Deluxe In/Out Remote Thermometer with Trend Chart

MODEL: JTR-168LR

USER'S MANUAL

INTRODUCTION

Congratulations on your purchase of the JTR-168LR Deluxe In/ Out Remote Thermometer.

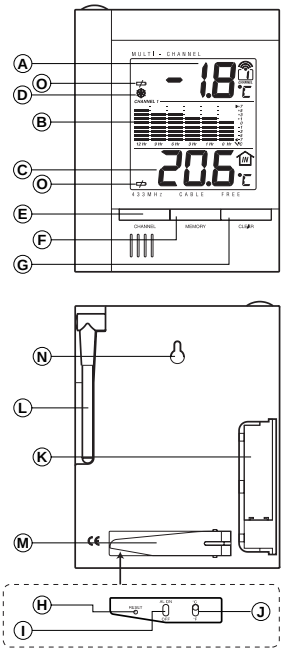
The basic package comes with a main unit (the temperature station) and a remote unit (the thermo sensor). The main unit can support up to three remote units.

The JTR-168LR is easy to use. The main unit has a large display for the outdoor temperatures, temperature variance for the last 12 hours and the indoor temperatures.

Additional features include ice warning and maximum/ minimum temperatures for indoors and outdoors.

No wire installation is required between the main unit and the remote units. As the JTR-168LR operates at 433MHz, it can be used in the U.S. and most places in Continental Europe.

MAIN FEATURES



A. OUTDOOR TEMPERATURE
Displays current temperature of remote sensor unit.

B. TEMPERATURE TREND CHART
Outdoor CHANNEL 1 temperature variance display, last 12 hours.

C. INDOOR TEMPERATURE
Shows the collected indoors temperature

D. ICE WARNING ICON
Lights up when the ice warning function is active

E. CHANNEL BUTTON
Sets the remote sensor channel .

F. MEMORY BUTTON
Toggles between current, maximum and minimum temperatures

G. CLEAR BUTTON
Erases memory data

H. RESET BUTTON
Returns all settings to default values

I. ICE WARNING SLIDE SWITCH [AL ON/OFF]
Turns on or off the ice warning function

J. °C/°F SLIDE SWITCH
Selects between degrees Centigrade (°C) and Fahrenheit (°F)

K. BATTERY COMPARTMENT
Accommodates two UM-3 or AA-size batteries

L. ANTENNA
Receives radio signal from remote unit

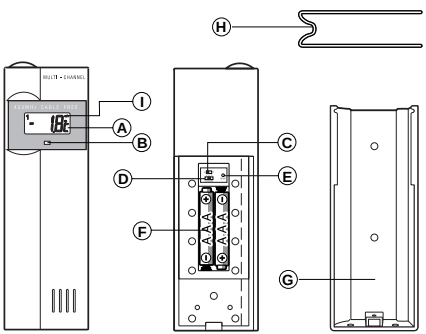
M. TABLE STAND
For standing the main unit on a flat surface

N. WALL-MOUNT RECESSED HOLE
For mounting the main unit on a wall

O. LOW BATTERY INDICATOR
- Appears on the 1st Line indicates the battery power of the remote sensor in display is low

- Appears on the 3rd Line indicates the battery power of the main unit is low

MAIN FEATURES: REMOTE UNIT



A. LCD DISPLAY
Displays the current temperature monitored by the remote unit

B. LED INDICATOR
Flashes when the remote unit transmits a reading

C. °C/°F SLIDE SWITCH
Selects between degrees 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
Accommodates two UM-4 or AAA-size batteries

G. WALL-MOUNT HOLDER
Supports the remote unit in wall-mounting

H. REMOVABLE TABLE STAND
For standing the remote unit on a flat surface

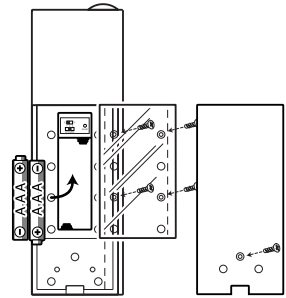
I. LOW BATTERY INDICATOR
Lights up when the battery power is low

HINTS FOR BEST OPERATION

- Assign different channels to different remote units.
- Insert batteries for remote units before doing so for the main unit.
- Set the main unit and the remote thermo-sensor unit within an effective range of 100 meters.
- The effective range is vastly affected by the building materials and how the units are positioned. Try different set-ups for best results.
- Though the remote units are weather proof, they should be placed away from direct sunlight, rain or snow.

