INSTALLATION AND OPERATION GUIDE FOR HARGROVE VENTED GAS LOGS

ANSI

Ember Burner, H-Burner, or System 4 Burner with

AEI Electronic Ignition Valve on Control System Concealer (3K)

NATIONAL FIREPLACE INSTITUTE NFI CERTIFIED www.nficertified.org

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

DESIGN CERTIFIED to ANSI Z21.60/CGA 2.26 Vented Decorative Appliance for Installation in Solid-Fuel Burning Fireplaces.

PFS® C US

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

NOTE: ADEQUATE FIREPLACE VENTILATION IS REQUIRED FOR SAFETY.
READ INSTRUCTIONS FULLY BEFORE INSTALLING OR OPERATING.
INSTALLER: LEAVE THIS MANUAL WITH THE APPLIANCE.
CONSUMER: RETAIN THIS MANUAL FOR FUTURE REFERENCE.

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.

WHAT TO DO IF YOU SMELL GAS

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

FOR YOUR SAFETY

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

IMPORTANT: Installation and service must be performed by a qualified professional installer, service agency, or the gas supplier.

NOTE: This appliance is only for use with the type of gas indicated on the rating plate.

Solid fuels shall not be burned in a fireplace where a decorative appliance is installed.

This Hargrove vented gas log set is to be installed only in a solid-fuel burning fireplace with a working flue and constructed of noncombustible material. The installation, including provisions for combustion and ventilation air must conform to 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 code. A damper clamp is included to maintain the minimum permanent vent opening and to prevent full closure of the damper blade. The gas log set must be burned with the **damper completely open (In the Commonwealth of Massachusetts the damper must either be welded in the fully open position or completely removed)** and the chimney free of any obstructions or restrictions.

The realistic yellow flame produces carbon monoxide and soot. Under normal conditions, these products are exhausted up the chimney. If fumes or soot, from the gas burning, are evident in the room when the damper is fully open it indicates that the fireplace draft is defective. Do not operate your gas log set until the fireplace draft is corrected. **It is the homeowners responsibility to assure their fireplace has adequate draft.**

IMPORTANT PRE-INSTALLATION AND FIREPLACE SAFETY INFORMATION

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

1. It is recommended that adults be present when this gas appliance is operating. It is recommended that this unit is not left burning when unattended or while anyone is sleeping.

2. Do not use a natural gas set for propane or a propane set for natural gas. If the gas type is not correct. DO NOT INSTALL. Contact your dealer for immediate assistance.

3. There are many different local codes for gas fire logs. The installation and the provision for combustion and ventilation air must conform to local codes and, or in the absence of local codes, with the National Fuel Gas Code ANSI Z223.1 – (most current revision).

4. Gas log sets must be installed by personnel qualified for installing gas appliances.

5. This appliance must be installed only in a solid-fuel burning fireplace with a working flue and constructed of noncombustible materials. Solid fuels are not to be burned in a fireplace where a decorative appliance has been installed.

6. A permanent free opening must be provided by either the fireplace chimney or chimney damper to vent flue gasses. Any chimney damper must be fixed in a manner, which will maintain the permanent free opening at all times. Use Table II to determine the minimum permanent free opening based on chimney height and the appliance Btu input rating. Refer to the Damper Stop section for additional directions.

7. The minimum free opening is based only on two factors; chimney height and Btu input rating. Many other factors affect the fireplace drafting. It is the homeowner's responsibility to assure their fireplace has adequate draft. If fumes or soot from the gas burning are evident in the room when the damper is fully open, it indicates that the fireplace draft is defective. Do not operate your gas log set until the fireplace draft is corrected. Consult your fireplace specialist.

8. 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.

9. When glass fireplace doors are used, always operate gas log set with the doors fully open to allow for proper combustion air and to keep control valves from overheating.

10. The minimum inlet supply pressure for input adjustment is 5.0 inches (natural gas) 11 inches (propane gas) in water column. The maximum inlet supply pressure is 10.5 inches (natural gas) 13 inches (propane gas) in water column.

11. 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 more than 1/2 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 1/2 psig (3.5kPa).

12. The fireplace chimney or venting system should be examined annually and cleaned as required by a qualified agency.

13. After burning for several hours, the logs become fragile and should not be handled. Knocking or rubbing logs can cause concrete to crumble and is not covered under the warranty.

14. To clean the logs, use a soft dry paintbrush for periodic dusting of the gas fire logs.

15. To clean the burner, shut off the gas supply, remove the burner pan media, and vacuum the burner ports. After cleaning, replace burner pan media and light the pilot according to the lighting instructions.

SPECIFICATIONS AND DIMENSIONS

Reference Table I to ensure that the Control System Concealer (CSC) will fit on the floor of your fireplace. Gas log set sizes do not have to match the CSC size as long as the CSC fits in the fireplace and the log set fits on the CSC. Do not use more than one size lower than your gas log set size. Example: A 30” log set can use either a 30” CSC or a 24” CSC, but not an 18” CSC.

