

TS-2R INSTALLATION AND OPERATING INSTRUCTIONS

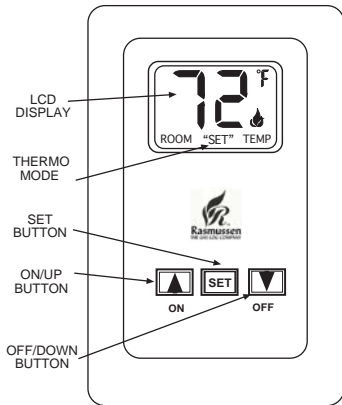
IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS DO NOT ATTEMPT TO INSTALL OR OPERATE

INTRODUCTION

This remote control system was developed to provide a safe, reliable, and user-friendly remote control system for gas heating appliances. The system can be operated thermostatically or manually from the transmitter. The system operates on radio frequencies (RF) within a 20' range using non-directional signals. The system operates 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 and **THERMO SAFETY SECTION** under REMOTE RECEIVER section. These signal/temperature safety features shut down the fireplace system when a potentially unsafe condition exists.

WALL MOUNT THERMOSTAT



The wall/transmitter operates on (2) 3V Button Cell (Included) which powers the LCD screen and powers the RF signal. These batteries are made specifically for remote controls and electronic lighters. Before using the transmitter the 3V batteries must be installed into the battery compartments.

It is recommended that CR2032 lithium batteries always be used for longer battery life and maximum operational performance.

Upon initial use, there may be a delay of five seconds before the remote receiver will respond to the transmitter. This is part of the system's design. If the LCD screen will not come on, check the 3V Button Cell battery.

TO INSTALL BATTERIES IN THE WIRELESS THERMOSTAT

1. Remove face from backing plate this is done by sliding the face up about 1/2" then pull the face off the base plate. As shown in Figure #1
2. Locate the (2) holders for the 3V button cell batteries.
3. Slide the button cell batteries into the battery holders. (Make sure that the batteries are installed with the (+) plus side facing you or up.

TO REMOVE THE BATTERIES IN THE WIRELESS THERMOSTAT

1. Remove face from backing plate this is done by sliding the face up about 1/2" then pull the face off the base plate. As shown in Figure #1
2. Locate the (2) holders for the 3V button cell batteries.
3. Insert a small screwdriver into the slot above the button cell battery and push the battery out. AS shown in Figure #2

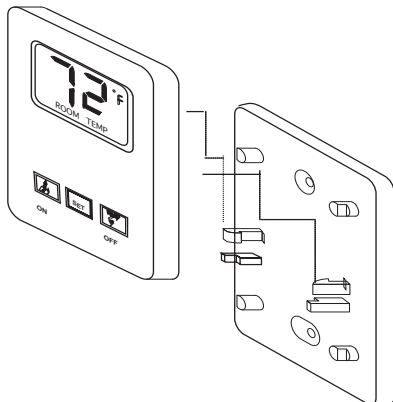
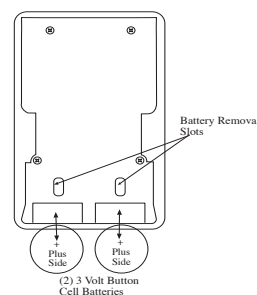


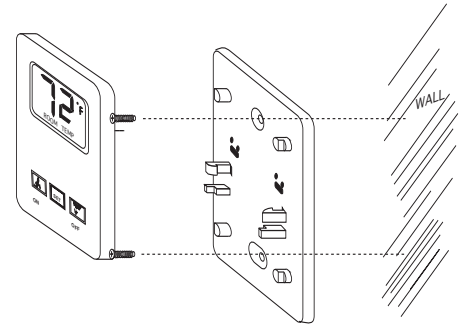
Figure #2

BACK OF UNIT



WALL MOUNTING THE THERMOSTAT

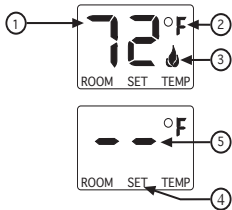
1. The wireless Thermostat must be located within 20' of the receiver. This is the normal operational distance.
2. Remove face from backing plate as shown in **Figure #1** then locate the (2) two holes that mount the plate to the wall.
3. After locating the (2) two mounting holes and mark the holes on the wall.
4. Use the (2) two dry wall anchors and screws (that are supplied) to mount the base plate to the wall as shown.
5. Thermostat can also be mounted onto an existing (Plastic) electrical box.
6. Base plate should be mounted level on the wall for best operation.



GENERAL INFORMATION

WALL MOUNT THERMOSTAT OPERATION

FUNCTIONS



1. ROOM TEMP – Current room temperature.
2. **F** – Degrees Fahrenheit (**C** Indicates degrees Celsius)
3. FLAME ICON – Indicates APPLIANCE IS ON.
4. SET- Indicates transmitter is in thermostat mode.
5. DASHES – Indicate thermostat mode is being disabled. When transmitter is not in the thermostat mode. The word (**SET**) will not appear.



