

SINCE 1932

INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

Installer: Leave this manual with the appliance.

Consumer: Retain this manual for future reference.

This appliance may be installed in an after-market permanently located, manufactured (mobile) home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This fireplace is not convertible for use with other gases.

⚠ WARNING: If the information in these instructions are not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **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.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

CONTEMPORARY LINEAR VENT-FREE GAS FIREPLACE

GAS-FIRED



LISTED

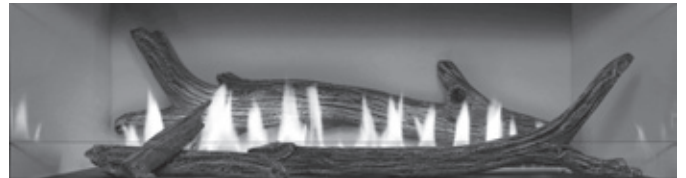
MH46389

MODELS

VFLL38FP(3,9)0L25(N,P)-1

VFLL38FP(3,9)0L(N,P)-2

VFLL48FP(3,9)0L(N,P)-1



Vent-Free Linear Logset Shown

WATER VAPOR: A BY-PRODUCT OF UNVENTED ROOM HEATERS

Water vapor is a by-product of gas combustion. An unvented room heater produces approximately one ounce (30ml) of water for every 1,000 BTU's (.3KW's) of gas input per hour. Refer to page 13.

This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to pages 13 - 14.

⚠ WARNING: If not installed, operated and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or from fuel combustion which can cause death or serious illness.

⚠ WARNING



**HOT GLASS WILL CAUSE BURNS.
DO NOT TOUCH GLASS UNTIL COOLED.
NEVER ALLOW CHILDREN TO TOUCH GLASS.**

NATIONAL FIREPLACE INSTITUTE



CERTIFIED
www.nficertified.org

We suggest that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

BEFORE YOU START

1. Read the soot prevention information on **page 4**.
2. Read the safety information on **pages 9 - 11**.
3. Frame the opening. **See pages 23 - 24**.
4. Install the gas lines. **See page 19**.
5. Install the wiring. **See pages 32 and 44**.
6. Install the remote system. **See pages 37 - 42**.
7. Light the fireplace and troubleshoot. **See pages 29, 30, 36, 46 and 47**.
8. Show the homeowner how to operate the fireplace.
9. Show the homeowner how to do the basic maintenance.

Unpacking the fireplace

1. Cut binding straps and shrink wrap.
2. Remove top of carton.
3. Remove glass carton from back of unit and set aside.
4. Remove non-combustible board and set aside.
5. Remove remaining carton.
6. Verify that the fireplace and components have not been damaged during shipping.
7. Set fireplace in a location near to its final installation location.

Installation Considerations - Fireplace Installation

Guidelines

In planning the installation for the fireplace, determine where the unit is to be installed. The fireplace can be mounted on any of these surfaces:

1. A flat hard combustible or non-combustible surface.
2. A raised platform of combustible or non-combustible material.
3. Four corners of the fireplace so contact is made on all four perimeter edges on the bottom of the unit.

If the fireplace is installed directly on carpeting, tile or other combustible material other than wood flooring, it should be installed on a metal or wood panel extending the full width and depth of the unit.

This unit is designed to be installed in a zero-clearance enclosure. This means the combustible material can come in contact with the top and side standoff spacers, and secured to combustible framing using the framing brackets provided.

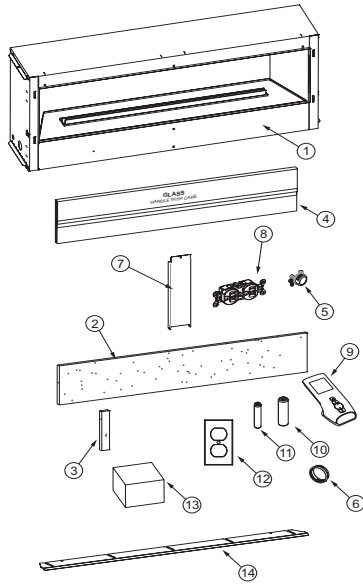
An optional (**Inner Top Deflector**) is included with the fireplace. This can be used to help distribute the heat of the fireplace more evenly across the fireplace opening. This does not change the requirements for non-combustible material above the fireplace opening.

It is also necessary to determine the following before installation:

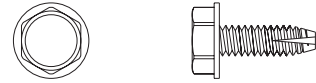
- Any desired accessory
- Gas supply piping (left side entrance).
- Electrical connections - for optional light kit
- Electrical supply requirements for optional light. (120V, 60Hz, 1 Amp) (right side entrance)
- Proper opening size of fireplace required for installation of the fireplace insert.

CARTON CONTENTS & HARDWARE PACK

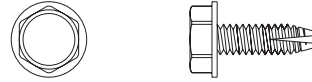
CARTON CONTENTS



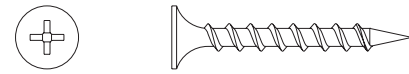
HARDWARE PACK CONTENTS - VFLL(28,48)FP(3,7)



#10-32 X 1/2" HEX HEAD SCREW



#10-32 X 1/2" STAINLESS HEX HEAD SCREW

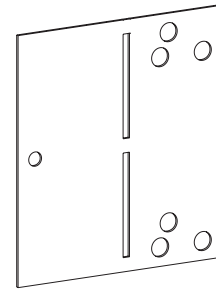


1-1/4" PHILLIPS DRYWALL SCREW

Items not shown to scale.

VFLL(38,48)FP3 SERIES		
Index Number	Description	Quantity Supplied
1	Fireplace	1
2	Non-combustible Board - Top	1
3	Non-combustible Board - Side	2
4	Glass Wrap (2 pieces of glass)	1
5	Romex Connector	1
6	Bushing	1
7	Standoff Supports	3
13	Remote/Battery Kit	1
14	Optional Inner Top Deflector	1
VFLL(38,48)FP9 SERIES		
1	Fireplace	1
2	Non-combustible Board - Top	1
3	Non-combustible Board - Side	1
4	Glass Wrap (2 pieces of glass)	1
5	Romex Connector	1
6	Bushing	1
7	Standoff Supports	
8	3-Prong Receptical	1
9	Remote	1
10	AA Battery	4
11	AAA Battery	3
12	Junction Box Cover	1
14	Optional Inner Top Deflector	1

See Parts Lists on pages 48 - 53 for ordering replacement parts. Do not order batteries, bolts, screws, washers or nuts. They are standard hardware items and can be purchased at any local hardware store.



NAILING FLANGES

Items not shown to scale.

Description	Quantity Supplied
#10-32 x 1/2" Hex Head Screw	16
#10-32 x 1/2" Stainless Steel Hex Head Screw	8
1-1/4" Phillips Drywall Screw	20
Nailing Flange	4

See Parts Lists on page 48 - 53 for ordering replacement parts. Do not order batteries, bolts, screws, washers or nuts. They are standard hardware items and can be purchased at any local hardware store.

IMPORTANT SOOT PREVENTION STEPS

IMPORTANT NOTICE

INSTALLER - SERVICE PERSON - HOMEOWNER

SOOT MAY BE CREATED IF THE FOLLOWING DIRECTIONS ARE NOT FOLLOWED.

- **⚠ WARNING:** Failure to keep the primary air openings of the burner clean may result in sooting and property damage.
- **⚠ WARNING:** Before installing in a solid-fuel burning fireplace, the chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner.
- Ensure the air shutter is set to the specification. See Figures 1 to 3 on this page and Tables 1 and 2 on page 5.
- Ensure burner, venturi, and air shutter are free of dirt, lint, animal hair (i.e. cat and dog) or anything that may block the needed air flow. See Cleaning and Servicing, page 26.
- **⚠ WARNING:** Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns. Pay particular attention to ceiling fans and exhaust fans.
- Do not place debris, logs or other articles on burner.
- Avoid the use of scented air fresheners while the fireplace is in operation. A residue can be produced which may produce soot.
- Avoid the use of decorative or scented candles while the fireplace is in operation. Soot may be produced from the by-products of a burning candle. Some candles also produce soot.
- Do not use rock wool (embers) with this fireplace.
- Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.
- Install optional logs according to the installation instructions. Do not alter log placement from the prescribed layout in this manual. Only use Empire logs specifically made for this fireplace.
- Verify the venturi tube is not bent or distorted. The main burner orifice must be centered in the venturi tube for proper combustion and to prevent sooting.

Verify the air shutter for the correct setting. Refer to tables 1 and 2 on page 5 for specific air shutter settings for each model.

NAT Gas Models - The air shutter setting must be 1/16" or 1/8". See Figures 1 and 2, and Table 1 on page 5.



Figure 1 (1/16" opening shown)

Test 1/16 or 1/8 air shutter setting with a round object like a drill bit. The object should barely slide between the opening. See Figure 2.



Figure 2 (1/16" opening shown)

LP Gas Models- The air shutter setting must be "fully open" or 1/4" open. See Figure 3 and Table 2 on page 5. The air shutter setting must be set to the maximum opening.



NOTICE: Orifice shield removed for photo clarity.

Figure 3

PRODUCT SPECIFICATIONS

	Natural Gas		Propane Gas	
	Millivolt	Intermittent Pilot (IP)	Millivolt	Intermittent Pilot (IP)
Regulator pressure setting	3.5" w.c.	3.5" w.c.	10.0" w.c.	10.0" w.c.
Gas inlet pressure	Max. 10.5" w.c.	10.5" w.c.	13.0" w.c.	13.0" w.c.
	Min. 4.5" w.c.	7.0" w.c.	11.0" w.c.	11.0" w.c.

Model	Gas Type	Valve Type	Orifice	Recommended Manifold Pressure (w.c.)	BTUH Max. Rate	BTUH Min. Rate
VFLL38FP30L25	LP	Millivolt	1.45mm	10"	25,000	19,500
VFLL38FP30L25	NAT	Millivolt	#42	3.5"	25,000	17,500
VFLL38FP30L	LP	Millivolt	1.65	10"	32,000	25,000
VFLL38FP30L	NAT	Millivolt	#36	3.5"	32,000	21,000
VFLL48FP30L	LP	Millivolt	#49	10"	40,000	31,000
VFLL48FP30L	NAT	Millivolt	3.00 mm	3.5"	40,000	28,000
VFLL38FP90L25	LP	IP	1.45 mm	10"	25,000	19,500
VFLL38FP90L25	NAT	IP	#42	3.5"	25,000	17,500
VFLL38FP90L	LP	IP	1.65 mm	10"	32,000	25,000
VFLL38FP90L	NAT	IP	#36	3.5"	32,000	21,000
VFLL48FP90L	LP	IP	#49	10"	40,000	31,000
VFLL48FP90L	NAT	IP	3.00 mm	3.5"	40,000	28,000

Model	Air Shutter Opening
VFLL38FP30L25	1/16"
VFLL38FP30L	1/8"
VFLL48FP30L	1/8"
VFLL38FP90L25	1/16"
VFLL38FP90L	1/8"
VFLL48FP90L	1/8"

Model	Air Shutter Opening
VFLL38FP30L25	1/4"
VFLL38FP30L	FULLY OPEN
VFLL48FP30L	FULLY OPEN
VFLL38FP90L25	1/4"
VFLL38FP90L	FULLY OPEN
VFLL48FP90L	FULLY OPEN

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INTRODUCTION

Instructions to Installer

1. Installer must leave instruction manual with owner after installation.
2. Installer must have owner fill out and mail warranty card supplied with unvented room fireplace.
3. Installer should show owner how to start and operate unvented fireplace.

Always consult your local Building Department regarding regulations, codes or ordinances which apply to the installation of an unvented fireplace.

This fireplace may be installed in an aftermarket* manufactured (mobile) home, where not prohibited by state or local codes.

*Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

WARNING

This appliance is equipped for natural or propane gas. Field conversion is not permitted.

WARNING

ANY CHANGE TO THIS HEATER OR ITS CONTROLS CAN BE DANGEROUS.

Improper installation or use of the fireplace can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.

This series is design certified in accordance with American National Standard Institute (ANSI) Z21.11.2 by the Canadian Standards Association Laboratories (CSA) as an Unvented Room Fireplace and should be installed according to these instructions.

Any alteration of the original design, installed other than as shown in these instructions or use with a type of gas not shown on the rating plate is the responsibility of the person and company making the change.

Millivolt 3 Series Only 750 Millivolt System

When you ignite the pilot, the thermocouple produces millivolts (electrical current) which energizes the magnet in the gas valve. After 30 seconds to 1 minute time period you can release the gas control knob and the pilot will stay ON. Allow your pilot flame to operate an additional one to two minutes before you turn the gas control knob from the PILOT position to the ON position. This time period allows the millivolts (electrical energy) to build-up to a sufficient level allowing the gas control to operate properly.

Important

All correspondence should refer to complete Model Number, Serial Number and type of gas.

Notice: During initial firing of this unit, its paint will bake out, and smoke will occur. To prevent triggering of smoke alarms, ventilate the room in which the unit is installed.

Installation on Rugs and Tile

If this fireplace is installed directly on carpeting, tile or other combustible material other than wood flooring the fireplace shall be installed on a metal or wood panel extending the full width and depth of the fireplace.

The base referred to above does not mean the fire-proof base as used on wood stoves. The protection is for rugs that are extremely thick and light colored tile.

Solid-fuels shall not be burned in a masonry or *UL 127* factory-built fireplace in which an unvented fireplace is installed.

Qualified Installing Agency

Installation and replacement of gas piping, gas utilization equipment or accessories and repair and servicing of equipment shall be performed only by a qualified agency. The term "qualified agency" means any individual, firm, corporation or company which either in person or through a representative is engaged in and is responsible for (a) the installation or replacement of gas piping or (b) the connection, installation, repair or servicing of equipment, who is experienced in such work, familiar with all precautions required and has complied with all the requirements of the authority having jurisdiction.

Commonwealth of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

Sellers of unvented propane or natural gas-fired supplemental fireplaces shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

In the Commonwealth of Massachusetts, unvented propane and natural gas-fired space heaters shall be prohibited in bedrooms and bathrooms.

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1.*

*Available from the American National Standards Institute, Inc. 1430 Broadway, New York, N.Y. 10018.

High Altitudes

For altitudes/elevations above 2,000 feet (610m), ratings should be reduced at the rate of 4 percent for each 1,000 feet (305m) above sea level. Contact the manufacturer or your gas company before changing spud/orifice size.

Well Head Gas Installations

Some natural gas utilities use "well head" gas. This may affect the Btu output of the unit. Contact the gas company for the heating value. Contact the manufacturer or your gas company before changing spud/orifice size.

ACCESSORIES

Accessories for VFLL(38,48)FP30 (Millivolt) Models	
Remote Control Accessories	Description
FRBTC	Battery Operated Remote Control with Thermostat
FRBTP	Battery Operated Programmable Remote Control
TRW	Remote Wall Thermostat (Wireless)

ACCESSORIES		
Part Number		Description
VFLL38	VFLL48	
DF38WHP	DF48WHP	Decorative Front, Tidewater - Pewter
DF38WBL	DF48WBL	Decorative Front, Tidewater - Black
DF384BL	DF484BL	Decorative Front, 4" Surround - Black
LK5	LK5	120 V Lighting Kit - Requires Switch or Rheostat
RXS10	RXS10	10ft Remote Extension Wiring
WXB10	WXB10	10ft Battery Backup Extension Wiring
VBP38LKR	VBP48LKR	Liner - Black Reflective
VBP38LWR	VBP48LWR	Liner - White Reflective
VBP38LSS	VBP48LSS	Liner - Stainless Steel
LS38DF	LS48DF	Log Set, Blue Bay
DG1AB	DG1AB	Decorative Glass Droplets - 1/2" Aqua Blue (One kit per one square foot)
DG1GC	DG1GC	Decorative Glass Droplets - 1/2" Glacier Ice (One kit per one square foot)
DG1SL	DG1SL	Decorative Glass Droplets - 1/2" Sangria Luster (One kit per one square foot)
DG1NXS	DG1NXS	Decorative Glass Droplets - 1" Onyx Solid (One kit per one square foot)
DG1TZC	DG1TZC	Decorative Glass Droplets - 1" Topaz Clear (One kit per one square foot)
DG1BKP	DG1BKP	Decorative Glass, Crushed - 1/4" Black (One kit per one square foot)
DG1BUC	DG1BUC	Decorative Glass, Crushed - 1/4" Blue (One kit per one square foot)
DG1CLF	DG1CLF	Decorative Glass, Crushed - 1/4" Clear (One kit per one square foot)
DR1FMA	DR1FMA	Decorative Rock, Ceramic Fiber - Medium (One kit per one square foot)
DRFPA	DRFPA	Decorative Rock, Ceramic Fiber - Pebble (One kit per 1/2 square foot)

NOTE: The total burner cover area equals 1.75 square feet for VFLL38, 2.25 square feet for VFLL48.

NOTE: Never place media material on or next to the burner.

Note: Decorative fronts do not cover the entire face of the fireplace. The installer must finish the wall all the way to the fireplace top and bottom opening as shown in Figure 22a on page 20.

IMPORTANT SAFETY INFORMATION

Definitions:

⚠ DANGER - Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ WARNING - Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION - Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE - Addresses practices not related to personal injury.

⚠ WARNING

When used without adequate combustion and ventilation air, appliance may give off **CARBON MONOXIDE**, an odorless, poisonous gas.

Do not install appliance until all necessary provisions are made for combustion and ventilation air. Consult the written instructions provided with the appliance for information concerning combustion and ventilation air. In the absence of instructions, refer to the National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation, or applicable local codes.

This appliance is equipped with a **PILOT LIGHT SAFETY SYSTEM** designed to turn off the appliance if not enough fresh air is available.

DO NOT TAMPER WITH PILOT LIGHT SAFETY SYSTEM!

If fireplace shuts off, do not relight until you provide fresh air.

If fireplace keeps shutting off, have it serviced. Keep burner and control compartment clean. See installation and operating instructions accompanying heater.

CARBON MONOXIDE POISONING MAY LEAD TO DEATH.

Early signs of carbon monoxide poisoning resemble the flu, with headache, dizziness and/or nausea. If you have these signs, fireplace may not be working properly. Get fresh air at once! Have fireplace serviced.

Some people — pregnant women, persons with heart or lung disease, anemia, those under the influence of alcohol, those at high altitudes — are more affected by carbon monoxide than others.

The pilot light safety system senses the depletion of oxygen at its location. If this fireplace is installed in a structure having a high vertical dimension, the possibility exists that the oxygen supply at the higher levels will be less than that at the fireplace. In this type of application, a fan to circulate the structure air will minimize this effect. The use of this fan will also improve the comfort level in the structure. When a fan is used to circulate air, it should be located so that the air flow is not directed at the burner.

⚠ DANGER

The installer of this product is responsible for the verifying the correct position of the air shutter and adjusting it if required. If not adjusted to the proper opening, a fire, explosion, or production of carbon monoxide may result causing property damage, personal injury or loss of life.

⚠ DANGER

The installer of this product is responsible for testing all connections for gas leaks. A gas leak will create a situation where a fire, explosion, or production of carbon monoxide may result causing property damage, personal injury or loss of life.

⚠ WARNING

Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.

⚠ WARNING

This fireplace needs fresh air for ventilation to run properly. This fireplace has an ODS (oxygen depletion sensor) which will shut down the fireplace if adequate fresh air is not available. See troubleshooting section in the instructions.

⚠ WARNING

Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.

⚠ WARNING

DO NOT operate this fireplace unless all components including logs, burners, and controls are in good working condition. Never operate this fireplace if any log or twig is broken, or out of their intended position. Refer to the Log set placement instructions for correct log and twig positioning. Replacement components are available through your local dealer as indicated in the How to Order Repair Parts section of the fireplace manual.

⚠ WARNING

Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.

IMPORTANT SAFETY INFORMATION

- Avoid the use of scented air fresheners (plug in type air fresheners, etc.) while the fireplace is in operation. Air fresheners produce a residue in the air similar to candles and may produce a soot like substance.
- Avoid the use of scented or decorative candles while the fireplace is in operation. Candles produce a residue in the air that creates a soot like substance. Burning candles while the fireplace is operating magnifies the problem. It should be noted that candles, in general, produce soot. The amount of time burned and the quantity of candles burned will determine the amount of soot produced and deposited.
- Installation and repair should be done by a QUALIFIED SERVICE PERSON. This fireplace should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that control compartments, burners and circulating air passageways of the fireplace be kept clean.
- Do not place debris, logs or other articles on the burner during operation.
- An unvented room fireplace having an input rating of more than 6,000 Btu per hour shall not be installed in a bathroom
- An unvented room fireplace having an input rating of more than 10,000 Btu per hour shall not be installed in a bedroom or bathroom.
- Due to high temperatures, the fireplace should be located out of traffic and away from furniture and draperies.
- Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
- Young children should be carefully supervised when they are in the same room with the fireplace.
- Do not place clothing or other flammable material on or near the fireplace.
- DO NOT use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
- You must operate fireplace with both glass panels in place.
- During manufacturing, fabricating and shipping, various components of this fireplace are treated with certain oils, films or bonding agents. These bonding agents are not harmful but may produce annoying smoke and smells as they are burned off during initial operation of the fireplace. This is a normal temporary occurrence. A window should be opened during the initial bake out period.
- Correct installation of the optional ceramic fiber logs, proper location of the fireplace and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. See instructions for proper installation.
- Keep fireplace area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
- **Sooting:** A vent-free fireplace or burner draws room air to support combustion. Lightweight particles suspended in the air – including dust, carpet fibers, candle or tobacco smoke, and pet hair – will be drawn toward the fireplace. These can lead to soot build up on logs, fireplace walls, and even walls of the room. To prevent malfunctions and sooting, have your dealer perform an inspection and cleaning each year – before the heating season. If you have pets or excessive dust, more frequent cleaning may be necessary. See cleaning and service section in this manual.
- Use Non-Combustible Materials where indicated for the fireplace installation. Non-combustible material do not ignite or burn as a result of using the fireplace. These include metal, brick, ceramic, concrete, slate, glass, and plaster. Adhesives must be rated for high temperatures. Any mechanical fasteners used to install material must also be non-combustible, including wall anchors and tile spacers. Materials that pass the ASTM E 136 test (Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750C) are considered non-combustible.
- Do not allow Combustible Materials adjacent to or in contact with the fireplace or venting. Combustible materials include wood, compressed paper, plant fibers, or other materials that will burn. These materials are considered combustible even when treated with fire-retardant chemicals.
- Proper installation, burner pan location and log placement is important to achieve optimum look and performance of your fireplace. The logs have been designed for easy location and placement on the log plate and must be followed for proper operation.
- Do not place embers (rock wool) in this fireplace.
- Do not place lava rocks on burner or logs.
- Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside the burner area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.
- Installing a television above a fireplace has become a desirable feature; however, the following information should be considered.

All fireplaces, whether decorative or heater rated create heat. Most television manufacturers recommend not placing a television near a heat source. Because there is a large variety of television manufactures, styles and sizes, it is impractical to test every potential installation. If you choose to install a television above or near your fireplace, understand that Empire Comfort Systems accepts no responsibility for this decision and any injury or damage due to this application is the sole responsibility of the owner. Additionally, it is highly recommended to turn off the fireplace and let it cool down before servicing or using the operational buttons located on the television. In all cases, the television manufacturer's instructions and warnings should be followed.

