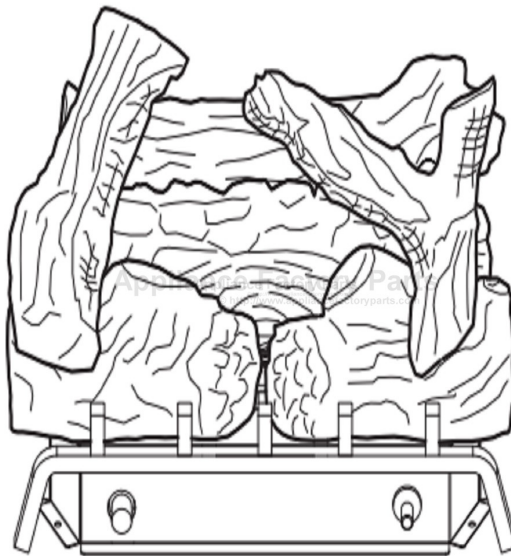


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# EMPIRE HVF2R24P Owner's Manual

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# HearthRite

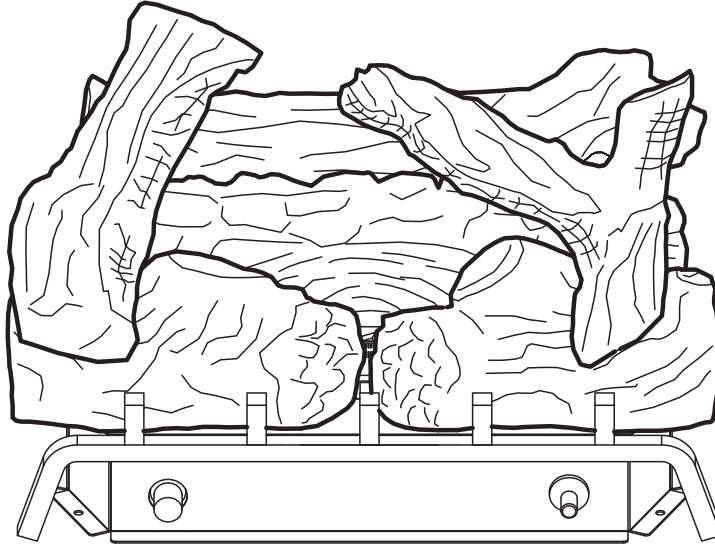
## VENT-FREE GAS LOG HEATER

User's Manual and Operating  
Instructions

### Models:

HVF2M18N / HVF2M24N  
HVF2M18P / HVF2M24P

HVF2R18N / HVF2R24N  
HVF2R18P / HVF2R24P



MC NO.274387  
ANS Z21.11.2-2016

### ▲ WARNING

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



**CAUTION—FOR YOUR SAFETY**

**WARNING: If the information in this manual is 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.

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 the **AIR FOR COMBUSTION AND VENTILATION** section on page 8 of this manual.

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

**INSTALLER: Leave this manual with the appliance.**  
**CONSUMER: Retain this manual for future reference.**

A Division of Empire Comfort Systems, Inc.  
918 Freeburg Avenue  
Belleville, IL 62220  
Phone: 618-233-7420 or 1-800-851-3153  
Fax: 618-233-7097 or 1-800-433-8648  
www.hearthrite.com

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## Specifications

**▲ WARNING** Read this entire manual and all operating instructions before operating this heater.

**IMPORTANT:** Read all instructions and warnings carefully before starting installation. Failure to follow these instructions may result in possible injury to persons or a fire hazard and will void the warranty.

Only a qualified installer, service agent, or local gas supplier may install and service this product.

Model #	HVF2M18N	HVF2M18P	HVF2M24N	HVF2M24P	HVF2R18N	HVF2R18P	HVF2R24N	HVF2R24P
Max. Input Rating (BTU/Hr)	30,000	30,000	32,000	32,000	30,000	30,000	32,000	32,000
Min. Input Rating (BTU/Hr)	14,500	17,500	23,000	21,500	N/A	N/A	N/A	N/A
Gas Type	Natural	Propane	Natural	Propane	Natural	Propane	Natural	Propane
Ignition Type	Pizeo							
Manifold Pressure	4 in. W.C.	9 in. W.C.	4 in. W.C.	9 in. W.C.	4 in. W.C.	9 in. W.C.	4 in. W.C.	9 in. W.C.
<b>Inlet Gas Pressure</b>								
Maximum	10.5 in. W.C.	14 in. W.C.	10.5 in. W.C.	14 in. W.C.	10.5 in. W.C.	14 in. W.C.	10.5 in. W.C.	14 in. W.C.
Minimum*	6 in. W.C.	11 in. W.C.	6 in. W.C.	11 in. W.C.	6 in. W.C.	11 in. W.C.	6 in. W.C.	11 in. W.C.

## **Safety Information**

### **▲ WARNING FIRE, EXPLOSION, AND ASPHYXIATION HAZARD**

**Improper adjustment, alteration, service, maintenance, or installation of this heater or its controls can cause death or serious injury.**

**Read the following instructions and precautions in User's Information Manual provided with this heater.**

**▲ WARNING CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning resemble the flu with headaches, dizziness, or nausea. If you have these signs, the log set may not be working properly. Get fresh air immediately, and have the log set serviced. Some people are more affected by carbon monoxide than others: pregnant women, people with heart or lung disease, people who are anemic, those under the influence of alcohol, and those living in high altitudes.

**NATURAL AND PROPANE/LP GAS:** Natural and propane/LP gases are odorless. An odor-making agent is added to the gas. The odor helps you detect a gas leak. However, the odor added to the gas can fade. Gas may be present even though no odor exists. Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to operating this heater safely.

#### **WARNING:**

- Due to high temperatures, the heater should be located out of traffic and away from furniture and draperies.
- The heater becomes very hot when operating. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition. The heater will remain hot for a time after shutoff.
- Allow surfaces to cool before touching.
- Young children should be carefully supervised when they are in the same room with the appliance.
- Do not place clothing or other flammable material on or near the heater. Never place any objects in the heater.
- Installation and repair should be done by a qualified service person. The heater 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 material, etc. It is imperative that control compartments, burners, and circulating air passageways of the heater be kept clean.
- Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the heater.
- Any change to this heater or its controls can be dangerous.
- Do not use any accessories not approved for use with this heater.
- Keep the heater area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
- This appliance is intended for supplemental heating.

**▲ WARNING: CALIFORNIA PROPOSITION 65:** Fuels used in gas-fired heaters and the products of combustion of such fuels contain chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm. This product can expose you to chemicals, including lead and lead compounds, known to the state of California to cause cancer, birth defects, or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov). ***Wash hands after handling.***



## **Safety Information (cont.)**

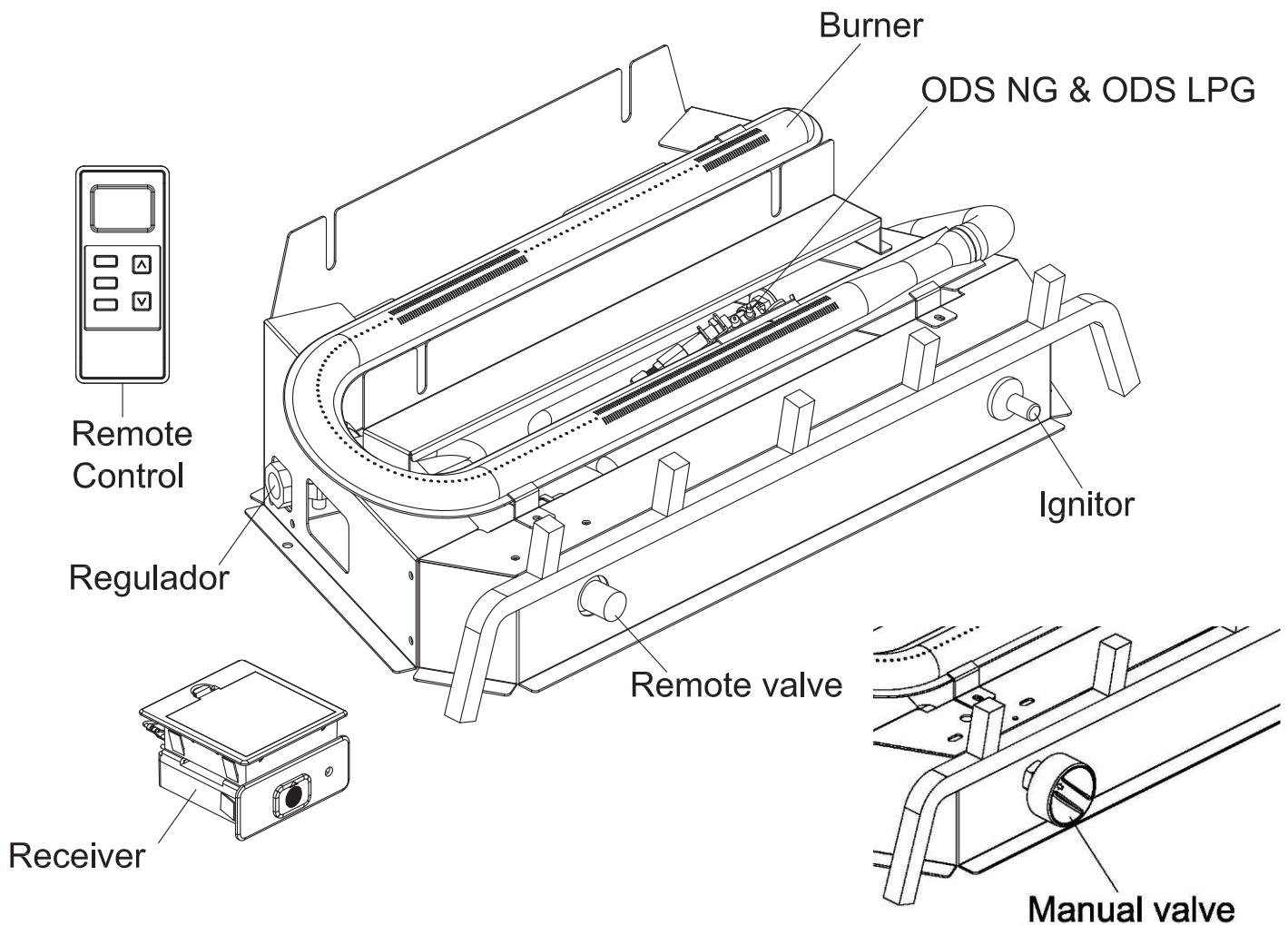
### **WARNING:**

- This heater must only be used with the type of gas indicated on the rating label. This heater is not convertible for use with other gases.
- Do not place propane/LP supply tank(s) inside any structure. Place propane/LP supply tank(s) outdoors.
- If you smell gas, do the following:
  - Shut off the gas supply ;
  - Do not try to light any appliance;
  - Do not touch any electrical switch, and 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, contact the fire department.
- Do not use this heater to burn real wood. Use only the logs provided with the heater.
- Do not add extra logs or ornaments such as pine cones or rock wool. These items may cause sooting.
- Never place objects in the fireplace or the logs.
- This heater is designed to be smokeless. If the logs ever appear to smoke, turn off the heater and call a qualified service person. **NOTE:** When first using the heater, slight smoking may result from log curing and manufacturing residues.
- To prevent the creation of soot, follow the instructions in CARE AND MAINTENANCE on pages 31 and 32.
- Before using furniture polish, wax, carpet cleaner, or similar products, turn the heater off. If heated, the vapors from these products may create a white powder residue within the burner box or on adjacent walls or furniture.
- This heater must never be installed in a bedroom or bathroom.
- This heater needs fresh air ventilation to run properly and safely. This heater has an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS shuts down the heater if not enough fresh air is available. See AIR FOR COMBUSTION AND VENTILATION, page 7. If the heater keeps shutting off, see the TROUBLESHOOTING GUIDE, page 33.
- Do not run the heater:
  - Where flammable liquids or vapors are used or stored;
  - Under dusty conditions.
- Do not use this heater to cook food or burn anything.
- Do not use the heater if any part has been under water. Before use, call a qualified service technician to inspect the heater and replace any part of the control system and/or gas control that has been under water.
- Turn off and let the heater cool before servicing. Only a qualified service person should service and repair the heater.
- Operating the heater above elevations of 4,500 feet may cause pilot outage.
- Do not operate the heater if a log is broken. Do not operate the heater if a log is chipped (dime-sized or larger).
- To prevent performance problems, do not use propane/LP fuel tank of less than 100 lb. capacity.
- Provide adequate clearances around air openings.
- A fireplace screen must be in place when the heater is operating. Unless other provisions for combustion air are provided, the screen shall have an opening(s) for introduction of combustion air.

**QUALIFIED INSTALLING AGENCY:** Only a qualified agency should install and replace gas piping, gas utilization equipment, or accessories, and/or repair and service such equipment. "Qualified agency" means any entity that either in person or through a representative is engaged in and is responsible for:

- Installing, testing, or replacing gas piping; or
- Connecting, installing, testing, repairing, or servicing equipment; is experienced in such work; is familiar with all precautions required; and has complied with all the requirements of the authority having jurisdiction.

## **Product Identification**



### ***SAFETY PILOT***

This heater has a pilot with an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS/pilot shuts off the heater if there is not enough fresh air and cuts off the main burner gas in the event of flame out.