BATTERY AND CHANNEL INSTALLATION: REMOTE UNIT

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 two UM-4 “AAA” sized batteries.



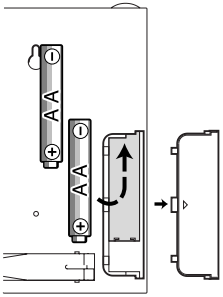
5. Replace the battery compartment door and secure its screws.

Replace the batteries when the low-battery indicator of the particular channel lights up on the main unit.

Note that once a channel is assigned to a unit, you can only change it by removing the batteries and repeating the above procedure.

BATTERY INSTALLATION: MAIN UNIT

1. Slide open the battey compartment door.
2. Insert two UM-3 AA-sized batteries.



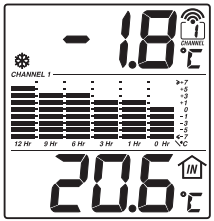
3. Replace the battery compartment door.
4. Flip open the table stand and press the **[RESET]** button with a blunt stylus. It ensures easier synchronization between the transmission and reception of signals.

Replace the batteries when the indicator **[⇨]** of the indoor temperature lights up.

GETTING STARTED

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

The main unit will also start receiving once batteries are installed. The temperature of the selected channel will be displayed on the top line and the indoor temperature on the bottom line. The main unit will automatically update its readings at 30-second intervals. The temperature variance for the last 12 hours is automatically scanned on the trend chart.



If no signals are received, blanks will be displayed. Press **[CHANNEL]** and **[MEMORY]** simultaneously to enforce another search. 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 INDOOR TEMPERATURES

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

Temperature readings, received from a remote sensor, are displayed on the top line of the unit.

Press **[CHANNEL]** to change from one channel to the next.

If more than one remote sensor is being used, the unit can automatically scan all three of the outdoor channels.

To use the automatic outdoor channel scanner function:

Press and hold **[CHANNEL]** for about 2 seconds. The unit will begin a cycle of continuously rotating through the three channels. Temperature readings from each site will be displayed for approximately 5 seconds.

To stop the automatic scanning function, press **[CHANNEL]** again. The scanning cycles will stop.

The kinetic wave display on the channel icon indicates the status of reception.

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

If no readings are received from one particular channel for more than two 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 **[CHANNEL]** and **[MEMORY]** simultaneously to enforce an immediate search. Of course no reading will be shown if no remote unit is assigned to that channel.

The JTR-168LR is capable of measuring temperatures within the -50°C (-58°F) and +70°C (+158°F) range. If the temperature goes above or below that, the display will show "HHH" or "LLL".

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. Press **[CHANNEL]** to locate the desired channel.
2. Press **[MEMORY]** to rotate through the maximum **[MAX]**, minimum **[MIN]** and current temperatures. The readings of the indoor temperatures will also be displayed.

To clear the memory of a particular channel

1. Press **[CHANNEL]** to locate the desired channel.
2. Press **[CLEAR],** the **MAX** and **MIN** memory for that channel will be erased. Note it will also erase the memory for the indoor temperatures. If you press **[MEMORY]** now, the maximum and minimum temperatures will have the same values as the current ones until different readings are recorded.

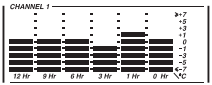
DISCONNECTED SIGNALS

If without obvious reasons the display for a particular channel goes blank, press **[CHANNEL]** and **[MEMORY]** to enforce an immediate search. If that fails, check if the remote unit of that channel is still in place. Make sure the transmission is within range and path is clear of obstacles and interference.

HOW TO READ THE TEMPERATURE TREND CHART

The temperature variance for **CHANNEL 1** for the past 12 hours is automatically scanned on the screen in six equal columns.

The variance is represented in rows of degrees C above or below the current temperature at 0 Hr (current time) and 0°C (no variance).



