

# MULTI-CHANNEL IN-OUT CABLE FREE THERMOMETER

**MODEL: EMR812**

*USER'S MANUAL*

## INTRODUCTION

Congratulations on your purchase of the EMR812 Multi-Channel In-Out Thermometer with 433MHz cable free sensor.

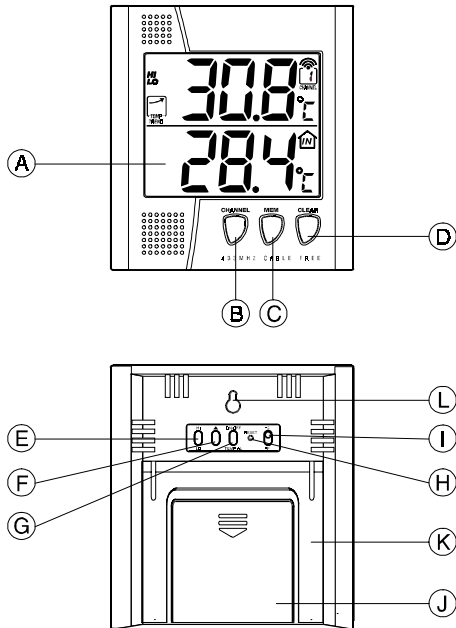
The EMR812 is an easy-to-use, state-of-the-art thermometer. The basic package comes with a main unit, which is the temperature station, and a remote unit, the thermo sensor.

The main unit has extra-large read-outs for indoors temperature and for that collected and transmitted by the remote unit. The main unit can support up to three remote units.

The main unit is capable of monitoring temperature changes of remote sites. By setting the upper and lower temperature limits the alarm will activate when those limits are exceeded. Also, the maximum and minimum temperature of different sites can also be retrieved quickly.

No wire installation is required between the main and remote units. As the EMR812 operates at 433MHz, it can be used in the U.S. and most places in Continental Europe.

## MAIN FEATURES: MAIN UNIT



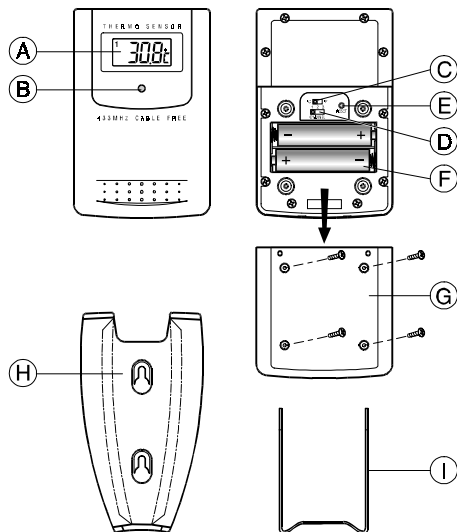
- (A) EXTRA LARGE TWO-LINE DISPLAY**  
Facilitates easy reading of remote and indoors temperatures
- (B) CHANNEL BUTTON**  
Selects among different channels
- (C) MEMORY (MEM) BUTTON**  
Recalls the maximum or minimum temperature of individual channels
- (D) CLEAR BUTTON**  
Clears the maximum and minimum temperatures of individual channels
- (E) HIGH (HI)/LOW (LO) BUTTON**  
Sets the upper or lower temperature alarm limits of individual channels
- (F) ADVANCE (▲) BUTTON**  
Sets the readings for the upper or lower temperature of individual channels
- (G) TEMPERATURE ALARM (TEMPAL) ON/OFF BUTTON**  
For turning on or off, the temperature alarm of individual channels
- (H) RESET BUTTON**  
For returning all settings to default values and erases temperature memories
- (I) °C/°F SLIDE SWITCH**  
For selecting between degree Centigrade (°C) and Fahrenheit (°F)
- (J) BATTERY COMPARTMENT**  
Accommodates two UM3 or "AA" size alkaline batteries

- (K) RETRACTABLE TABLE STAND**  
For standing the main unit on a flat surface
- (L) WALL-MOUNT RECESSED HOLE**  
For mounting the main unit on a wall

