

WIRELESS 868 MHz WEATHER STATION

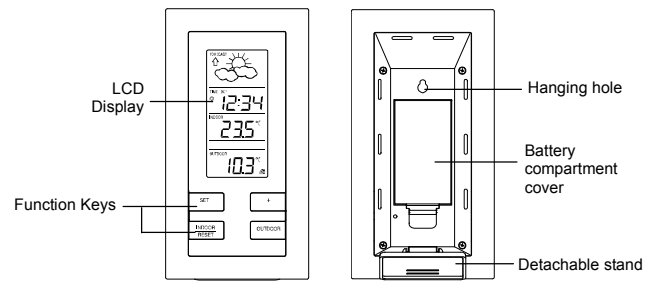
Instruction Manual



INTRODUCTION:

Congratulations on purchasing this weather station with wireless 868 MHz transmission of outdoor temperature and display of indoor temperature, weather forecast icon and weather tendency indicator. It is further featuring a DCF-77 radio controlled clock and manual time setting is available. With four easy to use function keys, this innovative product is ideal for use in the home or office.

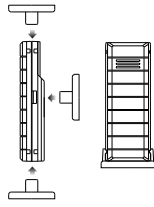
FEATURES:
The Weather Station



- DCF-77 Radio controlled time function with manual time setting options
- DCF time reception ON/OFF
- 24 hour display

- Calendar (year, month and day display in setting mode only)
- Time zone +/- 12 hours
- Temperature display in degree Celsius (°C)
- Indoor and outdoor temperature with minimum/maximum records
- Manual reset of minimum/maximum records
- 3 weather forecast icons with weather tendency indicator
- Wireless transmission at 868 MHz
- Signal reception interval at 4 seconds
- Low battery indicators
- Wall mounting or table standing (detachable stand)

The Outdoor Temperature Transmitter



- Remote transmission of outdoor temperature to weather station by 868 MHz signals
- Shower proof casing
- Wall mounting and table-standing

SETTING UP:

Note: This weather station receives only one outdoor transmitter.

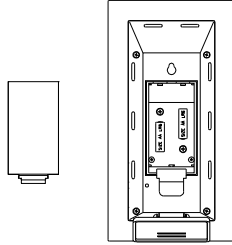
1. First, insert the batteries into the temperature transmitter. (see "**Install and replace batteries in the temperature transmitter**").
2. Within 30 seconds, insert the batteries into weather station (see "**Install and replace batteries in the weather station**"). Once the batteries are in place, all segments of the LCD will light up briefly. Then the time (default 0:00) and the weather icon will be displayed. If these are not displayed after 60 seconds, remove the batteries and wait for at least 60 seconds before reinserting them.
3. After inserting the batteries, the weather station will start receiving data from the transmitter. The outdoor temperature and the signal reception icon should then be displayed on the weather 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 successful 868 MHz transmission, this should under good conditions be a distance no more than 100 meters between the final position of the weather station and the transmitter (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:

Daily DCF reception is done at 02:00 and 03:00 am every day. If the reception at 03:00 am is not successful, then at 04:00 and 05:00 and 06:00 am there are other tries, until one is successful. If the reception at 06:00 am is still not successful, then the next try takes place at 02:00 am next day.

If reception is successful, the received time will override the manually set time. (Please also refer to notes on "DCF-77 Radio Controlled Time" and "Manual Time Setting").

HOW TO INSTALL AND REPLACE BATTERIES IN THE WEATHER STATION

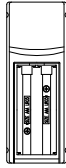


The Weather Station uses 2 x AA, IEC LR6, 1.5V batteries. When batteries need to be replaced, the low battery icon will appear on the LCD. To install and replace the batteries, please follow the steps below:

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 TEMPERATURE TRANSMITTER

The Temperature Transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. 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 Weather station in the first 3 minutes of power being supplied to it.

BATTERY CHANGE:

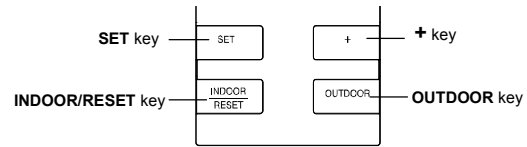


It is recommended to replace the batteries in all units regularly to ensure optimum accuracy of these units (Battery life see "**Specifications**").

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

FUNCTION KEYS:

Weather station: The weather station has four easy to use function keys.



