		(**"OFL"** displayed if outside this range)
Indoor relative humidity measuring range:		20% to 95%
		(**"- -"** displayed if outside this range)
Indoor Temperature checking interval	:	every 10 seconds
Indoor Humidity checking interval	:	every 20 seconds
Outdoor Temperature reception	:	every 5 minutes
Power source		
Receiver	:	2 x AA, IEC, LR6, 1.5V
Transmitter	:	2 x AAA, IEC, LR3, 1.5V
Battery life cycle	:	approximately 12 months
(Alkaline batteries recommended)		
Dimensions (L x W x H)		
Temperature station (without stand)	:	108 x 30 x 151 mm
Outdoor Transmitter	:	56 x 24 x 80 mm

LIABILITY DISCLAIMER

- 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 not to be used for medical purposes or for public information.
- This product is only designed to be used in the home as indication of temperatures and is not 100% accurate. Readings given by this product should be taken only as an indication and not as being totally accurate.
- 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 consent 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.

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 positioning the transmitter. The LCD contrast on the unit may also be reduced and the batteries are reduced in power.

433MHZ RECEPTION CHECK

The Temperature station will receive the temperature data within 15 minutes. If the temperature data is not being received 15 minutes after setting up, the display shows "- - -" then please check the following points:

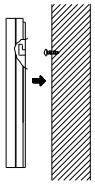
1. The distance of the Temperature Station or transmitter should be at least 1.5 to 2 meters away from any interfering sources such as computer monitors or TV sets.
2. Avoid placing the receiver onto or in the immediate proximity of metal window frames.
3. Using other electrical products such as headphones or speakers operating on the same signal frequency (433MHz) may prevent correct signal transmission and reception.
4. Neighbours using electrical devices operating on the 433MHz signal frequency can also cause interference.

Note:
When the 433 MHz 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 around 20 - 25 m from the transmitter to the Temperature station (in open space). However, this depends on the surrounding environment and interference levels. If no reception is possible despite the observation of these factors, all system units have to be reset (see **Setting-up**).

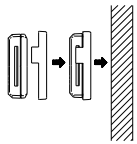
POSITIONING THE TEMPERATURE STATION:

The Temperature station comes attached with a removable table stand, which provides the option of table standing or wall mounting the unit. Before wall mounting, please check that the outdoor temperature(s) can be received from the desired location(s). To wall mount:



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 Temperature station by pulling it away from the base and hang it onto the screw. Remember to ensure that it locks into place before releasing.

POSITIONING THE OUTDOOR TEMPERATURE TRANSMITTER



The Temperature Transmitter is supplied with a holder that may be attached to a wall with the three screws supplied. To attach to the wall, please follow the steps below:

1. Mark the wall using a pen through the holes in the holder to obtain the exact drilling position.
2. Drill holes in the wall at the points marked.
3. Screw holder onto wall.

There is also double sided tape included with the wall mount. On smooth surfaces this can be used instead of drilling holes. The surface can, however, affect the transmission range. If for example the unit is attached to a piece of metal, it may then either reduce or increase the transmitting range. For this reason, we recommend not placing the unit on any metal surfaces or in any position where a large metal or highly polished surface is in the immediate proximity (garage doors, double glazing etc.). Choose a sheltered place. Avoid direct rain and sunshine. Before securing in place, please ensure that the Temperature Station can receive the signal from the Temperature Transmitter at the positions that you wish to situate them. The Temperature Transmitter simply clicks in or out of the holder. When inserting or removing the Temperature Transmitter to or from the wall holder please hold both units securely.

CARE AND MAINTENANCE:

- Extreme temperatures, vibration and shock should be avoided as these may cause damage to the units and give inaccurate forecasts and readings.
- When cleaning the displays and casings, use a soft damp cloth only. Do not use solvents or scouring agents as they may mark the LCD and casing.
- Do not submerge the units 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 it to its original point of purchase for repair by a qualified engineer. Opening and tampering with the unit may invalidate its guarantee.
- Do not expose the unit to extreme and sudden temperature changes, as this may lead to rapid changes in forecasts and readings and thereby reduce its accuracy.

