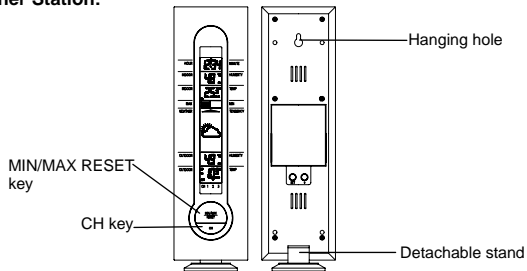


## Weather Station

### INTRODUCTION:

Congratulations on purchasing this innovative 433MHz Weather Station which displays the time, indoor and outdoor humidity, weather forecast, indoor and up to three outdoor temperature readings. To enjoy the full benefits of this innovative product, please read this operating manual.

### Weather Station:



### FEATURES:

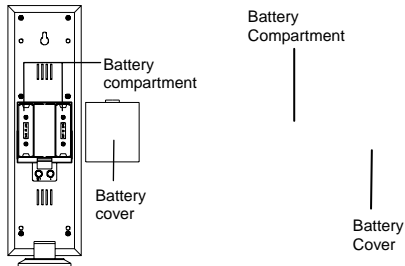
- DCF radio-controlled time reception
- LCD clock in 24 hour time display
- Indoor and outdoor relative humidity displayed as RH%
- Indoor and outdoor temperature reading in degree Celsius (°C)
- Indoor and outdoor temperature with Minimum and Maximum records
- Weather tendency indicator and weather icons
- Can receive up to three Outdoor transmitters
- Table standing or wall mountable (detachable table stand)

### Thermo-Hygro Transmitter

### TH3-TH TRANSMITTER!!!!!!

## SETTING UP:

Please follow these steps to ensure that your new Weather Station works correctly with the Thermo-Hygro transmitter(s):



1. First, insert the batteries into the Weather station (see "**How to install and replace batteries in the Weather Station**" below). Once the batteries are in place, all segments of the LCD will light up briefly. Then the indoor temperature and humidity, the time as "--:--" and the weather icons sun and clouds will be displayed. If the indoor temperature and humidity are not displayed after a few seconds, remove the

batteries and wait for at least 30 seconds before reinserting them. Once the indoor data is displayed proceed to step 2.

2. Within 1-1/2 minutes of activating the Weather station, place the batteries into the transmitter (see "**How to install and replace batteries in the Thermo-Hygro Transmitter**" below). The temperature and humidity will then be displayed on the small LCD of the transmitter. If the data is not displayed, remove the batteries and wait for at least 10 seconds before reinserting them.
3. After a few seconds of inserting the batteries into the transmitter, the Weather Station will start receiving data from the transmitter. The remote temperature and humidity will then be displayed on the Weather Station. If this does not happen after 2 minutes, the batteries will need to be removed from both units and reset from step 1.
4. The Weather 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 Weather Station will number the transmitters in the order of set-up, i.e. the first transmitter will have the data displayed with the channel number 1 pointer against it and so on.

**Note:** No pointer will show up if there is only one transmitter used.

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 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. In order to ensure

sufficient 433 MHz transmission however, this should under good conditions be no more than 20 - 25 metres from where the Weather Station will be finally positioned (see notes on "**Positioning**" and "**433 MHz Reception**").

6. The DCF-77 time reception and transmitter data reception occur at the same time. The DCF-77 time code reception is automatically started just after the weather station is activated. This takes typically between 3 - 5 minutes in good conditions.
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. (Please refer also to notes on "**Radio controlled time**" and "**Manual time setting**").

**Note:**

Should the total time of inserting the batteries into the transmitters take longer than 1-1/2 minutes from the time of inserting the batteries into the Weather Station then temperature reception problems may occur. If the Thermo-Hygro data is not being received, then see **Checking for 433 MHz reception**, before resetting the units (see **Resetting the Weather Station** below).

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 Weather Station in the first 1-1/2 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.