### ***REMOTE THERMOSTAT HEAT CONTROL***

The control automatically cycles the burner on and off to maintain a desired set room temperature (see page 25). When used as a vented decorative appliance, use of the thermostat function is prohibited. Operate manually only.

## General Preparation

This log set has been tested and approved to ANS Z21.11.2-2016 standard for Unvented Heaters and can be operated with the flue damper closed. State and local codes in some areas prohibit the use of vent-free heaters.

### **LOCAL CODES**

Install and use the heater with care. Follow all local codes. The installation must conform with local codes or, In the absence of local codes, with the latest edition of *The National Fuel Gas Code, ANS Z223.1/NFPA 54\**.

\*Available from:

American National Standard Institute, Inc.  
1430 Broadway  
New York, NY 10018

National Fire Protection Association, Inc.  
1 Batterymarch Park  
Quincy, MA 02269-9101

This heater is designed for vent-free operation. State and local codes in some areas prohibit the use of vent-free heaters.

**State 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 room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

In the State of Massachusetts, unvented propane or natural gas-fired space heaters are prohibited in bedrooms and bathrooms.

**In the State of Massachusetts the gas cock must be a T-handle type. The State of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.**

The installation of appliances designed for manufactured home (U.S. only) or mobile home installation must conform with the *Standard CAN/CSA Z240 MH, Mobile Housing*, in Canada, or with the *Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280*, in the United States, or when such a standard is not applicable, *ANS/NCSBCS A225.1/NFPA 501A, Manufactured Home Installations Standard*.

## **Preparing for Installation**

### ***WATER VAPOR IS A BY-PRODUCT OF UNVENTED ROOM HEATERS***

Gas combustion creates water vapor as a by-product. Unvented room heaters create about one (1) ounce (30 ml) of water for every 1,000 BTUs (0.3 kW) of gas input per hour. An unvented room heater is recommended as a supplemental heat source for a single room rather than as a primary heat source for an entire house. The water vapor does not typically create a problem. In most cases, the water vapor enhances the low humidity conditions that are typical of cold weather.

Keep these points in mind so that the water vapor does not create a problem:

- The heater must be the proper size for the application. Provide adequate combustion air and circulation air.
- In humid environments, use a dehumidifier to help lower the amount of water vapor in the air.
- Do not use an unvented room heater as your primary heat source.

### ***AIR FOR COMBUSTION AND VENTILATION***

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, ANS Z223.1/NFPA 54*, the *International Fuel Gas Code*, or applicable local codes.

### ***PRODUCING ADEQUATE VENTILATION***

Spaces in homes can be divided into these ventilation classifications:

- Unusually Tight Construction
- Unconfined Space
- Confined Space

The information on pages 7–9 will help you classify your space and provide adequate ventilation.

#### **Confined and Unconfined Space:**

A confined space has a volume less than 50 cu. ft. per 1,000 BTU/hr (4.8 m<sup>3</sup> per kW) of the total input rating of all appliances installed in that space. An unconfined space has a volume not less than 50 cu. ft. per 1,000 BTU/hr (4.8 m<sup>3</sup> per kW) of the total input rating of all appliances installed in that space. Rooms that are directly connected to the space in which the appliances are installed\*, through openings that do not have doors, are considered a part of the unconfined space.

Do not install this heater in a confined space or unusually tight construction unless you provide provisions for adequate combustion and ventilation air.

\*Adjoining rooms are directly connected only if there are doorless passageways or ventilation grills between them.

#### **Unusually Tight Construction:**

Doors and windows may leak air that provides enough fresh air for combustion and ventilation. However, you must provide additional fresh air in buildings of unusually tight construction. Unusually tight construction is defined as construction that meets the following criteria:

- A. Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm (6x10<sup>-11</sup> kg per pa-sec-m<sup>2</sup>) or less with openings that are gasketed or sealed.
- B. Doors and windows that can be opened have weather stripping.
- 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 residence meets all the above criteria, additional fresh air must be provided. See VENTILATION AIR FROM OUTDOORS on page 9 for more information. If your residence does not meet those three criteria, continue to DETERMINING FRESH-AIR FLOW FOR THE HEATER LOCATION.

## Preparing for Installation (cont.)

### **DETERMINING FRESH-AIR FLOW FOR THE HEATER LOCATION**

#### **Determining if You Have a Confined or Unconfined Space:**

Use the below information to determine if you have a confined or unconfined space. Your space includes the room in which you will install the heater plus any other rooms that are directly connected and have doorless passageways or ventilation grills between the rooms.

- Determine the volume of the space.  $\text{Length} \times \text{Width} \times \text{Height} = \text{cu. ft. (volume of space)}$ 
  - Example: 20 ft. (length)  $\times$  16 ft. (width)  $\times$  8 ft. (ceiling height) = 2560 cu. ft. (volume of space)If additional ventilation to adjoining room(s) is supplied with grills or openings, add the volume of these rooms to the total volume of your space.
- Divide the space's volume by 50 cu. ft. to determine the maximum BTU/hr the space can support.  
 $\text{_____ (volume of space)} \div 50 \text{ cu. ft.} = \text{(maximum BTU/hr the space can support)}$ 
  - Example: 2560 cu. ft. (volume of space)  $\div$  50 cu. ft. = 51.2 or 51,200 (maximum BTU/hr the space can support)
- Add the BTU/hr of all fuel burning appliances in the space:  
Vent-free heater \_\_\_\_\_ BTU/hr  
Gas water heater\* \_\_\_\_\_ BTU/hr  
Gas furnace \_\_\_\_\_ BTU/hr  
Vented gas heater \_\_\_\_\_ BTU/hr Example:  
Gas heater logs \_\_\_\_\_ BTU/hr Gas water heater 30,000 BTU/hr  
Other gas appliances\*+ \_\_\_\_\_ BTU/hr Vent-free heater + 26,000 BTU/hr  
Total = \_\_\_\_\_ BTU/hr Total = 56,000 BTU/hr  

\*Do not include direct-vent gas appliances. Direct-vent appliances draw combustion air from outdoors and vent to the outdoors.
- 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 : 51,200 BTU/hr (maximum the space can support) 56,000 BTU/hr (actual amount of BTU/hr used)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:
  - Add the space of an adjoining room and rework the above information. If the extra space creates an unconfined space, remove the door to the adjoining room or add ventilation grills between rooms. See VENTILATION AIR FROM INSIDE A BUILDING, page 9.
  - Vent the room directly to the outdoors. See VENTILATION AIR FROM OUTDOORS, page 9.
  - Install a heater that uses less BTUs/hr if the lower BTUs/hr creates an unconfined space. If the actual BTU/hr used is less than the maximum BTU/hr the space can support, the space is an unconfined space. In this case, no additional fresh air ventilation is needed.



## Preparing for Installation (cont.)

**▲WARNING** If the area in which the heater operates does not meet the required volume for indoor combustion air, you must provide combustion and ventilation air by one of the methods described in the *NATIONAL FUEL GAS CODE, ANSI Z223.1/NFPA 54*, the *INTERNATIONAL FUEL GAS CODE*, or applicable local codes.

### VENTILATION AIR FROM INSIDE A BUILDING

Fresh air comes from a connected unconfined space. You must provide two permanent openings when ventilating to a connected unconfined space, one of which that's within 12" of the wall that connects the two spaces (see options 1 and 2, Fig. 1). You may also remove the door into the adjoining room (see option 3, Fig. 1). Follow the National Fuel Gas Code NFPA 54/ANS Z223.1 for the required size of ventilation grills or ducts.

### VENTILATION AIR FROM OUTDOORS

Extra fresh air is provided via ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor. They must connect directly to the outdoors or spaces that open to the outdoors. Such spaces may include attics or crawl spaces. Follow the National Fuel Gas Code NFPA 54/ANS Z223.1 for the required size of ventilation grills or ducts.

**IMPORTANT:** Do not provide openings for inlet or outlet air into an attic if the attic has a thermostat-controlled power vent. The power vent will be activated by heated air that enters the attic. You must add the space of the connected unconfined space and rework the information on page 8. The combined spaces must have enough fresh air to supply all appliances in both spaces.

Fig. 1—Ventilation Air from Inside a Building

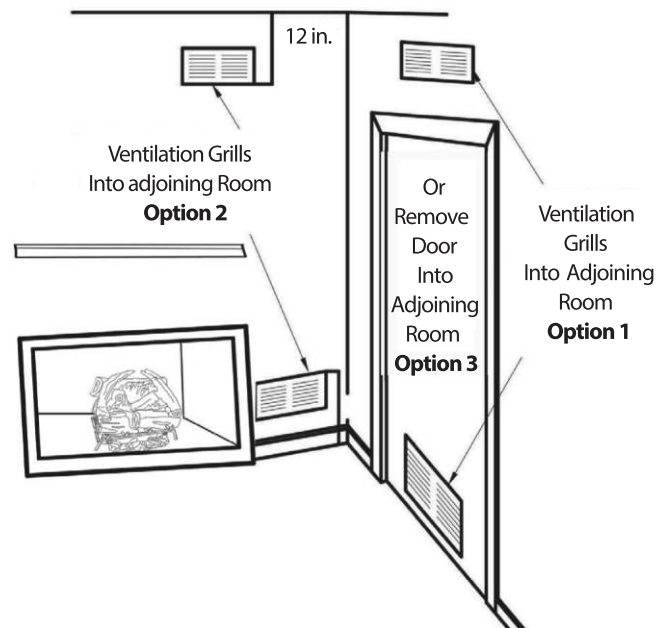
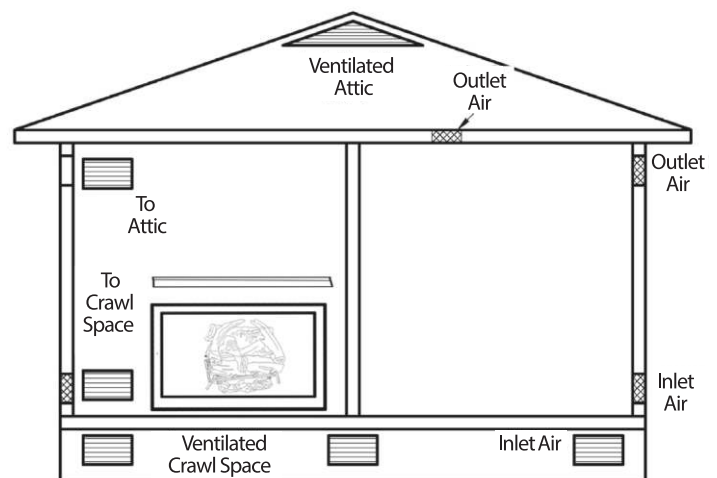


Fig. 2—Ventilation Air from Outdoors





## Installation

**NOTICE:** This heater is intended to be used as a supplemental heating source. Use this heater along with your primary heating system. This heater must not be used as a primary heat source. If you have a central heating system, you may run that system's circulating blower while using this heater. This helps to circulate the heat around your house.

**▲ WARNING** A qualified technician must install the heater. Follow all local codes.

**▲ WARNING** Never install the heater in a bedroom or bathroom; in a recreational vehicle; where curtains, furniture, clothing, or other flammable objects are less than 42" from the front, top, or sides of the heater; in high traffic areas; or in windy or drafty areas.

**▲ WARNING** Any glass doors must be fully opened when you are operating the heater.

**▲ 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.

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

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

**▲ WARNING** This appliance is for installation only in a solid fuel-burning or *UL 127* factory-built fireplace or in a listed ventless firebox enclosure. It has been design certified for these installations. Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating it has not been tested or should not be used with unvented gas logs.

**▲ WARNING** Do not burn solid fuels in your fireplace when this heater is also installed.

**▲ WARNING** Outside air ducts and/or ash dumps in the fireplace must be permanently closed when this heater is installed.

**▲ CAUTION** This heater creates warm air currents. These currents move heat to wall surfaces that are next to the heater. Installing the heater next to vinyl or cloth wall coverings, or operating the appliance where impurities in the air exist (tobacco smoke, aromatic candles, cleaning fluid, oil or kerosene lamps, etc.), may cause walls to discolor.

## **Installation (cont.)**

**IMPORTANT:** Vent-free heaters add moisture to the air, which is beneficial. However, if this heater is installed in areas without adequate ventilation, mildew may form from too much moisture in the air. See AIR FOR COMBUSTION AND VENTILATION, pages 7 through 9.

**CHECK GAS TYPE:** Be sure your gas supply is right for your heater. If the supply is not correct, do not install the heater. Contact the place where this heater was purchased for a heater appropriate for your gas supply.

**NOTICE:** State or local codes may only allow operation of this appliance in a vented configuration. Check your state or local codes.

<b>Log Sizing Requirements</b>				
<b>Log Size</b>	<b>Minimum Firebox Size</b>			
	Height	Depth	Front Width	Rear Width
18 in.	24 in.	14 in.	28 in.	20 in.
24 in.	24 in.	14 in.	32 in.	22 in.

### **HEATER CLEARANCES**

#### **▲ CAUTION**

If you install the heater in a home garage, a.) ensure the heater pilot and burner are at least 18" above the floor and, b.) locate the heater where moving vehicles will not hit it.

For convenience and efficiency, install the heater with these points in mind:

- Provide easy access for operation, inspection and service.
- Install the heater in the coldest part of the room.

