RCTHL

Thermostatic HI/LO Remote Control

INSTALLATION AND OPERATING INSTRUCTIONS

This hi/lo remote control system provides a safe, reliable, and user-friendly remote control to power up to a 6 VDC servo motor or solenoid gas valve system (Maxitrol Gas Valve). 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 manual for future reference.

CONTENTS OF KIT

Description	Qty
Transmitter	1
Battery Alkaline AAA (for Transmitter)	3
Receiver (Assembly) consists of :	1
Receiver Box	
Push Button-Black (Hi/On, Lo/Off)	
L-Bracket (Floor Mount)	
Battery Alkaline AA (for Receiver)	4
Wall Cover Plate-Black	1
Wall Cover Plate-White	1
Push Button-White (Hi/On, Lo/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
Installation Instructions	1
Screws (for fireplace system control covers)	2

FEATURES/SPECIFICATIONS

- Contemporary Ergonomic Style Transmitter with Large LCD Display
- Backlit LCD Display
- Battery Powered Transmitter and Receiver
- Easy Access Front Battery Door
- Pre-Programmed for Quick Installation
- Low battery Indication
- Child Proof Lockout
- Over 4 million security codes
- Thermal Shutdown and Out of Range Shutdown On Transmitter
- 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 this remote control.
- This remote control system is designed for use with a 6 VDC servo motor or solenoid gas valve system (Maxitrol Gas Valve).
- This remote control system requires three (3) "AAA" and four (4) "AA" alkaline batteries to power the transmitter and receiver. Wiring must conform to appliance requirements 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.

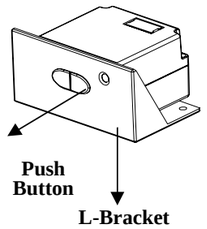
INSTALLATIONS

Remote Receiver:

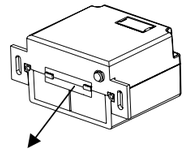
The remote receiver may be wall mounted or installed in the appliance per the appliance homeowner's manual. **Refer to the Homeowner's Manual for special installation instructions.** If wall mounted, the remote receiver must be installed in a junction box with cover plate provided. Failure to follow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

Installing Batteries:

The remote receiver uses four (4) "AA"- size batteries. To install batteries,



1. Remove the push buttons 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 indicated in the receiver cover.
5. Close the battery door until the door tab snaps in place.
6. To install the receiver into a wall junction box, install the receiver with the screws provided.



7. If you decided to install the receiver into the appliance, reinstall the L-bracket.
8. Gently, install the push buttons back to the receiver stem.
9. The batteries should be replaced at least once every 6 months or when the battery indicator flashes.

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 1/4",3/16", and two (2) 1/8" female spade terminals to the valve.

For applications longer than 18 inches, use 18 gauge wire, 105ºC rated, with no splices. Connect to the the 1/4", 3/16", and two (2) 1/8" 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 (250ºF) may cause the receiver to malfunction or fire hazard.

Setting Privacy Security Code on Transmitter and Receiver

The remote receiver and transmitter security codes are preset at the factory. A privacy code can be set into the system to prevent accidental operation by other transmitters in the vicinity using the following procedure:

1. Press the two push buttons on the receiver simultaneously and then press ON/HI button on the transmitter once.
2. The receiver LED will blink twice and the security code is now set.
3. The system is ready to operate.

Reset Button:

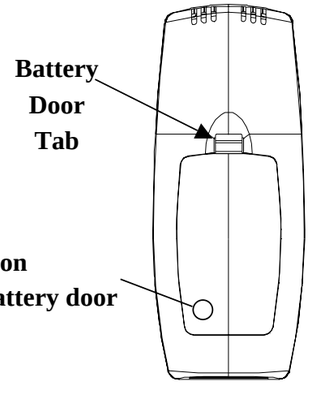
1. The reset button can be used to reset the systems such as the clock setting. The reset button is located behind the battery door cover.
2. Using a paper clip, press the button and the system will reset and go into clock setting mode. Follow the instructions on how to set the time in the next section.

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.



Back of the Transmitter

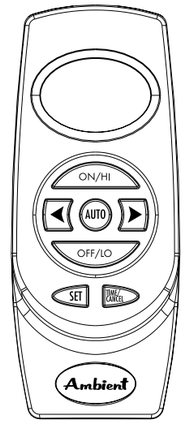
Installing Wall Holster:

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

OPERATIONS:

Transmitter:

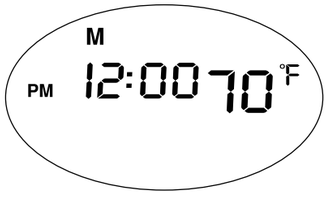
General:



The RCTHL Remote Control has four (4) operating modes: Manual, Timer, Auto, and Auto-P. The control system can be set to a temperature range 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 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 displays is shown above. Note that the temperature scale is degree F.
3. Press SET and TIME/CANCEL 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.

