

RHB SERIES GAS LOG BURNER

for

Champion and Radiance Log Sets

INSTALLATION AND OPERATING INSTRUCTIONS

FOR YOUR SAFETY

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

FOR YOUR SAFETY

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.

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.

IMPORTANT: *READ INSTRUCTIONS CAREFULLY BEFORE BEGINNING INSTALLATION OF LOG SET.*

NOTE: DAMPER MUST BE OPEN ACCORDING TO CHART ON PAGE 3 OF THESE INSTRUCTIONS OR FULLY OPEN WHEN LOG SET IS OPERATING.

This burner unit must be installed only in a *fully-vented, solid-fuel burning fireplace with a working flue* and constructed of noncombustible material. The damper and chimney must be free of any obstructions. This log set is designed to burn with a smoky, yellow flame and **must be vented** for this reason. The fireplace chimney must have a permanent vent opening to the atmosphere of not less than the minimum square inches stated in Table 1 and Table 2 on page 3 of these instructions. If it is smaller, do not use this log set.

IMPORTANT: Ensure that the chimney draft is adequate by holding a lit match or candle at the top edge of the fireplace opening. This will indicate if air movement is toward the fireplace. **If draft is inadequate, do not operate logs until draft is adequate.** If you smell fumes from the burner in the room when the damper is fully open, it indicates that the fireplace draft is insufficient. If the draft is insufficient, have the chimney inspected by a qualified chimney sweep. **DO NOT OPERATE LOGS UNTIL THE FIREPLACE DRAFT IS CORRECTED.** Do not burn solid fuels in a fireplace where a decorative appliance is installed.

GENERAL INFORMATION

- ◆ A fireplace screen must be in place when logs are operating and, unless other provisions for combustion air are provided, the screen must have an opening(s) for the introduction of combustion air.
- ◆ If glass doors are used with this log set, open doors fully when unit is operating.
- ◆ Open damper according to the chart on page 3 of these instructions (or fully open) and be sure damper stop clamp is installed. (See damper stop instructions listed on page 5.) Gas supply pipe must be 1/2" minimum I.D. or larger (3/4" if gas line is longer than 20 feet). The minimum inlet gas supply pressure for the purpose of input adjustment is 7 inches for natural gas and 11 inches for LP gas. The maximum inlet gas supply pressure is 10.5 inches for natural gas and 13 inches for LP gas.
- ◆ Solid fuels shall not be burned in a fireplace where a decorative appliance is used.
- ◆ The installation and provisions for combustion and ventilation air must conform with the National Fuel Gas Code, ANSI Z223.1.
- ◆ The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).
- ◆ The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).
- ◆ **KEEP APPLIANCE AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE AND OTHER FLAMMABLE VAPORS AND LIQUIDS.**
- ◆ Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

VENTING SYSTEM MAINTENANCE

An annual examination and cleaning of the venting system by a qualified person is recommended.

CLEANING YOUR GAS LOG SET

Periodically you may want to remove the soot build-up on the logs by lightly brushing the logs with a soft brush. Also, occasionally, visually inspect your burner pan and pilot for proper operation (Fig. 1 and Fig. 2 below).

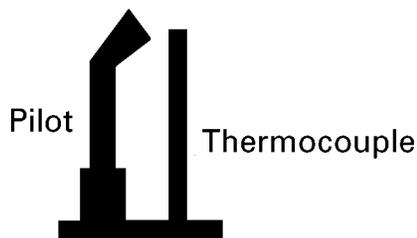


Fig. 1

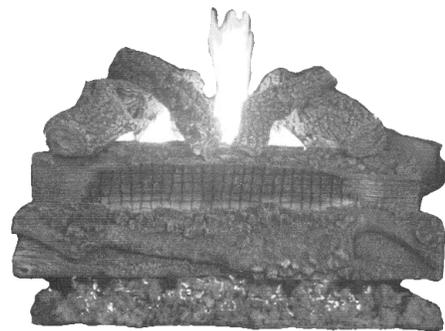


Fig. 2

**Minimum Permanent Free Opening, Square Inches
for Masonry Built Fireplaces**

Chimney Height (Feet)	18" Log Set	24" Log Set
Minimum Opening (Square Inches)		
6	49.2	56.6
8	45.5	52.4
10	41.7	48.2
15	37.7	43.2
20	34.3	39.8
30	31.2	35.9

