

## SMART-BATT-II Remote Control Kits

- Installation and Operating Instructions -

### INTRODUCTION

The remote control system can be operated thermostatically or manually from the transmitter. The system operates on radio frequencies (RF) within a 20 foot range. Can be used with IPI or Standing Pilot systems.

This remote control kit has a hand held transmitter that can be used as a remote on/off or as a thermostat. The transmitter display shows the current room temperature, target temperature, timer setting, on/off status, low battery indicator, current time and burner/valve operation.

If pertinent, see additional fireplace wiring diagrams on the following pages.

### INSTALLATION PRECAUTIONS

This remote control kit is tested and safe when installed in accordance with this installation manual. Installation of this kit **MUST** be done by a qualified service technician. It is the responsibility of the installer to read all instructions before starting installation and to follow these instructions carefully during installation. Modification of the remote control system or any of its components will void the warranty and may cause a fire hazard.

**CAUTION:** All wiring should be done by a qualified electrician and shall be in compliance with local codes and with the National Electric Code ANSI/NFPA No. 70-current (in the United States), or with the current CSA C22.1 Canadian Electric Code (in Canada), or in compliance with CE.

**WARNING: DO NOT CONNECT 110-230 VAC WIRING TO THE GAS CONTROL VALVE OF THIS APPLIANCE.**

Radio Frequency Remote: 433.92 MHZ

### CE REQUIREMENTS

**NOTE:** This equipment has been tested and found to comply with CE.

### FCC REQUIREMENTS

**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 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.

### Canadian Equipment Requirements

This digital apparatus does not exceed the (Class A/Class B)\* limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications. Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques (de la class A/de la class B)\* prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

This device complies with RSS-210 of Industry and Science Canada. 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.



## HEARTH MOUNT

The remote receiver can be placed on the fireplace hearth (see Figure 1), or under the fireplace behind the control access panel. Position it close to the front in the right or left corner where the ambient temperature inside the receiver case does not exceed 120° F.

**NOTE:** The remote receiver will only respond to transmitter when the switch cover on the receiver is in the REMOTE position. If the system does not respond to the transmitter, see MATCHING SECURITY CODES, and recheck battery position in the remote receiver.

## RECEIVER WIRING INSTRUCTIONS

Incorrect wiring connections WILL cause damage to the gas valve or electronic module operating the gas appliance and may also damage the remote receiver.

Make sure the remote receiver switch is in the OFF position. Use 18 gauge stranded wires for connections between the terminal wiring block on the millivolt gas valve or electronic module and the wire terminals on the remote receiver. For best results, use wire measuring no longer than 20 ft.

### Wiring Millivolt Valves

Connect the remote receiver by connecting each of the two wires leading from the TH terminals on the gas valve (see Figure 2) to either of the two wire terminals on the receiver. Normally it does not matter which wires go to which terminal.

