



Model: RR-2A

INSTALLATION AND OPERATING INSTRUCTIONS

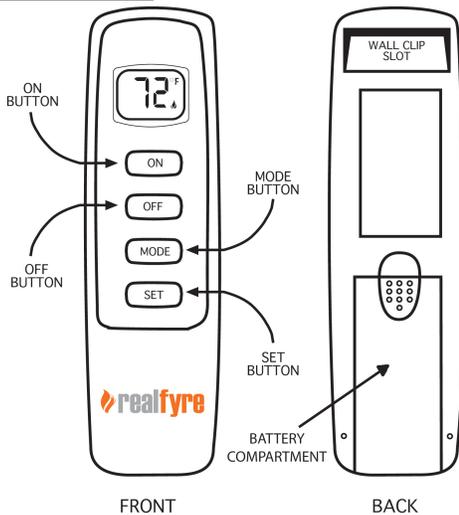
**IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS
DO NOT ATTEMPT TO INSTALL OR OPERATE**

INTRODUCTION

This remote control system was developed to provide a safe, reliable and user-friendly remote control system for gas heating appliances. This all battery system operates independently of household current. The system operates on radio frequencies with a non-directional signals. The SYSTEM's operating range is approximately 20-foot range. The system operates on one of 1,048,576 security codes that are programmed into the transmitter at the factory; the remote receiver's code must be matched to that of the transmitter prior to initial use.

Review **COMMUNICATION SAFETY SECTION** under TRANSMITTER section. These signal/temperature safety features shut down the fireplace system when a potentially unsafe condition exists.

TRANSMITTER

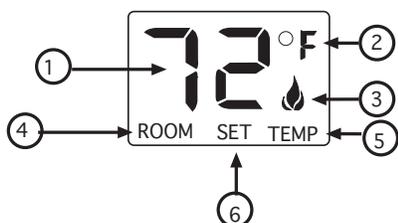


FRONT

BACK



LCD - Liquid Crystal Display



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. RR-2A is a remote control SYSTEM offers the user a battery-operated remote control that operates most millivolt gas valves used in some heater rated gas logs, gas fireplaces and other gas heating appliances.

The transmitter operates on (2) 1.5V AAA batteries.

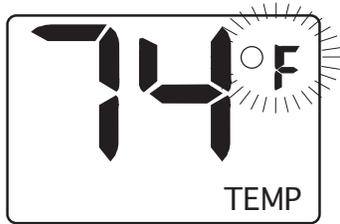
It is recommended that alkaline batteries always be used for longer battery life and maximum operational performance.

Before using the transmitter, install the (2) AAA transmitter batteries into the battery compartment. (Use caution that batteries are installed in the proper direction)

RR2A KEY SETTINGS

1. **ON** - Operates unit to ON position, Manually ON.
2. **OFF** - Operates unit to OFF position, Manually OFF.
3. **MODE** - Changes unit from manual mode to thermo mode.
4. **SET** - Sets temperature in thermo mode.

1. Display ----- Indicates current room temperature
2. °F or °C ----- Indicates degrees Fahrenheit or Celsius
3. Flame ----- Indicates appliance is ON.
4. Room ----- Indicates remote is in THERMO mode.
5. Temperature ----- Appears during manual operation.
6. Set ----- Appears when setting the desired temperature in THERMO mode.



SETTING °F / °C SCALE

The factory setting for temperature is °F. To change this setting to °C, first.

- Press the ON key and the OFF key on the transmitter at the same time this, will change from °F to °C. Follow this same procedure to change from °C back to °F.

MANUAL FUNCTION

To operate the system in the manual “MODE” does the following.

ON OPERATION

Press the ON key the appliance flame will come on. During this time the LCD screen will show ON, after 3 seconds the LCD screen will default to display room temperature and the word TEMP will show. **(Flame icon will appear on LCD screen in on mode)**

OFF OPERATION

Press the OFF key the appliance flame will shut off. During this time the LCD screen will show OF, after 3 seconds the LCD screen will default to display room temperature and the word “TEMP” will also show on the screen.

