

Ambient
Technologies

RCM-RX
RCTE

Thermostatic On/Off Remote Control – 110VAC

INSTALLATION AND OPERATING INSTRUCTIONS

This thermostatic 110 VAC on/off remote control system provides a safe, reliable, and user-friendly remote control for millivolt valve gas appliances. The system can be operated in a thermostatically or manual mode. Always check the appliance home owner’s manual for additional information, or warnings regarding accessory installation before connecting this remote control system.

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. Please keep this booklet for future reference.

CONTENTS OF KIT

Description	Qty
Transmitter	1
Battery Alkaline AAA (for Transmitter)	3
Receiver (Assembly) consists of:	1
Receiver Box with 110 VAC Adapter	
Slide Button-Black (On/RS/Off)	
L-Bracket (Floor Mount)	
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
Wall Holster	1
Wall Holster Screws	2
Wall Anchor	2
Screws (for fireplace system control covers)	2
Installation Instructions	1

FEATURES/SPECIFICATIONS

- Contemporary Ergonomic Style Transmitter with Large LCD Display
- Backlit LCD Display
- Battery Powered Transmitter
- Compact 110 VAC Adapter with 30" wire
- Pre-Programmed for Quick Installation
- Low battery Indication
- Child Proof Lock-out
- 128 Security Codes
- Quick Disconnect Wiring Assembly
- On/Off, Thermostatic, Timer, and 5-2 Day Thermostatic Programming Flexibility
- Reset Button

WARNING
Important Safety Information

- Read this manual thoroughly prior to installing, programming or operating any remote control.
- This remote control system is designed for use with a millivolt gas valve system. Do not use this remote control system on applications with voltages above 30 Volts AC.
- This remote control system requires three (3) "AAA" batteries to power the transmitter and 110 VAC to power the receiver. Wiring must conform to appliance requirement and building codes/ordinances as required by local and national code authorities having jurisdiction.
- Do not short (or jumper) across the gas valve terminals to test the remote control installation. This could damage the unit 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 in the transmitter, it is necessary to allow the transmitter to stabilize to room temperature before accurate room temperatures are displayed. If the transmitter is activated from a severe cold condition, allow 15 minutes for accurate temperature readings to appear on the 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 cause a fire hazard.

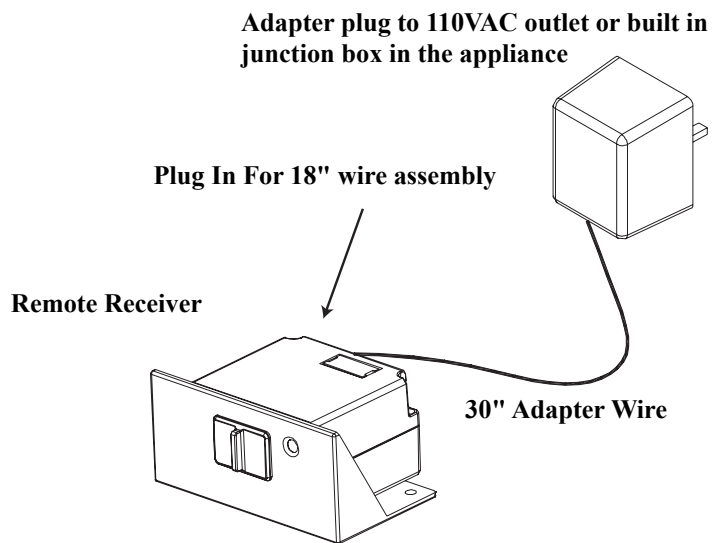
WARNING

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.

INSTALLATIONS

Remote Receiver:

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



Power up Receiver:

The receiver is powered by plugging into a polarized 110VAC outlet.

Installing Wire:

This system comes with an 18 inch pre-assembled wire assembly. Insert the white terminal to the back of the receiver. The terminal wire block can only be installed one way. Do not force the terminal plug onto the receiver.