SAFETY INFORMATION FOR USERS OF LP-GAS

Propane (LP-Gas) is a flammable gas which can cause fires and explosions. In its natural state, propane is odorless and colorless. You may not know all the following safety precautions which can protect both you and your family from an accident. Read them carefully now, then review them point by point with the members of your household. Someday when there may not be a minute to lose, everyone's safety will depend on knowing exactly what to do. If, after reading the following information, you feel you still need more information, please contact your gas supplier.

LP-GAS WARNING ODOR

If a gas leak happens, you should be able to smell the gas because of the odorant put in the LP-Gas. That's your signal to go into immediate action!

- Do not operate electric switches, light matches, use your phone. Do not do anything that could ignite the gas.
- Get everyone out of the building, vehicle, trailer, or area. Do that IMMEDIATELY.
- Close all gas tank or cylinder supply valves.
- LP-Gas is heavier than air and may settle in low areas such as basements. When you have reason to suspect a gas leak, keep out of basements and other low areas. Stay out until firefighters declare them to be safe.
- Use your neighbor's phone and call a trained LP-Gas service person and the fire department. Even though you may not continue to smell gas, do not turn on the gas again. Do not re-enter the building, vehicle, trailer, or area.
- **Finally**, let the service man and firefighters check for escaped gas. Have them air out the area before you return. Properly trained LP-Gas service people should repair the leak, then check and relight the gas fireplace for you.

NO ODOR DETECTED - ODOR FADE

Some people cannot smell well. Some people cannot smell the odor of the chemical put into the gas. You must find out if you can smell the odorant in propane. Smoking can decrease your ability to smell. Being around an odor for a time can affect your sensitivity or ability to detect that odor. Sometimes other odors in the area mask the gas odor. People may not smell the gas odor or their minds are on something else. Thinking about smelling a gas odor can make it easier to smell.

The odorant in LP-gas is colorless, and it can fade under some circumstances. For example, if there is an underground leak, the movement of the gas through soil can filter the odorant. Odorants in LP-Gas also are subject to oxidation. This fading can occur if there is rust inside the storage tank or in iron gas pipes.

The odorant in escaped gas can adsorb or absorb onto or into walls, masonry and other materials and fabrics in a room. That will take some of the odorant out of the gas, reducing its odor intensity.

LP-Gas may stratify in a closed area, and the odor intensity could vary at different levels. Since it is heavier than air, there may be more odor at lower levels. Always be sensitive to the slightest gas odor. If you detect any odor, treat it as a serious leak. Immediately go into action as instructed earlier.

SOME POINTS TO REMEMBER

- Learn to recognize the odor of LP-gas. Your local LP-Gas Dealer can give you a "Scratch and Sniff" pamphlet. Use it to find out what the propane odor smells like. If you suspect that your LP-Gas has a weak or abnormal odor, call your LP-Gas Dealer.
- If you are not qualified, do not light pilot lights, perform service, or make adjustments to fireplaces on the LP-Gas system. If you are qualified, consciously think about the odor of LP-Gas prior to and while lighting pilot lights or performing service or making adjustments.
- Sometimes a basement or a closed-up house has a musty smell that can cover up the LP-Gas odor. Do not try to light pilot lights, perform service, or make adjustments in an area where the conditions are such that you may not detect the odor if there has been a leak of LP-Gas.
- Odor fade, due to oxidation by rust or adsorption on walls of new cylinders and tanks, is possible. Therefore, people should be particularly alert and careful when new tanks or cylinders are placed in service. Odor fade can occur in new tanks, or reinstalled old tanks, if they are filled and allowed to set too long before refilling. Cylinders and tanks which have been out of service for a time may develop internal rust which will cause odor fade. If such conditions are suspected to exist, a periodic sniff test of the gas is advisable. **If you have any question about the gas odor, call your LP-gas dealer. A periodic sniff test of the LP-gas is a good safety measure under any condition.**
- If, at any time, you do not smell the LP-Gas odorant and you think you should, assume you have a leak. Then take the same immediate action recommended above for the occasion when you do detect the odorized LP-Gas.
- If you experience a complete "gas out," (the container is under no vapor pressure), turn the tank valve off immediately. If the container valve is left on, the container may draw in some air through openings such as pilot light orifices. If this occurs, some new internal rusting could occur. If the valve is left open, then treat the container as a new tank. Always be sure your container is under vapor pressure by turning it off at the container before it goes completely empty or having it refilled before it is completely empty.

IMPORTANT INSTALLATION GUIDELINES

Proper Primary Airflow into Burner

For proper burner operation and flame appearance, the flow of primary air into the venturi tube, located at the gas inlet of the burner, must not be reduced. This flow of air is reduced if dirt, lint or other obstructions build-up around or inside the venturi. Any obstruction in the venturi tube area must be removed. The flow of air into the venturi is also reduced if the gas orifice isn't centered in the venturi inlet and/or is not aligned with the venturi. Any misalignment of the burner orifice may be corrected by bending the shutter cap holding the orifice to the inlet of the venturi tube.

Ceiling Fans, Portable Fans or Logs Installed Near Cold Air Returns

Ceiling fans or oscillating floor type fans need to be monitored during the operation of vent-free fireplace. If the air blows directly into the flame causing it to disrupt the flame, it should be turned off or redirected. Ceiling fans could be reversed to possibly eliminate flame impingement, and the floor fan should be redirected. Upon installation, be aware of any cold air returns or vents in the proximity of the fireplace. Any draft created around a vent-free fireplace can cause the flame to impinge on the log and create a sooting situation.

WARNING

Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.

Candles

Avoid the use of scented or decorative candles while the fireplace is in operation. Candles produce a residue in the air that creates a soot like substance. Burning candles while the fireplace is operating magnifies the problem. It should be noted that candles, in general, produce soot. The amount of time burned and the quantity of candles burned will determine the amount of soot produced and deposited.

Plug-In Air Fresheners

Avoid the use of scented air fresheners while the fireplace is in operation. Air fresheners produce a residue in the air similar to candles and may produce a soot like substance.

Television Considerations

Installing a television above a fireplace has become increasingly popular; however, the area above any fireplace gets hot and most TV manufacturers recommend against placing their products near a heat source.

If you install a television above this fireplace, Empire Comfort Systems accepts no responsibility for damage or injuries. Follow the television manufacturer's installation instructions, including any recommendations regarding proximity to heat sources.

If you have a TV above your fireplace, turn off the fireplace and let it cool completely before servicing or touching any buttons on the TV.

WATER VAPOR: A BY-PRODUCT OF UNVENTED ROOM HEATERS

Water vapor is a by-product of gas combustion. An unvented room heater produces approximately one ounce (30ml) of water for every 1,000 BTU's (.3KW's) of gas input per hour.

Unvented room heaters are recommended as supplemental heat (a room) rather than a primary heat source (an entire house). In most supplemental heat applications, the water vapor does not create a problem. In most applications, the water vapor enhances the low humidity atmosphere experienced during cold weather.

The following steps will help insure that water vapor does not become a problem.

1. Be sure the heater is sized properly for the application, including ample combustion air and circulation air.
2. If high humidity is experienced, a dehumidifier may be used to help lower the water vapor content of the air.
3. Do not use an unvented room heater as the primary heat source.

PROVISIONS FOR ADEQUATE COMBUSTION & VENTILATION AIR

This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the *National Fuel Gas Code, ANSI Z23.1/NFPA 54, the International Fuel Gas Code*, or applicable local codes.

Installation in a Confined Space

A confined space is an area with volume less than 50 cubic feet per 1,000 Btuh of the combined input rates of all fireplaces drawing combustion air from that space. Small areas such as equipment rooms are confined spaces. Furnaces installed in a confined space which supply heated air to areas outside the space must draw return air from outside the space through tightly sealed return air ducts. A confined space must have 2 openings into the space for combustion air. One opening must be within 12 inches of the ceiling and the other must be within 12 inches of the floor. The required sizing of these openings is determined by whether inside or outside air is used to support combustion, the method by which the air is brought to the space (vertical or horizontal duct) and by the total input rate of all fireplaces in the space.

Unusually Tight Construction

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

Unusually tight construction is defined as construction where:

- a. Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm or less with openings gasketed or sealed, and
- b. Weather-stripping has been added on openable windows and doors, and
- c. Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If your home meets all of the three criteria above, you must provide additional fresh air. See "**Ventilation Air From Outdoors**," page 14.

Determining if You Have a Confined or Unconfined Space

Use this worksheet to determine if you have a confined or unconfined space.

Space: Includes the room in which you will install fireplace plus any adjoining rooms with doorless passageways or ventilation grills between the rooms.

1. Determine the volume of the space (length x width x height).
Length x Width x Height = _____ cu. ft. (volume of space)

Example: Space size 16 ft. (length) x 10 ft. (width) x 8 ft. (ceiling height) = 1,280 cu. ft. (volume of space)

If additional ventilation to adjoining room is supplied with grills or openings, add the volume of these rooms to the total volume of the space.

2. Divide the space volume by 50 cubic feet to determine the maximum BTU/Hr the space can support.
_____ (volume of space) ÷ 50 cu. ft. = (maximum BTU/Hr the space can support)

Example: 1,280 cu. ft. (volume of space) ÷ 50 cu. ft. = 25.6 or 25,600 (maximum BTU/Hr the space can support)

3. Add the BTU/Hr of all fuel burning fireplaces in the space.

Vent-free fireplace	_____	BTU/Hr
Gas water fireplace	_____	BTU/Hr
Gas furnace	_____	BTU/Hr
Vented gas fireplace	_____	BTU/Hr
Gas fireplace logs	_____	BTU/Hr
Other gas fireplaces*	+ _____	BTU/Hr
Total	= _____	BTU/Hr

Example:

Vented gas fireplace	20,000	BTU/Hr
Vent-free fireplace	+ 18,000	BTU/Hr
Total	= 38,000	BTU/Hr

*Do not include direct-vent gas fireplaces. Direct vent draws combustion air from the outdoors and vents to the outdoors.

4. Compare the maximum BTU/Hr the space can support with the actual amount of BTU/Hr used.
_____ BTU/Hr (maximum the space can support)
_____ BTU/Hr (actual amount of BTU/Hr used)

Example:

25,600	BTU/Hr (maximum the space can support)
38,000	BTU/Hr (actual amount of BTU/Hr used)

WARNING

If the area in which the fireplace may be operated is smaller than that defined as an unconfined space or if the building is of unusually tight construction, provide adequate combustion and ventilation air by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation*, or applicable local codes.

PROVISIONS FOR ADEQUATE COMBUSTION & VENTILATION AIR (continued)

The space in the above example is a confined space because the actual BTU/Hr used is more than the maximum BTU/HR the space can support. You must provide additional fresh air. Your options are as follows:

- A. Rework worksheet, adding the space of an adjoining room. If the extra space provides an unconfined space, remove door to adjoining room or add ventilation grills between rooms. See **Ventilation Air From Inside Building**.
- B. Vent room directly to the outdoors. See **Ventilation Air From Outdoors**.
- C. Install a lower BTU/Hr fireplace, if lower BTU/Hr size makes room unconfined.

If the actual BTU/Hr used is less than the maximum BTU/Hr the space can support, the space is an unconfined space. You will need no additional fresh air ventilation.

⚠ WARNING

You must provide additional ventilation air in a confined space.

Ventilation Air

Ventilation Air From Inside Building

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor on the wall connecting the two spaces (see options 1 and 2, Figure 32). You can also remove door into adjoining room (see option 3, Figure 32). Each ventilation grill or opening shall have a minimum free area of one square inch per 1,000 BTUH of the total input rating of the gas equipment in the confined space.

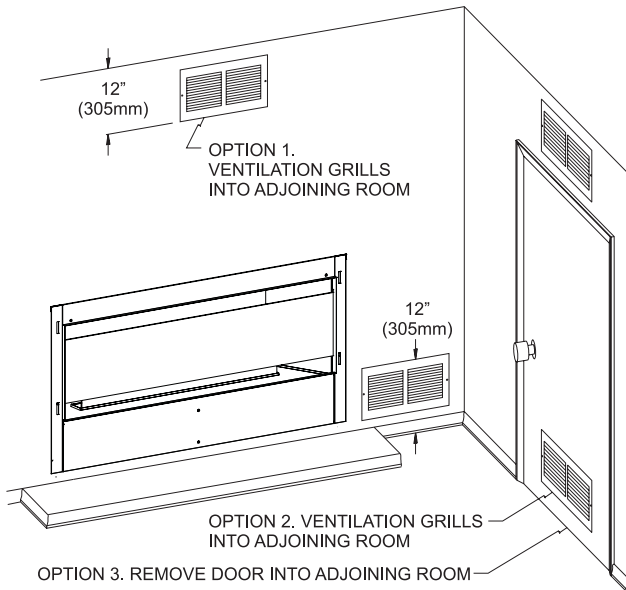


Figure 4

⚠ WARNING

Rework worksheet, adding the space of the adjoining unconfined space. The combined spaces must have enough fresh air to supply all appliances in both spaces.

Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one with 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. In most cases for direct communication with the outdoors or direct communication through a vertical duct a free area opening of one square inch per 4,000 BTU/Hr of fireplace input rating for each grill. If a horizontal duct is used, a grill free area or duct opening shall have a free area opening of one square inch per 2,000 BTU/Hr for each grill. Follow the *National Fuel Code ANSI Z223.1/NFPA54, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

IMPORTANT: Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent.

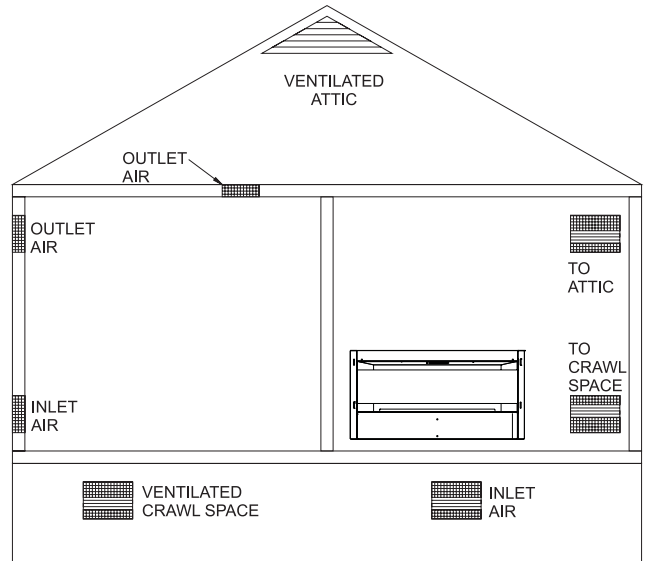


Figure 5

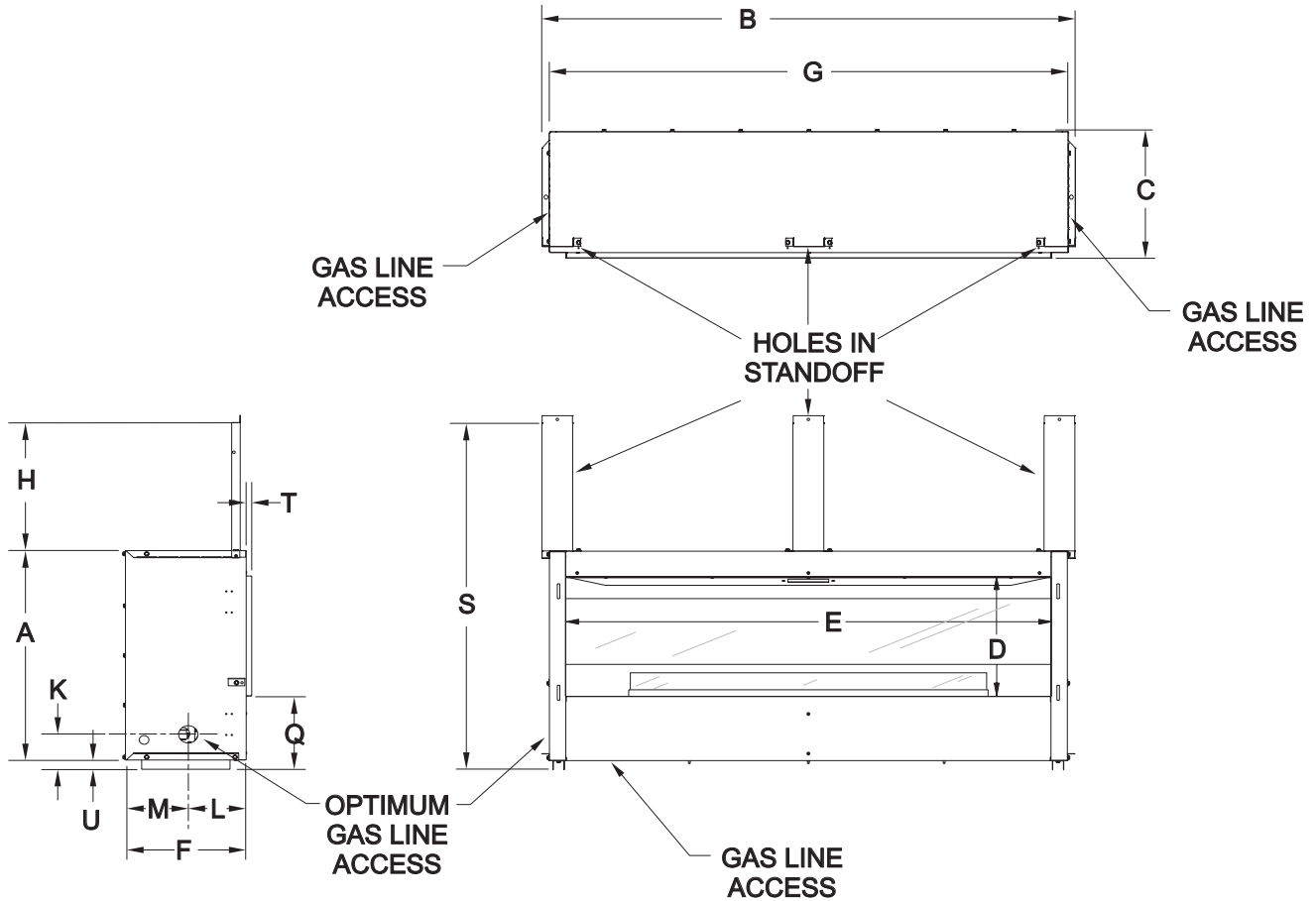
$A1 \times B1 = C1$
 $A2 \times B2 = C2$
 $C1 + C2 = \text{Sq. In. Required}$

Example: For a 30,000 BTU Fireplace, 1 sq in per 1,000 BTU equals 30 sq. in. of opening.

$(A1) 5\text{in}^2 \times (B1) 3\text{in}^2 = (C1) 15\text{in}^2$
 $(A2) 5\text{in}^2 \times (B2) 3\text{in}^2 = (C2) 15\text{in}^2$
 $(C1) 15\text{in}^2 + (C2) 15\text{in}^2 = 30\text{in}^2$

Figure 6

FIREPLACE DIMENSIONS



INDEX LETTER	DIMENSION DESCRIPTION	VFLL38FP	VFLL48FP
		Dimensions in Inches	
A	The maximum height of firebox face (excluding standoffs)	21-1/8	21-1/8
B	The maximum width of the firebox face (excluding nailing flanges)	43-1/4	52-3/4
C	The maximum depth of the firebox	11-1/2	11-1/2
D	The height of the firebox opening	12-1/16	12-1/16
E	The width of the firebox opening	38-1/4	48
F	The interior depth of the firebox (not shown)	10-1/2	10-1/2
G	The rear exterior width of the firebox (not shown)	41-5/8	51-3/8
H	The height to the firebox standoffs	13	13
K	Height from the bottom of the box to the gas line opening	2-1/2	2-1/2
L	Depth from the front of the box to gas line opening	5-1/4	5-1/4
M	Depth from rear of box to gas line opening	5-11/16	5-11/16
N	Glass height (not shown)	8	8
O	Glass width (not shown)	39-5/8	49-3/8
Q	Distance from floor to fireplace opening	7-7/16 (minimum)	7-7/16 (minimum)
S	Overall height to header	35	35
T	Opening Lip	1/2	1/2
U	Bottom Spacing	15/16	15/16

N/A - Not applicable for this unit.

Figure 7

FRAMING & MOUNTING BRACKET INSTALLATION

NOTE: You must use the framing and middle mounting brackets that are supplied with the fireplace. The brackets are shipped under the burner cover, inside the fireplace.

1. Locate the three steel middle mounting brackets under the burner cover. See Figure 8.

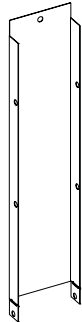


Figure 8

3. The brackets have a perforation located on each end. Bend them at the perforation. See Figure 9.

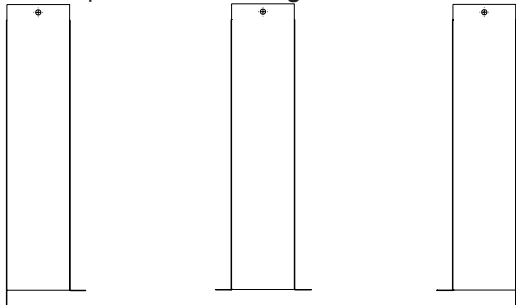


Figure 9

4. Secure the brackets to the fireplace top with four screws as shown in Figure 10. The screws are located in the hardware packet inside the envelope pack. There are holes located in the top of the fireplace for each mounting bracket. The hole closer to the edge of the fireplace is for mounting noncombustible board around the opening. The other hole is for mounting the non-combustible board to the fireplace face (top, side and bottom). See Figures 10 to 14.

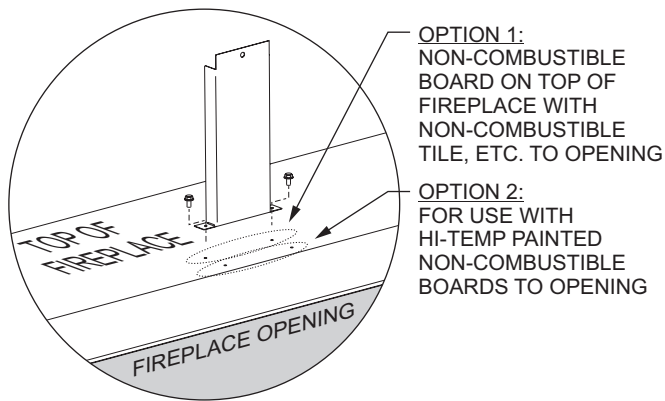


Figure 10

5. On the top and bottom of each side are side framing standoffs. Use pliers to bend the side framing standoff 90 degrees away from the cabinet. See Figure 10.

6. Locate framing brackets in the envelope pack. The holes in the framing brackets allow different size boards and different locations for the boards. See Figure 11. Bend the brackets at 90° angles. Install four framing brackets with two 10 x 1/2 screws (each). See Figures 13 and 14. Use the front set of holes if mounting around fireplace window. Use the back set of holes if mounting around the fireplace face (top, sides and bottom). Note: The non-combustible board provided is 1/2" thick.