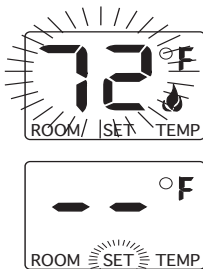
1. This TS-2R Wall/transmitter has **ON**, **OFF**, and **SET** functions that are activated by pressing the buttons on the face of the transmitter.
2. Upon initial use, there may be a delay of five seconds before the remote receiver will respond to the transmitter. This is part of the system's design. If the LCD will not come on, check the 3V-button cell battery.

SETTING MANUAL OPERATION



1. When the **ON** button on the wall/transmitter is pressed a flame icon on the LCD screen will appear when the appliance is **ON**.
2. When the appliance is **OFF** the flame icon will not appear.

SETTING THERMOSTAT OPERATION



1. If the transmitter is in the thermostat mode the word (**SET**) will appear on the LCD screen.
2. When the **SET** button is pressed the temperature digits will begin to flash.
3. While the temperature digits are flashing use the **ON** button to increase the set temperature or use the **OFF** button to decrease the set temperature to your desired temperature.
4. When the desired temperature setting is reached press the **SET** button, again and the word **SET** will appear on the LCD screen and now the transmitter will automatically send an **ON** or **OFF** signal to the receiver.
5. To disengage the thermostat mode push the **OFF** button or push and hold the **SET** button until (2) dashes appear on the LCD screen. When you release the **SET** button this will disengage the thermostat mode and the word **SET** will disappear from the LCD screen.

SETTING ° F / ° C SCALE

The factory setting for temperature is degrees Fahrenheit (0 F). To change this setting to Centigrade (° C), you must press and hold both the **ON** and **OFF** buttons on the transmitter **at the same time** until the LCD displays the change. If you want to convert back, repeat the above procedure.

THERMOSTAT UPDATING FEATURE –TRANSMITTER

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

The transmitter normally 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

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 – Manual ON and THERMOSTAT.

At all times and in all OPERATING MODES, the wall transmitter sends an RF signal every fifteen (15) minutes, to the receiver, 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 wall 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 the ON button on the wall transmitter 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.

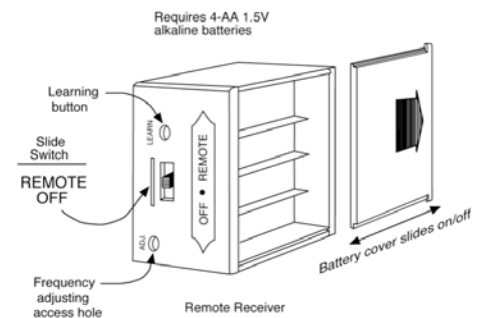
To “reset” the RECEIVER and operate the appliance, you must press ON button on the wall transmitter. The flame icon must be display on the LCD screen. By turning the system to ON, the COMMUNICATION -SAFETY operation is overridden and the system will return to normal operation depending on the MODE selected at the wall transmitter. The COMMUNICATION – SAFETY feature will reactivate if the transmitter’s batteries fail or be removed.

REMOTE RECEIVER

IMPORTANT

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

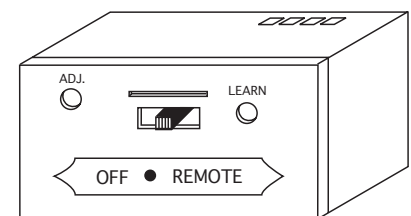
The remote receiver (right) operates on four 1.5V AA-size batteries. It is recommended that ALKALINE batteries be used for longer battery life and maximum microprocessor performance. **IMPORTANT:** New or fully charged batteries are essential to proper operation of the remote receiver as a latching solenoid power consumption is substantially higher than standard remote control systems.



NOTE: The remote receiver will only respond to the transmitter when the 2-position slide button on the remote receiver is in the REMOTE position. The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation.

FUNCTIONS:

1. **With the slide switch in the REMOTE position, the system will only operate if the remote receiver receives commands from the transmitter.** Upon initial use or after an extended period of no use, the ON button may have to be pressed for up to three seconds before activating solenoid. If the system does not respond to the transmitter on initial use, see Matching Security Codes.
2. **With the slide in the OFF position, the system is off.**
3. **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.** Placing the slide switch in the OFF position also functions as a safety



Part # BPR-1

"lock out" by both turning the system OFF and rendering the transmitter inoperative.