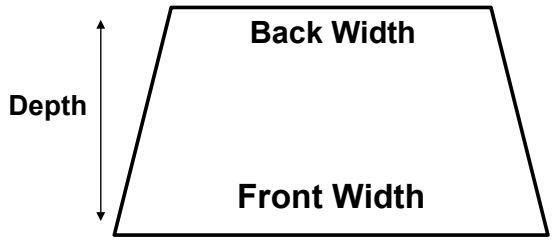


TABLE I
Minimum Fireplace Dimensions

SET SIZE	FRONT WIDTH	REAR WIDTH*	DEPTH	HEIGHT†
18”	30”	20”	12.5”	18.5”
24”	36”	26”	12.5”	18.5”
30”	42”	32”	12.5”	18.5”
36”	48”	38”	12.5”	18.5”

***At depth listed**

† The CSC is 2.5” tall on its own

Minimum Permanent Free Opening, Square Inches

Chimney Height, Feet	29	39	51	64
	Appliance Input Rating, Btu per Hour (w)			
6	34,000	46,400	62,400	80,000
8	37,000	50,400	68,000	86,000
10	40,400	55,800	74,400	96,400
15	44,600	62,400	84,000	108,800
25	50,400	68,400	94,000	122,200
30	55,200	76,800	105,800	138,600

PRE-INSTALLATION CHECKLIST

FIREPLACE AND CHIMNEY

- Fireplace is approved for solid-fuel burning and made of non-combustible materials.
- Operational damper with a chimney free of any obstruction or restriction.
- Fireplace has proper draft to accommodate decorative appliance.
- Fireplace is free from debris or ash.
- Fireplace is free of obstruction such as log grate, log lighter, etc.; that would prohibit the installation of the log set.
- If the floor is recessed or glass doors are installed on the fireplace, the appliance may need to be elevated to ensure proper air flow.
- Consult table to determine if the set is properly sized for the installation in the fireplace.

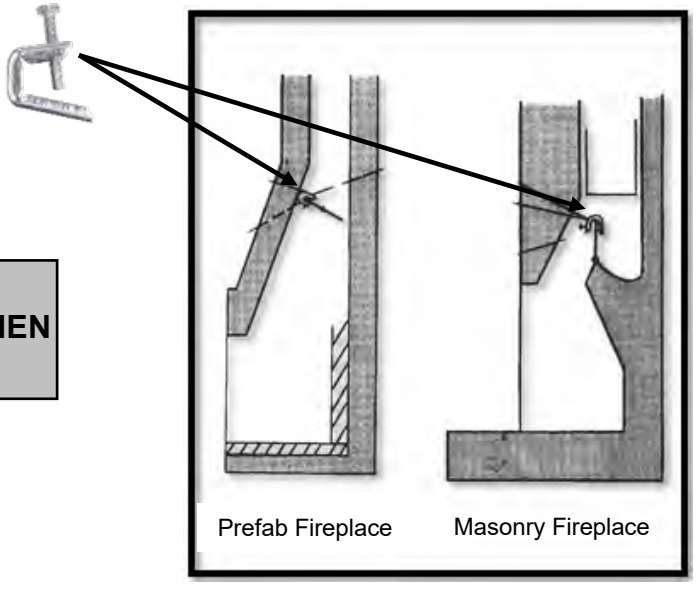
GAS LINE

- Ensure gas line is in safe condition and that it is adequate for the installation.
- Check gas line sizing to ensure it is properly sized for the appliance.
- For ease of installation gas line should be located on the right side of the fireplace when possible.
- Turn the gas supply line off and you are ready to begin burner installation.

DAMPER STOP INSTALLATION

Attach the damper stop clamp to the fireplace damper blade. Position the clamp to prevent full closure of the fireplace damper blade.

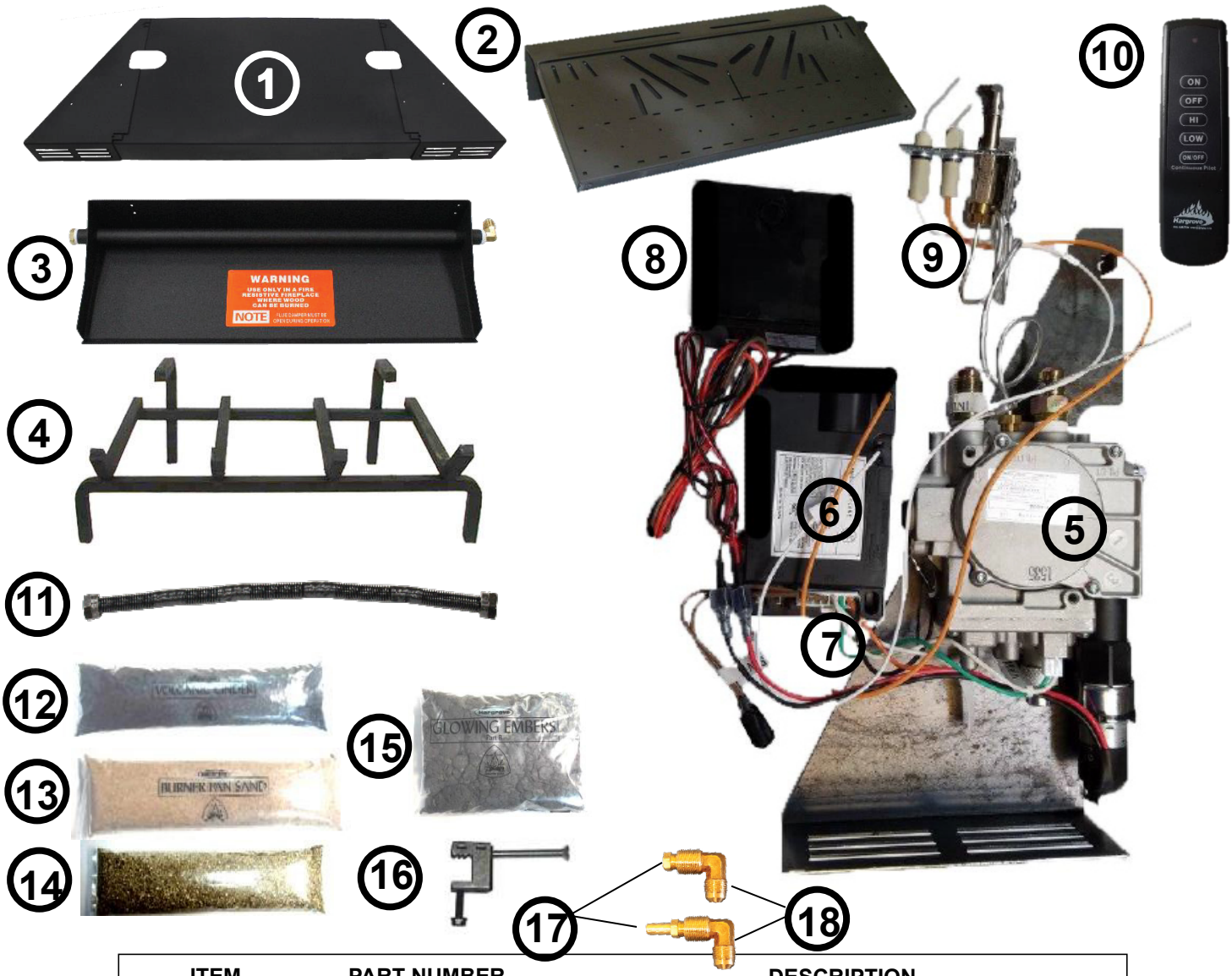
If the damper stop provided does not fit, the installer shall install a permanent damper stop that will keep the damper open to a minimum opening as determined on page 3 Table II of the instructions.