If this heater is installed directly on carpeting, tile, or other combustible material, other than wood flooring, the heater must be installed on a metal or wood panel that extends the heater's full width and depth.

#### **Minimum Clearances for Side Combustible Material, Side Wall, and Ceiling:**

- A. Clearances from the side of the heater cabinet to any combustible material and wall must follow the specifications listed in the below table.
- B. Clearances from the top of the heater opening to the ceiling must not be less than 36".

#### **▲ WARNING**

Maintain the minimum clearances. If possible, provide greater clearances from the floor, ceiling, and adjoining wall than required.

<b>Minimum Fireplace Clearance to Combustible Materials</b>		
Log Size	Side Wall	Ceiling
18 in.	16 in.	36 in.
24 in.	16 in.	36 in.

#### **▲ WARNING**

Seal any fresh air vents or ash clean-out doors located on the floor or wall of the fireplace with a heat-resistant sealant—this prevents drafting caused by pilot outage or sooting. Do not seal the chimney flue damper.

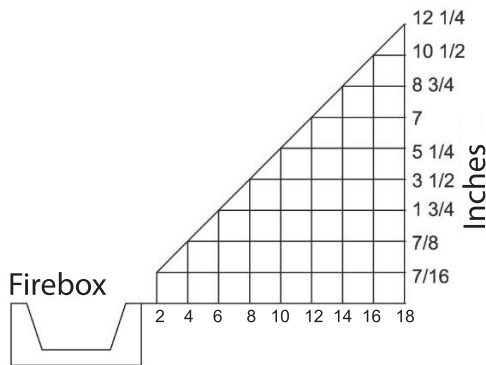
## Installation (cont.)

### **Minimum Noncombustible Material Clearance—If Not Using a Mantel:**

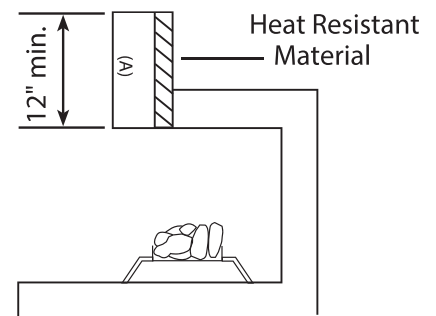
You must have noncombustible material(s) such as slate, tile, or marble above the fireplace opening. These materials must be at least 1/2" thick. If using sheet metal, you must have noncombustible material behind it, such as a noncombustible fireplace hood accessory (see Fig. 4).

**NOTICE:** This heater may be used as a vented product. If doing so, you must always operate log set with chimney flue damper open. If running log set with damper open, noncombustible material above fireplace opening is not needed. See **INSTALLING DAMPER CLAMP ACCESSORY FOR VENTED OPERATION**, page 14. When used as a vented decorative appliance, use of the thermostat function is prohibited—operate manually only.

**Fig. 3—Minimum Clearance for Combustible to Wall**



**Fig. 4—Heat Resistant Material (slate, marble, tile, etc.) above Fireplace**



### **Minimum Noncombustible Material Clearance—If Using a Mantel:**

You must have noncombustible material(s) such as slate, tile, or marble at least 1/2" thick. If using sheet metal, noncombustible material must be behind it. Noncombustible material must extend at least 12" up. If noncombustible material is less than 12", a fireplace hood accessory must be installed. If noncombustible material is more than 12", you may still require the hood accessory to deflect heat away from mantel shelf. See Fig. 3 and 4 above for minimum clearance requirements.

**IMPORTANT:** If the minimum clearances are not met, you must operate the heater with the chimney flue damper open. See **INSTALLING DAMPER CLAMP ACCESSORY FOR VENTED OPERATION**, page 14.

## Installation (cont.)

### **MANTEL CLEARANCES**

In addition to meeting noncombustible material clearances, you must also meet required clearances between the fireplace opening and mantel shelf. A fireplace hood is required if the below clearances are not met.

#### **Determining Mantel Clearances:**

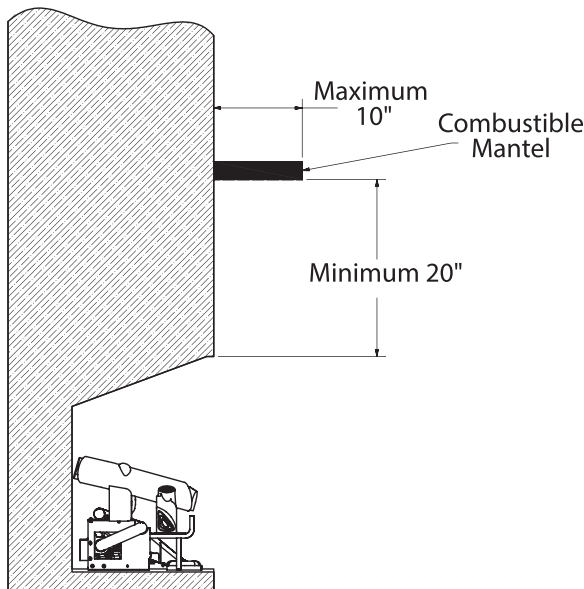
If you meet the minimum clearance requirements between the mantel shelf and the top of the fireplace opening, you do not require a fireplace hood (see Fig. 5).

<b>Noncombustible Material Installation Requirements</b>	
<b>Noncombustible Material Distance</b>	<b>Requirements for Safe Installation</b>
8" or more	Noncombustible material is okay.
Less than 8"	Noncombustible material must be extended to at least 8". See between 8" and 12" on the previous page. If you cannot extend the material, the heater must be operated with the flue damper open

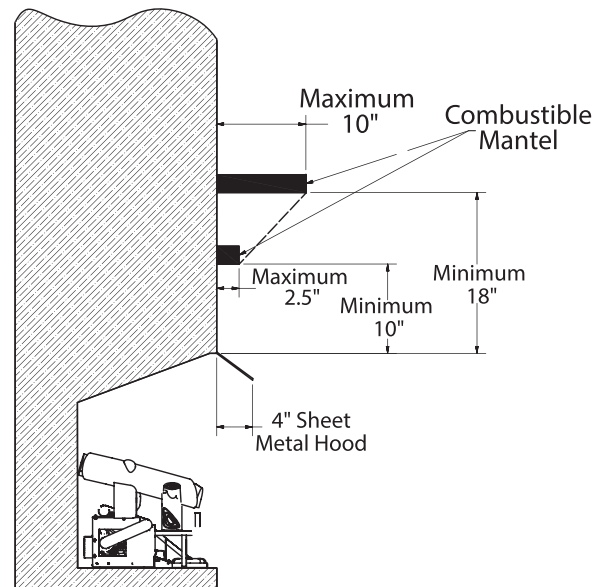
#### **Determining Minimum Mantel Clearance When Using a Hood:**

If the minimum clearances in Fig. 6 are not met, you must use a hood. When using a hood there are still certain minimum mantel clearances required, as shown in Fig. 6.

**Fig. 5—Closed Flue Mantel Clearances without Hood**



**Fig. 6—Closed Flue Mantel Clearances with Hood**



**NOTICE:** When operating the heater, the surface temperature of adjacent walls and mantels become hot. Walls and mantels above the firebox may become too hot to touch. If installed properly, these temperatures meet the requirement of the national product standard. Follow all minimum clearances shown in this manual.

**NOTICE:** If your installation does not meet the minimum clearances, you must only operate the heater with the flue damper open, or you must raise the mantel to an adequate height.

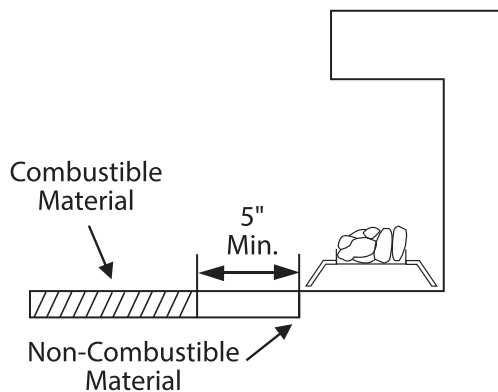
## **Installation (cont.)**

### **FLOOR CLEARANCES**

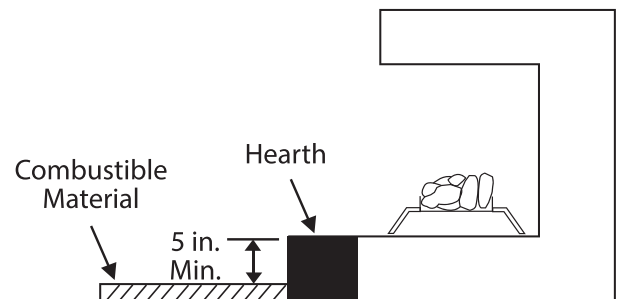
In addition to meeting noncombustible material clearances, you must also meet required clearances between fireplace opening and mantel shelf. A fireplace hood must be used if you do not meet the below clearances.

- A. If installing the heater on floor level, you must maintain the minimum distance of 5" to combustibles (see Fig. 7).
- B. If combustible materials are less than 5" to the fireplace, you must install the heater at least 5" above the combustible flooring (see Fig. 8).

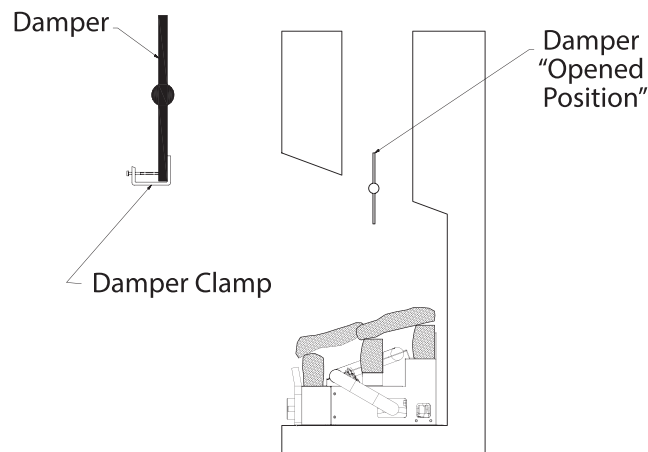
**Fig. 7—Minimum Fireplace Clearances if Installed at Floor Level**



**Fig. 8—Minimum Fireplace Clearances above Combustible Flooring**



**Fig. 9—Attach Damper to Fireplace**



### **INSTALLING DAMPER CLAMP ACCESSORY FOR VENTED OPERATION**

**NOTE:** When used as a vented heater, the heater must be installed only in a solid-fuel burning fireplace with a working flue constructed of noncombustible material. You may use this heater as a vented product. When used as a vented decorative appliance, use of the thermostat function is prohibited—operate manually only. There are three reasons for operating your heater as a vented model:

1. The fireplace does not meet the clearance requirements for vent-free operation.
2. State or local codes do not permit vent-free operation.
3. You prefer vented operation.

## **Installation (cont.)**

### **▲ WARNING**

Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

Before beginning assembly or operation of this heater, ensure all parts are present. Check the parts against the package contents list. If any part is missing or damaged, do not attempt to assemble, install, or operate the heater. Contact customer service for replacement parts.

**Estimated Assembly Time:** 1 to 2 hours

### **Tools Required for Assembly (not included, unless otherwise stated):**

Before installing the heater, ensure you have the following:

- Hardware package (included)
- Approved flexible gas hose if allowed by local codes
- Sealant (resistant to natural or propane/LP gas)
- Electric drill with 3/16" drill bit
- Phillips screwdriver
- External regulator (supplied by installer if required)
- Piping (check local codes)
- Equipment shutoff valve
- Test gauge connection
- Sediment trap
- Tee joint
- Pipe wrench
- 3/8" NPT to 3/8" flare fitting

### ***UNPACKING***

1. Remove logs, grate, and burner base assembly from carton.

**NOTE:** Do not pick up the burner base assembly by the burners. This could damage heater. Only handle the base assembly by its frame.

2. Remove all protective packaging used on the logs and heater.

3. Inspect the items for shipping damage. If you notice any damage, contact the dealer where the heater was purchased.



## Installation (cont.)

### CONNECTING TO A GAS SUPPLY

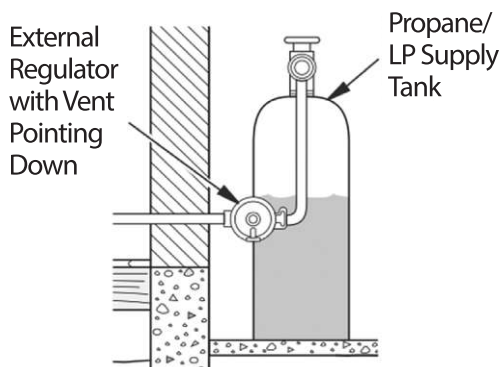
**▲ WARNING** A qualified service technician must connect heater to gas supply. Follow all local codes.

