. Yet the probe data from the second transmitter will not be displayed on the Temperature Station.

HOW TO INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE STATION

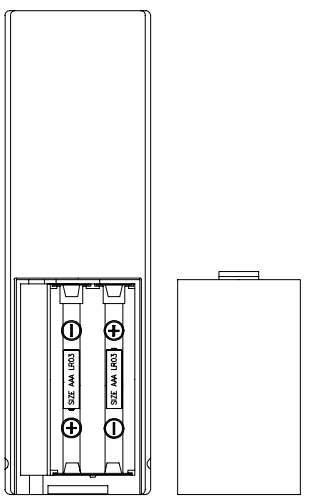
The Temperature Station uses 2 x AA, IEC LR6, 1.5V batteries. When batteries will need to be replaced, the low battery icon will appear on the LCD. To install and replace the batteries, please follow the steps below:



1. Lift up the battery compartment cover.
2. Insert batteries observing the correct polarity (see marking).
3. Replace compartment cover.

HOW TO INSTALL AND REPLACE BATTERIES IN THE THERMO-HYGRO TRANSMITTER

The Thermo-Hygro transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. When batteries will need to be replaced, the low battery icon will appear on the LCD of the Temperature Station. To install and replace the batteries, please follow the steps below:

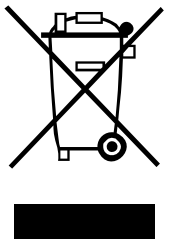


1. Lift up the rain protector of the transmitter and remove the battery cover.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the rain protector and battery cover on the unit.

Note:
In the event of changing batteries in any of the units, all units need to be reset by following the setting up procedures. This is because a random security code is assigned by the transmitter at start-up and this code must be received and stored by the Temperature Station in the first 3 minutes of power being supplied to it

BATTERY CHANGE:

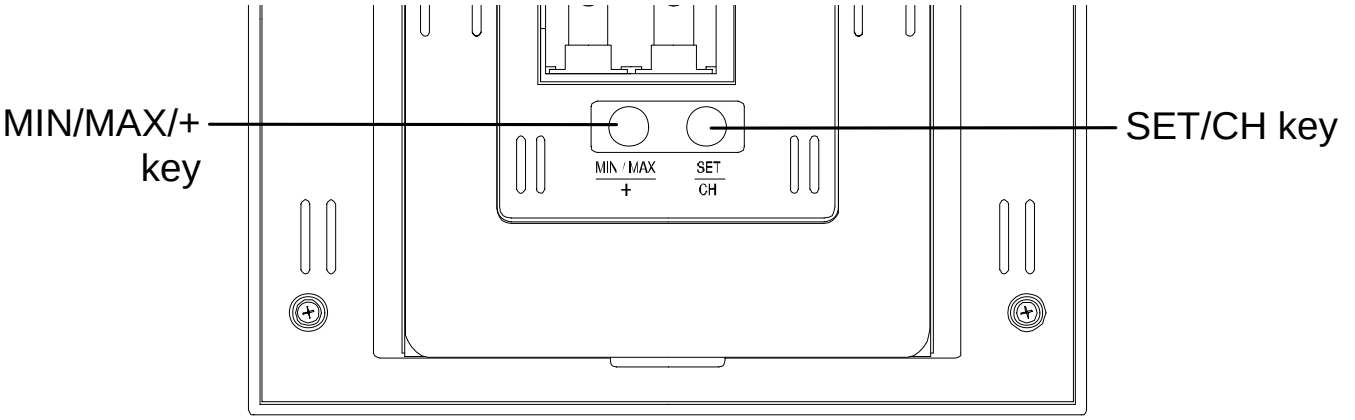
It is recommended to replace the batteries in all units at least every 24-month to ensure optimum accuracy of these units.



Please participate in the preservation of the environment. Return used batteries to an authorised depot.

FUNCTION KEYS:

The Temperature Station has only two easy to use function keys.



