14. Specifications:

Outdoor data:

Transmission range:	25 meters max. in optimum environment
Data transmission frequency:	433.92MHz
Data transmission interval:	Approximately every 60 seconds
Temperature range:	-29.9°C to +59.9°C (OFL is displayed outside this range)
Temperature resolution:	0.1°C
Outdoor humidity range:	20% to 95% (if reading is less than or greater than this range, reading will show - - %)
Indoor humidity resolution:	1%

Indoor data:

Indoor temperature measuring interval:	Approximately every 15 seconds
Indoor temperature range:	-0°C to +60°C (OFL is displayed outside this range)
Temperature resolution:	0.1°C
Indoor humidity measuring interval:	Approximately every 20 seconds
Indoor humidity range:	1% to 99%
Indoor humidity resolution:	1%
Air pressure measuring interval:	Approximately every 15 seconds
Relative air pressure set range:	960 to 1040 hPa
Air pressure resolution:	0.1hPa

Power Source:

Weather Station:	2 x AA, IEC, LR6, 1.5V batteries (Alkaline recommended)
Thermo-Hygro Sensor:	2 x AA, IEC, LR6, 1.5V batteries (Alkaline recommended)
Battery life for all units:	Approximately 12 months using alkaline batteries

Dimensions (L x W x H):

Weather Station (including stand):	118 mm x 75mm x 205mm
Thermo-Hygro Sensor (including stand):	75mm x 55 mm x 160mm

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.

TFA Dostmann / Wertheim
30.3125

CE 0681

For use in:
Germany, Austria, Italy, France, The Netherlands, Sweden, Denmark, UK, Spain, Belgium, Finland, Norway, Switzerland, Greece, Luxembourg, Portugal

EJIN9018T110

to the sensor again after changing the batteries otherwise no signal will be received from that sensor. Doing this will synchronize the receiver to all the sensors again. The history data from sensor 1 (channel 1) will remain in the receiver and once sensor 1 is synchronized again, the history will continue to be recorded at the same interval time. However, if the batteries to the receiver are changed all weather history will be reset.

For optimum performance, batteries to all units should be changed at the same time.

Please participate in the preservation of the environment by properly disposing of used-up batteries and accumulators at designated disposal points. Never dispose of batteries in a fire as the may explode or give leakage of dangerous chemicals or fumes

10. Synchronizing the receiver to the sensor signal:
In case the sensor signal is lost, press and hold the channel key for approximately 5 seconds and the receiver will synchronize to all sensor signals. When the units are synchronized, the data will be received again and the receiver will return to normal operation mode.

11. Resetting recorded data:
To reset the minimum and maximum records, press and hold the min/max key for 3 seconds. Doing this will reset all minimum and maximum indoors and outdoor records to their current values.

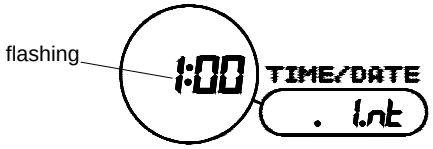
12. Cleaning and Maintenance

- Clean the housing and screen of the receiver only with a soft damp cloth. Do not use abrasives or solvents
- Ensure the sensor is operating by checking the sensor's LCD and change the batteries to all units on a regular basis
- Do not immerse the any of the units in water
- If you have damaged this product, do not attempt to make any repairs. Please take this unit to a qualified technician for assistance.

