# Model: RR-1A

## INSTALLATION AND OPERATING INSTRUCTIONS

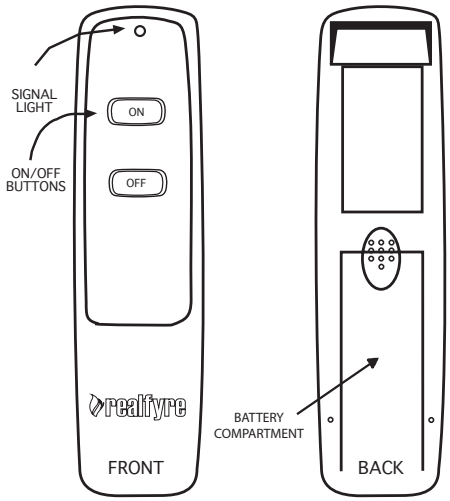
**IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS DO NOT ATTEMPT TO INSTALL OR OPERATE**

## INTRODUCTION

This remote control system was developed to provide safe, reliable, and user-friendly remote control system for gas heating appliances. The system can be operated manually from the transmitter. The system operates on one of 65,536 security codes that are programmed into the transmitter at the factory.

NOTE: This product is designed for use with an attended hearth appliance or fire feature. Adults must be present when the Control System is operating. DO NOT program or thermostatically set this Control to operate a hearth appliance or fire feature when Adults are not physically present. Furthermore, DO NOT leave the hearth appliance or fire feature burning unattended; it may cause damage or serious injury. If an Adult is going to be away from the hearth appliance or fire feature for any length of time, then the handheld/wall mount, receiver/control module and application should be in the "OFF" position.

TRANSMITTER



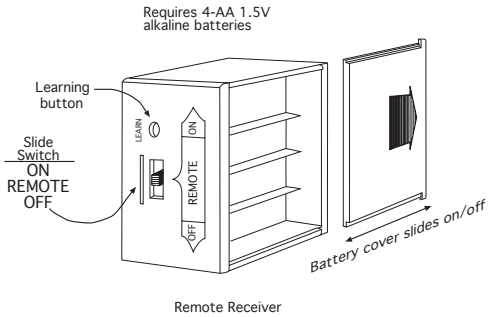

The transmitter operates on a 12V battery (included) made specifically for remote controls and electronic lighters. Install the 12V battery supplied with the unit into the battery compartment.

It is recommended that alkaline batteries always be used for longer battery life and maximum operational performance.

The transmitter has ON and OFF functions that are activated by pressing either button on the face of the transmitter. When a button on the transmitter is pressed, a signal light on the transmitter illuminates briefly to verify that a signal has been sent. Upon initial use, there may be a delay of three seconds before the remote receiver will respond to the transmitter. This is part of the system's design. If the signal light does not illuminate, check the position of the transmitter's battery.

### RECEIVER

The remote receiver operates on (4) AA-size 1.5V batteries. It is recommended that alkaline batteries be used for longer battery life and maximum microprocessor performance. IMPORTANT: New or fully charged batteries are essential for proper operation of the remote receiver. The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation. The remote receiver has a 3-position slide switch for selecting the mode of operation: ON/REMOTE/OFF.



Remote Receiver

- With the slide switch in the ON position (toward the LEARN button), the system will remain on until the slide switch is placed in the OFF or REMOTE position.
- With the slide switch in the REMOTE position (centered), the system will only operate if the remote receiver receives commands ***from the transmitter.***
- With the slide switch in the OFF position (away from the LEARN button), the system is off.
- It is suggested that the slide switch be placed in the OFF position if you will be away from your home 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 "LOCK-OUT" by both turning the system off and rendering the remote receiver inoperative.

## INSTALLATION INSTRUCTIONS

**WARNING**

This remote control system must be installed exactly as outlined in these instructions. Read all instructions completely before attempting installation. Follow instructions carefully during installation. Any modifications of the remote control or any of its components will void the warrant and may be pose a fire hazard.

Do not connect any gas valve or electronic module directly to 110-120VAC power. Consult gas appliance manufacturer's instructions and wiring schematics for proper placement of all wires. All electronic modules are to be wired to manufacturer's specifications.

The following wiring diagrams are for illustration purposes only. Follow instructions from manufacturer of gas valve and/or electronic module for correct wiring procedures. Improper installation of electric components can cause damage to electronic module, gas valve and remote receiver.