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## MAIN FEATURES: REMOTE UNIT

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- A LCD**  
For displaying the current temperature monitored by the remote unit
- B LED INDICATOR**  
Flashes when the remote unit transmits a reading
- C °C/°F SLIDE SWITCH**  
For selecting between Centigrade (°C) and Fahrenheit (°F)
- D CHANNEL SLIDE SWITCH**  
Designates the remote unit Channel 1, Channel 2 or Channel 3
- E RESET BUTTON**  
Returns all settings to default values
- F BATTERY COMPARTMENT**  
To accommodate two UM4 or "AAA" size alkaline batteries
- G BATTERY DOOR**
- H WALL-MOUNT HOLDER**  
For supporting the remote unit in wall-mounting
- I REMOVABLE TABLE STAND**  
For standing the remote unit on a flat surface

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## BEFORE YOU BEGIN

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For best operation,

1. Assign different channels to different remote units.
2. Insert batteries for remote units before doing so for the main unit.
3. Initially place both units close together. This will ensure synchronization between the remote unit and the main unit. Then, install batteries for the main unit or reset the main unit.

4. Position the remote unit and main unit within effective transmission range, which, in usual circumstances, is 30 meters.

**Note :** Building materials and where the main and remote units are positioned can vastly affect effective range. Try various set-ups for best result.

Though the remote units are weather proof, they should be placed away from direct sunlight, rain or snow.

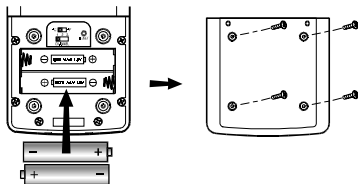
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## BATTERY AND CHANNEL INSTALLATION: REMOTE UNIT

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The remote unit uses two UM4 or "AAA" size alkaline batteries. To install them,

1. Remove the screws on the battery compartment.
2. Select the channel number on the **CHANNEL** slide switch.
3. Select the temperature display unit on the °C/°F slide switch.



4. Insert the batteries strictly according to the polarities shown therein.
5. Replace the battery compartment door and secure its screws.

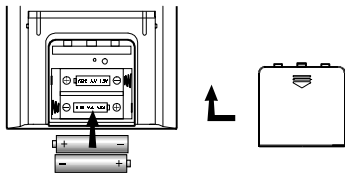
Replace the batteries when the low-battery indicator of the particular channel lights up on the main unit. (Repeat the steps described in section “BEFORE YOU BEGIN”)

**Note :** Once a channel is assigned to a remote unit, you can only change it by removing the batteries or resetting the unit.

## BATTERY INSTALLATION: MAIN UNIT

The main unit uses two UM3 or "AA" size alkaline batteries. To install them,

1. Slide open the battery compartment door.
2. Insert the batteries strictly according to the polarities shown therein.



3. Replace the battery compartment door.

## LOW BATTERY WARNING

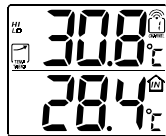
Replace the batteries when the low-battery indicator of the indoor temperature display lights up. (Repeat the steps described in section "BEFORE YOU BEGIN")

Respectively, for a remote sensor unit, the low-battery icon will show when the channel is selected.

## GETTING STARTED

Once batteries are in place for the remote units, they will start transmitting temperature readings at 30-second intervals.

The main unit will also start searching for signals for about a minute once batteries are installed. Upon successful reception, the individual channel temperatures will be displayed on the top line and the indoors temperature on the bottom line. The main unit will automatically update its readings at about 30-second intervals.



If no signals are received, blanks “- - -” will be displayed and the kinetic wave icon will show “[ ]”. Press **CHANNEL** and **MEM** simultaneously to enforce another search for about 30 seconds. This is useful in synchronizing the transmission and reception of the remote and main units.

Repeat this step whenever you find discrepancies between the reading shown on the main unit and that on the respective remote unit.

## HOW TO CHECK REMOTE AND INDOORS TEMPERATURES

The indoors temperature is shown on the bottom line of the display.

As for the remote sites or channels, press **CHANNEL** to go from one channel to another. The kinetic wave display on the channel number indicates the reception of that particular channel is in good order.

