

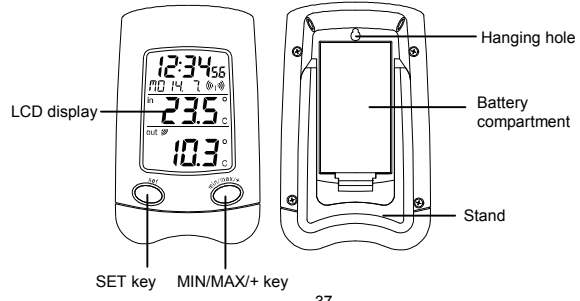
**WIRELESS 868 MHz TEMPERATURE STATION**  
**Instruction Manual**

**INTRODUCTION:**

Congratulations on purchasing this 868MHz Temperature Station which displays the time with second and outdoor temperature reading. With only two easy to use keys, this innovative product is ideal for use in the home or office.



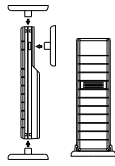
# THE TEMPERATURE STATION



**FEATURES:****The Temperature Station**

- DCF-77 Radio Controlled time with manual settings
- Time display (hour, minutes, seconds)
- Time reception ON/OFF
- 12/24 hour time format
- Calendar display (month, date, weekday)
- Time zone option  $\pm 12$  hours
- Temperature display in Celsius ( $^{\circ}\text{C}$ ) or Fahrenheit ( $^{\circ}\text{F}$ ) selectable
- Indoor and outdoor temperature display with MIN/MAX records
- All MIN/MAX recordings can be reset
- Wireless transmission at 868 MHz
- Signal reception intervals at 4-second
- Low battery indicator
- Table standing or wall mountable

### THE OUTDOOR TEMPERATURE TRANSMITTER



- Remote transmission of outdoor temperature to temperature Station by 868MHz
- Weather-resistant casing
- Wall mounting case
- Mount in a sheltered place. Avoid direct rain and sunshine

### SETTING UP:

**Note:** This temperature station receives only one outdoor transmitter.

1. First, insert the batteries into the Temperature transmitter. (see "Install and replace batteries in the Temperature transmitter").

2. Immediately after and within 30 seconds, insert the batteries into Temperature station (see "**Install and replace batteries in the Temperature station**"). Once the batteries are in place, all segments of the LCD will light up briefly. Following the time as 0:00 will be displayed and indoor temperature. If these are not displayed after 60 seconds, remove the batteries and wait for at least 10 seconds before reinserting them.
3. After inserting the batteries, the Temperature station will start receiving data from the transmitter. The outdoor temperature and the signal reception icon should then be displayed on the Temperature station. If this does not happen after 3 minutes, the batteries will need to be removed from both units and reset from step 1.
4. In order to ensure sufficient 868 MHz transmission however, this should under good conditions be a distance no more than 100 meters between the final position of the Temperature station and the transmitter (see notes on "**Mounting**" and "**868 MHz Reception**").
5. Once the remote temperature has been received and displayed on the Temperature

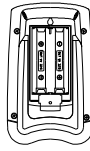
station, the DCF time (radio controlled time) code reception is automatically started. This takes typically between 3-5 minutes in good conditions. If after 10 minutes, the DCF time has not been received, press the SET key to manually enter a time initially.

**Note:**

Daily DCF reception is done at two hours interval until a reception is successful for the day. If the reception is still not successful, then the next try takes place at 00:00 the next day. If reception is successful, the received time will override the manually set time. The date is also updated with the received time. (Please refer also to notes on "**DCF-77 Radio Controlled Time**" and "**Manual Time Setting**")

**INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE STATION**

The Temperature station uses 2 x AA, IEC LR6, 1.5V batteries. To install and replace the batteries, please follow the steps below:



1. Remove the cover at the back of the temperature station.
2. Insert batteries observing the correct polarity (see marking).
3. Replace compartment cover.

