



Burner Systems:

2BRN-ST18	3BRN-ST18
2BRN-ST21	3BRN-ST21
2BRN-ST24	3BRN-ST24
2BRN-ST30	3BRN-ST30
2BRN-ST36	3BRN-ST36
2BRN-ST42	3BRN-ST42

INSTALLATION AND OPERATIONS GUIDE FOR GRAND CANYON GAS LOG SYSTEMS

Installation and service must be provided by a qualified installer, service agency or gas supplier

Grand Canyon Gas Logs, logs are made of cement refractory material re-enforced with steel fibers. Each of the logs are hand painted and hand finished to recreate the most realistic logs available on the market. The gas burner system is designed to recreate and burn like a real wood burning fireplace with a natural looking flame. With this in mind the gas log sets MUST be burned in a fully vented, non-combustible fireplace with the DAMPER COMPLETELY OPEN and the chimney free of any obstruction or restrictions. The fireplace must be designed and approved to burn wood.

The realistic flame produced by Grand Canyon Gas Log burners produce carbon monoxide and soot. Under standard conditions these byproducts are exhausted up the chimney. IF the fumes or soot from the burning gas are evident in the room when the damper is fully open it indicates that the fireplace draft is defective. IF this happens DO NOT operate your gas logs until the fireplace draft is corrected, call a service technician to fix the problem.

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 application

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 the building
- Immediately call the gas supplier from a neighbor's phone. Follow the gas supplier's instructions
- If you cannot reach the gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier

Grand Canyon Gas Log sets are to be installed only in a solid-fuel burning fireplace with working flue and construction of noncombustible material. The installation including provisions for combustion and ventilation air must conform with the *National Fuel Gas Code*, ANSI Z223.1/NFPA 54, or the *CSA B149.1 Natural Gas and Propane Installation Code*, and applicable local building codes.

A damper clamp is included to maintain the minimum permanent vent opening and to prevent full closure of the damper blade. The chimney damper must be fully opened when burning the log set. The log set is designed to burn with a yellow flame, thus adequate ventilation is absolutely necessary.

To comply with certifications, listings, and building code acceptances, and for safe operation and proper performance of this log set, use only Grand Canyon Gas Logs parts and accessories. Use of other controls, parts, and accessories that are not designed for use with Grand Canyon Gas Logs log set is prohibited and will void all the warranties, certifications, listings and building code approvals, and may cause property damage, personal injury or loss of life.

WARRANTY

Grand Canyon Gas Logs burners and logs carry a lifetime warranty against breakage and defects to the original purchaser. ALL GCGL valves, pilot assemblies and electrical components carry a 2 year warranty as long as installed indoors and installed by a licensed professional. Further warranty information can be found in the warranty section of this guide.

INSTALLER: Leave this manual with the log set
CONSUMER: Retain this manual for future reference.

IMPORTANT INFORMATION

WARNING: This appliance assembly contains burner orifices specifically for the input gas specified on the burner and box, as well as the Btu rating specified in this manual. Modifying or failure to use the factory orifice may cause property damage, personal injury or loss of life.

Read these instructions completely before installing and using Grand Canyon Gas Log system.

1. Gas type will be indicated on the burner and the box. Do not use a natural gas burner with propane or a propane burner with natural gas.
2. The installation, provisions for combustion, and ventilation air must conform to the National Fuel Gas Code, *ANSI Z223.1/NFPA54*, or the *CSA B 149.1*, National Gas and Propane Installation Code.
3. For warranty to be valid gas log sets must be installed by a NFI certified or other qualified professional installer.
4. This appliance must be installed only in a solid-fuel burning fireplace with a working flue and constructed of non-combustible materials. Solid fuels are not to be burned in a fireplace where a decorative appliance has been installed.
5. A permanent free opening must be provided by either the fireplace chimney or chimney damper to vent carbon monoxide and other flue gases. Any chimney damper must be fixed in a manner, which will maintain the permanent free opening at all times. Use the table at the bottom of this page to determine the minimum permanent free opening based on chimney height and the appliance Btu rating.
6. A fireplace screen must be in place when the appliance is operating and, unless other provisions for combustion air are provided, the screen shall have an opening(s) for introduction of combustion air. With use of glass doors, doors must be open while the appliance is burning to assure proper ventilation.
7. The minimum inlet supply pressure for the purpose of input adjustment is 5.0 inches (natural gas) 8.0 inches (propane) in water column. The maximum inlet supply pressure is 10.5 inches (natural gas) 13.0 inches (propane) in water column.
8. The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psig (3.5kPa). The appliance must be isolated from the gas supply piping system by closing its individual manual valve during pressure testing equal to or less than ½ psig (3.5kPa).
9. The appliance area is to be clear and free from combustible materials, gasoline and other flammable vapors and liquids.
10. 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 gas control which has been under water.