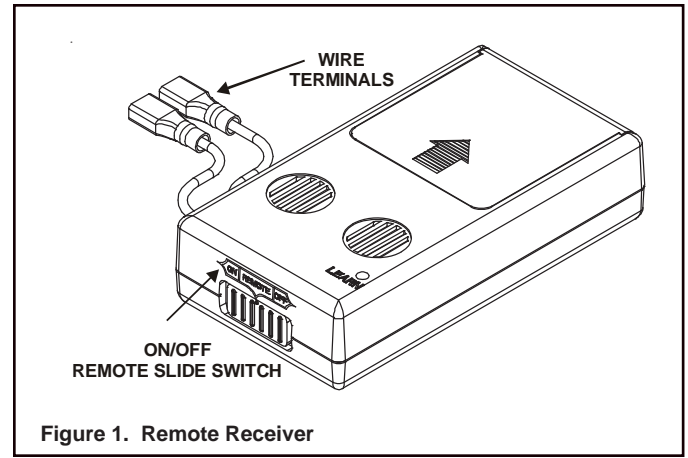


Figure 1. Remote Receiver

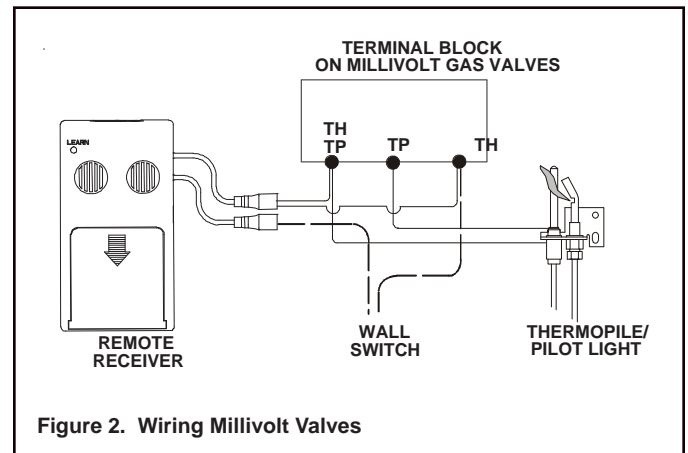


Figure 2. Wiring Millivolt Valves

## Alternative Wiring for units with a Wall Switch

### A. Wiring Millivolt Valve with Rocker

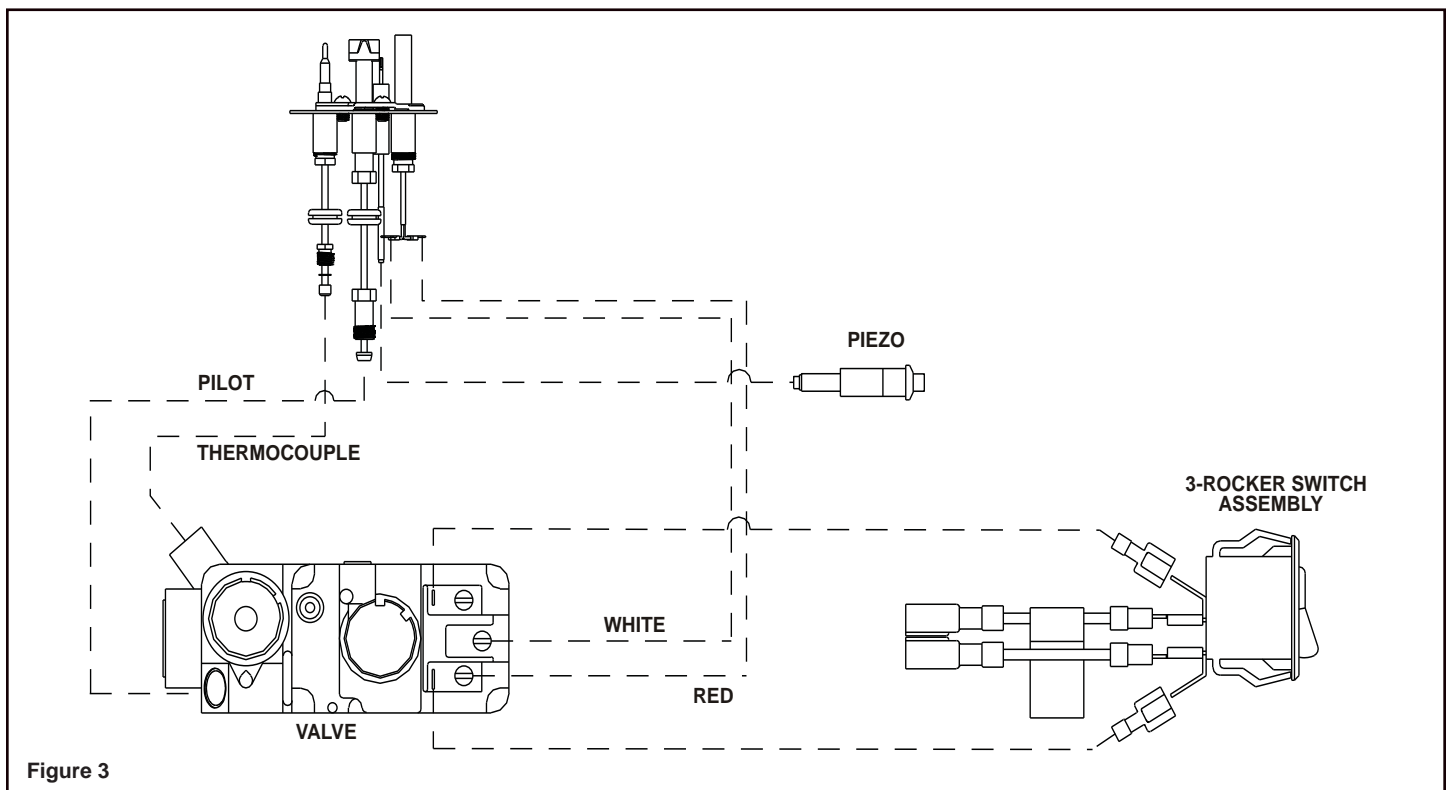


Figure 3

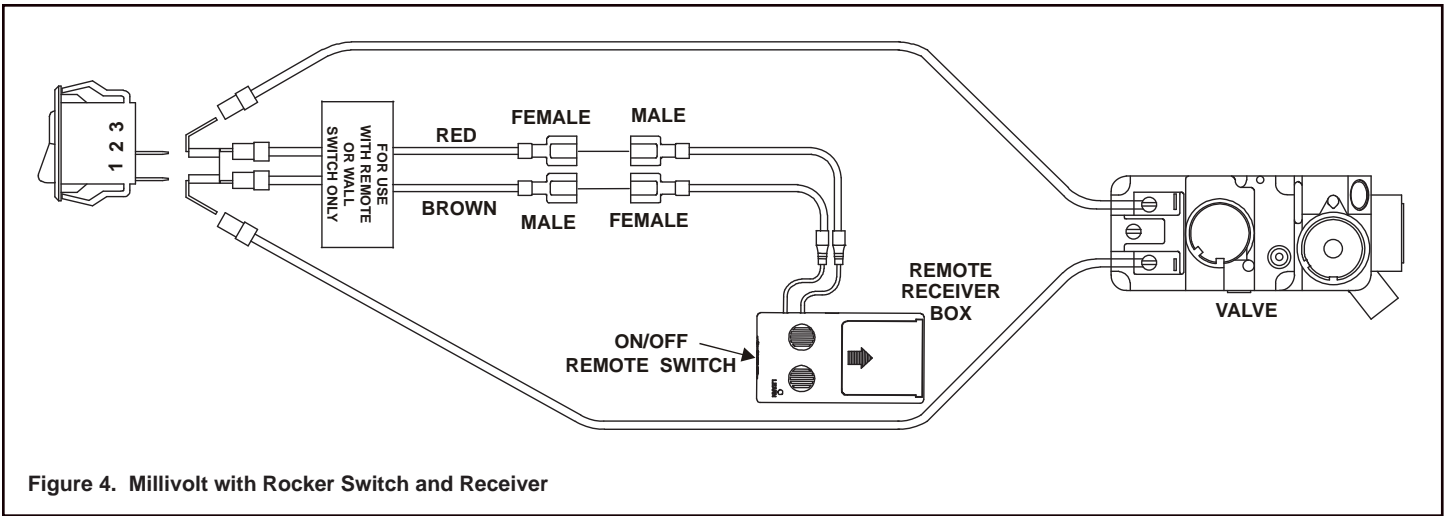


Figure 4. Millivolt with Rocker Switch and Receiver

If your fireplace is wired like Figure 3 find the leads on back of the switch marked “For use with remote or wall switch only” and take the leads and plug them into wire lead on remote receiver box (see Figure 4).