SPECIFICATIONS:

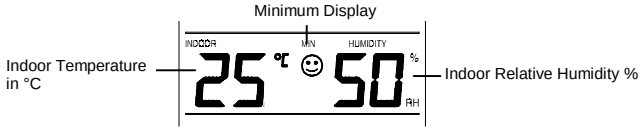
Temperature measuring range		
Indoor	:	-9.9ºC to +59.9ºC with 0.1ºC resolution (**"OFL"** displayed if outside this range)
Outdoor	:	-30ºC to +70ºC with 0.1ºC resolution

6. The steps for setting, activating and de-activating Alarm 2 are the same, but using the AL2 button instead of AL1.

SNOOZE SETTING AND STOPPING THE ALARM:

1. When the alarm is sounding, press any one of the four keys SET, IN, OUT or SNZ to activate the snooze function. The alarm will stop and re-activate after the snooze interval of 5 minutes.
2. To stop the alarm completely, press any one of the four keys AL1, AL2, DATE or CH.

LCD 3 INDOOR TEMPERATURE AND HUMIDITY READING WITH COMFORT LEVEL INDICATOR:



The indoor temperature and humidity are received automatically and displayed on the third section of the LCD.

THE COMFORT LEVEL INDICATORS:

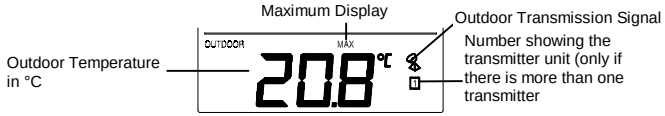
Comfortable: A happy face icon " **J**" indicating a temperature level between 20ºC and 25°C and humidity between 45% and 65%.

Uncomfortable: A sad face icon " **L**" indicating any value outside the comfortable range.

TOGGLING AND RESETTING THE INDOOR RECORDINGS:

1. To toggle between the indoor current, minimum and maximum temperature and humidity data and the times at which they were recorded, press the IN key:
   Once to show the minimum temperature and humidity values with time and date recorded.
   Twice to show the maximum temperature and humidity values with time and date recorded.
   Three times to return to the current time, date, temperature and humidity levels.
2. To reset the minimum and maximum temperature and humidity data and the times at which they were recorded, press the IN key continuously for about 3 seconds. This will reset all minimum and maximum data recorded to the current time, date, temperature and humidity. The min/max temperatures recorded are of current time and they remain unaffected by the time zone setting.

LCD 4 OUTDOOR TEMPERATURE:



The fourth LCD section shows the outdoor temperature and a transmission signal. A number besides the temperature will also show if more than one transmitter is used.

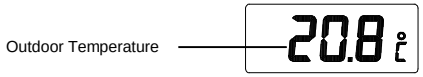
TOGGLING AND RESETTING THE OUTDOOR RECORDINGS:

1. To toggle between the outdoor current, minimum and maximum temperature data and the times at which they were recorded, press the OUT key:
   Once to show the minimum temperature value with time and date recorded
   Twice to show the maximum temperature value with time and date recorded
   Three times to return to the current time, date and temperature level
2. To toggle between transmitters, press the CH key:
   Once to show transmitter 2
   Twice to show transmitter 3
   Three times to return to transmitter 1

Note: The transmitter number will only be displayed if there is more than one transmitter detected.

3. To reset the minimum and maximum temperature data and the times at which they were recorded, press the OUT key continuously for about 3 seconds. This will reset all minimum and maximum data recorded to the current time, date and temperature. The min/max temperature recorded are of current time and they remain unaffected by the time zone setting.

