

## WIRELESS 433 MHz PROJECTION CLOCK

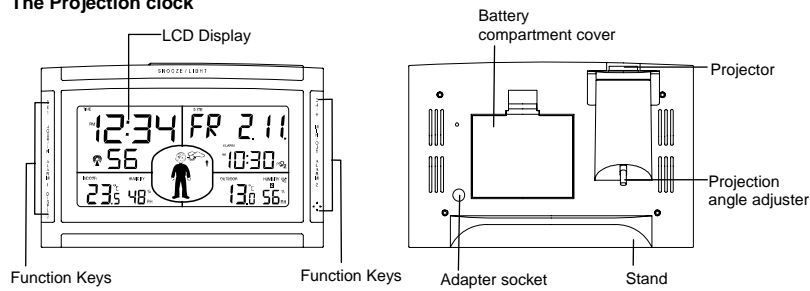
### Instruction Manual

#### INTRODUCTION:

Congratulations on purchasing this fancy Projection clock with wireless 433MHz transmission of outdoor temperature and humidity and display of indoor temperature and humidity. It is further acting as a DCF-77 radio controlled clock with date display and two alarms. With the totally 24 different weather forecast icons featured by "weather man", users can easily observe the forecast weather condition and will no longer worry the sudden weather change. This innovative product is ideal for use in the home or office.

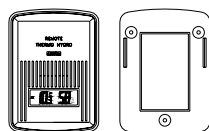
#### FEATURES:

##### The Projection clock



DCF-77 Radio controlled time with manual setting options  
Time reception ON/OFF  
12/24 hour display  
Hour, minute and second time display  
Calendar (weekday, date, month display)  
Time zone option  $\pm 12$  hours  
Features 2 alarms with snooze function  
Snooze setting  
Weather forecasting with 24 easy-to-read weather forecast signs featured by weather man  
Weather forecasting icon sensitivity setting  
Temperature display in degrees Celsius ( $^{\circ}\text{C}$ ) or Fahrenheit ( $^{\circ}\text{F}$ ) selectable  
Indoor and outdoor temperature display with MIN/MAX recording  
Indoor and outdoor humidity reading displayed as RH% with MIN/MAX recording  
All MIN/MAX temperature recordings show date and time received  
All MIN/MAX recordings can be reset  
Can take up to three outdoor transmitters  
LCD contrast setting  
Low battery indicator  
EL backlight  
Table standing

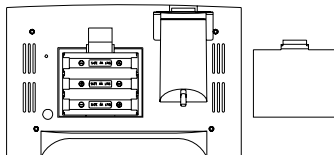
### The Outdoor Thermo-Hygro Transmitter



Remote transmission of outdoor temperature and humidity to Temperature Station by 433 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 PROJECTION CLOCK

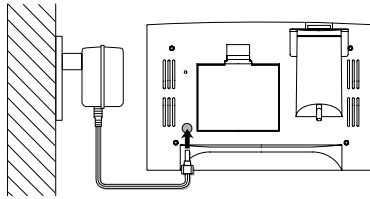
The Projection clock uses 3 x AA, IEC LR6, 1.5V batteries. When batteries will need to be replaced, the low battery icon will appear on the LCD. To install and replace the batteries, please follow the steps below:



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

In addition or instead of inserting batteries, the AC adapter can be used:

1. Connect the power adapter to a wall socket
2. Insert the adapter into the jack at the bottom of the clock
3. The Projection clock will now start receiving the DCF time signal. After approximate 3 to 5 minutes, the DCF time will be displayed (Also see "**SETTING UP**" below) .



**Important!**

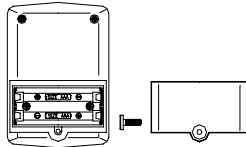
Use only the adapter provided with the projection clock and make sure that your household voltage is appropriate to the working voltage of the adapter. Otherwise your Projection clock may be damaged.

**POWERED WITH THE USE OF AC/DC ADAPTER**

If the Projection clock is first powered by batteries and the power adapter is subsequently used for extended period of time, the main power source of the Projection clock will switch to AC/DC power. The batteries will then act as a backup power source in case of power failure.

