

WIRELESS 868 MHz WEATHER STATION Instruction Manual

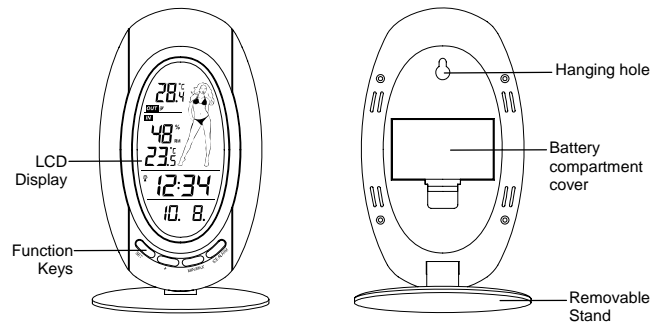
INTRODUCTION:

Congratulations on purchasing this Weather station with wireless 868MHz transmission. It not only displays the indoor temperature and humidity but also receives the outdoor temperature. It is further acting as a DCF-77 radio controlled clock. With the totally 8 different weather icons featured by "Weather girl", users can easily observe the current weather condition. And this innovative product is ideal for use in the home or office.



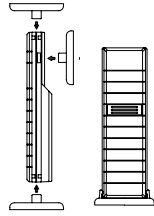
FEATURES:

The Weather Station



- DCF Radio controlled time with manual setting options
- Daylight Saving Time ON/OFF
- Hour, minute and second display
- Calendar display
- Time zone option -12 to 12 hours
- Wireless transmission at 868 MHz
- Outdoor signal reception intervals at 4-second
- Display one of the 8 easy-to-read Temperature condition icons featured by Weather girl
- Temperature display in Fahrenheit (°F) or Celsius (°C) selectable
- Indoor and Outdoor temperature display with MIN/MAX recording
- All MIN/MAX recordings can be reset
- Low battery indicator
- Wall hanging or free standing

The Outdoor Temperature Sensor



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

SETTING UP:

1. First, insert the batteries into the temperature sensor. (see "**Install and replace batteries in the temperature sensor**").
2. Immediately after and within 30 seconds, insert the batteries into Weather Station (see "**Install and replace batteries in the Weather Station**"). Once the batteries are in place, all segments of the LCD will light up briefly. Following the time as 0:00 and the "weather girl" icon and indoor temperature and humidity will be displayed. 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 into the sensor, the Weather Station will start receiving data from the sensor. The outdoor temperature and the signal reception icon should then be displayed on the Weather Station. If this does not happen after 5 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 there should be no more than 330 feet (100 meters) between the final position of the Weather Station and the sensor (see notes on "**Mounting**" and "**868 MHz Reception**").
 5. Once the remote temperature has been received and displayed on the Weather station, the DCF time (radio controlled time) code reception is automatically started. This takes typically between 3-5 minutes in good conditions.

Note:

- The Weather Station will receive one outdoor sensor only.
- If after 10 minutes, the Atomic time (DCF time) signal has not been received, press the SET key to manually enter a time initially.
- Daily DCF reception is done at 02:00 and 03:00 every day. If the reception at 03:00 is not successful, then at 04:00 and 05:00 and 06:00 there are other tries, until one is successful. If the reception at 06:00 is still not successful, then the next try takes place at 02:00 next day. If reception is successful, the received time will override the manually

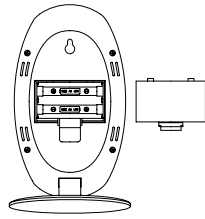
set time. The date is also updated with the received time. (Please refer also to notes on "DCF Reception" and "Manual Time Setting")

BATTERY INSTALLATION

INSTALL AND REPLACE BATTERIES IN THE WEATHER STATION

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

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

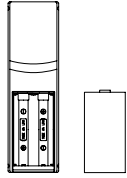


INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE SENSOR

The temperature sensor uses 2 x AA, IEC LR6, 1.5V Alkaline battery.

To install and replace the batteries, please follow the steps below:

1. Pull out the battery holder at the bottom of the sensor.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery holder 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 sensor at start-up and this code must be received and stored by the Weather 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).