FIREPLACE SIZE REQUIREMENTS

Burner Size	Min. Fireplace Dimensions				BTU			
	Width		Depth	Height	2 Burner		3 Burner	
	Front	Rear			NAT.	L.P.	NAT.	L.P.
18"	21"	21"	18"	14"	103K	93K	103K	93K
21"	24"	24"	18"	14"	106K	93K	106K	93K
24"	30"	30"	18"	14"	118K	100K	118K	100K
30"	36"	36"	18"	14"	128K	115K	128K	115K
36"	42"	42"	18"	14"	135K	125K	135K	125K
42"	48"	48"	18"	14"	140K	130K	140K	130K

IMPORTANT

For all valves, the air **MUST** be purged from the gas line before the pilot will light and burn properly. The time needed to purge will depend on the length of the gas line to the unit and the amount of time since the unit or gas line was last used. It may take several minutes before all the air is purged and the pilot will light and burn properly. Follow the **LIGHTING INSTRUCTIONS** section in this manual.

MINIMUM CHIMNEY HEIGHT AND FLUE OPENING

For Factory Built Fireplaces Free Opening Area Of Chimney Damper For Venting Combustion Products From Decorative Appliances For Installation In Solid Fuel Burning Fireplaces

	Appliance Input Rate (kBtu/hr)											
	20	30	40	50	60	70	80	90	100	110	120	
Chimney Height* (ft)	Minimum Opening** (sq. in.)											Max. Input***
10	11.3	16.6	22.1	28.3	35.3	44.2	—	—	—	—	—	77.6
15	8.6	12.6	17.3	21.2	26.4	32.2	38.5	45.4	—	—	—	98.2
20	7.5	10.8	14.5	18.1	22.1	26.4	31.2	37.4	43.0	—	—	114.2
25	6.6	9.6	12.6	15.9	18.1	22.9	27.3	31.2	36.3	43.0	50.3	121.0
30	6.2	9.1	11.3	14.5	17.3	20.4	24.6	28.3	33.2	37.4	44.2	130.1
35	5.7	8.0	10.8	13.2	15.9	18.9	22.1	25.5	30.2	34.2	39.6	141.2
40	5.3	7.5	10.2	12.6	15.2	18.1	20.4	23.8	27.3	31.2	35.3	158.5

* Height is from hearth to top of chimney and the minimum height is 10 feet. (See Figure 3, Factory Built Fireplace.)

** Chart shows minimum opening (sq. in.) for the given height and input rate.

*** Column marked "Max. Input" corresponds to the maximum allowable input rate (kBtu/hr) for the given height.

For Masonry Built Fireplaces Free Opening Area Of Chimney Damper For Venting Combustion Products From Decorative Appliances For Installation In Solid Fuel Burning Fireplaces

	Appliance Input Rate (kBtu/hr)											
	20	30	40	50	60	70	80	90	100	110	120	
Chimney Height* (ft)	Minimum Opening** (sq. in.)											
6	17.6	25.7	33.8	41.7	49.2	56.6	64.0	71.4	78.8	86.2	93.5	
8	16.5	23.7	31.2	38.7	45.5	52.4	59.7	66.9	74.1	81.3	88.6	
10	15.1	21.7	28.7	35.2	41.7	48.2	54.3	60.2	66.1	72.0	77.9	
15	14.1	19.9	26.1	32.0	37.7	43.2	48.8	54.1	59.4	64.6	69.9	
20	12.9	18.5	23.7	28.8	34.3	39.8	44.4	49.1	53.8	58.4	63.0	
30	12.2	16.9	21.6	26.5	31.2	35.9	40.3	44.5	48.6	52.7	56.6	

* Height is from hearth to top of chimney and the minimum height is 6 feet. (See Figure 3, Factory Built Fireplace.)