CAUTION
THE DAMPER MUST BE FULLY OPEN WHEN OPERATING THE GAS LOGS!

IMPORTANT: In the Commonwealth of Massachusetts the damper must be either permanently welded in the fully open position or completely removed.

BURNER PARTS LIST
(BURNER MOUNTED VALVE)



ITEM	PART NUMBER	DESCRIPTION
1	CSC	Control System Concealer *Photos not to scale
2	S4	System 4 Burner (LP)
3	EB / HB	Ember Burner / H Burner (NG)
4	PG	Pedestal Grate
5	AEI-V	GV60 Gas Control Valve
6	AFIC-M	Control Module/REceiver
7	AFWH	Wire Harness
8	AFBP	Battery Pack
9	AFPI-24	Pilot Assembly
10	AFRT	Remote Transmitter
11	FCNW-18	Non-Whistling Flex Connector
12	VC	Covanic Cinder
13	SD	Sand
14	VM	Vermiculite
15	RW	Glowing Embers
16	DS	Damper Stop
17	49-66-Z2	90 Degree Brass Elbow
18	PPH-2	Pre Drilled Brass Orifice (NG)
	PPH-2L	Longer Pre Driller Brass Orifice (LP)
19	SW-CSC	Superwool Insulation

BURNER AND GRATE POSITIONING

Check that the gas is turned off.

Make sure that all connections are secure including wires.

Place the center piece of the CSC floor in the fireplace. As you place the right wing on, make sure to run the pilot and flex connector through the hole. See figure 2.

Install batteries and try to place them where they are accessible out from underneath the CSC wing if there is room. It can be covered with volcanic cinder to hide it.

Install battery into the remote control. Hold learnt button on until you hear 2 beeps, then push a button on the remote until it beeps again. Your remote and receiver should now be synced.

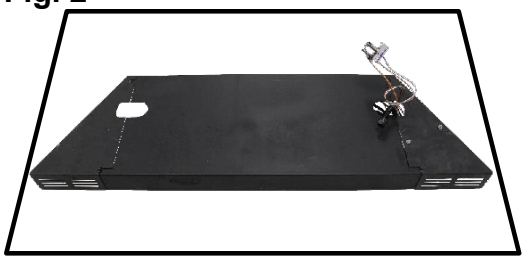
Place left wing over the Control Module and center entire CSC floor in the fireplace.

Center the burner on the CSC floor. The burner should be located under the flue opening.

The grate should be placed over the burner so the front legs of the grate are just in front of the burner pipe. See figure 3.

Remove the grate and proceed with the gas and pilot connection.

Fig. 2 **CSC POSITION**



GRATE POSITION

Fig. 3

NOTE- if the floor is recessed or glass doors are installed, burner must be elevated with firebrick or equivalent to ensure proper air flow over valve systems.

GAS CONNECTION and SETUP

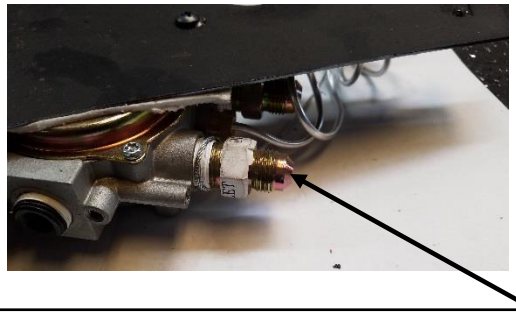
Check that the gas is turned off.

The gas supply line should be ½" inside diameter (ID) up to 30 feet and ¾" for longer distance.

Use the nonwhistling flex connector provided in the accessory kit to connect the gas supply to the burner kit. See figure 1.

Hook up the flex connector from your burner kit to the valve. See figure 1.