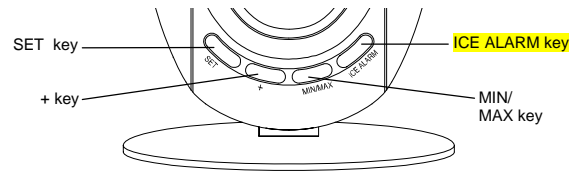


Please participate in the preservation of the environment. Return used batteries to an authorized depot.

FUNCTION KEYS:

Weather Station:

The Weather Station has four easy to use function keys.



SET key (Manual Setting):

- Press to enter the set mode for the following functions: Time zone, Manual time,

Year, Month, Date, Weekday and °C/°F settings.

MIN/ MAX key

- To toggle between the maximum/ minimum outdoor temperature and maximum/ minimum indoor temperature data
- Press to reset at the maximum or minimum temperature records of the indoor and the outdoor channel (will reset all records to current level)
- Press to exit the setting mode

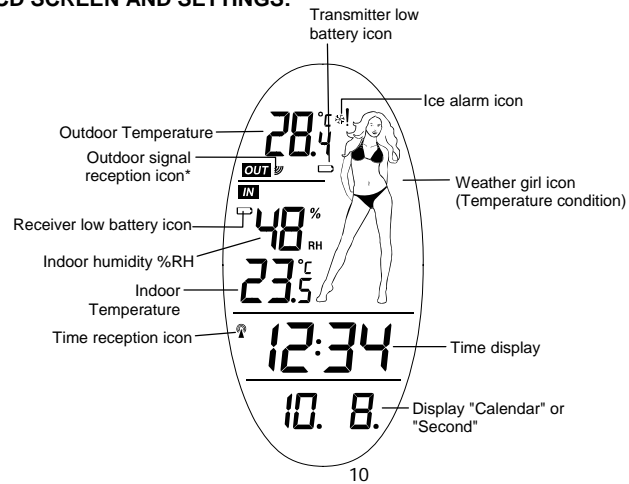
+ key

- To make adjustment for various settings
- In normal display, press to toggle between the display of the calendar and second of time in the time display of LCD

Ice Alarm key

- To activate / deactivate the Ice Alarm (alarm will be triggered once the outdoor temperature has dropped to 4°C (39.2°F))
- To exit from the manual setting mode

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). On the other hand, the short blinking of the icon shows that a reception is currently taking place.

For easy viewing, the LCD screen is divided into 3 sections displaying the information for time and indoor data, weather forecast, and outdoor data.

Section 1 - OUTDOOR TEMPERATURE

- Display the current outdoor temperature.
- By pressing the MIN/ MAX key, display the stored MIN/MAX outdoor temperature, with simultaneous display of MIN/ MAX icon.
- A signal reception symbol will be shown indicating that outdoor temperature signal is received.

Section 2 - INDOOR DATA AND TEMPERATURE ICON (FEATURED BY WEATHER GIRL)

- Display indoor temperature and indoor humidity
- The current temperature condition is displayed in form of one of eight icons, featured by Weather girl, which change in appearance according to the current outdoor temperature.

- Format of the weather girl icons refers to the below clause "**Weather girl Icon**"

Section 3 - TIME

- In normal mode, display the time and calendar.
- A signal reception symbol is shown indicating that Atomic time (DCF time) signal is received.

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 Weather 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 1,500 km radius around Frankfurt.

Once the outdoor temperature is displayed on the Weather station after initial set-up, 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 metres.
- 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.

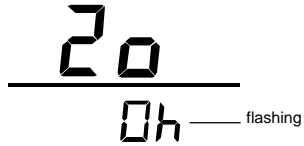
MANUAL SETTINGS:

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

- Time zone setting
- Manual time setting
- Calendar setting
- °C/ °F setting

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

TIME ZONE SETTING:



The time zone default of the Weather station is "0 hour". To change to another time zone:

1. Press and hold the SET key for about 3 seconds to enter the time zone setting (flashing).
2. Using the + key, set the time zone. The range runs between 12 to -12 hr, in consecutive 1hour intervals.
3. Press the SET key to confirm and enter the **"Manual Time Setting"** or exit the setting mode by pressing the MIN/MAX key

MANUAL TIME SETTING

In case the Weather Station is not able to detect the Atomic time (DCF) signal (disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal Quartz clock.