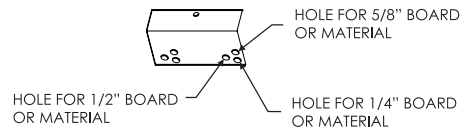


Figure 11

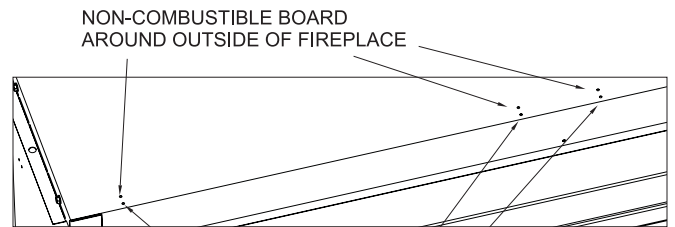


Figure 12

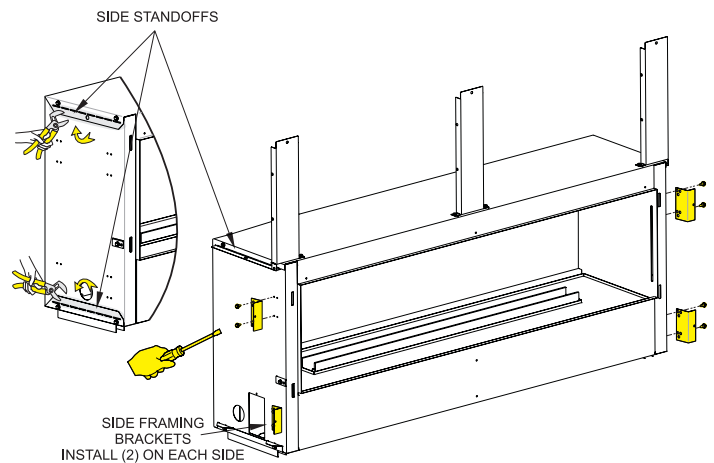


Figure 13

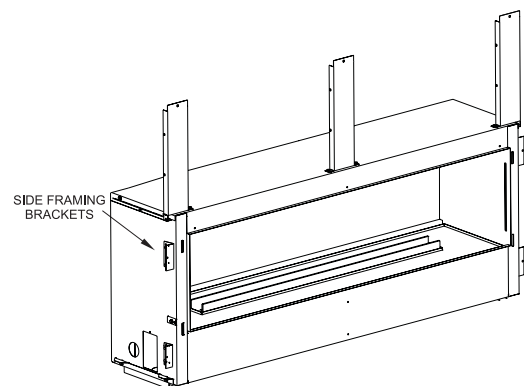


Figure 14

NOTE: Additional screws made be used with the side framing brackets to give additional support.

JUNCTION BOX WIRING INSTALLATION

Caution: All wiring should be done by a qualified electrician and shall be in compliance with all local, city and state building codes. Before making the electrical connection, make sure that the main power supply is disconnected. The firelace, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code ANSI/ NFPA 70 (latest edition).

JUNCTION BOX CONNECTIONS

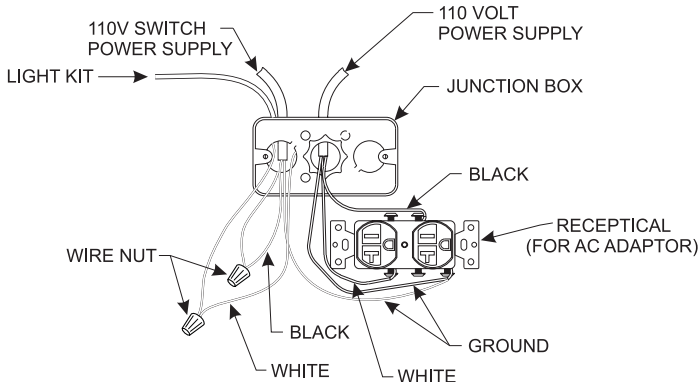


Figure 15

A factory installed junction box is located at the lower right corner inside the firebox bottom cavity. Wiring must be fed to the junction box through the outer wrap of the fireplace, then connected as required inside the junction box as directed above. Refer to the instructions above to determine what wiring is needed depending on what valve system you have, and whether or not the optional Accent Light kit will be installed.

It is recommended that approximately 6" of wiring be left in the junction box to allow for connections. For wiring detail, refer to Figure 12.

JUNCTION BOX WIRING INSTALLATION

120 Volt electrical requirements will depend on which model fireplace is installed.

For VFLL(38,48)FP30L series millivolt operated system:

Wiring is only needed if adding the LK5 Accent Light accessory. Follow the wiring instructions included with the LK5 to connect this optional accessory through the junction box to a wall switch.

For VFLL(38,48)FP90L series "IP" operated system: The suggested 120V electrical requirements include installation of the electrical receptacle into the junction box located at the lower right corner inside the firebox bottom cavity. This will be used to plug in the AC/DC Adapter that provides power to the electronic valve system.

NOTE: If an LK5 Accent Light kit is to be installed, a separate 120V line will be needed to connect the light kit wiring directly to a wall switch. See Figure 15.

It is recommended to move the fireplace to its final location or near it before installing electrical wire or connecting gas lines.

1. To access and install the junction box and wiring, begin by removing the burner cover. Lift it straight up off of the burner and set aside. See Figure 16. For VFLL(38,48)FP90 Units: Remove the heat shield and disconnect the wire to the switch on the heat shield.

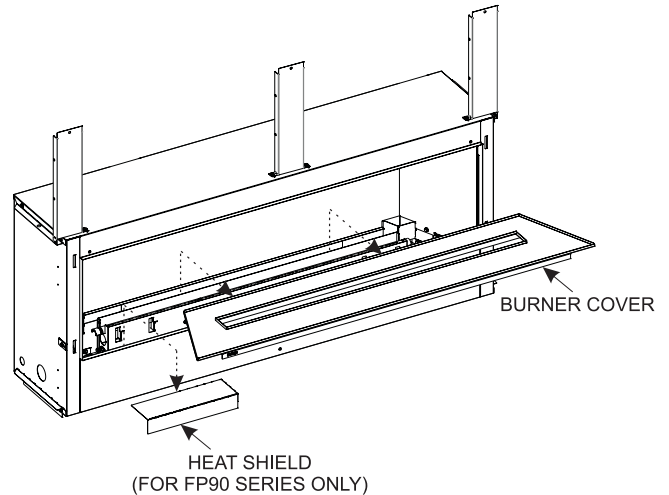


Figure 16

NOTE - for Porcelain Kits: Remove painted burner cover and replace with porcelain burner cover. Never use more than one burner cover.

2. Remove the five 5/16" Hex screws that hold down the complete burner and valve assembly. There are three screws on the front bottom flange, and two on the back bottom flange, near the ends. See Figure 17.

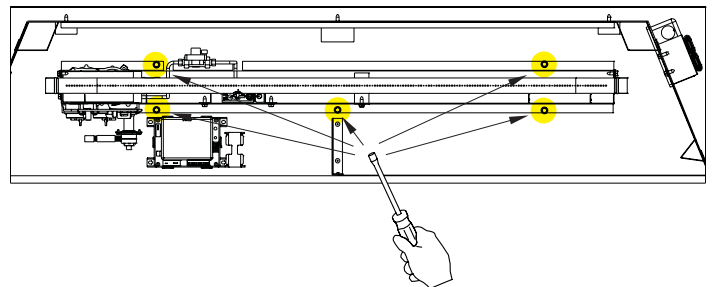


Figure 17

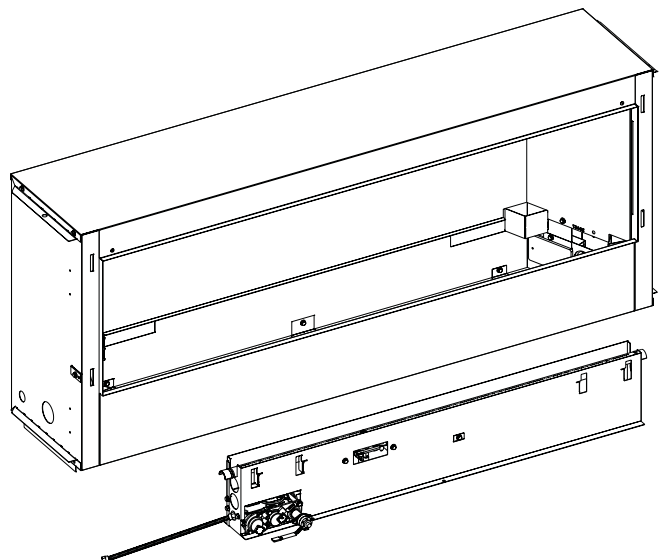


Figure 18

JUNCTION BOX WIRING INSTALLATION

3. Lift the complete burner and valve assembly upward, then turn it sideways in fireplace opening to gain easy access to the junction box. **See Figure 19.** You may remove the complete burner and valve assembly as shown in **Figure 19.**

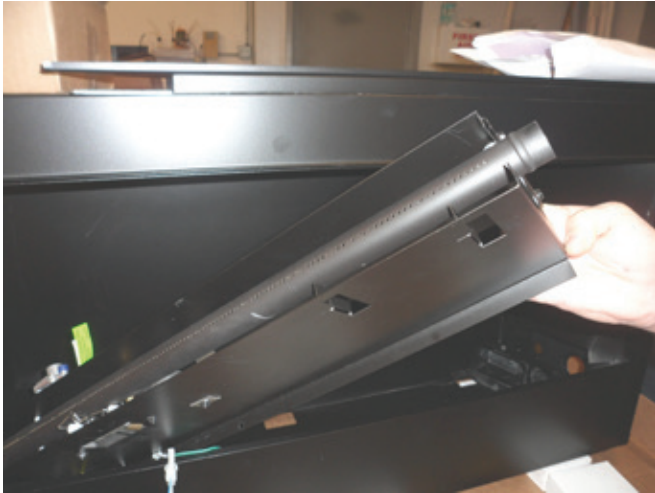


Figure 19

4. The junction box is located on the right side of the fireplace. Remove the two 5/16" Hex screws that secure the junction box to the firebox, and remove the junction box. **See Figure 20.** Run romex wire through the right rear corner of the fireplace and into the firebox area. Secure wiring with the romex connector as required and install the duplex receptacle as shown in **Figure 21.** Attach the black wire to the brass screw side of the receptacle, and the white wire to the opposite side. Secure the incoming ground wire under the green ground screw provided on the receptacle.



Figure 20

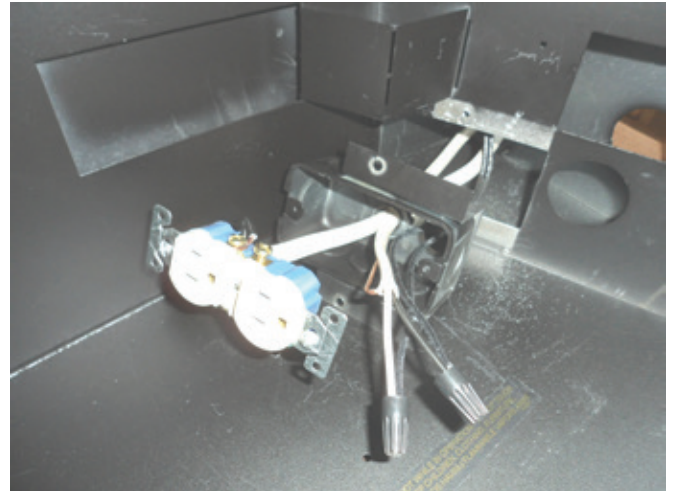


Figure 21

5. If only installing the LK5 Accent Light kit, then remove the 7/8" diameter knockout in the back of the junction box, install the 7/8" diameter protective grommet, and connect the wiring with wire nuts as shown in **Figure 21.**

There is a solid junction box cover plate included with the LK5 kit that should be used on the junction box if a duplex receptacle is not used.

6. Once the junction box wiring is completed, re-install the junction box into the lower right corner of the firebox cavity using the screws removed in step 4 as shown in **Figure 22.**

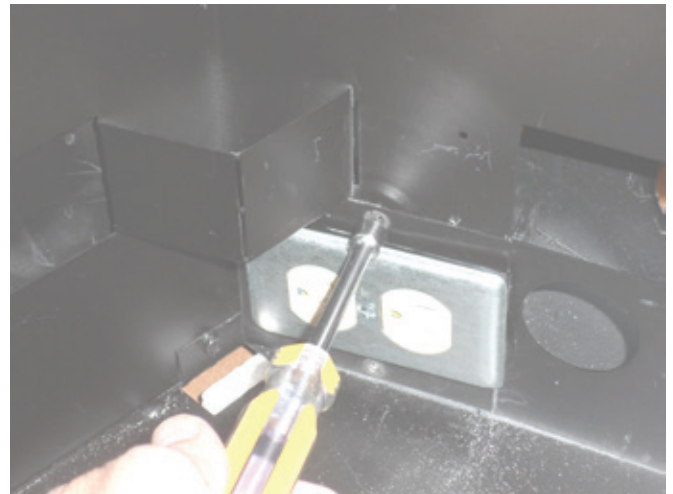


Figure 22

7. Reinstall the burner and valve assembly and reattach the screws removed in step 2. **See Figure 14.**
8. For VFLL(38,48)FP90: Reconnect the wire from the switch on the heat shield and put the shield back in place.

GAS SUPPLY

Caution: Two gas line installations at the same time are prohibited. The access plate to the switching means shall not be opened while the heater is in operation. The gas pipeline can be brought in through the right or left side of the fireplace. The insert has a Flexline with shutoff valve located on the left side when facing the unit. **See Figures 23 and 24.** Consult the current National Fuel Gas Code, ANSI Z223.1 CAN/CGA-B149 (.1 or .2) installation code.

Recommended Gas Pipe Diameter				
Pipe Length	Schedule 40 Pipe Inside Diameter		Tubing, Type L Outside Diameter	
	Nat.	L.P.	Nat.	L.P.
0-10ft	1/2"	3/8"	1/2"	3/8"
11-40ft	1/2"	1/2"	5/8"	1/2"
41-100ft	1/2"	1/2"	3/4"	1/2"
101-150ft	3/4"	1/2"	7/8"	3/4"

Caution: Never use plastic pipe. Check to confirm whether your local codes allow copper tubing or galvanized.

Notice: Since some municipalities have additional local codes, it is always best to consult your local authority and installation code.

The use of the following gas connectors is recommended:

- ANSI Z21.24 Fireplace Connectors of Corrugated Metal Tubing and Fittings.
- ANSI Z21.45 Assembled Flexible Fireplace Connectors of Other Than All-Metal Construction

The above connectors may be used if acceptable by the authority having jurisdiction. The Commonwealth of Massachusetts requires that a flexible fireplace connector cannot exceed three feet in length.

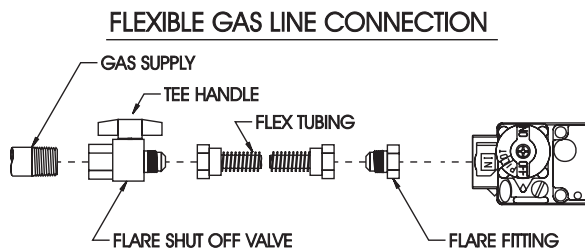


Figure 23

Installing the Main Gas Cock

Each fireplace should have its own manual gas cock. A manual main gas cock should be located in the vicinity of the unit and can be easily accessed after assembly. Where none exists, or where its size or location is not adequate, contact your local authorized installer for installation or relocation. Compounds used on threaded joints of gas piping shall be resistant to the action of liquefied petroleum gases. The gas lines must be checked for leaks by the installer. Testing for leaks on all exposed connections should be done with leak test solution or a soap solution. After testing is complete, all solution should be cleaned off. On unexposed connections, a pressure test should be made.

Never use an exposed flame to check for leaks. Fireplace must be disconnected from piping at inlet of control valve and pipe capped or plugged for pressure test. Never pressure test with fireplace connected; control valve will sustain damage!

34846-2-1016

NOTICE: The millivolt gas controls are equipped with a captured screw type pressure test point, therefore it is not necessary to provide a 1/8" test point up stream of the control. When using copper or flex connector use only approved fittings. The fireplace and it's individual shut off valve must be disconnected from supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5kPa).

The fireplace must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5kPa).

Attention! If one of the procedures results in pressures in excess of 1/2 psig (14" w.c.) (3.5 kPa) on the fireplace gas valve, it will result in a hazardous condition.

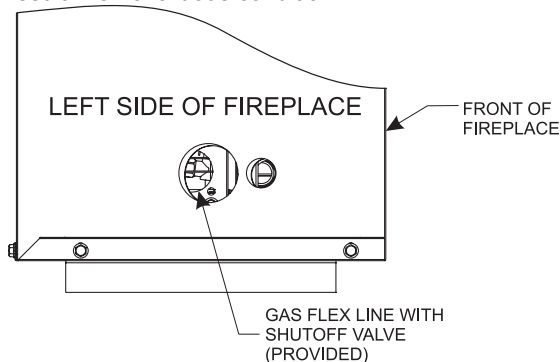


Figure 24

Shut off valve must be accessible after installation.

Checking Manifold Pressure

MILLIVOLT VALVES (VFLL(38,48)FP30)

Natural gas will have a manifold pressure of approximately 3.5" w.c. for maximum input or 1.6" w.c. for minimum input at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 4.5" w.c. for the purpose of input adjustment to a maximum of 10.5" w.c.

Propane gas will have a manifold pressure approximately 10.0" w.c. (2.49kPa) for maximum input or 6.3" w.c. for minimum input at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 11.0" w.c. for the purpose of input adjustment to a maximum of 13.0" w.c.

INTERMITTENT PILOT VALVES (VFLL(38,48)FP90)

Natural gas will have a manifold pressure of approximately 3.5" w.c. at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 7.0" w.c. for the purpose of input adjustment to a maximum of 10.5" w.c.

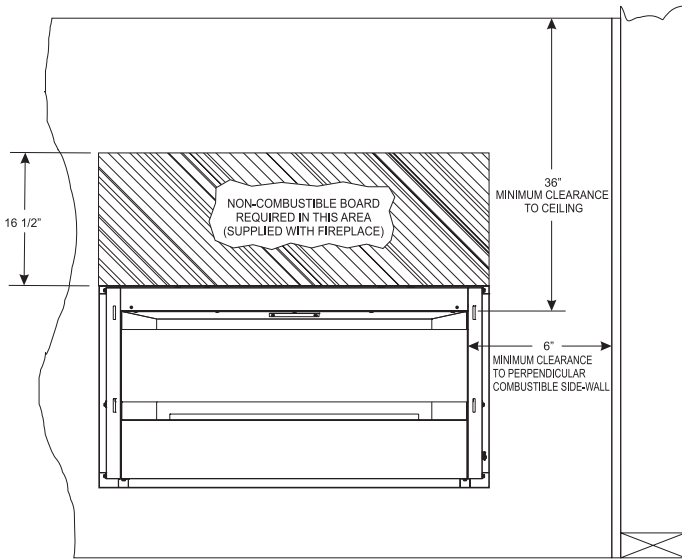
Propane gas will have a manifold pressure approximately 10.0" w.c. at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 11.0" w.c. for the purpose of input adjustment to a maximum of 13.0" w.c.

A test gage connection is located downstream of the gas fireplace pressure regulator for measuring gas pressure. The connection is a 1/8 inch N.P.T. plugged tapping.

Millivolt Control Valve

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.

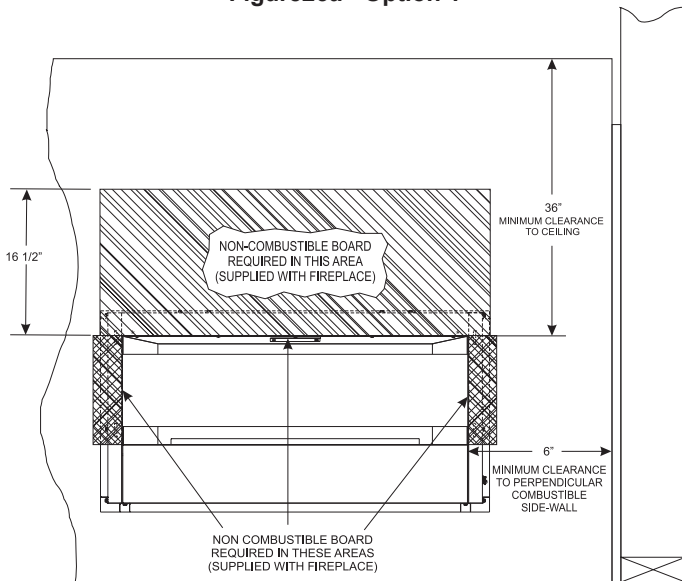
CLEARANCES



NOTE: Combustible material is allowed outside of the non-combustible board and outside of the unit boundaries.

NOTE: To finish the wall using DF(38,48)4BL Decorative Front, See Figure 25c.

Figure 25a - Option 1



NOTE: Combustible material is allowed below a fireplace viewing area opening and outside the non-combustible board.

NOTE: To finish the wall using DF(38,48)4BL Decorative Front, See Figure 25c.

Figure 25b - Option 2

FOR DF(3.4)8W(HP,BL)
DECORATIVE FRONT
INSTALLATION

FOR DF(3.4)84BL
DECORATIVE FRONT
INSTALLATION

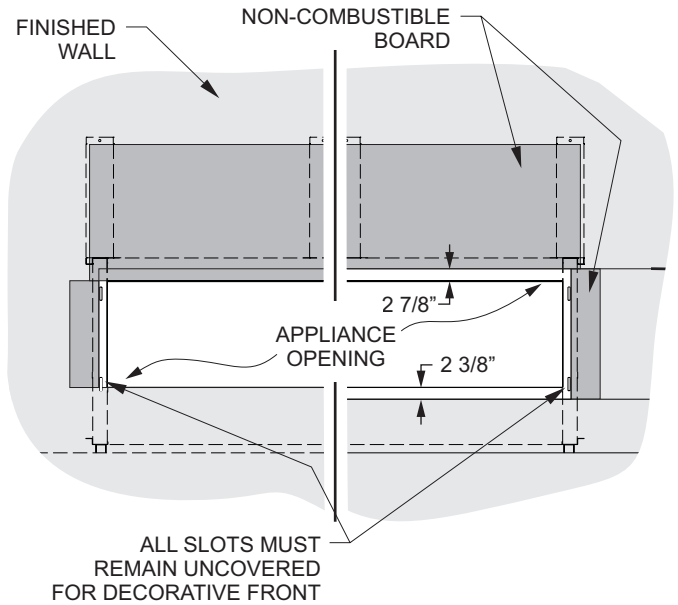
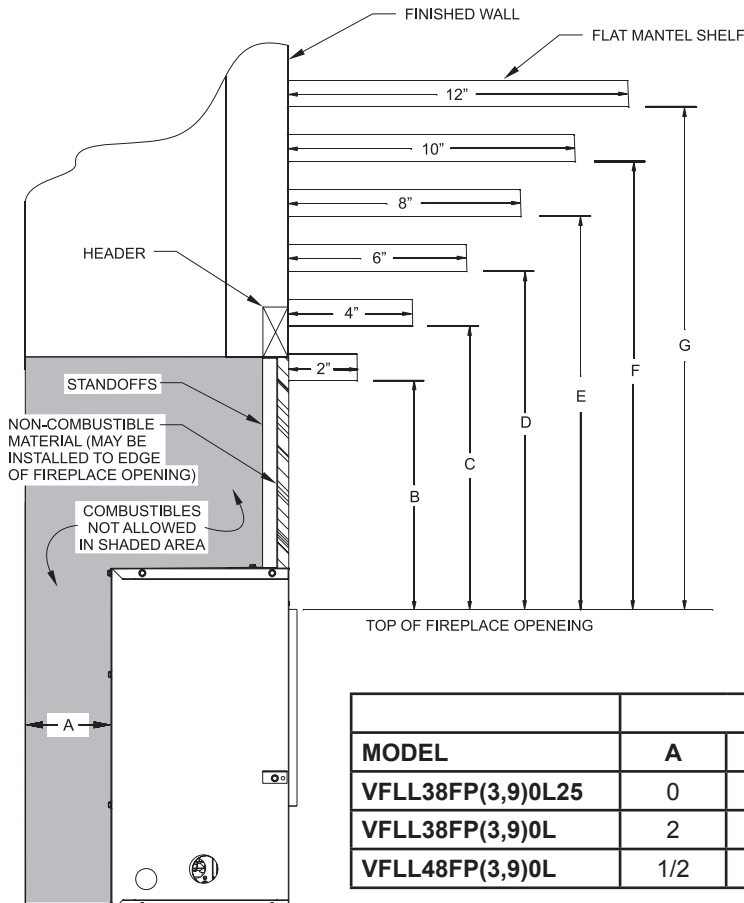


Figure 25c

⚠ WARNING

DO NOT put screws through large non-combustible board and into the fireplace. Attach screws only in standoffs.