## DISCONNECTED SIGNALS

If without obvious reasons the display for a particular channel goes blank “- - -”, press **CHANNEL** and **MEM** to enforce an immediate search. If this fails, check the following.




1. The remote unit of that channel is still in place.
2. The batteries of both the remote unit and main unit and replace as necessary.

**Note :** When the temperature falls below freezing point, the batteries of outdoor units will freeze, lowering their voltage supply and the effective range.

3. The transmission is within range and the path is clear of obstacles and interference. Shorten the distance when necessary.

## TEMPERATURE TREND




The temperature trend indicator on the screen shows the trend of readings collected at that particular remote site. Three trends, rising, steady and falling, will be shown.

Arrow indicator			
Temperature Trend	Rising	Steady	Falling

If the temperature goes above or below than the temperature measuring range of the main unit or the remote unit (stated in specification), the display will show “HHH” or “LLL”.

## HOW TO READ THE KINETIC WAVE DISPLAY

The kinetic wave display shows the signal receiving status of the main unit. There are three possible forms:

The unit is in searching mode.	
Temperature readings are securely registered.	
No signals.	

## MAXIMUM AND MINIMUM TEMPERATURES

The maximum and minimum recorded indoor temperatures and those of each channel will be automatically stored in memory. To display them,

1. Select the channel to be checked.
2. Press **MEM** once to display the maximum temperature and again the minimum temperature. The respective indicators, MAX or MIN will be displayed.

To clear the memory, press **CLEAR**. All segments of the display will light up for two seconds. The display will return to the last screen with maximum and minimum temperature erased from memory.

If you press **MEM** now, the maximum and minimum temperatures will have the same values as the current ones until different readings are recorded.

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## HOW TO USE TEMPERATURE ALARMS

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The temperature alarms allow you to set the upper and lower limits of readings for individual channels. The alarm will activate if a limit is exceeded. To set the alarm,

1. Select the channel to be set.
2. Press the **HI/LO** button for the upper (HI) or lower (LO) limit. An "OFF" message will be displayed if the alarm for that limit is turned off.
3. Use the **ADVANCE** (**▲**) button to set the upper or lower temperature.

If this is the first time you set the limits, the lower limit will start from  $-50^{\circ}\text{C}$  ( $-58^{\circ}\text{F}$ ) and the upper limit  $+70^{\circ}\text{C}$  ( $158^{\circ}\text{F}$ ). Otherwise, the reading will start from the temperature last selected.

Each press on the button will increase the temperature by one degree. Holding on the button will step up the increment by five.

4. Press **TEMP AL ON/OFF** button to switch on or off the Max./Min. temperature alarm. The set limit will be displayed.
5. Press **HI/LO** button to set another limit or return to normal

display. The respective HI, LO or both indicators will light up to signify the status of the alarm.

When an alarm activates, the display will switch to the respective channel with the display flashing. If undisturbed, it will alarm for one minute. Press any key to momentarily mute the alarm. It will alarm again if the temperature continues to exceed the set limit.

To disable an alarm altogether, select the channel and use **TEMP AL ON/OFF** to turn it off.

If you have set the upper and lower temperatures for more than one channel and the limits are exceeded, the alarm will activate with the display switching from one channel to another at five seconds intervals.

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## TRANSMISSION COLLISION

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Signals from other household devices, such as door bells, home security systems and entry controls, may interfere with those of this product and cause temporarily reception failure. This is normal and does not affect the general performance of the product. The transmission and reception of temperature readings will resume once the interference recedes.

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## NOTE ON $^{\circ}\text{C}$ AND $^{\circ}\text{F}$

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The unit of temperature display is selected on the  $^{\circ}\text{C}/^{\circ}\text{F}$  slide switch. Select  $^{\circ}\text{C}$  for Centigrade or  $^{\circ}\text{F}$  for Fahrenheit.

**Note** : The remote temperature display on the main unit is dominated by the selection on the  $^{\circ}\text{C}/^{\circ}\text{F}$  slide switch of the main unit. Whatever the display units of the remote sensors are, they will be automatically converted to the chosen one of the main unit.