Hours (flashing) — 0 : 05 — Minutes (flashing)

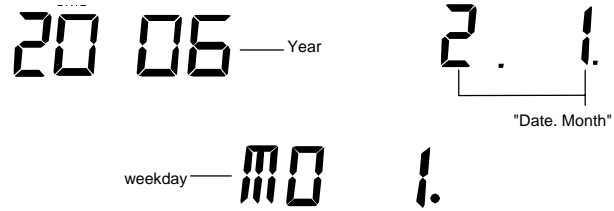
To set the clock:

1. The hour digits start flashing in the time display section.
2. Use the + key to adjust the hours and then press SET key to go to the minute setting.
3. The minute will be flashing. Press the + key to just the minutes.
4. Confirm with the SET key and enter the **“Calendar Setting”** or exit the setting mode by pressing the MIN/MAX key

Note:

- The unit will still try to receive the signal at each full hour despite it being manually set. When it does receive the signal, it will change the manually set time into the received time.
- The time format is fixed to "24-hr" time display.

CALENDAR SETTING



The date default of the Weather Station is 1. 1. of the year 2006 after initial set-up. 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. To do this:

1. Using the + key, set the year required. The range runs from 2000 to 2029 (default is 2006).
2. Press the SET key to enter the month setting mode.
3. The month digit will be flashing. Press the + key to set the month and then press the SET key to go to the date setting.

4. The date digit will be flashing. Press the + key to set the date.
5. Confirm with the SET key and set the weekday.
6. Press + key to select the weekday, "MO", "TU", "WE" etc.
7. Confirm with SET key and enter the **"°C/°F TEMPERATURE UNIT SETTING"** or exit the setting mode by pressing the MIN/MAX key.

°C/°F TEMPERATURE UNIT SETTING



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

1. The "°F/ °C" will be flashing, use the + key to toggle between "°F" and "°C".
2. Once the desired temperature unit has been chosen, confirm with the SET to exit the setting mode.

WEATHER GIRL ICON (Temperature condition icons):

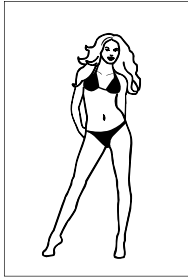
One of the 8 different temperature icons (featured by weather girl with different clothing) is displayed in the centre of LCD, which indicates the different temperature conditions due to the current outdoor temperature (temperature value detected by the outdoor sensor):

>78.8°F
(>26°C)

69.8 to 78.7 °F
(21.0 to 25.9°C)

59 to 69.7°F
(15.0 to 20.9°C)

50 to 58.9°F
(10.0 to 14.9°C)



46.4 to 49.9°F
(8.0 to 9.9°C)

39.2 to 46.3 °F
(4.0 to 7.9°C)

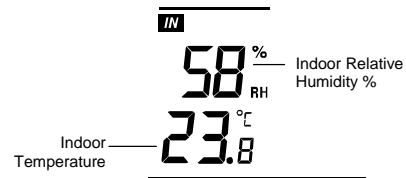
32 to 39.1°F
(0 to 3.9°C)

< 32°F
< 0°C



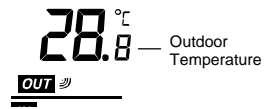
DISPLAY OF INDOOR TEMPERATURE AND HUMIDITY READING:

The indoor temperature and humidity are measured and displayed on the second section of the LCD.



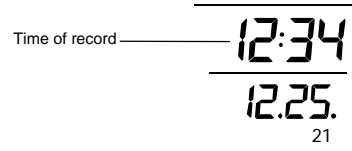
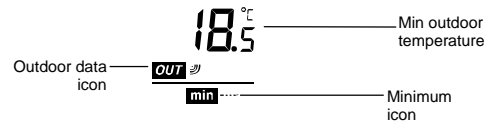
DISPLAY OF OUTDOOR TEMPERATURE READING:

The first LCD section shows the outdoor temperature.



DISPLAY OF OUTDOOR MINIMUM AND MAXIMUM RECORDS:

1. In normal display mode, Press the MIN/MAX button once, the outdoor MIN temperature and the time and date of recording this temperature will be displayed.



2. Press the MIN/MAX button once more, the outdoor max temperature and the time and date of recording this temperature will be displayed.
3. Press the MIN/ MAX button once more to advance to the indoor MIN/ MAX display.

DISPLAY OF INDOOR MINIMUM AND MAXIMUM RECORDS:

1. In normal display mode, press the MIN/ MAX key three times, the minimum indoor temperature will be shown in LCD. Also the time and date of recording this temperature will be displayed.
2. Then press the MIN/MAX button one more time, the minimum indoor temperature will be shown in LCD. Also the time and date of recording this temperature will be displayed.