SET key

- Press and hold to enter manual setting modes: Time zone, manual time, calendar and DCF time reception ON/OFF

+ key

- To change any values in manual set modes

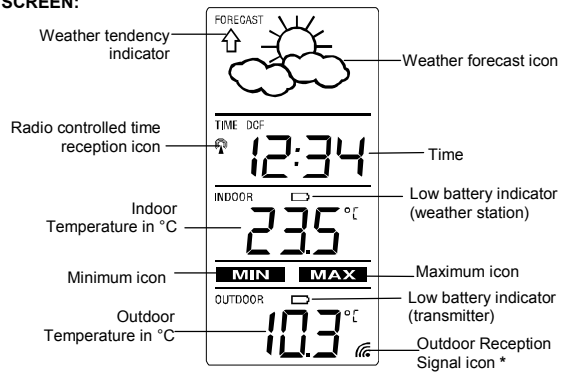
INDOOR/RESET key

- To display indoor minimum/maximum temperature records
- Press and hold to reset **ALL** indoor and outdoor minimum/maximum temperature records in one time

OUTDOOR key

- To display outdoor minimum/maximum temperature records

LCD SCREEN:



* 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 a better display clarity, the LCD screen is split into 4 sections.

Section 1 – WEATHER FORECAST AND WEATHER TENDENCY ICONS

Display of the weather to be expected in form of three weather symbols and two weather tendency indicators in form of an arrow, which change their appearance depending on the air pressure development

Section 2 – TIME

- In normal mode display of radio controlled time
- A reception tower symbol will be shown indicating that the DCF-77 time signal is scanned for (flashing) or received (steady).

Note: The symbol will not be shown when radio time reception is not successful or when time reception function is turned off.

Section 3 – INDOOR TEMPERATURE

- Display the current indoor temperature
- Display of low battery indicator (weather station)

Section 4 – OUTDOOR TEMPERATURE

- Display the current outdoor temperature
- A signal reception symbol will be shown indicating that receiver is receiving outdoor temperature
- Display of low battery indicator (transmitter)

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 1500 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 1500km radius of Frankfurt.

After the outdoor transmitter reception is completed in initial setup, the DCF tower icon on the clock display will start flashing. 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 SETTINGS:

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

- Time zone
- Manual time
- Calendar (Year, month and day)
- Time reception DCF ON/OFF

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

TIME ZONE SETTING:

TIME DCF



Time zone (flashing)

The time zone default is "0" hour. To set a different time zone:

1. The current time zone value starts flashing.
2. Use the **+** key to set the time zone. The range runs from 0, -1, -2... -12, 12, 11, 10... 2, 1, 0, in consecutive 1-hour intervals.
3. Confirm with the **SET** key and enter the **Manual time setting**

MANUAL TIME SETTING

In case the weather station is not able to detect the radio-controlled time (DCF time) signal (due to disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal Quartz clock.

TIME

Hour (flashing)



Minute

To set the clock:

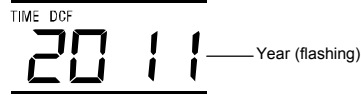
1. The hour digits start flashing in the time display section.
2. Use the **+** key to adjust the hours and then press **SET** key to go to the minute setting.
3. The minute will be flashing. Press the **+** key to adjust the minutes.
4. Confirm with the **SET** key and enter the **Calendar setting**

Note:

The unit will still try to receive the signal despite a manual setting. When the signal is received, the manually set time will automatically be replaced by the received time. During reception attempts, the DCF tower icon will flash. If reception has been unsuccessful, the DCF tower icon will not appear but reception will still be attempted.

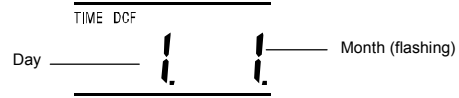
CALENDAR SETTING

The clock can display year, month and day in setting mode.



To set the Year:

1. Default year "2011" is flashing. Use the + key to change value. The year can be set from 2011 to 2039.
2. Press **SET** key to confirm and enter **Month Setting**.



To set the Month:

1. The month digit is flashing. Use the + key to change value.
2. Press the **SET** key to confirm and enter **Day Setting**.

To set the Day:

1. The day digit is flashing. Use the + key to change value.
2. Press **SET** key to confirm and enter **Time reception ON/OFF setting**.

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).



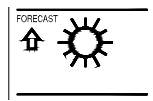
1. "On" is flashing on the LCD.
2. Use the + key to turn OFF the time reception function if necessary.
3. Confirm with the **SET** key and exit the setting mode.

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 and the DCF icon will not be displayed on the LCD.

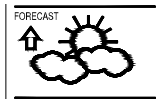
WEATHER FORECAST AND TENDENCY

THE WEATHER FORECASTING ICONS:

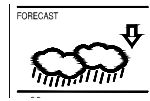
There are 3 weather icons in the top section of LCD which can be displayed in any of the following combinations:



Sunny



Cloudy with sunny intervals



Rainy

For every sudden or significant change in the air pressure, the weather icons will update accordingly to represent the change in weather. If the icons do not change, then it means either the air pressure has not changed or the change has been too slow for the Weather station to register. However, if the icon displayed is a sun or raining cloud, there will be no change of icon if the weather gets any better (with sunny icon) or worse (with rainy icon) since the icons are already at their extremes.

The icons display weather forecasts in terms of getting better or worse, and not necessarily sunny or rainy as each icon indicates. For example, if the current weather is cloudy and the rainy icon is displayed, it does not mean that the product is faulty because it is not raining. It simply means that the air pressure has dropped and the weather is expected to get worse but not necessarily rainy.

