**INTRODUCTION**

Congratulations on purchasing this weather station with wireless 868 MHz transmission of outdoor temperature and display of indoor temperature and air pressure history. It is further featuring a DCF-77 radio controlled clock and daily alarm function. In addition, calendar, weather forecast, sunrise/ sunset time as well as the moon phase are shown. This innovative product is ideal for use in the home or office.

> **« Instant Transmission+»** is the up and coming state-of-the-art new wireless transmission technology, exclusively designed and developed by LA CROSSE TECHNOLOGY.
> **"IT +"** offers you an immediate update of all your outdoor data measured from the transmitters: follow your climatic variations in real-time!

FEATURES

The weather station
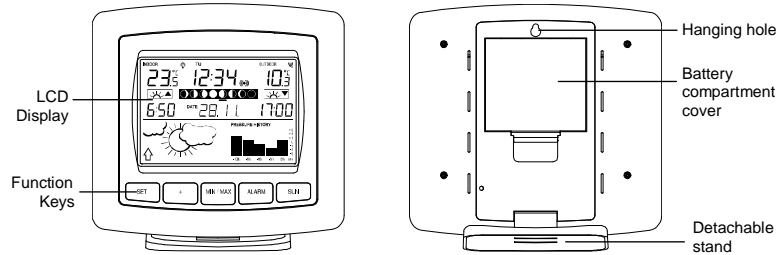
- DCF radio controlled time with manual setting option
- Time reception ON/OFF (user selectable)
- Time zone setting: -2 to +5 hours
- 24 hour time display (seconds displayed by pressing the **SUN** key)
- Weekday, day and month display (year in setting mode)
- Daylight saving time (DST) function selectable

- Daily alarm function
- Weather forecast with weather tendency indicator
- Temperature display in degree Celsius (°C)
- Indoor temperature display with MIN/MAX recordings
- Outdoor temperature display with MIN/MAX recordings, time and date
- All MIN/MAX recordings can be reset
- Relative air pressure history for the past 12 hours
- Display of sunrise time, sunset time and sun duration time in 193 cities
- Display 8 moon phase icons with indicator throughout the year
- Outdoor signal reception intervals at 4 seconds
- LCD contrast setting
- Indoor and outdoor low battery indicators
- Table standing/wall mounting

The outdoor temperature transmitter

- Remote transmission of outdoor temperature to weather station by 868 MHz
- Shower proof casing
- Wall mounting case
- Mounting at a sheltered place. Avoid direct rain and sunshine

HOW TO INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE TRANSMITTER
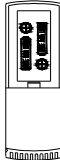
The outdoor temperature transmitter uses 2 x AAA, IEC LR3, 1.5V batteries. When the batteries need to be replaced, the low battery symbol will appear on the LCD. To install and replace the batteries, please follow the steps below:
1. Remove the cover.
2. Insert batteries, observing the correct polarity (see marking).
3. Replace the battery cover on the unit.

HOW TO INSTALL AND REPLACE BATTERIES IN THE WEATHER STATION
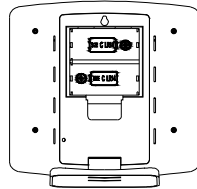
The weather station uses 2 x C, IEC LR14, 1.5V batteries. To install and replace the batteries, please follow the steps below:
1. Remove the cover at the back of the weather station.
2. Insert batteries, observing the correct polarity (see marking).
3. Replace the compartment cover.

Note: Always wait for 2 minutes after removing the batteries before reinserting, otherwise start up and transmission

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problems may occur. In the event of changing batteries in any of the units, all units need to be reset by following the setting up procedures.

SETTING UP

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

1.   First, insert the batteries in the transmitter (see "**How to install and replace batteries in the temperature transmitter**" above).
2.   Within 30 seconds of powering up the transmitter, insert batteries in the weather station (see "**How to install and replace batteries in the weather station**" above). Once the batteries are in place, all segments of the LCD will light up briefly and a short signal tone will sound. Then the indoor temperature and the time as 0:00 will be displayed. If these information are not displayed on the 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 weather station will start receiving data signal from the transmitter. The outdoor temperature should then be displayed on the weather station. If this does not happen after 60 seconds, the batteries will need to be removed from both units and reset from step 1.
4.   In order to ensure successful 868 MHz transmission, the distance between the weather station and the transmitter should be within 100 meters (see notes on "**Positioning" and "868 MHz Reception**").
5.   Once the outdoor data reception test period is completed, 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.

