

IN-OUT Thermometer with Cable Free Sensor and Clock

MODEL: RAR232

USER'S MANUAL

INTRODUCTION

Congratulations on your purchase of the RAR232 In-Out Thermometer with 433MHz cable free sensor and calendar clock.

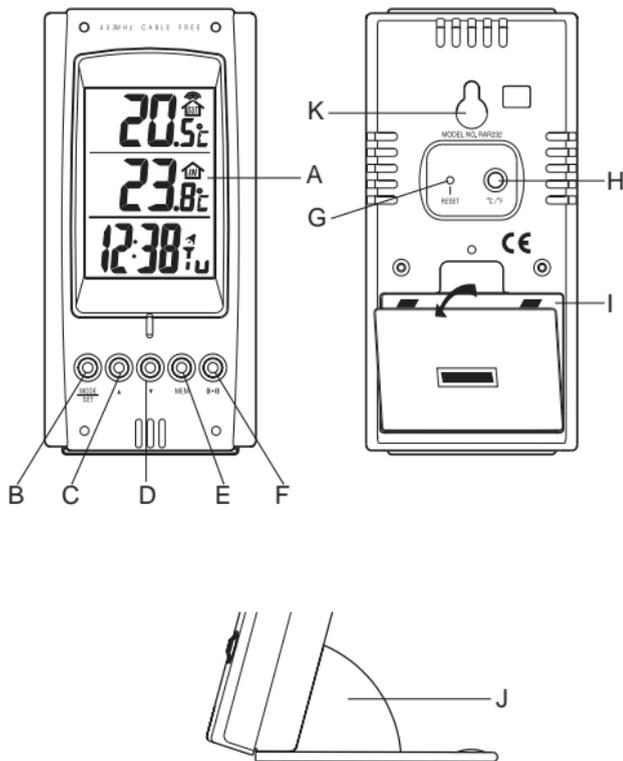
The basic package comes with a main unit, which is the temperature and calendar clock station, and a remote unit, the thermo sensor.

The main unit shows the indoors temperature, calendar clock and temperatures collected and transmitted by the remote unit.

The main unit is capable of keeping track of the maximum and minimum temperature of different sites. And no wire installation is required and the RAR232 operates at 433MHz.

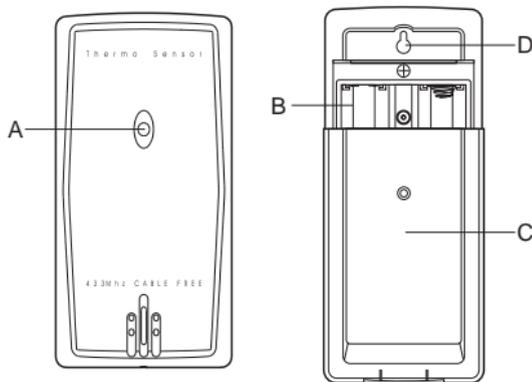
As for the calendar clock, it include five language display, and two minutes crescendo single alarms.

MAIN FEATURES



- A THREE-LINE DISPLAY**
Facilitates easy reading of remote and indoors temperatures and calendar clock
- B MODE/SET BUTTON**
Toggles the display modes and confirms entry while setting the values for display
- C UP (▲) BUTTON**
Advances the value of a setting
- D DOWN (▼) BUTTON**
Decreases the value of a setting
- E MEMORY (MEM) BUTTON**
Recalls the maximum or minimum temperature of main and remote unit
- F ALARM [(••)] BUTTON**
Displays the alarm time or sets the alarm status
- G RESET BUTTON**
Returns all settings to default values
- H °C/°F BUTTON**
Selects between degree Centigrade (°C) and Fahrenheit (°F)
- I BATTERY COMPARTMENTS**
Accommodates two UM-4 or “AAA” size 1.5V alkaline batteries
- J REMOVABLE TABLE STAND**
For standing the main unit on a flat surface
- K WALL-MOUNT RECESSED HOLE**
For mounting the main unit on a wall

MAIN FEATURES: REMOTE UNIT



- A LED INDICATOR**
Flashes when the remote unit transmits a reading
- B BATTERY COMPARTMENT**
Accommodates two AA-size batteries
- C BATTERY DOOR**
- D WALL-MOUNT RECESSED HOLE**
Supports the remote until in wall-mounting

BEFORE YOU BEGIN

For best operation,

1. Insert batteries for remote units before doing so for the main unit.

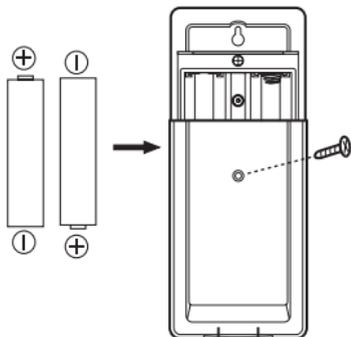
- Place the main unit as close as possible next to the remote unit, reset the main unit after installing batteries. This will ensure easier synchronization between the transmission and reception of signals.
- Position the remote unit and main unit within effective transmission range, which, in usual circumstances, is 20 to 30 meters.