## HOW TO USE THE TABLE STAND OR WALL MOUNTING

The main unit has a retractable table stand, which when flipped open, can support the unit on a flat surface. Or you can flip close the stand and mount the unit on a wall using the recessed screw hole.

As for the remote unit, it comes with a wall-mount holder and a removable stand. Use either to hold the unit in place.

### Main unit

Wall-mount

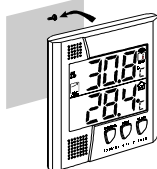
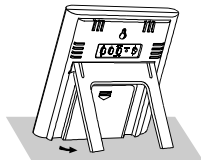


Table Stand



### Remote unit

Wall-mount

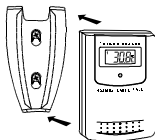
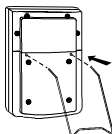


Table Stand



## THE RESET BUTTON

This button is only used when the unit is operating in an unfavorable way or malfunctioning. Use a blunt stylus to hold down the button. All settings will return to their default values.

## PRECAUTIONS

This product is engineered to give you years of satisfactory service if you handle it carefully. Here are a few precautions:

1. Do not immerse the unit in water.
2. Do not clean the unit with abrasive or corrosive materials. They may scratch the plastic parts and corrode the electronic circuit.
3. Do not subject the unit to excessive force, shock, dust, temperature or humidity, which may result in malfunction, shorter electronic life span, damaged battery and distorted parts.
4. Do not tamper with the unit's internal components. Doing so will invalidate the warranty on the unit and may cause unnecessary damage. The unit contains no user-serviceable parts.
5. Only use fresh batteries as specified in the user's manual. Do not mix new and old batteries as the old ones may leak.
6. Always read the user's manual thoroughly before operating the unit.

## SPECIFICATIONS

### Temperature Measurement

#### Main unit

##### Indoor Temperature measurement

Displayed IN temperature range : -9.9°C to +70.0°C  
(14.2°F to 158.0°F)

Proposed operating range : -5.0°C to +50.0°C  
(23.0°F to 122.0°F)

Temperature resolution : 0.1°C (0.2°F)

##### Remote Temperature measurement

Displayed OUT temperature range : -50.0°C to +70.0°C  
(-58.0°F to 158.0°F)

Proposed operating range : -5.0°C to +50.0°C  
(23.0°F to 122.0°F)

Temperature resolution : 0.1°C (0.2°F)

#### Remote unit

Displayed range : -50.0°C to +70.0°C  
(-58.0°F to 158.0°F)

Proposed operating range : -20.0°C to +60.0°C  
(-4.0°F to 140.0°F)

Temperature resolution : 0.1°C (0.2°F)

RF Transmission Frequency : 433 MHz

No. of Remote unit : Maximum of 3

RF Transmission Range : Maximum 30 meters

Temperature sensing cycle : around 30 seconds

### Power

Main unit : use 2 pcs UM-3 or “AA”  
1.5V alkaline battery

Remote sensing unit : use 2 pcs UM-4 or “AAA”  
1.5V alkaline battery

### Weight

Main unit : 250 g (without batteries)

Remote sensing unit : 100 g (without batteries)

### Dimension

Main unit : 117 x 107 x 26 mm

Remote sensing unit : 92 x 60 x 21 mm



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## NOTE ON COMPLIANCE

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This product complies to standards and specifications of BZT, FCC and article number 334 of PTT.

**Warning:** Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
- Consult the dealer of an experienced radio/TV technician for help.

## CAUTION

- The content of this manual is subject to change without further notice.
- Due to printing limitation, the displays shown in this manual may differ from the actual display.
- The manufacturer and its suppliers held no responsibility to you or any other person for any damage expenses, lost profits, or any other claim arise by using this product.
- The contents of this manual may not be reproduced without the permission of the manufacturer.

*MODEL: EMR812*

# **MULTI-CHANNEL IN-OUT CABLE FREE THERMOMETER**

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**Instruction Manual**

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**Mode D'emploi**

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**Bedienungsanleitung**

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**Manuale di Istruzioni**

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**Instrucciones de Funcionamiento**