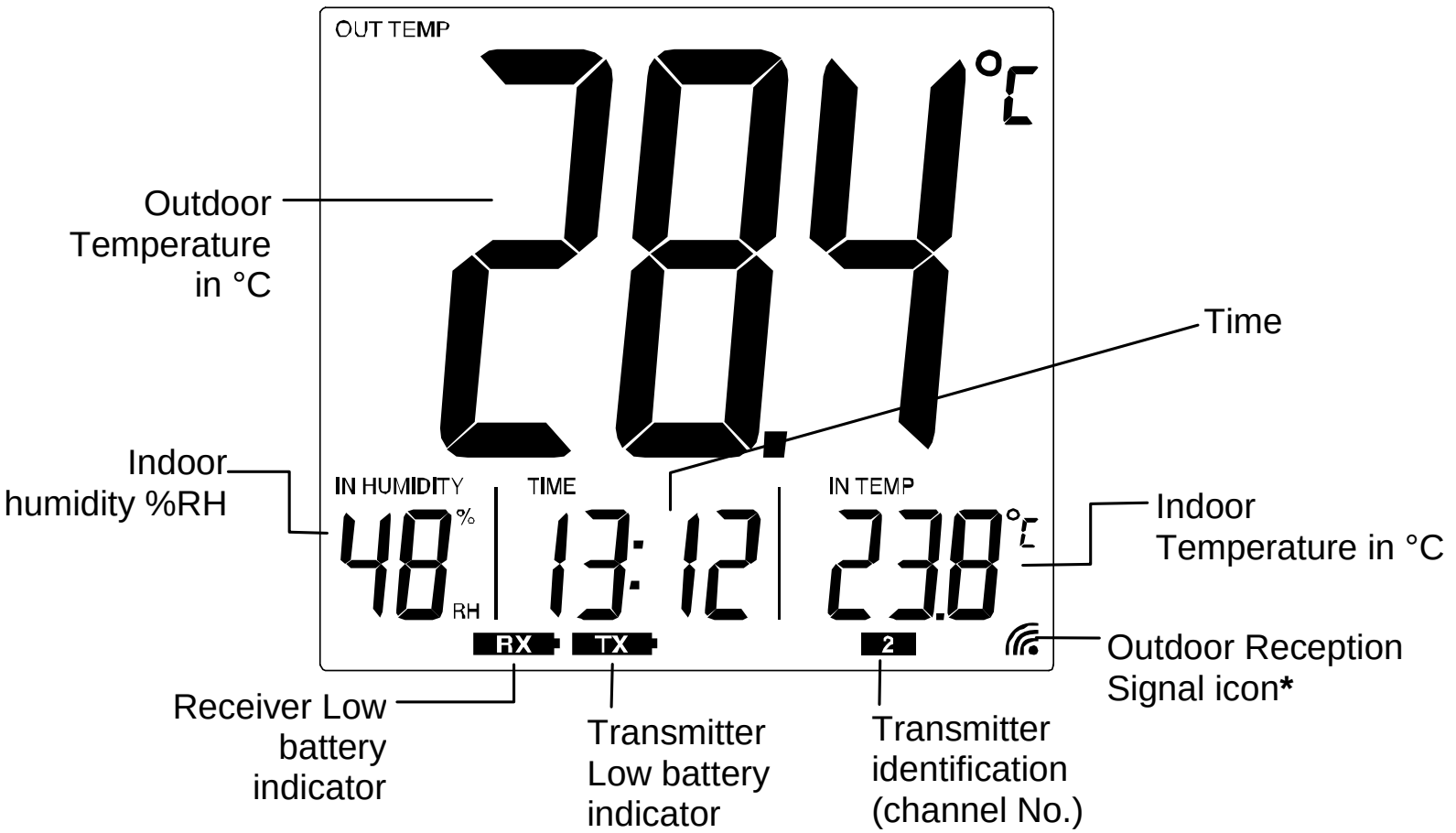
SET/CH key (Setting/Channel)

- Press and hold for about 3 seconds to enter the Manual setting mode.
- Used to toggle between the data of different outdoor transmitters (channel) "1", "2" and "3", when more than 1 transmitter is used.

MIN/MAX/+ key (Min/ Max temperature)

Used to toggle between the minimum and maximum recorded readings of indoor & outdoor temperature and indoor humidity.