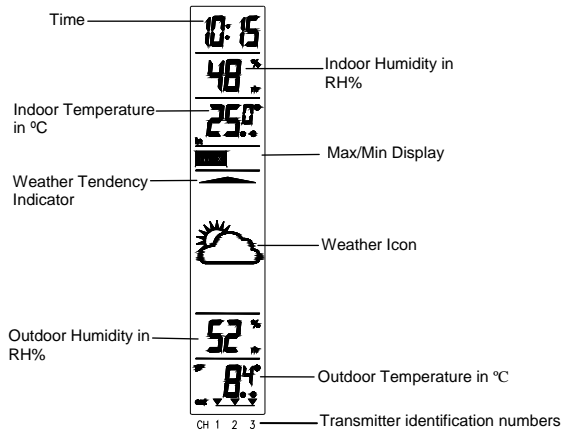
**Please participate in the preservation of the environment. Return used batteries to an authorised depot.**

**LCD SCREEN**

The Weather Station's LCD is split into 7 sections displaying the information for time, weather forecast, indoors and outdoors.

All the segments will light up momentarily before displaying:

1. Time
2. Indoor humidity reading displayed in RH%
3. Indoor temperature in degree Celsius (°C)
4. Hidden Max/Min icon for Indoor and Outdoor Temperature
5. Weather icon
6. Outdoor humidity reading displayed in RH%
7. Outdoor Temperature in °C



### TIME SETTING:

After the batteries are inserted, set the time display as follow:

1. Press and hold the SET key at the back of the Weather Station about four seconds to enter the set mode
2. The hour digit starts flashing. Use the "+" key to enter the hour.
3. Press the SET key to enter the minutes. The minute digits start flashing.
4. Press the "+" key to set the minutes.
5. Press the SET key or avoid touching any keys for eight seconds to confirm the time setting.

### USING THE WEATHER STATION:

#### Indoor humidity:

The indoor humidity is displayed on the second line of the LCD, under the time. The Weather Station's built in sensor automatically measures the humidity once the batteries are inserted.

#### Indoor temperature:

The indoor temperature is displayed on the third line of the LCD under the indoor humidity. The Weather Station's built in sensor automatically measures the temperature once the batteries are inserted.

**Minimum and maximum indoor temperature recordings:**

By pressing the "MIN/MAX/RESET" key the current indoor temperature will alternate between the maximum, minimum, and current temperature recordings (also changes for outdoor temperature). Once a new indoor temperature high or low is reached, it will automatically set into the Weather Station's memory.

**Note:**

When current temperature is selected, the MAX or MIN icon will not appear on the MAX/MIN section of the LCD.

**Weather forecast and weather icons:**

The weather forecast and icons can display three weather symbols and two weather tendency indicators in forms of an arrow. The arrows will change their appearance depending on the air pressure development.

**Outdoor temperature reading:**

The outdoor temperature reading is on the bottom line of the LCD under outdoor humidity display. The Weather Station receives the outdoor temperature via 433 MHz frequency when the batteries are inserted into the transmitter within the 1-1/2 minutes of the setting up time (See **Setting up** above).

**Note:**

Should the outdoor Thermo-Hygro data not be received within 2 minutes after inserting the batteries into a transmitter, then see "**Checking 433 MHz reception**" below.

**Outdoor humidity reading:**

The outdoor humidity is displayed on the second last line of the LCD, under the weather icon. The Weather Station receives the outdoor humidity via 433 MHz. (See **Setting Up above.**)

**Minimum and maximum outdoor temperature reading:**

By pressing the "MIN/MAX/RESET" key the current outdoor temperature will alternate between the minimum, maximum and current temperature recordings. Once a new outdoor temperature high or is low reached, it will automatically be set into the Weather Station's memory.

**Note:**

When current temperature is selected, the MAX or MIN icon will not appear on the MAX/MIN section of the LCD.

**Resetting the minimum and maximum temperature recording:**

By pressing and holding down the "MIN/MAX/RESET" key for about 3 seconds, both the indoor and outdoor minimum and maximum temperature recordings will be reset to the current indoor and outdoor temperatures.

**Important Note:**

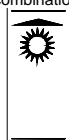
All channels of outdoor temperature recordings (max/min) will be reset at the same time.

### Outdoor channel 1, 2, and 3

If more than one transmitter is being used, to alternate between the Thermo-Hygro readings of transmitter 1, 2, and 3, simply press the "CH" key. If the reading is from transmitter 1, then the channel identification pointer will be displayed in the outdoor temperature section of the LCD. The same will apply to the next transmitter and so on. However, if only one transmitter is used, no identification pointer will be displayed on the LCD.

### THE WEATHER FORECASTING ICONS:

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



Sunny



Cloudy with sunny intervals



Rainy

For every sudden or significant change in the air pressure, the weather icons will update accordingly to represent the change in weather. If the icons do not change, then it means either the air pressure has not changed or the change has been too slow for the Weather Station to register. However, if the icons 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 rain.