Table 1

**Minimum Permanent Free Opening, Square Inches
for Factory Built Fireplaces**

Chimney Height (Feet)	18" Log Set	24" Log Set
Minimum Opening (Square Inches)		
10	35.3	44.2
15	26.4	32.2
20	22.1	26.4
25	18.1	22.9
30	17.3	20.4
35	15.9	18.9
40	15.2	18.1

Table 2

HOW TO INSTALL YOUR GAS LOG SET

This log set must be installed by a qualified person and instructions must be followed exactly to ensure safe operation.

Your log set is packaged in three (3) boxes. The complete burner assembly is packaged in one box and the logs are packaged in separate boxes.

GENERAL INSTALLATION

These logs require a minimum permanent free opening as stated in the chart on page 3 of these instructions, that must be provided by either the fireplace chimney or the fireplace damper to vent the gases. **The chimney damper must be fixed in a manner which will maintain the minimum permanent vent opening at all times.** This may be accomplished by installing a screw bolt in the edge of the damper to prevent its closing or by a hole(s) in the damper. These logs must be installed only in a vented fireplace with a working flue and constructed of noncombustible material. The minimum size fireplace in which these logs are to be installed is:

Log Set Size	Depth	Height	Front Opening Width
18"	14"	18"	25"
24"	14"	18"	36"

BURNER ASSEMBLY AND INSTALLATION

1. Turn off gas supply to fireplace.
2. Ensure that fireplace is clean.
3. Remove complete burner assembly from box and place complete burner assembly on floor of fireplace with the open side of the bottom pan facing the front of the fireplace.
4. Position the burner assembly centered from side to side and as far toward the back of the fireplace as possible. The fireplace will draft better with the burner unit toward the back of the fireplace. **(Never place the burner assembly more toward the front in larger fireplaces.)**
5. Remove logs from log box and place on burner assembly as described on page 5 under Log Placement.
6. Visually inspect the position of gas log set in the fireplace as described above.
7. After you have visually inspected the position of the log set in the fireplace, remove logs from burner assembly and proceed to connect gas supply.

CONNECTING GAS SUPPLY

There is a 3/8 flared fitting installed on your gas log set at the factory. Be sure fittings are the appropriate size on any tubing that is to be connected to your gas log set. If using tubing that has to be cut and shaped, be sure to use the proper tubing cutter and flaring tool. Also, be careful not to crimp the tubing when it is being bent to hook up the log set. A crimp in this line could restrict the gas flow to the log set. If a crimp does occur, do not use the gas line. Gas resistant pipe compound must be used on all threaded male connections, except brass to brass.

NOTE: During the first 2 to 3 hours of burning, the flame burning against the glowing log will appear to be orange in color. After this burn in period this flame will turn completely blue and almost invisible. You will then see mostly glow and no flame on the face of this glowing log, which enhances the glow appearance.

SAND AND GLOWING EMBER PLACEMENT (NATURAL GAS)

1. Open the bag of sand and pour over the pipe filling the pan of the back pan burner.
2. Pour the sand over the pipe, filling the bottom pan, following the contour of the pan.
3. Open the bag of glowing ember material and disperse it on top of the sand on the back and bottom pan burner.

VERMICULITE AND GLOWING EMBER PLACEMENT (LP GAS)

1. Open the bag of vermiculite and pour over the pipe filling the pan of the back pan burner.
2. Pour the vermiculite over the pipe, filling the bottom pan, following the contour of the pan.
3. Open the bag of glowing ember material and disperse it on top of the vermiculite on the back and bottom pan burner.