LCD SCREEN AND SETTINGS:



*****When the signal is successfully received by the weather station, the Outdoor reception icon will be switched on. (If not successful, the icon will not be shown in LCD) So the user can easily see whether the last reception was successful (icon on) or not (icon off). On the other hand, the flashing of the icon shows that a reception is being done now.

For better distinctness the LCD screen is split into 4 sections displaying the information for time, indoor temperature, and outdoor data.

Section 1 - OUTDOOR TEMPERATURE
Section 2 – INDOOR HUMIDITY
Section 3 – TIME
Section 4 - INDOOR TEMPERATURE

MANUAL SETTING:

12 / 24- HOUR TIME DISPLAY SETTING AND TEMPERATURE UNIT (°C/°F) SETTING

User may choose to display the time in 12-hour or 24-hour mode:

Note:
When the time display is set as 12-hour mode, the temperature unit will be fixed to °F; when the time mode is in 24-hour, the temperature unit will be fixed to °C.

1. In normal display mode, press and hold the SET/CH key for about 3 second. The "12h" or "24h" digit will be flashing.
2. Press the MIN/MAX/+ key to set the desired time display mode.
3. Press shortly the SET/CH key to advance to the **MANUAL TIME SETTING**.

MANUAL TIME SETTING

User shall manually set the time of Temperature Station by the following steps:

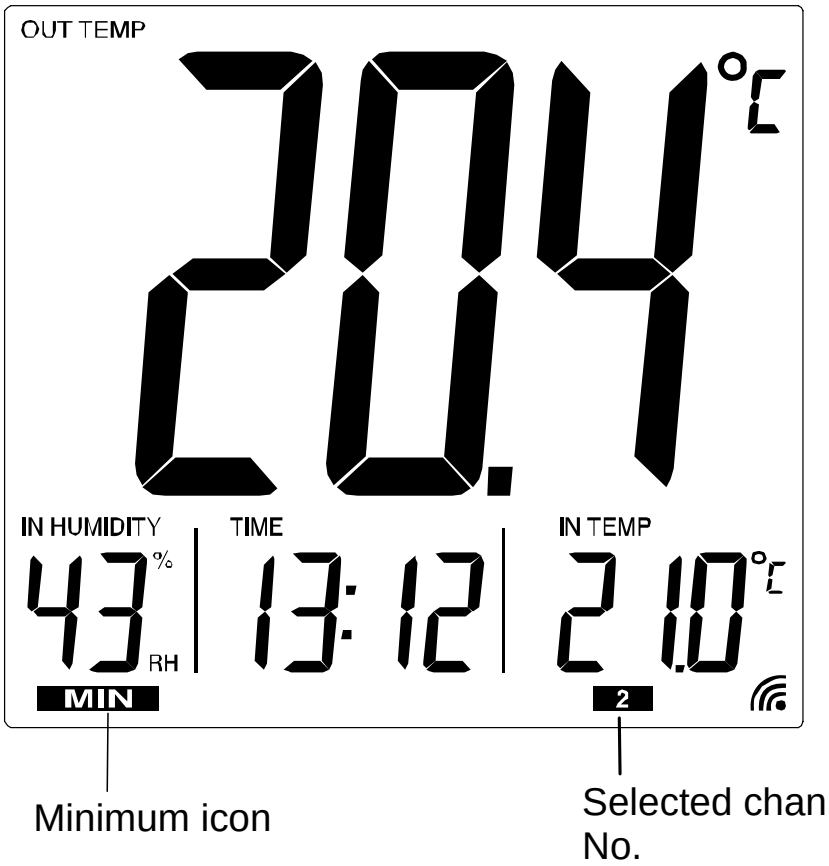
1. The hour digit of the time display will be flashing.

2. Press the MIN/MAX/+ key to adjust the hour. Press SET/CH key to confirm and go to the minute setting.
3. The minute digit will be flashing. Press the MIN/MAX/+ key to adjust the minute. Press SET/CH key once more to return to normal display.