THERMOSTAT FUNCTION

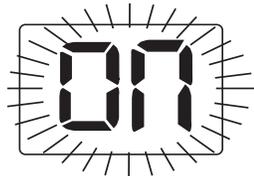
SETTING DESIRED ROOM TEMPERATURE

This remote control system can be thermostatically controlled when the transmitter is in the THERMO mode (The word **ROOM must be displayed on the screen**). To set the THERMO MODE and DESIRED room temperature, Press the MODE key until the LCD screen shows the word ROOM, then the remote is in the thermostatic mode. Press and hold the SET key until the desired set temperature is reached. (By pressing and holding the set key the LCD screen set numbers will increase from 45° to 99° then restart over at 450) Next release the SET key. The LCD screen will display the set temperature for 3 seconds and the LCD screen will flash the set temperature for 3 seconds, then the LCD screen will default to display the room temperature.

TO CHANGE THE SET TEMPERATURE

Press and hold the SET key until the desired set temperature is reached. (By pressing and holding the set key the LCD screen set numbers will increase from 45° to 99° then restart over at 45°) Next release the SET key. The LCD screen will display the set temperature for 3 seconds, then will flash the set temperature for 3 seconds, then the LCD screen will default to display the room temperature.

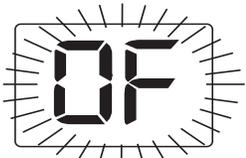
Press the MODE key to disengage the thermo mode. The word ROOM on the LCD screen will not show when the thermo is not in operation.



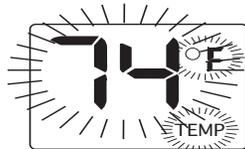
SCREEN WHILE DEPRESSING ON Button



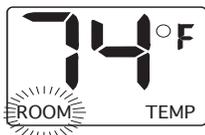
SCREEN AFTER 3 SECOND DEFAULT



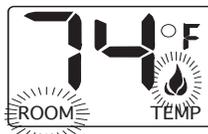
SCREEN WHILE DEPRESSING OFF Button



SCREEN AFTER 3 SECOND DEFAULT



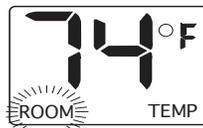
THERMO MODE



THERMO ON



THERMO SET



THERMO OFF

NOTE: The highest SET temperature is 99° Fahrenheit (32° Celsius) and the lowest temperature is (45° Fahrenheit (6° Celsius))

OPERATIONAL NOTES:

The Thermo Feature on the transmitter operates the appliance whenever the ROOM TEMPERATURE varies a certain number of degrees from the SET TEMPERATURE. This variation is called the "SWING" or TEMPERATURE DIFFERENTIAL. The normal operating cycle of an appliance may be 2-4 times per hour depending on how well the room or home is insulated from the cold or drafts. The factory setting for the "swing number" is 2. This represents a temperature variation of +/- 2° F (1° C) between SET temperature and ROOM temperature, which determines when the fireplace will be activated. This function is pre-set at the factory.

The transmitter has ON and OFF manual functions that are activated by pressing either button on the face of the transmitter. When a button on the transmitter is pressed the word ON or OF will appear on the LCD screen to show while the signal is being 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.

REMOTE RECEIVER

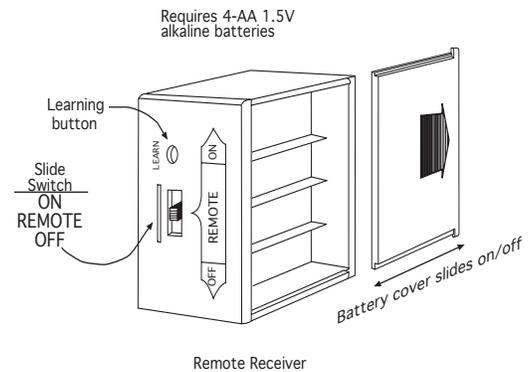
IMPORTANT

THE REMOTE RECEIVER SHOULD BE POSITIONED WHERE AMBIENT TEMPERATURES DO NOT EXCEED 130° F.

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. It emits one beep when it receives an ON or OFF command manually, but no beep when cycling on and off automatically in THERMO mode. The remote receiver has a 3-position slide switch for selecting the mode of operation: ON/REMOTE/OFF

- 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.
- 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

INSTALLATION

The remote receiver can be mounted on or near the fireplace 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°F inside the receiver case. Battery life is also significantly shortened if batteries are exposed to high temperatures.