Follow the homeowner’s manual for connecting the two (2) 1/4" female spade terminals to the millivolt valve.

For applications longer than 18 inches, use 18 gauge wire or larger, 105°C rated, with as few splices as possible. Connect to the two (2) 1/4" female spade wiring terminals. Wire can be no longer than 20 feet.

WARNING

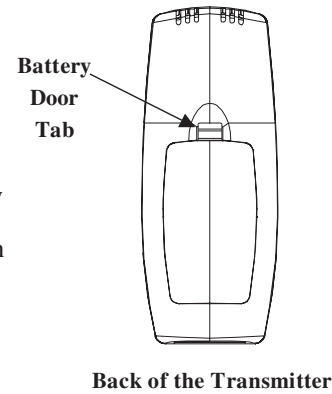
Make sure that the wires do not contact the appliances any place other than at the terminals. Exposure to temperatures higher than 105C (250°F) may cause the receiver to malfunction or fire hazard.

Remote Transmitter:

Installing Batteries:

The remote transmitter uses three (3) "AAA"- size batteries. To install batteries,

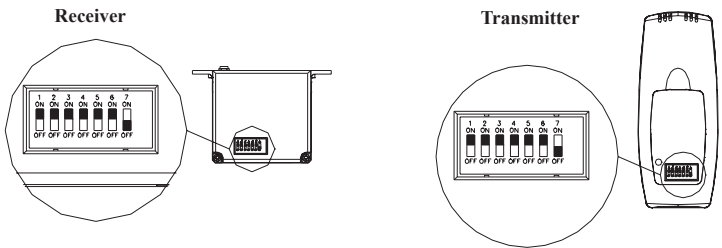
1. Press down the battery door tab and lift up and remove the battery door.
2. Install the batteries as indicated in the receiver cover.
3. Close the battery door by snapping in place.
4. The batteries should be replaced at least once every 6 months or when the battery indicator flashes.



Setting Privacy (DIP) Switch on Receiver and Transmitter:

The remote receiver and transmitter privacy (DIP) switches are preset at the factory. Do not set all DIP switches to "OFF" position or "ON" position. The receiver and transmitter privacy (DIP) swithes are preset at the factory. In the event of activation or interference from other nearby transmissions, reset the code using the following procedure:

1. Slide the code switches on the transmitter or receiver to your choice of ON or OFF position. Switches #1 to #6 are preset to "ON", and #7 is preset to "OFF" on both the transmitter and receiver.
2. The switches on the transmitter and receiver must match in order for the system to work.
3. The system is now ready to operate.



WARNING

Do not use two (2) or more remote control systems in the same area with the same dip switch settings, as they will communicate with each other. This may cause the appliances to malfunction.

Reset Button:

1. The reset button can be used to reset the systems such as the clock setting. The reset button is located behind the battery door cover.
2. Using a paper clip, press the button and the system will reset and go into clock setting mode. Follow the instructions on how to set the time in the next section.

Installing Wall Holster:

The transmitter wall holster can be attached to any wall. Use the wall anchors and screws to secure the wall holster.

OPERATIONS:

Transmitter:

General:

The RCTE Remote Control has four (4) operating modes: Manual, Timer, Auto, and Auto-P. The control system can be set to temperature ranges between 45°F and 90°F.

The transmitter will operate the remote receiver from 1foot to a maximum of 30 feet. The distance is reduced when batteries are low or when the receiver is inside a metal enclosure.



Initial start up:

1. After initial power up or when [RESET] button is pressed, the transmitter is reset. The reset button is located inside the battery door.



2. During system reset, all features of the LCD will be visible. After one second, the LCD will be initialized. A typical reset display is shown above. Note that the temperature scale is degree F.
3. While °F is flashing, press and hold [SET] and [TIME/CANCEL] for more than 3 seconds to select between °C and °F display. It will exit setting mode automatically after 10 seconds if no key is pressed.
4. After reset the transmitter is operating in manual mode. The time and room temperature are shown as above.