#### **INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER**



- The Temperature Transmitter uses 2 x AA, IEC LR6, 1.5V battery. To install and replace the batteries, please follow the steps below:
1. Remove the battery compartment cover at the back of the transmitter.
  2. Insert the batteries, observing the correct polarity (see marking).
  3. Replace the battery compartment 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 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 regularly to ensure optimum accuracy of these units (Battery life see **Specifications** below).

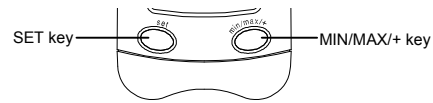


**Please participate in the preservation of the environment. Return used batteries to an authorized depot.**

## FUNCTION KEYS:

### Temperature Station:

There are two easy-to-use function keys in the Temperature Station



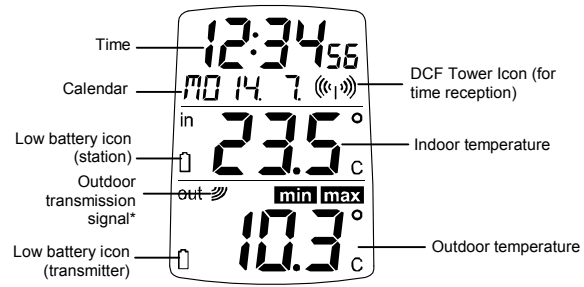
### SET key

- Press and hold for about 3 seconds to enter the Manual setting modes: manual time, year, date, month, weekday, 12/24 hour time format, time zone, time reception ON/OFF, and temperature settings.
- Press and hold to reset the indoor and outdoor MIN/MAX temperature records

**MIN/MAX/+ key**

- To make adjustments for various settings in manual setting modes
- To toggle between the MIN/MAX readings of indoor/ outdoor temperature

## LCD SCREEN AND SETTINGS



\* When the outdoor signal is successfully received by the Weather Station, this icon will be switched on. (If not successful, the icon will not be shown in LCD) So user can easily see whether the last reception was successful (icon on) or not (icon off).

For better distinctness the LCD screen is split into 3 sections:

**Section 1 - TIME AND CALENDAR**

- Display the current time and calendar.
- A signal reception symbol is shown indicating that Atomic time (DCF time) signal is received.

**Section 2 - INDOOR TEMPERATURE**

- Display the current indoor temperature in normal display.
- Low battery indicator

**Section 3 - OUTDOOR TEMPERATURE**

- Display the outdoor temperature.
- Display the signal reception symbol indicating that receiver is receiving outdoor data.
- Low battery indicator

**DCF-77 RADIO CONTROLLED TIME**

The time base for the radio controlled time is a Cesium Atomic Clock operated by the Physikalisch Technische Bundesanstalt Braunschweig which has a time deviation of less than one second in one million years. The time is coded and transmitted from Mainflingen near Frankfurt via frequency signal DCF-77 (77.5 kHz) and has a transmitting range of approximately 1,500 km. Your radio-controlled Temperature Station receives this signal and converts it to show the precise time in summer or wintertime.

The quality of the reception depends greatly on the geographic location. In normal cases, there should be no reception problems within a 1500km radius of Frankfurt.

Once the outdoor temperature is displayed on the Temperature Station, the DCF tower icon in the clock display will start flashing in the upper left corner. This indicates that the clock has detected that there is a radio signal present and is trying to receive it. When the time code is received, the DCF tower becomes permanently lit and the time will be displayed. If the tower icon flashes, but does not set the time or the DCF tower does not appear at all, then please take note of the following:

- 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.
- During nighttime, the atmospheric disturbances are usually less severe and reception is possible in most cases. A single daily reception is adequate to keep the accuracy deviation below 1 second.

### **MANUAL SETTING**

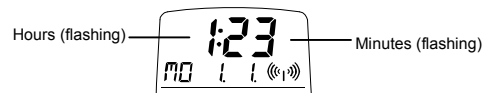
The following manual settings can be done in the setting mode:

- Manual time
- Calendar
- 12/24 hour time display
- Time zone
- Time reception ON/OFF (DCF ON/OFF)
- Temperature unit °C/°F setting

Press and hold the SET key for about 3 seconds to advance to the setting mode:

### **MANUAL TIME SETTING**

In area where reception of the DCF-77 time is not possible, the time can be manually set. The clock will then be a normal Quartz clock. Once the DCF signal is detected, it will change the manually set time into the received time. Please proceed the following setting steps at the first time before using the Temperature Station.



