

# WIRELESS WEATHER STATION

## INSTRUCTION MANUAL

MODEL NO.: 1280/ 1281

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*This Operation Manual is part of this product and should be kept in a safe place for future reference. It contains important notes on setup and operation.*

*\*NOTE: This is a combined operation manual for 1280 and 1281. 1280 can receive and display the DCF radio controlled time and date (RCC function). 1281 maintain all the functions of 1280 but without RCC function.*

## 1. Introduction

Thank you for purchasing this Wireless Weather Station. Designed for everyday use, the weather station will prove to be an asset of great value for your personal use in the home or office. Please read this instruction manual thoroughly to fully understand the correct operation of your weather station and benefit from its unique feature.

### 1.1 Package Contents

- 1x Weather station base unit
- 1x remote Sensor with mounting bracket
- Mounting Screws
- Instruction manual

### 1.2 Feature

- 1) Indoor humidity (%RH)
- 2) Wireless outdoor and indoor temperature (°F or °C)
- 3) Records min. and max. humidity
- 4) Records min. and max. temperature
- 5) Weather forecast tendency
- 6) Forecast icons based on changing barometric pressure
- 7) Radio controlled time and date with manual setting option (1280 only)
- 8) Time Zone Setting
- 9) 12 or 24-hour time display
- 10) Perpetual calendar
- 11) Time alarm
- 12) Can receive up to 3 sensors
- 13) LED backlight
- 14) Wall hanging or free standing
- 15) Included one transmitter
- 16) Synchronized instant reception
- 17) Low battery indicator on the receiver

## 2. Installation

### 2.1 Installing the Batteries

**Note:** Please note the polarity when inserting/replacing batteries in the unit, failure to do so may result in permanent damage. Use good quality Alkaline Batteries and avoid rechargeable batteries.

- 1) Insert two AAA batteries into the remote sensor. After the remote sensor is powered up, the sensor will transmit weather data every 8s for 16 times. After this learning period is over, then the transmitter will transmit every 48s.
- 2) Insert two AA batteries into the weather station. When the base station is powered up, a short beep will sound and all LCD segments will light up for about 4 seconds before it enters into learning mode to learn the sensors security code. Every time the remote sensor is powered up (for example after a change of batteries), a random security code is transmitted and this code must be synchronized with the base station to receive weather data. **Thus if battery change happened on remote sensor side, then the base station must be power up again to re-learn the transmitter.**
- 3) Wait 3 minutes or until the outdoor temperature is displayed in the weather station. ***Do not press any keys before outdoor sensor data received.*** The wireless weather station can receive up to 3 temperature sensors. If you have purchased additional remote sensors, repeat step 1) for all extra sensors. However, ensure that you leave 10 seconds in between the reception of the last sensor and the set-up of the following sensor. The wireless weather station will number the sensors in the order of set-up, i.e. the first temperature sensor will have the temperature displayed with **CH1**. If only have one sensor, **CH1** won't be display.
- 4) After the learning mode, the base station will start the radio controlled time reception. The receiver will start RCC time reception period for 10 minutes maximum, and no weather data will be received during this period of time. If RCC signal can't be synchronized with the base station within 1 minute, the signal search will be cancelled and will automatically resume every hour on the hour until the signal is successfully captured. Regular RF link will be established once RCC reception routine is finished.
- 5) Mount the units, ensuring that the receiver can still pick up the signal from the transmitter. To measure outdoor temperature, place the transmitter outdoors. It will transmit the temperature from its location.

**Note: DO NOT PRESS ANY KEY** on the base station until the first set of data is display on the LCD. This ensures that the base station has synchronized with the sensors and that the system is now functioning. If a key is pressed before the weather station receives the temperature signal, you will need to follow the battery installation procedure again. **Please wait 10 seconds before re-insert the battery again to make a proper reset for both transmitter and receiver.**

**Note for Radio Controlled Time:**

The time and date display is based on the signal provided by the highly accurate government operated atomic clock. The base station will continue to scan for the radio controlled time signal each day at 2:00, 8:00, 14:00 and 20:00 despite it being manually set. If reception has been unsuccessful, then the radio controlled time icon will not appear but reception will still be attempted continually. If reception has been successful, the received time and date will overwrite the manually set time and date.

**Note:**



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

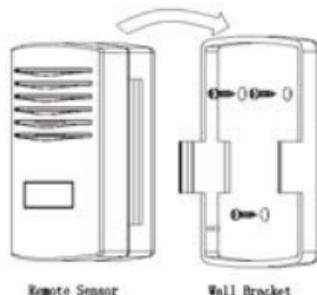
## **2.2 Mounting**

### **2.2.1 Base Station**

With one foldable legs at the back of the unit, the base station can be placed onto any flat surface or wall mounted at the desired location by the hanging holes at the back of the unit. It is important to check that the radio signal can be received before permanently mounting any of the units

## 2.2.2 Remote Sensor

**Note:** To achieve a true temperature reading, avoid mounting remote sensor in direct sunlight. We recommend that you mount the remote sensor on an outside North-facing wall; obstacles such as walls, concrete, and large metal objects will reduce the range.