LOG PLACEMENT

1. Remove the fiber log and place it in the middle of the burner unit, with the charred face of the log facing the room. Line up the two holes in the bottom of this log with the two 3/8" pegs and gently slide the log over the pegs until it rests on the grate. **(Do not force.)**
2. Remove the longest log and place on the grate in front of the fiber log. The bark side should be facing the room.
3. Remove the next longest log and place it on the back of the grate behind the top pan burner. The bark side should be facing the room.
4. Remove the rest of the logs and place on top of the back log and fiber log as shown in the diagram on page 6.

Please refer to the log photos on page 6. Your logs should be placed in the same position as those shown for your corresponding log set.

DAMPER STOP

When log set is operating, damper must be fully open or as per the chart on page 3 of this manual.

Included in the burner assembly box is a damper stop clamp which attaches to the damper as shown in Figure 5. Install it on the damper blade and tighten with a wrench.

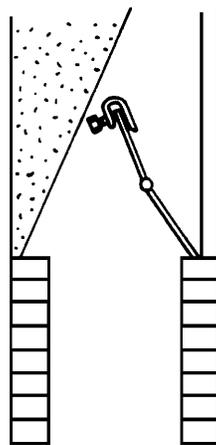
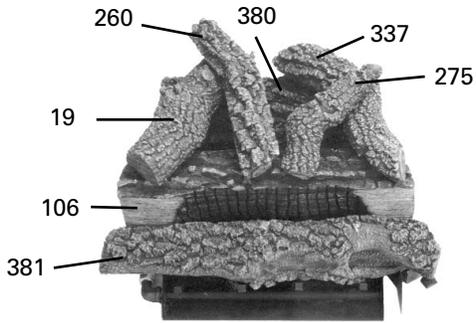
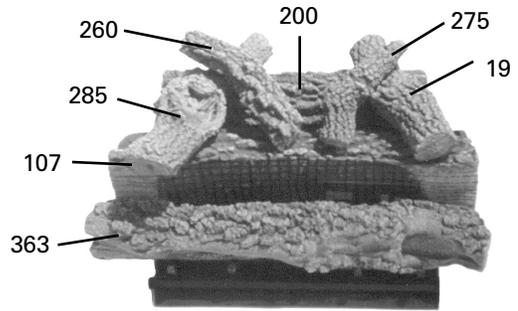