1. The hour digit in the time section starts flashing. Use the MIN/MAX/+ key to set the hour.
2. Press the SET key to enter the minutes. The minute digits start flashing.
3. Use the MIN/MAX/+ key to set the minute.
4. Press again the SET key to confirm and enter the **Calendar setting** mode.

**Note:**

The unit will still try and receive the signal despite it being manually set. When it does receive the signal, it will change the manually set time into the received time.

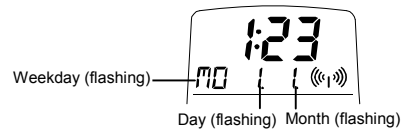
### CALENDAR SETTING

The date default of the Temperature station is 1. 1. in the year 2008. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, the date can also be set manually:



Year (flashing)

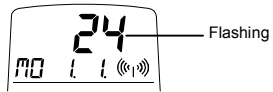
1. The year digits will start flashing. Use the MIN/MAX/+ key to set the year (2008 to 2029).
2. Press the SET key to enter the month (the month digit will be flashing). Use MIN/MAX/+ key to adjust the month.



3. Then press the SET key to enter the day. Use MIN/MAX/+ key to adjust the day.
4. Press the SET key to enter the weekday (the weekday digit will be flashing). Use MIN/MAX/+ key to adjust the weekday.
5. Press the SET key to confirm and enter the **12/24 hour time display** mode.

#### **12/24 HOUR TIME DISPLAY SETTING**

To set the time format to 12h or 24h display mode (default 24h):

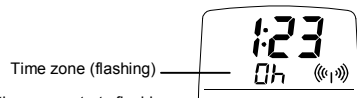


1. Use the MIN/MAX/+ key to select the "12h" or "24h" display mode.
2. Press the SET to confirm and to enter the **Time zone setting** mode.

**Note:** When 24h mode display is selected, the calendar format will be "Weekday. Day. Month" display. When 12h mode display is selected, the calendar format will be "Weekday. Month. Day" display.

#### **TIME ZONE SETTING**

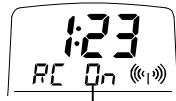
The time zone can be set between  $\pm 12$  hours (default 0 hour):



1. The time zone starts flashing.
2. Use the MIN/MAX/+ key to change the time zone. The range runs from 0, -1, -2...-12, 12, 11, 10... 2, 1, 0, in consecutive 1-hour intervals.
3. Press the SET key to confirm and enter the **Time reception ON/OFF setting** mode.

#### **TIME RECEPTION ON/OFF SETTING**

In area where reception of the radio-controlled time (DCF time) is not possible, the time reception function can be turned OFF. The clock will then work as a normal Quartz clock. (Default setting is ON).



flashing

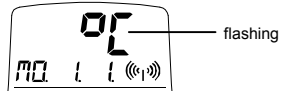
1. The "ON" digits will start flashing on the LCD.
2. Use the MIN/MAX/+ key to turn OFF the time reception function if necessary.
3. Confirm with the SET key and enter the °C/°F Temperature unit setting mode.

**Note:**

If the Time Reception function is turned OFF manually, the clock will not attempt any reception of the radio-controlled time (DCF time) as long as the Time Reception OFF function is activated. The Time Reception icon will not be displayed on the LCD.

### °C/°F TEMPERATURE UNIT SETTING

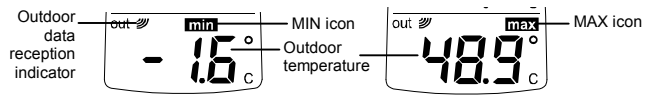
The default temperature reading is set to °C (degree Celsius). To select °F (degree Fahrenheit):



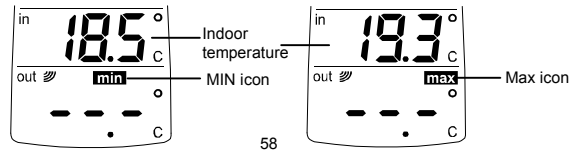
1. The "°C" or "°F" will be flashing, use the MIN/MAX/+ key to toggle between "°C" and "°F".
2. Confirm with the SET key and exit the manual setting modes.