Note:

After setting up, readings for weather forecasts should be disregarded for the next 12-24 hours. This will allow sufficient time for the Weather Station to collect air pressure data at a constant altitude and therefore result in a more accurate forecast.

Common to weather forecasting, absolute accuracy cannot be guaranteed. The weather forecasting feature is estimated to have an accuracy level of about 75% due to the varying areas the Weather Station has been designed for use in. In areas that experience sudden changes in weather (for example from sunny to rain), the Weather Station will be more accurate compared to use in areas where the weather is stagnant most of the time (for example mostly sunny).

If the Weather Station is moved to another location significantly higher or lower than its initial standing point (for example from the ground floor to the upper floors of a house), remove the batteries and re-insert them after about 30 seconds. By doing this, the Weather Station will not mistake the new location as being a possible change in air-pressure when really it is due to the slight change of altitude. Again, disregard weather forecasts for the next 12 to 24 hours as this will allow time for operation at a constant altitude.

THE WEATHER TENDENCY INDICATOR

Working together with the weather icons are the weather tendency indicators (located on the left and right hand side of the weather icons). When the indicator points upwards, it means

that the air-pressure is increasing and the weather is expected to improve, but when indicator points downwards, the air-pressure is dropping and the weather is expected to become worse.

Taking this into account, you will see how the weather has changed and how it is expected to change. For example, if the indicator is pointing downwards together with cloud and sun icons, then the last noticeable change in the weather was when it was sunny (sun icon only). Therefore, the next change in the weather will be the cloud with rain icons since the indicator is pointing downwards.

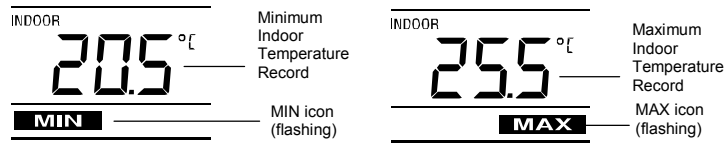
Note:

Once the weather tendency indicator has registered a change in the air pressure, it will remain permanently visualized on the LCD.

INDOOR MIN/MAX TEMPERATURE RECORDS

The current indoor temperature is displayed on the third section of the LCD.

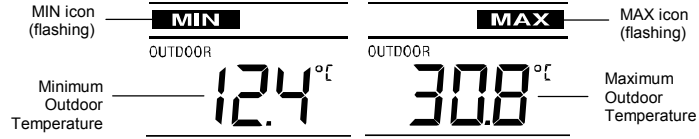
Press and release the "INDOOR/RESET" key repeatedly, the current indoor temperature will alternate between the minimum, maximum temperature recordings and the current value.



OUTDOOR MIN/MAX TEMPERATURE RECORDS

The current outdoor temperature is displayed on the last section of the LCD.

Press and release the "OUTDOOR" key repeatedly, the current outdoor temperature will alternate between the minimum, maximum temperature recordings and the current value.



RESETTING INDOOR AND OUTDDOR MIN/MAX TEMPERATURE RECORDS

In normal display mode, press and hold the **INDOOR/RESET** key for 3 seconds to reset in one time **ALL** indoor and outdoor minimum/maximum records to current values.

LOW BATTERY INDICATOR

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

868 MHz RECEPTION CHECK

The weather station should receive the temperature data within 3 minutes after set-up. If the temperature data is not received 3 minutes after setting up (not successfully continuously, the outdoor display shows "- - -"), please check the following points:

1. The distance of the weather 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 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.

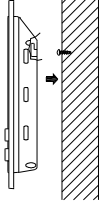
Note:

When the 868MHz signal is received correctly, do not re-open the battery cover of either the transmitter 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 from the transmitter 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**).

POSITIONING THE WEATHER STATION:

The weather station may be hung onto wall easily or free standing.



To wall mount

Choose a sheltered place. Avoid direct rain and sunshine.

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

1. Fix a screw (not supplied) into the desired wall, leaving the head extended out 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. Remember to ensure

that it locks into place before releasing.



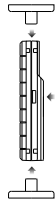
Free standing

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

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 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 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 transmitter or move the units 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, as 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
("OF.L" displayed if outside this range)
Outdoor : -39.9°C to +59.9°C with 0.1°C resolution
("OF.L" displayed if outside this range)
Indoor temperature checking interval : every 16 seconds

Outdoor temperature reception : every 4 seconds

Power consumption:

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

Battery life cycle (Alkaline batteries recommended) : Approx. 24 months

Temperature transmitter : 2 x AAA, IEC, LR3, 1.5V

Battery life cycle (Alkaline batteries recommended) : Approx. 12 months

Dimensions (L x W x H) :

Weather station : 83 x 25 x 157 mm

Temperature transmitter : 32.4 x 14.1 x 86.5 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.