

# RCM

## ON/Off Remote Control

### INSTALLATION AND OPERATING INSTRUCTIONS

This on/off remote control system provides a safe, reliable, and user-friendly remote control for millivolt valve gas heating appliances. The system can be manually from the transmitter. It can be used with any millivolt gas valve system. Always check with the owner's manual of the appliance before connecting this remote control system to it.

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately contact the dealer from whom you purchased the kit. Do not attempt to install any part of the kit unless all parts are in good condition.

#### CONTENTS OF KIT

Description	Qty
Transmitter	1
Battery Alkaline AAA ( for Transmitter)	3
Receiver (Assembly)	1
Receiver Box	1
Slide Button-Black (On/RS/Off)	1
L-Bracket (Floor Mount)	1
Battery Alkaline AA (for Receiver)	4
Wall Cover Plate-Black	1
Wall Cover Plate-White	1
Slide Button-White (On/RS/Off)	1
Screws (for Wall Cover Plate)	2
Plug-In Wiring Assembly – 18" Inches	1
Velcro (Loop and Hook)	1
Instructions Booklet	1

**Store this booklet for future reference**

#### FEATURE/SPECIFICATIONS

- Contemporary Ergonomic Styling Transmitter with Large LCD Display
- LCD Display Backlight
- Battery Powered Transmitter and Receiver
- Easy Access Front Battery Door
- Pre-Programmed for Quick Installation
- Low battery Indication
- Child Proof Capable
- 256 Security Codes
- Quick Disconnect Wiring Assembly
- Reset Button

**WARNING**  
**Important Safety Information**

- Read this manual thoroughly prior to installing, programming or operating this remote control.
- This thermostat is designed for use with millivolt gas valve system. Do not use this remote control systems on applications with voltages above 30 Volts AC.
- This remote control system requires three (3) "AAA" and four (4) "AA" alkaline batteries to provide power for the transmitter and receiver respectfully to properly control the system operation. Wiring must conform to appliance requirement or all building codes and ordinances as required by local and national code authorities having jurisdiction.
- Do not short (or jumper) across terminals on the gas valve to test the remote control installation. This could damage the thermostat and void the warranty.
- This remote control system should only be used as described in this manual. Any other use is not recommended and will void the warranty.

**NOTE**

**Due to the sensitive temperature monitoring components used in the transmitter, you may find it necessary to allow the transmitter to stabilize to room temperature before accurate room temperatures are displayed on the LCD. If the transmitter is activated from a severe cold condition, it can take up to 15 minutes for accurate temperature readings to appear on LCD.**

**WARNING**

**Turn appliance OFF and allow to cool before installing or servicing. DO NOT connect 110-120 VAC wiring to the milli-volt gas control valve. The remote operator must be installed exactly as outlined in these instructions. Read all instructions completely before attempting installation. Follow instructions carefully during installation. Any modification of components will void the warranty and may pose a fire hazard.**

**WARNING**

**Low battery power in the transmitter or receiver can affect the operation of the remote control in the AUTO mode. In some cases the unit may not cycle off when the target temperature is reached**

**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 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 connected.
- Consult the dealer or an experienced radio/TV technician for help.

## INSTALLATIONS

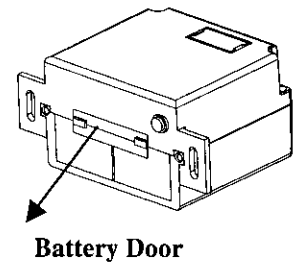
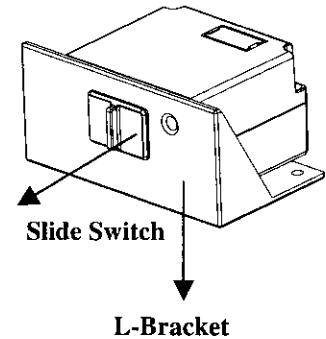
### *Remote Receiver:*

The remote receiver may be wall mounted or installed in the appliance per the instructions in the specific appliance manual. **Refer to the Homeowner's Manual for special installation instructions.** If wall mounted, the remote receiver must be installed in a junction box along with cover plate provided. Failure to follow the installation instructions found in the appropriate Homeowner's Manual will void the warranty and may pose a fire hazard.