**▲ WARNING** Never connect the heater to private/non-utility gas wells (commonly known as wellhead gas).

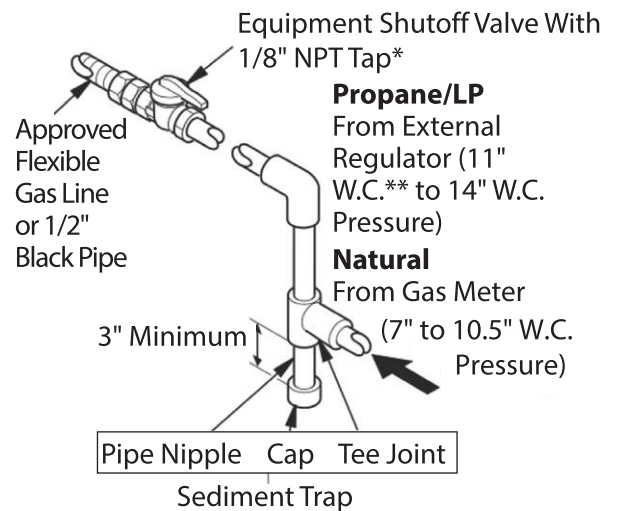
**▲ CAUTION** Never connect the heater directly to the gas supply. This heater requires an external regulator (not supplied). The external regulator between the gas supply and heater must be installed. Your gas supplier provides the external regulator for natural gas.

The installer must supply an external regulator for liquid propane. For natural gas, the gas supplier supplies the external regulator. The external regulator reduces incoming gas pressure, and the pressure must be reduced to between 11" and 14" of water column for propane and between 7" and 10.5" of water column for natural gas. Heater regulator damage could occur if the pressure of the incoming gas is not reduced. Install the external regulator with the vent pointing down as shown in Fig. 10. The purpose of pointing the vent down is to protect it from freezing rain or sleet.

**Fig. 10—Regulator Conversion**



**Fig. 11—Gas Connection**



\*The equipment shutoff valve can be purchased from your local home center store.

**▲ CAUTION** Use only new black iron or steel pipe. Internally tinned copper tubing may be used in certain areas, depending on your local codes. Use pipe of 1/2" diameter or greater to allow proper volume gas to heater. If the pipe is too small, loss of pressure will occur. Installation must include an equipment shutoff valve, union, and plugged 1/8" NPT tap. The NPT tap must be located within reach for the test gauge hook up and be upstream from heater (see Fig. 11).

**IMPORTANT:** Install equipment shutoff valve in an accessible location. The equipment shutoff valve is for turning on or shutting off the gas to the heater. Apply pipe joint sealant lightly to the male threads. This prevents excess sealant from going into the pipe. The heater valves may become clogged if excess sealant gets into the pipes.

## Installation (cont.)

**▲ CAUTION** Use pipe joint sealant that is resistant to gas (propane or NG). We recommend that you install a sediment trap in a supply line, which traps moisture and contaminants. The sediment trap should be located within reach for cleaning and where it is not likely to freeze. Install it in the piping system between the fuel supply and heater. This keeps contaminants from getting into the heater controls. The heater may not run properly if the sediment trap is not installed or is installed incorrectly.

**▲ CAUTION** Avoid damage to the regulator. Hold the gas regulator with a wrench when connecting into gas piping and/or fittings. NG Models: 6" to 10.5 W.C. /11" to 14" W.C.. Your gas supplier provides an external regulator for natural gas.

### INSTALLATION ITEMS NEEDED (NOT PROVIDED):

- 8" Adjustable Wrench
  - 8" Pipe Wrench
  - 3/8" Flexible Gas Line (24" Min.) or 1/2" Black Pipe
  - 90 Deg. 3/8 NPT x 3/8" Flare Fitting or 3/8" Street Elbow
  - Sealant (Resistant to natural or propane/LP gas)
  - Shutoff Valve
1. Depending on where your gas supply line is located, a variety of options are possible for routing the gas connection lines. First, install the 3/8" fitting on the heater regulator using sealant. Direct the attachment either left or right toward the gas supply line.

**NOTICE:** Most building codes do not permit concealed gas connections. Check your local building code before using a flexible gas line for this installation.

2. Install the gas line to the 90 deg. fitting, and attach it to the shutoff valve (see Fig. 12 & 13). Depending on your connection, it might be necessary to cut and access the hole in the side or bottom of the mantel cabinet.
3. Check all connections for gas leaks.

Fig. 12—Gas Inlet to Regulator

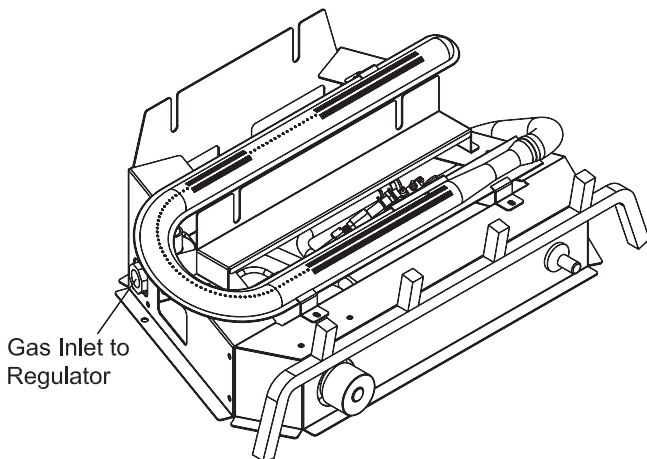
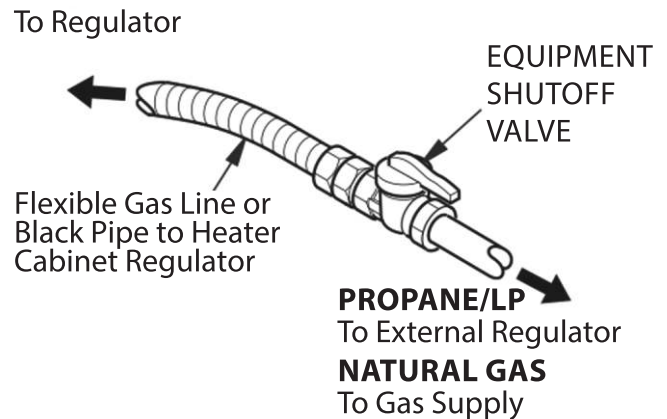


Fig. 13—Attaching the Flexible Gas Line to the Equipment Shutoff Valve



## Installation (cont.)

### CHECKING GAS CONNECTIONS

**▲WARNING** After installing or servicing the heater, test all gas piping and connections for leaks. Immediately correct all leaks.

**▲WARNING** Never use an open flame to check for a leak. Apply a mixture of liquid soap and water to all joints—bubbles may indicate a leak. Immediately correct all leaks.

#### Pressure Testing Gas Supply Piping System

##### Test Pressures in Excess Of 1/2 PSIG (3.5 kPa):

1. Disconnect the heater, including the main gas valve (control valve) and equipment shutoff valve, from the gas supply piping system. Pressures greater than 1/2 PSIG will damage the regulator.
2. Cap off the open end of the gas pipe where the equipment shutoff valve was connected.
3. Open the gas supply tank valve or use compressed air to pressurize the supply piping system.
4. Check all joints of the gas supply piping system. Use a mixture of liquid soap and water in the gas joints to check for leaks—bubbles may indicate a leak.
5. Immediately correct all leaks.
6. Reconnect the heater and equipment shutoff valve to gas supply. Check reconnected fittings or leaks.

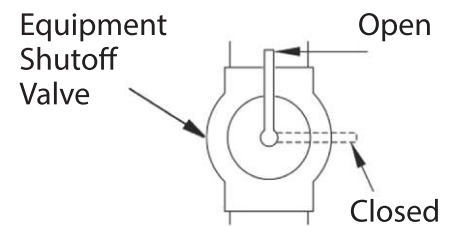
##### Test Pressures Equal To or Less Than 1/2 PSIG (3.5 kPa):

1. Close the equipment shutoff valve (see Fig. 14).
2. Open the gas supply tank valve or use compressed air to pressurize the supply piping system.
3. Check all joints from the gas meter to the equipment shutoff valve (see Fig. 15.1 & 15.2).
4. Use a mixture of liquid soap and water in the gas joints to check for leaks—bubbles may indicate a leak.
5. Immediately correct all leaks.

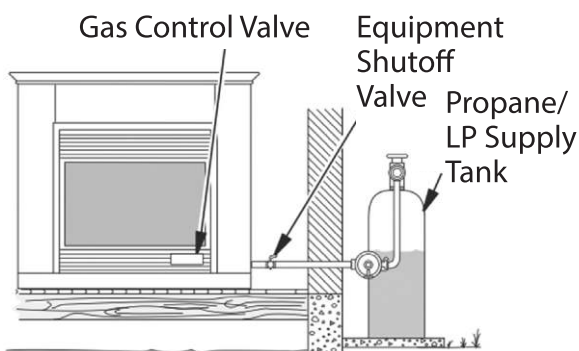
#### Pressure Testing Heater Gas Connections:

1. Open the equipment shutoff valve (see Fig. 14).
2. Open the gas supply tank valve.
3. Ensure the control knob of the heater is in the OFF position.
4. Check all joints from the equipment shutoff valve to the control valve (see Fig. 15.1 & 15.2). Use a mixture of liquid soap and water in the gas joints to check for leaks—bubbles may indicate a leak.
5. Light the heater (see OPERATION, page 21-23). Check all other internal joints for leaks.
6. Turn off the heater (see TO TURN OFF GAS TO THE HEATER, page 23).

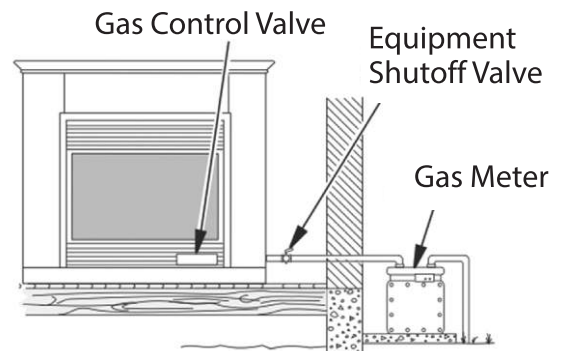
**Fig. 14—Equipment Shutoff Valve**



**Fig. 15.1—Checking Gas Joints (Propane/LP Only)**



**Fig. 15.2—Checking Gas Joints (Natural Gas Only)**



## **Installation (cont.)**

### **BEFORE INSTALLING THE HEATER**

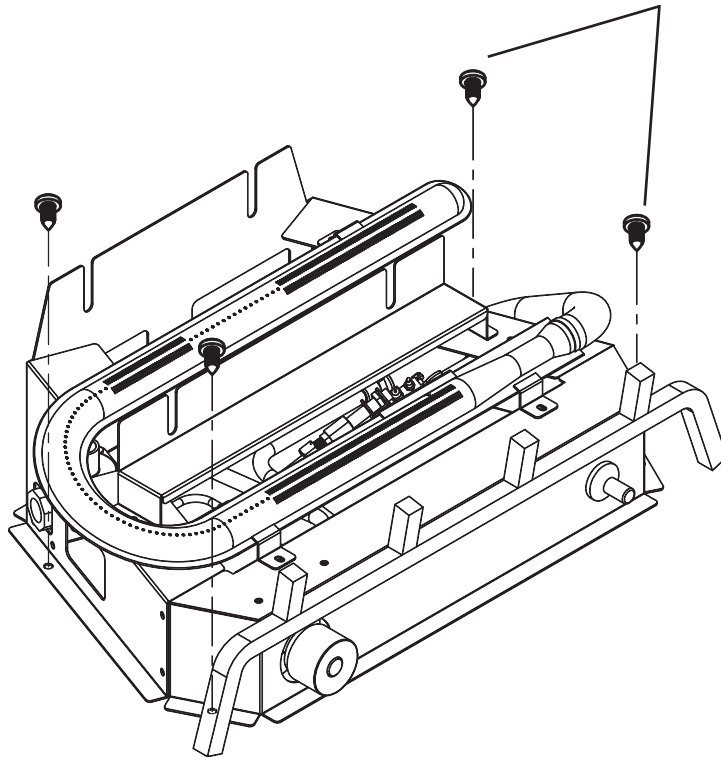
- Turn off the gas supply to the fireplace or firebox.
- Clean the fireplace floor and chimney before installing the heater. Seal any ash, and clean out doors to protect the unit from down drafts.

### **MOUNTING PROCEDURE**

- Place the grate/burner assembly into the firebox.
- Using the log set as a guide, drill four (4) 5/32" diameter holes approximately 1" deep into the floor of the firebox.
- Anchor the grate/burner assembly to the floor using four (4) concrete attachment screws (not included) (see Fig. 16).

**Fig. 16—Mounting Locations**

1/4" x 3/4" Concrete Hex Head Flanged Attachment Screws



## Log Placement

### ▲ WARNING

Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this heater may result in property damage or personal injury.

### ▲ CAUTION

Check to ensure that no yellow flame comes in contact with any log, both after installation and periodically afterwards. Set the heater to HIGH and check if yellow flames come into contact with any log. If so, reposition the logs as indicated in the below illustrations. Yellow flames coming into contact with logs create unnecessary soot.

Install the logs exactly as indicated (see Fig. 17–20). Do not modify the logs, and use only logs supplied with the heater. The logs are numbered and correspond to the numbers listed below.

