

# MILLIVOLT OPERATING INSTRUCTIONS (FP3 SERIES)

## STANDING PILOT OPERATING INSTRUCTIONS REMOTE/OFF/ON Switch

The fireplace is equipped with a REMOTE/OFF/ON switch. A wire harness is attached to the REMOTE/OFF/ON switch. The red, black and green (wires) female push-ons attach to the REMOTE/OFF/ON switch. At the opposite end of the wire harness, the black and green (wires) female push-ons attach to the gas valve. An additional green wire and the red wire, which are stripped and bare, will attach to one of the accessories that can be purchased for use with your fireplace.

### NOTICE

#### "ON DEMAND PILOT" System Operation

After seven days of inactivity of the main burner, the pilot will shut off. Applies to Models; DVD(32,36,42,48)FP33(N,P)-4

#### Operation Of REMOTE/OFF/ON Switch With No Accessories

To ignite main burner, turn the control knob on the gas valve from the PILOT position to the ON position. Turn the REMOTE/OFF/ON switch from the OFF position to the ON position. The additional green wire and red wire, which are stripped and bare are not used.

#### Wall Switch, FWS-1

Connect the green and red, stripped and bare, wires on the REMOTE/OFF/ON switch wire harness to the wall switch. Turn the REMOTE/OFF/ON switch to the REMOTE position. Pivot the rocker switch on the FWS-1 to the ON position.

#### Wall Thermostats (Optional)

TRW - Wireless for Millivolt models

TMV - Reed switch for Millivolt models

#### Battery Operated Remote Controls, FRBC, FBRTC, and TRW

Connect the green and red, stripped and bare, wires on the REMOTE/OFF/ON switch wire harness to the remote receiver that is a component in the remote kit. Turn the REMOTE/OFF/ON switch to the REMOTE position. Follow instructions included with the remote to complete installation.

**NOTE:** If batteries fail in the remote, and immediate heat is desired, turn the REMOTE/OFF/ON switch from the REMOTE position to the ON position.

#### Electric (120 Volt) Operated Remote Control, FREC

Connect the green and red, stripped and bare, wires on the REMOTE/OFF/ON switch wire harness to the wires on remote receiver that is a component in the FREC. Turn the REMOTE/OFF/ON switch to the REMOTE position. Follow instructions in the FREC to complete installation.

**NOTICE:** If electric (120 volt) fails in FREC, and immediate heat is desired, turn the REMOTE/OFF/ON switch from the REMOTE position to the ON position.

#### Installation Of Remote Receiver

Place remote receiver on the floor of fireplace behind the louver as far forward as possible.

**Attention:** The Velcro loop and hook are not necessary in this installation but can be used to secure remote receiver.

Refer to remote control installation and operating instructions for more details on remote control.

#### Millivolt Control

The valve regulator controls the burner pressure which should be checked at the pressure test point. Turn captured screw counter clockwise 2 or 3 turns and then place tubing to pressure gauge over test point (Use test point "A" closest to control knob). After taking pressure reading, be sure and turn captured screw clockwise firmly to re-seal. Do not over torque. Check for gas leaks.

Millivolt thermopile is self generating. Gas valve does not require 24 volts or 110 volts.

#### Check System Operation

Millivolt system and all individual components may be checked with a millivolt meter 0-1000 MV range.

It is important to use wire of a gauge proper for the length of the wire:

| RECOMMENDED WIRE GAUGES |            |
|-------------------------|------------|
| Maximum Length          | Wire Gauge |
| 1' to 10'               | 18         |
| 10' to 25'              | 16         |
| 25' to 35'              | 14         |

# MILLIVOLT STANDING PILOT LIGHTING INSTRUCTIONS (FP3 SERIES)

## FOR YOUR SAFETY READ BEFORE LIGHTING

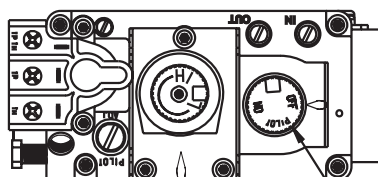
### ⚠ WARNING

If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

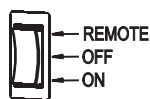
- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. Before lighting smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- What To Do If You Smell Gas**
- Do not try to light any appliance.
  - Do not touch any electrical switch;
  - Do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## LIGHTING INSTRUCTIONS

1. Stop! Read the safety information above.
2. Set REMOTE/OFF/ON switch to OFF.
3. Turn off all electric power to the appliance (if applicable).
4. Lower bottom louver assembly.
5. Push in gas control knob slightly and turn clockwise to "OFF."

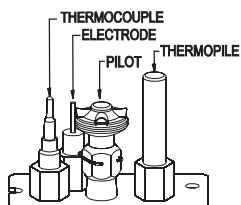


GAS CONTROL KNOB SHOWN IN "OFF" POSITION.



