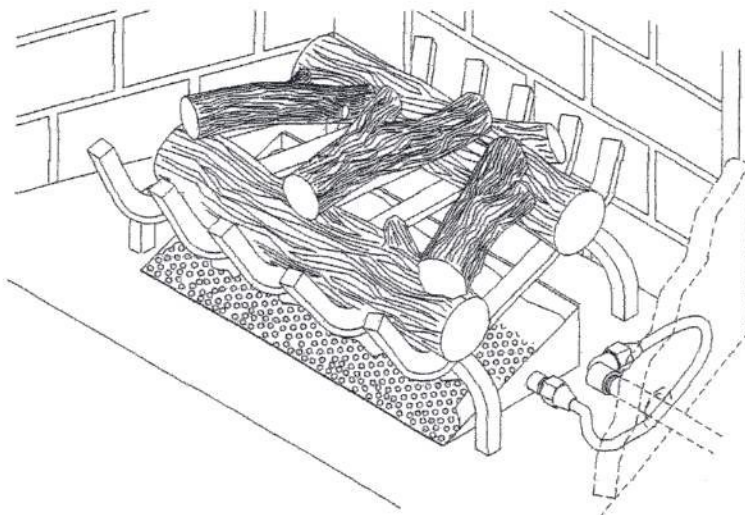


Sierra
Radiant Heat Gas Logs

SIERRA
STANDARD BI-FLO
GAS LOG KIT

INSTALLATION AND OPERATING INSTRUCTIONS



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 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.



Hearth Products
Association

WARNING: Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer; service agency or the gas supplier.

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

Save this manual for future reference.

GENERAL INFORMATION

Thank you for choosing a SIERRA RADIANT HEAT GAS LOG. Included in this kit is an advanced BI-FLO BURNER (U.S. PAT. #5263852.) which allows lower operating costs and cleaner burning. Please read the following installation guide before attempting to install your appliance.

Installation and repair should be done by a qualified service person. The appliance 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 passage-ways of the appliance be kept clean.

INSTALL THIS APPLIANCE ONLY IN A SOLID-FUEL BURNING FIREPLACE WITH A WORKING FLUE AND CONSTRUCTED OF NONCOMBUSTIBLE MATERIAL. All models are approved for NATURAL GAS ONLY! A Propane Safety Pilot Kit (p/n: SA-30P) is required for use with LPG and is available through your dealer. If desired, a safety pilot kit (p/n: SA-30) is also available for natural gas.

Solid fuels MUST NOT be burnt in a fireplace where a decorative appliance is installed.

Installation and provisions for combustion and ventilation air must conform with the National Fuel Gas Code, ANSI Z223.1.

The installation of gas appliances vary with the locality. Please check local building codes prior to installation to insure conformance with these codes.

Provide adequate clearances around air openings into the fireplace hearth and adequate accessibility clearance for servicing and proper operation. Never obstruct the front opening of the fireplace.

CAUTION - This log set is to be used only in a fully vented solid fuel burning fireplace. The fireplace should be in full operational order prior to installation of gas log set. Before installing gas logs, fireplace must be checked for proper draw, otherwise gas logs will not operate properly and cause an unsafe condition. If proper draw is not present, inspection of the fireplace flue venting system and/or termination will be required. If fireplace does not have proper venting, there will be soot accumulation on the log set and around fireplace surround. This may cause soot to accumulate on walls and furniture near the fireplace. *Sooting is caused by improper placement of logs or burner which, in turn, will produce excessive carbon monoxide.*

NOTE: Some sooting is normal, occasionally a carbon soot coating may accumulate on some areas of the logs. Check log placement, logs should not 'trap' the flame beneath the logs. Sooting may be removed by brushing the logs with a soft bristle brush.

WARNING: Prolonged exposure to excessive amounts of Carbon Monoxide can be extremely hazardous to your health, and may cause loss of life!

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 underwater.

Any safety screen or guard removed for servicing this appliance must be replaced prior to operating the gas logs.

Keep the appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids. Never leave small children unattended near an operating appliance.