## INSTALLATION

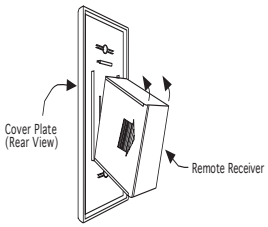
The remote receiver can be either wall-mounted in a standard plastic switch box or placed on or near the fireplace hearth. Preferably, the remote receiver should be wall-mounted in a plastic switch box, as this will protect its electronic components from both the heat produced by the gas appliance and potential damage or abuse that can occur if it is left exposed on the hearth. PROTECTION FROM EXTREME HEAT IS VERY IMPORTANT. Like any piece of electronic equipment, the remote receiver should be kept away from temperatures exceeding $130^0$ F inside the receiver case. Battery life is also significantly shortened if batteries are exposed to high temperatures.

Make sure the remote receiver switch is in the OFF position. It is recommended that 18 gauge solid or stranded wires (included) be used to make connections between the terminal wiring block on the millivolt gas valve or electronic module and the wire terminals on the remote receiver. For the best results, use 18-gauge solid or stranded wire, with no splices and measuring no longer than 20-feet.

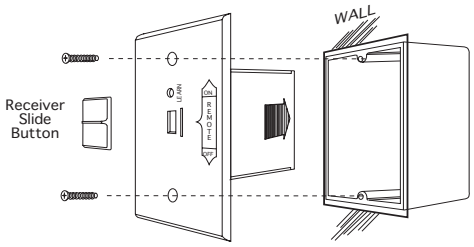
## WALL MOUNTING

Install (4) AA-size 1.5 alkaline batteries in the remote receiver. For best performance, remote receiver batteries should be factory fresh when installed. Very little battery power is required to operate the remote receiver, but the electronics are tuned to operate best when battery output is greater than 5.3 volts. Four new AA batteries should provide an output voltage of 6.0 to 6.2 volts. **Be sure batteries are installed with the (+) and (-) ends facing the correct direction**.

To attach cover plate to receiver box




Position the receiver as shown in diagram to the left with lower tab on cover plate inserted into groove of receiver (Make the LEARN hole on cover plate properly aligns with remote receiver) Pull receiver up and snap into top tab of cover plate.

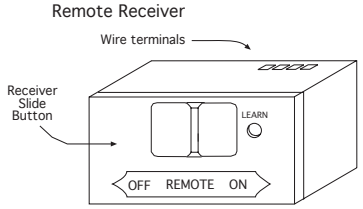



Position the cover plate so the word ON is facing up; then, install the remote receiver into the plastic switch box using the two long screws provided. Push the white button over the receiver slide switch only after making sure the remote receiver has LEARNED the transmitter's security code (see LEARNING TRANSMITTER TO RECEIVER).

**NOTE:** The remote receiver will only respond to the transmitter when the 3-position slide button on the remote receiver is in the REMOTE position. If the system does not respond to the battery transmitter on initial use, see LEARNING TRANSMITTER TO RECEIVER, and recheck battery positions in the remote receiver.

## HEARTH MOUNT

The remote receiver can be placed on the fireplace hearth or under the fireplace, behind the control access panel. Position where the ambient temperature inside the receiver case does not exceed $130^0$F.NOTE: Black slide button is used for hearth mount applications.

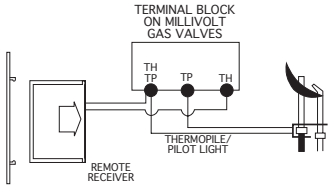


## WIRING INSTRUCTIONS

A qualified electrician or a gas technician who is familiar with the gas appliance and gas valves that will be operated by this remote should install the remote control system. Incorrect wiring connections **WILL** cause damage to the gas valve or electronic module operating the gas appliance and may also damage the remote receiver.

### WIRING MILLIVOLT VALVES

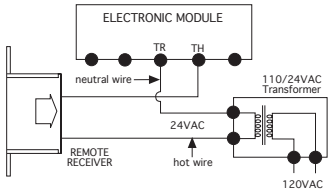
The remote receiver is connected to the millivolt valve using the TH (thermostat) terminals on the terminal block on the millivolt gas valve. Connect 18 gauge solid or stranded wires from the remote receiver to the gas valve.




Operation of the remote receiver is similar to that of a thermostat in that both turn the gas valve on and off based on input signals. A thermostat's input signals are different temperatures. The remote receiver's input signals come from the transmitter.

Connect each of the two wires leading from the TH terminals on the millivolt gas valve to either of the two wire terminals on the remote receiver. Normally it does not matter which wires go to which terminal.

### WIRING ELECTRONIC SPARK IGNITIONS




The remote control receiver can be connected, in series, to a 24VAC transformer to the TR (transformer) terminal on the electronic module. Connect the hot wire from the 24VAC transformer to either of the wire terminals on the remote receiver. Connect another wire (included) between the other receiver wire terminal and the TH (thermostat) terminal on the electronic module.