### B. Wiring Millivolt Valve with 3-Wire Assembly

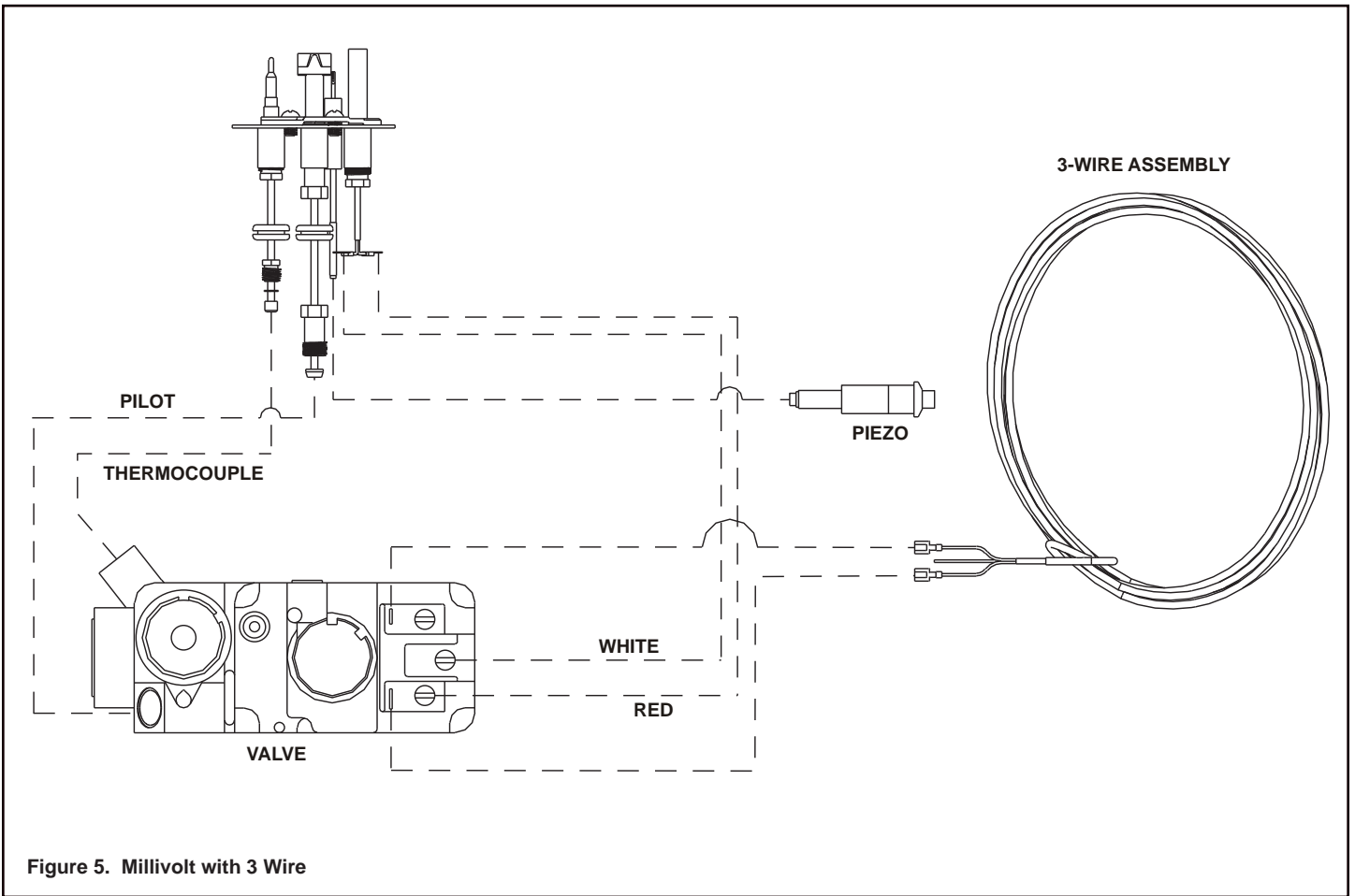