Note that the effective range is vastly affected by the building materials and where the main and remote units are positioned. 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.

BATTERY INSTALLATION: REMOTE UNIT

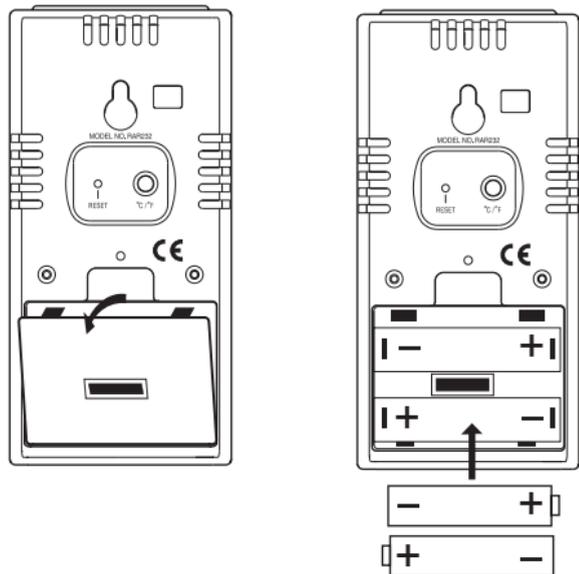
- Remove the screws on the battery compartment.



- Install 2 alkaline batteries (UM-3 or “AA” size 1.5V) strictly according to the polarities shown.
- Replace the battery compartment door and secure its screws.

BATTERY INSTALLATION: MAIN UNIT

- Slide open the battery compartment door.
- Install 2 alkaline batteries (UM-4 or “AAA” size 1.5V) strictly according to the polarities shown.



3. Replace the battery compartment door.

LOW BATTERY WARNING

When it is time to replace batteries, the respective low-battery indicator will show up on the indoor or outdoor temperature.

HOW TO USE THE TABLE STAND OR WALL MOUNTING

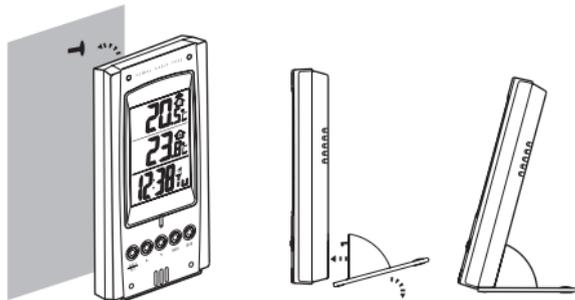
The main unit has a removable table stand, which when connected, can support the unit on a flat surface. Or you can remove the stand and mount the unit on a wall using the recessed screw hole.

As for the remote unit, you can place it on a flat surface or mount the unit on a wall using the recessed screw hole.

Main unit

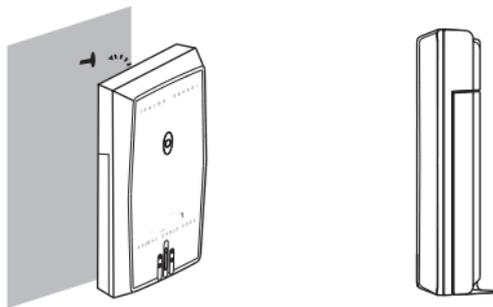
Wall-mount

Table Stand



Wall-mount

Table Stand



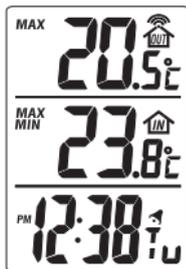
THE RESET BUTTON

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.

GETTING STARTED

Once batteries are in place for the remote unit, they will start transmitting temperature readings at 78-second intervals.

The main unit will also start searching for signals for about four minutes once batteries are installed. Upon successful reception, the outdoors 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 78-second intervals.



If no signals are received, blanks “.” will be displayed and the kinetic wave icon will show “”. Press [▲] and [▼] simultaneously to enforce another search for about 4 minutes. 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 remote unit.

HOW TO CHECK REMOTE AND INDOOR TEMPERATURES

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

The outdoors temperature is shown on the top line of the display. The kinetic wave display on the outdoors temperature indicates the reception of the remote unit is in good order.