** Chart shows minimum opening (sq. in.) for a given height and input rate.

PARTS LIST



Grand Canyon 2 Burner See Through
2BRN-ST18
2BRN-ST21
2BRN-ST24
2BRN-ST30
2BRN-ST36
2BRN-ST42



Grand Canyon 3 Burner See Through
3BRN-ST18
3BRN-ST21
3BRN-ST24
3BRN-ST30
3BRN-ST36
3BRN-ST42



3/8 " Non-Whistle free flex sizes (18-24)



1/2 " Non-Whistle free flex sizes (30-42)



Lava Rock



Glowing Embers

Vermiculite
LP Only



Damper Clamp



1/2 " Flare x 1/2 " FIP (30-42)
3/8 " Flare x 1/2 " FIP (18-24)

MAINTENANCE

Burning Grand Canyon Gas Logs for any length of time will cause the logs to soot. Soot only accumulates on the log therefore the burner will not need cleaning. Soot is caused by incomplete combustion of the gas leaving behind a dark dense material. Soot will also accumulate on the logs if the logs are not placed in the proper position according to the log placement diagrams. To clean off soot use an old tooth brush and gently rub away the soot. Periodic examination and cleaning of the venting system and the solid fuel-burning fireplace, including frequency of such examination and cleaning, by a qualified agency. Periodic examination of the pilot assembly should be in accordance with the provided picture.



INSTALLATION

The damper clamp with hex bolt is provided as a means to prevent full closure of the damper blade. The clamp is easily attached to most, damper blades with pliers or a wrench, and must be permanently installed. The clamp is designed to prevent accidental closure of the damper when installed. Should the clamp not fit or fail to provide the permanent vent opening listed in the table above, have a permanent stop installed, remove the damper blade or have the damper cut to provide the minimum permanent opening required.

The Grand Canyon Gas Log set must be installed by a qualified professional service technician. Instructions must be followed carefully to ensure proper performance and full benefit from the gas log set. Check to be sure the log set is designed and labeled for the type of gas (natural or propane) supplied to the fireplace. Fireplace floor must be level clear of debris and smooth.

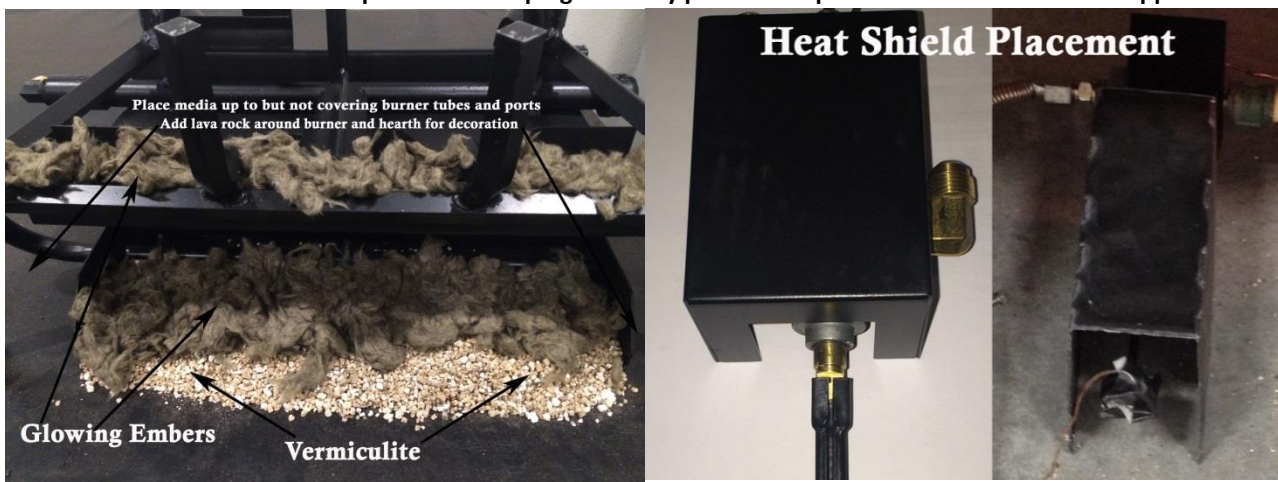
WARNING: Failure to position the parts in accordance with this manual or failure to use only parts specifically approved with this appliance may result in property loss, personal injury, or loss of life.