#### HOW TO INSTALL AND REPLACE BATTERIES IN THE THERMO-HYGRO TRANSMITTER

The Thermo-Hygro 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 cover with an appropriate screwdriver.
2. Insert the batteries, observing the correct polarity (see marking).
3. Replace the battery 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 random security code is assigned by the transmitter at start-up and this code must be received and stored by the Projection clock in the first 3 minutes of power being supplied to it

#### **SETTING UP:**

1. First, insert the batteries into the Projection clock (see "**How to install and replace batteries in the Projection clock**"). Once the batteries are in place, all segments of the LCD will light up briefly and a short signal tone will sound. Following some test data display, the indoor temperature and humidity, the time as 0:00 the date as 1.1. and the "weather man" icon will be displayed. If the indoor temperature and humidity are not displayed after 30 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 Projection clock, place the batteries into the transmitter (see **"How to install and replace batteries in the Thermo-Hygro outdoor transmitter"**).
3. After inserting the batteries into the transmitter, the Projection clock will start receiving data from the transmitter. The outdoor temperature and humidity should then be displayed on the Projection clock. If this does not happen after 15 minutes, the batteries will need to be removed from both units and reset from step 1.
4. The Projection clock 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 Projection clock will number the transmitters in the order of set-up, i.e. the first transmitter will have the temperature and humidity displayed with the number 1 against it and so on.
5. Before 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 stop this process. The process also stops automatically if up to 3 transmitters are received or no keys are pressed for a few minutes.
6. Once the remote temperature and humidity have been received and displayed on the Projection clock, 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 100 meters from where the Projection clock will be finally positioned (see notes on **"Positioning the thermo-hygro transmitter"** and **"433 MHz Reception"**).
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 to receive the DCF time at each full hour. 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 “DCF-77 Radio controlled Time” and “Manual Time Setting”).

#### **BATTERY CHANGE:**

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

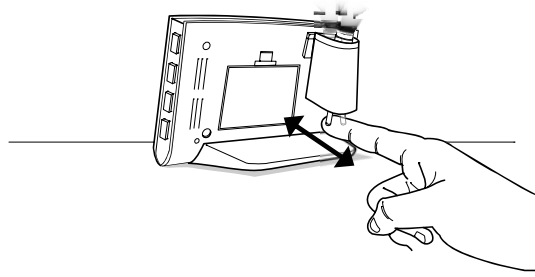


**Please participate in the preservation of the environment. Return used batteries to an authorised depot.**

#### **PROJECTION OF TIME AND/OR REMOTE TEMPERATURE**

1. When plugged into an AC outlet, the projection clock can continuously project the time and/or remote temperature.
2. When operating on batteries alone, the projection clock will only project when SNOOZE/LIGHT button is pressed.
3. The projection will auto-focus for display from three to six feet away. A dark surrounding will be necessary to clearly see the projection.
4. The default is projecting time (Hour and Minutes). The Projection Alarm can be set to project the time (M0), remote temperature of **Channel 1** (M1), or alternating between time and remote temperature (M2) by pressing and releasing the “DISPLAY” button. The selected display mode will flash on the lower middle as “M0”, “M1” or “M2”.
5. The direction of the display can also be rotated 360° in 90° increments by pressing the

- directional button. There is no display on the LCD that signifies the direction.
6. The projector case can be tilted for about 60° to help to orient the projected data.

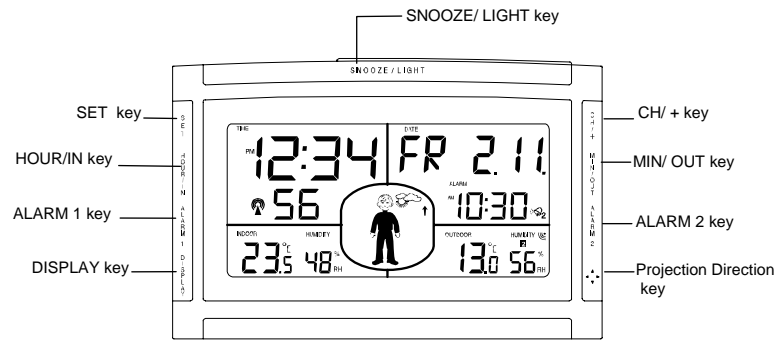




### FUNCTION KEYS:

#### Projection clock:

The projection clock has nine easy to use function keys.