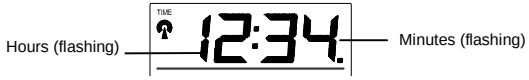
TEMPERATURE TRANSMITTER:



The LCD display shows the current temperature at the location of the transmitter. The temperature is measured and transmitted to the Temperature Station approximately every 60 seconds and at each transmission the antenna icon (Y) will light briefly.

- 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 - the reception is possible in most cases. A single daily reception is adequate to keep the accuracy deviation below 1 second.

MANUAL CLOCK SETTING:



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

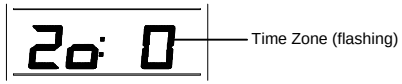
1. Press and hold down the SET key for around 3 seconds until the time display flashes.
2. Use the IN key to set the hours and the OUT key to set the minutes. Pressing these keys continuously moves the hours consecutively by 1 and the minutes consecutively by 5.
3. Either press the SET key once more to enter the set mode for the time zone and date section or do not touch any buttons for around 30 seconds to confirm the set time.

Note:
The unit will still try to receive the signal every hour 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 hour.

LCD 2 TIME ZONE AND DATE SETTING:

The second section of the LCD shows either the date and month, the weekday and date, Alarm ((1)) time or Alarm ((2)) time. It also shows the Alarm ON/OFF icons ((1)) and ((2)).

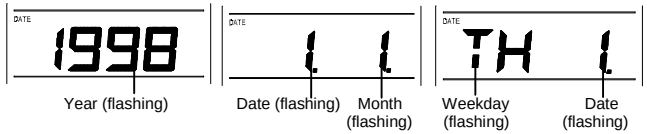
TIME ZONE SETTING:



The time zone default of the Temperature Station is 0. To re-set the time zone:

1. Press the SET key after completing the time setting in order to enter the time zone setting (flashing).
2. Using the IN key, set the time zone. The range runs from 0 to +9 and then runs from -9 back to 0 in consecutive 1hour intervals.
3. Press the SET key to enter the date setting mode or do not touch any buttons for around 30 seconds to confirm the time zone setting.

DATE SETTING:



The date default of the Temperature Station is 1. 1. or TH 1. in the year 1998. Once the radio-controlled time signals are received, the date is automatically updated. However, if the signals are not received, you can adjust the date manually.
To do this:

1. Press the SET key after completing the time zone setting in order to enter the year setting (flashing). Reset the year by pressing the IN key. The range runs from 1998 to 2020.
2. Press the SET key again to enter the month and date display (flashing).
3. Using the OUT key, set the month required. Using the IN key, set the date required.
4. Press the SET key again to enter the weekday display (flashing).
5. Using the IN key, set the weekday required.
6. Press the set key once more to confirm all settings or do not touch any buttons for around 30 seconds. The mode will return to normal.

ALARM SETTING:

1. Press and hold down the AL1 key for around 3 seconds until the alarm time display flashes.
2. Use the IN key to set the hour and the OUT key to set the minutes. Pressing these keys continuously moves the hours consecutively by 1 and the minutes consecutively by 5.
3. Either press the AL1 key once more to confirm and return to the normal display or do not touch any buttons for around 30 seconds to confirm the set time.
4. To activate the alarm function, press the AL1 button once for Alarm 1. You should now see the Alarm ((1)) symbol to represent the Alarm 1 being ON.
5. To de-activate, press the AL1 button once again.

- Changes the hour setting in alarm mode
- Used to activate the snooze function for the alarm

OUT key (Outdoor)

- Used to toggle between the current/ maximum/ minimum outdoor temperatures
- Press for around 3 seconds to reset the outdoor maximum and minimum temperature records (will reset all temperatures to current level of the relative transmitter being reset - each transmitter's data must be reset separately)
- Changes the minute and month setting when in set mode
- Changes the minute setting in alarm setting mode
- Used to activate the snooze function for the alarm

CH key (Channel)

- Used to toggle between the outdoor Temperature Transmitters 1, 2 and 3.
- Used to stop the alarm

AL1 key (Alarm 1)