DCF 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 1,500km radius of Frankfurt.

DCF reception is done twice daily at 02:00 and 03:00 am. If the reception is not successful at 03:00 am, then the next reception takes place the next hour and so on until 06:00am, or until the reception is successful. If the reception is not successful at 06:00 am, then the next attempt will take place the next day at 02:00 am.

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.

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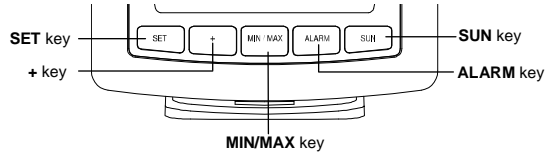
Please participate in the preservation of the environment. Return used batteries to an authorized depot.

FUNCTION KEYS

Weather station:

The weather station has five easy to use function keys:

SET key
- Press and hold for 2 seconds to enter manual setting modes: LCD contrast, time zone, time reception ON/OFF, Daylight Saving Time ON/OFF, manual time setting and calendar
- To stop the alarm sound
- To exit alarm setting mode and country/city setting mode

+ key
- To increase/change values in setting modes
- To stop the alarm sound

MIN/MAX key
- To switch among the display of minimum/maximum indoor temperature and minimum/maximum outdoor temperature records
- To decrease/change values in setting modes

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- At normal mode, press and hold the key for 2 seconds to reset **ALL** indoor/outdoor minimum/maximum temperature recordings to current readings
- To stop the alarm sound

ALARM key
- To activate/deactivate the alarm and display alarm time
- Press and hold for 2 seconds to enter the alarm setting mode
- To stop the alarm sound
- To exit manual setting mode and country/city setting mode

SUN key
- To switch among the display of date (normal mode), seconds, sun duration and city
- Press and hold for 2 seconds to enter country/city setting mode
- To stop the alarm sound
- To exit manual setting mode and alarm setting mode

LCD SCREEN

The LCD screen is split into 2 main sections displaying the information for indoor/outdoor temperatures, time, moon phase, calendar, sunrise/sunset times, weather forecast and air pressure history.

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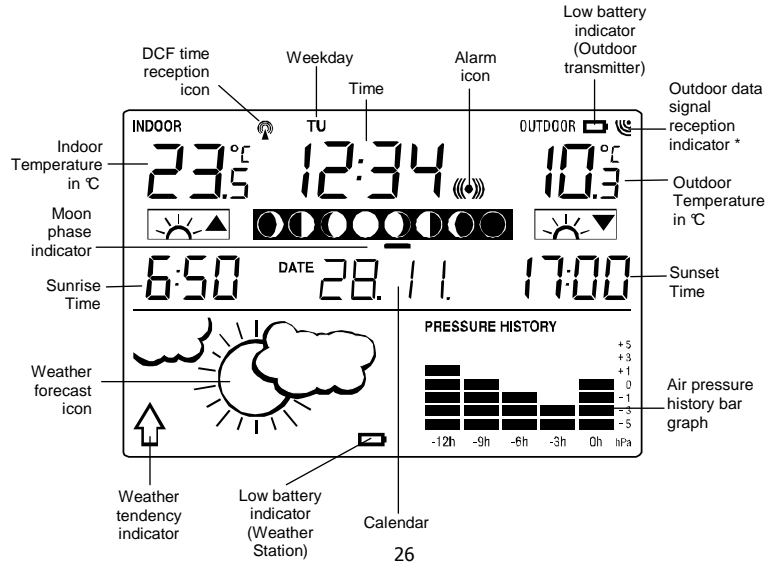
* When the signal is successfully received by the weather station, the Outdoor reception icon will be switched on. (If not successful, the icon will not be shown in LCD) So the user can easily see whether the last reception was successful (icon on) or not (icon off). On the other hand, the flashing of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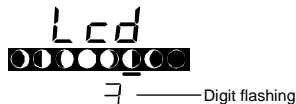
MANUAL SETTINGS

The following settings can be changed when pressing the **SET** key:
- LCD contrast setting
- Time zone setting
- Time reception (RCC) ON/OFF setting
- Daylight saving time (DST) ON/OFF setting
- Manual time setting
- Calendar setting

Press and hold the **SET** key for about 2 seconds to advance to the setting mode:

LCD CONTRAST SETTING

Lcd

┌── Digit flashing

The LCD contrast can be set within 8 levels, from LCD 0 to LCD 7 (Default is LCD 3):
1. Press and hold the **SET** key until the digit starts flashing.
2. Press the **+** key or **MIN/MAX** key to set the level of contrast desired.
3. Press the **SET** key to enter **"Time Zone setting,"** or exit the setting mode by pressing the **ALARM** key or **SUN** key.