NOTE - IF THE FIREPLACE IS EQUIPPED WITH GLASS DOORS, THE DOORS MUST BE FULLY OPEN WHEN OPERATING THE LOG SET.

INSTALLATION INSTRUCTIONS

CAUTION - MAKE SURE ALL GAS TO SUPPLY LINE IN FIREPLACE IS SHUT OFF BEFORE PROCEEDING !

This appliance may be installed into bedrooms and bathrooms, provided installation meets unconfined space requirements as noted in section 6.61 of the National Fuel Gas Code NFPA 54-1996.									
Tools Required :					Included in your set :				
<ul style="list-style-type: none"> ■ Pipe Wrench ■ Adjustable Open End Wrench ■ Pipe Sealer 					<ul style="list-style-type: none"> ■ Burner Pan Valve Assembly ■ Grate ■ Damper Stop ■ Sand, Crushed Lava Rock & Ember Material 				
All sets come with two (2) Base Logs and Top Logs as follows:									
Model	Qty	Model	Qty	Model	Qty	Model	Qty	Model	Qty
AS16	3	MP16	3	CO16	4	SO16	3	SP16	3
AS18	3	MP18	3	CO18	5	SO18	3	SP18	3
AS24	4	MP24	4	CO24	6	SO24	4	SP24	4
AS30	5	MP30	5	CO30	7	SO30	5	SP30	5

The fireplace must have a minimum inside height of 16 inches and a depth and width as shown in the chart below. All installations have a minimum flue inside diameter of 8 inches and a minimum height of 8 feet for entire venting system. The chimney height must be at least 6 ft.

The minimum size of the fireplace in which the log set may be installed must be as follows:

MODEL NUMBERS	CO, SO, MP, SP, AS -			
	-16	-18	-24	-30
FIREPLACE MINIMUM WIDTH	22"	24"	30"	36"
FIREPLACE MINIMUM DEPTH	12"	14"	16"	18"
MINIMUM PERMANENT DAMPER OPENING	29 sq.in/ 8ft. vent height	39 sq.in/ 8ft. vent height	51 sq.in/ 8ft. vent height	64 sq.in/ 8ft. vent height

DAMPER STOP INSTALLATION :

A minimum permanent free opening must be maintained by either the fireplace chimney or chimney damper to vent the flue gas (see chart above).

The **damper stop** is provided so that when properly installed, the chimney damper maintains the minimum permanent vent opening at all times.

Install damper stop by positioning it over the edge of the damper blade and tightening the attachment bolt (**Figure 1**).

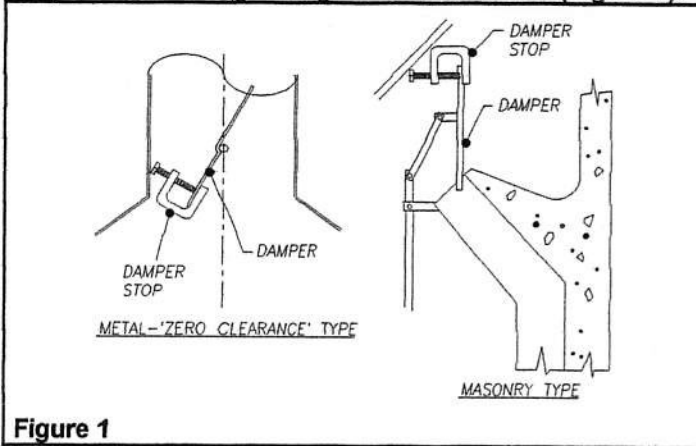


Figure 1

GAS SUPPLY CONNECTION :

DO NOT CONNECT APPLIANCE BEFORE PRESSURE TESTING GAS PIPING.

GAS RATINGS			
TYPE OF GAS:		NATURAL	L.P. (PROPANE)
MAX. INPUT RATING:	-16	46,000 BTU	46,000 BTU
	-18	46,000 BTU	46,000 BTU
	-24	57,000 BTU	57,000 BTU
	-30	80,000 BTU	80,000 BTU
† MIN. SUPPLY PRESSURE:			
		5.0 in.WC (1.24 kPa)	11.0 in.WC (2.74 kPa)
MAX. SUPPLY PRESSURE:			
		7.0 in.WC (1.74 kPa)	13.0 in.WC (3.23 kPa)

† For the purpose of input adjustment.