BURNER INSTALLATION:

1. Make sure the fireplace gas supply is turned off
2. Locate the gas-supply stub inside the fireplace and remove the cap. When removing the cap make sure the stud does not turn, loosening the connection inside the wall.
3. Center the burner from side to side and front to back. Ideally, the burner will be aligned directly under the flue damper.
4. Use the 3/8" / ½ "aluminum flex line connector to connect the gas supply line to the gas inlet on the valve/burner. When bending the flex line use proper bending procedures to avoid kinking the tubing.
5. Verify that connections are tight, then turn on the gas and check each connection using soap and water solution. **DO NOT USE AN OPEN FLAME FOR LEAK TESTING.** The soap and water connection should be 50% water and 50% soap. Brush the solution over the connections and check for bubbles. Any leak must be corrected prior to proceeding with installation.
6. Determine the valve system that is installed on the appliance, then proceed with lighting the pilot (NOTE: Manual on/off valves do not have a pilot).
7. Before lighting the appliance make sure the heat shield is placed back in the position it was when the appliance was taken out of the box.

BURNER MEDIA INSTALLATION:

1. Locate vermiculite (3 burner and LP units only) and the rock wool (Glowing Embers). Vermiculite is used for all propane units and for the ember burner on the 3 burner appliance.
 - a. Open the vermiculite, then evenly fill the entire ember pan area,
2. Open the bag of rock wool, then spread it evenly throughout the entire ember pan area. Tear the rock wool into smaller pieces and keeping it loosely packed will provide a better ember bed appearance.



FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A. This appliance has a pilot which must be lighted by hand.
- 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.

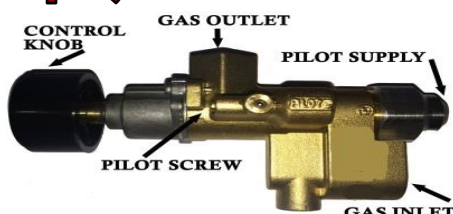
WHAT TO DO IF YOU SMELL GAS:

- 1. Do not try to light any appliance.
- 2. Do not touch any electric switch; do not use any phone in your building
- 3. Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- 4. If you cannot reach your gas supplier, call the fire department.

- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control, which has been underwater.

LIGHTING INSTRUCTIONS

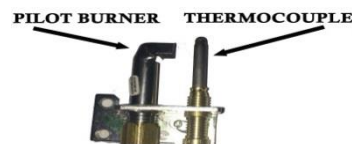
- 1. STOP! Read the safety information above on this label.
- 2. Push in gas control knob slightly and turn clockwise to "OFF" 



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

- 3. 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.

- 4. Find pilot – follow metal tube from the gas control behind the burner.

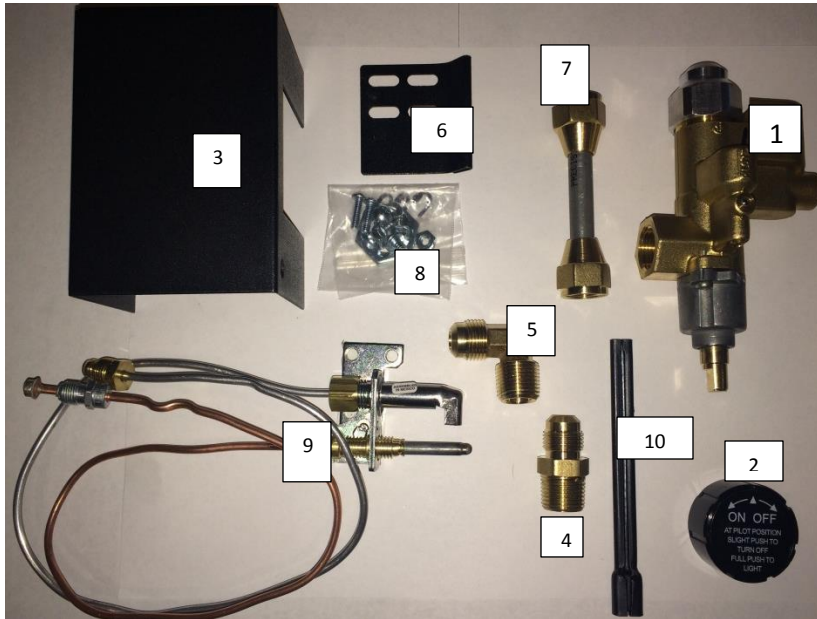


- 5. Turn knob on gas counter-clockwise to arrow in the center of the knob. 
- 6. Push in control knob all the way and hold in. immediately light the pilot with a match. Continue to hold the control knob in for about one minute after the pilot is lit. release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 3-7
 - If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF"  and call your service technician or gas supplier.
- 7. Turn gas control knob counterclockwise to "ON" 

TO TURN OFF GAS TO APPLIANCE

- 1. Turn knob clockwise from "ON"  position to the center arrow position. Push in the gas control knob slightly and turn clockwise to "OFF".  Do not force knob.