Fig. 1



Connect to gas

IMPORTANT

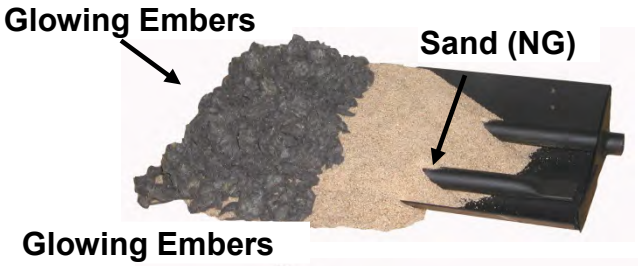
The minimum inlet supply pressure for the purpose of input adjustment is 5.0 inches (natural gas) 11 inches (propane gas) in water column. The maximum inlet supply pressure is 10.5 inches (natural gas) 13 inches (propane gas) in water column.

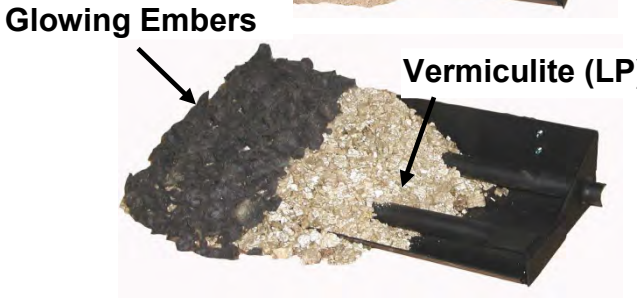
BURNER MEDIA

Fill the burner pan with sand(NG) or vermiculite(LP). The media level should be sloped evenly with the sides of the burner pan. Under filling will cause uneven flame.

Glowing Embers (Rockwool) are placed over the media. For best results pinch off pieces of the rockwool the size of a dime and feather it out

Test fire the burner once again for flame distribution, media can be altered to achieve desired flame appearance.



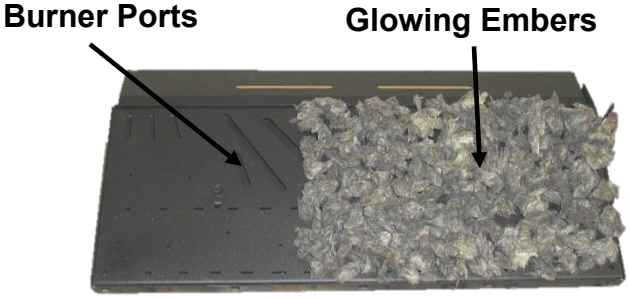


Cover the ported area of the System 4 Burner with Embers (Rockwool).

Light the gas and observe the flame for even distribution.

Most of the ember material should glow form the flame contact.

If there are any areas that are not glowing, poke around at the embers to improve glow.



LOG INSTALLATION

Install the logs based on the installation diagram provided with the logs set, as stated in step 7, for Radiant Heat logs it will be necessary to remove the grate and install the radiant heat bracket (packaged with Radiant Heat logs) onto the back of the burner pan.

Once the logs have all been place you can readjust the grate positioning to get desired flame pattern. When adjusting grate position be careful as the **GRATE WILL BE HOT**, it might be necessary to let it cool between adjustments.

RECOMMENDED BURN-IN PERIOD: Hargrove gas logs are made of special refractory materials, which withstand high temperatures. One characteristic of this material is retention of moisture. For this reason, we recommend burning the logs for only fifteen minutes during the first burning. After allowing the logs to cool for at least one hour, the set can be burned for any length of time.

LIMITED LIFETIME WARRANTY: Hargrove gas logs carry a limited lifetime warranty against breakage in the original fireplace. Warranty does not include labor. This warranty is void if excessive handling after burning causes breakage. All accessories and metal parts carry a two year limited warranty in the original fireplace. Items will be replaced during this period for the cost of shipping.

VOLCANIC CINDER PLACEMENT

The black volcanic cinders are used to cover the fireplace floor, fittings and tubing around the burner system. Although not functional, the back cinders act as a picture frame to show off the glowing embers and yellow flame.

FOR YOUR SAFETY: Do not use this appliance if any part has been underwater. Immediately call a qualified service technician to inspect the appliance and to replace any part of the system or gas control, which has been underwater

LIMITED WARRANTY

Refractory and Ceramic Fiber Logs

Hargrove gas logs carry a limited lifetime warranty against any manufactured defect or breakage. This warranty does not cover breakage caused by excessive handling once installed and fired. Contact Customer Service for warranty claim details.

Burner & Grate

If the burner or grate fails due to deterioration within five (5) years of the verified purchase date, contact Customer Service for warranty claim details.

Valves, Remote Controls, & Switching Devices

All valves, remote controls and switching devices are warranted against manufacturing defects which appear within two (2) years of the verified purchase date. Warranty does not cover products that have been damaged by misuse from overheating. Before any product is returned a Return Goods Authorization number (RGA) must be issued by the Customer Service Department. All returns must be accompanied by an explanation of the problem and all necessary parts.

All Other Parts

If any assembled part should fail to operate or be found defective which appear within two years of the verified purchase date, contact Customer Service for warranty claim details

Buyer shall notify Customer Service of any defect covered by this warranty no later than thirty (30) days after defect is discovered. Failure to provide notice within thirty (30) days shall void the limited warranty.

WHAT IS NOT COVERED

1. Removal and reinstallation costs.
2. Labor costs for replacement or repairs.
3. Transportation or shipping cost.
4. The cost of a service call to diagnose trouble.
5. Painted Surfaces.
6. Damage or defect caused by improper installation, accident, misuse, abuse, alteration, or authorized service technician.
7. Replacement of burner or combustion chamber resulting from improper storage of the appliance.