A **manual shut-off valve** must be included **within (6') six feet** of the appliance's gas supply system. This shut-off valve is not supplied with the appliance. It may be preferable and more convenient to install the type of shut-off valve that can be accessed through a wall with a key (check local building codes).

1. Remove all ashes or other debris from fireplace. If your fireplace is equipped with an ash dump, the door must be sealed with high temperature silicone or furnace cement.
2. Run a 1/2" NPT black iron gas line through fireplace and into hearth area, allowing only enough stem to install the elbow fitting. Prepare incoming black iron gas line with **Teflon tape** or **pipe joint compound** (check with local codes as to the use of Teflon tape).

Compounds used on threaded joints of gas piping shall be resistant to the action of Liquefied Petroleum (LP or Propane), and should be applied lightly to ensure excess sealant does not enter the gas line.

A provision must be made for a **1/4" NPT plugged tapping** for a test gauge connection immediately upstream of the gas supply connection to the appliance.

3. Position burner base in the center of the fireplace hearth. Apply pipe thread sealant on the opposite end of the burner pan gas supply inlet side and install the 3/8" pipe plug. Tighten securely. Apply thread sealant on the incoming gas line and install the 1/2"-3/8" NPT street elbow fitting tightly. The male end of the fitting should point towards the rear of the fireplace. If a flexible, aluminum gas line connector is used (check local codes), be careful not to kink tubing when hand forming to fit between burner pan and incoming gas line (**Figure 2**). It's important that the gas supply line fitting nuts are towards the outside ends; once the line is bent, the fitting nuts will not slide over bends. **Be careful not to kink tubing !**

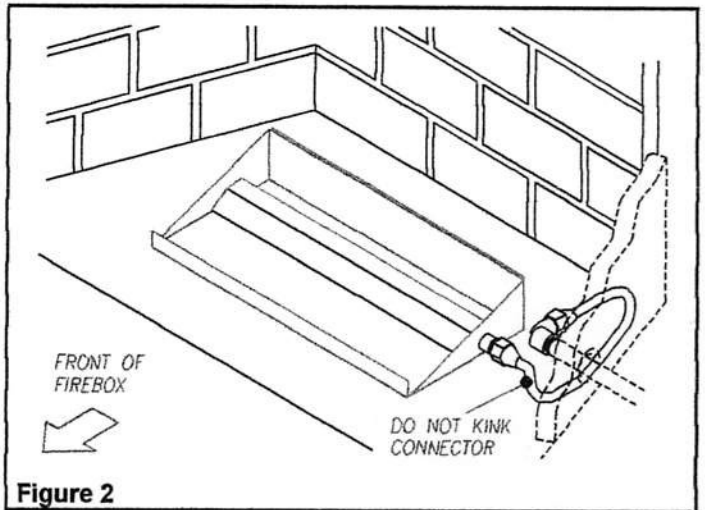


Figure 2

4. After gas line connection is complete, **turn on gas supply** and check connections for leaks. This is done by brushing or spraying each fitting from incoming gas line to log set with a solution of 50% soap and 50% water. If bubbles appear, further tightening will be required.

CAUTION! NEVER CHECK FOR LEAKING GAS CONNECTIONS WITH AN OPEN FLAME.

5. Place and center the grate over the burner pan. The widest part of the grate should point forward. The rear of the pan should be about 2" towards the front from the rear crossbar of the grate (**Figure 3**). Once position has been set, remove grate and proceed with next step.