Setting Clock:

1. While in Manual mode, press [SET] to enter clock setting mode.
2. In clock setting mode, only clock is displayed. Press [SET] to select item (hour, minute or day). Selected item is flashing. 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.

Timer mode:



1. In manual or auto mode press [TIME/CANCEL] to enter Timer mode. LCD will display only the timer time and room temperature.
2. In Timer mode, the preset time is 120 minutes (maximum).
3. Press [▶] or [◀] to change timer time in 10 minute increments.
4. The transmitter will turn on the appliance when entering timer mode. When the times run out, the transmitter will turn off the appliance and return to Manual mode.

5. Timer count down can be cancelled by pressing:
- a. **TIME/CANCEL** which returns back to previous mode
 - b. **ON** or **OFF** which returns to manual mode,
 - c. **AUTO** which then goes to auto mode.

Auto mode:

1. To enter auto mode, press **AUTO** in manual mode or timer mode.

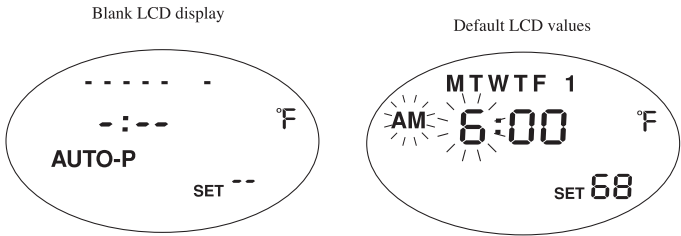


2. In auto mode, press **SET** (set temp will flash) and press **▶** or **◀** to set temperature. The default set temperature is 72° F. Press **SET** again to save and exit.
3. After entering auto mode, once the setting is completed, the transmitter will automatically turn on the fireplace when the room temperature is below the target temperature and turn off the appliance when the room temperature is above the target temperature.
4. There will be a slight delay in the response of the unit (on/off) to a temperature. Temperature is monitored every 3 minutes.
5. Flame icon will display when the transmitter is in "ON" position.
6. Pressing either the **ON** or **OFF** button, it will change to Manual mode.
7. When **AUTO** and **ON** buttons are pressed simultaneously and held more than 3 seconds, it will enter Auto-P (program) mode.
8. When **TIMER/CANCEL** button is pressed, it will change to timer mode.

Auto-P mode:

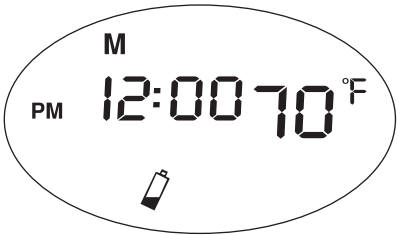
Auto-P mode will allow the remote control systems to thermostatically control the appliance on weekdays (Monday to Friday) and /or on weekends (Saturday and Sunday). The remote control systems cannot be programmed for individual days. Each group of days (weekdays/weekends) can be programmed for up to two sets of time settings to cycle.

1. Press **AUTO** and **ON** buttons simultaneously and hold for 3 seconds to enter auto programming mode.
2. Press **AUTO** to start programming the remote. The **AUTO** button becomes the set button in the Auto P mode.
3. When entering Auto-P mode, there are no default values and a blank display will be seen as illustrated below.
4. Press **▶** or **◀** buttons to set hour for 1'st setting.
5. Press **AUTO** to save hour and move to minutes.
6. Press **▶** or **◀** buttons to set minutes for 1'st setting.
7. Press **AUTO** to save minutes and move to temperature.
8. Press **▶** or **◀** buttons to set temperature for 1'st setting.
9. Press **AUTO** to save temperature and move to the 2'nd, 3'rd, & 4th settings of the day.
10. Repeat the program process for each of the settings. Up to 4 settings are available for each day, but you may set any number up to 4 settings.
11. This completes the programming for Monday (S) to Friday (F) setting. Repeat the process for the Saturday (S) to Sunday (S) setting.
12. There will be a slight delay in the response of the unit (on/off) to a temperature change. Temperature is monitored every 3 minutes.