Fig. 5

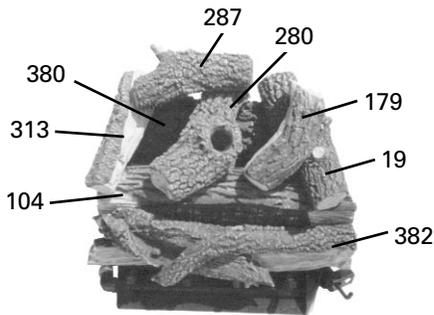
LOG PLACEMENT PHOTOS



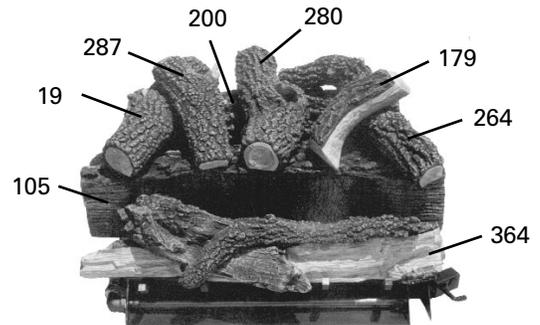
RAD-18



RAD-24



CHML-18



CHML-24

LOG PARTS LIST FOR CHML-18 & 24 and RAD-18 & 24

KEY LETTER	PART NO.	DESCRIPTION	KEY LETTER	PART NO.	DESCRIPTION
A	Log # 381	Front Log - RAD-18	F	Log # 19	Left Top Log - RAD-18
	Log # 363	Front Log - RAD-24		Log # 285	Left Top Log - RAD-24
	Log # 382	Front Log - CHML-18		Log # 313	Left Top Log - CHML-18
	Log # 364	Front Log - CHML-24		Log # 19	Left Top Log - CHML-24
B	Log # CF LOG 106	Glow Middle Log - RAD-18	G	Log # 337	Right Top Log - RAD-18
	Log # CF LOG 107	Glow Middle Log - RAD-24		Log # 19	Right Top Log - RAD-24
	Log # CF LOG 104	Glow Middle Log - CHML-18		Log # 19	Right Top Log - CHML-18
	Log # CF LOG 105	Glow Middle Log - CHML-24		Log # 264	Right Top Log - CHML-24
C	Log # 380	Back Log - RAD-18	H	Log # 280	Middle Top Log - CHML-18
	Log # 200	Back Log - RAD-24		Log # 280	Middle Top Log - CHML-24
	Log # 380	Back Log - CHML-18			
	Log # 200	Back Log - CHML-24			
D	Log # 260	Left Middle Log - RAD-18			
	Log # 260	Left Middle Log - RAD-24			
	Log # 287	Left Middle Log - CHML-18			
	Log # 287	Left Middle Log - CHML-24			
E	Log # 275	Right Middle Log - RAD-18			
	Log # 275	Right Middle Log - RAD-24			
	Log # 179	Right Middle Log - CHML-18			
	Log # 179	Right Middle Log - CHML-24			

FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
WHAT TO DO IF YOU SMELL GAS
 - ◆ Do not try to light any appliance.
 - ◆ Do not touch any electrical switch; do not use any phone in your building.
 - ◆ Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - ◆ If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control handle, Never use tools. If the handle 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 fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS SAFETY PILOT VALVE

1. STOP! Read the safety information previously listed above.
2. Turn gas control handle clockwise ↻ to the "OFF" position.
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 on this label. If you don't smell gas, go to the next step.
4. Locate pilot (Fig. 8) in the center behind the middle stainless steel burner underneath the middle log.
5. Turn control handle counterclockwise ↺ to the "PILOT" position (Fig. 7).
6. Place a lit match at the pilot burner and simultaneously push in the control handle. This should ignite the pilot.
7. Once the pilot lights continue to depress the control handle for one (1) minute.
8. After one minute slowly release the control handle and it will pop back out. Pilot should remain lit. If it goes out, repeat steps 1 thru 8.
 - ◆ If the handle does not pop out 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 handle to "OFF" and call your service technician or gas supplier.
9. Turn control handle counterclockwise ↺ to "ON".

TO TURN OFF GAS TO APPLIANCE

Turn control handle clockwise ↻ to the "OFF" position. Do not force.

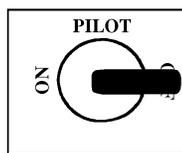


Fig. 7

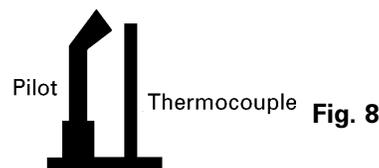


Fig. 8

FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
WHAT TO DO IF YOU SMELL GAS
 - ◆ Do not try to light any appliance.
 - ◆ Do not touch any electrical switch; do not use any phone in your building.
 - ◆ Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - ◆ If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control handle, Never use tools. If the handle 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 fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS MANUAL VALVE

1. STOP! Read the safety information previously listed above.
2. Turn the gas control handle clockwise ↻ to the "OFF" position.
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 on this label. If you don't smell gas, go to the next step.
4. Place a lit match on the pan burner fill material close to the back center of the bottom pan.
5. Slowly open the gas valve by rotating the control handle counterclockwise ↺.
6. This should ignite the burner.
7. Once the burner is ignited adjust the control handle to the desired flame height.

TO TURN OFF GAS TO APPLIANCE

Turn control handle clockwise ↻ to the "OFF" position. Do not force.