## SYSTEM CHECK

### MILLIVOLT VALVES

Light your gas appliance following the lighting instructions that came with the appliance. Confirm that the pilot flame is on; it must be in operation for the main gas valve to operate.

- Slide the 3-position button on the remote receiver to the ON position. The main gas flame (i.e., the fire) should ignite.
- Slide the button to OFF. The flame should extinguish (the pilot flame will remain on).
- Slide the button to REMOTE (the center position), and then press the ON button on the transmitter to change the system to ON. The main gas flame should ignite.

### ELECTRONIC IGNITION SYSTEMS

- Slide the 3-position button on the remote receiver to the ON position. The spark electrode should begin sparking to ignite the pilot (the pilot may ignite after only one spark). After the pilot flame is lit, the main gas valve should open and the main gas flame should ignite.
- Slide the button to OFF. The main gas flame and pilot flame should both extinguish.
- Slide the button to REMOTE (the center position), and then press the ON button on the transmitter to change the system to ON. The spark electrode should begin sparking to ignite the pilot. After the pilot is lit, the main gas valve should open and the main gas flame should ignite.

## GENERAL INFORMATION

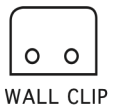
### LEARNING TRANSMITTER TO RECEIVER

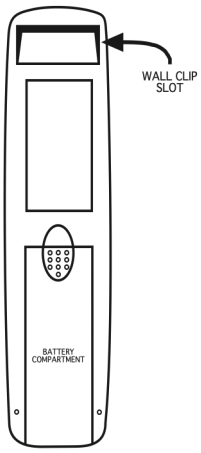
Each transmitter uses a unique security code. It will be necessary to press the LEARN button on the receiver to accept the transmitter security code upon initial use, if batteries are replaced, or if a replacement transmitter is purchased from your dealer or the factory. In order for the receiver to accept the transmitter security code, be sure the slide button on the receiver is in the REMOTE position; the receiver will **not** LEARN if the slide switch is in the ON or OFF position. The LEARN button in located on the front face of the receiver; inside the small hole labeled LEARN. Using a small screwdriver or end of a paperclip gently press and release the black LEARN button inside the hole. When you release the LEARN button the receiver will emit an audible "beep".

After the receiver emits the beep press the transmitter ON button and release. The receiver will emit several beeps indicating that the transmitter's code has been accepted into the receiver.
The microprocessor that controls the security code matching procedure is controlled by a timing function. If you are unsuccessful in matching the security code on the first attempt, wait 1-2 minutes before trying again – this delay allows the microprocessor to reset its timer circuitry – and try up to two or three more times.

**TRANSMITTER WALL CLIP**

The transmitter can be hung on a wall using the clip provided. If the clip is installed on a solid wood wall, drill 1/8" pilot holes and install with the screws provided. If it is installed on a plaster/wallboard wall, first drill two 1/4" holes into the wall. Then use a hammer to tap in the two plastic wall anchors flush with the wall; then install the screws provided.




**BATTERY LIFE**

Life expectancy of the alkaline batteries in the transmitter should be at least 12 months. Check and replace all batteries annually. When the transmitter no longer operates the remote receiver from a distance as it did previously (i.e., the transmitter's range has decreased), or the remote receiver does not function at all, the batteries should be checked. It is important that the remote receiver batteries are fully charged and provides continuous output voltage of a least 5.3 volts. The length of the wire between the remote receiver and gas valve directly affects the operating performance of the remote system. The longer the wire, the more battery power is required to deliver signals between the remote receiver and the gas valve.

**TROUBLE SHOOTING**

If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the remote. Review the fireplace manufacturer's operation manual to make sure all connections are properly made. Then check the operation of the remote in the following manner:

- Make sure the batteries are correctly installed in the receiver. One reversed battery will keep receiver from operating properly.
- Check battery in Transmitter to make sure contacts are touching (+) and (-) ends of battery. Bend metal contacts in for tighter fit.
- Be sure receiver and Transmitter is within 20 to 25-feet operating range.
- Clear Codes: Memory in the receiver might be full if the learn button is pressed too many times. If this happens it will not allow any more codes to be learned and no audible beep will be heard. To clear memory, place the receiver slide switch into the REMOTE position. Press the learn button and release after 10 seconds. You should hear three (3) long audible beeps indicating all codes have cleared. You can now "learn" the transmitter to the receiver as described in the General Information Section.
- Keep receiver from temperatures exceeding $130^0$ F. Battery life shortened when ambient temperatures are above $130^0$ F.
- If receiver is installed in tightly enclosed metal surround, the operating distance will be shortened.

## RR-1A / RR-2A REMOTE SYSTEMS ADDENDUM

**WIRING TO AN EXISTING TOGGLE SWITCH**

1. Locate the electrical connectors on the back of the toggle switch that controls your gas log set.
2. Remove the two (2) spare female connectors (if installed) from the two (2) male piggyback connectors. The piggyback connectors are each a part of a female electrical connector wired to burner control valve (Fig. 1).