**SET key (Setting):**

To enter the set mode for the following functions: LCD contrast, Time zone, Time Reception ON/OFF, 12/24 hour display, Manual time, Year, Date, snooze time duration, °C/°F, and Weather forecast sensitivity settings.

**Note:** The year can be displayed in the set mode (not displayed in normal mode)

To stop the alarm  
To switch on the backlight

**HOUR/ IN key (Indoor)**

To toggle between the current/ maximum / minimum indoor temperature and humidity  
To press for over 3 seconds to reset the indoor maximum and minimum temperature and humidity records (will reset all records to current level)

**Note:** the Time/date information is only available for MIN/MAX temperature data.

To change alarm hour in alarm setting mode  
To stop the alarm  
To switch on the backlight

**MIN/ OUT key (Outdoor)**

To toggle between the current/ maximum/ minimum outdoor temperature and humidity  
Press for around 3 seconds to reset the outdoor maximum and minimum temperature and humidity records (will reset all records to current level of the relative transmitter being reset- each transmitter's data must be reset separately)  
To change alarm minute in alarm setting mode

To stop the alarm  
To switch on the backlight

**CH/ + key**

To toggle between the Thermo-Hygro outdoor transmitters 1, 2 and 3 (if more than 1 transmitter is used)  
To adjust LCD contrast, time zone, Time Reception ON/OFF, 12/24 hour display, hour, year, month, day, snooze time duration, °C/°F and weather forecasting icon sensitivity in setting modes  
To stop the alarm  
To switch on the backlight

**ALARM 1 key**

Press for about 3 seconds to enter the Alarm 1 setting mode  
To display the preset alarm time of Alarm 1  
To activate/ deactivate the Alarm 1  
To stop the alarm  
To switch on the backlight

**ALARM 2 key**

Press for about 3 seconds to enter the Alarm 2 setting mode  
To display the preset alarm time of Alarm 2  
To activate/ deactivate the Alarm 2  
To stop the alarm  
To switch on the backlight

**DISPLAY key**

- To toggle between the projection of current time (M0), remote temperature (M1), or alternating between time and outdoor temperature (M2)
- To stop the alarm
- To switch on the backlight

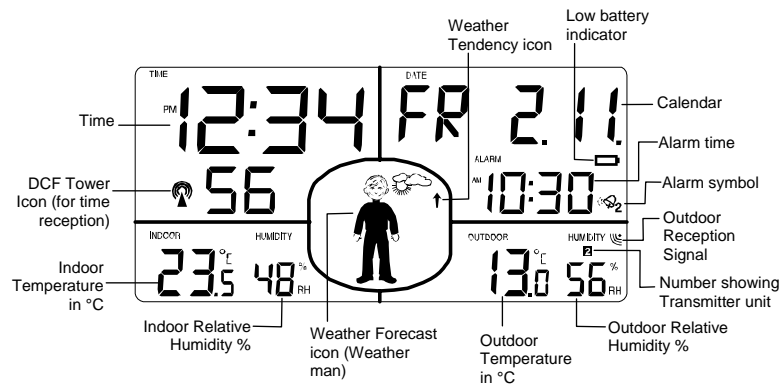
**SNOOZE/ LIGHT key**

- To activate the snooze function for the alarm
- To exit manual setting mode and alarm setting mode
- To switch on the backlight
- To switch on the projection

**Projection Direction key**

- To rotate the projection image in 90° increments
- To activate the EL back-light

# **LCD SCREEN AND SETTINGS:**



For better distinctness the LCD screen is split into 5 sections displaying the information for time, date, weather forecast, indoors and outdoors.

**Section 1 - TIME**

In normal mode display of radio controlled time.

A reception tower symbol in LCD 1 of the display indicates that the DCF-77 time signal is scanned for (flashing) or received (steady).

In setting mode display of manual setting values.