Fig. 7

FOR YOUR SAFETY READ BEFORE LIGHTING

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

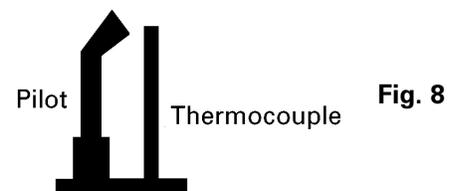
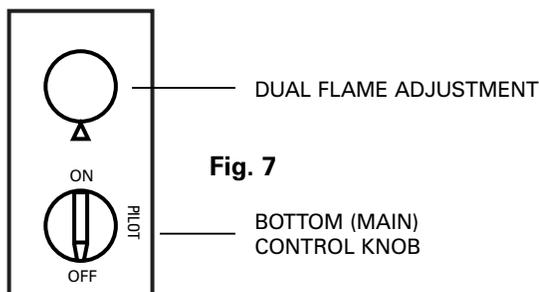
- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
WHAT TO DO IF YOU SMELL GAS
 - ◆ Do not try to light any appliance.
 - ◆ Do not touch any electrical switch; do not use any phone in your building.
 - ◆ Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - ◆ If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in or turn the gas control handle, Never use tools. If the handle 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 fire or explosion.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

LIGHTING INSTRUCTIONS ROTARY CONTROL VALVE

1. STOP! Read the safety information previously listed above.
2. Turn the (MAIN) gas control handle clockwise ↻ to the "OFF" position.
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 on this label. If you don't smell gas, go to the next step.
4. Locate pilot (Fig. 8) - located in the center behind the middle stainless steel burner underneath the middle log.
5. Turn (MAIN) control handle counterclockwise ↺ to the "PILOT" position (Fig. 7).
6. Place a lit match at the pilot burner, and simultaneously push in on the(MAIN) control knob. This should ignite the pilot.
7. Once the pilot lights, continue to depress the(MAIN) control knob for one (1) minute.
8. After one minute, slowly release (MAIN) control knob and it will pop back out. Pilot should remain lit. If it goes out, repeat steps 1 thru 8.
 - ◆ If the handle does not pop out when released, stop and immediately call your service technician or gas supplier.
 - ◆ If the pilot will not stay lit after several tries, turn the (MAIN) control knob to "OFF" and call your service technician or gas supplier.
9. Turn bottom (MAIN) control knob counterclockwise ↺ to "ON".
(NOTE: Refer to page 10 of these instructions for operation of remote control or wall switch.)

TO TURN OFF GAS TO APPLIANCE

Turn control handle clockwise ↻ to the "OFF" position. Do not force.



INSTALLATION INSTRUCTIONS FOR INSTALLING A ROTARY VALVE UNIT

REMOTE CONTROL

1. Refer to pages 4 and 5 of these instructions for installation of the burner unit and logs.
2. The remote control package has a hand held transmitter and a receiver with wires attached to it.
NOTE: The receiver requires 4 AA batteries (not included) and the transmitter requires one 9 volt transistor battery (not included). Do not install the batteries until all hookups are completed.
3. Remove the receiver and locate the two female terminals on the end of the wires. One of these terminals is smaller than the other one.
4. Locate the two male terminals on the top right front of the valve.
5. Plug the small female terminal from the receiver on the small male terminal of the valve.
6. Plug the larger female terminal from the receiver on the larger male terminal of the valve.
7. It is best to place the receiver in the fireplace as far away from the burner unit as possible to protect it from heat. Make sure the receiver eye is facing the room so it can receive the signal from the transmitter.
8. Install batteries in the receiver by removing the back of the receiver where the wires go in.
9. Install the battery in the hand held transmitter by removing the back of the unit.
10. Follow LIGHTING INSTRUCTIONS on page 9 to light the pilot on your log set, and then follow item 6 under LIGHTING INSTRUCTIONS on page 9 to turn on your main control knob. **CAUTION: Your log set may come on when you complete this step.**
11. You can now operate your log set with the hand-held transmitter.
12. Push and hold the "ON" button of the transmitter to turn on the log set.
13. Push and hold the "OFF" button of the transmitter to turn off the log set.