If no readings are received from the remote unit for more than four minutes, blanks “.” will be displayed until further readings are successfully searched. Check the remote unit is sound and secure. You can wait for a little while or press [▲] and [▼] simultaneously to enforce an immediate search.

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 and outdoor temperatures will be automatically stored in memory. To display them,

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, hold down [**MEM**] for two seconds. The maximum and minimum temperatures will be erased. If you press [**MEM**] now, the maximum and minimum temperatures will have the same values as the current ones until different readings are recorded.

DISCONNECTED SIGNALS

If without obvious reasons the display of the outdoor temperature goes blank, press [**▲**] and [**▼**] to enforce an immediate search. If that fails, check:

1. The remote unit is still in place.
2. The batteries of both the remote unit and main unit. 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 path is clear of obstacles and interference. Shorten the distance when necessary.

TRANSMISSION COLLISION

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.

NOTE ON °C AND °F

The unit of temperature display can be selected by pressing °C / °F button repeatedly.

CALENDAR CLOCK DISPLAY MODES

The clock and the calendar share the same section of the display. The calendar is displayed in a day-month format.



CLOCK MODE



CALENDAR MODE

Each press on the **MODE** button will toggle the display between clock and calendar mode.

HOW TO SET THE CALENDAR CLOCK MANUALLY

To set the clock manually, hold **MODE/SET** for two seconds in clock display mode. The 12 hr digits will blink. Use [▲] or [▼] to select 12 hour or 24 hour format.

Press **MODE/SET** to confirm. Repeat the same procedure to set the hour, minutes, year, month, day-of-month and display language. During the setting, press and hold [▲] or [▼] will increase or decrease the value rapidly.

Note that the date is displayed in DAY-MONTH format. For display language, you can choose among English (E), German (D), French (F), Italian (I) and Spanish (S) - in that order.

If there is an item you do not wish to change, simply press [**MODE/SET**] to bypass the item.

When you are done, press [**MODE/SET**] to exit. The display will return to the clock mode.

HOW TO SET AND ARM THE ALARM

To set an alarm,

1. Press [(••)] once to display alarm time. If the alarm is disarmed, the time will be displayed as --:--.
2. Press [(••)] for two seconds. The hour digits will blink.
3. Enter the hour using [▲] or [▼].
4. Press [(••)]. The minute digits will blink.
5. Enter the minutes using [▲] or [▼].
6. Press [(••)] to exit.

The alarm icon will be displayed indicating the alarm is now armed. You can also arm or disarm an alarm by pressing the [(••)] button repeatedly. Press **MODE/SET** to return to clock display mode.

HOW TO STOP AN ALARM

Press any key on the unit to stop an alarm.

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

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

Proposed operating range : -10.0°C to +50.0°C
14.0°F TO 122.0.°F

Temperature resolution : 0.1°C
0.2°F

RF Transmission Frequency : 433 MHz

No. of Remote unit : 1

RF Transmission Range : Maximum 30 meters

Temperature sensing cycle : around 78 seconds

Calendar Clock

12/24 h display with hh : mm

Date Format : Day : Month.

Day of week selectable in 5 language (E, F, D, I,S)

2-minute crescendo alarm

Power

Main unit : use 2 pcs UM-4 or "AAA" 1.5V battery

Remote sensing unit : use 2 pcs UM-3 or "AA" 1.5V battery

Weight

Main unit : 68g (without battery)

Remote sensing unit : 46g (without battery)

Dimension

Main unit : 113(L) x 54(W) x 62(T) mm

Remote sensing unit : 96(L) x 50(W) x 28(T) mm

EC-DECLARATION OF CONFORMITY

This product contains the approved transmitter module **TX 03** and complies with the essential requirements of Article 3 of the R&TTE 1999/5/EC Directives, if used for its intended use and that the following standard(s) has/ have been applied:

Efficient use of radio frequency spectrum

(Article 3.2 of the R&TTE Directive)

applied standard(s) **EN 300 220-1(2,3):1997**

Electromagnetic compatibility

(Article 3.1.b of the R&TTE Directive)

applied standard(s) **ETS 300 683:1997**

Safety of information technology equipment

(Article 3.1.a of the R&TTE directive)

applied standard(s) **EN 60950:1997**

Additional information:

The product is therefore conform with the Low Voltage Directive 73/23/EC, the EMC Directive 89/336/EC and R&TTE Directive 1999/5/EC (appendix II) and carries the respective CE marking.

VS-Villingen / Germany August 2001

Gerhard Preis

EC representative of manufacturer



RTTE Compliant Countries :

All EU countries, Switzerland **(CH)**

And Norway **(N)**

INTENDED USE OF THE DEVICE

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 contents of this manual may not be reproduced without the permission of the manufacturer.