13. Problems & Solutions:

Problems	Solutions
No outdoor data is displayed on the receiver LCD	• Check the batteries are correctly inserted into the sensor(s) and the data is displayed on the sensor's LCD • Reduce distance between receiver and sensor(s) until the signal is received
High shielding materials between the units (thick walls, steel, concrete, isolating aluminum foil and etc.)	• Find a different location for sensors and/or receiver • The transmission distance under optimum conditions is 25 meters. Although the signal may travel through solid surfaces or objects avoid possible interfering sources where possible
Interference from other sources (e.g. wireless radio, headset, speaker, etc. operating on the same frequency)	• Find a different location for the sensors and/or base station. • Using electrical other devices operating on 433MHz signal can also cause interference with reception. Quite frequently interferences are of a temporary nature. If there are wireless headsets, remote babysitters or other devices operating on 433MHz in your house or in the vicinity, their switch-on time is mostly limited. Furthermore most of these devices allow the setting to an interference-free frequency.
Loss of transmission signal from the sensor to the receiver	• Press and hold the channel key for 5 seconds to synchronize the receiver to the sensor again. If still no signal, then change the sensor batteries and synchronize the units again or relocate the sensor until the signal is received.
Poor contrast LCD	• Check and adjust the LCD contrast setting on the receiver
No reception or low batteries in sensors or receiver.	• Check the low battery indicator on the receiver LCD and change batteries if required
Data shown on the sensor's LCD is different to the data shown on the receiver's LCD	• Data shown on the sensor(s) LCD may not always correspond to that shown on the receiver because the data displayed on the sensor will be the most recent data measurement and needs to be transmitted to the receiver for updating.

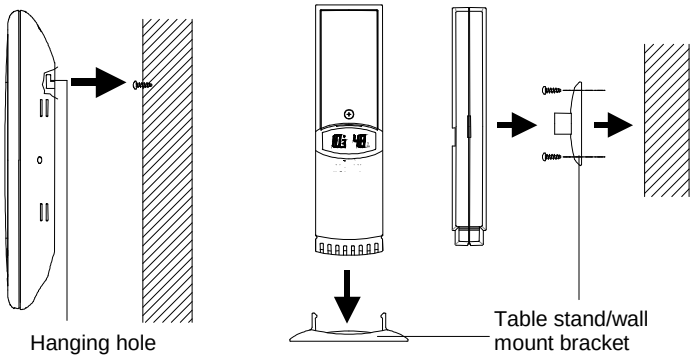
Weather history interval recording setting



The default weather history interval recording is 1 hour. To adjust the interval setting (interval digit is flashing), using the '+' or '–' keys select the interval time for data recording from 5 min, 10 min, 30 min, 1 hr, 3 hrs, 6 hrs, 12 hrs, 24 hrs. Once the interval is set, press set key once more to return to the normal operation mode. Now when the set interval time is reached, the receiver will record the data for all weather events into the history based on that interval time setting. Note, although the time interval is set, the receiver will have a fixed time that the data will be stored into the history. The following table lists the times when the history data will be recorded against the set time interval:

Interval time setting	History data recording times
5 minutes	At every 05, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60 minutes from a full hour
10 minutes	At every 10, 20, 30, 40, 50, 60 minutes from a full hour
30 minutes	At every 30 minutes from a full hour
1 hour	At every full hour
3 hours	At every 12:00am, 3:00am, 6:00am, 9:00am, 12:00pm, 3:00pm, 6:00pm, and 9:00pm
6 hours	At every 12:00am, 6:00am, 12:00pm and 6:00pm
12 hours	At every 12:00am and 12:00pm
24 hours	12:00am

8. Placing and mounting the units:



Both the receiver and the sensor(s) can be placed onto any flat surface using the stand or wall mount bracket for the sensor included in this pack (the wall mount bracket also doubles as a stand). The hanging hole is located at the back of the receiver and for wall mounting. To wall mount the sensor, secure the wall bracket into place and clip the sensor onto the bracket.

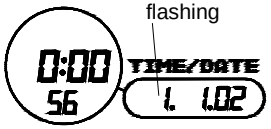
Before placing or mounting the units, check that the 433MHz signals from the sensor(s) and DCF77 radio controlled time signal can be received before drilling holes for permanent mounting. Should any of the signals not be received and displayed on the receiver's LCD, relocate the units. Once the signals are received, the units can be affixed permanently. Do not affix the units in areas where direct sunlight or rain can damage the sensors causing inaccurate readings.