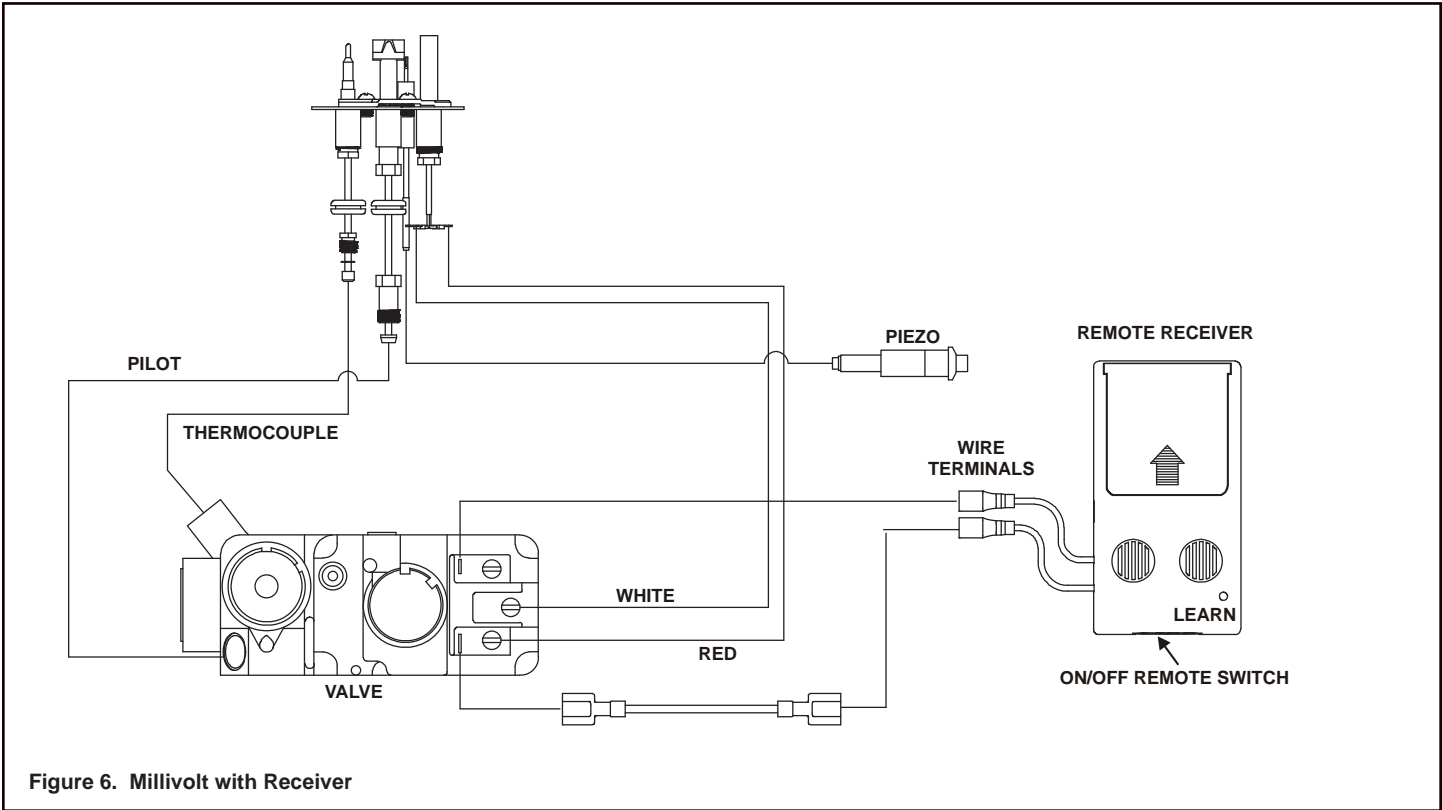
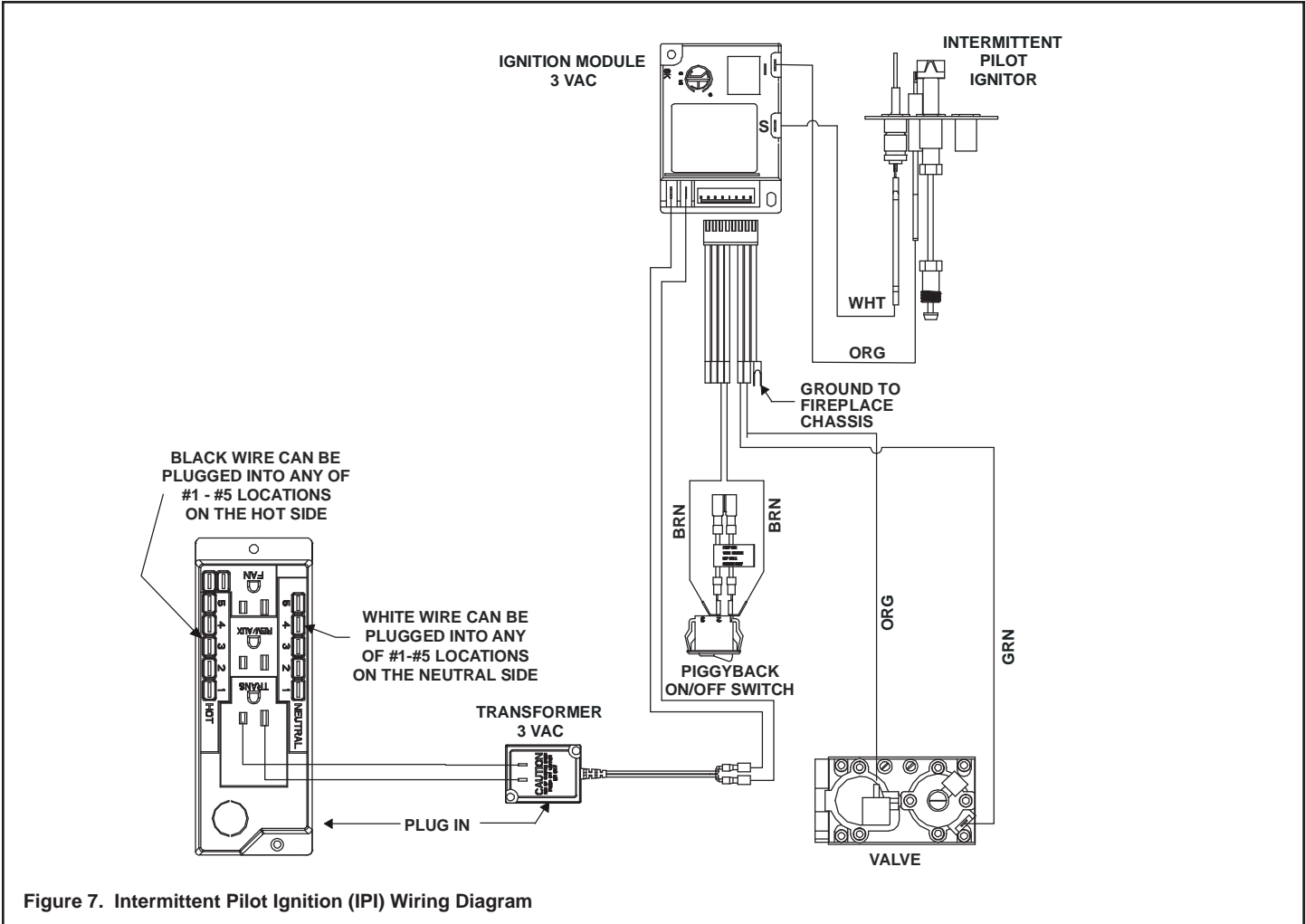