### Note:

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

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

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

## THE WEATHER TENDENCY INDICATOR

Working together with the weather icons are the weather tendency indicators (located on the top and bottom part of the weather icons). When the indicator points upwards, it means that the air-pressure is increasing and the weather is expected to improve, but when indicator points downwards, the air-pressure is dropping and the weather is expected to become worse.

Taking this into account, 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 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.

## CHECKING FOR 433 MHz RECEPTION:

In normal surroundings (for example away from interfering sources such as TV sets), the outdoor data can usually be easily received within 1-1/2 minutes. If the outdoor data is not displayed on the LCD after 2 minutes, then check the following:

1. The distance of the units should be at least 1.5 - 2.0 meters away from interfering sources such as computer monitors or TV sets.

2. Avoid placing the units onto or in the immediate proximity of metal doors, window frames or structures.
3. Using other electrical products such as headphones and speakers that operate on the same signal (433 MHz) can prevent the transmission pick up.
4. Neighbours using electrical products operating on the 433 MHz signal can also cause interference. In most severe cases, the reception is only possible once all other electrical products using the 433 MHz are switched off.
5. Within thick concrete rooms such as basements and tower blocks, the 433 MHz signal can be weakened (avoid placing near metal frames and structures).
6. Transmission can be affected by exposure to extreme temperature conditions. For example, if the weather has been extremely cold (under -25°C) for an extended period of time then the transmission signal may be weakened. (Please bears this in mind when positioning the transmitter).

### Note:

Should after checking the above list and the outdoor data is still not received, then reset the units (see **Resetting the Weather Station** below).

## RESETTING THE WEATHER STATION:

1. Remove the batteries from the Weather Station and the transmitter(s)
2. Wait at least 30 seconds and repeat the procedures specified in **Setting up** above.

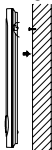
### Note:

Remember when resetting, all units have to be reset and to always insert the batteries into the weather station first and then followed by the transmitter(s).

## POSITIONING

### Weather Station:

The Weather Station comes complete with a detachable stand that gives the option of table standing or wall mounting. To wall mount:



1. Fix a screw into the desired wall, leaving the head extended out the by about 5mm.
2. Using the Weather Station's hanging hole, carefully hang it onto the screw.

**Note:**

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

### POSITIONING THE THERMO-HYGRO TRANSMITTER

The Thermo-Hygro transmitter is supplied with two screws with mounting plate for wall mounting. Before securing the transmitter, ensure that the 433MHz signal (outdoor temperature and relative humidity readings) can be received from the desired locations.

Also, select a sensible mounting surface as this can affect the transmission range, for example, if 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 to place the unit on any metal surfaces or anywhere with metal structures in the immediate proximity (garage doors, double glazing etc.).

## CARE AND MAINTENANCE:

- Avoid placing the units in areas prone to vibration and shock as these may cause damage.
- Avoid areas where the units can be exposed to sudden changes in temperature, i.e. direct sunlight, extreme cold and wet/moist conditions as these will lead to rapid changes in temperature which reduces the accuracy of readings.
- When cleaning the LCD and casing, use a soft damp cloth only. Do not use solvents or scouring agents.
- Do not submerge the units into water.
- Immediately remove all low powered batteries to avoid leakage and damage. Replace only with new batteries of the recommended size.
- Do not make any repairs to the units. Please return them to the original point of purchase for repair by a qualified engineer. Opening and tampering with the units may invalidate its guarantee.

## SPECIFICATIONS:

Temperature measuring range	
Indoor	: 0°C to +60°C with 0.1°C resolution ("OF.L" displayed if outside this range)
Outdoor	: -29.9°C to +59.9°C with 0.1°C resolution ("OF.L" displayed if outside this range)
Relative humidity measuring range	
Indoor	: 20% to 95%rh
Indoor temperature checking intervals	: every 10 seconds
Indoor humidity checking intervals	: every 20 seconds
Outdoor temperature reception	: every 60 minutes
Transmitting frequency	: 433.92 MHz
Power source:	
Weather Station	: 2 x AA, IEC LR6, 1.5V batteries
Transmitter	: 2 x AA, IEC LR6, 1.5V batteries
Battery life for both units	: Approximately 12 months (Alkaline batteries recommended)
Dimensions (L x W x H):	
Weather Station	: 75 x 21 x 255 mm (stand excluded)
Transmitter	: ?

- 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.

#### **Liability Disclaimer:**