9. Changing batteries:

To change batteries, please follow the instructions in 'Setting up'; 'Activating the Receiver' and 'Activating the Sensor(s)' and always use the correct size and recommended type.

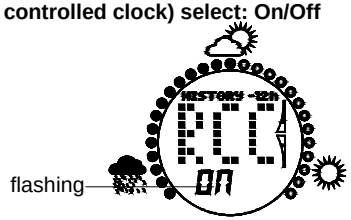
If only the battery to a particular sensor is changed, then press and hold the channel key for approximately 4 seconds to synchronize the receiver

Calendar setting: date



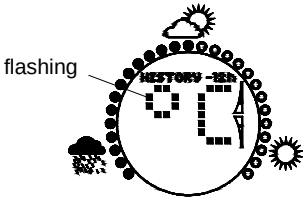
To adjust the date (date digit is flashing), use the '+' or '–' keys to select the current calendar date and press set key once to enter the RCC select On/Off mode.

RCC (radio controlled clock) select: On/Off



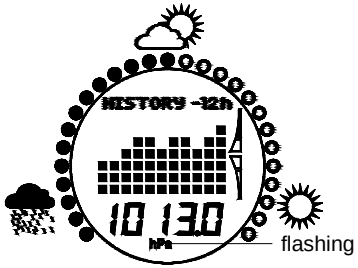
The default RCC setting is set to 'On' and the receiver will automatically search for the DCF77 radio controlled time signal daily from 0200 to 0600 hours (2 a.m. to 6 a.m.). Alternatively it will attempt to receive the signal each time the unit exits the user setting mode when the time or date has been manually set (unless the RCC feature is set 'Off'). Using the '+' or '–' keys set the RCC 'Off' or 'On' and press set key once to enter the temperature display select mode.

Temperature display select: °C/°F



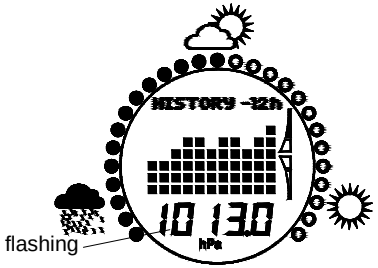
The default temperature setting is °C. Use the '+' or '–' keys to select the temperature unit of your choice and press set key once to enter the air pressure unit select mode.

Air pressure unit select: hPa, inHg or mmHg



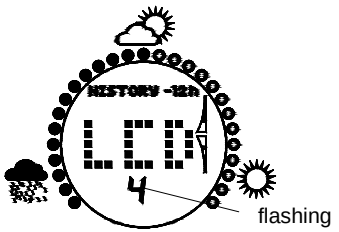
The default air pressure unit is hPa (hectopascals). Use the '+' or '–' keys the select the air pressure unit from hPa, inHg or mmHg and press set key once to enter the relative air pressure setting mode.

Relative air pressure setting



The default relative air pressure setting is 1013.0 hPa. Use the '+' or '–' keys to set the desired relative air pressure value for your location (values can be changed to represent your local surroundings). Once the value is set, press set key once to enter the weather history recording interval mode. For more details see how to use the weather station 'relative air pressure'.

LCD contrast



The LCD contrast levels run from 1 to 8 with the default setting contrast level at 4. Select the desired LCD contrast level for the point of placing the unit by using the '+' or '–' keys and press set key once to enter the 12 or 24 hour time format display mode.

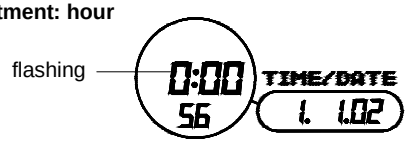
12 hour or 24 hour time format display

The default format of the time display is set to 24 hours. Using the '+' or '–' keys, select the time format to 12 or 24 hour time display and press set key once to enter the time zone setting mode

Time zone ±12 hours

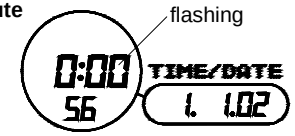
The default setting is 0 hours. In the time zone mode, use the '+' or '–' keys set the desired time zone for your region from the DCF77 radio controlled time (time for central Europe) then press the set key once to enter the manual time adjusting mode.