VALVE PARTS LIST



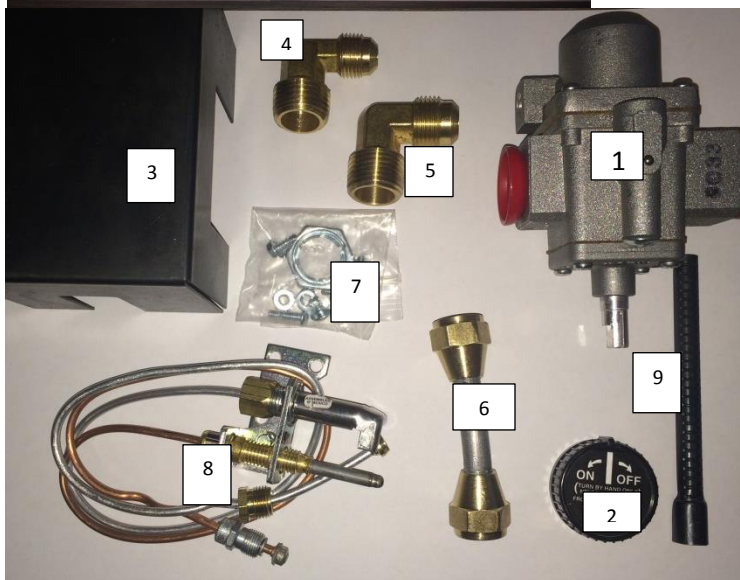
SPQMKN

- (1) 109 Valve
- (2) 111 Black Knob
- (3) 140 Heat Shield
- (4) 110 3/8" Flare x 3/8" Adaptor
- (5) 401 3/8" x 1/2" Male
- (6) 120 PB Mounting Bracket
- (7) 426 3/8" x 3" Swivel Nut
- (8) 660 Parts Bag
- (9) 102 Pilot Assembly
- (10) 101 Stem
- (11) 229 10" Black Flex line (Not Shown)



SPLPK

- (1) Vermiculite
- (2) 460 Air Mixer/Orifice
- (3) 218P LP Orifice



HCSPK

- (1) 100-HC Valve
- (2) 111 Black Knob
- (3) 121 Heat Shield
- (4) 1/2" x 3/8" Flare Elbow
- (5) 1/2" x 1/2" Flare Elbow
- (6) 426 3/8" x 3" Swivel Nut
- (7) 660 Parts Bag
- (8) 102 Pilot Assembly
- (9) 101 Stem (2x 36&42)
- (10) 229 10" Black Flex line (Not Shown)

LOG PLACEMENT DIAGRAM

18" ARIZONA JUNIPER



24" ARIZONA JUNIPER



30" ARIZONA JUNIPER



LOG PLACEMENT GUIDE CON'T

36" ARIZONA JUNIPER



18" ARIZONA WEATHERED



24" ARIZONA WEATHERED



LOG PLACEMENT GUIDE CON'T

30" ARIZONA WEATHERED



36" ARIZONA WEATHERED



WARRANTY

Refractory Logs: Grand Canyon Gas Logs, logs carry a lifetime warranty against any manufacture defects or breakage as long as the products are installed inside. In the event defect or breakage occurs a replacement will be available to pick-up from the dealer at which the log set was originally purchased. This warranty does not cover breakage caused by excessive handling once installed and fired. Logs installed outdoors carry a (1) year warranty. This warranty is limited to original purchaser only.

Burner: Grand Canyon Gas Logs burners carry a life time warranty against manufacture defects or breakage as long as the appliance is installed inside and by a professional installer. In the event a defect or breakage occurs a replacement will be available for pick-up from the dealer at which the burner was originally purchased. Burners installed outside carry a (1) year warranty. This warranty is limited to original purchaser only.

Electrical and Valves: Grand Canyon Gas Logs valves, pilot assemblies and electrical components carry a (2) year warranty against breakage or defects from date of purchase, by original purchaser, and must be installed by a licensed professional installer. This warranty only covers use with Grand Canyon Gas Logs burners and logs. In the event a defect or breakage occurs a replacement will be available for pick-up from the dealer at which the burner was originally purchased. Products installed outdoor carry a (1) year warranty.

WARRANTY CARD:

Please fill this warrant card and mail it to Grand Canyon Gas Logs to receive a warranty claim

Purchased from:

City, State

Day/Month/Year:

Your information

Name:

City, State:

Phone Number:

Date of install:

Mail to:

Grand Canyon Gas Logs

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