TIME ZONE SETTING

TU
12:34
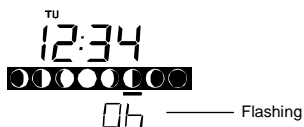
0h ── Flashing

The time zone setting is used for countries where DCF signal can be received but not in the same time zone as the German time (e.g. 1h = one hour later.) The default time zone is "0h". 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 -2 to +5 hour, in one-hour interval.
3. Press the **SET** key to enter **"Time Reception On/Off setting,"** or exit the setting mode by pressing **ALARM** key or **SUN** key.

TIME RECEPTION ON/OFF SETTING

```
rCC
ON ———— Flashing
```

In areas where reception of the DCF time is not possible, the radio controlled clock (RCC) function can be turned OFF. The clock will then work as a normal Quartz clock. (Default setting is ON).
1. The digit "ON" will start flashing on the LCD.
2. Use the **+** key to turn OFF the time reception function.
3. Press the **SET** key to enter **"Daylight Saving Time On/Off setting,"** or exit the setting mode by pressing **ALARM** key or **SUN** key.

Note:
If the time reception function is turned OFF manually, the clock will not attempt any reception of the DCF time as long as the time reception OFF function is activated.
The time reception icon " ☊ " will not be displayed on the LCD.

DAYLIGHT SAVING TIME ON/OFF SETTING

```
dSt
ON ———— Flashing
```

The daylight saving time (DST) function can be set ON/OFF. Default setting is "ON":
1. "ON" will flash on the LCD with "dSt" displayed.
2. Use the **+** key to turn the daylight saving time function ON or OFF.
3. Press the **SET** key to enter "**Manual Time setting**" or exit the setting mode by pressing the **ALARM** key or **SUN** key.

MANUAL TIME SETTING
In case the weather station cannot detect the DCF-signal (for example due to disturbances, transmitting distance, etc.), the time can be manually set. The clock will then work as a normal quartz clock.

```
                  TU
Hour (flashing) ——— 12:34 ——— Minutes
```

To set the clock:
1. The hour digit will start flashing.
2. Use the **+** key to increase or **MIN/MAX** key to decrease the value. Keep holding the key allows the value to advance faster.
3. Press the **SET** key to enter minute setting.

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4. The minute will be flashing. Use the **+** key to increase or **MIN/MAX** key to decrease the value.
5. Press the **SET** key to enter "**Calendar Setting**" or exit the setting mode by pressing the **ALARM** key or **SUN** key.

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. During reception attempts the DCF tower icon will flash. If reception has been unsuccessful, then the DCF tower icon will not appear but reception will still be attempted the following day.

CALENDAR SETTING
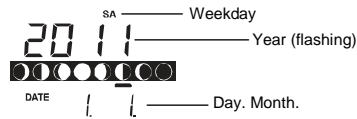
The default date of the weather station is 1. 1. 2011. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, the date can also be set manually:
1. The year digits will start flashing.
2. Use the **+** key to increase or **MIN/MAX** key to decrease the value. The range runs from 2011 to 2025 (default is 2011).
3. Press the **SET** key to enter the month setting mode.
4. The month digit will be flashing. Use the **+** key to increase or **MIN/MAX** key to decrease the value.
5. Press the **SET** key to enter day setting, or exit the setting mode by pressing the **ALARM** key or **SUN** key.
6. The day digit will be flashing. Use the **+** key to increase or **MIN/MAX** key to decrease the value. Keep holding the key allows the value to advance faster.
7. Press **SET** key once more to return to normal display.

Note:
The corresponding weekday is displayed above the time in short form (from Monday to Sunday): **MO / TU / WE / TH / FR / SA / SU**

LOCATION SETTNG FOR SUNRISE/SUNSET TIME
The weather station will automatically update the sunrise, sunset and sun duration time at 00:00, based on the city location, the date, time and DST settings.
1. Press and hold the **SUN** key for 2 seconds to enter the **Location setting mode**.
2. The short form of Country name will start flashing. Use the **+** key or MIN/MAX key to select the Country.
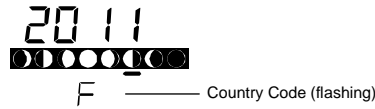
Note: 10 European countries / 193 cities can be chosen from. Every country/city is displayed in short code (default country is France = **F**). See the list at the beginning of this handbook for all the country/ city codes. French cities are coded from **F01** to **F95**. The department name is in brackets ( ).