### Installing Batteries:

The remote receiver uses four (4) "AA"- size batteries that came with the package. To install batteries,

1. Remove the slide switch by gently pulling straight out.
2. Use your thumb and index finger to gently pull down the L-bracket.
3. Open the battery door by pressing the two tabs located on the door.
4. Install the batteries as marked or indicated in the receiver cover.
5. Close the battery door until the door tab snap.
6. If you decided to install the receiver onto the wall, install the wall cover bracket that by securing the wall cover to the receiver with the screws provided or if you decided to install the receiver into appliance surrounding, reinstall the L-bracket.
7. Gently, install the slide switch back to the receiver stem.
8. The batteries should be replaced at least once every 6 months or when the battery indicator light flashes.



### Installing Wire:

The remote control systems came with 18 inches pre-assembled wiring. Plug in the small white terminal block on one end of the wiring to the back of the receiver. The terminal wire block can only be installed one way. Do not force the terminal block into the receiver.

Follow the appliance owner instructions for connecting the two (2) 1/4" female spade terminal.

For applications that require wire longer than 18 inches, use 18 gauge wire, 105°C rated with no splices connecting to the two (2) 1/4" female spade wiring terminal and measuring no longer than 20 feet.

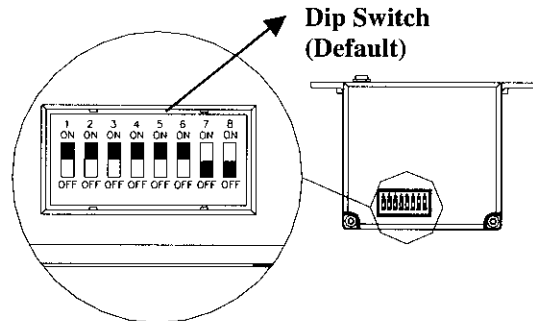
**WARNING**

**Make sure wiring are not directly contacting the appliances other than at the terminal. If wiring are exposed to temperature higher than 105C (250°F), the receiver may not function properly and may cause fire hazard.**

Setting Privacy (DIP) Switch On Receiver:

The remote receiver privacy (DIP) switch was preset at the factory. A private code can be set into the system to prevent accidental operation by other transmitters in the vicinity using the following procedure:

1. Slide the code switches to your choice of ON or OFF position. The factory setting is switch #1 to #6 set to ON, and #7 and #8 set to OFF.
2. There are also code switches on the external surface of the remote receiver. Slide the code switches to exactly match the settings on the remote transmitter.
3. The system is now ready to operate.

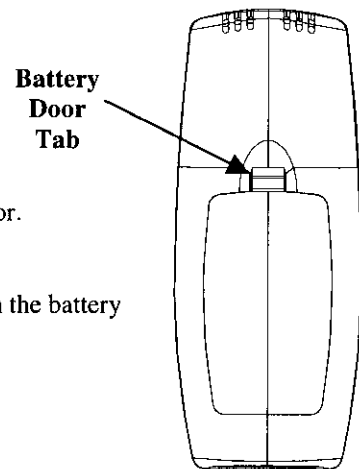


**Remote Transmitter::**

Installing Batteries:

The remote transmitter uses three (3) "AAA"- size batteries that came with the package. To install batteries,

1. Press down the battery door tab and lift up and remove the battery door.
2. Install the batteries as marked or indicated in the receiver cover.
3. Close back the battery door tab until the battery door tab snap.
4. The batteries should be replaced at least once every 6 months or when the battery indicator light flashes.