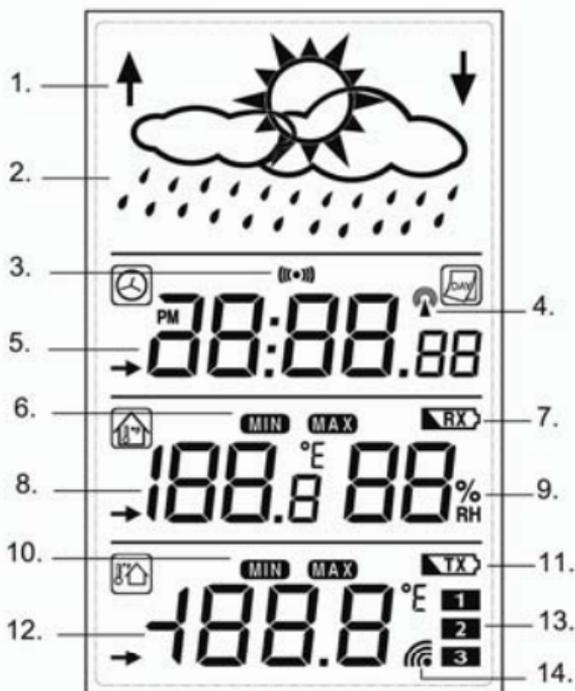


To wall mount, use 3 screws to affix the wall bracket to the desired wall, plug in the remote sensor to the bracket.

## 3. Overview

### 3.1 Base unit-LCD

The following illustration shows a normal LCD display for description purposes only.



- |                                      |                                       |
|--------------------------------------|---------------------------------------|
| 1. Weather tendency arrow            | 8. Indoor temperature display         |
| 2. Weather forecast icon             | 9. Indoor Humidity display            |
| 3. Time alarm icon                   | 10. MIN/MAX icon                      |
| 4. DCF tower icon for time reception | 11. Transmitter low battery indicator |
| 5. Time / Date                       | 12. Outdoor temperature display       |
| 6. MIN/MAX icon                      | 13. Number showing sensor unit        |
| 7. Receiver low battery indicator    | 14. Outdoor reception signal          |

### 3.2 LED backlight

The backlight is automatically switched ON when any key are pressed. The backlight will be switched on for approximately 5 seconds before automatically switching OFF.

### 3.3 Weather forecasting

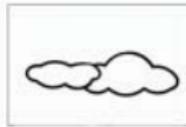
The four weather icons Sunny, Partly Cloudy, Cloudy and Rainy represent the weather forecasting. There are also two weather tendency indicators to show the air pressure tendency.



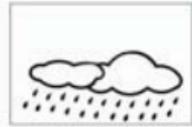
**Sunny**



**Partly Cloudy**



**Cloudy**



**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 wireless weather station to register. However, if the icon displayed is a sun or raining cloud, there will be no change of icon if the weather gets any better (with sunny icon) or worse (with rainy icon) since the icons are already at their extremes. The icons displayed forecasts the weather in terms of getting better or worse and not necessarily sunny or rainy as each icon indicates. For example, if the current weather is cloudy and the rainy icon is displayed, it does not mean that the product is faulty because it is not raining. It simply means that the air pressure has dropped and the weather is expected to get worse but not necessarily rainy.

### ***3.4 Weather tendency indicator***

The weather tendency indicators arrow is located beside the weather icons to show the air pressure tendency and provide a forecast of the weather to be expected by the decreasing or increasing air pressure. The upward arrow means that the air pressure is increasing and the weather is expected to become better. The downward arrow means that the air pressure is decreasing and the weather is expected to become worse. The tendency indicator arrow will not show up while the pressure without change within 3 hours.

### ***3.5 Pressure sensitivity setting for weather forecasting***

The pressure threshold can be set to suit the user's requirement for weather forecasting from 2-4hPa (default 3hPa). For areas that experience frequent changes in air pressure requires a higher setting compared to an area where the air pressure is stagnant. For example if 4hPa is selected, then there must be a fall or rise in air pressure of at least 4hPa before the weather station will register this as a change in weather.

### ***3.6 Storm warning indicator***

Once you have selected pressure sensitivity, storm threshold is internally calculated by adding 2hpa from your selected normal pressure sensitivity. ressure threshold within 3 hours, the storm forecasting will be activated, rain icon and downward arrows will flash for 3 hours indicating the storm warning feature has been activated.

## **4. Program Mode**

The base station has three keys for easy operation: **CH/+** key, **MODE/SET** key, **MIN/MAX/-** key. And there are three section on the LCD: Time Mode, Indoor Temperature & Humidity Mode and Outdoor temperature mode

The setting mode will return to normal display mode while key idle 30s.