Time adjustment: hour



To adjust the hour (hour digit is flashing), use the '+' or '–' keys to select the hour and press set key once to enter the minute mode.

Time adjustment: minute

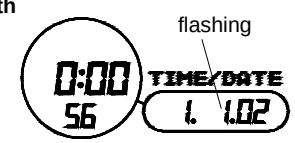


To adjust the minute (minute digit is flashing), use the '+' or '–' keys to select the minute and press set key once to enter the calendar adjustment mode.

Calendar setting: year

To adjust the year (year digit is flashing), use the '+' or '–' keys to select the current calendar year and press set key once to enter the calendar setting month mode.

Calendar setting: month



To adjust the month (month digit is flashing), use the '+' or '–' keys to select the current calendar month and press set key once to enter the calendar setting date mode.

1hPa but less than 3hPa within a 4-hour period. When either both the up or both the down indicators are displayed at any one time, it means a significant change in the air pressure has occurred by more than 3hPa within a 4-hour period. The indicator pointing upwards represents an increase in the air pressure and the weather is expected to improve. When the indicator points downwards, it represents a drop in air pressure and the weather is expected to become worse.

9. The air pressure bar graph indicates the air pressure trend over the past 12 hours with each bar along the horizontal axis representing 1 hour. The middle of the vertical axis (point at where the up and down tendency indicators intersect) represents the current air pressure and each single bar change on the vertical axis is how high or low in 2hPa the past pressure was compared to the current pressure. If the bars are rising it means that the weather is improving due to the increase in air pressure. If the bars go down, it means the air pressure has dropped and the weather is expected to become worse.
10. The snowfall indicator is represented by the cloud and snowflake icon (positioned over the raining icon) when the temperature of 'sensor 1' falls to 0°C or below. Note that this feature only applies to 'sensor 1'. 'Sensor 1' is the first activated sensor and does not apply to any of the other sensors even if they are activated. For accurate operation of this feature, ensure that 'sensor 1' is positioned outdoors in an appropriate place but away from direct sunlight and rain to avoid inaccurate data measurements.
11. Relative air pressure is the one value that is calculated back at sea level from the local absolute air pressure and can thus be used for reference for weather conditions and weather developments for your area. Since the relative air pressure is the one value given by the various TV, radio stations in their daily weather reports for their respective locations it is recommended to use this value to correct the default value on this weather station to represent your local area.
12. Low battery indicator will appear when the batteries are near exhaustion and require replacing. When alkaline batteries are used in the weather station and the sensor(s), battery life is approximately 12 months. When changing batteries, batteries to all units should be changed at the same time to maintain optimum operation.
13. 'TIME/DATE'. In this section, the time and calendar is displayed. The time and date will synchronize to the DCF77 radio controlled time signal or it can be manually set to function like a normal clock. The time signal is received once daily from 0200 to 0600 hours (2 a.m. to 6 a.m.) or if signal reception is unsuccessful in the first attempt it will try to receive the signal each hour during these times. Signal reception is also attempted each time the weather station exits the user setting mode if the time or date has been manually changed (unless the RCC feature is set to 'Off'). The received time also functions as the time base of all recorded data for the weather history. During signal reception the RCC tower icon flashes on the LCD to show that reception is taking place and will remain visual once the signal is received. The DCF77 radio controlled time and calendar display is based on the signal provided by the Caesium atomic clock operated by the Physikalisch Technische Bundesamt in Braunschweig, Germany.
14. 'TEMP/HYGRO IN'. In this section, the indoor temperature and indoor relative humidity surrounding the receiver is displayed.