Figure 5. Millivolt with 3 Wire

If your fireplace is wired like Figure 5 remove 3 wires from the valve by unplugging the spade from the valve. Install the jumper wire on the terminal on the valve as shown in Figure 6. Then install one of the leads from the receiver onto the valve and the other wire onto the lead from the jumper wire.



**C. Wiring Intermittent Pilot Ignition (IPI) with Rocker Switch**



If your fireplace looks like Figure 7, find the leads on the back of switch marked "For use with remote or wall switch only". Take the leads and plug them into wire leads on remote receiver box (see Figure 8).

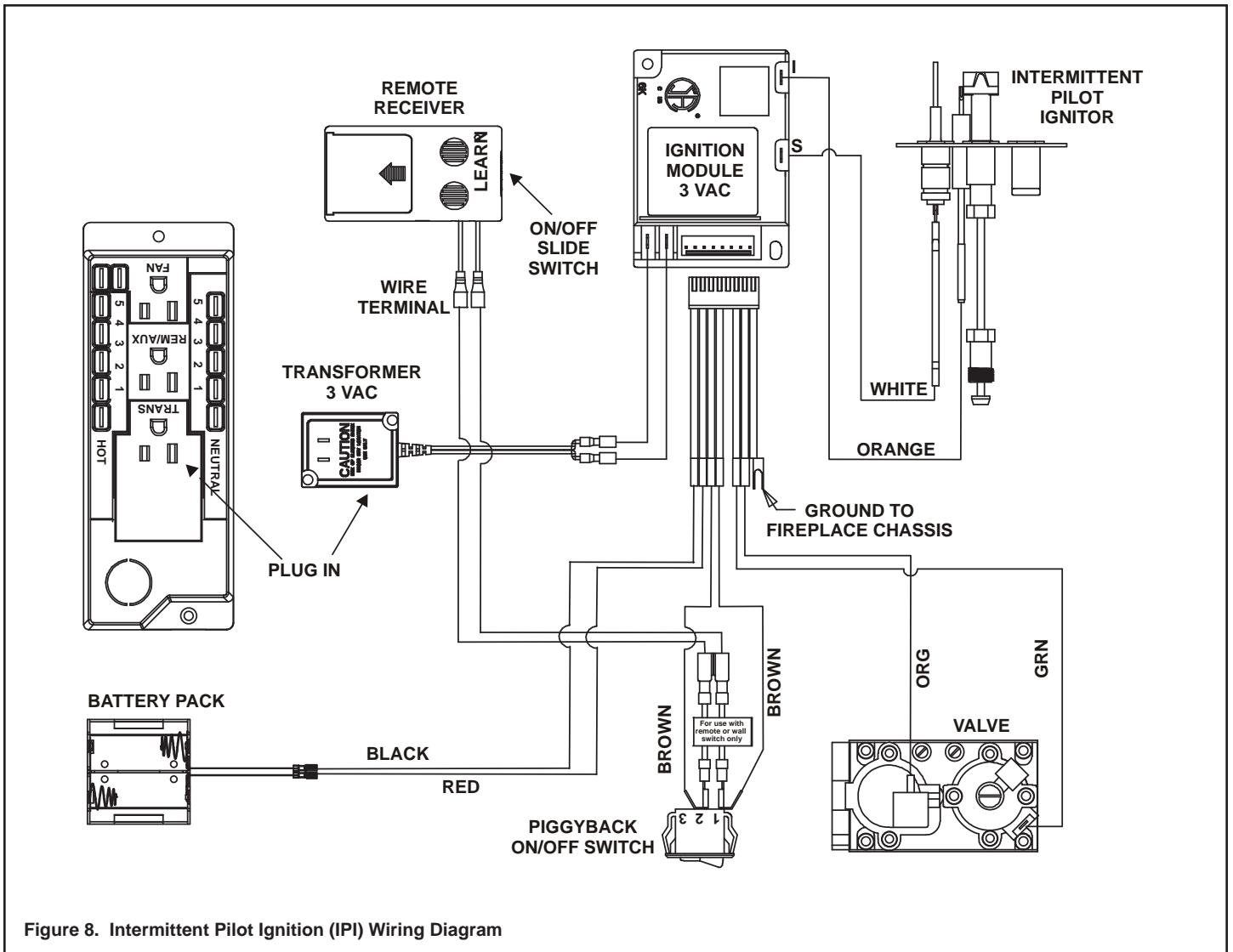
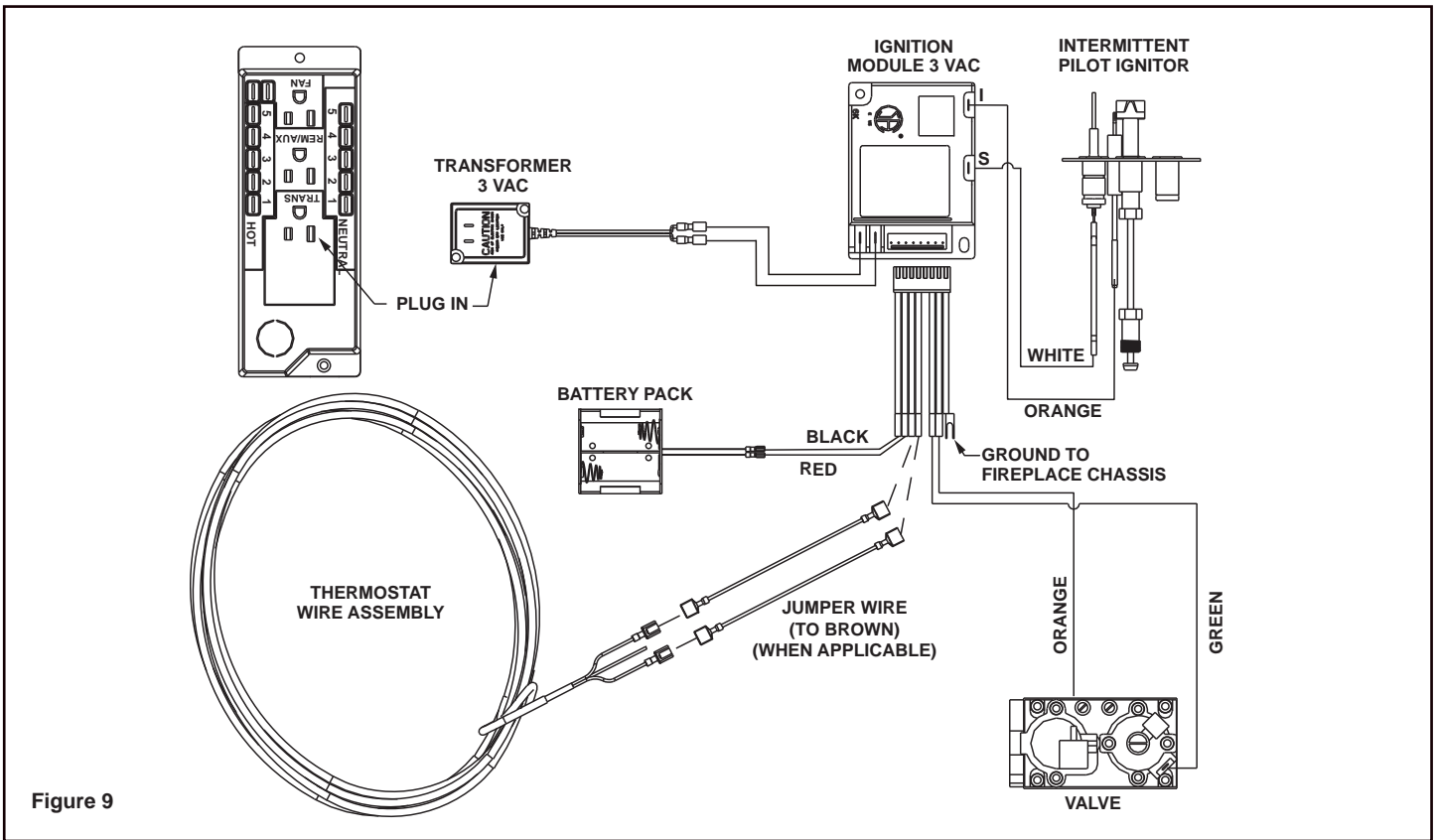


Figure 8. Intermittent Pilot Ignition (IPI) Wiring Diagram

## D. Wiring Intermittent Pilot Ignition (IPI) with 3-Wire Assembly



If your fireplace looks like Figure 9 remove the 3-wire off the jumper wire by unplugging the spade from jumper wire. Install the jumper wire on the wire as shown. See Figure 10. Then install one of the leads from the remote receiver onto the the valve and other wire into the lead on the jumper wire.