**Section 2 - CALENDAR, ALARM 1 OR ALARM 2 TIME**

Display date and month, weekday and date, Alarm 1 time or Alarm 2 time. It also shows the Alarm ON/OFF icons 1 and 2

Display of low battery indicator. A small battery symbol on the upper right side indicates low running batteries.

In setting mode display of a variety of references and setting values

**Section 3 - WEATHER FORECAST AND WEATHER ICONS**

Display of the weather to be expected in form of 24 fancy weather symbols (featured by Weather man) and two weather tendency indicators in form of an arrow, which change their appearance depending on the air pressure development.

Format of the weather man icons refer to the "WEATHER FORECAST AND TENDENCY"

**Section 4 - INDOOR TEMPERATURE AND HUMIDITY**

In normal mode, on the left, display of the current indoor temperature.

In normal mode, on the right, display of the current indoor relative humidity.

By pressing the HOUR/ IN key, display of the stored MIN/MAX indoor temperature and humidity with simultaneous display of a MIN or MAX symbol in the upper center.

#### **Section 5 - OUTDOOR TEMPERATURE AND HUMIDITY**

In normal mode, on the left, display of the current outdoor temperature.

In normal mode, on the right, display of the current outdoor relative humidity.

By pressing the MIN/ OUT key, display of the stored MIN/MAX outdoor temperature and humidity with simultaneous display of a MIN or MAX symbol in the upper center.

By pressing the "CH" key, display of outdoor sensors (up to three outdoor transmitters) 1, 2 or 3 in the center will indicate from which sensor the current reading originates.

A signal reception symbol in the upper center indicates that a signal is received from the transmitter(s).

#### **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 Projection clock 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 and humidity are displayed on the Projection clock 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.  
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:**

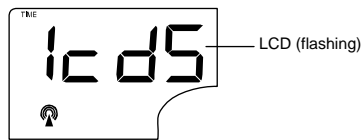
The following manual settings can be done in the setting mode:

- LCD contrast setting
- Time zone setting
- Time reception ON/OFF setting
- 12/24-Hour setting
- Manual time setting
- Calendar setting
- Snooze setting
- °C/ °F setting
- Weather forecasting icon sensitivity setting

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



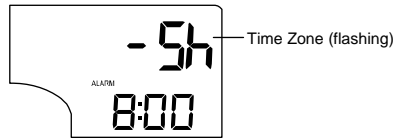
## LCD CONTRAST SETTING



The LCD contrast can be set to 8 different levels to suit the users needs (default LCD contrast setting is LCD 5). To set the desired contrast level:

1. The above display will be seen. Press the CH/ + key to select the level of contrast desired.
2. Press the SET key to confirm and enter the **"Time Zone setting"** or exit the setting mode by pressing the SNOOZE/ LIGHT key

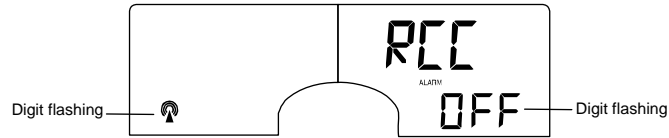
## TIME ZONE SETTING:



The time zone default of the Projection clock is 0. To change to another time zone:

1. Press the SET key after completing the LCD contrast setting in order to enter the time zone setting (flashing).
2. Using the CH/ + key, set the time zone. The range runs from 0 to +12 and then runs from -12 back to 0 in consecutive 1 hour intervals.
3. Press the SET key to confirm and enter the **"Time Reception ON/OFF setting"** or exit the setting mode by pressing the SNOOZE/ LIGHT key

#### TIME RECEPTION ON/OFF SETTING



In area where reception of the DCF-77 time is not possible, the DCF-77 time reception 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 CH/ + key to turn OFF the time reception function.
3. Confirm with the SET key and enter the **"12/24-Hour Display setting"** or exit the setting mode by pressing the SNOOZE/ LIGHT 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 and DCF icons will not be displayed on the LCD.