#### 4.1 Time Modes

- Press the **MODE** key to make the arrow point to TIME display section



- Press the **CH/+** key to shift the display of time, calendar(day-month-year) and alarm time
- Press the **-/MIN/MAX** key to on/off the alarm. If alarm is enabled, **((•••))** will show in the TIME display section indicating the alarm function has been enabled
  
- Press the **MODE/SET** key for 3s to select the following setting in sequence:
  - Time Zone Setting
    - The default time zone setting value is 0 based on Germany DCF time (GMT+1)
    - Time zone option +/-12 hours
    - For countries not at the same time zone area of Germany, it is needed to set the correct time zone so that correct time can be displayed after radio controlled clock time is received successfully.
  - 12/24 hour format
  - Manual time setting (hours/minutes)
  - Calendar setting(year /month /date)
  - Temperature display unit degree Celsius or Fahrenheit
  - Pressure threshold setting (default 3hPa)

In the above setting modes, press CH/+ key or -/min/max key change or scrolls the value. Hold the CH/+ key or -/min/max key for 3 second will increase/decrease digits in great steps.

## Set alarm time



1. While in normal time display mode, press the CH/+ key twice to display alarm time
2. Press SET/ MODE key for 3s to enter alarm time setting mode.
3. The hour digit will start flashing, press CH/+ key or -/min/max key to set the hour.
4. Press and release SET/MODE key to set the minute.
5. The minute digits start flashing. press CH/+ key or -/min/max key to set the minutes.
6. Confirm with SET/MODE key and **(((•)))** will show in the TIME display section indicating the alarm function has been enabled.

### Canceling the alarm while sounding

When time alarm is triggered, the alarm will sound for 120seconds. Press any key to mute the alarm

### **4.2 Indoor Temperature & Humidity Modes**

Press the **MODE** key to make the arrow point to INDOOR TEMPERATURE & HUMIDITY display section



- Press the **-/MIN/MAX** key to display the following values:
  1. Indoor temperature maximum
  2. Indoor temperature minimum
  3. Indoor humidity maximum
  4. Indoor humidity minimum
  5. Current indoor temperature and humidity

## Reset the indoor temperature and humidity MIN/MAX value

Press the **MIN/MAX** key for 3 seconds, the above individual minimum or maximum record will be reset to zero

### 4.3 Outdoor Temperature Mode

Press the **MODE** key to make the arrow point to OUTDOOR TEMPERATURE display section



- Press and release CH/+ key to toggle between the outdoor sensor 1,2,3 ( If more than 1 sensor is used )
- Press the -/MIN/MAX key to display the following values:
  1. Current channel outdoor temperature maximum
  2. Current channel outdoor temperature minimum
  3. Current outdoor temperature
- Reset the outdoor temperature MIN/MAX value
- Press the MIN/MAX key for 3 seconds, the outdoor temperature minimum or maximum record will be reset to current temperature value. It is required to reset the outdoor MIN/MAX temperature records of different channels separately (if there are more than 1 wireless sensor used). In outdoor temperature mode, press the CH/ + button to select a channel. The channel ID will be displayed besides the outdoor temperature reading.

## 5. Troubleshooting

Q 1. No signal from remote sensor

A There can be many reasons for this, the following steps should help you troubleshoot this problem.

1.1 Make sure that the batteries in the remote sensor are not depleted.

1.2 Reduce the distance between transmitter and receiver

1.3 Remove the batteries from the base station and the remote sensor and reset the weather station in the right order as described in section 2 of this manual.

1.4 This problem could also be a result of radio interference in your neighborhood, try relocating the sensor and the base station

Q 2 Remote sensor drops off intermittently

A Possible interference from other sources, try relocating the sensor or the base station. Radio device operation on the same frequency can also cause interference.

Q 3 Temperature, humidity or the pressure is incorrect.

A Check/ Replace the batteries. Also make sure that the remote sensor is not place near objects that can act as sources of heat or cold. Adjust the relative air pressure value from a reliable source such as TV or radio

## 6. Specifications

### Outdoor data

Transmission distance in open field	: 100meter max.
Frequency	: 433MHz
Temperature range	: -40°C to +65°C (show OFL if outside range)
Resolution	: 0.1°C
Measuring interval remote sensor	: 48 sec
Water proof level	: IPX3

### Indoor data

Pressure / temperature	: 48 sec
Indoor temperature range	: -9.9°C to +80°C
Resolution	: 0.1°C
Measuring range rel. humidity	: 20%~99%
Resolution	: 1%
Measuring range air pressure	: 919hPa – 1080hPa
Resolution/Accuracy	: 0.1hPa/1.5hPa
Alarm duration	: 120 sec

### Power consumption

Base station	: 2XAA 1.5V LR6 Alkaline batteries
Remote sensor	: 2xAAA 1.5V LR03 Alkaline batteries
Battery life	: Minimum 12 months for base station Minimum 24 months for remote sensor