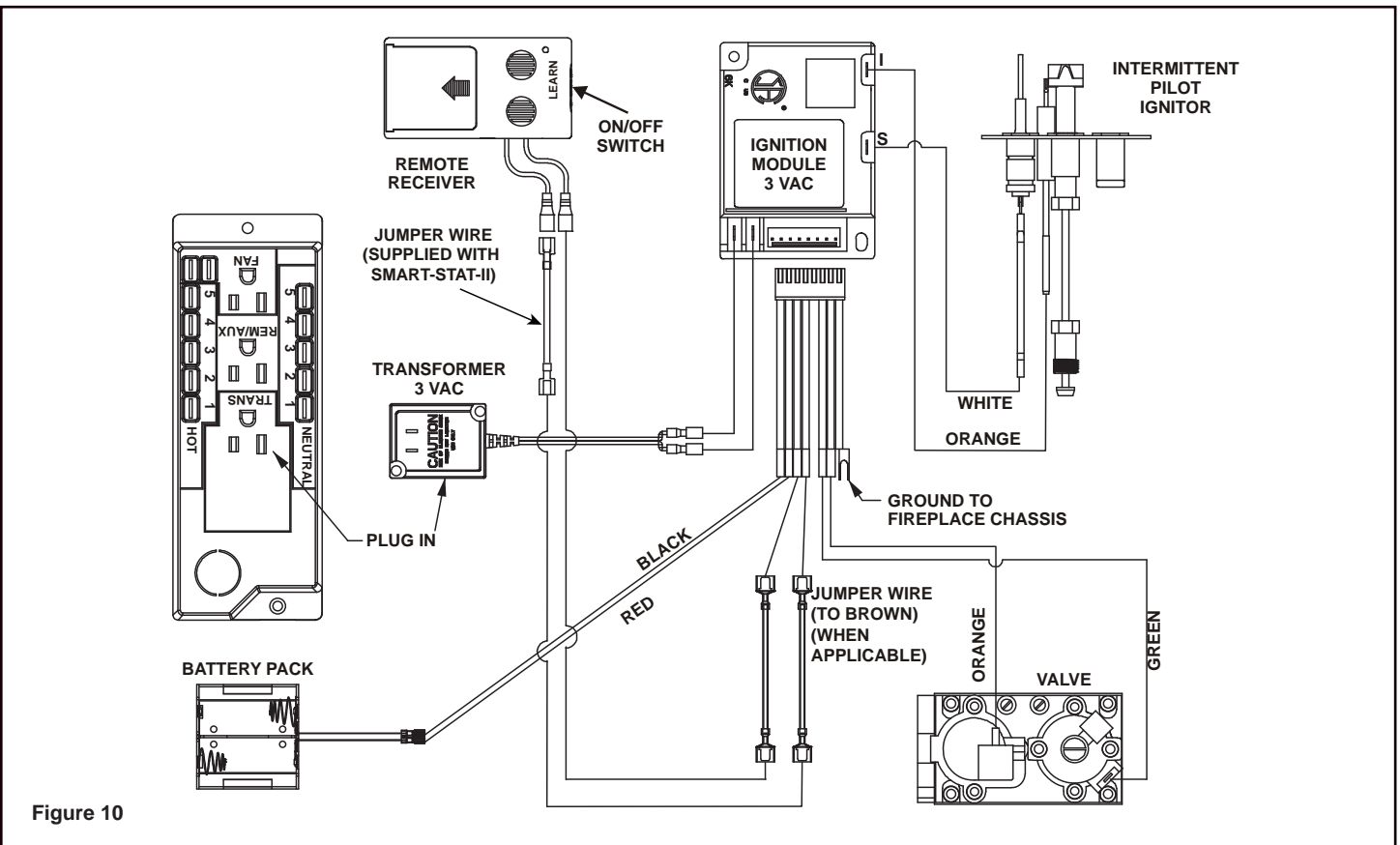
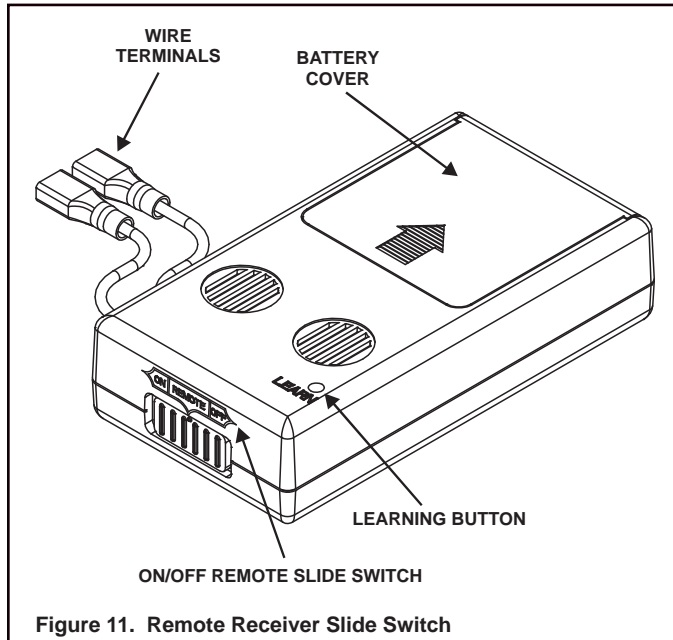


Figure 10

**NOTE:** 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: OFF/REMOTE/ON (see Figure 11).



**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 transmitter on initial use, see section Matching Security Codes.

1. With the slide switch in the ON position, the system is on.
2. With the slide switch in the REMOTE position, the system only operates if the remote receiver receives commands from the transmitter.
3. With the slide switch in the OFF position, the system is off.

**NOTE:** The slide switch should be placed in the OFF position if you will be away from your home for an extended period of time. Placing the switch in the OFF position also functions as a safety “lock out” by turning the system off and rendering the remote receiver inoperative.

## TRANSMITTER

**Important:** Before operating remote control, transmitter and receiver must have matching security codes. See section ‘Matching Security Codes’.

**Important:** Review ‘Thermo-Safety/Communication-Safety Features’ under ‘Transmitter Safety Features’ section. These signal/temperature safety features shut down the fireplace system when a potentially unsafe condition exists.

**Important:** Review ‘Auto Shutdown’ section. This safety feature shuts down the fireplace after 9 hours of continuous operation, in ON mode only.

**Important:** New batteries are essential for proper operation of the multi-function transmitter. The transmitter operates on 2 AAA-size 1.5V batteries. Use Alkaline batteries for longer battery life and maximum operational performance.

Insert 2 AAA-size 1.5V batteries into the battery compartment on the back of the transmitter. When the batteries are correctly inserted, the screen will display numbers (see Figure 7 for LCD Display Screen).

**NOTE:** If the transmitter is activated from a very cold condition it may be necessary to allow the transmitter to stabilize to room temperature (could take up to 15 minutes) before accurate room temperatures are displayed on the screen.

**NOTE:** LCD screen is equipped with a “backlite” for easier viewing of LCD screen. Backlite illuminates when a function button is depressed. After 5 seconds elapses, LCD screen will return to its normal state.

1. **LOW** - Battery power low. Replace batteries within two weeks.
2. **TIMER** - Indicates time remaining before system shuts off, when timer-programmed, 9 - hour maximum setting.
3. **MODE** - Indicates operation MODE of system. ON indicates the system is on, either manually or thermostatically. THERMO indicates the system will automatically cycle ON/OFF, depending on programmed SET temperature. OFF indicates the entire system is turned off.
4. **SET** - Indicates desired SET room temperature for THERMO operation.
5. **FLAME** - Indicates burner/valve operational.
6. **CLOCK** - Indicates the current time in AM/PM.
7. **ROOM** - Indicates CURRENT room temperature.
8. **°F** - Indicates degrees Fahrenheit (°C indicates degrees Celsius).

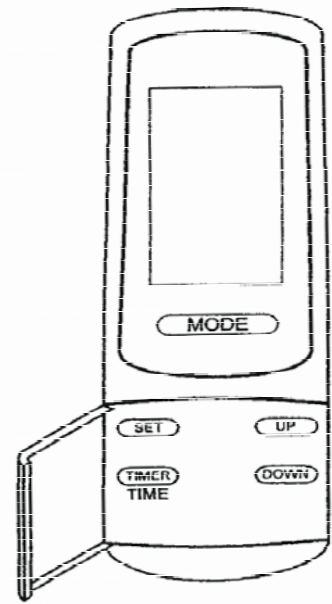
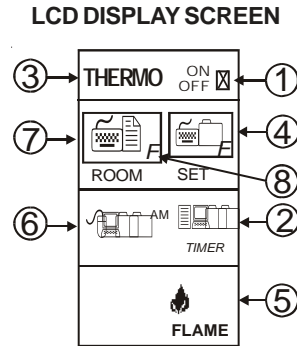


Figure 12. Transmitter LCD Display Screen

## MATCHING SECURITY CODES

It may be necessary to program the remote receiver to the security code of the transmitter upon initial use, if batteries are replaced, or if a replacement transmitter is purchased from your dealer. To program the remote receiver:

1. Set the slide button on the receiver to the REMOTE position.
2. Push the LEARN button (one beep will be heard) on the top of the remote receiver.
3. Then press the MODE button on the transmitter. Several beeps indicate 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 overwrite the old one. **NOTE:** When the LEARN button is depressed, "beeping" sounds should be heard.