CLEARANCES (cont'd)



Television Considerations

Installing a television above a fireplace has become increasingly popular; however, the area above any fireplace gets hot and most TV manufacturers recommend against placing their products near a heat source.

If you install a television above this fireplace, Empire Comfort Systems accepts no responsibility for damage or injuries. Follow the television manufacturer's installation instructions, including any recommendations regarding proximity to heat sources.

If you have a TV above your fireplace, turn off the fireplace and let it cool completely before servicing or touching any buttons on the TV.

MODEL	DIMENSION (IN INCHES)						
	A	B	C	D	E	F	G
VFLL38FP(3,9)0L25	0	18	20	22	24	26	28
VFLL38FP(3,9)0L	2	18	20	22	24	26	28
VFLL48FP(3,9)0L	1/2	23	23	25	27	29	31

Figure 26a

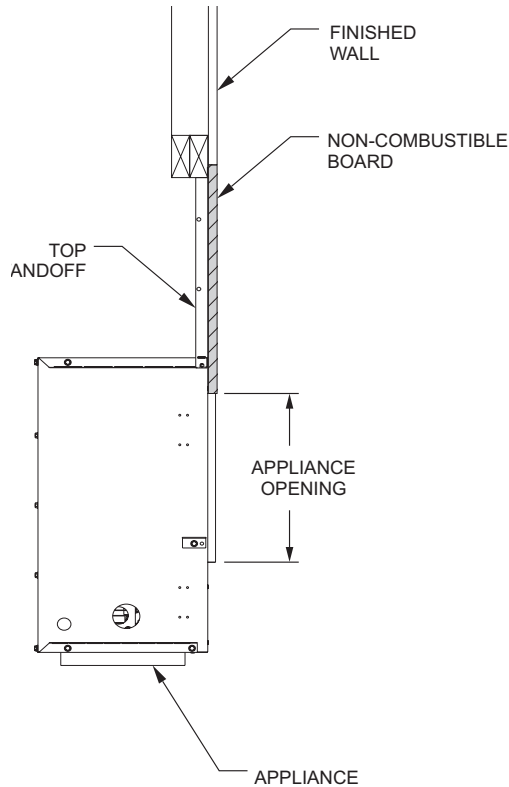


Figure 26b

FIREPLACE INSTALLATION

Built-In Fireplace Installation

Built-in installation of this fireplace involves installing the fireplace into a framed-in enclosure. This makes the front of the fireplace flush with a wall or the front of the fireplace window flush with a wall.

A framed-in enclosure is an enclosure that does not allow drafts through the firebox. These drafts could cause the flame to roll back producing soot or a poor flame pattern.

Frame in rough opening. Use dimensions shown in **Figure 32** for a conventional rough opening. Use **Figure 33** for an elevated installation. Be sure to provide support to the bottom of the fireplace. Use dimensions shown in **Figure 35** for corner rough opening. Be sure to provide gas line for fireplace and electrical power for optional light assembly. Refer to Junction Box Wiring section on pages 17 and 18 for details on electrical requirements.

1. Verify gas and electrical lines are ready for fireplace installation. See "Gas Supply" page 19. See "Junction Box" pages 17 and 18. If no electrical power is to be used, place a solid cover (provided) over the junction box opening. See Junction Box Wiring section in this manual.
2. Insert fireplace into enclosure.
3. Level firebox.
4. Secure three middle mounting brackets with drywall screws to the framed opening above the fireplace as shown in **Figures 27 to 35**. The brackets should be installed to support the ends of the non-combustible board. Note: The drywall screws are located in the instruction envelope packet. Secure the left and right framing standoffs to the side framing as shown in figure 24. Secure fireplace on left and right through side framing brackets.
- 5a. **Option 1:** To install the fireplace cabinet face flush with the wall-board, secure the framing brackets at the top and sides of the fireplace with a 1/2" setback. This allows you to use the supplied non-combustible board above the fireplace. **NOTE:** This type of installation will allow you to apply tile, marble, stone or other non-combustible material over the face of the fireplace cabinet, up to the flange opening. **See Figures 25a and 26a.**
- 5b. **Option 2:** To install the fireplace so that non-combustible board is installed over the fireplace cabinet face (down to the opening window), secure the top and side framing brackets flush with the face of the fireplace cabinet. Non-combustible board has been provided with the unit. **See Figures 25b and 26b.**

NOTE: If using the 4" surround DF384BL or DF484BL, non-combustible Board will need to be raised 2 7/8" above the opening and 2 3/8" below the opening. **See Figure 25c.**

NOTE: Decorative fronts do not cover the entire face of the fireplace. The installer must finish the wall all the way to the fireplace top and bottom opening as shown in Figure 25a on page 20.

NOTE: Allow recommended cure times for mud, tile, paint etc. Do not burn fireplace during this cure time.

Notice for Finishing Materials

The wall above the fireplace will become hot. Install the non-combustible board supplied with the fireplace before adding paint, tile or stone. Attach tile or other non-combustible products to the fireplace face and to the non-combustible area (Figures 29 and 30) using adhesives designed for high-temperature applications. Follow the manufacturer's instructions for application and curing times. Heat from the fireplace may cause incorrectly installed materials to fail. If you are painting above the fireplace, use a coating designed for high temperature environments and follow the manufacturer's instructions for surface preparation, application and curing. Heat from the fireplace may cause incorrectly applied coatings to fail or discolor.

6. Check gas lines for leaks.
7. For VFLL(38,48)FP90 plug power adapter to junction box.
8. Place batteries in receiver boxes and remotes using instructions provided. Verify remote is communicating with receiver.
9. Install optional liners using their instructions.
- 10a. For VFLL(38,48)FP30 fireplaces: Connect the remote receiver to the valve as indicated in the instructions included with the remote and receiver. Light the pilot and turn the valve to the "ON" position. Set "Hi" or "Lo" for flame height as desired. The fireplace will not light the burner until the remote's "ON" button is pressed.
- 10b. For VFLL(38,48)FP90 fireplaces, set receiver for "remote". Set switch on side of heat shield to standing pilot or intermediate pilot. **See Figure 73.** Verify that the heat shield is back in place. **See Figure 16.**
11. Replace burner cover. **See Figure 16.**
12. Retrieve shorter glass and install in front of burner. **See Figure 27.**
13. Place optional log set plate and logs according to their instructions.
14. Place optional decorative glass or rocks according to their instruction. **See Figure 44. Glass and rock must not be placed on top of or next to burner.**
15. Retrieve larger glass and install in slots on the left and right of fireplace. **See Figures 40 - 43.**
16. Install optional decorative surround panel assembly. Refer to instructions included with the surround panel kit.
17. Test fireplace using remote and show owner how to use the remote. Show owner lighting instructions in this manual.
18. Installation of built-in fireplace is complete. Leave this manual with the owner.

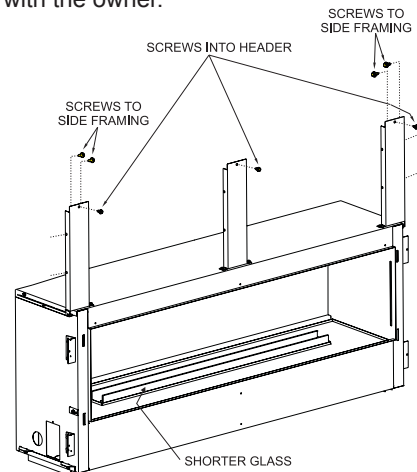


Figure 27

FIREPLACE INSTALLATION

Non-combustible Board Requirements

1. Do not attach non-combustible board to the fireplace. Attach non-combustible board only to side studs and header board.
2. Pre-drill holes into non-combustible board. Counterlink holes are recommended.
3. Use only high-temperature adhesive and high-temperature paints with the non-combustible board.
4. Do not over-tighten screws going through non-combustible board.

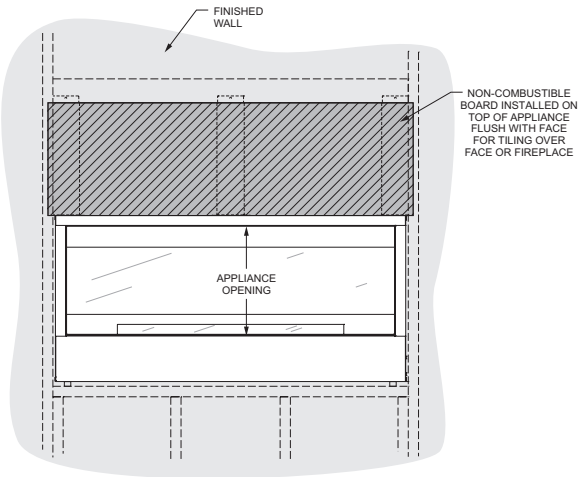


Figure 28 - Tiling or Non-Combustible Material Application
 Tile or non-combustible materials can be applied on top of the non-combustible board and finished wall as their instructions require.

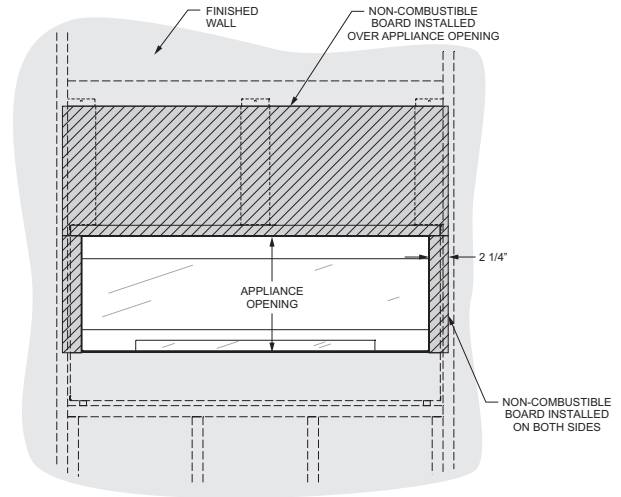
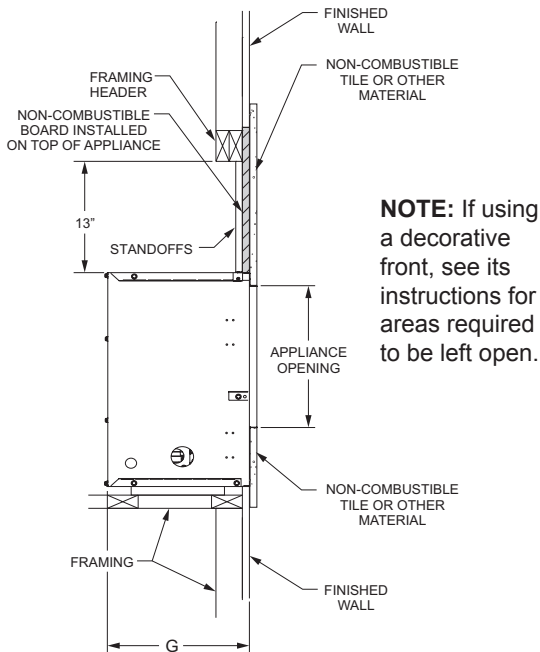


Figure 29 - High Temperature Paint Application



NOTE: If using a decorative front, see its instructions for areas required to be left open.

Figure 30 - Tiling or Non-Combustible Material Application

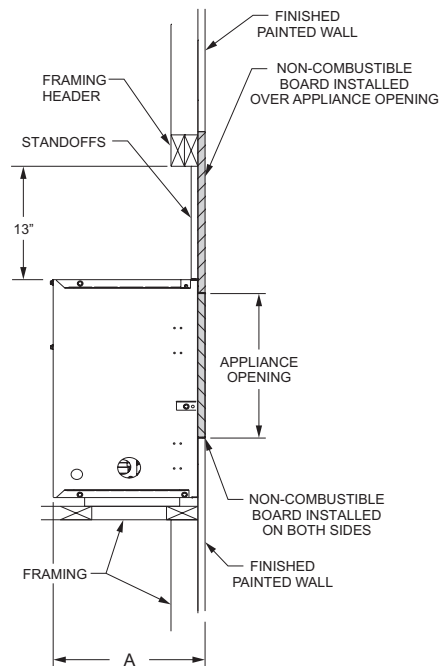


Figure 31 - High Temperature Paint Application

TABLE 3 - MINIMUM DIMENSIONS (in inches) FOR FIGURES 28 - 34							
	A	B	C	D	E	F	G
VFLL38FP(3,9)0L25	11-3/4*	43-1/2	35-1/4	48-7/8	69	34-1/2	11-1/4
VFLL38FP(3,9)0L	13-3/4*	43-1/2	35-1/4	48-7/8	69	34-1/2	13-1/4
VFLL48FP(3,9)0L	12*	53	35-1/4	53-1/2	75-5/8	37-7/8	11-1/2

* Minimum clearance with 1/2" non-combustible board over face of fireplace.

FIREPLACE INSTALLATION

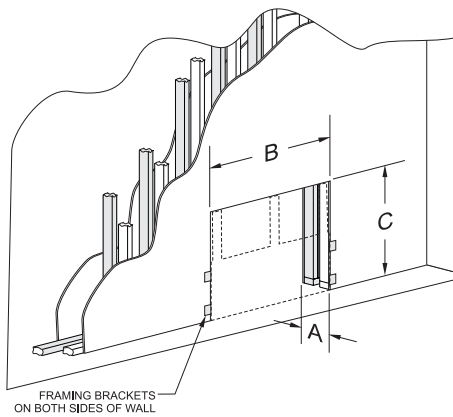


Figure 32

Rough Opening for Elevated Installation (Built-In)

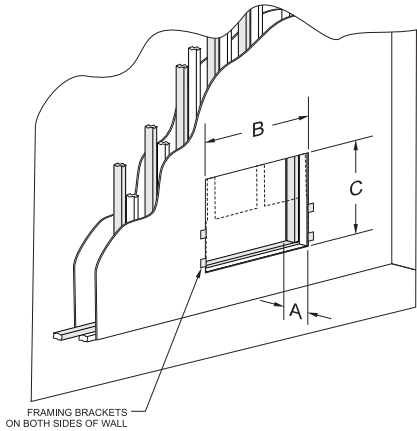


Figure 33

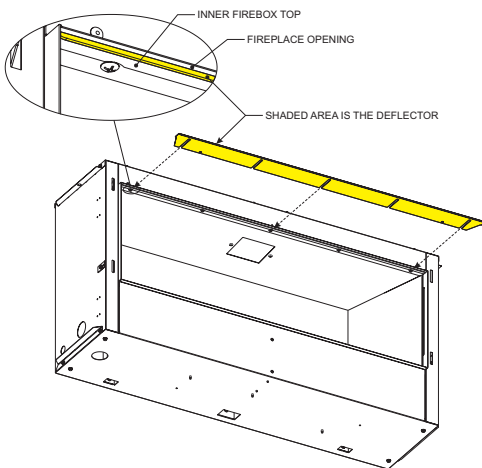


Figure 34

Rough Opening for Installing in Corner (Built-In)

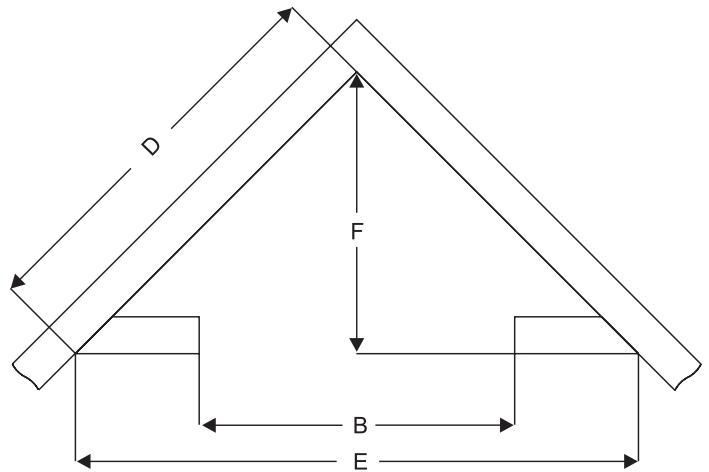


Figure 35

Notice for Finishing with Tile or Stone

The wall above the fireplace will become hot. Install the non-combustible board supplied with the fireplace. Tile or other non-combustible materials can be applied to the board or face of the fireplace. All adhesives must be designed for high-temperature applications (minimum rating of 300°F). Follow the manufacturer's instructions for application and curing times. See step 2, # 4 (page 28) for correct placement of the nailing flanges. Heat from the fireplace may cause incorrectly installed materials to fail.

Notice for Finishing with Paint

Use a coating designed for 300°F environments and follow the manufacturer's instructions for surface preparation, application and curing. Heat from the fireplace may cause incorrectly applied coatings to fail or discolor. Light colors may show some discoloration. Contact paint manufacturer for application questions.

Inner Top Deflector Installation (Optional)

The purpose of the **Inner Top Deflector** is to reduce temperatures across the top of the fireplace opening. The fireplace is safe without the deflector. The deflector will also help with finishing materials thicker than 1/2 inch to push the heat away from under the finishing material. The deflector can be used for finishing material up to 1 1/2 inch.

If installing an optional **Inner Top Deflector**, loosen the (5) Phillips head screws securing the inner firebox top. (See Figure 34) Do not remove screws completely. Slide into place with the inner top deflector slot angled downward. Slide the deflector between the inner firebox top and the fireplace opening, until the front of the deflector is flush with the wall. Tighten the (5) Phillips head screws to lock in place.

TABLE 3 - MINIMUM DIMENSIONS (in inches) FOR FIGURES 28 - 34

	A	B	C	D	E	F	G
VFLL38FP(3,9)0L25	11-3/4*	43-1/4	35-1/4	48-7/8	69	34-1/2	11-1/4
VFLL38FP(3,9)0L	13-3/4*	43-1/4	35-1/4	48-7/8	69	34-1/2	13-1/4
VFLL48FP(3,9)0L	12*	53	35-1/4	53-1/2	75-5/8	37-7/8	11-1/2

* Minimum clearance with 1/2 inch non-combustible board over face of fireplace.

COMBUSTIBLE MATERIALS

Combustible Material

Do not attach combustible material to the mantel of your fireplace. This is a fire hazard.

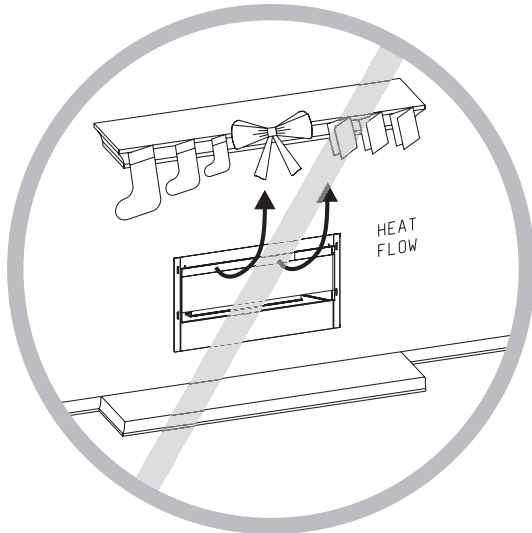


Figure 36

Television Considerations

Installing a television above a fireplace has become increasingly popular; however, the area above any fireplace gets hot and most TV manufacturers recommend against placing their products near a heat source.

If you install a television above this fireplace, Empire Comfort Systems accepts no responsibility for damage or injuries. Follow the television manufacturer's installation instructions, including any recommendations regarding proximity to heat sources.

If you have a TV above your fireplace, turn off the fireplace and let it cool completely before servicing or touching any buttons on the TV.

CLEANING AND SERVICING

Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.

TURN OFF FIREPLACE AND ALLOW TO COOL BEFORE CLEANING.

Remove any optional decorative covers or decorative glass material. Gloves are recommended.

PERIODIC CLEANING - Refer to parts diagram for location of items discussed below.

- Do not use cleaning fluid to clean any part of fireplace.
- Glass should be cleaned with ammonia-free cleaner. Ammonia will etch or stain glass when heated.
- Remove loose particles and dust from the burner, controls and air shutter.
- Inspect and clean burner air intake hole. Remove lint or particles with brush. Failure to keep air intake hole clean will result in sooting and poor combustion.

ANNUAL CLEANING/INSPECTION - Refer to parts diagram for location of items discussed below.

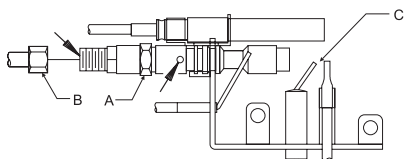
- Inspect and clean burner air intake hole. Remove lint or particles with vacuum or brush. Failure to keep air intake hole clean will result in sooting and poor combustion.
- Inspect and clean all burner ports.
- Inspect ODS pilot for operation and accumulation of lint at air intake holes.
- Verify flame pattern for proper operation.
- Verify smooth and responsive ignition of main burner.

CLEANING AND PILOT MAINTENANCE

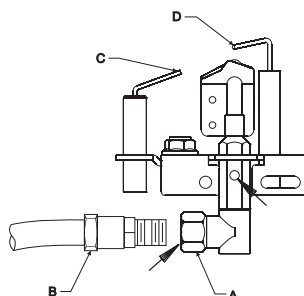
Oxygen Depletion Sensor Pilot

When the pilot has a large yellow tip flame, clean the Oxygen Depletion Sensor as follows:

1. Clean the ODS pilot by loosening nut B from the pilot tubing. When this procedure is required, grasp nut A with an open end wrench.
2. Use canned air to blow through the holes indicated by the arrows. This will blow out foreign materials such as dust, lint and spider webs. Use a wrench to hold Nut A as you tighten Nut B.



Millivolt Pilot
Figure 36



Intermittent Pilot
Figure 37

⚠ WARNING

Never use needles, wires, or similar cylindrical objects to clean the pilot to avoid damaging the calibrated ruby that controls the gas flow.

3. If intermittent pilot unit stops working, clean flame sensor C (Figure 37) with a damp cloth.
4. If intermittent pilot ignitor does not spark, clean ignitor D (Figure 37) with a damp cloth.

CONTROL COMPARTMENT AND BURNER MAINTENANCE

Keep the control compartment and burner area clean by vacuuming or brushing area at least twice a year.

THE FIREPLACE CAN GET VERY HOT – HANDLE ONLY WHEN COOL.

Always turn off gas to the pilot before cleaning. For relighting, refer to lighting instructions located on the rating plate of the fireplace.

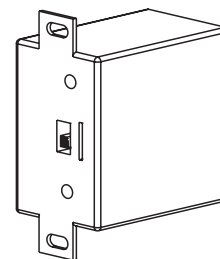
Never obstruct the flow of the combustion and ventilation air. Keep the front of the fireplace clear of all obstacles and materials.