LIMITATIONS AND EXCLUSIONS

1. No one has authority to add to or vary this limited warranty, or to create for Hargrove Manufacturing Corporation any other obligation or liability in connection with this appliance.
2. Any implied warranty applicable to this appliance is limited in duration to the same period of time as this written warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.
3. HARGROVE MANUFACTURING CORPORATION WILL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR CONTINGENT DAMAGES YOU MIGHT SUFFER AS A RESULT OF A CLAIM UNDER THIS WRITTEN WARRANTY OR ANY IMPLIED WARRANTY. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusion may not apply to you.
4. This warranty applies only to the original purchaser and may not be transferred or assigned.
5. If you cannot verity the purchase date of the appliance, the warranty period will begin on the date of which the appliance was manufactured.
6. Replacement or repair parts are warranted for the remaining period of the original part warranty. Warranty parts must be obtained through authorized dealers of this product who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty.
7. The maximum liability of Hargrove Mfg. Corp. in connection with this limited warranty shall not in any case exceed the contract price paid for the product claimed to be defective or unsuitable.
8. Purchaser or user agrees to hold Hargrove Mfg. Corp. harmless from all claims by the buyer because of injury or damage to an ultimate user or other person caused by the product sold herein by the seller to the buyer, whether the injury or damage results from the assembly, installation, operation, shipment, storage, or manufacture of this product. Hargrove Mfg. Corp. makes no warranties, expressed or implied, other than those expressly stated herein.

YOUR DUTIES

This appliance must be installed by a qualified installer, operated and maintained in accordance with all applicable codes and the instructions furnished with the appliance. You must provide a receipt verifying the purchase date of the appliance when making a warranty claim with the dealer from which the appliance was purchased.

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

CONTACT INFO: Hargrove Gas Logs
Wellston Park Rd. – Sand Springs, OK 74063
Toll Free – (800)725-4166
www.hargrovegaslogs.com

Customer Service hours: 8:00am to 4:00pm CST

AMERICAN FLAME

Electronic Safety Pilot System for Vented Gas Logs

Models:

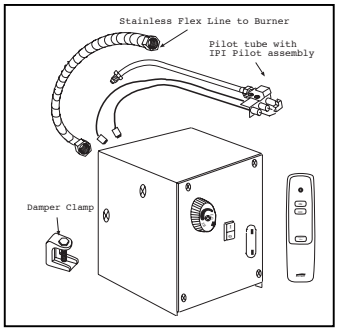
AFVK-SP

AFVK-SP-H/L

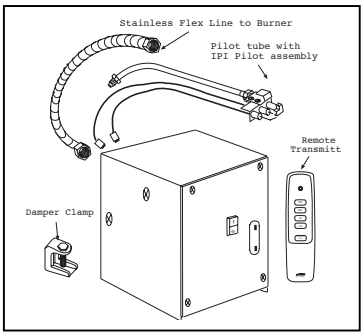
AFVK-SP-MH/L

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

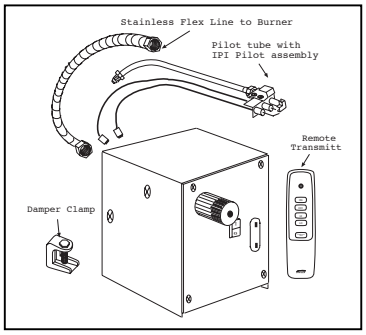
INSTALLATION AND OPERATING INSTRUCTION



AFVK-SP
Manual Hi/Lo



AFVK-SP-H/L
Remote Hi/Lo Solenoid



AFVK-SP-MH/L
Remote Variable Hi/Lo Motor Drive

These intermittent pilot ignition (IPI) gas valve kits that are set up for Natural gas only and designed to be used with 18 to 30-inch gas log sets. Optional LP conversions kits LPK-18 or LPK-24 are available.

Notice: Please leave these instructions for the consumer. Retain for future reference

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

FOR YOUR SAFETY
WHAT TO DO IF YOU SMELL GAS

- **Do not try to light the appliance.**
- **Do not touch any electrical switch.**
- **Do not use any phone in your building.**
- **Immediately call you gas supplier from a neighbor's phone. Follow the gas suppliers instructions.**
- **If you cannot reach your gas supplier call the fire department.**

Important: Read these instructions carefully before starting installation of your log set.

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

Be sure Flue Damper and Glass Doors are fully open when operating any vented gas log set.

Young children should be carefully supervised when they are in same room as the appliance.

Installation Precautions:

These instructions must be used as a supplement to the instructions supplied with the gas log set. Follow the gas log instructions supplied by the manufacturer on the placement of the burner pan, log basket grate, burner media (sand or vermiculite), ember material and the log placement. Please follow these instructions on the connection of the inlet line to the gas valve and to the burner pan assembly. If this fireplace installation has glass doors, **only operate the fireplace with glass doors in the fully open position.**
This electronic safety pilot system contains a valve, pilot assembly, and connector that are certified by CSA.