7. User Setting mode:

To enter the user setting mode, press and hold the set key for approximately four seconds. Then each press of the set key will run through the following sequence of setting modes:

- LCD contrast
- 12 hour or 24 hour time format display
- Time zone ±12 hours
- Time adjustment: hour
- Time adjustment: minute
- Calendar setting: year
- Calendar setting: month
- Calendar setting: date
- RCC (radio controlled clock) select: On/Off
- Temperature display select: °C/°F
- Air pressure unit select: hPa, inHg or mmHg
- Relative air pressure setting
- Weather history interval recording setting

In the user setting mode, if no key is pressed the LCD will automatically return to the normal operation mode after 15 seconds. Alternatively press the channel key to confirm a setting and return to the normal operation mode.

1. The ‘TEMP/HYGRO OUT’ section will display the outdoor temperature and outdoor humidity of any one of up three thermo-hygro sensors. Use the channel key to toggle between sensors 1, 2 and 3 (sensors are optional from your dealer).
2. MIN/MAX function, with each press of the min/max key the LCD will toggle through:

   - Maximum outdoor temperature
   - Minimum outdoor temperature
   - Maximum outdoor humidity
   - Minimum outdoor humidity
   - Maximum indoor temperature
   - Minimum indoor temperature
   - Maximum indoor humidity
   - Minimum indoor humidity

   When each respective maximum and minimum record is displayed, the times and dates at which the records were received will be flashing. The LCD will automatically return to the normal operation mode after 15 seconds.

3. The high frequency transmission icon will appear each time the sensor is transmitting out new data to the weather station
4. Channel’s 1, 2 and 3 icons represent the respective sensor being displayed on the LCD at that moment in time. Only data from one channel can be displayed at any one moment in time. Use the channel key to toggle between each of the sensors.
5. The storm-warning indicator (windsock icon) works in two steps and appears when there is an expected storm or poor weather. The first step is for moderate wind where air pressure falling by more than 4hPa or if the air pressure falls below 995hPa within a 6-hour period, the windsock is displayed slightly raised from the mast. The second step indicates strong winds and possible stormy weather where the windsock is raised horizontally from the mast. The stronger signal appears when the air pressure falls by more than 5hPa within a 4-hour period or if the air pressure falls to below 990hPa. The moderate storm-warning indicator will stop when the air pressure has risen by 1 hPa or if the air pressure rises to more than 995hPa. The stronger storm-warning indicator will stop when the air pressure rises by 1hPa or if the air pressure rises to more than 990hPa.

6. The electronic barometer has three weather icons, raining, cloudy and sunny for weather forecasting. This feature allows this instrument to be used as an analog barometer to easily check periods of high air pressure (above 1013 hPa) or periods of low air pressure (below 1013 hPa). The smaller circles surrounding the air pressure bar graph functions as a bar and represents the air pressure in a clockwise direction for increasing air pressure and anti-clockwise for decreasing air pressure. Each circle (segment) is equal to 1.5 hPa with the default air pressure setting at 1013 hPa, the circle bar is set to the middle of the circle for cloudy icon. Until the unit has run for at least 24 hours, weather forecasts given should be discarded to allow the unit sufficient time for air pressure reading at a consistent altitude to provide more accurate readings. The higher the air pressure, the more circles will appear and the better the weather is expected to be. The lower the air pressure, the fewer the circles will appear meaning the weather is expected to become worse. The weather icons are used as points of reference for the barometer bar of circles that run around the main air pressure bar graph. For best results and accurate readings, the unit should operate constantly at the point of fixing. Common to weather forecasting, absolute accuracy cannot be guaranteed but it will give users an indication of the expected weather.
7. The unique weather history feature allows the user to select a time interval to record up to 170 sets of weather history data. A set of data consists of the outdoor temperature, outdoor humidity, indoor temperature, indoor humidity, air pressure and the associated time and date that these readings were recorded. For the outdoor data, only history from sensor 1 will be recorded. When the history feature is used the circle bar of the barometer for weather forecasting also changes. To recall the data, press the history key once and then using the ‘+’ or ‘–‘ keys to move forward or backwards or alternatively press and hold the ‘+’ or ‘–‘ keys to scroll through the data in fast forward and backward mode. To select the desired time recording interval for weather history, go to the interval setting in the ‘User setting mode’.
8. The weather tendency indicator is located on the right side of the air pressure bar graph. The indicator is split into four parts, two indicators pointing upwards and two indicators pointing downwards. When either one of the up or down indicators are displayed, it means that there is a moderate change in the air pressure by more than