An intermittent pilot may require more frequent battery changes than a millivolt pilot. To replace the batteries in an intermittent unit, follow these steps:

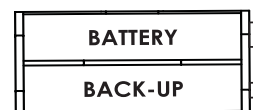
1. Remove the outer glass. See Figures 40 - 43.
2. Remove the optional glass media from inside the fireplace.
3. Lift and set aside the burner cover.
4. Lift the heat shield that is in front of the valve.

NOTE: The battery backup and remote receiver are located under the heat shield.

5. Replace the four AA batteries in each.
6. Replace the items removed in steps 1 through 4.



REMOTE RECEIVER
Figure 38



BATTERY HOLDER
Figure 39

DECORATIVE GLASS ACCESSORY INSTALLATION

⚠ WARNING

Failure to position the parts in accordance with the diagrams and instructions below or failure to use only parts specifically approved for use with this fireplace may result in property damage or personal injury.

NOTICE: The burner may be operated with or without the Decorative accessory options. Follow the directions below should you choose to enhance your burner with any one of the available decorative options.

NOTE: VFLL38 burner pan will accept 1.75 square feet of Decorative Glass. VFLL48 burner pan will accept 2.25 square feet of Decorative Glass.

DECORATIVE GLASS AND ROCKS ACCESSORY PLACEMENT

⚠ CAUTION

Do not use more glass than recommended.

⚠ CAUTION

Glass or rocks must not be more than a single layer.

⚠ CAUTION

Never place media materials on or next to the burner.

The Decorative Glass options are available in various colors and package sizes. Choose the size appropriate for your fireplaces. See list on page 8.

⚠ CAUTION

Use of gloves and eye protection is required while applying the decorative glass or rocks.

Application of the Decorative Glass or Rocks should only be performed after the burner has been fully installed, secured and tested for leaks. If operating the burner with a Remote Control, make sure all batteries are installed and that the burner operates with the remote correctly.

⚠ CAUTION

Do not use real rocks or glass. Use decorative rocks and decorative glass from the accessories listed on page 8.

INSTALLATION

1. Remove glass front from fireplace by lifting the glass front up, sliding it to the right, and then carefully angle left side out of the slots. See Figures 40 - 43.

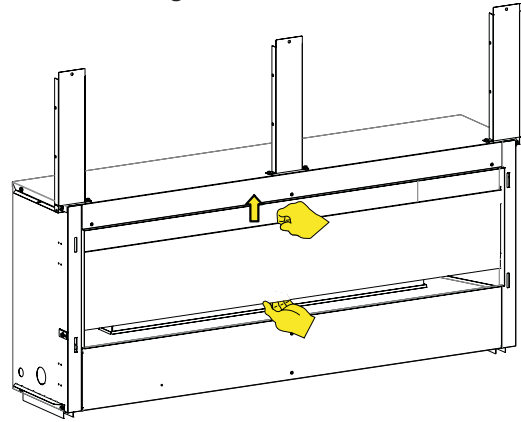


Figure 40

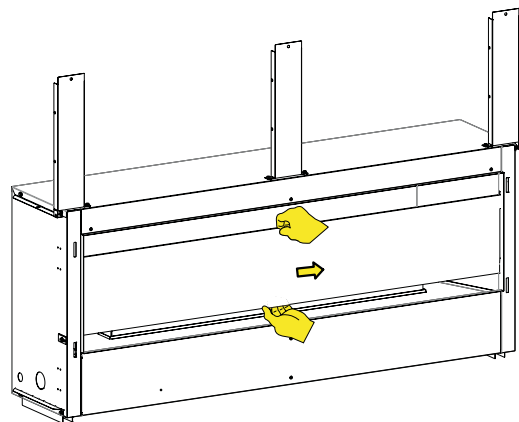


Figure 41

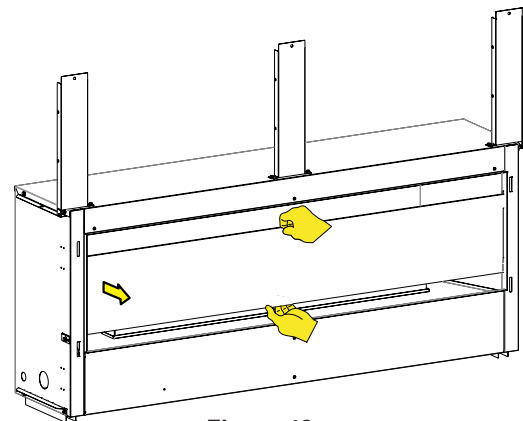


Figure 42

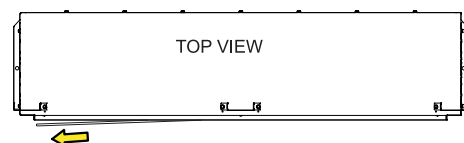


Figure 43

DECORATIVE GLASS ACCESSORY INSTALLATION

- Apply the accessory decorative media to the shaded area only. **See Figure 44.** Use enough to cover the floor of the fireplace, but do not allow the media to reach higher than the flange surrounding the burner. Never place decorative media inside the flange surrounding the burner itself.

This fireplace can use crushed glass, glass droplets (1/2 inch), glass drops (1 inch), or ceramic fiber rocks and pebbles. Mix colors and glass types, but do not exceed the recommended amount of decorative media.

⚠ CAUTION

Glass or rocks must not be placed around the ends or over the front edge of the burner assembly. Do not restrict air flow.

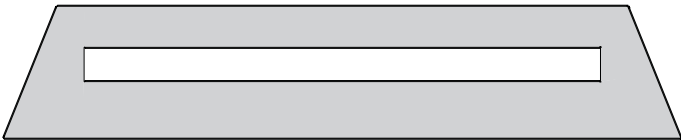


Figure 44

Quantity of Glass

Model	Amount
VFLL38FP	1.75 sq. ft.
VFLL48FP	2.25 sq. ft.

- Replace the glass front into the fireplace by placing the right side into the slots in the firebox. Carefully angle in the left side of the glass and then slide the glass to the left. Settle the glass into the slots by gently lowering it. **See Figures 45 - 48.**

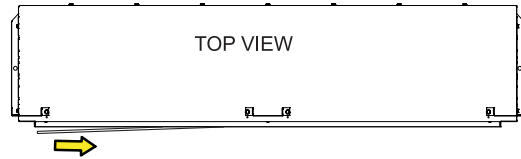


Figure 45

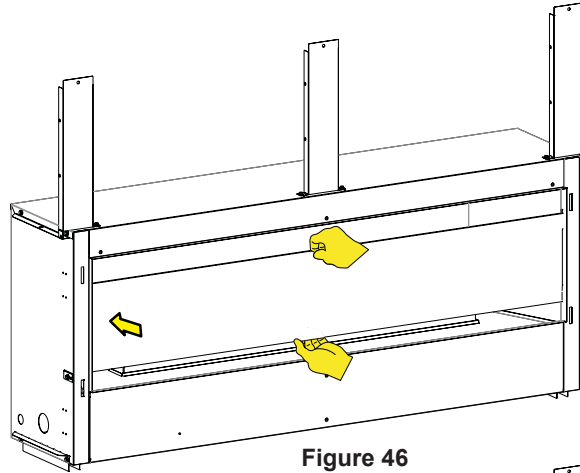


Figure 46

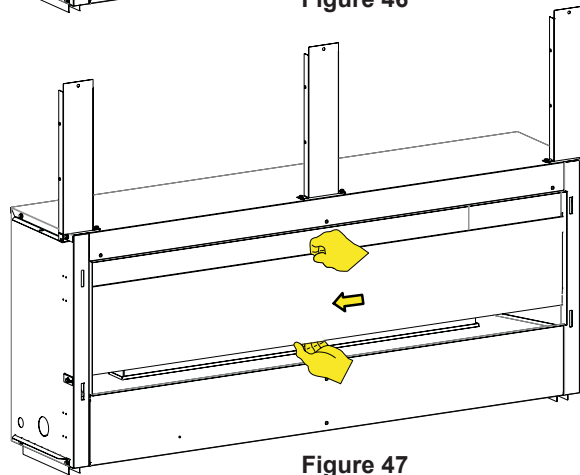


Figure 47

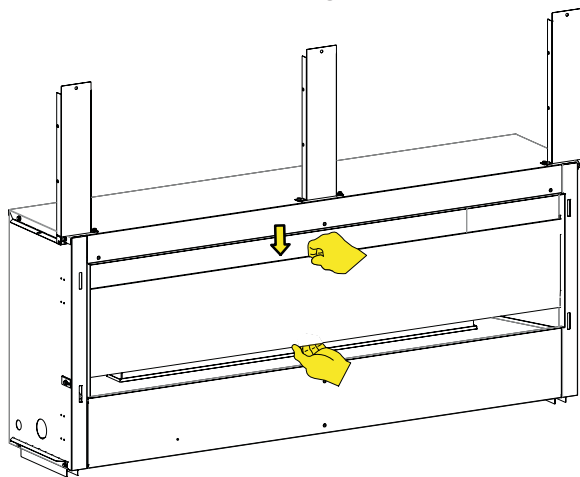


Figure 48




MILLIVOLT CONTROL VALVE LIGHTING INSTRUCTIONS

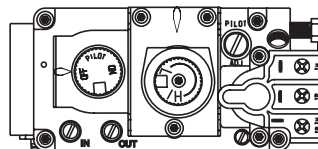
FOR YOUR SAFETY READ BEFORE LIGHTING

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

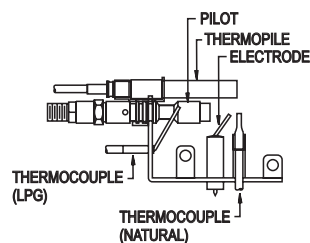
- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO 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 label.
2. Open bottom louver assembly (if applicable).
3. Set REMOTE/OFF/ON switch to "OFF."
4. Turn off all electric power to the appliance (if applicable).
5. Push in gas control knob slightly and turn clockwise  to "OFF."
NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.
6. Wait ten (10) minutes to clear out any gas. Then smell for gas, including near the floor. If you 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 in front of 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 (1) 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 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. Set REMOTE/OFF/ON switch to desired setting.
12. Turn on all electric power to the appliance (if applicable).
13. Close bottom louver assembly (if applicable).



GAS CONTROL KNOB SHOWN IN "OFF" POSITION.





IP LIGHTING INSTRUCTIONS

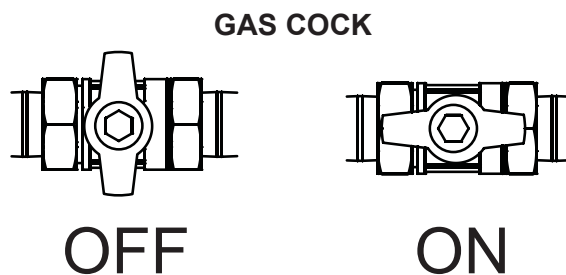
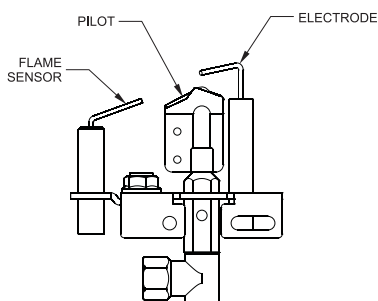
FOR YOUR SAFETY READ BEFORE LIGHTING

▲ 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 can be lighted with the manual on/off switch, a remote control, or by switching the remote receiver switch to the "ON" position. 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 the remote control or manual remote receiver switch to operate the gas valve. Never use tools. If valve does not operate, do not 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. Turn OFF electric power to the appliance.
3. Remove front surround panel assembly or bottom louver if included.
4. Turn gas cock counterclockwise  to "On" position.
5. Wait ten (10) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above on this page. If you do not smell gas, go to the next step.
6. Turn ON electric power to the appliance.
7. Find pilot - Follow metal tube from gas control. The pilot is behind the burner on the right side.
8. Turn main flame to on. If the pilot does not light within 60 seconds, stop and go to Step 5.
9. Refer to remote control instructions for detailed information, control features, and operation. Note: There is a CPI/IP switch behind the right side panel that allows for a continuous standing pilot mode or an intermittent pilot mode. See appliance manual for location of this switch. If the pilot or burner does not stay lit (in the standing pilot mode), stop and immediately call a qualified service technician or gas supplier.
10. If the burner or pilot does not operate properly after several tries, turn the gas cock clockwise  to "OFF" and call your service technician or gas supplier.
11. Replace the front surround assembly or close bottom louver assembly.
12. Operation of the gas valve is controlled by a manual on/off switch or a hand held remote control. Refer to remote instructions for detailed operation information.

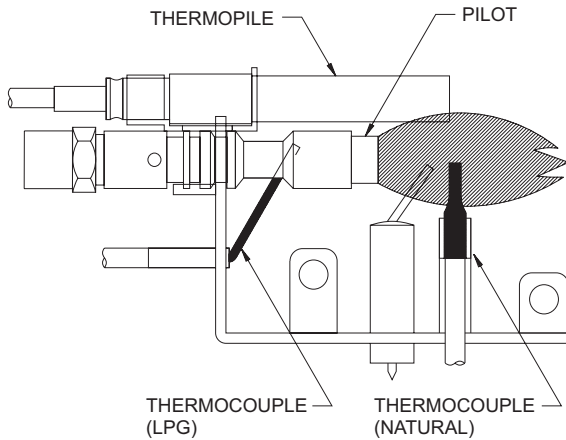


TO TURN OFF GAS TO FIREPLACE

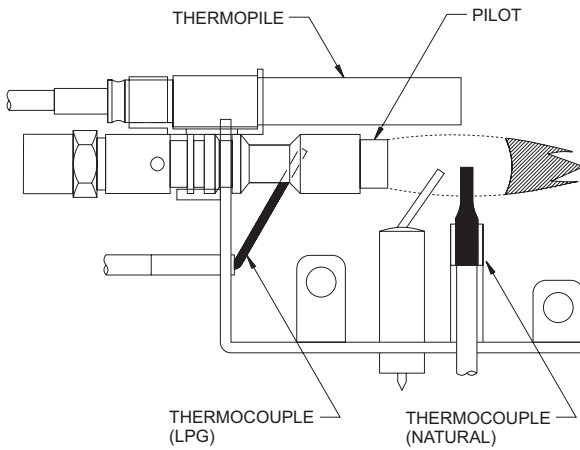
1. Set REMOTE/OFF/ON switch to OFF.
2. Turn off all electric power to the appliance if service is to be performed (if applicable).
3. Lower bottom louver assembly.
4. Push in gas control knob slightly and turn clockwise  to "OFF." Do not force.
5. Close bottom louver assembly.

PILOT FLAME CHARACTERISTICS

Figures 49 and 51 show a correct pilot flame pattern. The correct flame will be blue and will extend beyond the thermocouple. The flame will surround the thermocouple just below the tip. A slight yellow flame may occur where the pilot flame and main burner flame meet. Figures 50 and 52 show an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the fireplace will shut down.



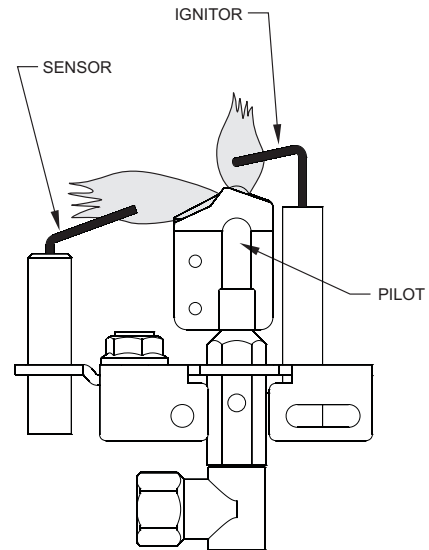
**Correct Pilot Flame Pattern for MILLIVOLT
Figure 49**



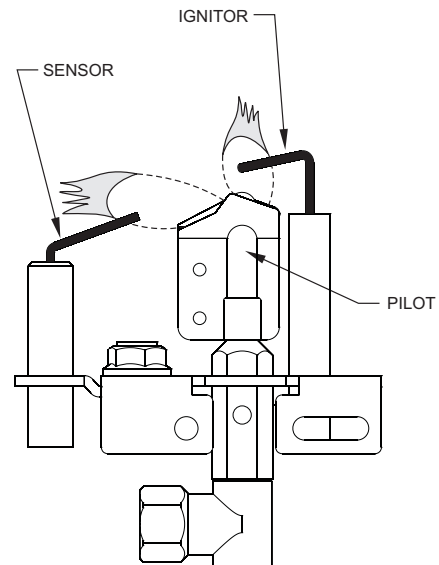
**Incorrect Pilot Flame Pattern for MILLIVOLT
Figure 50**

If pilot flame pattern is incorrect, as shown in Figure 50:

- See Millivolt Troubleshooting, page 35.



**Correct Pilot Flame Pattern for IP
Figure 51**



**Incorrect Pilot Flame Pattern for IP
Figure 52**

If pilot flame pattern is incorrect, as shown in Figure 52:

- See IP Troubleshooting, pages 44 - 46.

OPERATION INSTRUCTIONS/FLAME APPEARANCE

Flames from the pilot (front center of burner) as well as the main flame should be visually checked as the fireplace is installed.

In normal operation at full rate after 10 to 15 minutes, the flame appearance should be sets of yellow flames.

NOTICE: All flames will be random by design, flame height will go up and down.

Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside the burner area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.

During manufacturing, fabricating and shipping, various components of this fireplace are treated with certain oils, films or bonding agents. These chemicals are not harmful, but may

produce annoying smoke and smells as they are burned off during the initial operation of the fireplace, possibly causing headaches or eye or lung irritation. This is a normal and temporary occurrence.

The initial break-in operation should last 2-3 hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

Once the break in operation has been completed, adjust the fireplace to the desired output and then replace the surround.

MILLIVOLT WIRING

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Millivolt thermopile is self powered, gas valve does not require 110 volts. Maximum length of 20 feet of 16 AWG to conductor wires is to be used with all optional switches.

Check 750 Millivolt System Operation

Millivolt system and all individual components may be checked with a millivolt meter 0-1000 MV range. The thermopile reading needs to be between 325 and 400 millivolts.

Remote Receiver

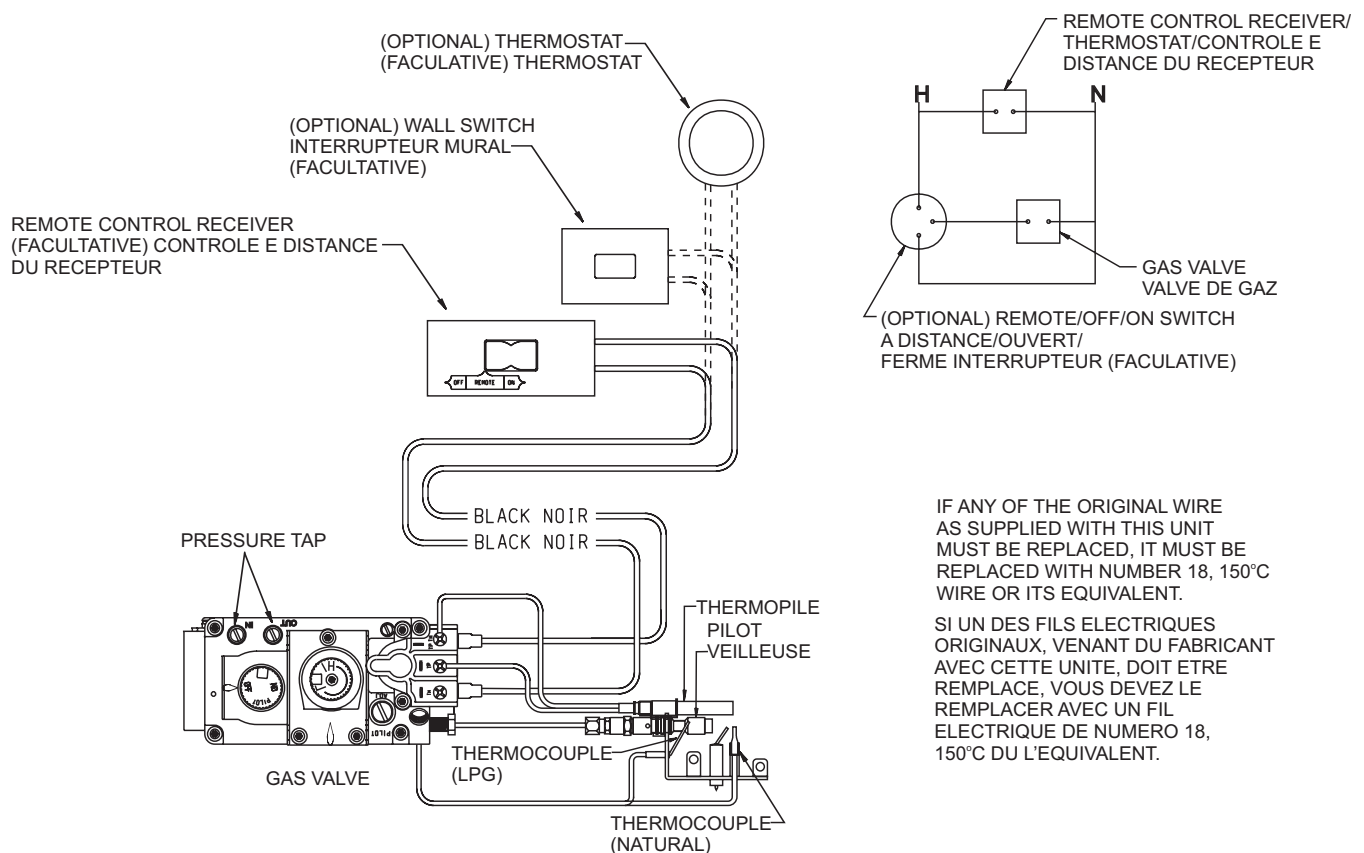
Use the following steps to place the remote receiver adjacent to the gas valve.

Attention: The remote receiver bracket is not used in this installation.

1. The remote receiver can not be placed beside the gas valve and burner assembly.
2. When facing the fireplace, the remote receiver must be placed to the left of the gas valve.

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

WIRING DIAGRAM



IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THIS UNIT MUST BE REPLACED, IT MUST BE REPLACED WITH NUMBER 18, 150°C WIRE OR ITS EQUIVALENT.

SI UN DES FILS ELECTRIQUES ORIGINAUX, VENANT DU FABRICANT AVEC CETTE UNITE, DOIT ETRE REMPLACER, VOUS DEVEZ LE REMPLACER AVEC UN FIL ELECTRIQUE DE NUMERO 18, 150°C DU L'EQUIVALENT.

Figure 53

FRBC - MILLIVOLT CONTROL SYSTEM

INSTALLATION AND OPERATING INSTRUCTIONS

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

INTRODUCTION

This remote control system was developed to provide safe, reliable, and user-friendly remote control system for gas heating fireplaces.

The system can be operated manually from the transmitter.

The system operates on one of 255 security codes that are programmed into the transmitter at the factory.

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

TRANSMITTER

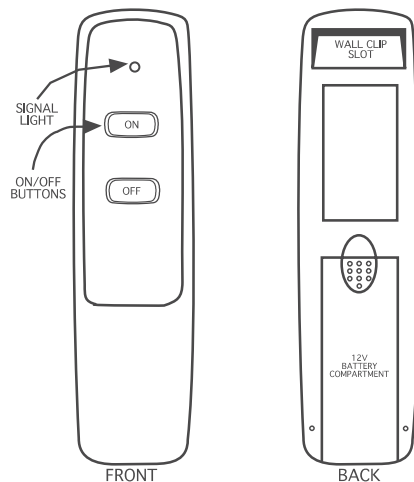


Figure 54

Always use alkaline batteries. They perform better and last longer.