### CHECKING THE MIN/ MAX TEMPERATURES

1. In normal mode display, press the MIN/MAX/+ key to display the outdoor MIN display and the time and date of record.
2. Press the MIN/MAX/+ key a second time to show the outdoor MAX display and the time and date of record.



3. Press the MIN/MAX/+ key a third time to show the indoor MIN display and the time and date of record.
4. Press again the MIN/MAX/+ key once to display the indoor MAX display and the time and date of record.



5. Press the MIN/MAX/+ to return to current indoor and outdoor temperature display.

#### **RESETTING THE MIN/ MAX TEMPERATURE**

**Note: All the indoor and outdoor MIN/MAX records will be reset at the same time.**

1. Press the MIN/MAX/+ key once to enter the indoor temperature display.
2. Press the SET key. This will reset both the MIN/MAX indoor and outdoor temperature data to the current temperature data.

#### **LOW BATTERY INDICATOR**

Low battery indicator is displayed on the LCD when the batteries require changing.

#### **OUTDOOR TRANSMITTER**

The range of the Temperature 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:**

The Temperature station should receive the temperature data within 2 minutes after set-up. If the temperature data is not received 2 minutes after setting up (the outdoor display shows "--"), 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. Neighbors 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.

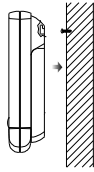
- The transmission range is about 100 m from the transmitter to the Temperature station (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see **Setting up**).

#### **POSITIONING**

##### **THE TEMPERATURE STATION:**

Choose a sheltered place. Avoid direct rain and sunshine.

Before wall mounting, please check that the outdoor temperature values can be received from the desired locations.

**Wall mount**

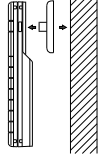
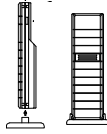
1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the by about 5mm.
2. Hang the station onto the screw. Remember to ensure that it locks into place before releasing.

**Free standing**

With the foldout stand, the weather station can be placed onto any flat surface.

#### OUTDOOR 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.

**Note:**

Before permanently fixing the transmitter wall base, place all units in the desired locations to check that the outdoor temperature reading is receivable. In event that the signal is not received, relocate the transmitters or move them slightly as this may help the signal reception.

**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.
- Precautions shall be taken when handling the batteries. Injuries, burns, or property damage may be resulted if the batteries are in contact with conducting materials, heat, corrosive materials or explosives. The batteries shall be taken out from the unit before the product is to be stored for a long period of time.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended type.
- 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.
- Special care shall be taken when handling a damaged LCD display. The liquid crystals can be harmful to user's health.
- 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.
- Never touch the exposed electronic circuit of the device as there is a danger of electric shock should it become exposed.
- 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 : -9.9°C to +59.9°C with 0.1°C resolution  
(14.1°F to +139.8°F with 0.2°F resolution)

("OF.L" displayed if outside this range)  
Outdoor : -39.9°C to +59.9°C with 0.1°C resolution  
(-39.8°F to +139.8°F with 0.2°F resolution)  
("OF.L" displayed if outside this range)  
Indoor Temperature checking interval : every 16 seconds  
Outdoor Temperature reception : every 4 seconds  
**Power consumption:**  
Temperature Station : 2 x AA, IEC LR6, 1.5V  
Outdoor Temperature Transmitter : 2 x AA, IEC LR6, 1.5V  
Battery life cycle : approximately 24 months  
(Alkaline batteries recommended)  
**Dimensions (L x W x H):**  
Temperature Station : 70 x 29 x 115.2 mm  
Outdoor Temperature Transmitter : 38.2 x 21.2 x 128.3 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.
- 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.
- No part of this manual may be reproduced without written authorization 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.