INSTALLATION INSTRUCTIONS

WARNING

DO NOT CONNECT REMOTE RECEIVER DIRECTLY TO 110-120VAC POWER. THIS WILL BURN OUT THE RECEIVER. FOLLOW INSTRUCTIONS FROM MANUFACTURER OF GAS VALVE FOR CORRECT WIRING PROCEDURES. IMPROPER INSTALLATION OF ELECTRIC COMPONENTS CAN CAUSE DAMAGE TO GAS VALVE AND REMOTE RECEIVER, WHICH IS NOT COVERED BY WARRANTY.

INSTALLATION

NOTE: INSTALLATIONS IN THE OPTIONAL CERAMIC LOG HOUSE (ITEM #RH2) IS HIGHLY RECOMMENDED.

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.

Make sure the remote receiver switch is in the OFF position. For best results it is recommended that 18 gauge stranded wires should be used to make connections and no longer than 20 ft.

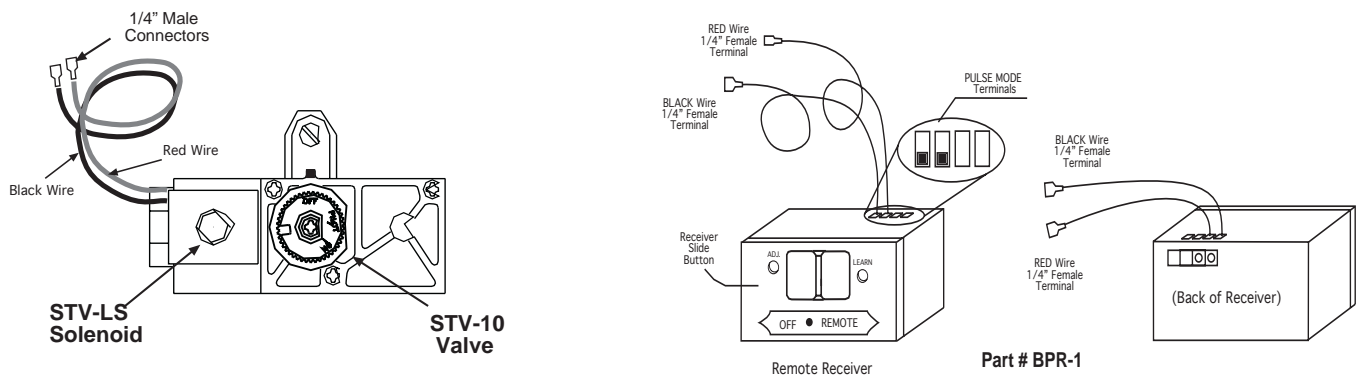
WIRING INSTRUCTIONS

CONNECTING THE RECEIVER TO A VALVE WITH THE LATCHING SOLENOID

1. Connect the BLACK 18 gage stranded wire with the 1/4" female terminal from the receiver to the BLACK wire with the 1/4" male terminals from the valve solenoid.
2. Connect the RED 18 gage stranded wire with the 1/4" female terminal from the receiver to the RED wire with the 1/4" male terminals from the valve solenoid.
3. After receiver wires are connected to the valve solenoid wire make sure the receiver shield is located over the receiver and then locate the receiver in an area that will not exceed the 130° F.

IMPORTANT NOTE: Operation of these controls is dependent on which wire is attached to which terminal. If operation of control does not correspond to operating buttons on transmitter, reverse wire installation at the receiver or at the control.

NOTE: Up to 6.3 VDC of power is provided at the receiver terminal.



THERMOSTAT-SAFETY FEATURE - BPR-1 RECEIVER

When the ambient temperature at the THERMISTOR, inside the receiver case, reaches 130°F, the THERMISTOR will automatically send 2 pulses of power to the off terminal on the valve to shut the fireplace system off and the RECEIVER will begin emitting a series of 2 "beeps" every 4 seconds. When the ambient temperature, at the RECEIVER, drops between 120° F and 130° F, the user can reactivate the fireplace by pushing either button on the transmitter. When any transmitter button is pressed, the THERMISTOR "resets" itself and the fireplace will begin operating again. However, the "beeping" will continue, if the ambient temperature remains between 120° F and 130° F. This "beeping" alerts the user that the RECEIVER should be repositioned so the ambient temperature drops below 120° F.

When the temperature drops below 120° F, the "beeping" will cease, providing the user has "reset" the THERMISTOR by pushing either transmitter button to operate the fireplace. Allow sufficient time for receiver to cool below 120° F, and then press transmitter button to stop beeping.