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

REMOTE RECEIVER

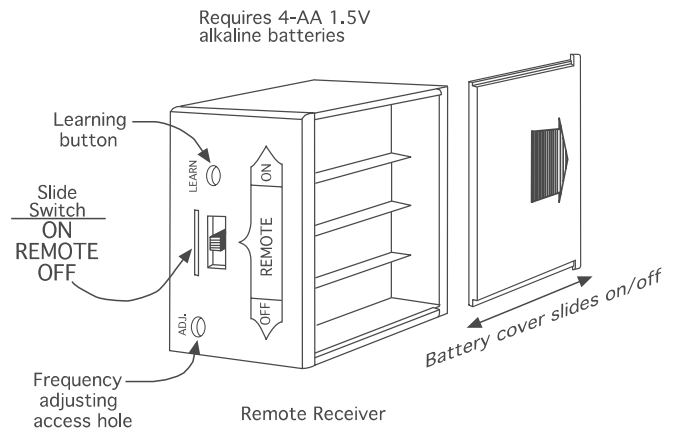


Figure 55

The remote receiver operates on 4 AA-size 1.5V batteries. It is recommended that ALKALINE batteries be used for longer battery life and maximum microprocessor performance. **IMPORTANT:** New or fully charged batteries are essential for proper operation of the remote receiver.

The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation. The remote receiver has a 3-position slide switch for selecting the MODE of operation: ON/REMOTE/OFF

- With the slide switch in the ON position (toward the LEARN button), the system will remain on until the slide switch is placed in the OFF or REMOTE position.
- With the slide switch in the REMOTE position (centered), the system will only operate if the remote receiver receives commands **from the transmitter**.
- With the slide switch in the OFF position (away from the LEARN button), the system is off.
- **It is suggested that the slide switch be placed in the off position if you will be away from your home for an extended period of time. If the remote receiver is mounted out of children's reach, placing the slide switch in the OFF position also functions as a safety "lock-out" by both turning the system off and rendering the remote receiver inoperative.**

FRBC - MILLIVOLT CONTROL SYSTEM

INSTALLATION

⚠ WARNING

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

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

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

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 fireplace 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 (not included) be used to make connections between the terminal wiring block on the millivolt gas valve or electronic module and the wire terminals on the remote receiver. For the best results, use 18 gauge solid or stranded wire, with no splices and measuring no longer than 20 ft.

WIRING INSTRUCTIONS

A qualified electrician or a gas technician who is familiar with the gas fireplace 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 fireplace 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.

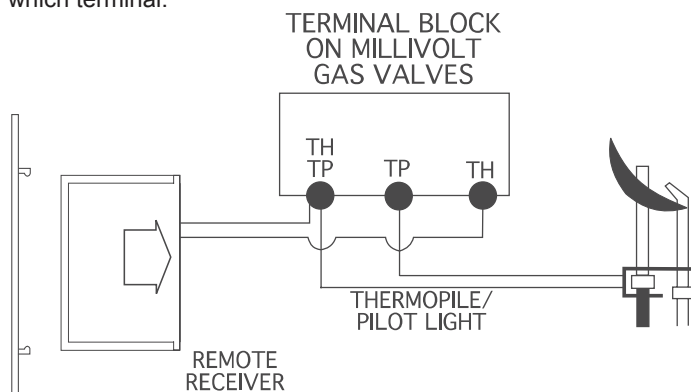


Figure 56

SYSTEM CHECK

MILLIVOLT VALVES

Light your gas fireplace 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.

- 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), then press the ON button on the transmitter to change the system to ON. The main gas flame should ignite.

FRBC - MILLIVOLT CONTROL SYSTEM

GENERAL INFORMATION

MATCHING SECURITY CODES

Each transmitter can use one of 255 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 by pushing and releasing the learn button. A single "beep" will sound. Press the "ON" button on the remote control, until three "beeps" sound. The three "beeps" are the signal that the receiver has learned the new code. 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.

BATTERY LIFE

Life expectancy of the alkaline batteries is longer and performance better than other batteries. 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 and provides continuous output voltage of a least 5.3 volts. The length of the wire between the remote receiver and gas valve directly affects the operating performance of the remote system. The longer the wire, the more battery power is required to deliver signals between the remote receiver and the gas valve. Recommended length is no longer than 20 feet. The transmitter should operate with as little as 5.0 volts battery power.

TROUBLE SHOOTING

If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the ECS remote. Review the fireplace manufacturer's operation manual to make sure all connections are properly made. Then check the operation of the ECS 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 are within 20'-25' operating range.
- Keep RECEIVER from temperatures exceeding 130° F. Battery life shortened when ambient temperatures are above 130° F.
- If RECEIVER is installed in tightly enclosed metal surround, the operating distance will be shortened.

RECEIVER ADJUSTMENT – RECOMMENDED ADJUSTMENT

NOTE: The slide button, White or Black, covers the ADJ access hole when installed.

- 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.
- 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).

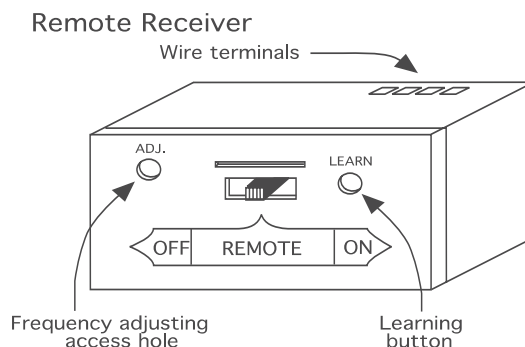


Figure 57

SPECIFICATIONS

BATTERIES:
Transmitter 12V (A23)
Remote Receiver
6V - 4ea. AA1.5 Alkaline

FCC ID No.'s: transmitter - K9L1002TX;
Receiver - K9L3001RX

Operating Frequency: 303.875MHZ

Canadian ISC ID No.'s: transmitter - 2439 102 728;
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.

MILLIVOLT TROUBLESHOOTING

SYMPTOMS, POSSIBLE CAUSES AND CORRECTIONS

- 1. When ignitor button is pressed, there is no spark at ODS/pilot.**
 - a. Ignitor electrode positioned wrong - Replace pilot.
 - b. Ignitor electrode is broken - Replace pilot.
 - c. Ignitor electrode not connected to ignitor cable - Reconnect ignitor cable.
 - d. Ignitor cable pinched or wet. Keep ignitor cable dry - Free ignitor cable if pinched by any metal or tubing.
 - e. Broken ignitor cable - Replace ignitor cable.
 - f. Bad piezo ignitor - Replace piezo ignitor.
- 2. Fireplace produces unwanted odors.**
 - a. Fireplace burning vapors from paint, hair spray, glues, etc. - Ventilate room. Stop using odor causing products while fireplace is running.
 - b. Gas leak - Locate and correct all leaks.
- 3. Fireplace shuts off during use. (Pilot and main burner are off.)**
 - a. Not enough fresh air is available for ODS/pilot to operate - Open window and/or door for ventilation.
 - b. Low line pressure - Contact local gas company.
 - c. ODS/pilot is partially clogged - Clean ODS/pilot.
 - d. Defective thermocouple - Replace pilot.
- 4. Fireplace shuts off during use. (Pilot stays on.)**
 - a. Low line pressure - Check line pressure to the valve.
 - b. Defective thermopile - Check pilot flame, check wire connections, output should be a minimum of 325 millivolts across. TH/TP and TP terminals with REMOTE/OFF/ON switch off.
- 5. Gas odor even when control knob is in OFF position.**
 - a. Gas leak - Locate and correct all leaks.
 - b. Control valve defective - Replace control valve.
- 6. When ignitor button is pressed, there is spark at ODS/pilot, but no ignition.**
 - a. Gas supply turned off or manual shutoff valve closed - Turn on gas supply or open manual shutoff valve.
 - b. Control knob not in PILOT position - Turn control knob to PILOT position.
 - c. Control knob not pressed in while in PILOT position - Press in control knob while in PILOT position.
 - d. Air in gas lines when installed - Continue holding down control knob. Repeat igniting operation until air is removed.
 - e. ODS/pilot is clogged - Replace ODS/pilot assembly or get it serviced.
 - f. Gas regulator setting is not correct - Replace gas regulator.
- 7. ODS/pilot lights but flame goes out when control knob is released.**
 - a. Control knob not fully pressed in - Press in control knob fully.
 - b. Control knob not pressed in long enough - After ODS/pilot lights, keep control knob pressed in 30 seconds.
 - c. Manual Shutoff valve not fully open - Fully open manual shutoff valve.
 - d. Thermocouple connection loose at control valve - Hand tighten until snug, then tighten 1/4 turn more.
 - e. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by either low gas pressure or dirty or partially clogged ODS/pilot - Contact local gas company.
 - f. Thermocouple damaged - Replace thermocouple.
 - g. Control valve damaged - Replace control valve.
- 8. Burner does not light after ODS/pilot is lit.**
 - a. Burner orifice clogged - Clean burner or replace main burner orifice.
 - b. Burner orifice diameter is too small - Replace burner orifice.
 - c. Inlet gas pressure is too low - Contact qualified service person.
- 9. If burning at main burner orifice occurs (a loud, roaring blow torch noise).**
 - a. You must turn off burner assembly and contact a qualified service person.
 - b. Manifold pressure is too low - Contact local gas company.
 - c. Burner orifice clogged - Clean burner or replace burner orifice.
- 10. Fireplace produces a whistling noise when main burner is lit.**
 - a. Turning control knob to HIGH position when main burner is cold - Turn control knob to LOW position and let warm up for a minute.
 - b. Air in gas line - Operate burner until air is removed from line. Have gas line checked by local gas company.
 - c. Dirty or partially clogged burner orifice - Clean burner or replace burner orifice.

If the gas quality is bad, your pilot may not stay lit, the burners may produce soot and the fireplace may backfire when lit. If the gas quality or pressure is low, contact your local gas supplier immediately.

PROFLAME - IP CONTROL SYSTEM

Technical Data	
Remote Control	
Supply voltage	4.5 V (three 1.5 V AAA batteries)
Ambient temperature ratings	0-50°C (32 - 122°F)
Radio frequency	315 MHz
Receiver	
Supply voltage	6.0 V (four 1.5 V AA batteries)
Ambient temperature ratings	0-60°C (32 - 140°F)
Radio frequency	315MHZ

DANGER

Fire Hazard. Can cause severe injury or death.

The Receiver causes ignition of the fireplace. The fireplace can turn on suddenly. Keep away from the fireplace burner when operating the remote system or activating manual bypass of the remote system.

CAUTION

Property Damage Hazard.

Excessive heat can cause property damage.

The fireplace can stay lit for many hours. Turn off the fireplace if it is not going to be attended for any length of time. Always place the Transmitter where children can not reach it.

WARNING

The transmitter and receiver are radio frequency devices. Placing the receiver in or near metal may severely reduce the signal range.

ATTENTION

- Turn "OFF" the main gas supply of the fireplace during installation or maintenance of the receiver.
- Place the receiver's 3-position slider switch in the "OFF" position during installation or maintenance.
- Turn "OFF" main gas supply to the fireplace prior to removing or reinserting the batteries in the receiver.

PROFLAME - IP CONTROL SYSTEM

TRANSMITTER (REMOTE CONTROL WITH LCD DISPLAY)

The Proflame Transmitter uses a streamline design with a simple button layout and informative LCD display (**Figure 58**). The Transmitter is powered by 3 AAA type batteries. A Mode Button is provided to Index between the features and a Thermostat Button is used to turn on/off or index through thermostat functions (**Figures 58 and 59**).

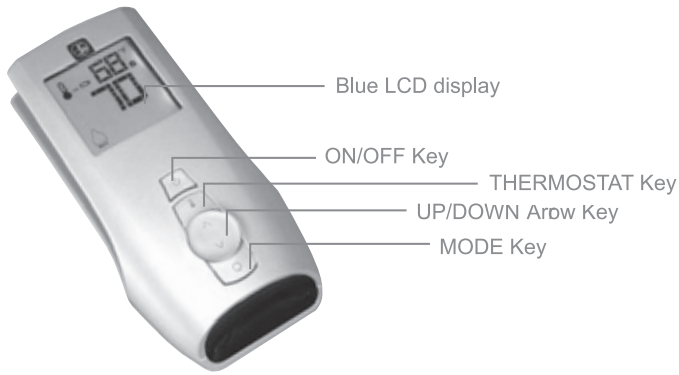


Figure 58 - Proflame Transmitter

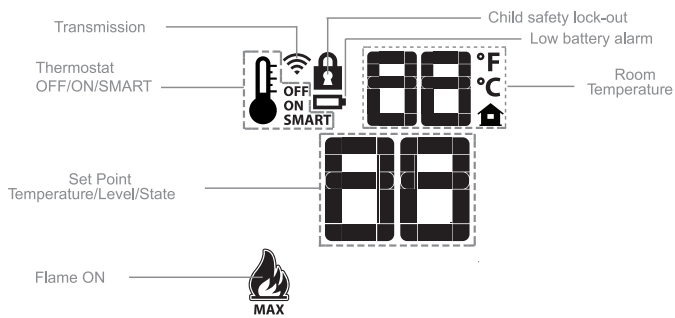


Figure 59 - Transmitter LCD display

RECEIVER

The Proflame Receiver (**Figures 60a and 60b**) connects directly to the gas valve and stepper motor with a wiring harness. The Receiver is powered by 4 AA type batteries. The Receiver accepts commands via radio frequency from the Transmitter to operate the fireplace in accordance with the particular Proflame system configuration. The Receiver three position slider switch can be set to one of three positions: ON (Manual Override), Remote (Remote control) or Off.

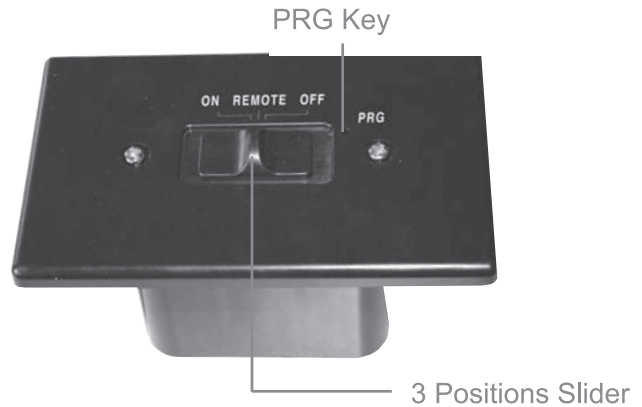


Figure 60a - Proflame Receiver Body Front

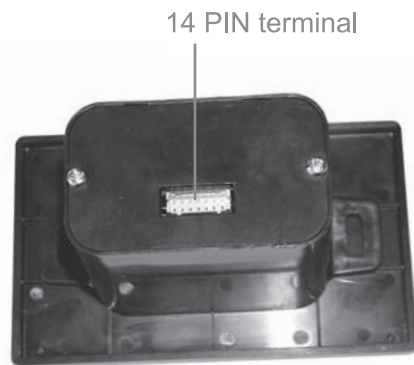


Figure 60b - Proflame Receiver Body Back

PROFLAME - IP CONTROL SYSTEM

OPERATING PROCEDURE

Initializing the System for the first time

Install the 4 AA batteries into the receiver battery bay. Note the polarity of battery and insert into the battery bay as indicated on the Battery cover (+/-). Place the 3 position slider switch in the "Remote" position.

Using the end of a paper clip, or other similar object, insert the end of the paper clip into the hole marked "PRG" on the Receiver front cover. The Receiver will "beep" three times to indicate that it is ready to synchronize with a Transmitter. Install the 3 AAA type batteries in the Transmitter battery bay, located on the base of the Transmitter. With the batteries already installed in the Transmitter, push the On button. The Receiver will "beep" four times to indicate the Transmitter's command is accepted and sets to the particular code of that Transmitter. The system is now initialized.

Temperature indication Display

With the system in the "OFF" position, press the Thermostat Button and the Mode Button at the same time. Look at the LCD screen on the Transmitter to verify that a C or F is visible to the right of the Room Temperature display. (Figures 61 and 62)

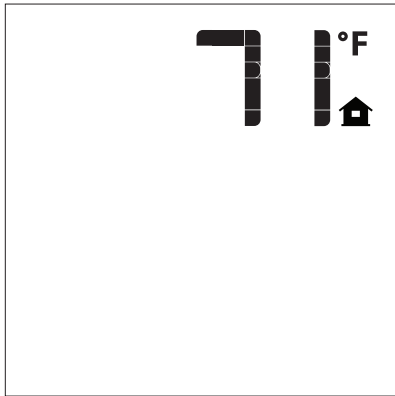


Figure 61 - Fahrenheit

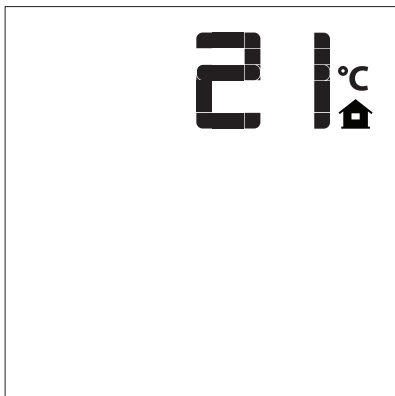


Figure 62 - Celsius

Turn on the Fireplace

Press the ON/OFF Button on the Transmitter. The Transmitter display will show all active Icons on the screen. At the same time the Receiver connects the thermopile to the gas valve millivolt coil and the fireplace main burner turns on. A single "beep" from the Receiver will confirm reception of the command.

Turn off the Fireplace

Press the ON/OFF Button on the Transmitter. The Transmitter LCD display will only show the room temperature and Icon (Figure 63). At the same time the Receiver disconnects the thermopile from the gas valve millivolt coil and the fireplace burner turns off. A single "beep" from the Receiver confirms reception of the command.

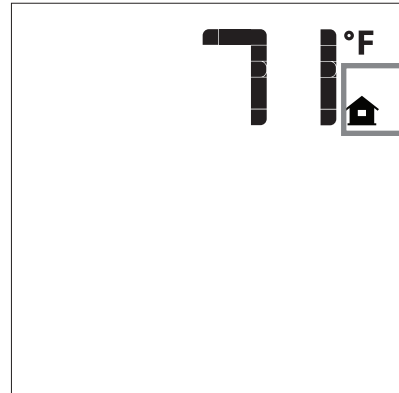


Figure 63

PROFLAME - IP CONTROL SYSTEM

Remote Flame Control

The Proflame GTM has six flame levels. With the system on, and the flame level at the maximum in the fireplace, pressing the Down Arrow Button once will reduce the flame height by one step until the flame is turned off. The Up Arrow Button will increase the flame height each time it is pressed. If the Up Arrow Button is pressed while the system is on but the flame is off, the flame will come on in the high position (**Figure 64 - 69**). A single “beep” will confirm reception of the command.

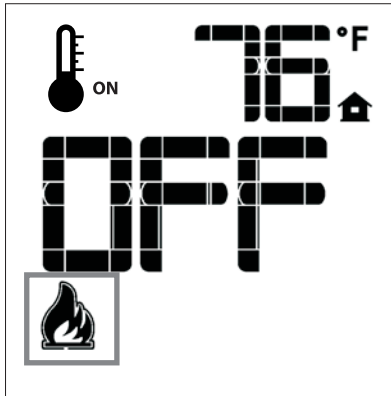


Figure 64

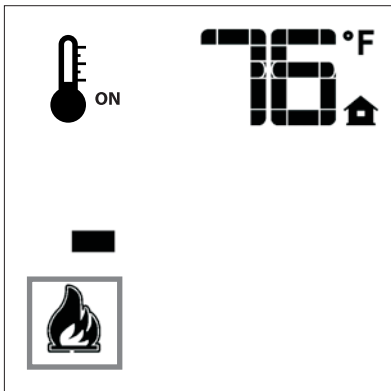


Figure 65

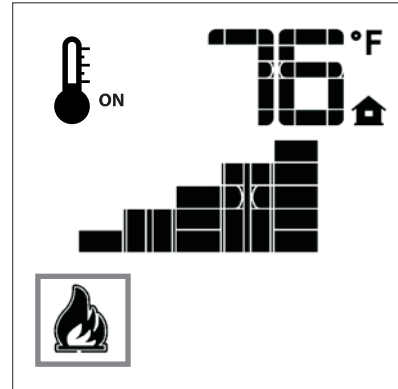


Figure 66

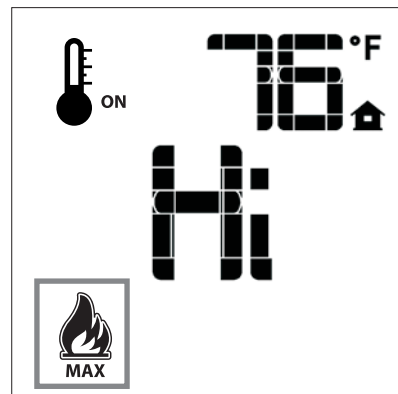


Figure 67

PROFLAME - IP CONTROL SYSTEM

ROOM THERMOSTAT (Transmitter Operation)

The Remote Control can operate as a room thermostat. The thermostat can be set to a desired temperature to control the comfort level in a room.

To activate this function, press the Thermostat Button (**Figure 58**). The LCD display on the Transmitter will change to show that the room thermostat is "ON" and the set temperature is now displayed (**Figures 68a and 68b**). To adjust the set temperature, press the Up or Down Arrow Buttons until the desired set temperature is displayed on the LCD screen of the Transmitter.

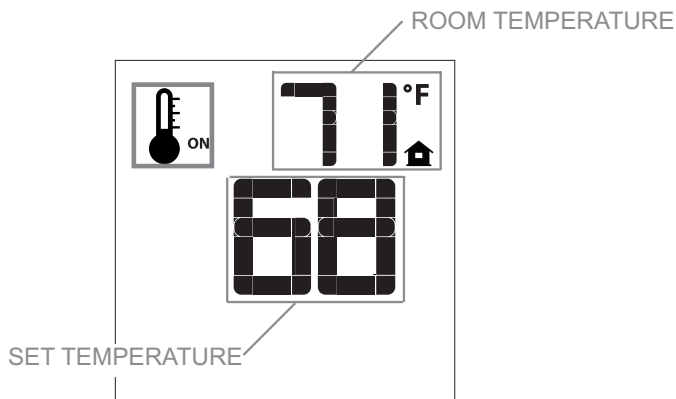


Figure 68a

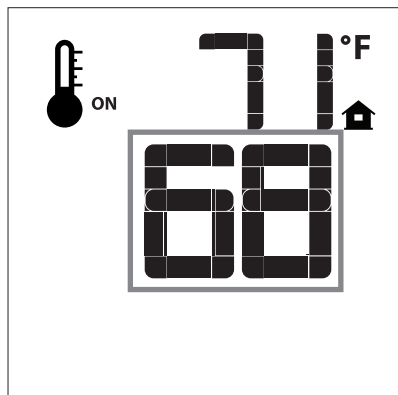


Figure 68b

Smart Thermostat (Transmitter Operation)

The Smart Thermostat function adjusts the flame height in accordance to the difference between the set point temperature and the actual room temperatures. As the room temperature gets closer to the set point the Smart Function will modulate the flame down.

To activate this function, press the Thermostat Button (**Figure 58**) until the word "SMART" appears to the right of the temperature bulb graphic (**Figure 69**). To adjust the set temperature, press the Up or Down arrow Buttons until the desired set point temperature is displayed on the LCD screen of the Transmitter (**Figure 70**).