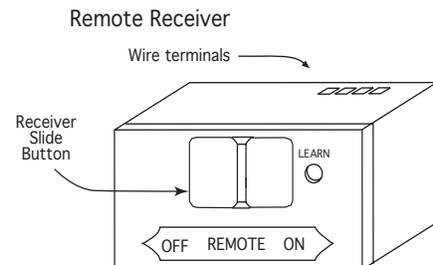
HEARTH MOUNT

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° F.

NOTE: Black Button is used on Hearth Mount Applications.

INSTALLATION

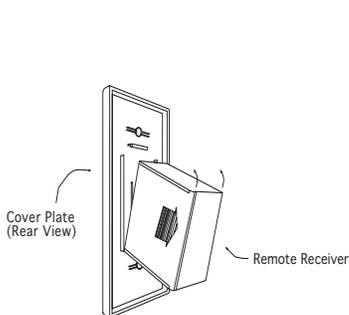
The remote receiver can be either wall-mounted in a standard plastic switch box or placed on or near the fireplace hearth. Preferably, the remote receiver should be wall-mounted in a plastic switch box, as this will protect its electronic components from both the heat produced by the gas appliance and 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° 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 gage stranded wire, with no splices and measuring no longer than 20'.

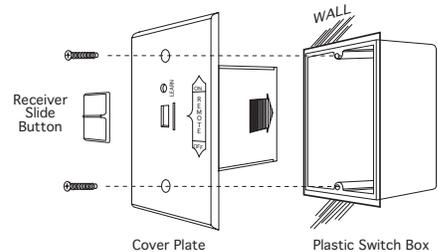
WALL MOUNTING

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 sure 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).



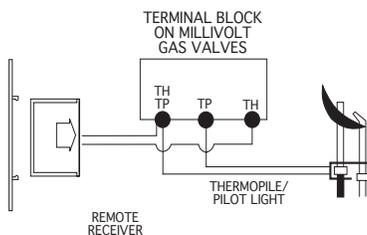
NOTE: The remote receiver will only respond to the transmitter when the 3-position slide button on the remote receiver is in the REMOTE position. If the system does not respond to the battery transmitter on initial use, see LEARNING TRANSMITTER TO RECEIVER, and recheck battery positions in the remote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

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

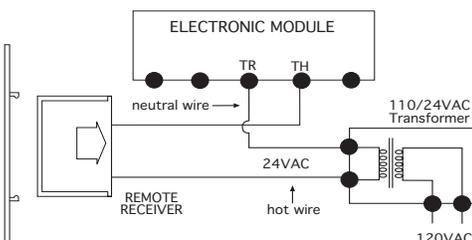
The remote receiver is connected to the millivolt valve using the TH (thermostat) terminals on the terminal block on the millivolt gas valve. Connect 18 gauge solid or stranded wires from the remote receiver to the gas valve.



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 turn the system to ON. The main gas flame should ignite.
- Press the OFF button on the transmitter to turn the system to OFF. The flame should extinguish (the pilot flame will remain ON).
- Press the MODE button on the transmitter to change the system to THERMO. Advance the SET temperature on the transmitter to a temperature of at least 2° F (1° C) above the ROOM temperature displayed on the LCD screen. With this manual setting, the normal thermostatic cycle is overridden and the system flame will ignite. Set the SET temperature to at least 2° F (1° C) below the room temperature and the system flame will extinguish in a few seconds. Thereafter, it should continue to cycle to on and off thermostatically approximately every two minutes as the ROOM temperature changes, but only when the temperature differential between room and set temperatures differ at least 2° F (1° C). The 2° F differential is the factory setting.

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 turn 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.
- Press the OFF button on the transmitter to OFF. The main gas flame and pilot flame should BOTH extinguish.
- Press the MODE button on the transmitter to change the system to THERMO. Advance the SET temperature on the transmitter to a temperature of at least 2° F (1° C) above the ROOM temperature displayed on the LCD screen. With this manual setting the normal thermostatic cycle is overridden and the system flame will ignite. Set the SET temperature to at least 2° F (1° C) below the room temperature and the system flame will extinguish in a few seconds. Thereafter, it should continue to cycle to on and off thermostatically approximately every two minutes as the room temperature changes, but only when the temperature differential between ROOM and SET temperatures differ at least 2° F (1° C). (The 2° F differential is the factory setting).