- Press to display the time set for Alarm ((1)) and to simultaneously set Alarm ((1)) ON/ OFF
- Press for around 3 seconds to enter the Alarm ((1)) setting mode
- Used to stop the alarm

AL2 key (Alarm 2)

- Press to display the time set for Alarm ((2)) and to simultaneously set Alarm ((2)) ON/ OFF
- Press for around 3 seconds to enter the Alarm ((2)) setting mode
- Used to stop the alarm

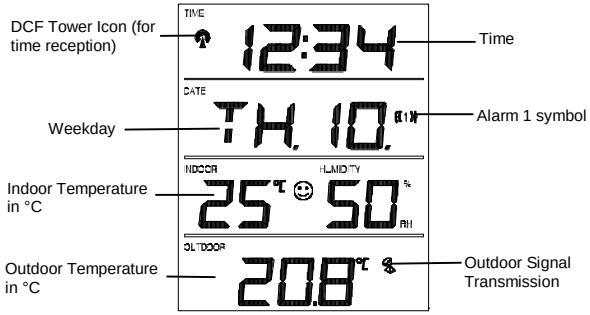
DATE key

- Used to toggle between the two date display modes and the two alarm times
- Used to stop the alarm

SNZ key (Snooze)

- Used solely to activate the snooze function for the alarm

LCD SCREEN AND SETTINGS



For better distinctness the LCD screen is split into 4 sections displaying the informations for time, date, indoors and outdoors.

LCD 1 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.

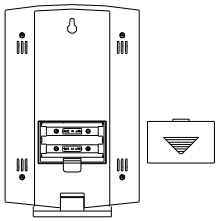
Once the outdoor temperature is displayed on the Temperature Station, the DCF tower icon in the clock display will start flashing in the upper left corner. This indicates that the clock has detected that there is a radio signal present and is trying to receive it. When the time code is received, the 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 metres.

stop this process and the display will show the temperature for the first transmitter. The process also stops automatically if no keys are pressed for a few minutes.

6. Once the remote temperature has been received and is displayed on the Temperature Station, the DCF-77 time code reception is automatically started. This takes typically between 3-5 minutes in good conditions. This time period is an excellent opportunity to locate the transmitter(s) in suitable location(s) outdoors. In order to ensure sufficient 433 MHz transmission however, this should under good conditions be no more than 20 - 25 meters from where the Temperature Station will be finally positioned (see notes on **"Positioning"** and **"433 MHz Reception check"**).
7. If after 10 minutes, the DCF time has not been received, use the SET key to manually enter a time initially. The clock will automatically attempt each hour to receive the DCF time. When this 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 **"Radio controlled Time Reception"** and **"Manual Time Setting"**).

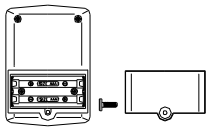
HOW TO INSTALL AND REPLACE BATTERIES IN THE TEMPERATURE STATION



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

1. Insert finger or other solid object in the space at the bottom centre of the battery compartment and lift up to remove the 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. When batteries will need to be replaced, the battery symbol will appear on the LCD.
To install and replace the batteries, please follow the steps below:

1. Unscrew the screw on the back of the compartment and remove the cover.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery cover on the unit and seal by re-screwing.

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

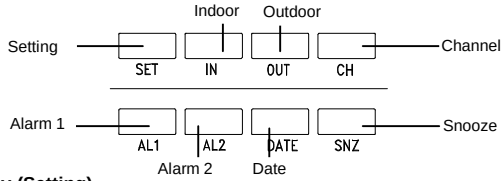
BATTERY CHANGE:

It is recommended to replace the batteries in all units on an annual basis to ensure optimum accuracy of these units.