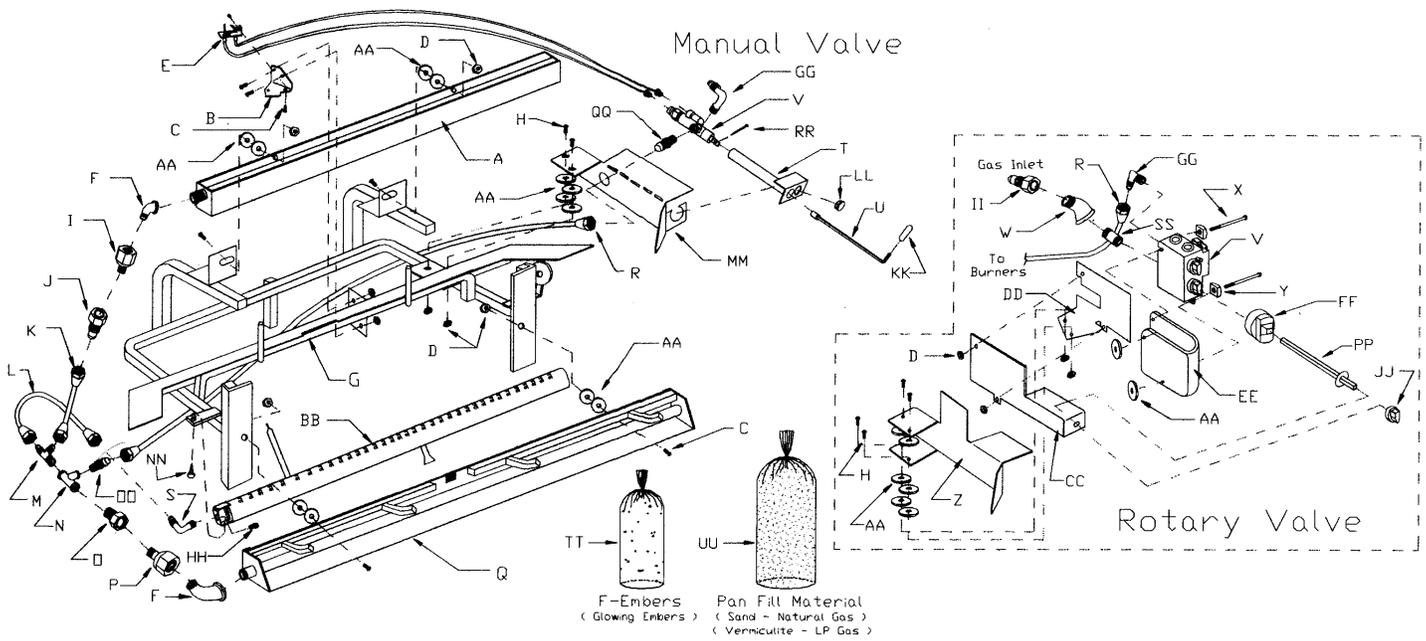
WALL SWITCH

1. Refer to pages 4 and 5 of these instructions for installation of the burner unit and logs.
2. It is recommended that a qualified electrician do the installation.
3. The wall switch kit has a wall switch and cover and is designed to be installed in a standard wall switch box. *NOTE: The wall switch requires 4 AA batteries (not included). Do not install the batteries until all hookups are completed.*
4. There must be two wires run from the switch box to the interior of the fireplace. If the wire furnished with the wall switch is not long enough, an electrician must run the correct length of wire.
5. **It is very important to connect the wires correctly between the wall switch and the valve. There is a small male terminal and a large male terminal located on the valve and there are two terminals on the back of the wall switch. (NOTE: The terminals on the wall switch are labeled 1/4" and 3/16".) Connect the wires from the small male terminal on the valve to the terminal marked 3/16" on the wall switch, and the large male terminal on the valve to the terminal marked 1/4" on the wall switch. It is very important not to get the wires crossed when making this connection.**
6. After all connections are made, install the batteries and secure the switch and cover at the wall switch box.
7. Follow LIGHTING INSTRUCTIONS on page 9 to light the pilot on your log set, and then follow item 6 under LIGHTING INSTRUCTIONS on page 9 to turn on your main control knob. **CAUTION: Your log set may come on when you complete this step.**
8. You can now operate your log set with the wall switch.
9. Push and hold the "up arrow" on the wall switch to turn on the log set.
10. Push and hold the "down arrow" on the the wall switch to turn off the log set.