HOW TO USE THE ICE WARNING

The ice warning is selected on the **ICE WARNING** slide switch on the main unit. The warning only applies to **CHANNEL 1**.

To activate the warning, slide the switch to **ON**. When the temperature recorded at **CHANNEL 1** falls to between -2°C (28.4°F) to +3°C (37.4°F) a beeping alarm will sound; the ice warning icon **[❄]** and current outdoor temperature will flash. The alarm will sound every minute so long as the recorded temperature is within alarm range. To stop the alarm, press any key or change the channel. Display features will continue to flash as a reminder that the temperature remains within the ice warning range.

To deactivate the ice warning function, slide the **ICE WARNING** switch to **OFF**.

NOTE ON °C AND °F

The unit of temperature display is selected on the °C/°F slide switch. Select °C for Centigrade or °F for Fahrenheit.

Note that the remote temperature display on the main unit is dominated by the selection on the °C/°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.

LOW BATTERY WARNING

When it is time to replace batteries, the respective **[⇨]** indicator will show up when the corresponding channel is selected. The battery level of the main unit will be shown on the indoor temperature when it is running low.

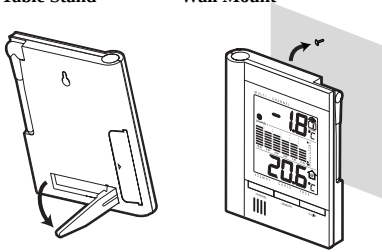
HOW TO USE THE TABLE STAND OR WALL MOUNTING

Flip open the table stand to place the main unit on a flat surface. Or you can flip close the stand and mount the unit on a wall using the recessed 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.

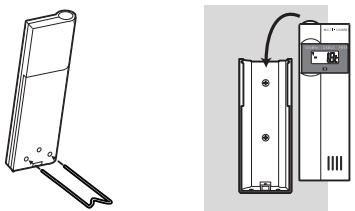
Main Unit

Table Stand **Wall Mount**



Remote Unit

Table Stand **Wall Mount**



THE RESET BUTTON

The **RESET** button is used to enhance synchronization of signals after battery replacement or 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.

MAINTENANCE

When handled properly, this unit is engineered to give you years of satisfactory service. Here are a few product care instructions:

1. Do not immerse the unit in water. If the unit comes in contact with water, dry it immediately with a soft lint-free cloth.
2. Do not clean the unit with abrasive or corrosive materials. Abrasive cleaning agents may scratch the plastic parts and corrode the electronic circuit.
3. Do not subject the unit to excessive: force, shock, dust, temperature, or humidity. Such treatment may result in malfunction, a shorter electronic life span, damaged batteries, or distorted parts.
4. Do not tamper with the unit's internal components. Doing so will terminate the unit's warranty and may cause damage. The unit contains no user-serviceable parts.
5. Only use new batteries as specified in this instruction manual. Do not mix new and old batteries as the old batteries may leak.
6. Read this instruction 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)
Diagram temperature scale	: ≤ -7°C to ≥ 7°C
Ice Warning function (Channel-1 Remote Sensor)	: -2°C to +3°C (28.4°F to 37.4°F)

Remote Sensor Unit

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	: 100 meters
Temperature sensing cycle	: 30 seconds

User selectable °C and °F

Power

Main unit	: use 2 pcs UM-3 or"AA" 1.5V alkaline battery
Remote unit	: use 2 pcs UM-4 or "AAA" 1.5V alkaline battery

Weight

Main unit	: 200 g (without battery)
Remote sensing unit	: 87 g (without battery)

Dimension

Main unit	: 153 (L) x 117 (W) x 23.5 (D) mm
Remote sensing unit	: 152 (L) x 48 (W) x 23 (D) mm

NOTE ON COMPLIANCE

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.

FCC :

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.

R&TTE Compliance Note

This device complies with the essential requirements of Article 3 of the R&TTE 1999/5/EC Directive, if used for its intended use and that the following standard(s) has been applied:

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

Applied standards ETS 300 683 : 1997

Efficient use of the radio frequency spectrum (Article 3.2 of the R&TTE Directive)

Applied standards EN300 220 –1 : 1997

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.