If you are unsuccessful in matching the security code on the first attempt, wait 1-2 minutes before trying again.

## OPERATING INSTRUCTIONS

To operate the system, press the MODE button (Figure 12) on the transmitter to select the operational MODE desired.

- ON indicates the system is on, either manually, timed or thermostatically.
- THERMO indicates the system will automatically cycle ON/OFF, depending on programmed set temperature.
- OFF indicates the entire system is turned off.

## Transmitter Settings

Flip open the plastic cover on the front of the transmitter to expose the "SET" buttons.

**NOTE:** Flashing numbers on the display indicate the system is waiting for input, such as using the UP and DOWN buttons to program a new setting. If no change is made to flashing digits within 15 seconds, the system will complete the procedure last programmed and reset the display to its normal state.

### Setting the Clock

1. Press and hold the TIMER/TIME button on the transmitter for more than two seconds. The hour digit(s) will begin flashing (see Figure 12, Location #6).
2. Press the UP or DOWN button until the desired hour is displayed in AM or PM.
3. After setting the desired hour, press and release the TIMER/TIME button again to set the minutes; the minute digits will begin flashing.
4. Press the UP or DOWN button until the desired minutes are displayed.
5. Press and hold the TIMER/TIME button again for more than two seconds. The time digits will cease flashing, indicating the clock has been successfully set. You may also press the SET button on the transmitter to stop the time digits from flashing and set the time.



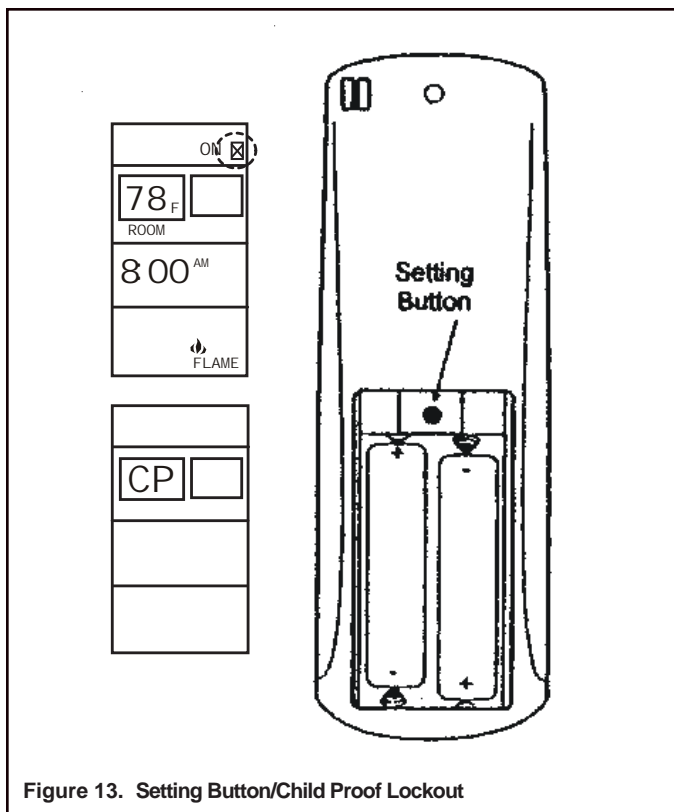


Figure 13. Setting Button/Child Proof Lockout

### Setting °F/°C Scale

The factory setting for temperature is degrees Fahrenheit (°F). To change this setting to degrees Centigrade (°C):

1. Remove the battery cover on the back of the transmitter and locate the “setting button” at the top center of battery compartment (see Figure 13).
2. Push setting button and °F will begin flashing on the LCD screen (see Figure 12, Location #4).
3. Push the DOWN button on the transmitter to change °F to °C.
4. Push “setting button” on transmitter and Centigrade (°C) degree readings will display on LCD screen.
5. Repeat this process to change back to Fahrenheit (°F) reading, this time pushing the UP button. **NOTE:** LCD screen will return to normal state if setting button is not pushed within 15 seconds.

### Setting Desired Room Temperature - Thermo Operations

This remote control system can be thermostatically controlled when the transmitter is in the THERMO mode. (THERMO must be displayed on the screen). The transmitter will “sense” the room temperature every two minutes automatically turning the fireplace ON or OFF thermostatically. To set the desired room temperature:

1. Press the MODE button to place the transmitter into THERMO mode. THERMO ON or OFF will display.
2. Press the UP or DOWN button to select the desired room temperature. The highest SET temperature is 99° F (32 °C). The lowest SET temperature is 45 °F (6 °C).

**NOTE:** To prevent repeated thermo-cycling of the gas appliance, the sensing unit in the transmitter will only activate the remote receiver when the temperature change exceeds 2° F (1 °C) above or below the SET (desired) temperature.

When the transmitter is in the THERMO 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 it to read the room temperature higher than it actually is.

### Setting the Countdown Timer

This remote control system can operate with a built-in countdown timer when the transmitter is in the ON or THERMO modes (THERMO or ON must be displayed on the LCD screen).

1. Press and release the TIMER/TIME button on the transmitter. The word TIMER and 0:15 flash on the screen (see Figure 12, Location #2).
2. Press the UP and DOWN button to begin advancing through each of the countdown time options. Available countdown times are 15 min, 30 min, 45 min, 1 hour, 1 hr 30 min, and each additional half hour up to nine hours.
3. To set the TIMER, press the SET button on the transmitter. If the system is ON, it will remain on until the “time” has expired. If the system is in the THERMO mode, it will cycle on and off as the room temperature requires until the “time” has expired.

**NOTE:** When the timer is used in the THERMO mode, the THERMO operation will discontinue when the “time” has expired.

### Transmitter Low/Battery Indicator

An “X” outlined by a battery on the right side of the LCD screen will appear when battery power has dropped significantly. At this time, approximately two weeks of battery power remains.

### Receiver Batteries

The batteries must be replaced once every season. It is recommended to replace at the beginning of the burn season with 4AA alkaline batteries.

## Child Proof Lockout (CP)

The transmitter contains a “Child Proof” lockout feature that prevents unauthorized use of the remote control. To access the “Child Proof” activation button, remove cover on BACK of transmitter. To activate LOCKOUT:

1. Press and hold in the “setting button” for 5 seconds. The letters CP will display on the LCD screen (see Figure 13). This prevents the activation of fireplace. When any function button is pressed ON/OFF etc. the letter CP will display on the LCD screen.

To deactivate LOCKOUT:

1. Press and hold in the “setting button” for 5 seconds. The LCD will display CP until 5 seconds have elapsed, and then the LCD screen will return to its normal state.