GENERAL INFORMATION

MATCHING SECURITY CODES

Each transmitter can use one of 1,048,576 unique security codes. It may be necessary to program the remote receiver to LEARN the security code of the transmitter upon initial use, if batteries are replaced, or if a replacement transmitter is purchased from your dealer or the factory. When matching security codes, be sure slide button on the receiver is in the REMOTE position; the code will NOT "LEARN" if the slide switch is in the ON or OFF position. Program the remote receiver to LEARN a new security code **Push and Release** the LEARN button on the top of the remote receiver and then **Press** the **ON** button on the wall transmitter. A change in the beeping pattern, at the receiver, indicates the transmitter's code has been programmed into the receiver. When an existing receiver is matched to a new transmitter, the new security code will override the old one.

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.

THERMOSTAT FUNCTION

When the transmitter is in the THERMOSTAT mode, it should be kept away from direct sources of heat such as fireplaces, incandescent lighting, and direct sunlight. Leaving the transmitter in direct sunlight, for example, will cause its heat-sensing diode to read the room temperature higher than it actually is: if in THERMOSTAT mode, it may not turn on the appliance even if the ambient ROOM temperature is below the SET temperature.

BATTERY LIFE

Life expectancy of alkaline batteries in the TS-2R should be at least 12 months. Check and replace all batteries annually. When the Wall Transmitter no longer operates 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 a combined output voltage of at least 5.3 volts. The length of the wire between the remote receiver and the 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. The Wall Transmitter should operate with as little as 2.4 volts of battery power, measuring at each of the 3-volt button cell batteries.

TROUBLE SHOOTING

Should you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the remote control. 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:

1. Make sure receiver batteries are installed properly. If one battery is installed backward, receiver will not operate in remote mode. Be sure battery output is 5.3 volts or more. (Slide switch is independent of battery condition.)
2. Be sure the wall transmitter's batteries are properly installed and that the battery output is 2.4 volts each or more.
3. The wall transmitter has (2) 3 volt button cell batteries (1) button cell operates the LCD screen and the other button cell operates sending the RF signal. If the button cell battery that controls sending the RF signal is low or defective the LCD screen may work but the RF signal may not be sending (Check each button cell battery)
4. Check to make sure the transmitter is communicating with the receiver.
 - If the receiver beeps when the **ON** button is depressed on the wall transmitter they are communicating.
 - If the receiver does not beep when the **ON** button is depressed on the wall transmitter, you will need to teach the receiver the code of the transmitter. This is done by holding the **LEARN** button down on the receiver (NOTE: The black slide Button covers the LEARN access hole when installed), and at the same time depress the ON button on the wall transmitter. A change in the beeping pattern, at the receiver indicates the transmitter's code has been programmed into the receiver.

5. Make sure the wall transmitter is within the 15'-20' range of the receiver.
6. Positioning of the receiver is important. If the receiver is "enclosed" in a metal surround, the operation of the receiver may be affected as noted below. Reposition the receiver to improve operating range. It is suggested that a heat shield be installed to protect the receiver from extreme heat. If the receiver is "enclosed" in a metal surround, this can:
 - Cause the RF signal to get lost and not communicate with the receiver.
 - Cause the working distance to be shorter than normal.

NOTE: A receiver located in an area, where the ambient temperature inside the case exceeds 130 °F, will cause THERMO-SAFETY feature to cut in, requiring you to reposition the receiver to stop the warning beeps, and to "reset" the receiver's operation.

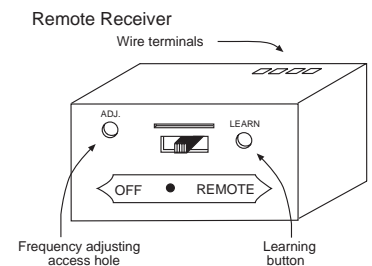
7. Due to handling and shipping of the unit, handling or dropping of the wall transmitter by the customer, and heat conditions to the receiver, some units may need an occasional frequency adjustment. This adjustment is made to improve the communication and operating distance between the transmitter and the receiver. See RECEIVER ADJUSTMENT.

RECEIVER ADJUSTMENT – RECOMMENDED ADJUSTMENT

NOTE: The black slide button covers the ADJ access hole when installed.

- A. To adjust at the receiver, use a small slotted screwdriver. Turn the adjustment screw counter-clockwise about 5 degrees or a maximum of 1/8 turn. This should correct the distance problem.
- B. If that does not correct the problem, return adjustment screw to original position and then turn adjustment screw clockwise.

This adjustment is like tuning your radio. If you keep turning the adjustment screw, in either direction, you will go past the proper setting (tuning).



SPECIFICATIONS

BATTERIES: Wall Transmitter 6V – 2ea. (CR2032) 3.0 volt lithium button cell batteries

Remote Receiver 6V –4ea. AA 1.5 Alkaline

FCC ID No.'s: transmitter –(K9L TS-R-2A); receiver – (K9L300IRX)

Operating Frequency: 303.8MHZ

Canadian IC ID No.'s: transmitter – (2439A-TSR2A) receiver – (2439 102 728A)

FCC REQUIREMENTS

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