### Number of Logs: 5

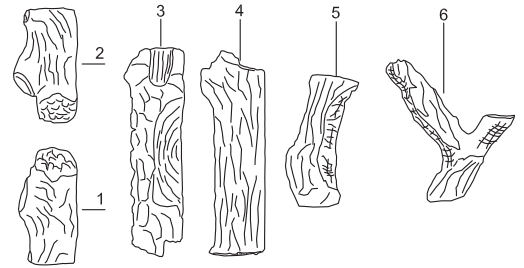
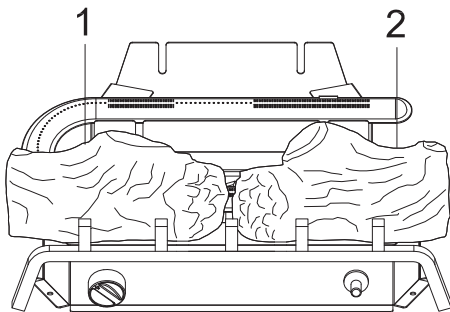
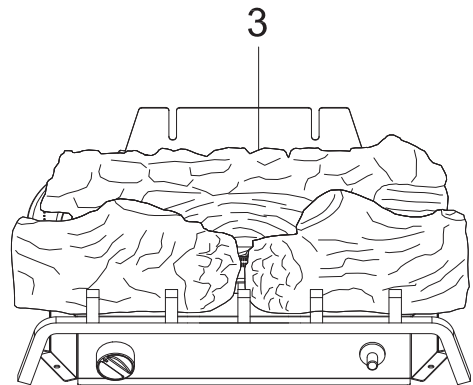


Fig. 17



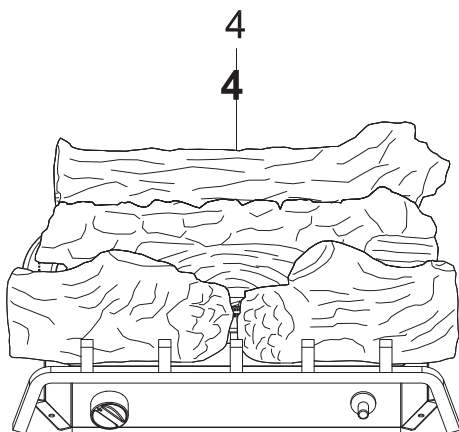
1. Place log #1 and #2 onto the pins in the front grate base.

Fig. 18



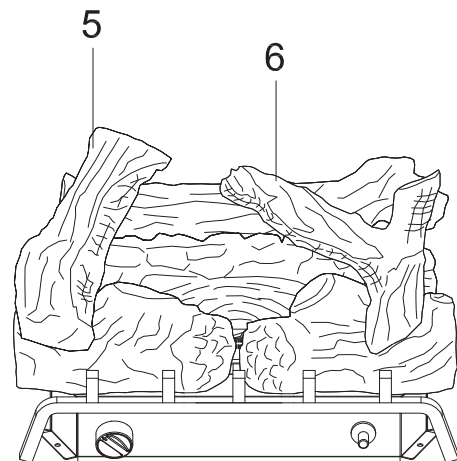
2. Place log #3 onto the middle grate base, making sure it's aligned with logs #1 and #2.

Fig. 19



3. Place log #4 onto the back grate base, making sure it's aligned with logs #1, 2 and 3.

Fig. 20



4. Place log #5 so that it's resting on logs #1, 3 and 4. Place log #6 so that it's resting on logs #2, 3 and 4

## Operation

### 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 that must be lighted by the electronic ignitor. When lighting, 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 electric 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. Push in or turn the gas control knob using only your hand. Never use tools. If the knob will not push in or turn by hand, 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 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.



## Operation—HVF2M18N / HVF2M18P / HVF2M24N / HVF2M24P

### LIGHTING INSTRUCTIONS




1. **STOP!** Read all the above safety information before proceeding.
2. Turn the control knob clockwise  to the "OFF" position (see Fig. 19).
3. Wait five (5) 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 don't smell gas, go to the next step.
4. Turn the control knob counterclockwise  to the "PILOT" position. Depress control knob.
5. With control knob depressed, push down on the ignitor button until the pilot lights. The pilot is located behind the heater screen near the rear of the burner (see Fig. 20).
  - Do not attempt to light the pilot by hand.
6. Keep the control knob depressed for (30) seconds after the pilot lights. Then release the control knob.
  - If the control knob does not pop up when released, stop and immediately call a qualified service technician or gas supplier.
  - If the pilot goes out, repeat steps 3 through 7. Wait (1) minute before attempting to light pilot again. If after several tries the pilot still goes out, turn the gas control knob clockwise to the "OFF" position and call a qualified service technician.
7. Turn the control knob counterclockwise  to the desired setting.

Fig. 19—Control Knob

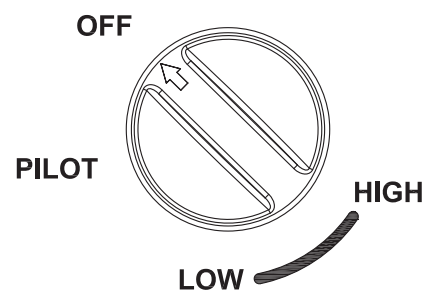
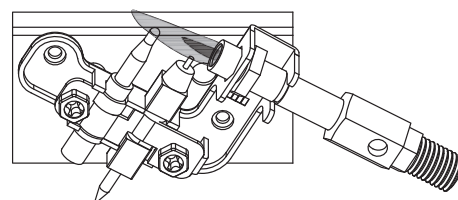


Fig. 20—Pilot



**▲ WARNING** The fireplace screen must be in place while the heater is in operation.

**▲ WARNING** Any glass doors must be completely opened while the heater is operating.

### TO TURN OFF GAS TO THE HEATER

1. Turn the control knob clockwise  to the "OFF" position.

#### Shutting Off the Burner only (Pilot Stays Lit):

1. Turn the control knob clockwise  to the "PILOT" position.

## Operation—HVF2R18N / HVF2R18P / HVF2R24N / HVF2R24P

### LIGHTING INSTRUCTIONS

1. **STOP!** Read all the above safety information before proceeding.
2. Set the receiver switch to the "ON" position (see Fig. 21).

**NOTE:** When used as a vented decorative appliance, use of the remote thermostat function is prohibited—operate manually only.




3. Turn the control knob clockwise  to the "OFF" position (see Fig. 21).
4. Wait five (5) 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 don't smell gas, go to the next step.
5. Push in slightly and turn the control knob counterclockwise  to the "PILOT" position (see Fig. 28). Depress the control knob.
6. With the control knob depressed, push down on the ignitor button until the pilot lights. The pilot is located behind log #3 near the center of the burner (see Fig. 22).
7. Keep the control knob depressed for (30) seconds after the pilot lights. Release the control knob.
  - If the control knob does not pop up when released, stop and immediately call a qualified service technician or gas supplier.
  - If the pilot goes out, repeat steps 3 through 7. Wait (1) minute before attempting to light the pilot again. If after several tries the pilot still goes out, turn the gas control knob clockwise to the "OFF" position and call a qualified service technician.
8. Turn the control knob counterclockwise  to the "ON" position.
9. To use the included thermostatic remote control, set the receiver switch to the "REMOTE" position (see Fig. 21). Press the "ON" button to turn on the remote (Fig. 23) to ignite the main burner. Refer to the remote control instruction manual on page 25 for the "MODE" and "SET" functions.

Fig. 21—Receiver and Control Knob

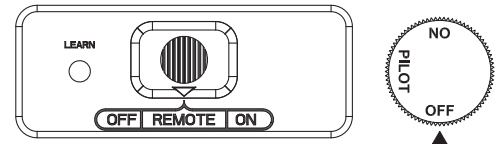


Fig. 22—Pilot

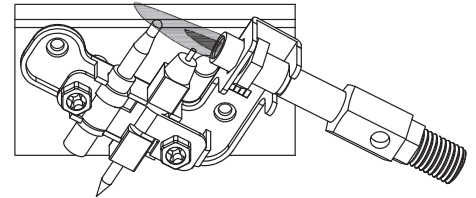
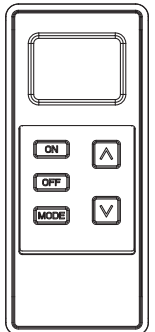



Fig. 23—Remote/Transmitter



**▲ WARNING** The fireplace screen must be in place while the heater is in operation.

**▲ WARNING** Any glass doors must be completely opened while the heater is operating.

### TO TURN OFF GAS TO THE HEATER

1. Set the thermostat to the lowest setting.
2. Press the "OFF" button on the remote control.
3. Push in slightly and turn the control knob clockwise  to the "OFF" position.

## Operation (cont.)

### **INSPECTING BURNERS**

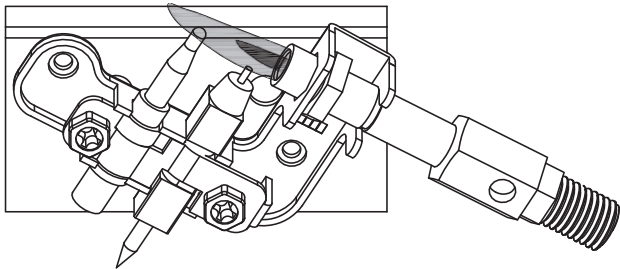
Check the pilot flame pattern and burner flame patterns often.

### **PILOT FLAME PATTERN**

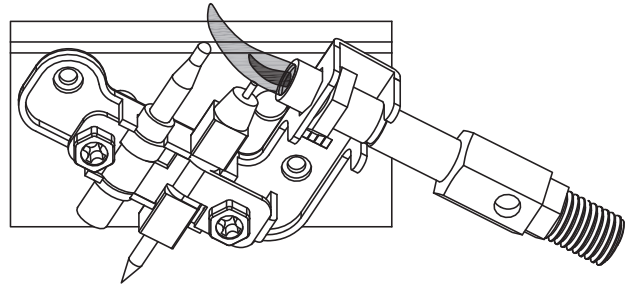
Figure 31 shows a correct pilot flame pattern. Figure 25 shows an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the heater will shut down. If pilot flame pattern is incorrect, as shown in Figure 24:

- Turn the heater off (see TO TURN OFF GAS TO THE HEATER, page 23).
- See the TROUBLESHOOTING GUIDE, page 33.

**Fig. 24—Correct Pilot Flame Pattern**



**Fig. 25—Incorrect Pilot Flame Pattern**



**WARNING** burner flame patterns.

**▲ WARNING** Do not allow fans to blow directly into the heater. Avoid any drafts that alter burner flame patterns.

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

## Remote Control Operation

**▲ WARNING** IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS, DO NOT ATTEMPT TO INSTALL OR OPERATE THIS DEVICE.

This remote control system was developed to provide a convenient, user-friendly, and safe remote control system for gas heating appliances. The system is operated manually from the transmitter and operates on radio frequencies (RF) within a 20-foot range using non-directional signals. The system uses one of 16777216 security codes that are programmed into the transmitter at the factory. The remote receiver's code must be matched to the transmitter's code prior to initial use.

**NOTE:** Review COMMUNICATION SAFETY under the GENERAL INFORMATION section. This safety feature shuts down the appliance during potentially hazardous or unsafe conditions.

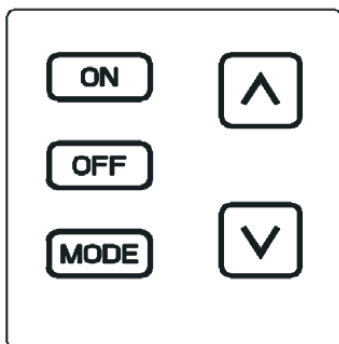
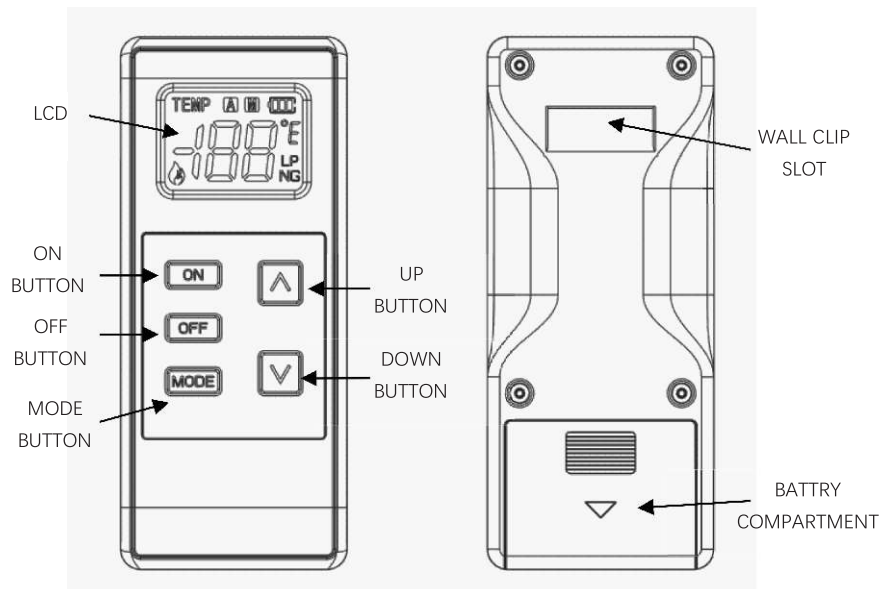
This remote control system provides you with a battery-operated remote control to power the gas valve. (see Fig. 26).