OPERATION OF THE REMOTE CONTROL AND WALL SWITCH

The remote control and wall switch only operates when you are holding the "ON" or "OFF" button down. You can turn the log set up and down or turn the log set on and off. When you are depressing the "ON" and "OFF" button, watch the flame on your log set and release the button when the log set is at the desired flame height.

PARTS LIST



KEY NO.	PART NO.	DESCRIPTION	KEY NO.	PART NO.	DESCRIPTION
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A	14-2018	Burner Pan (Top) 18"	V	07-1025	Gas Control Valve (Safety)
	14-2024	Burner Pan (Top) 24"		13-1200	Gas Control Valve (Rotary)
B	11-1350	Pilot Mounting Bracket	W	07-1020	3/8 Black Street Elbow
C	01-1080	Screw 10-32 X 1/2"	X	11-1170	Screw 10-32 X 2 1/2"
D	01-1095	Nut 10-32	Y	11-1765	Square Nut (1/4 X 20)
E	07-1009	Thermocouple	Z	14-1010	Valve Mounting Bracket
F	11-2135	Street Elbow Black 90 1/2"	AA	IW-1	Insulating Washer
G	14-3018	18" Grate Assembly	BB	14-1018	Burner (Stainless Glow)
	14-3024	24" Grate Assembly		14-1024	Burner (Stainless Glow)
H	01-1080	Screw 10-32 X 1/2"	CC	14-1012	Valve Handle Bracket
I	BPO-2	Orifice (Natural Gas) Bottom	DD	14-1011	Insulating Mounting Bracket
	AM-2	Orifice (Propane Gas) Bottom	EE	14-1013	Insulation 4 X 10
J	08-910	Brass Adapter 3/8FPT X 3/8 Flare	FF	14-1201	Valve Adapter Knob (Rotary)
K	14-3000	Gas Line with Flare Nuts 3.5"	GG	11-1300	Brass Elbow
L	14-3001	Gas Line with Flare Nuts 9.5"	HH	04-1009	Screw
M	14-2010	Brass Tee	II	08-910	Brass Adapter 3/8FPT X 3/8 Flare
N	10-1160	Black Tee	JJ	14-1202	Knob (Outer Rotary Rod)
O	07-1001	Brass Adapter 3/8FPT X 3/8MPT	KK	11-2002	Rod Handle Tip Cover
P	BPO-2	Orifice (Natural Gas) Bottom	LL	11-2091	Plug (Plastic)
	AM-2	Orifice (Propane Gas) Bottom	MM	14-1015	Valve Mounting Bracket (Manual)
Q	14-4018	Burner Pan (Bottom) 18"	NN	04-1009	Screw
	14-4024	Burner Pan (Bottom) 24"	OO	01-1004	Brass Fitting 3/8MPT X 3/8 Flare
R	14-3002	Gas Line (Main) 17"(18),19.25(24)	PP	14-1021	Rod Handle (Rotary Control)
S	11-1300	Brass Elbow	QQ	01-1004	Brass Fitting 3/8MPT X 3/8 Flare
T	14-1017	Handle Tube Assembly 4.75"	RR	01-1078	Cotter Pin
U	14-1019	Rod Handle 5.5"	SS	06-1029	Nipple (Black) 3/8 X 1.5"
V	08-905	Gas Control Valve (Manual)	TT	F-EMBERS	Glowing Ember
			UU	F-SAND	Sand (Natural Gas)
				F-VERMIC	Vermiculite (Propane Gas)

Parts may be ordered from your local retailer or from:
HEATMASTER, INC.

Route 2, Box 48
Angier, NC 27501
(919) 639-4568

When ordering, please include complete part number, part name and gas type.