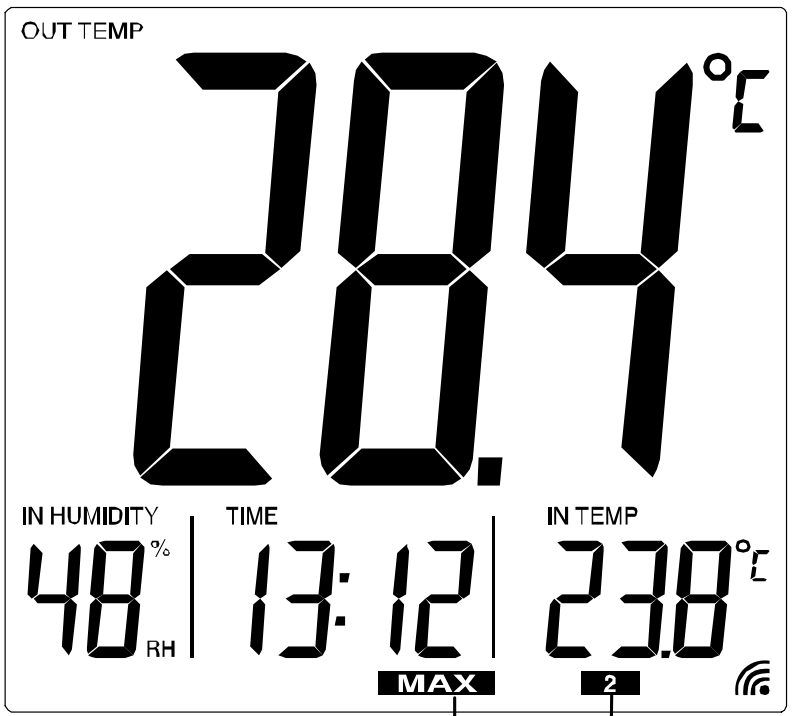
VIEWING THE MINIMUM AND MAXIMUM READINGS:

User may view the minimum and maximum temperature and humidity data records of the indoor or outdoor channels by the following steps:

1. In normal display, press SET/CH key to choose the desired channel (transmitter).
2. Press the MIN/MAX/+ key once to view the minimum indoor temperature, minimum outdoor temperature and minimum indoor humidity of the selected channel.



3. Press the MIN/MAX/+ key once more to view the maximum indoor temperature, maximum outdoor temperature and maximum indoor humidity of the selected channel.



RESETTING THE MINIMUM AND MAXIMUM READINGS:

User may reset the minimum and maximum temperature and humidity data to the current value by the following step:

1. Press and hold the MIN/MAX/+ key for about 3 seconds to reset all the minimum/ maximum data of all channels and the indoor sensor to the current values in a single action.

TEMPERATURE TRANSMITTER:

The outdoor temperature are measured and transmitted every 4.5 seconds.

The range of the Thermo-Hygro transmitter may be affected by the temperature. At cold temperatures the transmitting distance may be decreased. Please bear this in mind when placing the transmitter.

868 MHz RECEPTION CHECK

The Temperature Station should receive the temperature data within few minutes after set-up. If the temperature data is not being received 5 minutes after setting up (the display shows “- - -” after consecutive failures in receiving signal for times), please check the following points:

1. The distance of the Temperature Station or transmitter should be at least 1.5 to 2 meters away from any interfering sources such as computer monitors or TV sets.
2. Avoid positioning the Temperature Station 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. Neighbours using electrical devices operating on the 868MHz signal frequency can also cause interference.

Note:

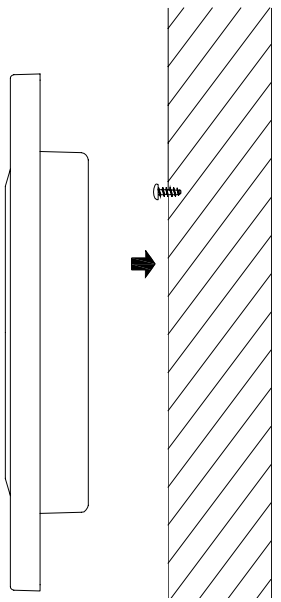
When the 868MHz signal is received correctly, do not re-open the battery cover of either the transmitter or Temperature station, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see **Setting up** above) otherwise transmission problems may occur.

The transmission range is about 100 m from the transmitter to the Temperature 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 **Setting up**).