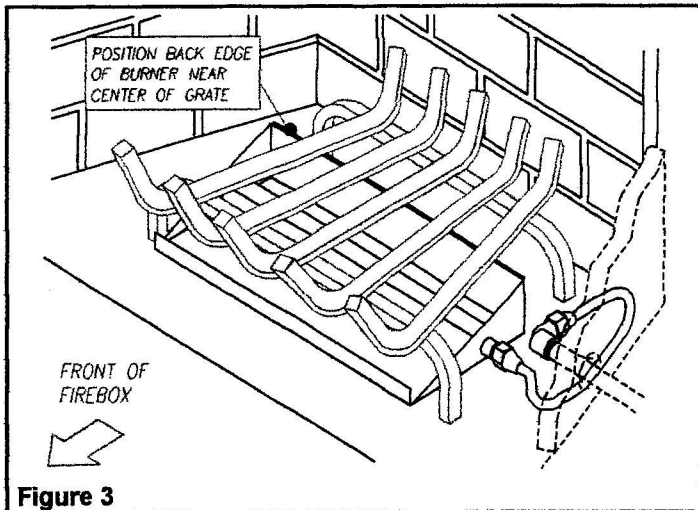


Figure 3

6. Fill the center section of the burner pan about half full with the **silica sand** provided (Figure 4). Tap burner pan lightly to settle sand. The sand should fill cavity under diverter plate. The sand disperses the gas flow and works with the burner design to create an optimum burning pattern of the fuel gas.

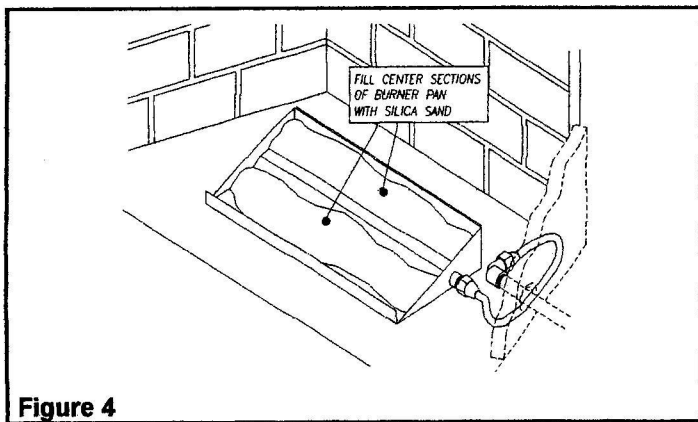


Figure 4

7. Fill the remaining space of the burner pan with the **crushed lava rock**. Keep rock level approximately 1/4" from the top of the burner. Crushed lava rock gives the appearance of a bed of coals beneath the logs. Next, place small pieces of the **ember material** on top of the lava rock. After placing a liberal amount of fiber `embers' on the lava rock, sprinkle the **granulated `ember' material** over the rock and fibers (Figure 5).

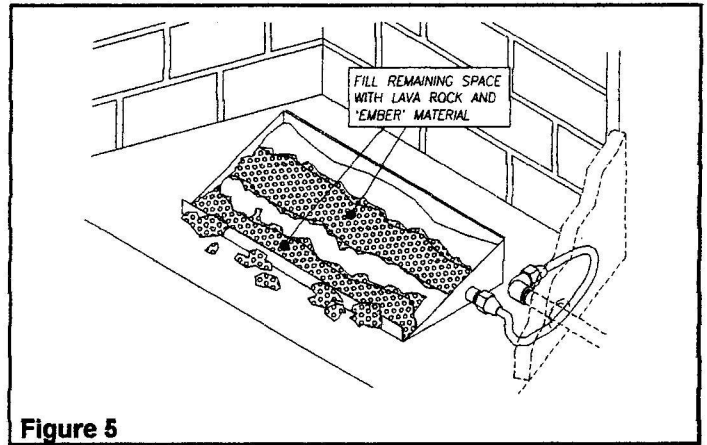


Figure 5

8. (optional) If desired, you may paint the supply line, connector, and fittings with a heat resistant flat black stove paint in order to hide those components from view and create a more professional looking installation.
9. Position grate so that the center of the grate is directly over the back edge of the burner pan. Position the smaller base log to the rear and the longer base log to the front of the grate allowing maximum space between them (Figure 6). Top logs can be arranged in any order as long as they are as far apart from each other as possible to achieve minimal flame interference.