**Note**: Control valve connectors must remain attached to the toggle switch and the control valve.

3. Connect each of the two (2) female connectors coming from the remote receiver to one of the two (2) male piggy-back connectors on the back of the toggle switch (Fig. 2).

**Note:** If the female remote receiver connectors also have piggyback connectors, you may attach the spare female connectors to them.

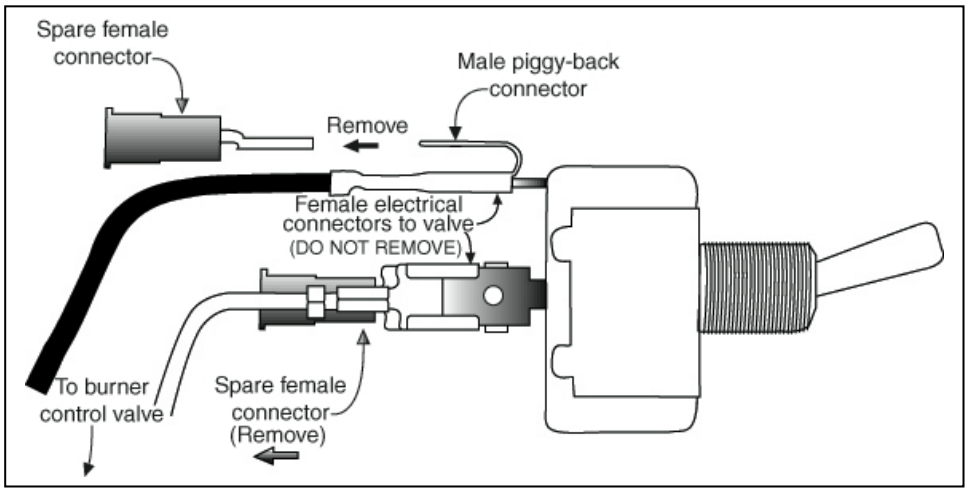



**Fig.1**

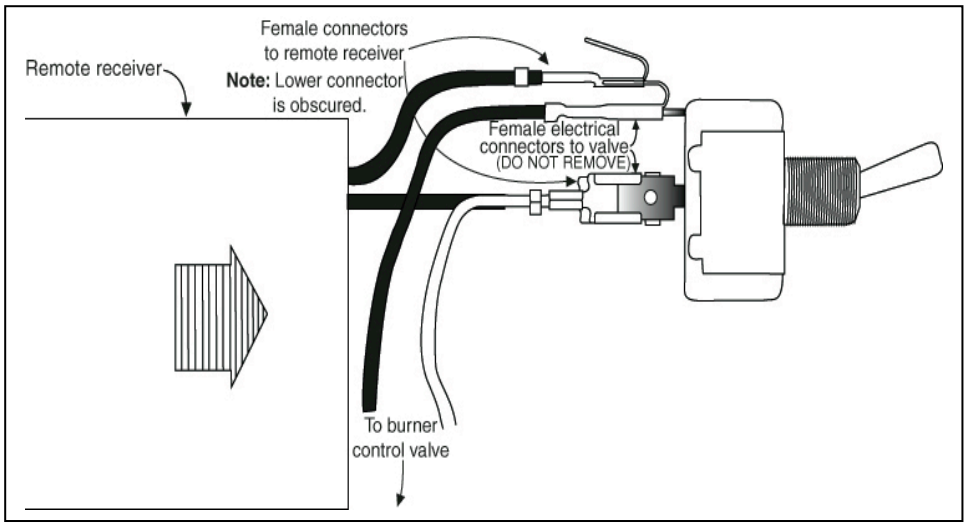



**Fig. 2**

**SPECIFICATIONS**

BATTERIES: Transmitter 12V (A23); Remote Receiver 6V – 4ea. AA 1.5

Alkaline Operating Frequency: 303.875MHZ

Output: Dry-contact for up to 40VDC/1A, 30VAC/1A

**FCC REQUIREMENTS**
**NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THE EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT**

**Federal Communication Commission Interference Statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
**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 connected.
- Consult the dealer or an experienced radio/TV technician for help.

**Note:** The Grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. such modifications could void the user's authority to operate the equipment.

**RF Warning**

The device has been evaluated to meet general RF exposure requirement. This equipment complies with FCC's RF radiation exposure limits set forth for an uncontrolled environment. This device and its antenna(s) must not be co-located or conjunction with any other antenna or transmitter.

**IC Warning**

This device complies with Industry Canada license-exempt RSS standard (s).
Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.