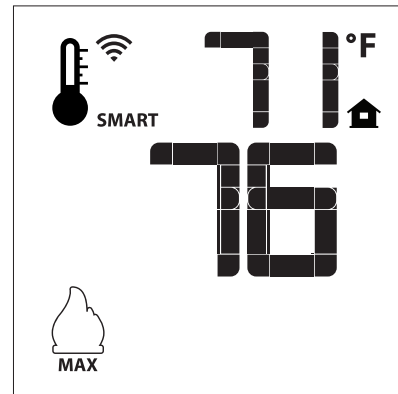


Figure 69

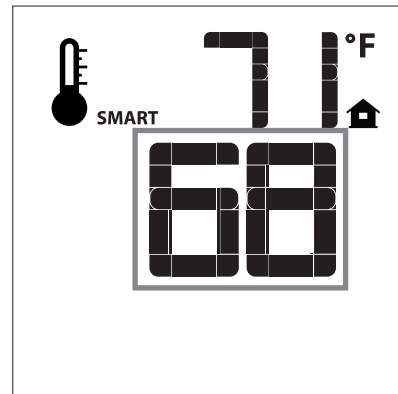


Figure 70

PROFLAME - IP CONTROL SYSTEM

BUTTON LOCK

This function will lock the buttons to avoid unsupervised operation.

To activate this function, press the MODE and the UP Arrow Button at the same time (**Figure 71**).

To de-activate this function, press the MODE and the UP Arrow Button at the same time.

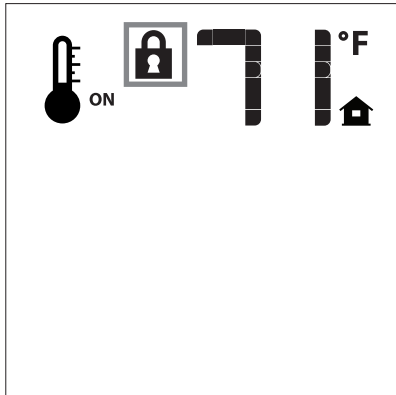


Figure 71

LOW BATTERY POWER DETECTION

Transmitter

The life span of the remote control batteries depends on various factors: quality of the batteries used, the number of ignitions of the fireplace, the number of changes to the room thermostat set point, etc.

When the Transmitter batteries are low, a Battery Icon will appear on the LCD display of the Transmitter (**Figure 72**) before all battery power is lost. When the batteries are replaced this Icon will disappear.

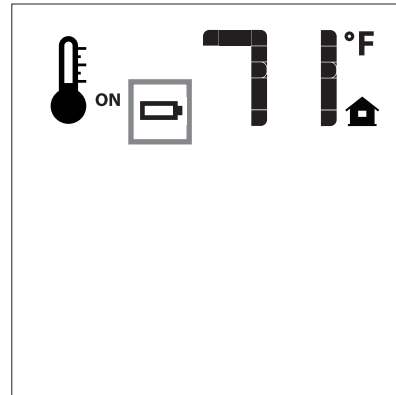


Figure 72

Receiver

The life span of the Receiver batteries depends on various factors: quality of the batteries used, the number of ignitions of the fireplace, the number of changes to the room thermostat set point, etc.

When the Receiver batteries are low, No “beep” will be emitted from the Receiver when it receives an On/Off command from the Transmitter. This is an alert for a low battery condition for the Receiver. When the batteries are replaced the “beep” will be emitted from the Receiver when the ON/OFF Button is pressed (See Initialization of The System).

MANUAL BYPASS OF THE REMOTE SYSTEM

If the batteries of the Receiver or Transmitter are low or depleted, the fireplace can be turned on manually by sliding the three position slider switch on the Receiver to the ON position.

This will bypass the remote control feature of the system and the fireplace main burner will come on if the gas valve is in the “On” position.

IP OPERATING INSTRUCTIONS

5.25 VDC ELECTRONIC CONTROL VALVE

The electronic control valve system includes the ability to switch the pilot from a standing pilot mode to an intermittent pilot mode.

- **IP Mode** - In the Intermittent Pilot mode, when the unit is turned ON, it will cause spark to the pilot, light the pilot, then allow the burner to light. When the unit is turned to OFF, both the burner and pilot will be OFF.
- **CPI Mode** - In the Continuous Pilot mode, the pilot remains ON continuously even when the burner is turned OFF.

NOTE: A small toggle switch is located on a bracket that is used to switch from IP (upward position) to the CPI (downward position). See Figure 73.

When the unit is turned to ON, the electrical current will energize a spark to the pilot igniter. Once the pilot sensor heats up (after a few seconds), the valve will be energized, allowing gas to flow to the burner.

1. Follow the SAFETY and LIGHTING INSTRUCTIONS for Intermittent Pilot controls found in this manual, and on labels found in the control compartment located in the lower cavity of the fireplace.
2. During the operating season (or in power outage periods), it is recommended that the pilot remain in the CPI (standing pilot mode) to reduce cold start issues, and/or conserve battery backup power during a power outage.
3. The gas valve has inlet and outlet pressure taps as shown in **Figure 73**. Refer to page 18 for gas pressure requirements.

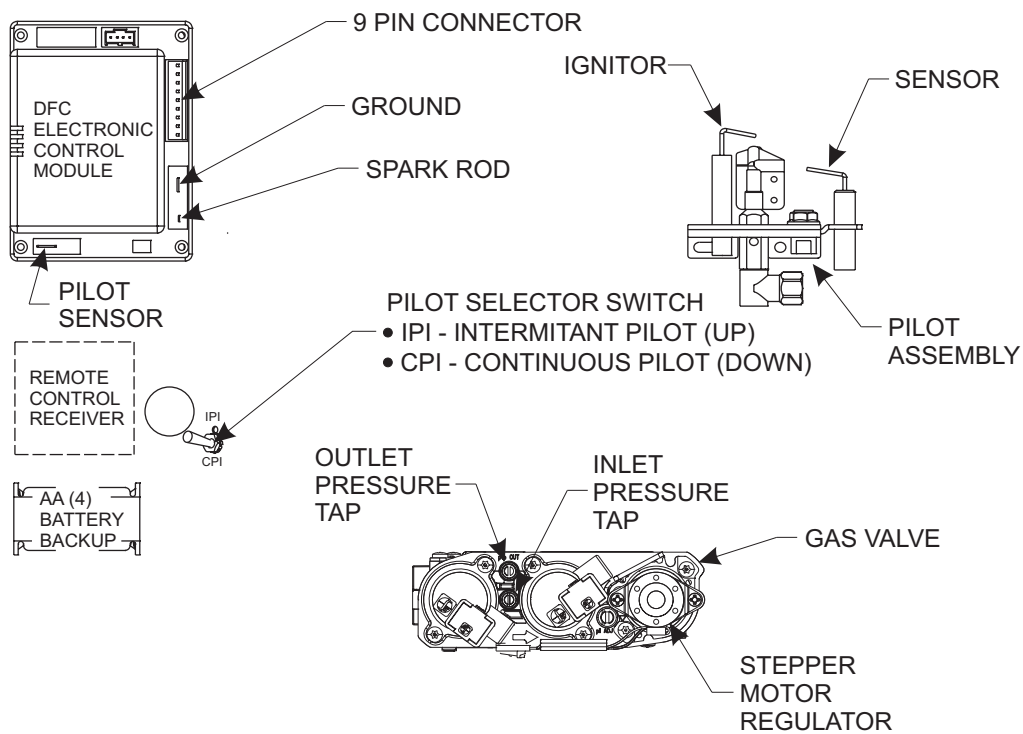
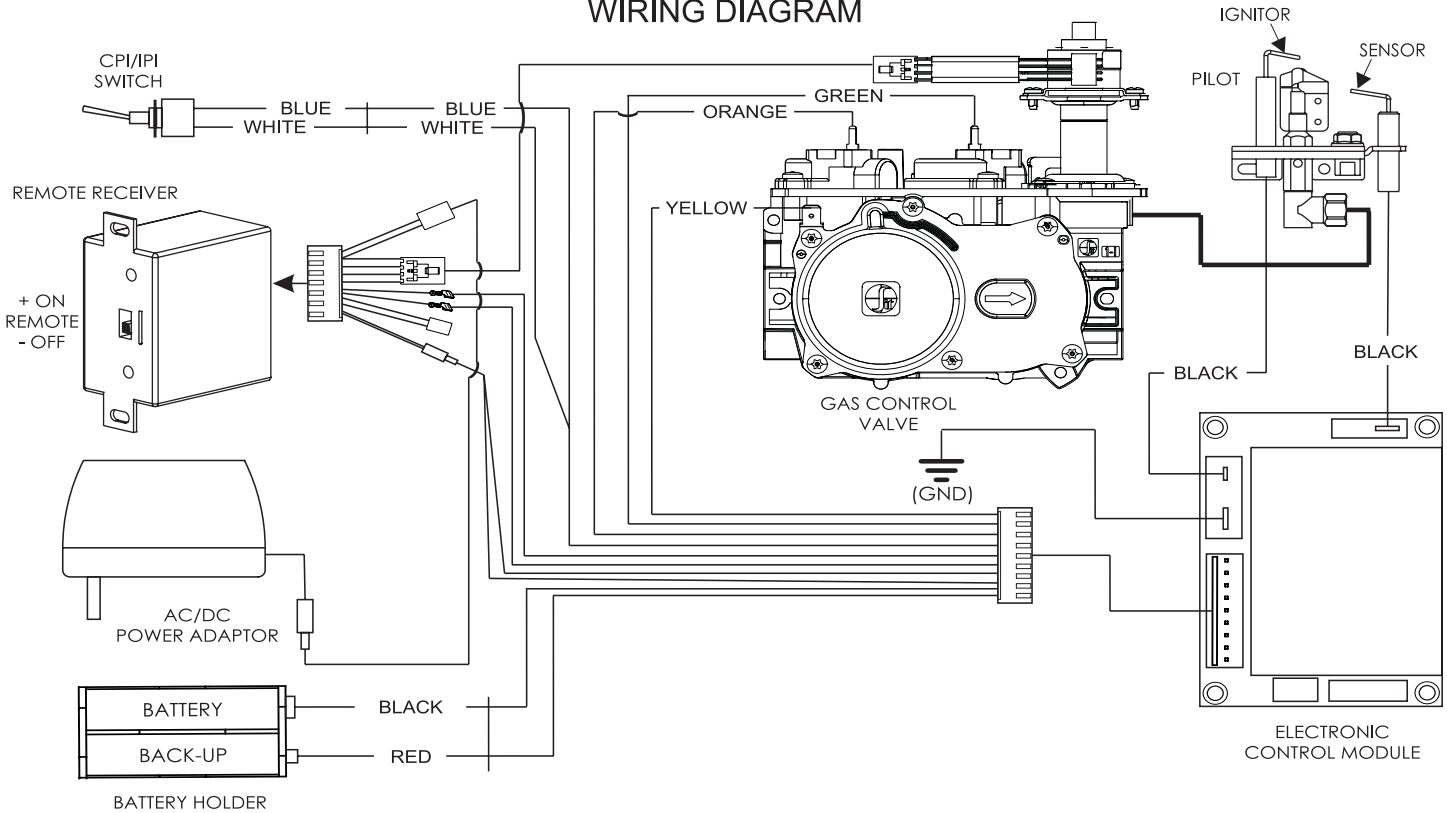


Figure 73

IP WIRING

WIRING DIAGRAM



If any of the original wire as supplied with this unit must be replaced, it must be replaced with equivalent gauge and temperature rated wire.

This fireplace is only for use with the type of gas indicated on the rating plate and may be installed in an aftermarket, permanently located, manufactured (mobile) home where not prohibited by local codes. This fireplace is not convertible for use with other gases.

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

The wire connections in Figure 74 are not used.

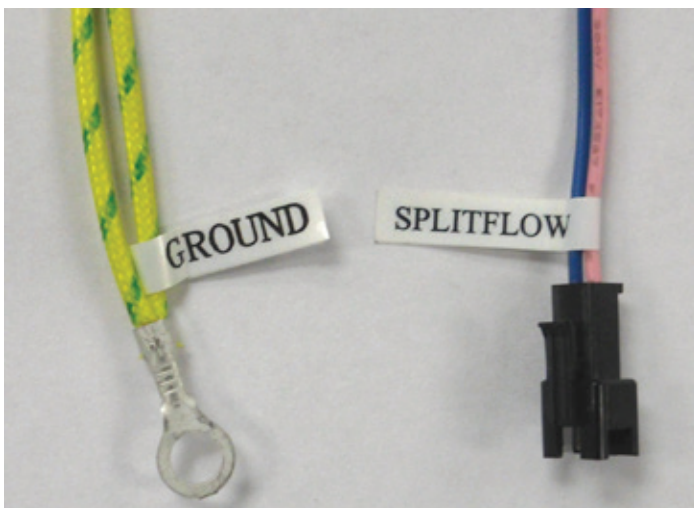


Figure 74

IP TROUBLESHOOTING

Brief Description of the Components

The Digital Fireplace Control (DFC) is an automatic gas ignition system based on a single micro-controller core. This control manages all functions related to ignition, flame sensing and supervision for atmospheric applications.

The DFC can be set to provide continuous or intermittent ignition control sequences and flame monitoring with safety shutdown in case of failure.

The DFC is set up as a stand alone (AC powered system with battery back up. See IP Lighting Instructions on page 29 and Wiring Diagram on page 44.

Troubleshooting

Before proceeding with the procedures in the following troubleshooting table, verify that the power supply (AC/DC adapter) is present and that the batteries inside the receiver and/or optional battery pack are fresh and installed with correct polarity.

Make sure all the connections between the wire harnesses and system components are proper and positive.

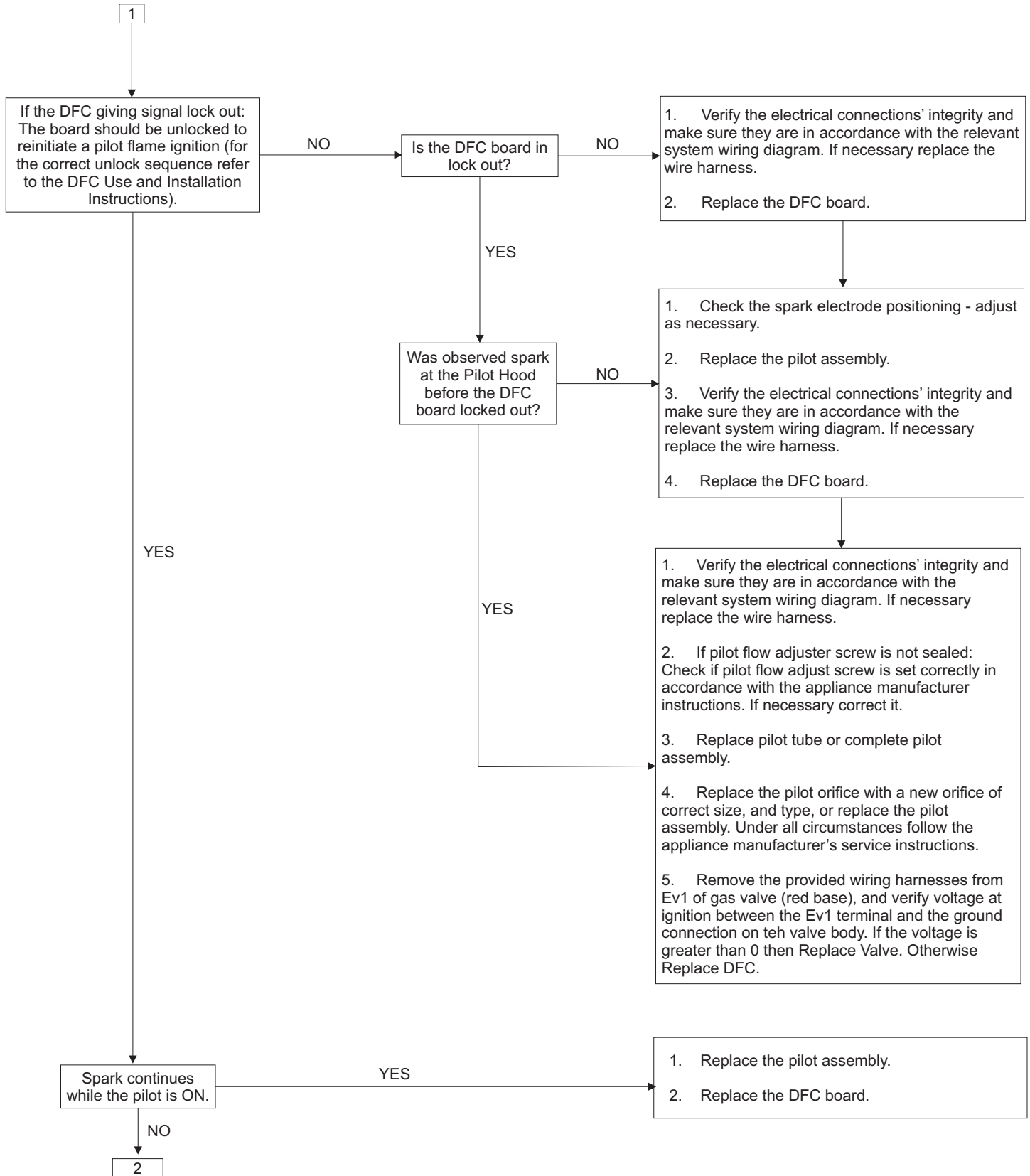
Verify that the static inlet pressure meets the manufacturer's recommended inlet pressure. If necessary adjust the line pressure regulator.

If the recommended actions for the following troubleshooting chart do not help to address the problem consider replacing wiring harnesses.

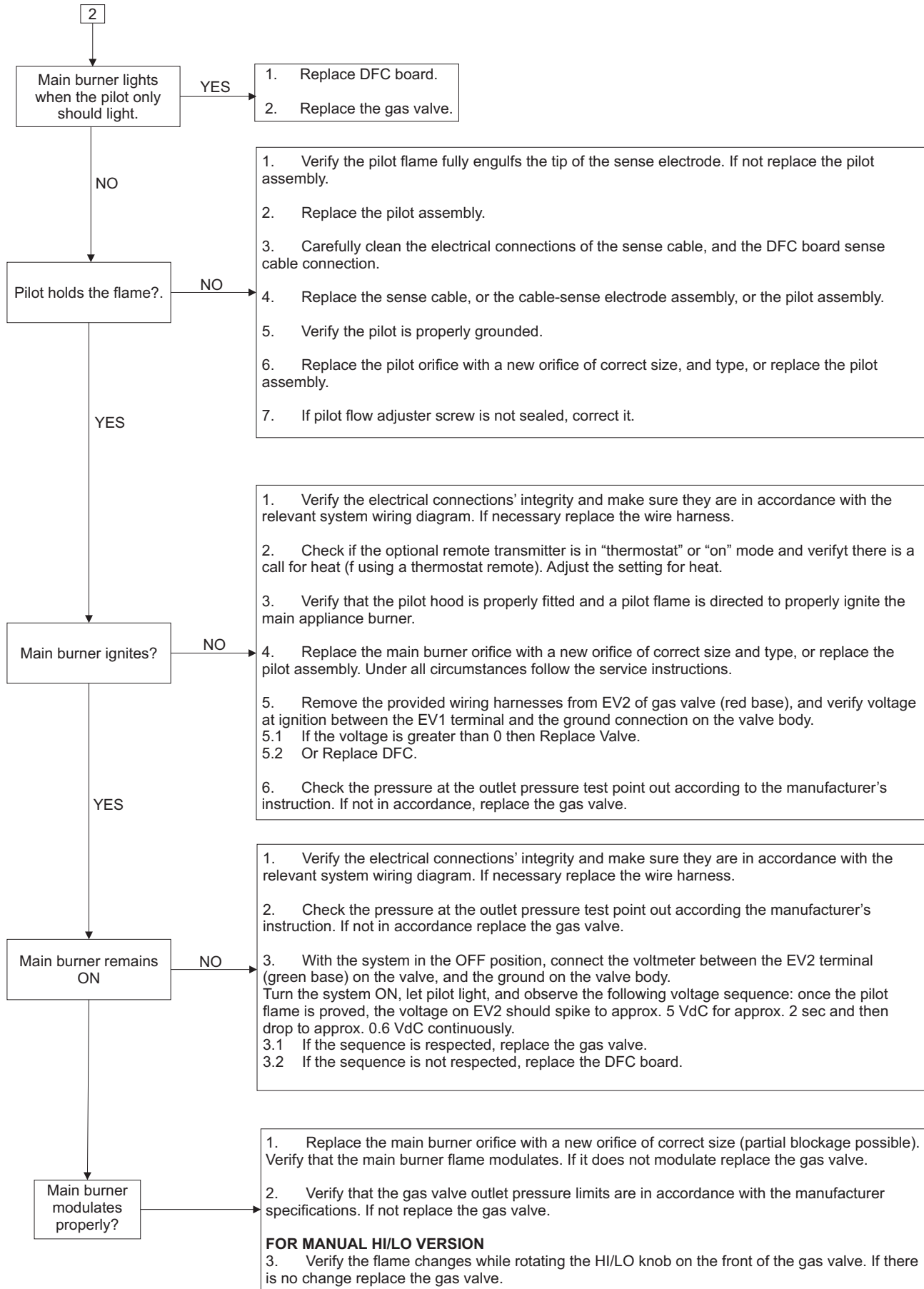
WARNING

Any actions performed on the gas valve must be performed in accordance with this instruction manual. Likewise, any actions performed on the DFC or other system components must be done in accordance with the individual component instructions. Replacement of components must be performed in accordance with this instructions manual.

IP TROUBLESHOOTING



IP TROUBLESHOOTING



MASTER PARTS DISTRIBUTOR LIST

To Order Parts Under Warranty, please contact your local Empire dealer. See the dealer locator at www.empirecomfort.com. To provide warranty service, your dealer will need your name and address, purchase date and serial number, and the nature of the problem with the unit.

To Order Parts After the Warranty Period, please contact your dealer or one of the Master Parts Distributors listed below. This list changes from time to time. For the current list, please click on the Master Parts button at www.empirecomfort.com.

Please note: Master Parts Distributors are independent businesses that stock the most commonly ordered Original Equipment repair parts for Heaters, Grills, and Fireplaces manufactured by Empire Comfort Systems Inc.

Dey Distributing

1401 Willow Lake Boulevard
Vadnais Heights, MN 55101

Phone: 651-490-9191

Toll Free: 800-397-1339

Website: www.deydistributing.com

Parts: Heater, Hearth and Grills

Victor Division of F. W. Webb Company

200 Locust Street
Hartford, CT 06114

Phone: 860-722-2433

Toll Free: 800-243-9360

Fax: 860-293-0479

Toll Free Fax: 800-274-2004

Websites: www.fwwebb.com & www.victormfg.com

Parts: Heater, Hearth and Grills

East Coast Energy Products

10 East Route 36
West Long Branch, NJ 07764

Phone: 732-870-8809

Toll Free: 800-755-8809

Fax: 732-870-8811

Website: www.eastcoastenergy.com

Parts: Heater, Hearth and Grills

HOW TO ORDER REPAIR PARTS

Parts Not Under Warranty

Parts can be ordered through your Service Person, Dealer, or a Master Parts Distributor. See this page for the Master Parts Distributors list. For best results, the **service person or dealer** should order parts through the distributor. Parts can be shipped directly to the **service person/dealer**.

Warranty Parts

Warranty parts will need a proof of purchase and can be ordered by your Service Person or Dealer. Proof of purchase is **required** for warranty parts.