**12/24 HOUR TIME DISPLAY SETTING**

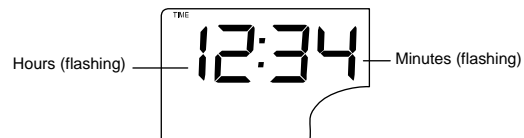


1. After setting time reception ON/OFF, press the SET key, "12h" or "24h" flashes in the LCD.
2. Press the CH/ + key to select the "12h" or "24h" display mode.
3. Press the SET again to confirm and to enter the **"Manual Time setting"** or exit the setting mode by pressing the SNOOZE/ LIGHT key.

**Note:** When 24h mode display is selected, the calendar format will be date and month display.  
When 12h mode display is selected, the calendar format will be month and date display.

**MANUAL TIME SETTING**

In case the Projection clock is not 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.



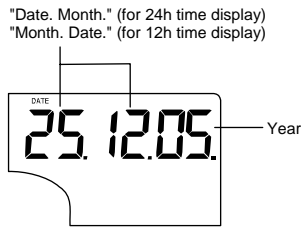
To set the clock:

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

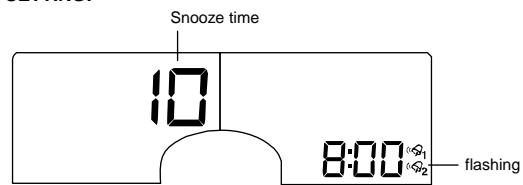
## CALENDAR SETTING



The date default of the Projection clock is 1. 1. of the year 2003 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 CH/ + key, set the year required. The range runs from 2003 to 2029 (default is 2003).
2. Press the SET key to enter the month setting mode.
3. The month digit will be flashing. Press the CH/ + 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 CH/ + key to set the date.
5. Confirm with the SET key and enter the "**Snooze setting**" or exit the setting mode by pressing the SNOOZE / LIGHT key.

#### SNOOZE SETTING:



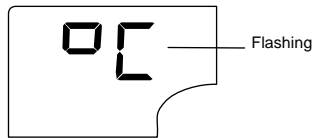
The snooze time can be set OFF or to a maximum time of 30 minutes (default is 10 minutes):

1. The alarm icon will be flashing. Use the CH/ + key to set the snooze time (minute). Each pressing of the key will increase the snooze time by 5 minutes. The snooze can also be set OFF when the "OFF" digit is being displayed.
2. Confirm with the SET key and enter the "**°C / °F temperature unit setting**" or exit the manual setting mode by pressing the SNOOZE/ LIGHT key.

**Note:**

If the snooze time has been set "OFF", the snooze function will not be activated.

#### °C/°F TEMPERATURE UNIT SETTING

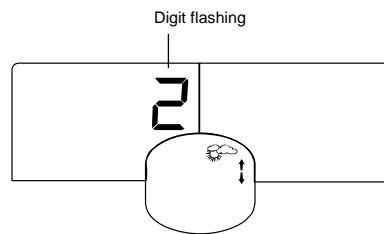


The default temperature reading is set to °C (degree Celsius). To select °F (degree Fahrenheit):

1. The "°C" will be flashing, use the CH/ + key to toggle between "°C" and "°F".
2. Once the desired temperature unit has been chosen, confirm with the SET key and enter the **"Weather Forecast Icon Sensitivity setting"** or exit the setting mode by pressing the SNOOZE/ LIGHT key.

#### WEATHER FORECASTING ICON SENSITIVITY SETTING

For locations with rapid changes of weather conditions, the threshold can be set to a different level for faster display of weather conditions.

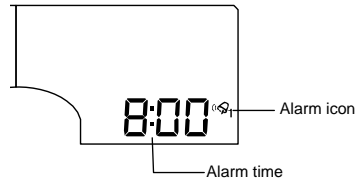


1. Using the CH/ + key to set the weather sensitivity level. There are 3 levels of setting: 1, 2 and 3; level 1 is the most sensitive setting, level 3 is the least sensitive setting (default setting is "2").
2. Confirm with the SET key and exit the **Manual settings**.



### ALARM SETTING:

There are two alarms available in the projection clock and user may set two different alarm times.