Installation Instructions:

INSTALLATION: Valve Kit with Pre-Installed Log Set:

1. Make sure gas is completely turned OFF to the gas log set. Make sure you have a certified and approved shut-off within 6-feet of the fireplace, or per the local code requirements.
2. Remove all logs and basket grate and set aside.
3. Disconnect the 3/8" Flared fitting on the existing manual valve from the inlet gas supply.
4. Remove existing manual valve and fittings on the burner pan.
5. Locate a position on the back of the burner pan about 4-inches from the right or left side of the burner pan. **Note: (Figure 1 & 2)**
6. Mount pilot assembly to burner pan as shown in (**Figure 3**). Note: This pilot bracket clips on the burner pan and holds the pilot at a 45-degree position onto the pan, an attachment screw is recommended. Bend pilot tubing from pilot assembly until the bottom of the pilot bracket is resting against the pan. This will hold the pilot at the 45º position. (**Use caution when bending pilot tubing not to kink the tubing and when locating the igniter and flame sensor wires not to locate the wires and the tubing in or over the burner pan**.)
7. Locate the valve kit in the right or left front corner of the firebox as far forward as possible (**See Figure 4**)
8. Bend inlet gas supply line and connect the 3/8" flare fitting to 3/8" inlet connector on the gas valve. (**Use caution not to kink the aluminum inlet line when bending to fit to the valve**).
9. Bend 12" stainless flex line and connect to valve outlet then connect other end to 3/8" flare fitting on burner pan, (**Caution do not let gas inlet line to the valve kit or gas outlet line from the valve kit be placed inside or overtop of the burner pan**).
10. Turn ON gas supply and check all connections for leaks using soapy water solution.
11. Follow valve lighting instructions. After the pilot is operating, check pilot fittings for leaks.
13. Reinstall basket grate and logs.
14. Install Damper clamp (supplied with valve kit) which allows damper to remain slightly open to allow the pilot gases to vent).

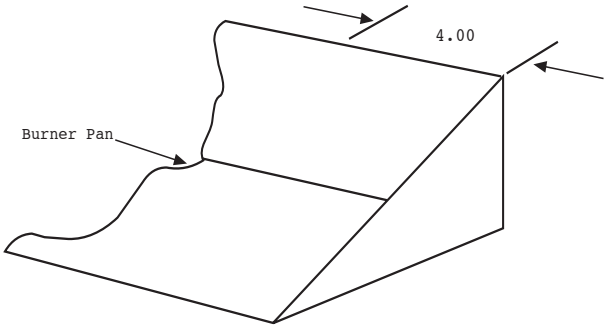
    NOTE: For any PROPANE installations see conversion kit instructions.

INSTALLATION: Valve Kit with New Log Set:

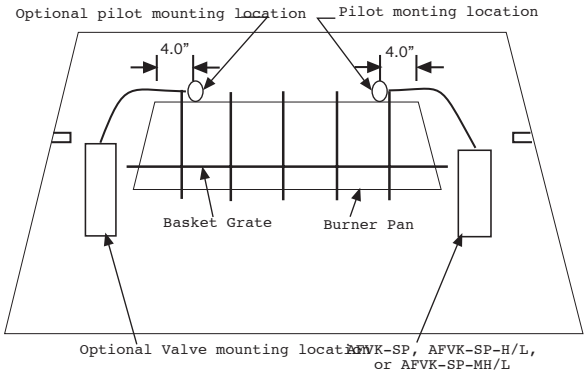
1. Make sure gas is completely turned OFF to the fireplace. Make sure you have a certified and approved shut-off within 6-feet of the fireplace, or per the local code requirements.
2. Follow the instructions supplied with the log set to locate the burner pan. Using the fittings, orifice and gas supply line that came with the log set. Connect the line to the inlet gas supply.
3. Locate a position on the back of the burner pan about 4" from the right or left side of the burner pan. Note: (Figure 1 & 2)
4. Mount pilot assembly to burner pan as shown in (**Figure 3**). Note: This pilot bracket clips on the burner pan and holds the pilot at a 45-degree position onto the pan, an attachment screw is recommended. Bend pilot tubing from pilot assembly until the bottom of the pilot bracket is resting against the pan. This will hold the pilot at the 45º position. (**Use caution when bending pilot tubing not to kink the tubing and when locating the igniter and flame sensor wires not to locate the wires and the tubing in or over the burner pan**.) Locate the valve kit in the right or left front corner of the firebox as far forward as possible (**See Figure 4**)
5. Bend inlet gas supply line and connect the 3/8" flare fitting to 3/8" inlet connector on the valve kit (**Use caution not to kink the aluminum inlet line when bending to fit to the valve**).

6. Bend 12” stainless flex line and connect to valve outlet. Connect other end to 3/8” flare fitting on burner pan. (**Caution do not let gas inlet line to the valve kit or gas outlet line from the valve kit be placed inside or overtop of the burner pan**).
7. Turn ON gas supply and check all connections for leaks using soapy water solution.
8. Follow valve lighting instructions. After pilot is operating check pilot fittings for leaks.
9. Follow the instructions supplied with the log set to install ember material, basket grate and logs.
10. Install Damper clamp (supplied with valve kit) which allows damper to remain slightly open to allow the pilot gases to vent).

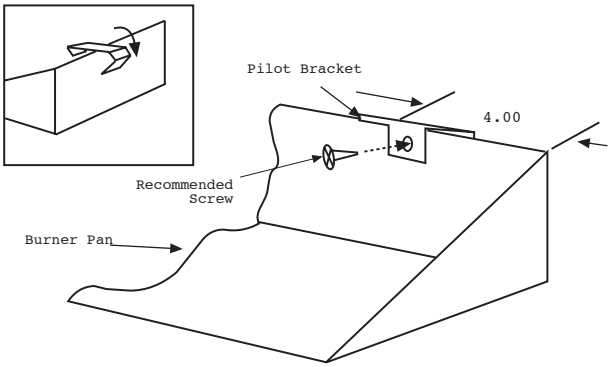
NOTE: For any PROPANE installations see conversion kit instructions.