Important Note:

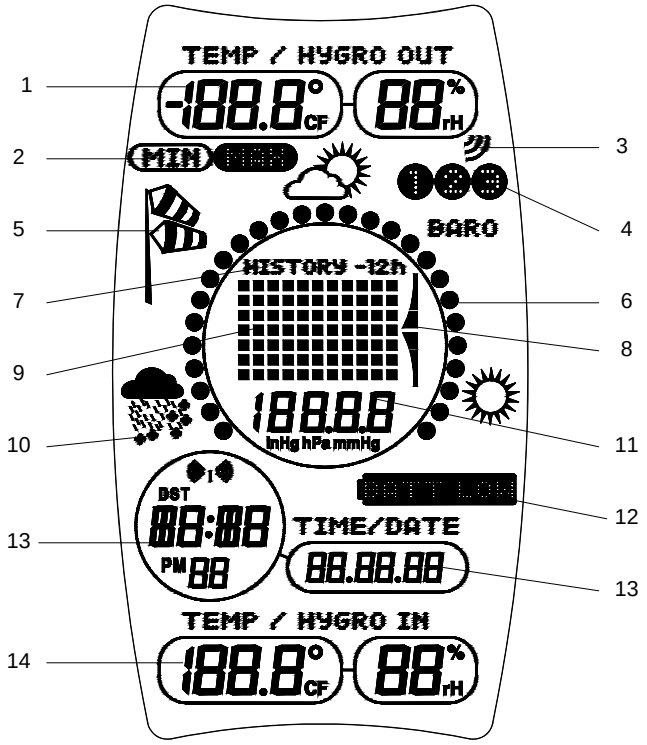
During setting up, it is important to distinguish which sensor is ‘sensor 1’, ‘sensor 2’ and ‘sensor 3’ for final place of fixing. Distinguishing the sensors will allow the user to position the sensors in the location of choice. For example the user may want to affix ‘sensor 1’ outdoors, ‘sensor 2’ in the garage and ‘sensor 3’ in the greenhouse and once the readings are displayed on the receiver’s LCD the user will know which channel corresponds to location of the sensors.

It is also important to distinguish which is ‘sensor 1’ as this one sensor is used for the snowfall indicator when the temperature level falls to 0°C or below and therefore must be positioned outdoors. Note that this feature only applies to the first activated sensor and does not apply to the other sensors even if all of them are activated for use.

Once all sensor(s) signals are received, the receiver will start to receive the DCF77 radio controlled time signal. Once the time signal is received the time and calendar will automatically be displayed in the time section on the LCD.