Using the battery power from the receiver, the solenoid circuit operates a solenoid. The circuit uses reversing polarity software to reverse the positive (+) and negative (-) output of the receiver's battery power, which drives a latching solenoid ON/OFF. The system is controlled by the remote transmitter, which operates on two (2) 1.5 V AAA batteries.

Always use ALKALINE batteries for longer battery life and maximum performance. Do not use rechargeable batteries. Before using the transmitter, place the two (2) AAA batteries in the battery compartment. Ensure the batteries are placed in the proper direction.

Before using the transmitter, place the two (2) AAA batteries in the battery compartment. Ensure the batteries are placed in the proper direction.

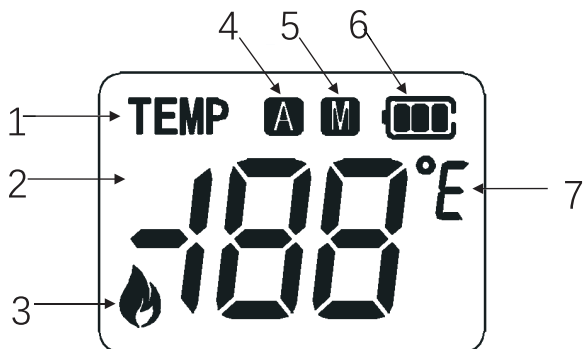
**Fig. 26—Remote/Transmitter**



<b>Key Settings</b>	
ON	Turns the heater ON. Manually operated solenoid ON.
OFF	Turns the heater OFF. Manually operated solenoid OFF.
MODE	Changes the heater from manual mode to thermostat mode.
▲ ▼	Sets the temperature in thermostat mode.

## Remote Control Operation (cont.)

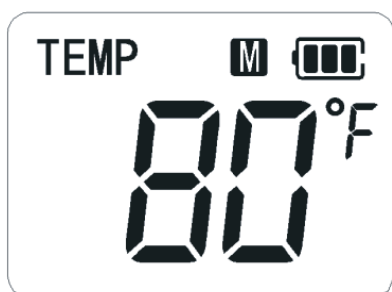
Fig. 27—LCD Screen



LCD Screen (see Fig. 27):

1. **TEMP** Temperature indication.
2. **DISPLAY** Indicates CURRENT room temperature.
3. **FLAME** Indicates burner/valve in operation.
4. **A:** Thermostat function.
5. **M:** Manual function.
6. **SET** Remote control battery display
7. **°C to °F** Temperature in degrees F or C.

Fig. 28—Control Settings at Start up



Control Settings at Start up (see Fig. 28):

After batteries are installed, press any button and the screen lights up and the room temperature is displayed in °F, the control is in manual mode and the battery level is displayed.

### Setting °F/°C Scale

The factory setting for temperature is °F. To change this setting to °C Press the ON and OFF buttons on the transmitter at the same time. Follow this same procedure to change from °C back to °F.

Fig. 29—Manual Function



Screen while pressing the ON key

Screen after the 3-Second Default



Screen while pressing the OFF key

Screen after the 3-Second Default

Manual Function (see Fig. 29):

To operate the remote system in the MANUAL MODE, do the following:

#### ON OPERATION

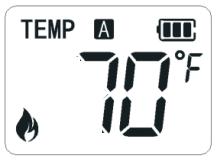
Press the "ON" button and the heater flame comes on. The display screen shows "ON" for three (3) seconds, the display shows the room temperature, and the the flame icon.

#### OFF OPERATION

Press the "OFF" button and the heater flame shuts off. The display screen shows "OFF" for three (3) seconds, display shows the room temperature, and the flame icon is off.

## Remote Control Operation (cont.)

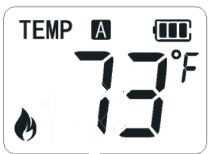
**Fig. 30—Thermostat Function**



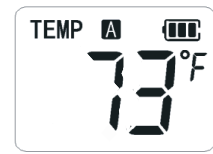
THERMOSTAT SET



THERMOSTAT MODE



THERMOSTAT ON



THERMOSTAT OFF

**NOTE:** The highest set temperature is 99° F (32°C) and the lowest temperature is 45°F (6°C).

### Notes on Operation:

The heater is operated by the thermostat feature whenever the room temperature varies a certain number of degrees from the set temperature. This variation is known as “temperature differential” or “swing.” Based on how well your home is insulated from the cold, the normal operating cycle of the heater may be 2–4 times per hour. The “swing” comes preset from the factory at 2, which allows for a temperature variation of +/- 2°F (1°C) between the set temperature and the room temperature. This determines when the heater will begin operation.

To activate the ON and OFF manual functions on the transmitter, press either button on the face of the transmitter. When “OFF” is pressed the valve and flame shuts off. When first used, a delay of three seconds may occur before the receiver responds to the transmitter, which is normal.

### Remote Receiver:

**IMPORTANT:** Do not position the receiver where ambient temperatures are greater than 130°F.

The remote receiver (see Fig. 31) operates on four (4) 1.5V AA-size batteries. Always use alkaline batteries for longer battery life and maximum performance. Always use new/fully charged batteries for proper operation of the remote receiver—the power consumption of a latching solenoid is much higher than standard remote control systems. Do not use rechargeable batteries.

**NOTE:** The remote receiver only responds to the transmitter when the 3-position slide button on the remote receiver is in the REMOTE position. The remote receiver contains the microprocessor, to which the transmitter sends signals for operation.

### Thermostat Function (see Fig. 30):

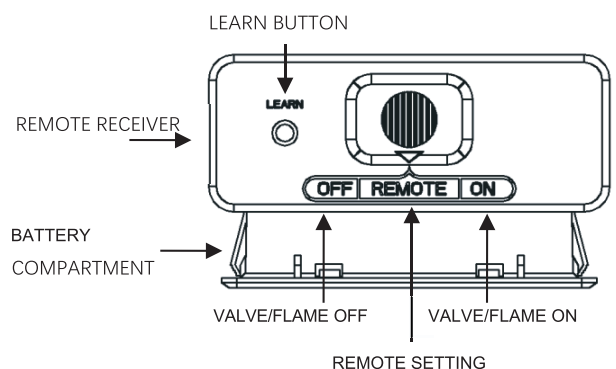
When used as a vented decorative appliance, use of the thermostat function is prohibited—operate manually only. This remote control system can be thermostatically controlled when the control is in the A mode.

### SETTING/CHANGING THE DESIRED ROOM TEMPERATURE

To set the THERMOSTAT MODE and the desired room temperature:

1. Press the MODE button to switch to Thermostat “A” function.
2. Press the “^” and “v” buttons choose the desired set temperature. Each time you press “^” and “v”, the temperature changes by 1 degree.
3. If the adjusted temperature is lower than the room temperature, the flame icon is off and the valve and burner flame shuts off.
4. If the adjusted temperature is higher than the room temperature, the flame icon is on and the valve and burner flame turns on.

**Fig. 31—Remote Receiver**





## Remote Control Operation (cont.)

### Functions:

- When the slide switch is in the REMOTE position, the system only operates if the receiver can receive commands from the transmitter.
- When first used or after extended disuse, the "ON" button may have to be pressed for up to three (3) seconds before the valve is activated. On first use the system does not respond to the transmitter, see LEARNING THE TRANSMITTER TO THE RECEIVER on page 29.
- The system can be manually turned on when the slide switch is in the ON position.
- The system is off when the slide switch is in the OFF position.
- If you'll be away from the heater and/or your home for an extended period, we recommend keeping the slide switch in the OFF position.
- When the slide switch is in the OFF position, it also functions as a safety "lock out." This feature turns the system OFF and prevents the transmitter from operating.

## INSTALLATION INSTRUCTIONS

**▲ WARNING** Do not connect the remote receiver directly to 110–120VAC power because this will burn out the receiver. Follow instructions for correct wiring procedure. Installing electrical components incorrectly may cause damage to remote receiver and/or gas valve.

### Installation:

You can mount the receiver on or near the fireplace hearth. ALWAYS PROTECT THE RECEIVER FROM EXTREME HEAT. Keep the receiver away from temperatures over 130° F inside the receiver case. Extreme temperatures also shorten battery life.

### Hearth Mount:

You can place the receiver on the fireplace hearth or behind the fireplace control access panel. The receiver must be placed so that the temperature inside the receiver case does not exceed 130° F.

### Wiring Instructions:

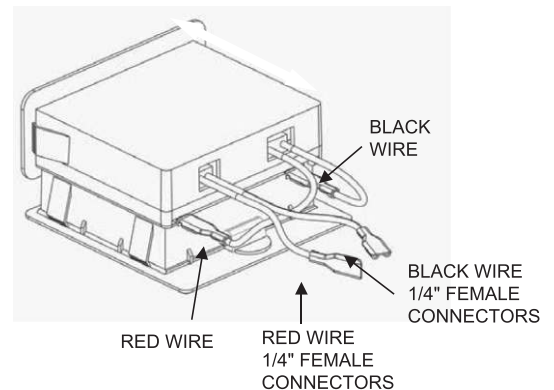
Ensure the receiver switch is in the OFF position. Use of 18-gauge stranded wires to make connections is recommended. Wires should not exceed 20 feet.

Connect the receiver to a manual valve with a latching ON/OFF solenoid. Connect two 18-gauge stranded or solid wires from the remote receiver terminals to the latching solenoid (see Fig. 32 & 33).

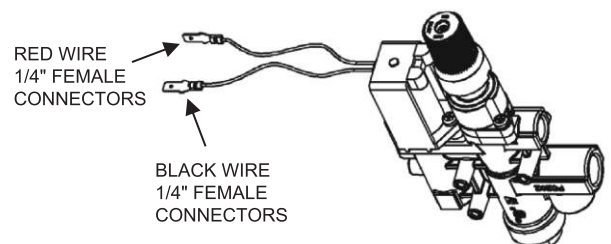
**NOTE:** The operation of the controls depends on the way the wires are attached to the terminal. If the controls do not correspond to the operating buttons on the transmitter, reverse the wire installation at the receiver or at the controls.

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

**Fig. 32— Receiver Wiring**



**Fig. 33—Latching Solenoid Wiring**



## **Remote Control Operation (cont.)**

### **GENERAL INFORMATION**

#### **Communication/Safety/Transmitter (C/S/TX):**

Built into the remote control's software is a COMMUNICATION/SAFETY function. It provides an extra margin of safety when the transmitter is out of the normal 20-foot operating range of the receiver. The COMMUNICATION/SAFETY feature operates the same in all operating modes.

#### **Learning the Transmitter to the Receiver:**

Every transmitter has 16777216 unique security code. Upon first use, you must press the "LEARN" button on the receiver to verify the transmitter security code. This process must be repeated if you replace the batteries or purchase a replacement transmitter. To allow the transmitter to accept the security code, the slide button on the receiver must be in the REMOTE position. If the slide switch is in the ON or OFF position, the receiver will not accept the security code. The "LEARN" button is located on the front face of the receiver, inside the small hole labeled "LEARN." Press and release the black "LEARN" button inside the hole—a paper clip or small screwdriver works best, and press any button on the transmitter. When the "LEARN" button is released, the receiver emits a beeping pattern.

The security code matching procedure uses a timing function. If the security code is not matched on the first attempt, wait 1–2 minutes and try again, which allows the timer to reset. Follow this procedure 2–3 times if necessary.

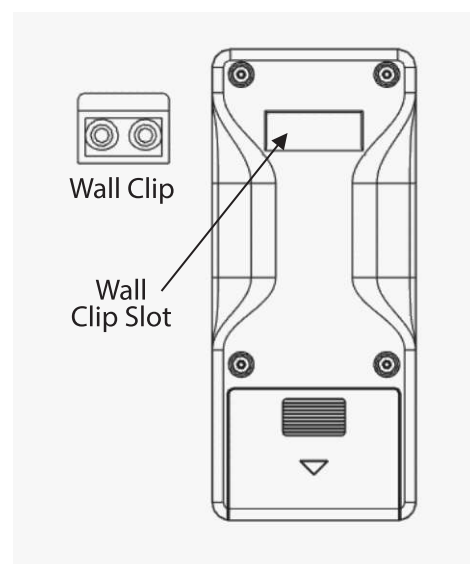
#### **Transmitter Wall Clip (see Fig. 34):**

You can hang the transmitter on a wall using the provided clip. If installing on a solid wood wall, drill 1/8" pilot holes and use the provided screws. If installing on a plaster/wallboard wall, first drill two 1/4" holes into the wall. Then, with a hammer, tap in the two plastic wall anchors so that they are flush with the wall. Then install the clip with the provided screws.

#### **Battery Life:**

Replace the batteries regularly. If the transmitter no longer functions at a distance it previously did or the remote receiver does not function at all, check the batteries. The receiver batteries should always provide a combined output voltage of at least 5.5 volts. The hand-held transmitter should operate with as little as 2.5 volts of battery power.

**Fig. 34— TransmitterWall Clip**



## **Remote Control Operation (cont.)**

### ***TROUBLESHOOTING***

Any problems with the log set may be a result of the log set malfunctioning, or it may be due to the remote system malfunctioning. First, review the manual to make sure all connections are properly made. Then check the remote system in the following ways:

- Ensure the batteries are correctly placed in the receiver. If a battery is inserted incorrectly, the remote system will not operate correctly.
- Check the battery in the transmitter to ensure the contacts are touching the positive (+) and negative (-) ends of the battery. You can bend in the metal contacts for a tighter fit.
- Be sure the receiver and transmitter are within a 20-25 foot range of one another.
- Do not allow receiver to exceed 130°F. Battery life is shortened when exposed to temperatures above 115°F.
- If the receiver is installed in such a way that it's tightly enclosed in metal, the operating distance will be shortened.
- Do not use rechargeable batteries—they do not supply enough power.