3.   With the desired country selected, press the **SUN** key to enter City setting mode.
4.   The City code will start flashing. Use the **+** key or **MIN/MAX** key to select the City. Keep holding the key allows the value to advance faster.

dEP

F01 ——— City Code
(flashing)

5.   Confirm with the **SUN** key, or exit the setting mode by pressing the **SET** key or **ALARM** key **without saving the changes**.
6.   The city's sunrise, sun duration and sunset time will be displayed in a few seconds.

Sunrise icon   Sunset icon

5:55   15:13   21:08

Sunrise time   Sun duration (hours : minutes)   Sunset time
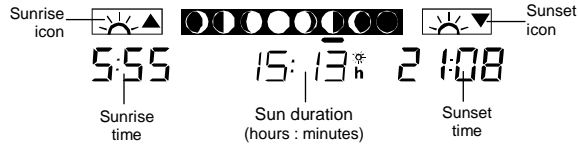
7.   Press the **SUN** key twice to go back to normal date display.

ALARM SETTING
To set the daily alarm:
1.   Press and hold **ALARM** key for 2 seconds until the alarm time shown.

TU

Alarm time (flashing) ——— 6:00 ——— Alarm On indicator

2.   The hour digit will be flashing. Press the **+** key or **MIN/MAX** key to adjust the hour.
3.   Press **ALARM** key once and minute digit will be flashing. Press **+** key or **MIN/MAX** key to set the minute, or exit the setting mode by pressing the **SET** key or **SUN** key.
4.   Press **ALARM** key once more to return to normal display.

Note: To activate/deactivate the alarm function, press the **ALARM** key once. The display of the alarm icon represents that the alarm is "ON".
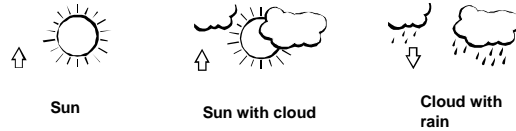
Note: The duration of alarm sounding is 2 minutes. Press any key will stop the alarm sound.

TO EXIT SETTING MODES
To exit the setting modes anytime, user can wait for automatic timeout to return to normal display.

WEATHER FORECASTING ICONS
Weather icons can be displayed in any of the following combinations:

Sun	**Sun with cloud**	**Cloud with rain**

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 displayed forecasts the weather 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 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), discard the weather forecast for the next 12-24 hours. 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.

WEATHER TENDENCY INDICATOR
Working together with the weather icons is the weather tendency indicator (located on the left of the weather icons). When the arrow points upwards, it means that the air pressure is increasing and the weather is expected to improve, but when arrow points downwards, the air pressure is dropping and the weather is expected to become worse.
Taking this into account, one can see how the weather has changed and is expected to change. For example, if the indicator is pointing downwards together with cloud and sun icons, then the last

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noticeable change in the weather was when it was sunny (the sun icon only). Therefore, the next change in the weather will be cloud with rain icons since the indicator is pointing downwards.

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

AIR PRESSURE HISTORY (ELECTRONIC BAROMETER WITH BAROMETRIC PRESSURE TREND)

The bottom right section of the LCD shows the air pressure history bar graph.

Air pressure trend over the last 12 hours
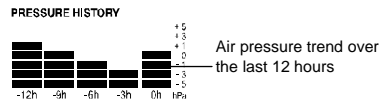
The bar graph indicates the air pressure history trend over the last 12 hours in 5 intervals: 0h, -3h, -6h, -9h and -12h. The "0h" represents the current full hour air pressure recording. The columns represent the "hPa" (0, ±1, ±3, ±5) at specific time. The "0" in the middle of this scale is equal to the current pressure and each change (±1, ±3, ±5) represents how high or low in "hPa" the past pressure was compared to the current pressure.

If the bars are rising it means that the weather is getting better due to the increase of air pressure. If the bars go down, it means the air pressure has dropped and the weather is expected to get worse from the present time "0h".