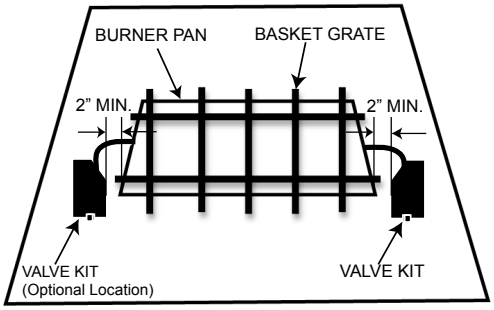
(Figure #1)



(Figure #2)



(Figure #3)



(Figure #4)

Note: (<u>The following section is for reference ONLY</u>) The pilot tubing connection and pilot wiring comes <u>Pre-Assembled</u> to the electronic module (AF-4000MOD) and gas valve.

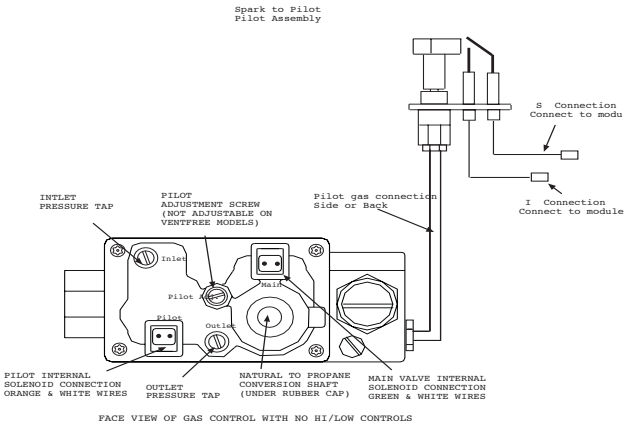
<u>Spark to Pilot Burner Connections</u>

These electronic valve kits uses a spark to pilot burner assembly. The pilot gas connections are as follows.

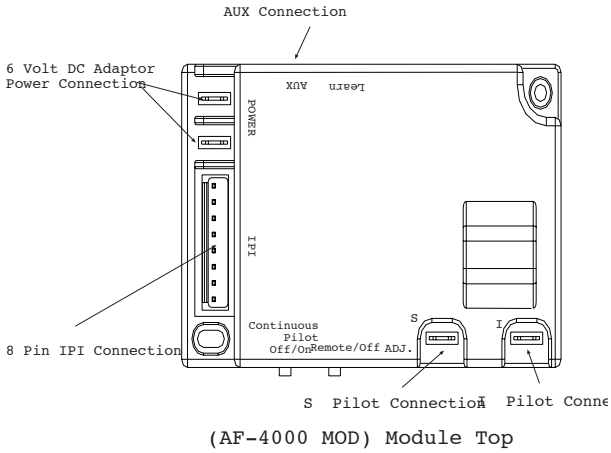
1. Connect the pilot tubing fitting into the pilot outlet connection at the rear of the valve kit and tighten. (Use caution on brass connectors)
2. After installing the pilot tubing connector and gas has been turned ON check all connections for leaks with soap and water solution.

Wiring The Pilot

1. The **"S"** & **"I"** wires from the pilot assembly are per connected at the factory to the **"S"** & **"I"** terminals on the (AF-4000 MOD) module. **Note:** The terminal locations in figures 5 & 6.
2. Route the **"S"** & **"I"** wires from the pilot assembly to the (AF-4000 MOD) module in an area that will be away from the pilot or main burner flame.



(Figure #5)



(Figure #6)

Instructions for installing batteries into the Valve Kit Battery Pack

The battery pack is located at the back of the valve kit inside the metal box. **Note Figures 7 thru 10.**

- **A.** The valve kits battery pack has a 6-inch 4-pin wire harness connecting the battery pack to the module. **See Figure 11.**
- **B**. Prior to installation Note: The location of the battery pack (Figure 7) is located just inside the metal housing at the back of the valve kit. **Note**: Remove the battery pack during installation.

Note: All valve kits are battery powered systems and will not operate without the battery pack. The battery pack controls the solenoid or motor drive of the system and provides the power necessary to operate a valve kit.

AFVK-SP, AFVK-SP-H/L, & AFVK-SP-MH/L Models

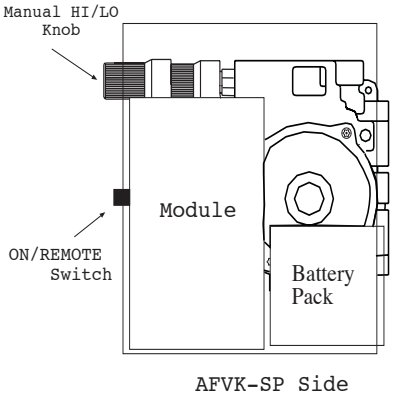
1. Install (4) AA alkaline batteries (Included) in the battery pack as shown in figure 10.
2. The 6-inch 4-pin male connector on the battery pack comes pre-installed to the 4-pin female connector located on the battery pack and module**. Note: Figure 9 & 11 for reference.**
4. The AFVK-SP-H/L & AFVK-SP-MH/L also has (2) 18" wires (Red & Black) that are connected to the Hi/ Lo solenoid**. Note Figure 11.**
5. After the valve kit installation process is completed reinstall the battery pack back into the rear area of the metal box as shown in Figure 7, 8, and 8A.
6. Ensure the excess wire from the 4-pin wire harness and Hi/Lo wire harness are tucked in the metal box to protect them from heat.