POSITIONING THE TEMPERATURE STATION:

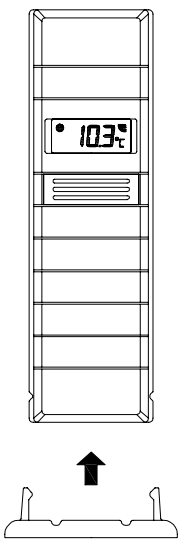
The Temperature Station comes attached with foldout table stand, which provides the option of table standing or wall mounting the unit. Before wall mounting, please check that the outdoor temperature values can be received from the desired locations.

To wall mount:



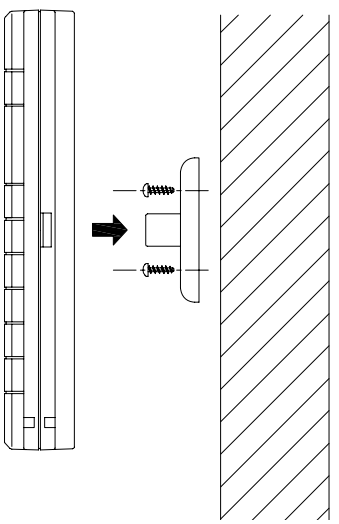
1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the by about 5mm.
2. Hang the temperature station onto the screw. Remember to ensure that it locks into place before releasing.

POSITIONING THE TEMPERATURE TRANSMITTER



The Transmitter is supplied with a holder that may be attached to a wall with the two screws supplied. The Transmitter can also be position on a flat surface by securing the stand to the bottom to the Transmitter.

To wall mount:



1. Secure the bracket onto a desired wall using the screws and plastic anchors.
2. Clip the remote temperature sensor onto the bracket.

User may also use the double sided tape to install the transmitter onto wall. On smooth surfaces this can be used instead of drilling holes. The mounting surface can, however, affect the transmission range. If for example 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 placing the unit on any metal surfaces or in any position where a large metal or highly polished surface is in the immediate proximity (garage doors, double glazing, etc.). Before securing in place, please ensure that the Temperature Station can receive the 868MHz signal from the Thermo-hygro transmitter at the positions that you wish to situate them.

CARE AND MAINTENANCE:

- Extreme temperatures, vibration and shock should be avoided as these may cause damage to the unit and give inaccurate forecasts and readings.
- When cleaning the display and casings, use a soft damp cloth only. Do not use solvents or scouring agents as they may mark the LCD and casings.
- Do not submerge the unit in water. Furthermore, fix all parts in place where the unit is adequately protected against moisture and rain.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended type.
- Do not make any repair attempts to the unit. Return them to their original point of purchase for repair by a qualified engineer. Opening and tampering with the unit may invalidate their guarantee.

- Do not expose the units to extreme and sudden temperature changes, this may lead to rapid changes in forecasts and readings and thereby reduce their accuracy.

SPECIFICATIONS:

Temperature measuring range

Indoor	:	-9.9ºC to +59.9ºC with 0.1ºC resolution ("OFL" displayed if outside this range)
Outdoor	:	-39.9ºC to +59.9ºC with 0.1ºC resolution ("OFL" displayed if outside this range)
Indoor Humidity measurement	:	1 to 99% (Displays "1%" when ≤ 1%; displays "99%" when ≥ 99%)
Indoor Temperature checking interval	:	every 15-second
Outdoor data checking inerval	:	every 4.5-second

Power Supply

Temperature Station	:	2 x AA, IEC LR6, 1.5V
Outdoor Thermo-hygro Transmitter	:	2 x AAA, IEC LR3, 1.5V
Battery life cycle	:	approximately 24 months (Alkaline batteries recommended)

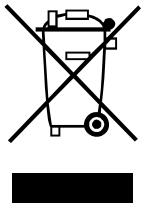
Dimensions (L x W x H)

Temperature Station	:	147.1 x 23.6 x 139.1 mm
Outdoor Thermo-hygro Transmitter	:	36.6 x 19.3 x 121.8 mm

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.
- As stated on the gift box and labeled on the product, reading the “User manual” is highly recommended for the benefit of the user. This product must however not be thrown in general rubbish collection points.
- 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 designed for use in the home only as indication of the temperature and/or other weather data.
- This product is not to be used for medical purposes or for public information.
- The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.



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.