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 4 or 3 to change. Selected item is flashing.

Manual Mode:

1. Press and hold the ON/HI button to turn on the appliance and increase the flame height. Press and hold the OFF/LO button to decrease the flame height and to turn it off.

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 and temperature is 120 minutes (maximum) and 70 degrees Fahrenheit (room temperature).
3. Press 4 or 3 to select timer time in 10 minute increments. Press SET and 4 or 3 to set temperature.
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/HI or OFF/LO which returns to manual mode,
   c. AUTO which then goes to auto mode.

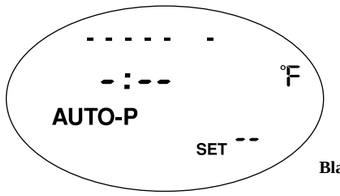
Auto mode:

1. To enter auto mode, press AUTO in manual mode or timer mode.
2. In auto mode, press SET and press 4 or 3 to set temperature.
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".
6. Pressing either the ON/HI or OFF/LO buttons, will change to Manual mode.
7. When AUTO and ON/HI buttons are pressed simultaneously and held more than 3 seconds, it will change to Auto-P (program) mode.
8. When TIMER/CANCEL button is pressed, it will change to timer mode.

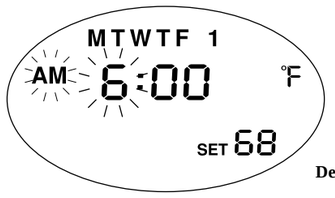
Auto-P mode:

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. To enter Auto-P mode, press AUTO and ON/HI buttons and hold more than 3 seconds. Press AUTO again.
2. When entering Auto-P mode, there are no default values and a blank display will be seen as illustrated below.
3. In this status, press UP or DOWN to load default values, LCD will be display as shown below. When entering Program setting mode for the first time, program 1 for the first day will display as shown below. 6am is flashing to indicate the selected item to be adjusted.



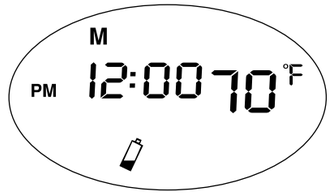
Blank LCD display



Default LCD values

4. Use AUTO to select among the items of the day shown: hour, minute and temperature of program 1. Subsequence presses will proceed to program 2, 3 and 4 and then repeat again.
5. Selected item will be flashing and can be adjusted by 4 or 3 key. Program time is changed in 3 minutes step. Setting range in Fahrenheit mode is 45-90°F in step of 1°F. The setting range in Celsius mode is 7.0-32.0°C in step of 1°C.
6. Once the settings are complete and/or no keys are pressed within 10 seconds, the program will function.
7. 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.
8. There will be a slight delay in the response of the unit (on/off) to a temperature change.Temperature is monitored every 3 minutes
9. When ON/HI or OFF/LO buttons are pressed, it will change to Manual mode.
10. When AUTO button is pressed, it will change to Auto mode.
11. When TIMER/CANCEL button is pressed, it will change to timer mode.

Low-battery detection:

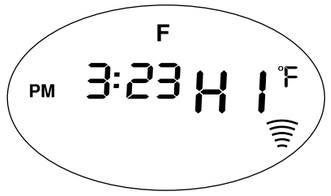


1. Battery voltage is checked once a minute. When the battery voltage drops to a certain level, the low-battery warning will come on, and the transmitter **will turn off the appliance**. The transmitter will not function anymore until fresh batteries are installed.
2. When the batteries are low, the 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/HI and OFF/LO 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/HI and OFF/LO 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.

Transmitter Out of Range Shutdown:

1. If transmitter is placed more than 30 feet away from the receiver for more than 30 minutes, the receiver will turn off the fireplace.

Receiver:

Push Button:

1. Press and hold the ON/HI button to turn on the appliance. Press and hold the OFF/LO button to turn it off.

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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.
3. Press and hold the ON/HI button on the transmitter to turn on the appliance. The main gas flame should ignite.
4. Press and hold the OFF/LO button on the transmitter to turn it off. The flame height should reduce until extinguishs the unit completely (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. 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.
4. Appliance does not come on after pressing ON/HI on transmitter	1. Wiring / Electrical Connections.	1. Check wiring connections.
	2. 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.
	3. Distance between the transmitter and receiver is more than 30 feet.	1. Make sure the operating distance is less than 30 feet
5. Receiver cannot receive signal.	1. Receiver is installed in an enclosure.	1. Make sure the receiver is not located inside an enclosure.

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.

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FOR TECHNICAL SUPPORT
CALL 800-398-6195

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