To set alarm:


1. Press and hold down the AL1 key (for setting Alarm 1) for about 3 seconds until the alarm time display flashes.
2. Use the HOUR/ IN key to set the hours and the MIN/ OUT key to set the minutes. Pressing and holding these keys will move 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 15 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 ((1)) alarm symbol to represent the Alarm 1 being ON.
5. To de-activate, press the AL1 button once again.
6. The above 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:**

When the alarm is sounding, press the SNOOZE/ LIGHT key to activate the snooze function. The alarm will stop and re-activate after the snooze interval of 5 minutes (for example).

The snooze function can be set when the alarm is ringing by pressing the SNOOZE/ LIGHT key. However the snooze will only be activated when the snooze time is set other than OFF in snooze setting. Otherwise the snooze function will not be activated.

When the alarm is snoozing, the alarm icon ((1)) or ((2)) will start flashing indicating that the alarm is active but is in Snooze mode. To stop the snooze function when it is in snooze period, press and hold the SNOOZE key for 2 seconds until a "Beep" is sounded. You can also press the SET, CH/+, HOUR/IN or MIN/OUT keys once to stop the snooze function.

To stop the alarm, press any key (except the SNOOZE/ LIGHT key, DISPLAY and  keys) during alarm ringing. Or press and holds the SNOOZE key for 2 seconds (a beep sound can be heard).

**WEATHER FORECAST AND TENDENCY:****The weather forecast icons (Weather man):**

One of the 24 different weather icons (featured by Weather man with different clothing) is displayed in the centre of LCD, which indicate the different forecast weather condition due to air pressure level (Sunny, Sunny + Cloudy or Cloudy + Rainy) and the current outdoor temperature (Temperature value detected by Transmitter channel 1):

	25.9 C	21.0 to 25.9 C	15.0 to 20.9 C	10.0 to 14.9 C	8.0 to 9.9 C	4.0 to 7.9 C	0.0 to 3.9 C	<0.0 C
Sunny								
Sunny and Cloudy								
Cloudy and 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 Projection 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 Projection clock 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 Projection clock has been designed for use in. In areas that experience sudden changes in weather (for example from sunny to rain), the Projection clock will be more accurate compared to use in areas where the weather is stagnant most of the time (for example mostly sunny).

If the Projection clock 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 Projection clock 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 (the upward and downward arrows located on the right hand side of the weather man icon). 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.

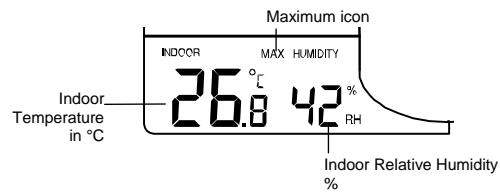
Therefore, user may see how the weather has changed and is expected to change. For example, if the indicator is pointing downwards together with cloudy icons, it means that the last noticeable change in the weather was when it was sunny (the sunny icon only). Therefore, the next change in the weather will be the cloudy 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.

**INDOOR TEMPERATURE AND HUMIDITY READING:**

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



**TOGGLING AND RESETTING THE INDOOR RECORDINGS:**

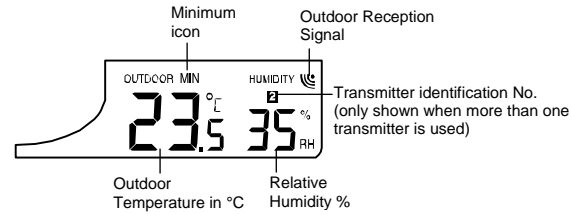
1. To toggle between the indoor current, minimum and maximum temperature and humidity data and the times at which they were recorded, press the HOUR/ IN key:

Once to show the maximum temperature and humidity values with time and date recorded  
Twice to show the minimum temperature and humidity values with time and date recorded  
Three times to return to the current time, date, temperature and humidity levels.

**Note:** The Time/date shown is corresponding to the MIN/ MAX temperature value, not the MIN/ MAX humidity value.

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 and humidity recorded are of current time and they remain unaffected by the time zone setting.

#### OUTDOOR TEMPERATURE AND HUMIDITY:



The last LCD section shows the outdoor temperature and humidity, a reception signal and a number beside the temperature will also show if more than one transmitter has been used.