CP (CHILDPROOF) FEATURE

This remote control includes a CHILDPROOF “LOCK-OUT” feature that allows the user to “LOCK-OUT” operation of the appliance, from the TRANSMITTER.

SETTING “LOCK-OUT” – (CP)

- To activate the “LOCK-OUT” feature, press and hold the ON button and the MODE button at the same time for 5 seconds. The letters CP will appear in the TEMP frame on the LCD screen.
- To disengage the “LOCK-OUT”, press and hold the ON button and the MODE button at the same time for 5 seconds and the letters CP will disappear from the LCD screen and the transmitter will return to its normal operating condition.
- To verify that transmitter is in the CP lock-out mode press any key and the LCD screen will show “CP”

NOTE: If the appliance is already operating in the ON or THERMO MODES, engaging the “LOCK-OUT” will not cancel the operating MODE. Engaging the “LOCK-OUT” prevents only the manual operation of the TRANSMITTER. If in the auto modes, the THERMO operation will continue to operate normally. To totally “LOCK-OUT” the operation of the TRANSMITTER’S operating signals; the transmitter’s MODE must be set to OFF.

THERMO UPDATING FEATURE –TRANSMITTER – (T/S –TX)

This remote control has a THERMO UPDATING Feature built into its software. The THERMO UPDATING Feature operates in the following manner, but only in the THERMO MODES:

The transmitter reads the ROOM temperature every 2 minutes checking the ROOM temperature against the SET temperature and then sends a signal to the receiver.

COMMUNICATION – SAFETY – TRANSMITTER – (C/S – TX)

This remote control has a COMMUNICATION –SAFETY function built into its software. It provides an extra margin of safety when the TRANSMITTER is out of the normal 20-foot operating range of the receiver.

The COMMUNICATION – SAFETY feature operates in the following manner, in all OPERATING MODES – ON/ ON THERMO.

At all times and in all OPERATING MODES, the transmitter sends an RF signal every fifteen (15) minutes, to the receiver, indicating that the transmitter is within the normal operating range of 20 feet. Should the receiver NOT receive a transmitter signal every 15 minutes, the IC software, in the RECEIVER, will begin a 2-HOUR (120-minute) countdown timing function. If during this 2-hour period, the receiver does not receive a signal from the transmitter, the receiver will shut down the appliance being controlled by the receiver. The RECEIVER will then emit a series of rapid “beeps” for a period of 10 seconds. Then after 10 seconds of rapid beeping, the RECEIVER will continue to emit a single “beep” every 4 seconds until a transmitter ON or MODE Button is pressed to reset the receiver. The intermittent 4-second beeping will go on for as long as the receiver’s batteries last which could be in excess of one year.

To “reset” the RECEIVER and operate the appliance, you must press the ON or MODE button on the transmitter. By turning the system to ON, the COMMUNICATION –SAFETY operation is overridden, and the system will return to normal operation depending on the MODE selected at the transmitter. The COMMUNICATION – SAFETY feature will reactivate should the transmitter be taken out of the normal operating range or should the transmitter’s batteries fail or be removed.

GENERAL INFORMATION

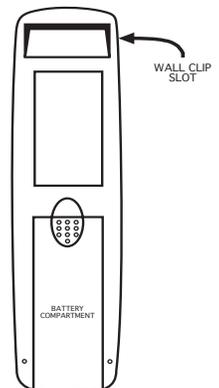
LEARNING TRANSMITTER TO RECEIVER

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 is 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 any 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 alkaline batteries in the RR-2A should be at least 12 months. Check and replace all batteries annually. When the transmitter no longer operates the remote receiver from a distance 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, providing combined output voltage of at least 5.3 volts. The transmitter should operate with as little as 2.5 volts battery power.

TROUBLESHOOTING

If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the RR-2A remote system. 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-foot 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° F. Battery life shortened when ambient temperatures are above 115° F.
- If RECEIVER is installed in tightly enclosed metal surround, the operating distance will be shortened.
- NOTE: A receiver located in an area, where the ambient temperature inside the case exceeds 130° F, will cause the THERMO-SAFETY feature to cut in, requiring you to reposition the receiver to stop the warning beeps, and to “reset” the receiver’s operation.