13. When **ON** or **OFF** buttons are pressed, it will change to Manual mode.
14. When **AUTO** button is pressed, it will change to Auto mode.
15. When **TIMER/CANCEL** button is pressed, it will change timer mode.

Low-battery detection:

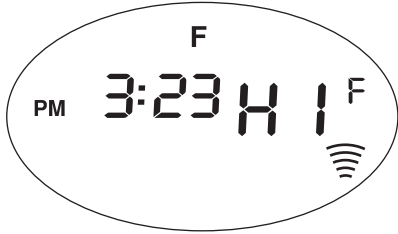


1. Battery voltage is checked once a minute. When the battery voltage drops to a certain level, the low-battery warning will come on, and the transmitter **will turn off the appliance**. The transmitter's keypad will not function until fresh batteries are installed.
2. When the batteries are low, the LCD shows a low battery indicator. The low battery warning will be displayed in any mode.
3. The transmitter will not operate with low batteries. Change the battery before the battery is too weak for normal operation. **TURN THE UNIT OFF BEFORE REPLACING BATTERIES.**

Child-proof protection:

1. Press and hold **ON** and **OFF** buttons simultaneously for 3 seconds to enter child-proof mode.
2. The transmitter will not work mode until child-proof mode is deactivated by pressing the **ON** and **OFF** buttons simultaneously for 3 seconds again to exit child-proof mode.

Transmitter Thermal Shutdown:



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

Receiver:

Slide Switch:

1. ON position: the system will remain on until the slide switch is placed in the OFF or RS (remote) position.
2. RS (remote) position: the system will only operate if the remote receiver receives a signal from the transmitter.
3. OFF position: the system is off. The slide switch should 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, the OFF position also functions as a safety device by both turning the system off and rendering the receiver 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 appliance 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. Appliance control knob must be in the ON position. Appliance ON/OFF switch 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 (remote), then press the **ON** button on the transmitter to turn the system to ON. The main gas flame should ignite.
6. Press the **OFF** button on the transmitter to turn the system to OFF. The flame should extinguish (the pilot light will remain on).

TROUBLESHOOTING

Symptom	Causes	Action
1. LCD display is blank 2. LCD display shows "funny" display	1. Low Battery	1. Replace batteries. Change batteries every 6 months. 2. Check battery installation and replace batteries. 3. Press Reset button at the back of the transmitter. The reset button is located at the lower left corner behind the battery cover.
3. Appliance does not come on after pressing ON on tranmitter	1. Wiring / Electrical Connections 2. Privacy (DIP) switch setting on transmitter does not match receiver 3. Transmitter measures temperature exceeding 99 degrees Fahrenheit and shows "HI" on LCD 4. Distance between the transmitter and receiver is more than 30 feet	1. Slide the switch to ON, if appliance comes ON, wiring is not the cause. 2. If appliance does not come on, check wiring connections. 3. Check to make sure the receiver is plug into 110 VAC outlets. 1. Make sure the transmitter and receiver has the same DIP switch settings. 1. Move transmitter to a cooler place and wait until temperature drops below 99 degree. 1. Make sure the operating distance is less than 30 feet
4. Receiver cannot receive signal.	1. Receiver is installed in an enclosure 2. Battery installed wrong	1. Make sure the receiver is not located inside an enclosure. 2. Install battery correctly in the receiver.

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.

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 to the original owner, 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.

Ambient Technologies
149 Cleveland Drive
Paris KY 40361

FOR TECHNICAL SUPPORT
CALL 800-398-6195

50D0074 Rev 1 Feb 2003