**NOTICE:** Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.

6. Wait ten minutes to clear out any gas. Then smell for gas, including near the floor. If you then smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
7. Find pilot - Follow metal tube from gas control. The pilot is behind the burner on the right side.
8. Turn gas control knob counterclockwise to "PILOT."



9. Push in control knob all the way and hold in. Repeatedly push the piezo ignitor button until the pilot is lit. Continue to hold the control knob in for about one minute after the pilot is lit. Release knob, and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 9.
  - If the control knob does not pop up when released, STOP and IMMEDIATELY call a qualified service technician or gas supplier.
  - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
10. Turn gas control knob counterclockwise to "ON."
11. Close bottom louver assembly.
12. Turn on all electric power to the appliance (if applicable).
13. Set REMOTE/OFF/ON switch to desired setting.

## TO TURN OFF GAS TO FIREPLACE

1. Set REMOTE/OFF/ON switch to OFF.
2. Turn off all electric power to the appliance if service is to be performed (if applicable).
3. Lower bottom louver assembly.
4. Push in gas control knob slightly and turn clockwise to "OFF." Do not force.
5. Close bottom louver assembly.

# MILLIVOLT STANDING PILOT WIRING DIAGRAM (FP3 SERIES)

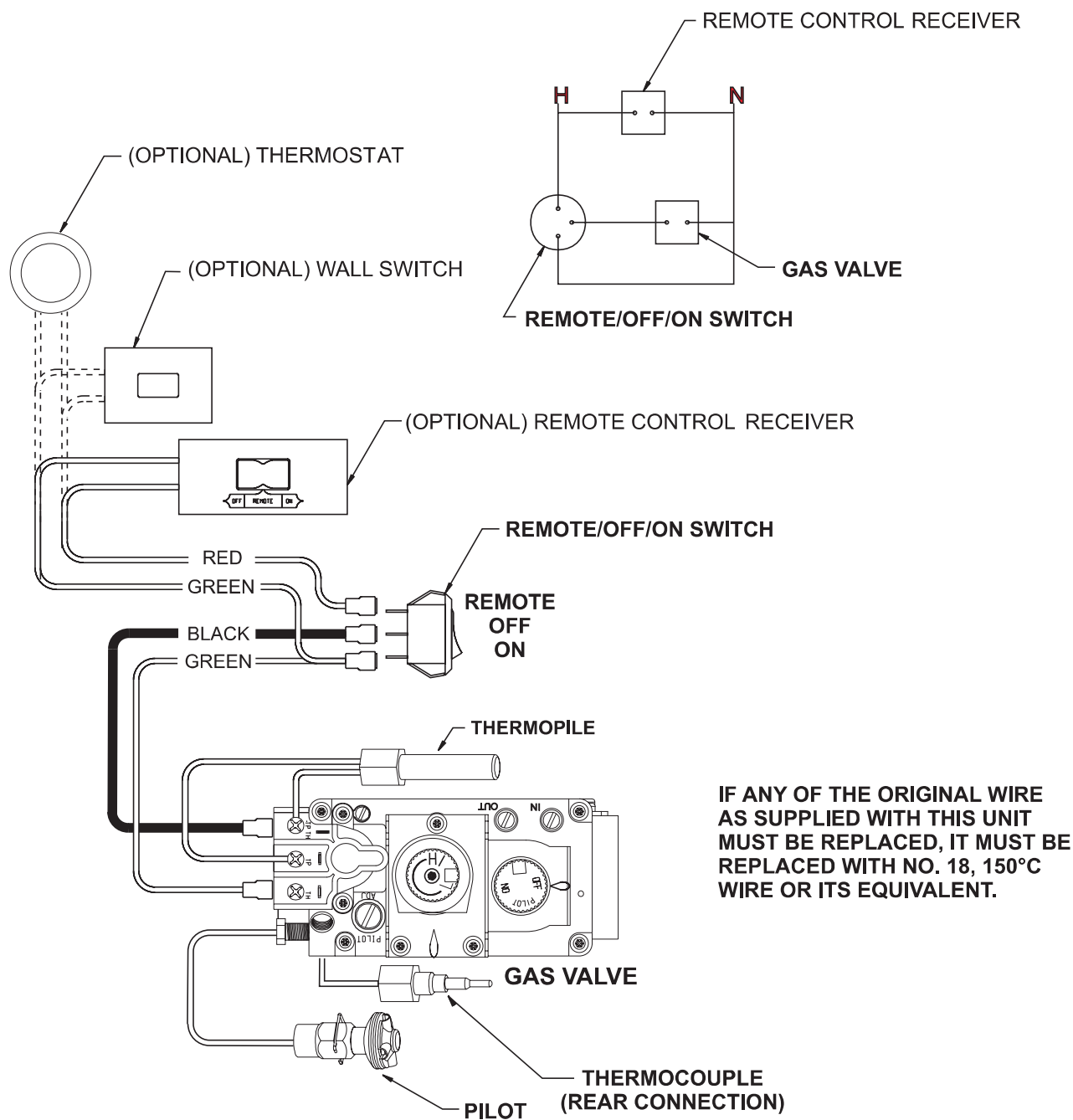


Figure 61

# MILLIVOLT STANDING PILOT TROUBLESHOOTING (FP3 SERIES)

With proper installation and maintenance, your new Direct Vent Gas Fireplace will provide years of trouble-free service. If you do experience a problem, refer to the Trouble Shooting Guide below. This guide will assist a qualified service person in the diagnosis of problems and the corrective action to be taken.