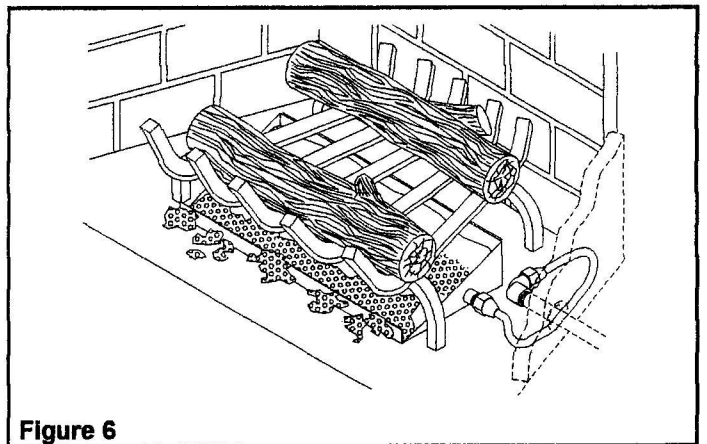


Figure 6

The gas log must be operated with a fireplace screen in place. The screen must have sufficient holes to allow for combustion air.

IF THE FIREPLACE IS EQUIPPED WITH GLASS DOORS, THE DOORS MUST BE FULLY OPEN WHEN OPERATING THE LOG SET.

NOTE: SIERRA RADIANT HEAT GAS LOGS REQUIRE A BREAK-IN PERIOD. BURN THE LOG SET FOR ABOUT 30 MINUTES, THEN LET IT COOL COMPLETELY BEFORE RELIGHTING.

CAUTION : LOGS GET VERY HOT AND SHOULD BE HANDLED ONLY WHEN COOL TO AVOID INJURY.

OPERATING 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 burner which must be lighted by hand. When lighting burner 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. 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 underwater.

LIGHTING INSTRUCTIONS

1. **STOP!** Read the safety information above before proceeding.
2. Wait five (5) minutes to clear out any gas. If you then smell gas, **STOP!** Follow "B" in the safety information above. If you don't smell gas, go to next step.
3. Check to make sure that the damper is in the open position and that the damper stop is properly installed before attempting to light the gas log set. Place a lit match on the ember material closest to the gas supply line. Slowly turn on the gas. If the gas does not light in ten (10) seconds, turn the gas off and wait about one (1) minute before trying again.

IF THE FIREPLACE IS EQUIPPED WITH GLASS DOORS, THE DOORS MUST BE FULLY OPEN.

TO TURN OFF APPLIANCE

1. Turn the gas supply off. The flame may continue to burn a minute or two, this is normal due to excess gas trapped within the sand and burner pan which will burn away.

MAINTENANCE :

It is recommended that a competent serviceman perform the following procedures at least annually;

At the beginning of each heating season, have a qualified technician inspect the venting/flue system and termination for any obstructions and also proper draw. The burner and pilot burner area should also be checked for dust or carbon build-up. This may be removed from burner or logs with a soft bristle brush. Care should be taken when cleaning and handling logs since they become brittle with use. Small heat cracks in the logs do not affect the operation of the log set.

OPERATING YOUR NEW APPLIANCE

When the appliance is being operated for the first time, allow for a supervised burn of 30 minutes. Then shut the appliance off and let it cool completely before relighting. This allows proper curing time for the logs.

CUSTOMER SERVICE & PARTS REPLACEMENT :

Parts and accessories may be purchased from your local dealer or directly from Empire Products, Inc. Orders will be accepted by mail, or you may call your order in Monday through Friday from 1:00 p.m. to 5:00 p.m. (Pacific Standard Time) at: (909) 628-3316.

TROUBLE SHOOTING

If pilot or main burner will not light:

- 1) Verify gas supply is turned "ON".
- 2) Verify all air is bled from system.
- 3) Verify you have followed the safety and operating instructions.
- 4) Call a qualified repair person to inspect the appliance.



HEARTH
PRODUCTS
ASSOCIATION

Empire



EMPIRE PRODUCTS, INC. 5061 Brooks St. Montclair, CA 91763 P/N 140032 6/98