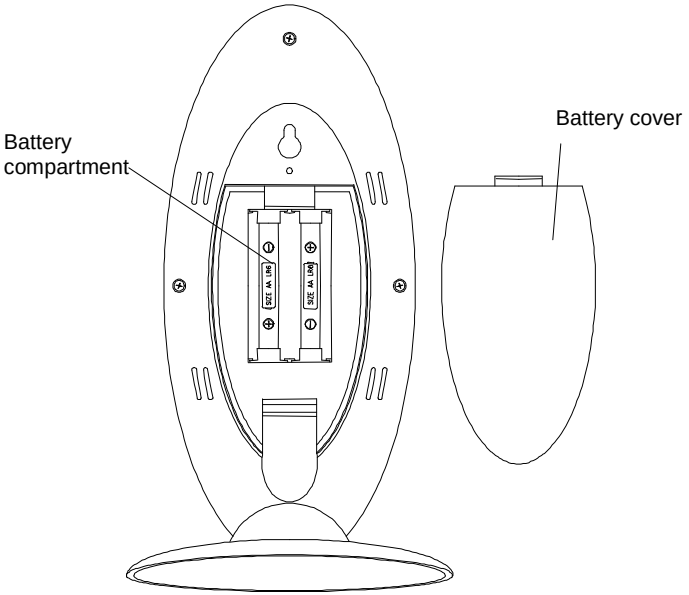
6. How to use the Weather Station:

This section will describe how to interpret the data as shown on the LCD of the Weather Station. For easy reference, the LCD shown here is in full segment.



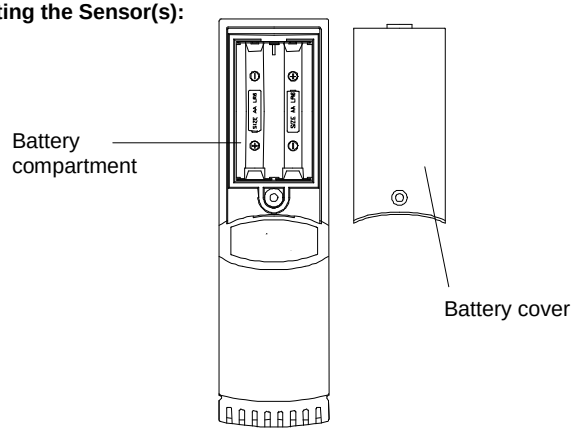
5. Setting up:

Activating the Receiver:



1. Flip open the battery cover located at the back of the receiver and checking the correct polarization, insert 2 x AA 1.5V batteries into the battery compartment before replacing the cover
2. Once the batteries are inserted, all the LCD segments will light up briefly before displaying individual sets of data
3. Within 4 minutes of activating the receiver, activate the sensor(s) as follows

Activating the Sensor(s):



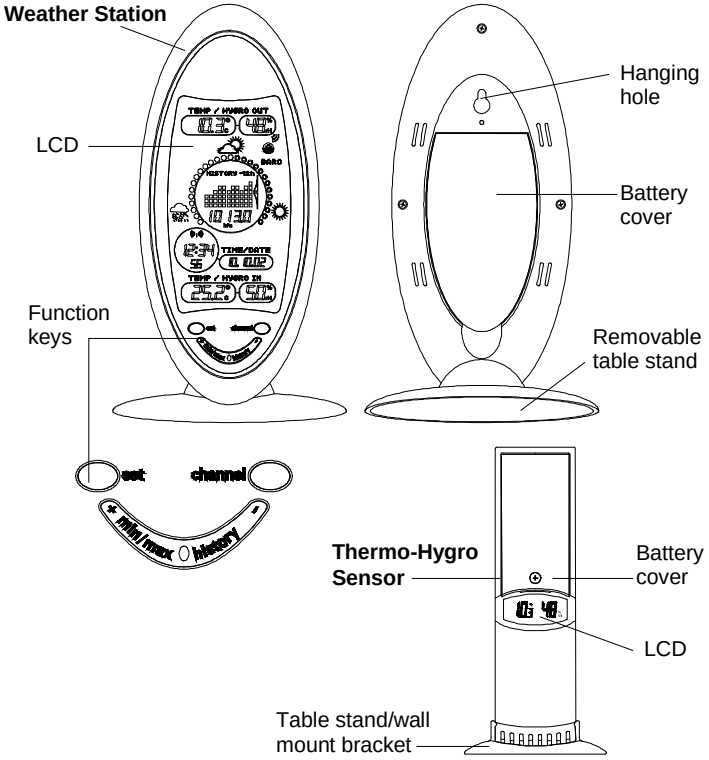
1. Using a screwdriver, unscrew and open the battery cover located at the front of the sensor and checking the correct polarization insert 2 x AA 1.5V batteries into the battery compartment before replacing the cover
2. Once the batteries are inserted, the LCD on the sensor will show the surrounding temperature and humidity and start transmitting the data to the receiver by 433MHz
3. Now check the outdoor temperature and outdoor humidity from sensor has been received on the LCD of the receiver in the outdoor data section
4. Once the data is received from the first sensor, activate the second and then followed by the third sensors in the same way (the number of sensors depends on the set that you have purchased from your local dealer). After each data reception from a sensor, a channel number for that sensor will be displayed on the receiver's LCD to show the data reception was successful. When all three sensors are operable, the channel key is used to toggle between channels 1, 2 and 3 to display the relevant data from each of the sensors. During signal transmission the high frequency icon can be seen above the channel icons to show that data transmission is taking place.