#### **TOGGLING AND RESETTING THE OUTDOOR RECORDINGS:**

1. To toggle between the outdoor current, minimum and maximum temperature and humidity data and the times at which they were recorded, press the OUT key:  
Once to show the maximum temperature and humidity values with time and date recorded  
Twice to show the minimum temperature and humidity values with time and date recorded  
Three times to return to the current time, date, temperature and humidity levels

**Note:** The time/date shown is only corresponding to the MIN/ MAX temperature value, not the humidity value.

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 more than one transmitter is applied.

3. To reset the minimum and maximum temperature and humidity data, and the times at which they were recorded, press the MIN/ OUT key continuously for about 3 seconds. This will reset all minimum and maximum data recorded to the current time, date, temperature and humidity. The current time taken is the normal displayed time and does not regard the time zone set for the unit.

**Note:** The MIN/MAX data for each transmitter needs to be reset separately.

#### **EL BACK-LIGHT**

The EL back-light will be automatically switched ON when any key is pressed. The EL back-light will be switched on for approximately 9 seconds before automatically switching OFF.

**THERMO-HYGRO TRANSMITTER:**

The range of the Thermo-Hygro 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.

**433MHz RECEPTION**

The Projection clock should receive the temperature and humidity data within 15 minutes after set-up. If the temperature and humidity data is not being received 15 minutes after setting up (the display shows "- - -" after checking for the transmission 3 times) please check the following points:

1. The distance of the projection clock 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 Projection clock 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:**

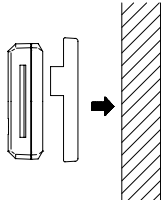
When the 433MHz signal is received correctly, do not re-open the battery cover of either the transmitter or Projection clock, as the batteries may spring free from the contacts and force a false reset. Should this happen accidentally then reset all units (see **Setting up** above) otherwise transmission problems may occur.

The transmission range is about 100 m from the transmitter to the Projection clock (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 THERMO-HYGRO TRANSMITTER:**

The Thermo-hygro transmitter can be placed onto 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 and humidity readings are receivable. In event that the signal is not received, relocate the transmitters or move them slightly as this may help the signal reception.

**CARE AND MAINTENANCE:**

Extreme temperatures, vibration and shock should be avoided as these may cause damage to the unit and give inaccurate forecasts and readings.

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  
(14.2°F to +139.8°F with 0.2°F resolution, "OF.L" displayed if outside this range)

Outdoor : -29.9°C to +69.9°C with 0.1°C resolution  
(-21.8°F to +157.8°F with 0.2°F resolution, "OF.L" displayed if outside this range)

Relative humidity measuring range:

Indoor and outdoor : 1% to 99% with 1% resolution ("-" displayed if outside this range)

Indoor temperature checking interval : every 15 seconds

Indoor humidity checking interval : every 20 seconds

Outdoor temperature reception : every 5 minutes

Outdoor humidity checking interval : every 5 minutes

Power supply:

Projection clock : 3 x AA, IEC, LR6, 1.5V

Or  
AC adapter (included) : INPUT 230V AC 50Hz; OUTPUT: DC 4.5V  
(use the provided AC/DC adapter only)  
Thermo-Hygro transmitter : 2 x AAA, IEC, LR3, 1.5V  
Battery life cycle : Approximately 12 months (Alkaline batteries recommended)  
Dimensions (L x W x H)  
Projection clock : 169.6 x 74.4 x 110.2 mm  
Thermo-Hygro transmitter : 56 x 24.9 x 80 mm (stand 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 or/and regional authorities to retrieve the addresses of legal dumping grounds with selective collection.

All electronic instruments must from now on be recycled. User shall take an active part in the reuse, recycling and recovery of the electrical and electronic waste.

The unrestricted disposal of electronic waste may do harm on public health and the quality of environment.

As stated on the gift box and labeled on the product, reading the "User manual" is highly recommended for the benefit of the user. This product must however not be thrown in general rubbish collection points.

The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.

This product is designed for use in the home only as indication of the temperature.

This product is not to be used for medical purposes or for public information.

The specifications of this product may change without prior notice.

This product is not a toy. Keep out of the reach of children.  
No part of this manual may be reproduced without written authorization of the manufacturer.



**R&TTE Directive 1999/5/EC**

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