Indoor data icon **IN** **max** Maximum icon

31.5 °C — Max indoor temperature
Time of record **12:34**
12.25.

3. Press the MIN/ MAX button once more to go back to the normal display.

RESETTING THE INDOOR AND OUTDOOR MINIMUM AND MAXIMUM RECORDS

1. In normal display mode, press the MIN/ MAX button to advance to the MIN/MAX records display.
2. Press and hold the MIN/MAX key for about 2 seconds, this will reset all the indoor and outdoor MIN and MAX temperature records to the current temperature and time.

Note:

The indoor and outdoor records will be reset at the same time.

Ice Alarm (ALARM AT 4°C)

This Weather Station has a unique Ice Alarm feature. User may choose to turn it On or Off. User may press the Ice Alarm key to activate the alarm (the Ice Alarm icon will then be displayed to indicate that the alarm is "on"). After the alarm is switched on, and the measured outdoor temperature has dropped below 4°C (39.2°F), the Ice Alarm will be triggered. The alarm will then sound and the Ice Alarm icon will be blinking on the LCD. The alarm duration will be about 1.5 minutes.

HYSTERESIS OF ICE ALARM

To compensate for the fluctuation of the measured outdoor temperature, which may cause the Ice Alarm to sound constantly if the measured reading is close to **4°C (39.2°F)**, a

hysteresis function has been implemented for the alarm.

If the current temperature value drops to 4°C (39.2°F), the ice alarm will be activated (if the alarm has been enabled).

Since the preset hysteresis is 1°C (1.8°F). If the temperature rises back to 4.6°C (40.3°F) and thereafter again drops to below 4°C (39.2°F), the data will be blinking, but no alarm will be activated.

With the pre-set hysteresis of 1°C (1.8°F), it has to rise back to above 5°C (41°F) and drop below 4°C (39.2°F) to trigger the alarm again.

Note: After the alarm is triggered, the alarming icon will still blink when the temp is still between 4 to 5 °C (39.2 to 41°F).

868 MHz RECEPTION

The Weather Station should receive the temperature data within 5 minutes after set-up. If the temperature data is not received 5 minutes after setting up (not successfully continuously, the outdoor display shows "- - -"), please check the following points:

1. The distance of the Weather Station or sensor should be at least 1.5 to 2 m away from any interfering sources such as computer monitors or TV sets.

2. Avoid positioning the Weather 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 sensor or Weather 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.

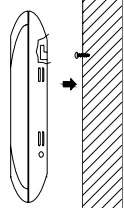
The transmission range is about 100 m (330 ft.) from the sensor to the Weather Station (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see **Setting up**).

MOUNTING

POSITIONING THE WEATHER STATION:

The Weather Station has been designed to be hung onto wall or free standing.

To wall mount



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.

1. Fix a screw (not supplied) into the desired wall, leaving the head extended out the by about 5mm.
2. Remove the stand from the Weather Station by pulling it away from the base and hang the station onto the screw. Make sure that it locks into place before releasing.

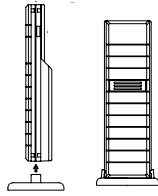
Free standing



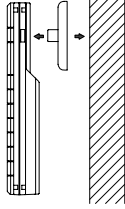
With the stand, the Weather Station can be placed onto any flat surface.

POSITIONING THE TEMPERATURE TRANSMITTER:

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



To wall mount:



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

Note:

Before permanently fixing the sensor 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 sensors 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.
- 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.
- 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 : -9.9°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)

Relative humidity measuring range:

Indoor : 1% to 99% with 1% resolution (displays "- -" when outside this range)

Indoor temperature checking interval : every 17 seconds

Indoor humidity checking interval : every 17 seconds

Outdoor data reception : approximately every 4 seconds

Power supply:

Weather Station : 2 x AA, IEC, LR6, 1.5V

Temperature Sensor : 2 x AA, IEC, LR6 1.5V

Battery life cycle (Alkaline batteries recommended)

Weather Station : Approximately 24 months
Temperature Sensor : Approximately 24 months
Dimensions (L x W x H)
Weather Station : 92 x 30.7 x 160 mm
Temperature Sensor : 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 and 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.
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.