### ***SPECIFICATIONS***

Operating Frequency: 303.8 MHZ

FCC ID No.: transmitter - 2ATZEFC20201 ; Receiver - 2ATZEFC20202

Transmitter Batteries: (2) 1.5V AAA batteries

Receiver Batteries: (4) 6V AA 1.5 Alkaline batteries

### ***FCC REQUIREMENTS***

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.

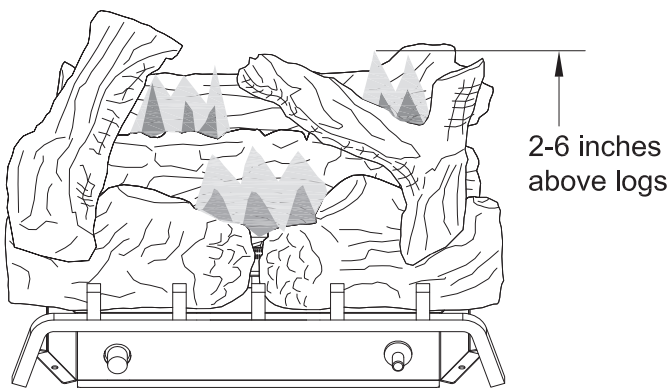
## Care and Maintenance

### BURNER FLAME PATTERN

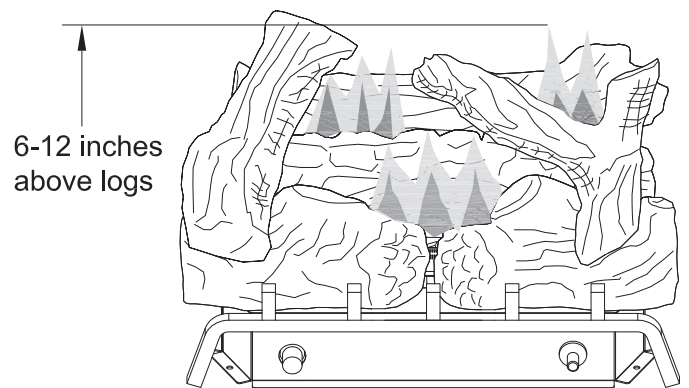
Figure 35 shows a correct burner flame pattern. Figure 36 shows an incorrect burner flame pattern. The incorrect burner flame pattern shows sporadic, irregular flame tipping. The flame should not be dark or have an orange/reddish tinge. **NOTE:** When using the heater the first time, the flame will be orange for approximately one hour until the log cures. If the burner flame pattern is incorrect, as shown in Figure 36, do the following:

- Turn the heater off (see TO TURN OFF GAS TO THE HEATER, page 23).
- See the TROUBLESHOOTING GUIDE, page 33.

**Fig. 35—Correct Burner Flame Pattern**



**Fig. 36—Incorrect Burner Flame Pattern**



**▲ WARNING** Turn off the heater and let cool before servicing.

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

**▲ CAUTION** You must keep the control areas, burner, and circulating air passageways of the heater clean. Inspect these areas before using the heater. Have a qualified service person inspect the heater every year. Excessive lint from carpeting, bedding material, pet hair, etc. may require that the heater be cleaned more frequently.

### BURNER ORIFICE HOLDER AND PILOT AIR INLET HOLE

The primary air inlet holes allow the right amount of air to mix with the gas, which creates a clean burning flame. Keep these holes clear of lint, dirt, dust, pet hair, and other debris. Before every heating season, clean these holes—blocked air holes create soot. During operation, the heater should be cleaned at least every three (3) months. A qualified service person should inspect the heater yearly.

Keep the burner tube and pilot assembly clean and free of dirt and other debris. Use compressed air of 30 PSI or less to clean these parts. If using compressed air in a can, follow the directions on the can exactly. You may damage the pilot assembly if the directions are not followed exactly.

### FOR VENTED APPLICATIONS

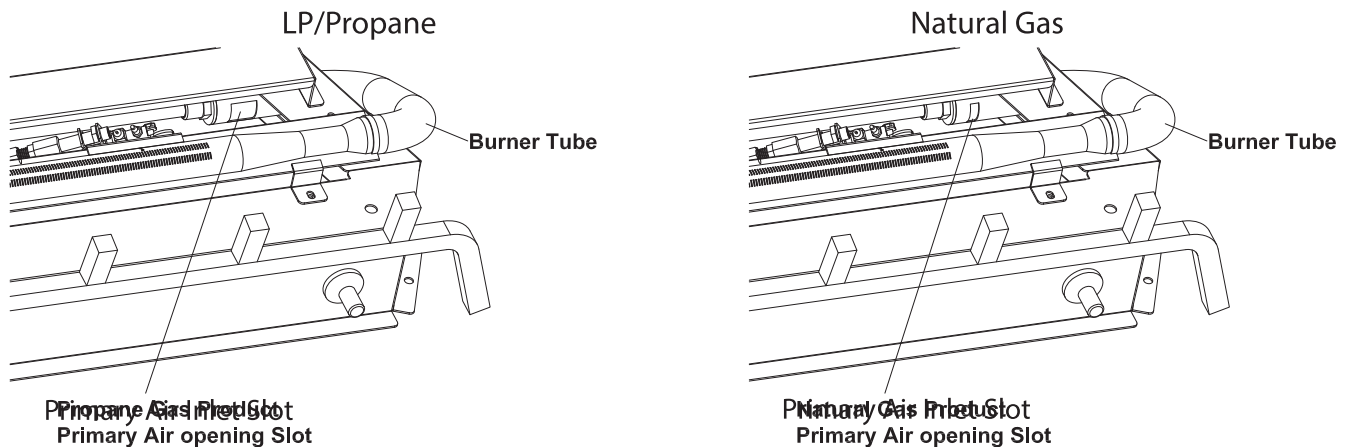
Periodic examination and cleaning of the venting system and the solid fuel-burning fireplace, including frequency of such examination and cleaning, must be done by a qualified agency.

## Care and Maintenance (cont.)

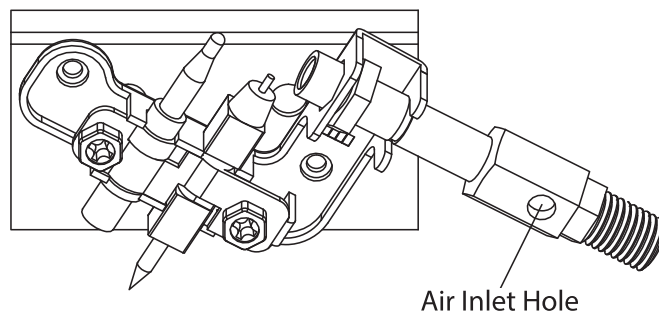
1. Shut off the heater, including the pilot. Allow the heater to cool for at least 30 minutes.
2. Inspect the burner, pilot, and primary air inlet holes on the orifice holder for dirt and debris (see Fig. 37).
3. Blow air through the ports/slots and holes in the burner.
4. Check the orifice holder again, which is located at the end of the burner tube. With a cloth or vacuum cleaner nozzle, remove any large particles of dust, dirt, or other debris.
5. Blow air into the primary air holes on the orifice holder.
6. Repeat steps 3 and 4. Clumps of dust/debris may have been pushed into the burner.

Clean the pilot assembly. A yellow tip on the pilot flame indicates dust and dirt in the pilot assembly. A small pilot air inlet hole is about 2" from where the pilot flame comes out of the pilot assembly (see Fig. 38). Ensure the heater is off, and lightly blow air through the air inlet hole. If you do not have compressed air, blowing through a drinking straw will also work.

**Fig. 37—Primary Air Inlet Slot on Burner Tube**



**Fig. 38—Pilot Air Inlet Hole**



### LOG SET

- If you remove the log set for cleaning, refer to page 20 for placement instructions.
- Replace the log set if it is broken or chipped (dime-sized or larger).

### ▲ CAUTION

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

If any of the original wire as supplied with the appliance must be replaced, it must be replaced with a wire of at least a temperature rating.

Verify proper operation after servicing.

## Troubleshooting Guide

**▲ WARNING** If you smell gas, do the following:

- Shut off gas supply.
- 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.

**▲ WARNING** Turn off and let the heater cool before servicing. Only a qualified service person should service and repair the heater.

**▲ CAUTION** Never use a wire, needle, or similar object to clean ODS/pilot. This can damage ODS/ pilot unit.

**IMPORTANT:** Impurities in the air may create odors when operating the appliance. For example, cleaning supplies, paint, cigarette smoke, glues, new carpets, etc. create fumes, which may mix with combustion air and create odors.

Problem	Possible Cause	Solution
There is no spark at the ODS/pilot when the ignitor button is pressed.	<ol style="list-style-type: none"> <li>1. Ignitor electrode is positioned wrong.</li> <li>2. Ignitor electrode is broken.</li> <li>3. Ignitor electrode is not connected to ignitor cable.</li> <li>4. Ignitor cable is pinched or wet.</li> <li>5. Damaged ignitor cable.</li> <li>6. Bad piezo ignitor.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace electrode.</li> <li>2. Replace electrode.</li> <li>3. Replace ignitor cable</li> <li>4. Free the ignitor cable if it's pinched by any metal or tubing. Keep ignitor cable dry.</li> <li>5. Replace ignitor cable.</li> <li>6. Replace piezo ignitor.</li> </ol>
When the ignitor button is pressed, there is a spark at the ODS/pilot but no ignition.	<ol style="list-style-type: none"> <li>1. Gas supply is turned off o equipment shutoff valve is closed.</li> <li>2. Control knob is not fully pressed in while pressing ignitor button.</li> <li>3. Air in gas lines when installed.</li> <li>4. ODS/pilot is clogged.</li> <li>5. Gas regulator setting is incorrect.</li> <li>6. Control knob not in PILOT position.</li> <li>7. Depleted gas supply (propane).</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn on the gas supply or the open equipment shutoff valve.</li> <li>2. Fully press in the control knob while pressing the ignitor button.</li> <li>3. Continue holding down the control knob. Repeat igniting operation until air is removed.</li> <li>4. Clean ODS/pilot (see CARE AND MAINTENANCE, pages 31 &amp; 32) or replace ODS/pilot assembly.</li> <li>5. Replace gas regulator.</li> <li>6. Turn control knob to PILOT position.</li> <li>7. Contact local propane/LP gas company.</li> </ol>



## Troubleshooting Guide (cont.)

<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
ODS/pilot lights but flame goes out when the control knob is released.	<ol style="list-style-type: none"> <li>1. Control knob is not fully pressed in.</li> <li>2. Control knob is not pressed in long enough.</li> <li>3. Equipment shutoff valve is not fully open.</li> <li>4. Thermocouple connection is loose.</li> <li>5. Thermocouple damaged.</li> <li>6. Control valve damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press in control knob fully.</li> <li>2. After ODS/pilot lights, keep control knob pressed in 30 seconds.</li> <li>3. Fully open equipment shutoff valve.</li> <li>4. Hand tighten until snug, and then tighten ¼ turn more.</li> <li>5. Replace thermocouple.</li> <li>6. Contact customer service.</li> </ol>
Burner(s) does not light after ODS/pilot is lit.	<ol style="list-style-type: none"> <li>1. Burner orifice is clogged.</li> <li>2. Burner orifice diameter is too small.</li> <li>3. Inlet gas pressure is too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean burner orifice (see CARE AND MAINTENANCE, pages 31 &amp; 32) or contact customer service.</li> <li>2. Contact customer service.</li> <li>3. Contact your gas supplier.</li> </ol>
Burner(s) does not light after ODS/pilot is lit. (Heater is set up for natural gas.)	<ol style="list-style-type: none"> <li>1. Inlet gas pressure is too high.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact your gas supplier.</li> </ol>
There is delayed ignition of the burner(s).	<ol style="list-style-type: none"> <li>1. Manifold pressure is too low.</li> <li>2. Burner orifice is clogged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact your gas supplier.</li> <li>2. Clean burner (see CARE AND MAINTENANCE, pages 31 &amp; 32) or contact customer service.</li> </ol>
The burner is backfiring during combustion.	<ol style="list-style-type: none"> <li>1. Burner orifice is clogged or damaged.</li> <li>2. Burner is damaged.</li> <li>3. Gas regulator is damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean burner orifice (see CARE AND MAINTENANCE, pages 31 &amp; 32, or contact customer service).</li> <li>2. Contact dealer or customer service.</li> <li>3. Replace gas regulator.</li> </ol>
There is a high yellow flame during burner combustion.	<ol style="list-style-type: none"> <li>1. There is not enough air.</li> <li>2. Gas regulator is defective.</li> <li>3. Inlet gas pressure is too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check burner for dirt and debris. If found, clean burner (see CARE AND MAINTENANCE, page 31 &amp; 32).</li> <li>2. Replace gas regulator.</li> <li>3. Contact your gas supplier.</li> </ol>
A gas odor is present during combustion.	<ol style="list-style-type: none"> <li>1. Foreign matter between control valve and burner.</li> <li>2. Gas leak—see WARNING Statement at top of page 34.</li> </ol>	<ol style="list-style-type: none"> <li>1. Take apart gas tubing and remove foreign matter.</li> <li>2. Locate and correct all leaks (see CHECKING GAS CONNECTIONS, page 18).</li> </ol>
Heater produces a clicking/ticking noise just after burner is lit or shut off.	<ol style="list-style-type: none"> <li>1. Metal is expanding while heating or contracting while cooling.</li> </ol>	<ol style="list-style-type: none"> <li>1. This is common with most heaters. If noise is excessive, contact a qualified service technician.</li> </ol>