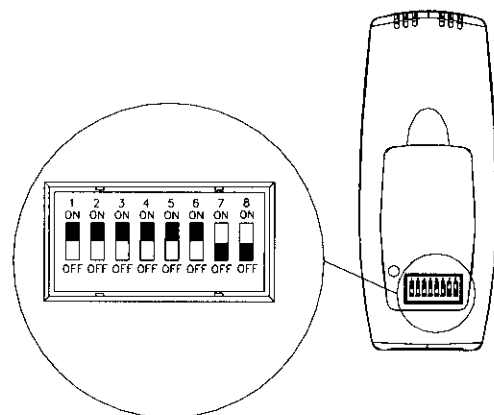


**Back of the Transmitter**

Setting Privacy (DIP) Switch On Transmitter:

The remote transmitter privacy (DIP) switch was preset at the factory. A private code can be set into the system to prevent accidental operation by other transmitters in the vicinity using the following procedure:

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3. The system is now ready to operate.

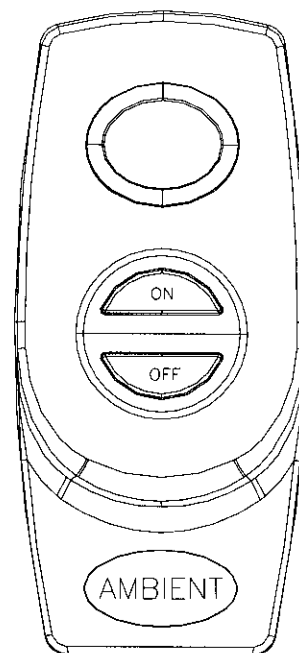


## OPERATIONS:

### Transmitter:

#### Transmitter Keypad Layout:

Key	Function
<b>ON</b>	1. in clock setting mode, select next item to adjust 2. in normal mode increase flame 3. in normal mode press ON+OFF>3 seconds enter or exit childproof
<b>OFF</b>	1. in clock setting mode, increase the select item 2. in normal mode decrease flame 3. in normal mode press ON+OFF>3 seconds enter or exit childproof



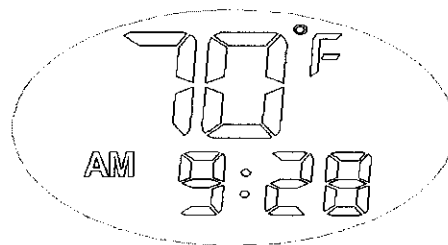
### General:

The RCM Remote Control has one (1) operating modes: Manual

The transmitter will operate the remote receiver from 1 foot to a maximum of 20 feet. The distance is reduced when batteries are low or when the receiver is inside a metal enclosure.

### Initial start up:

1. After power up or **RESET** button is pressed, the transmitter is reset.
2. During system reset, all segments of the LCD will be turned on. After one second, the LCD will be initialized. Some typical reset displays are shown on the right. Note that the temperature scale is degree F.
3. After reset the transmitter is operating at manual mode and output OFF signal. The time and room temperature are shown.



### Setting Clock:

1. Press **SET** while in Manual mode to enter clock setting mode.
2. In clock setting mode, only clock is displayed. Press **SET** to select item (hour, minute or day), press **▶** or **◀** to change. Selected item is flashing.

### Manual Mode:

1. Press the **On** button once to turn on the appliance. Press the **OFF** button to turn it off.
2. In Manual mode, the transmitter will not turn the appliance off even if the room temperature is above the target temperature.

**NOTE**

**It takes some time for the receiver to respond to the transmitter. Do not press the Auto On / Off buttons more than once within 5 seconds for correct operation.**

Low-battery detection:

1. Battery voltage is sampled every 1 minute. When the battery voltage drops to a certain level, the low-battery warning will come out., and the transmitter **will turn off the appliance**. The transmitter will not function anymore until fresh battery are installed.
2. During battery low condition, LCD shows low battery indicator. Low battery warning will be displayed in any mode.
3. The transmitter can't operate during battery low. User must change the battery as soon as possible before the battery is too weak that normal operation can not be assured.

Child-proof protection:

1. Press and hold **ON** and **OFF** button simultaneously for 3 seconds to enter child-proof mode.
2. No button will be accepted in child-proof mode until child-proof mode is deactivated by press **ON** and **OFF** button simultaneously for 3 seconds again to exit child-proof mode.