All parts listed in the Parts List have a Part Number. When ordering parts, first obtain the Model Number and Serial Number from the name plate on your equipment. Then determine the Part Number (**not** the Index Number) and the Description of each part from the following illustration and part list. Be sure to give all this information . . .

Fireplace Model Number _____ Part Description _____

Fireplace Serial Number _____ Part Number _____

Type of Gas (Propane or Natural) _____

Do not order bolts, screws, washers or nuts. They are standard hardware items and can be purchased at any local hardware store.

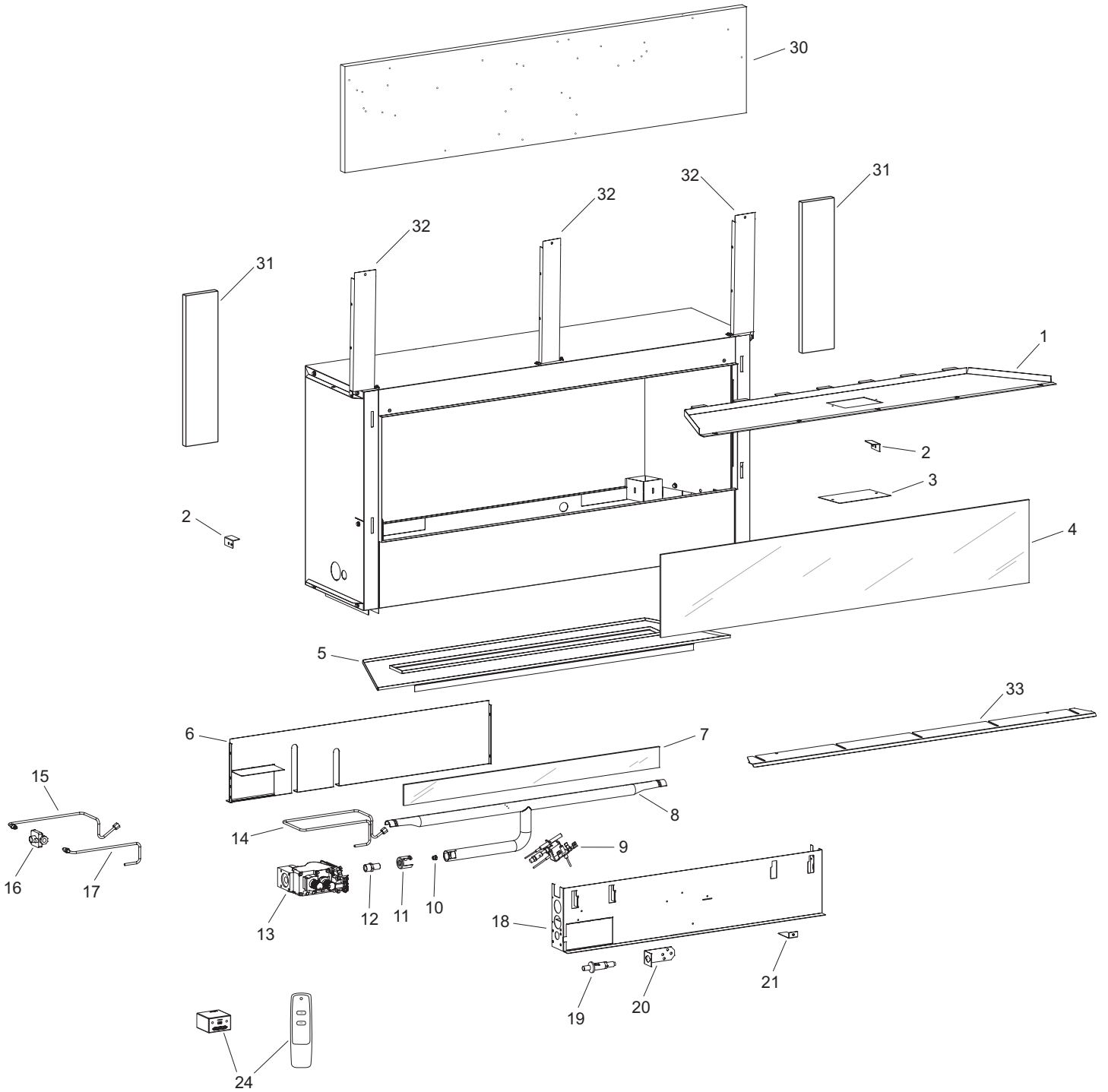
Shipments contingent upon strikes, fires and all causes beyond our control.

VFLL38FP3 PARTS LIST

INDEX NO.	PART NO.		DESCRIPTION
	VFLL38FP30L	VFLL38FP30L25	
1	30378	30378	INNER FIREBOX TOP ASSEMBLY
2	DV612	DV612	BRACKET (USED AS GLASS RETAINER)
3	30291	30291	ACCENT LIGHT COVER PLATE
4	R11231	R11231	GLASS
5	29483	29483	BURNER COVER ASSEMBLY
6	34438	34438	BURNER BOX BACK
7	R11232	R11232	GLASS
8	R11230	R11230	BURNER, TUBE
9	R3623	R3623	PILOT ASSEMBLY - LPG
9	R3624	R3624	PILOT ASSEMBLY - NAT
10	P243	-	ORIFICE #36 - NAT
10	P250	-	ORIFICE 1.65 mm - LPG
10	-	P286	ORIFICE #42 - NAT
10	-	P208	ORIFICE 1.45mm - LPG
11	R7624	R7624	AIR SHUTTER
12	P313	P313	ORIFICE HOLDER
13	R3625	R3625	VALVE - LPG
13	R3626	R3626	VALVE - NAT
14	29461	29461	TUBING ASSEMBLY, PILOT - LP
15	29464	29464	TUBING ASSEMBLY, REGULATOR TO PILOT - NAT
16	R7063	R7063	REGULATOR, PILOT - NAT
17	29463	29463	TUBING ASSEMBLY, VALVE TO REGULATOR - NAT
18	29466	29466	BURNER BOX FRONT
19	R9761	R9761	PIEZO IGNITOR
20	26304	26304	IGNITOR BRACKET
21	34441	34441	CENTER SUPPORT
24	FRBC	FRBC	TRANSMITTER & RECEIVER
30	33015	33015	BOARD, NON-COMBUSTIBLE
31	33014	33014	BOARD, NON-COMBUSTIBLE (2 REQUIRED)
32	33553	33553	MIDDLE MOUNTING BRACKET
33	37434	37434	INNER TOP DEFLECTOR (OPTIONAL INSTALLATION)
N/S	33554	33554	HARDWARE KIT
N/S	P251	P251	COUPLING - NAT
N/S	31234	31234	VENTURI TARGET - NAT

N/S - NOT SHOWN

VFL38FP3 EXPLODED VIEW

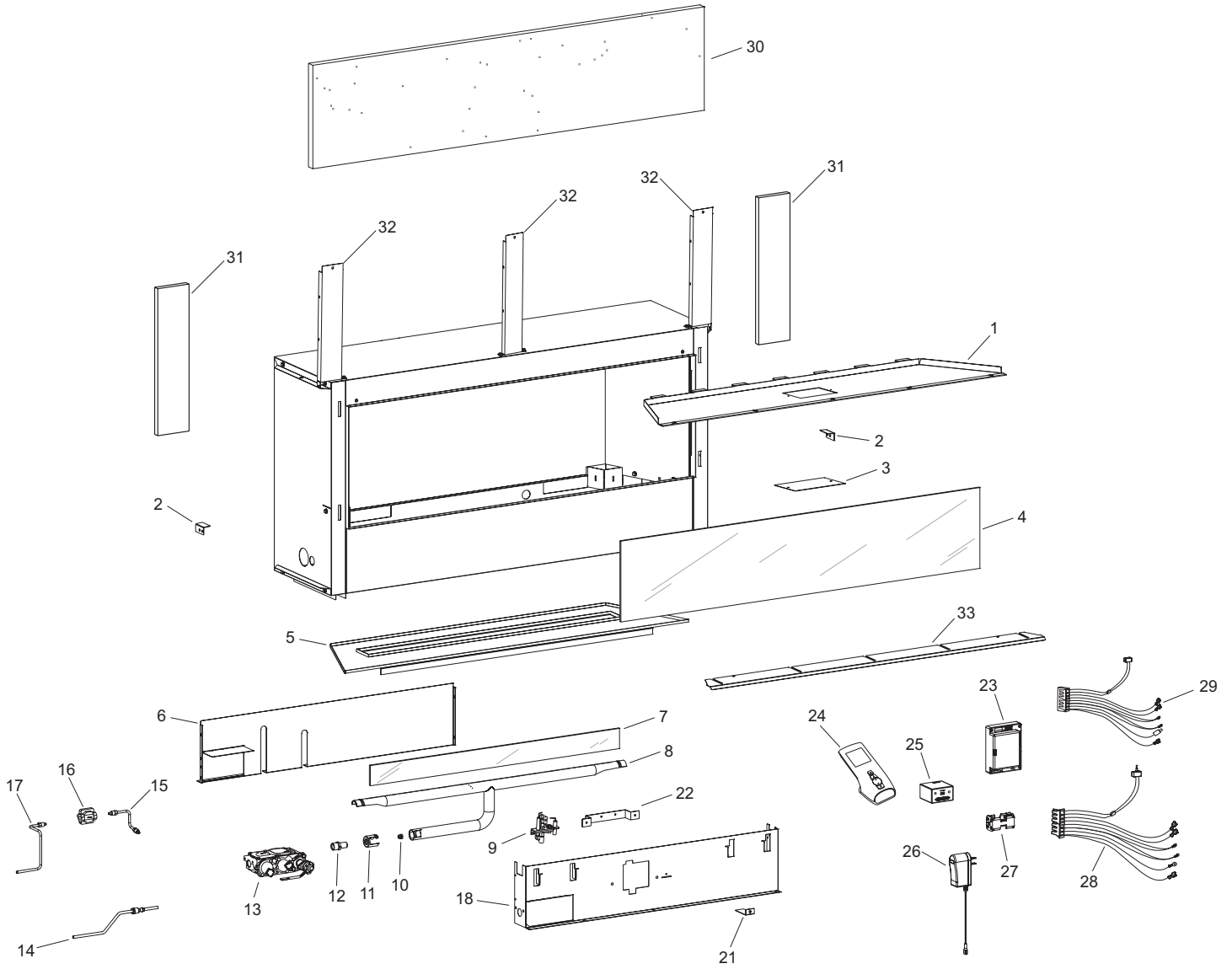


VFLL38FP9 PARTS LIST

INDEX NO.	PART NO.		DESCRIPTION
	VFLL38FP90L	VFLL38FP90L25	
1	30378	30378	INNER FIREBOX TOP ASSEMBLY
2	DV612	DV612	BRACKET (USED AS GLASS RETAINER)
3	30291	30291	ACCENT LIGHT COVER PLATE
4	R11231	R11231	GLASS
5	29483	29483	BURNER COVER ASSEMBLY
6	34438	34438	BURNER BOX BACK
7	R11232	R11232	GLASS
8	R11230	R11230	BURNER, TUBE
9	R11327	R11327	PILOT ASSEMBLY - LPG
9	R11328	R11328	PILOT ASSEMBLY - NAT
10	P243	-	ORIFICE #36 - NAT
10	P250	-	ORIFICE 1.65 mm - LPG
10	-	P286	ORIFICE #42 - NAT
10	-	P208	ORIFICE 1.45mm - LPG
11	R7624	R7624	AIR SHUTTER
12	P313	P313	ORIFICE HOLDER
13	R11234	R11234	VALVE - LPG
13	R11233	R11233	VALVE - NAT
14	33800	33800	TUBING ASSEMBLY, PILOT - LP
15	33799	33799	TUBING ASSEMBLY, REGULATOR TO PILOT - NAT
16	R7063	R7063	REGULATOR, PILOT - NAT
17	29497	29497	TUBING ASSEMBLY, VALVE TO REGULATOR - NAT
18	34437	34437	BURNER BOX FRONT - LPG
18	34436	34436	BURNER BOX FRONT - NAT
21	34441	34441	CENTER SUPPORT
22	34439	34439	PILOT BRACKET -LP
22	34440	34440	PILOT BRACKET - NAT
23	R11127	R11127	CONTROL BOARD, PROFLAME
24	R11236	R11236	TRANSMITTER
25	R11235	R11235	RECEIVER
26	R11128	R11128	POWER ADAPTOR, 7.0 VDC
27	R11122	R11122	BATTERY HOLDER, AA WITH SNAP-ON
28	R11123	R11123	WIRE HARNESS, PROFLAME DFC
29	R11237	R11237	WIRE HARNESS, RECEIVER
30	33015	33015	BOARD, NON-COMBUSTIBLE
31	33014	33014	BOARD, NON-COMBUSTIBLE (2 REQUIRED)
32	33553	33553	MIDDLE MOUNTING BRACKETS
33	37434	37434	INNER TOP DEFLECTOR (OPTIONAL INSTALLATION)
N/S	33554	33554	HARDWARE KIT
N/S	P251	P251	COUPLING - NAT
N/S	31234	31234	VENTURI TARGET - NAT

N/S - NOT SHOWN

VFLL38FP9 EXPLODED VIEW



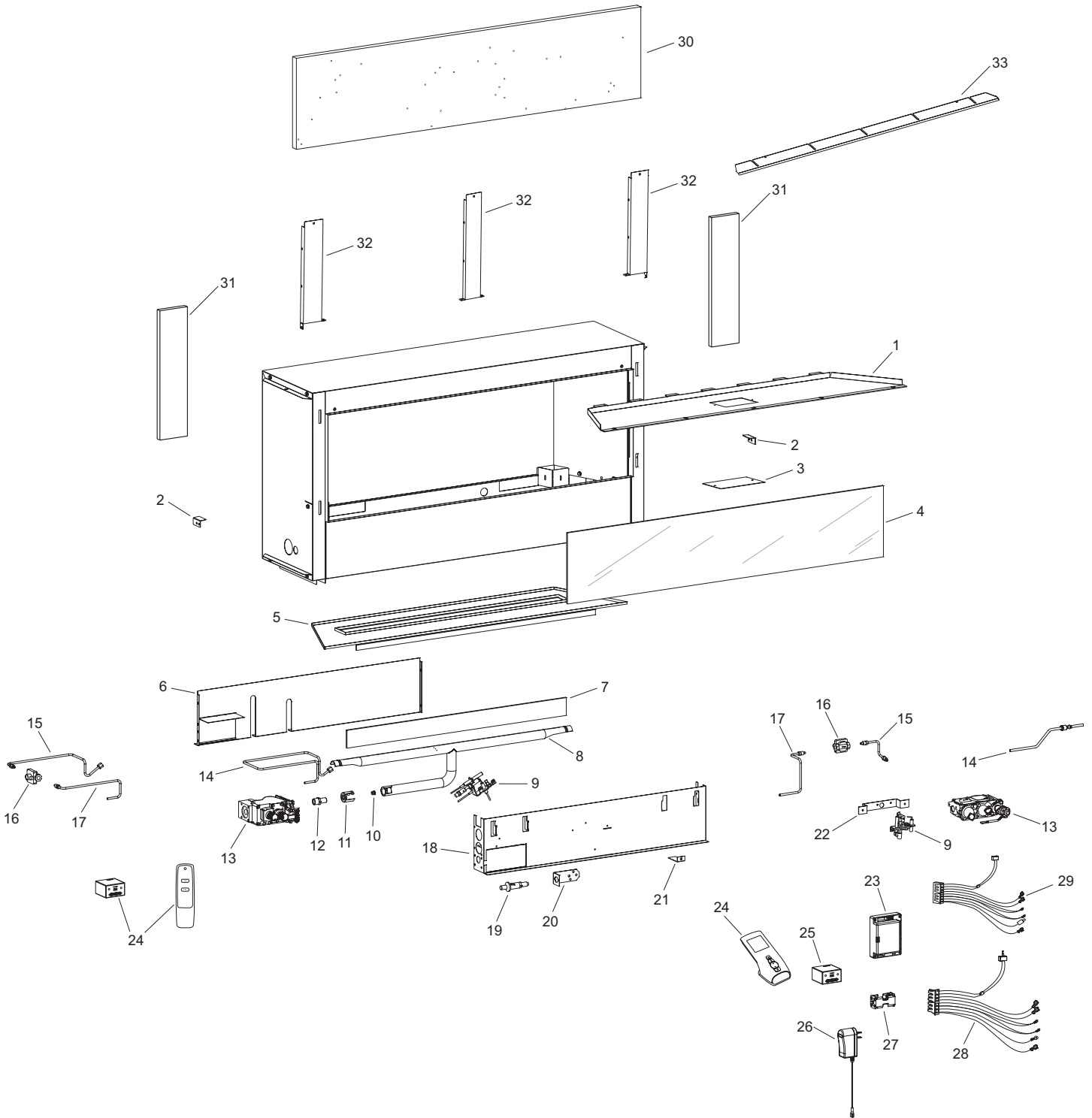
VFLL48FP(3,9) PARTS LIST

VFLL48FP3		
INDEX NO.	PART NO.	DESCRIPTION
1	32662	INNER FIREBOX TOP ASSEMBLY
2	DV612	BRACKET (USED AS GLASS RETAINER)
3	30291	ACCENT LIGHT COVER PLATE
4	R11746	GLASS
5	32820	BURNER COVER ASSEMBLY
6	34461	BURNER BOX BACK
7	R11747	GLASS
8	R11745	BURNER, TUBE
9	R3623	PILOT ASSEMBLY - LPG
9	R3624	PILOT ASSEMBLY - NAT
10	P302	ORIFICE 3.00mm - NAT
10	P265	ORIFICE #49 - LPG
11	R7624	AIR SHUTTER
12	P313	ORIFICE HOLDER
13	R3625	VALVE - LPG
13	R3626	VALVE - NAT
14	29461	TUBING ASSEMBLY, PILOT (LP)
15	29464	TUBING ASSEMBLY, REGULATOR TO PILOT (NAT)
16	R7063	REGULATOR, PILOT (NAT)
17	29463	TUBING ASSEMBLY, VALVE TO REGULATOR (NAT)
18	32682	BURNER BOX FRONT
19	R9761	PIEZO IGNITOR
20	26304	IGNITOR BRACKET
21	34441	CENTER SUPPORT
24	FRBC	TRANSMITTER & RECEIVER
30	32675	BOARD, NON-COMBUSTIBLE
31	33014	BOARD, NON-COMBUSTIBLE (2 REQUIRED)
32	33553	MIDDLE MOUNTING BRACKET
33	37435	INNER TOP DEFLECTOR (OPTIONAL INSTALLATION)
N/S	33554	HARDWARE KIT

N/S - NOT SHOWN

VFLL48FP9		
INDEX NO.	PART NO.	DESCRIPTION
1	32662	INNER FIREBOX TOP ASSEMBLY
2	DV612	BRACKET (USED AS GLASS RETAINER)
3	30291	ACCENT LIGHT COVER PLATE
4	R11746	GLASS
5	32820	BURNER COVER ASSEMBLY
6	34461	BURNER BOX BACK
7	R11747	GLASS
8	R11745	BURNER, TUBE
9	R11327	PILOT ASSEMBLY - LPG
9	R11328	PILOT ASSEMBLY - NAT
10	P302	ORIFICE 3.00mm - NAT
10	P265	ORIFICE #49 - LPG
11	R7624	AIR SHUTTER
12	P313	ORIFICE HOLDER
13	R11234	VALVE - LPG
13	R11233	VALVE - NAT
14	33800	TUBING ASSEMBLY, PILOT (LP)
15	33799	TUBING ASSEMBLY, REGULATOR TO PILOT (NAT)
16	R7063	REGULATOR, PILOT (NAT)
17	29497	TUBING ASSEMBLY, VALVE TO REGULATOR (NAT)
18	34460	BURNER BOX FRONT - LPG
18	34459	BURNER BOX FRONT - NAT
21	34441	CENTER SUPPORT
22	34439	PILOT BRACKET - LPG
22	34440	PILOT BRACKET - NAT
23	R11127	CONTROL BOARD, PROFLAME
24	R11236	TRANSMITTER
25	R11235	RECEIVER
26	R11128	POWER ADAPTOR, 7.0 VDC
27	R11122	BATTERY HOLDER, AA WITH SNAP-ON
28	R11123	WIRE HARNESS, PROFLAME DFC
29	R11237	WIRE HARNESS, RECEIVER
30	32675	BOARD, NON-COMBUSTIBLE
31	33014	BOARD, NON-COMBUSTIBLE (2 REQUIRED)
32	33553	MIDDLE MOUNTING BRACKET
33	37435	INNER TOP DEFLECTOR (OPTIONAL INSTALLATION)
N/S	33554	HARDWARE KIT

VFLL48FP(3,9) EXPLODED VIEW



WARRANTY

Empire Comfort Systems Inc. warrants this hearth product to be free from defects at the time of purchase and for the periods specified below. Hearth products must be installed by a qualified technician and must be maintained and operated safely, in accordance with the instructions in the owner's manual. Empire will not warranty any Boulevard fireplace that is not installed by the selling dealer or that dealer's direct contract agents. This warranty applies to the original purchaser only and is not transferable. All warranty repairs must be accomplished by a qualified gas appliance technician.

Limited Lifetime Parts Warranty with a Five-Year Limited Labor Warranty – Combustion Chamber and Heat Exchanger

If the combustion chamber or heat exchanger (see parts list) fails because of defective workmanship or material, Empire will repair or replace at Empire's option. Within five years from the date of purchase, Empire will pay reasonable labor to have the defective part repaired or replaced at Empire's option.

Limited Five-Year Parts & Labor Warranty – All Other Components

(Except Remote Controls, Thermostats, Accessories and Replacement Parts)

Should any part fail because of defective workmanship or material within five years from the date of purchase, Empire will repair or replace at Empire's option. Within five years from the date of purchase, Empire will pay reasonable labor to have that defect repaired at Empire's option.

Limited One-Year Parts Warranty – Remote Controls, Thermostats, Accessories, and Parts

Should any remote control, thermostat, accessory, or other part fail because of defective workmanship within one year from the date of purchase, Empire will repair or replace at Empire's option.

Duties Of The Owner

The appliance must be installed by a qualified installer and operated in accordance with the instructions furnished with the appliance. A bill of sale, cancelled check, or payment record should be kept to verify purchase date and establish warranty period. Ready access to the appliance for service.

What Is Not Covered

Damages that might result from the use, misuse, or improper installation of this appliance.
Travel, diagnostic costs and freight charges on warranted parts to and from the factory.
Claims that do not involve defective workmanship or materials.
Unauthorized service or parts replacements.
Removal and reinstallation cost.
Inoperable due to improper or lack of maintenance.

How To Get Service

To make a claim under this warranty, please have your receipt available and contact your installing dealer. Provide the dealer with the model number, serial number, type of gas, and purchase verification. The installing dealer is responsible for providing service and will contact the factory to initiate any warranted parts replacements. Empire will make replacement parts available at the factory. Shipping expenses are not covered. If, after contacting your Empire dealer, service received has not been satisfactory, contact: Consumer Relations Department, Empire Comfort Systems Inc., PO Box 529, Belleville, Illinois 62222, or send an e-mail to info@empirecomfort.com with "Consumer Relations" in the subject line.

Your Rights Under State Law

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.



**Empire Comfort Systems Inc.
Belleville, Illinois**

If you have a general question
about our products, please e-mail
us at info@empirecomfort.com.

If you have a service or repair
question, please contact your dealer.

www.empirecomfort.com