3. Product Features:

- 8 LCD contrast level settings (default setting level 4)
- DCF77 radio controlled time reception
- Time format is user selectable to 12 or 24 hour display (default setting 24 hour)
- Time zone setting ±12 hours (default setting time zone 0)
- RCC (radio controlled clock): On/Off (default On)
- Calendar display: date, month and year
- Up to 3 separate outdoor temperature and relative humidity sensors can be received using wireless 433MHz signal transmission
- Indoor temperature and relative humidity display
- Temperature display is user selectable to °C/°F (default setting °C)
- Barometer for weather forecasting
- Snowfall indicator for temperatures below 0°C
- Weather tendency indicator
- Storm warning indicator
- Low battery indicator
- Relative air pressure display in hPa inHg or mmHg (default setting hPa)
- User selectable relative air pressure range (default setting 1013.0 hPa)
- Complete weather history for up to 170 records with selectable interval setting (default setting 1 hour)

4. Getting Started:

Please carefully unpack the contents and placing onto a flat surface check that the following is included:



1. Weather Station Receiver with table stand
2. Thermo-hygro sensor with table stand/wall mount (up to 3 sensors can be used - optional)

Thank you for purchasing this Weather Station. This unique product is designed for everyday use for the home or office and will prove to be an asset of great use. To fully benefit from all the features and understand the correct operation of this product, please read this instruction manual thoroughly.

1. Functions of the Weather Station

This weather station measures the environment of its surrounding area and receives weather data transmitted from up to three outdoor thermo-hygro for temperature and humidity (the number sensors are optional).

The received data is continuously updated to bring you the latest weather information displayed on the LCD of the weather station. Data transmitted from the thermo-hygro sensors is done by wireless 433MHz transmission over a distance of up to 25 meters in open space (free from interference).

2. Safety Notes:

- Any damage caused by failure to comply with this instruction manual will invalidate any guarantee! The manufacturer and supplier will not be held responsible for any actions due to failure to comply with this instruction manual or from data inaccuracies that may occur with this product or manual
- In case of harm or damage to a person or property caused by improper handling, misuse or failure to comply with the correct use of this product as described in this instruction manual, the manufacturer and supplier cannot be held liable
- For reasons of safety and operation, alterations to this device are strictly prohibited
- To operate the weather station and the thermo-hygro sensor(s), only AA, IEC, LR6, 1.5V batteries (alkaline recommended) should be used

- Do not leave used-up batteries in the units (even leak proof batteries) as these may corrode and release chemicals that may damage this product and also be dangerous to health
- Inserting batteries in an incorrect polarity will cause damage to this product
- This product is not a toy, keep it out of the reach of children
- Do not dispose new or used batteries to fire due to dangers of explosion or release of dangerous chemicals
- This product is not to be used for medical purposes or for public information

Contents

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