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

FUNCTION KEYS:

Temperature Station:
The temperature station has eight easy to use function keys, 4 on the outside and four behind a shutter inside the lower compartment:



SET key (Setting)

- Used to enter the set mode for the following functions: Time, Time zone, Year, Date and Weekday
- The year can also be displayed in the set mode (not displayed in normal mode)
- Used to activate the snooze function for the alarm

IN key (Indoor)

- Used to toggle between the current/ maximum/ minimum indoor temperature and humidity
- Press for over 3 seconds to reset the indoor maximum and minimum temperature and humidity records (will reset all records to current level)
- Changes the hour, time zone, year, day and weekday setting when in set mode

WIRELESS 433 MHZ TEMPERATURE STATION

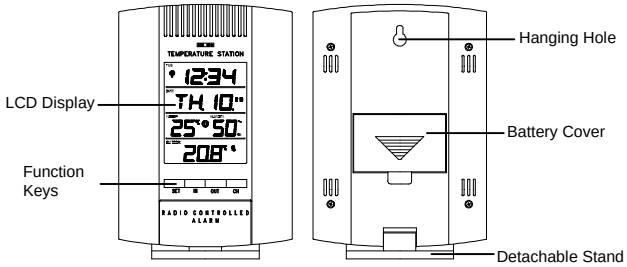
Instruction Manual

INTRODUCTION:

Congratulations on purchasing this Temperature Station with wireless 433 MHz transmission of outdoor temperature and display of indoor temperature and humidity. It is further featuring a DCF-77 radio controlled clock with calendar display and two alarms. With eight easy to use function keys, this innovative product is ideal for use in the home or office.

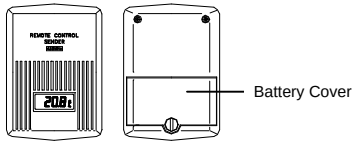
FEATURES:

The Temperature Station



- DCF-77 Radio controlled time with manual setting option
- 24 hour display
- Hour and minute display, seconds indicated by flashing dot
- Time zone option ±9 hours
- Features 2 alarms with snooze function
- Weekday with date or date with month calendar display
- Indoor temperature reading in °C with minimum and maximum recording
- Indoor humidity reading displayed as RH% with minimum and maximum recording
- Indoor comfort level indicator by happy or sad face icons
- Outdoor temperature reading (for up to 3 transmitters) in °C with minimum and maximum recording
- All minimum and maximum recordings show date and time received and can be reset
- Can take up to three outdoor transmitters
- Wall mountable or table standing

The Outdoor Transmitter



- Remote transmission of outdoor temperature to temperature station by 433 MHz signals
- LCD showing current temperature
- Shower proof casing
- Wall mounting case
- Mounting at a sheltered place. Avoid direct rain and sunshine

SETTING UP:

1. First, insert the batteries into the Temperature Station (see "**How to install and replace batteries in the Temperature Station**" below**).** Once the batteries are in place, all segments of the LCD will light up briefly and a short signal tone will sound. Then the indoor temperature and humidity, the time as 0:00 and the date as 1.1. will be displayed. If the indoor temperature and humidity are not displayed after a few seconds, remove the batteries and wait for at least 10 seconds before reinserting them. Once the indoor data is displayed proceed to step 2.
2. Within 3 minutes of activating the Temperature Station, place the batteries into the transmitter (see "**How to install and replace batteries in the Temperature Transmitter**" below**).**
3. After inserting the batteries into the transmitter, the Temperature Station will start receiving transmissions from the transmitter. The outdoor temperature should then be displayed on the Temperature Station. If this does not happen within 15 minutes, the batteries will need to be removed from both units and reset from step 1.
4. The Temperature Station can take up to 3 remote transmitters. If you have purchased additional transmitters, follow step 2 for all extra transmitters. However, ensure that you leave 10 seconds in between the reception of the last transmitter and the set-up of the following transmitter. The Temperature Station will number the transmitters in the order of set-up, i.e. the first transmitter will have the temperature displayed with the number 1 against it and so on.
5. When all the transmitters are set up, there is a testing period, during which the display switches quickly between all the received transmitters at random, according to which random transmission it receives. Pressing any key will