Note:
For accurate barometric pressure trends, the weather station should operate at the same altitude for recordings (i.e. it should not be moved from the ground to the second floor of the house). When the unit is moved to a new location, discard readings for the next 12 hours.
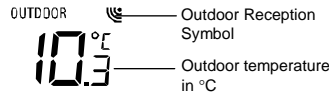
DISPLAY OF INDOOR TEMPERATURE

The indoor temperature is measured automatically and displayed on the upper left corner of the LCD.

Indoor Temperature in ℃
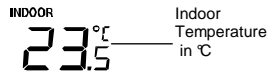
DISPLAY OF OUTDOOR TEMPERATURE

The upper right of the LCD section shows the outdoor temperature and a reception symbol.

Outdoor Reception Symbol

Outdoor temperature in °C

DISPLAY OF INDOOR/OUTDOOR MAXIMUM AND MINIMUM RECORDS
Press the **MIN/MAX** key several times to view the MIN/MAX indoor temperature, and MIN/MAX outdoor temperature sequentially. Date and time of recordings will be shown for outdoor data.

RESETTING THE MAXIMUM/MINIMUM RECORDS
In normal display mode, press and hold the **MIN/MAX** key for 2 seconds. This will reset **ALL** minimum and maximum temperature records to current readings in one time.

DISPLAY OF SUN DURATION TIME
1. In normal date mode, press the **SUN** key twice to display the sun duration time (total number of hours of sunlight on the day).
2. Press the **SUN** key again will display the City selected. (See "**LOCATION SETTNG FOR SUNRISE/SUNSET TIME**")
3. Press the **SUN** key again to go back to normal date display.

THE MOON PHASE ICONS
The Sun-Moon Clock displays 8 different moon phase icons. The current moon phase is indicated with a bar segment according to the set calendar.

A bar segment indicates the current moon phase

Waxing Crescent | First Quarter | Waxing Gibbous | Full Moon | Waning Gibbous | Last Quarter | Waning Crescent | New Moon

LOW BATTERY INDICATORS
Low battery indicator will show on the LCD when the batteries of weather station or transmitter require changing.

TEMPERATURE TRANSMITTER
The reception distance 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 weather 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 temperature 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 (868 MHz) may prevent correct signal transmission and reception.

4.   Neighbors using electrical devices operating on the 868 MHz signal frequency can also cause interference.

Note:

When the 868 MHz 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:
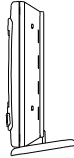
The weather station comes with a detachable stand that gives the option of table standing or wall mounting. Before wall mounting, please check that the outdoor data can be received from the desired locations.
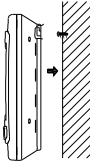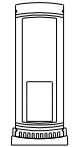
To wall mount:
1.   Fix a screw (not supplied) into the desired wall, leaving the head extended out by about 5mm.
2.   Remove the stand by pulling it away from the weather station. Using the back hanging hole, carefully hang the weather station onto the screw.

Note: Always ensures that the unit locks onto the screw head before releasing.

POSITIONING THE TEMPERATURE TRANSMITTER:

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

To wall mount:
1.   Secure the bracket onto a desired wall using the screws and plastic anchors.
2.   Clip the transmitter 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 units 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 : -9.9ºC to +59.9ºC with 0.1ºC resolution
14.2ºF to 139.8ºF with 0.2ºF resolution
(**"OF.L"** displayed if outside this range)
Outdoor : -39.9ºC to +59.9ºC with 0.1ºC resolution
-39.8ºF to +139.8ºF with 0.2ºF resolution
(**"OF.L"** displayed if outside this range, "--.-" displayed if no transmitter signal)
Indoor temperature checking interval : every 16 seconds
Outdoor temperature reception : every 4 seconds
Transmission range : up to 100 meters (open space)
Power consumption (Alkaline batteries recommended):
Weather station : 2 x C, IEC, LR14, 1.5V
Battery life cycle : Approx. 12 months (depending on usage)
Temperature transmitter : 2 x AAA, IEC, LR3, 1.5V
Battery life cycle : Approx. 12 months
Dimensions (L x W x H)
Weather station : 153.6 x 35 x 142.5 mm
Temperature transmitter : 36 x 16 x 102.6 mm (wall bracket excluded)

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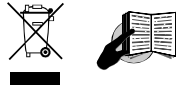
R&TTE Directive 1999/5/EC
Summary of the Declaration of Conformity: We hereby declare that this wireless transmission device does comply with the essential requirements of R&TTE Directive 1999/5/EC.