## TRANSMITTER SAFETY FEATURES

It is recommended that the TRANSMITTERS always be located within a 20 foot operating range of the fireplace, preferably in the same room in which the fireplace system is located. The TRANSMITTER features several safety features that alert the user when the TRANSMITTER is placed outside the 20 foot normal operating range.

### Thermo-Safety and Communication-Safety Features

This remote control has both a THERMO-SAFETY and 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. It is also activated when the batteries become weak or are removed from the transmitter.

In the THERMO-SAFETY feature (only in the THERMO or TIMER modes) the transmitter normally reads the ROOM temperature every 2 minutes. In addition to checking the temperature, the transmitter sends a signal to the receiver indicating that the transmitter and its batteries are still active.

In the COMMUNICATION-SAFETY feature, at all times and in all OPERATING MODES the transmitter sends a 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 2 minutes (THERMO-SAFETY feature) or 15 minutes (COMMUNICATION-SAFETY feature), 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 fireplace being controlled by the receiver. The RECEIVER will then emit a series of rapid “beeps”. Then, after 10 rapid “beeps”, the RECEIVER will continue to emit a single “beep” every 4 seconds until a transmitter signal is again received. The intermittent 4 second beeping will go on indefinitely until reset.

To “reset” the RECEIVER and operate the fireplace system:

1. Press the MODE button on the transmitter. The word ON must display on the LCD screen. The THERMO-SAFETY and COMMUNICATION-SAFETY operation is overridden and the system will return to normal operation depending on the MODE selected at the transmitter.

We recommend the user check the batteries in the TRANSMITTER to make sure the voltage is no less than 2.7 volts.

### Auto Shutdown

This remote control has an Auto Shutdown feature incorporated into its system. When the transmitter MODE is in the ON position the fireplace will continuously operate for 9 hours. After 9 hours, the fireplace will shut down. To relight the fireplace:

1. Press the MODE button.

The transmitter must be positioned within a 20 foot operating range for the Auto Shutdown feature to operate.

## SYSTEM CHECK

### Millivolt Valves

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

1. Slide the 3-position button on the remote receiver to the ON position. The main gas flame (i.e., the fire) should ignite.
2. Slide the button to OFF. The flame should extinguish (the pilot flame will remain on).
3. Slide the button to REMOTE (the center position), then press the MODE button on the transmitter to change the system to ON. The main gas flame should ignite.
4. Press the MODE button on the transmitter to change the system to OFF. The flame should extinguish (the pilot flame will remain on).
5. Press the MODE button on the transmitter to change the system to THERMO.
6. 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 and the system flame will ignite.
7. Set the SET temperature to at least 2 °F (1 °C) below the room temperature and the system flame will extinguish. Thereafter, it should continue to cycle on and off thermostatically approximately every two minutes as the ROOM temperature changes, but only when the temperature differential between ROOM and SET temperatures differs at least 2 °F (1 °C). The 2 °F differential is the factory setting.

### Electronic Ignition System

1. 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.
2. Slide the button to OFF. The main gas flame and pilot flame should BOTH extinguish.
3. Slide the button to REMOTE (the center position).

4. Then press the MODE 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.
5. Press the MODE button on the transmitter to OFF. The main gas flame and pilot flame should BOTH extinguish.
6. Press the MODE button on the transmitter to change the system to THERMO.
7. Advance the SET temperature on the transmitter to temperature of at least 2 °F (1 °C) above the room temperature displayed on the LCD screen and the system flame will ignite.
8. Set the SET temperature to at least 2 °F (1 °C) below the room temperature and the system will extinguish. Thereafter, it should continue to cycle 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.

#### **Timer Operation**

The countdown timer will operate in either the manual ON or THERMO mode. Once the fireplace system is in an operating mode, set the countdown timer to turn off in 15 minutes. The timer function will allow operation to continue until the "countdown time" on the LCD screen expires. After 15 minutes elapses, the system should turn off.

## **GENERAL INFORMATION**

### **Transmitter Wall Bracket**

The transmitter can be hung on a wall using the bracket provided. Locate the bracket on an inside wall sufficiently far away from direct sources of heat such as a fireplace, incandescent lighting, or sunlight so it detects ambient room temperatures, not a single heat source. If the bracket is installed on a solid wood wall, drill 1/8 inch pilot holes and install with the screws provided. If it is installed on a plaster/wallboard wall, first drill two 1/4 inch 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.

### **Transmitter Battery Life**

Life expectancy of the alkaline batteries in the transmitter should be at least one season. Check 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) the batteries should be checked.

### **Receiver Batteries**

Life expectancy of the alkaline batteries in the receiver is one burn season. Replace with 4AA alkaline batteries at the beginning of each burn season.

### **Limited Warranty**

This REMOTE CONTROL SYSTEM is warranted for 12 months from the date of purchase or installation to the original purchaser to be free from defects in materials and workmanship. Damage to the SYSTEM caused by accident, misuse, abuse, or installation error whether performed by a contractor, service company, or owner, is not covered by this warranty. Seller will not be responsible for labor charges and/or damage incurred in installation, repair, replacement or for incidental or consequential damages.

Batteries and any damage caused by them are not covered by this warranty.

Some states, provinces, and nations do not allow exclusion or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply. This warranty gives you specific legal rights. You may have other rights that vary by state, province or nation.

## Troubleshooting

To check the operation of the remote:

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 transmitter's batteries are properly installed and that the battery output is 2.7V or more.
3. Check to make sure the transmitter is communicating with the receiver.
  - If the receiver beeps when the MODE button is depressed on the transmitter they are communicating.
  - If the receiver does not beep when the MODE button is depressed on the transmitter go to Matching Security Codes.
4. Make sure the transmitter is within the 20 feet range of the receiver.
5. 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.

## Specifications

Batteries: Transmitter - 3V 2 ea.; AAA 1.5V, Alkaline  
Receiver: (4) AA 1-SV Alkaline

Operating Frequency: 433.92 MHZ

FCC ID No.'s: ULERF-5AN

IC No.'s: 6732A-RF5AN

## Service Parts

No service parts available.

### Limited Warranty

This REMOTE CONTROL SYSTEM is warranted for 12 months from the date of purchase or installation to the original purchaser to be free from defects in materials and workmanship. Damage to the SYSTEM caused by accident, misuse, abuse, or installation error whether performed by a contractor, service company, or owner, is not covered by this warranty. Seller will not be responsible for labor charges and/or damage incurred in installation,

repair, replacement or for incidental or consequential damages. Batteries and any damage caused by them are not covered by this warranty.

Some states, provinces, and nations do not allow exclusion or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply. This warranty gives you specific legal rights. You may have other rights that vary by state, province or nation.

Please contact your Hearth & Home Technologies dealer with any questions or concerns.

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Hearth & Home Technologies dealer,  
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Hearth & Home Technologies Inc.  
7571 215th Street West, Lakeville, MN 55044  
[www.fireside.com](http://www.fireside.com)