## Troubleshooting Guide (cont.)

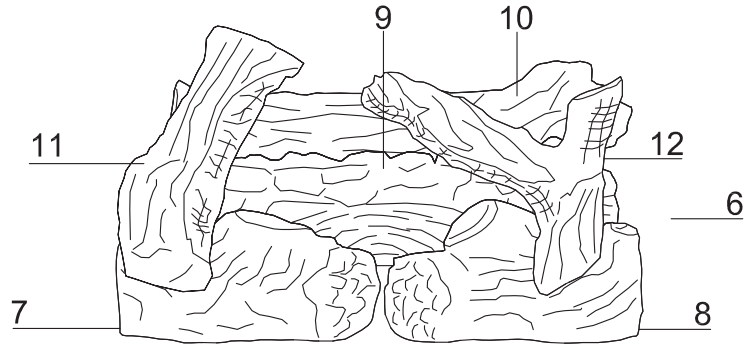
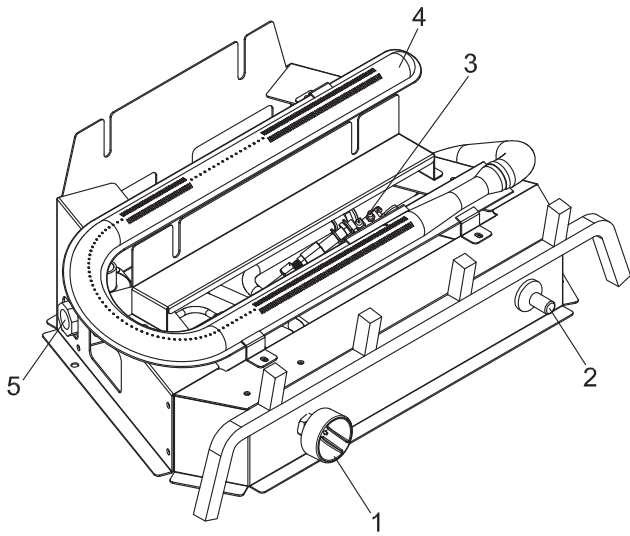
<b>Problem</b>	<b>Possible Cause</b>	<b>Solution</b>
White powder residue is forming within burner box or on adjacent walls or furniture.	1. When heated, the vapors from furniture polish, wax, carpet cleaners, etc. turn into white powder residue.	1. Turn heater off when using furniture polish, wax, carpet cleaner or similar products.
Heater produces unwanted odors.	1. Heater is burning vapors from paint, hair spray, glues, etc. See IMPORTANT statement, page 34. 2. Gas leak—see WARNING Statement at the top of page 34. 3. The fuel supply is low.	1. Ventilate room. Stop using odor causing products while heater is running. 2. Locate and correct all leaks (see CHECKING GAS CONNECTIONS, page 18). 3. Refill supply tank ( propane /LP models).
Heater shuts off in use (ODS operates).	1. Not enough fresh air is available. 2. The line pressure is low. 3. ODS/pilot is partially clogged.	1. Open window and/or door for ventilation. 2. Contact local gas supplier. 3. Clean ODS/pilot (see CARE AND MAINTENANCE, page 31 & 32).
Gas odor exists even when control knob is in OFF position.	1. Gas leak—see WARNING Statement at top of page 34. 2. Control valve is defective.	1. Locate and correct all leaks (see CHECKING GAS CONNECTIONS, page 18). 2. Contact customer service.
Moisture/condensation is present on windows.	1. Not enough combustion/ventilation air is provided.	1. Refer to AIR FOR COMBUSTION AND VENTILATION requirements, pages 7–9.
There is slight smoke or odor during initial operation.	1. Residues from manufacturing process are present.	1. Problem will stop after a few hours of operation.
Heater produces a whistling noise when burner is lit.	1. Turning control knob to high (5) position when burner is cold. 2. There is air in the gas line. 3. Air passageways on heater are blocked. 4. Burner orifice are dirty or partially clogged.	1. Turn control knob to low (1) position and let it warm up for a minute. 2. Operate burner until air is removed from line. Have gas line checked by local propane/LP gas company. 3. Observe minimum installation clearances (Fig. 5, 6, 7, 8, pages 13–14). 4. Clean burner (see CARE AND MAINTENANCE, pages 31 & 32) or contact customer service.

### **QUALIFIED INSTALLING AGENCY**

Only a qualified agency should perform installation and replacement of gas piping, gas utilization equipment or accessories, and repair and servicing of equipment. The term “qualified agency” means any individual, firm, corporation, or company that either in person or through a representative is engaged in and is responsible for the following:

- A. Installing, testing, or replacing gas piping; or
- B. Connecting, installing, testing, repairing, or servicing equipment and is a.) experienced in such work, b.) familiar with all precautions required, and c.) has complied with all the requirements of the authority having jurisdiction.

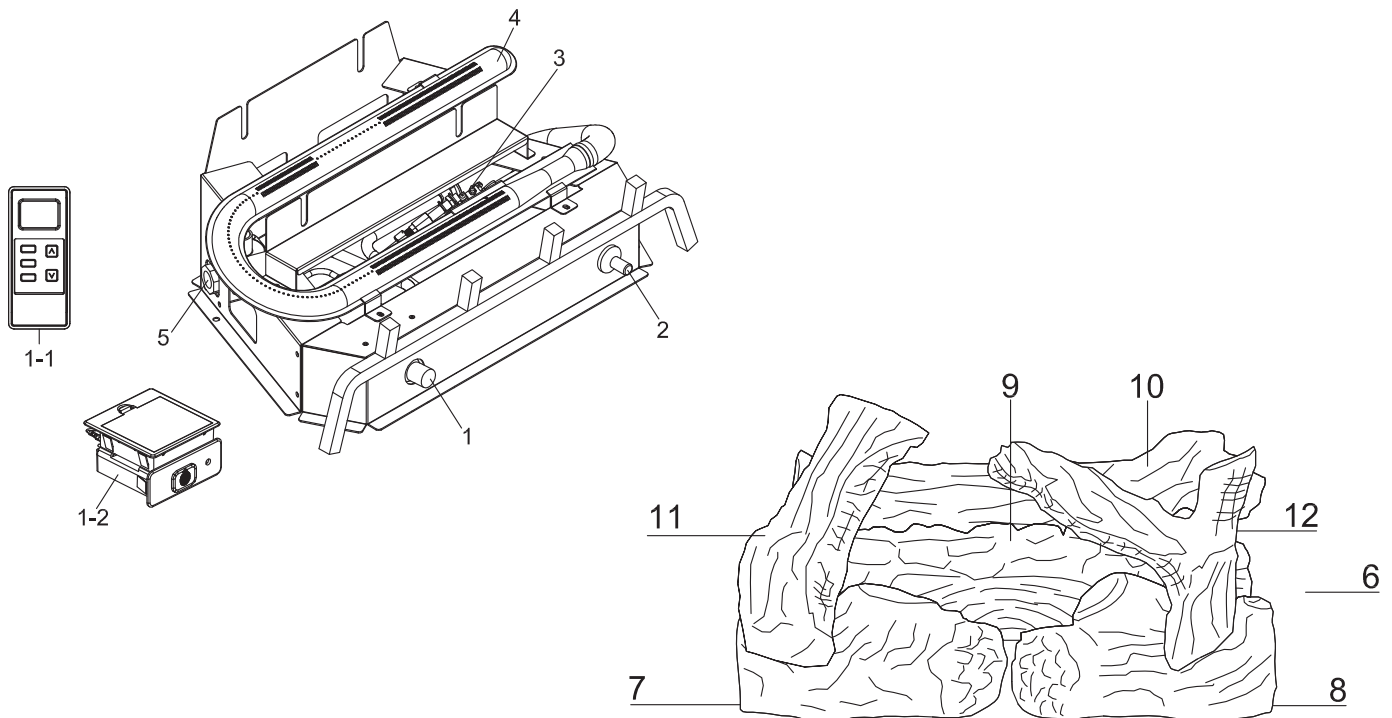
## Parts List—HVF2M18N / HVF2M18P / HVF2M24N / HVF2M24P



ITEM No.	DESCRIPTION	QTY	HVF2M18N	HVF2M18P	HVF2M24N	HVF2M24P
1	Manual valve	1	SA1802-0-15KN	SA1802-0-18KL	SA1802-0-23KN	SA1802-0-22KL
2	Piezo	1	FP-01	FP-01	FP-01	FP-01
3	ODS	1	Bn3430e	Bn3429e	Bn3430e	Bn3429e
4	Burner	1	GLA18TY-200B-N	GLA18TY-200B-L	GLA24TY-200B-N	GLA24TY-200B-L
5	Regulador	1	RG-4	RG-9	RG-4	RG-9
6	Log Set (Complete)	1	SET180A	SET180A	SET240A	SET240A
7	Log 1	1	LOG181A	LOG181A	LOG241A	LOG241A
8	Log 2	1	LOG182A	LOG182A	LOG242A	LOG242A
9	Log 3	1	LOG183A	LOG183A	LOG243A	LOG243A
10	Log 4	1	LOG184A	LOG184A	LOG244A	LOG244A
11	Log 5	1	LOG185A	LOG185A	LOG245A	LOG245A
12	Log 6	1	LOG186A	LOG186A	LOG246A	LOG246A
Parts Available - Not Shown						
13	Lava Rock	1 Bag	VGLA18Y-500B	VGLA18Y-500B	VGLA24Y-500B	VGLA24Y-500B

For replacement parts, contact HearthRite at (800)851-3153.

## Parts List—HVF2R18N / HVF2R18P / HVF2R24N / HVF2R24P



ITEM No.	DESCRIPTION	QTY	HVF2R18N	HVF2R18P	HVF2R24N	HVF2R24P
1	Remote valve	1	FC202	FC202	FC202	FC202
1-1	Remote Control	1	FC202-01	FC202-01	FC202-01	FC202-01
1-2	Receiver (Include battery box)	1	FC202-02	FC202-02	FC202-02	FC202-02
2	Piezo	1	FP-01	FP-01	FP-01	FP-01
3	ODS	1	Bn3430e	Bn3429e	Bn3419e	Bn3429e
4	Burner	1	GLA18TY-200B-N	GLA18TY-200B-L	GLA24TY-200B-N	GLA24TY-200B-L
5	Regulador	1	RG-4	RG-9	RG-4	RG-9
6	Log Set (Complete)	1	SET180A	SET180A	SET240A	SET240A
7	Log 1	1	LOG181A	LOG181A	LOG241A	LOG241A
8	Log 2	1	LOG182A	LOG182A	LOG242A	LOG242A
9	Log 3	1	LOG183A	LOG183A	LOG243A	LOG243A
10	Log 4	1	LOG184A	LOG184A	LOG244A	LOG244A
11	Log 5	1	LOG185A	LOG185A	LOG245A	LOG245A
12	Log 6	1	LOG186A	LOG186A	LOG246A	LOG246A
<b>Parts Available - Not Shown</b>						
13	Lava Rock	1 Bag	VGLA18Y-500B	VGLA18Y-500B	VGLA24Y-500B	VGLA24Y-500B

For replacement parts, contact HearthRite at (800)851-3153.



## **WARRANTY**

### **KEEP THIS WARRANTY**

Always specify model and serial numbers when communicating with customer service.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied.

## **LIMITED WARRANTY**

### **HEARTHRITE VENT-FREE GAS BURNERS AND LOG SETS**

HearthRite warrants this product to be free from defects in materials and components and limited labor for (3) THREE years from the date of first purchase, provided that the product has been properly installed, operated and maintained in accordance with all applicable instructions. To make a claim under this warranty, the Bill of Sale or cancelled check must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers the cost of part(s) required to restore this heater to proper operating condition and an allowance for labor when provided by a HearthRite Authorized Service Center. Warranty part(s) MUST be obtained through authorized dealers of this product and/or HearthRite who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater MUST be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance or defects caused by improper installation.

Some states do not allow limitation on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation on implied warranties, or exclusion or limitation on damages may not apply to you.

Always be sure to specify the model number and serial number when making any claim with HearthRite. For your convenience, use the space provided below to list this information.

Locating Your Serial Number:

Your serial number can be found on the tags on the back or side of your appliance. It will be up to twelve digits (for example: 192112345678). Have your serial number ready before calling customer service at (800)851-3153.

Model #: \_\_\_\_\_

Serial #: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

# HearthRite

A Division of Empire Comfort Systems, Inc.  
918 Freeburg Avenue  
Belleville, IL 62220  
Phone: 618-233-7420 or 1-800-851-3153  
Fax: 618-233-7097 or 1-800-433-8648  
[www.hearthrite.com](http://www.hearthrite.com)