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 piggy-back connectors. The piggy-back connectors are each a part of a female electrical connector wired to the burner control valve (See 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 (See Fig. 2).

Note: If the female remote receiver connectors also have piggy-back connectors, you may attach the spare female connectors to them.

Fig. 1

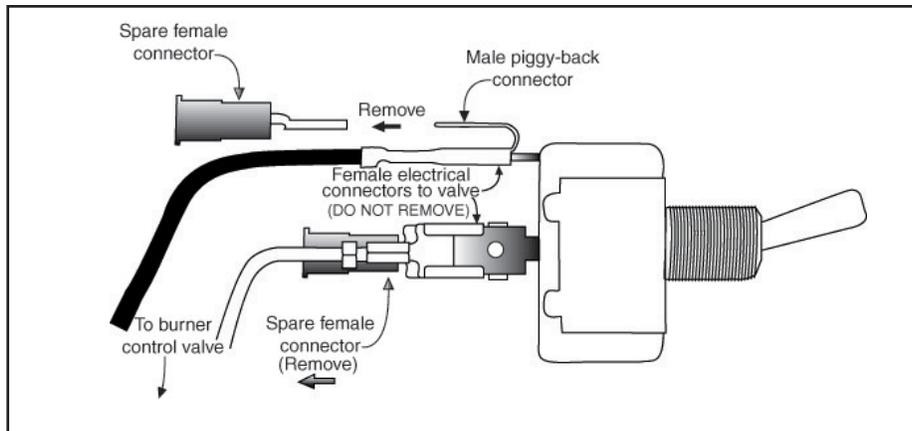
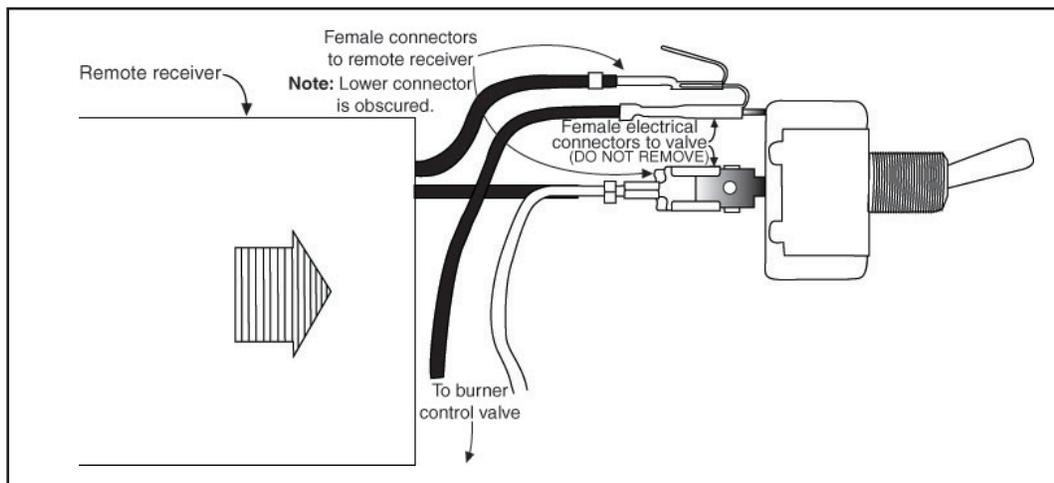


Fig. 2



SPECIFICATIONS

BATTERIES: Transmitter (2) 1.5-volt AAA batteries
Remote Receiver 6V - 4 ea. AA 1.5 Alkaline
Operating Frequency: 303.8 MHz

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 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.

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.

Cet appareil est conforme aux normes RSS exemptes de licence d'Industrie Canada.

Le fonctionnement est soumis aux deux conditions suivantes:

- (1) Cet appareil ne doit pas causer d'interférences et
- (2) Cet appareil doit accepter toute interférence, y compris les interférences pouvant entraîner un fonctionnement indésirable de l'appareil.

This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference causing equipment regulations.

Cet appareil est conforme à la norme RSS 210 d'Industrie Canada. Cet appareil de classe B respecte toutes les exigences du règlement canadien sur le matériel brouilleur.