## 1. Spark ignitor will not light pilot after repeated triggering of piezo ignitor button.

- a. Defective ignitor (no spark electrode)
  - Check for spark at electrode and pilot; if no spark and electrode wire is properly connected, replace ignitor.
- b. No gas or low gas pressure.
  - Check remote shut off valves from fireplace. Usually there is a valve near the main. There can be more than one valve between the fireplace and main.
  - Low pressure can be caused by a variety of situations such as a bent line, too narrow diameter of pipe, or low line pressure. Consult with plumber or gas supplier.
- c. No Propane in tank.
  - Check Propane tank. Refill tank.

## 2. Pilot will not stay lit after carefully following lighting instructions.

- a. Defective thermocouple.
  - Check that pilot flame impinges on thermocouple. Clean and/or adjust pilot for maximum flame impingement.
  - Ensure the thermocouple connection at the gas valve is fully inserted and tight (hand tight plus 1/4 turn). Faulty thermocouple if reading is below specified minimum of 15 millivolts.
  - Disconnect the thermocouple from the valve, place one millivolt meter lead wire on the end of the thermocouple and the other millivolt meter lead wire on the thermocouple copper wire. Start the pilot and hold the valve knob in. If the millivolt reading is less than 15 millivolt, replace the thermocouple.
- b. Defective valve.
  - If thermocouple is producing more than 15 millivolts, replace faulty valve.

## 3. Pilot burning, no gas to burner, valve knob "ON", REMOTE/OFF/ON switch "ON."

- a. REMOTE/OFF/ON switch, wall switch, remote control or wires defective.
  - Check REMOTE/OFF/ON switch and wires for proper connections. Place jumper wires across terminal at switch. If burner comes on, replace defective switch. If OK, place jumper wires across switch wires at gas valve-if burner comes on, wires are faulty or connections are bad.
- b. Thermopile may not be generating sufficient millivolts.
  - If the pilot flame is not close enough physically to the thermopile, adjust the pilot flame.
  - Be sure the wire connections from the thermopile at the gas valve terminals are tight and the thermopile is fully inserted into the pilot bracket.
  - Check the thermopile with a millivolt meter. Take the reading at TH-TP & TP terminals of the gas valve. The meter should read 350 millivolts minimum, while holding the valve knob depressed in the PILOT position, with the pilot lit, and the REMOTE/OFF/ON switch in the OFF position. Replace the faulty thermopile if the reading is below the specified minimum.
  - With the pilot in the ON position, disconnect the thermopile leads from the valve. Take a reading at the thermopile leads. The reading should be 350 millivolts minimum. Replace the thermopile if the reading is below the minimum.
- c. Defective valve.

—Turn valve knob to ON. Place REMOTE/OFF/ON switch to ON. Check with millivolt meter at thermopile terminals. Millivolt meter should read greater than 200 millivolts. If the reading is okay and the main burner does not ignite, replace the gas valve.

- d. Plugged main burner orifice.
  - Check main burner orifice for blockage and remove.

## 4. Frequent pilot outage problem.

- a. Pilot flame may be too high or too low, or blowing (high), causing pilot safety to drop out.
  - Clean and adjust flame for maximum flame impingement on the thermocouple. Follow lighting instructions carefully.

## 5. The pilot and main burner extinguish while in operation.

- a. No Propane in tank.
  - Check Propane tank. Refill fuel tank.
- b. Inner vent pipe leaking exhaust gases back into system
  - Check for leaks.
- c. Glass too loose, gasket leaks in corners after usage.
  - Be certain glass assembly is installed correctly.
- d. Horizontal vent improperly pitched.
  - The horizontal vent cap should slope down only enough to prevent any water from entering the unit. The maximum downwards slope is 1/4 inch.
- e. Bad thermopile or thermocouple.
  - Replace if necessary.
- f. Improper vent cap installation.
  - Check for proper installation and freedom from debris or blockage.

## 6. Glass soots.

- a. Flame impingement on logs.
  - Check and adjust log position. Contact Empire Comfort Systems, Inc.
- b. Debris around throat of main burner.
  - Inspect the opening at the base of the main burner. It is imperative that NO material be placed in this opening.

## 7. Flame burns blue and lifts off main burner.

- a. Insufficient oxygen being supplied.
  - Check to make sure vent cap is installed properly and free of debris. Make sure that vent system joints are tight and have no leaks.
  - Check to make sure that no material has been placed at the main burner base.