Transmitter Thermal Shutdown:

1. If transmitter measure room temperature exceeding 99 degrees Fahrenheit, the LCD will display "HI" and the transmitter will turn off the appliance.
2. Transmitter will not function the room temperature has dropped below 99 degree Fahrenheit.



**Receiver:**

Slide Switch:

1. With the slide switch in the ON position, the system will remain on until the slide switch is placed in the OFF or RS position.
2. With the slide switch in the RS position (centered), the system will only operate if the remote receiver receives signal from the transmitter.
3. With the slide switch in the OFF position, the system is off. It is suggested that the slide switch be placed in the OFF position if you will be away for an extended period of time. If the remote receiver is mounted out of children's reach, placing the slide switch in the OFF position also functions as a safety device by both turning the system off and rendering the transmitter inoperable.

**TESTING YOUR NEW REMOTE CONTROL SYSTEM**

1. Connect the wiring terminal to the appliance. Refer to the appropriate Homeowner's Manual for proper wiring connections to the appliance.
2. Light your gas appliance following the lighting instructions that came with the appliance. Confirm that the pilot light is on; it must be in operation for the remote control to operate the main gas valve. Control knob found on the appliance must be in the ON position. ON/OFF switch found on the appliance must be in OFF position.

3. Slide the 3 position button on the remote receiver to the ON position. The main gas flame should ignite
4. Slide the button to OFF. The flame should extinguish (the pilot light will remain on).
5. Slide the button to RS (the center position), then press the **ON** button on the transmitter to change the system to ON. The main gas flame should ignite.
6. Press the **OFF** button on the transmitter to change the system to OFF. The flame should extinguish (the pilot light will remain on).

## TROUBLESHOOTING

Symptom	Causes	Action
1. LED light on receiver blinking or battery icon on LCD on transmitter. 2. LCD display is blank 3. LCD display shows "funny" display	1. Low Battery	1. Replace batteries. Recommended change batteries every 6 months  3. Press Reset button at the back of the transmitter. The reset button is located at the lower left corner behind the battery cover.
1. Appliance does not come on after pressing <b>ON</b> on transmitter	1. Wiring / Electrical Connections	1. Slide the switch to ON, if appliance comes ON, wiring is not the causes. 2. If appliance does not come on, check wiring connections.
	2. Privacy (DIP) switch setting on transmitter or receiver	1. Make sure the transmitter and receiver has the same DIP switch settings.
	3. Transmitter measures temperature exceeding 99 degrees Fahrenheit and shows "HI" on LCD	1. Move transmitter to a cooler place and wait until temperature drops below 99 degree.
	4. Distance between the transmitter and receiver is more than 20 feet	1. Make sure the operating distance is less than 20 feet
1. Cannot program set temperature below 45 deg F or above 90 deg F	1. This is beyond the operating range of the transmitter	1. Set temperature must be above 45 deg F or below 90 deg F
1. Transmitter does not follow the program settings in Auto-P mode	1. Current time and temperature is not set properly.	1. Make sure the time and temperature setting is set properly.

## WARRANTY

This warranty gives you specific legal rights and you may also have other rights that vary from state to state or province to province. Answers to any questions regarding our limited warranty may be obtained by writing our corporate offices.

Ambient Technologies warrants each new Ambient Technologies remote control against any defects that are due to faulty material or workmanship for a period of five years after the original date of purchase. This warranty and our liability does not apply to batteries, nor does it include damage to merchandise or the remote control resulting from accident, alteration, neglect, misuse, improper installation or any other failure to follow Ambient Technologies installation and operating instructions.

Ambient Technologies agrees to repair or replace at its option any Ambient Technologies remote control under warranty provided it is returned postage prepaid to our warranty facility in a padded carton within the warranty period, with proof of the original date of purchase and a brief description of the malfunction. This limited warranty does not include the cost of removal or re-installation.

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