AFVK-SP-H/L & AFVK-SP-MH/L Models Only

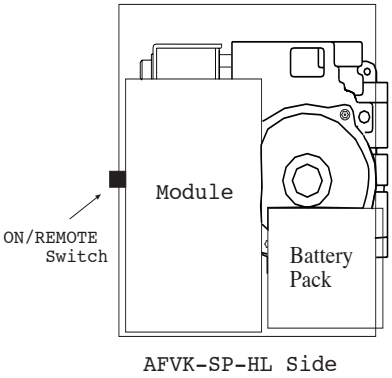
1. Check the connections of the stripped ends of the RED and BLACK wires on solenoid wiring harness to the screw terminals located on the top of the battery pack, note location in Figure 11.
2. Connect the (2) 1/4" female terminals on the solenoid or DC Motor Drive wiring harness to the matching color (RED & BLACK) 1/4" male terminals on the wires from the Hi/Lo solenoid or DC Motor Drive. Note: locations in Figure 11.

Note: On the AFVK-SP-H/L the battery pack switch must be set to LATCHING SOLENOID power to operate the HI/LO solenoid. This switch is located on the face of the battery pack Note Figure 11

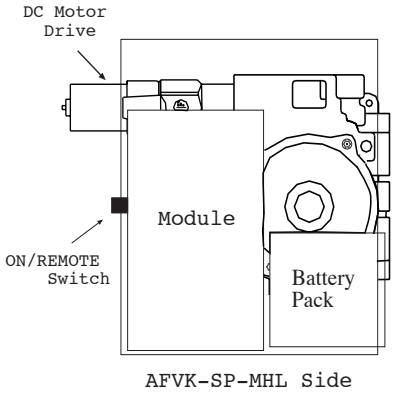
Note: On the AFVK-SP-MH/L the battery pack switch must be set to DC MOTOR DRIVE power to operate the HI/LO DC Motor Drive. This switch is located on the face of the battery pack Note Figure 11



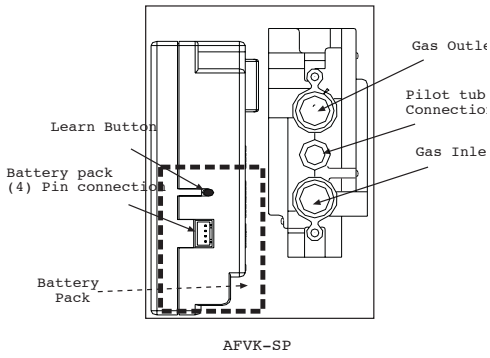
(Figure #7)



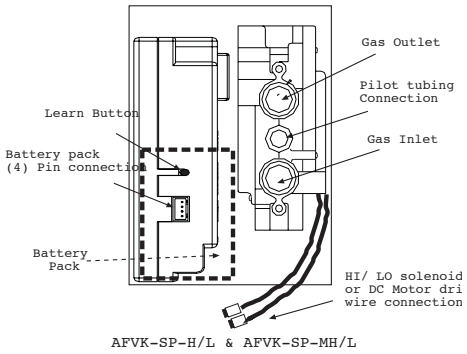
(Figure #8)



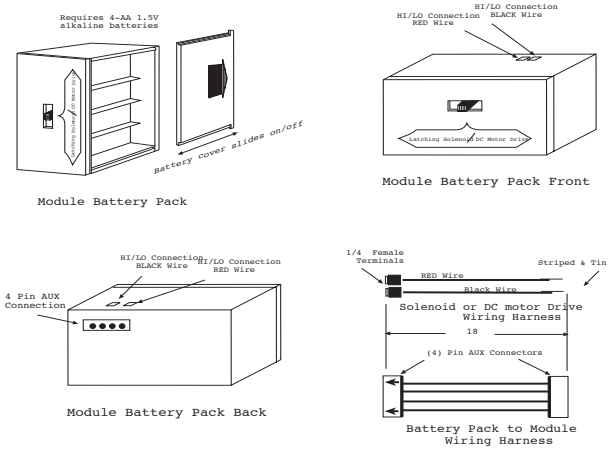
(Figure #8A)



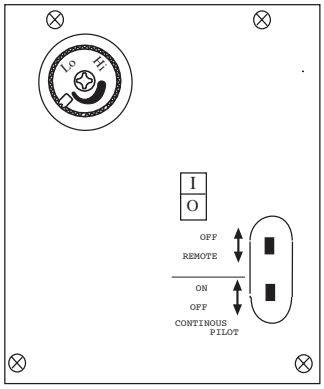
(Figure #9)



(Figure #10)



(Figure #11)



(Figure #12)

Converting the AFVK-SP, AFVK-SP-H/L, & AFVK_SP-MH/L Natural to Propane

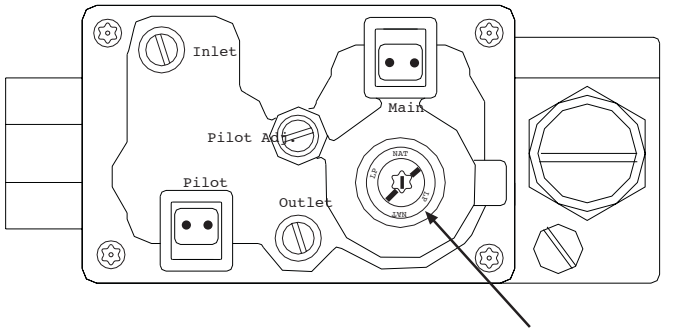
Note: When converting a vented log set from NATURAL to PROPANE it will be necessary to use the LPK-18 or LPK-24

The AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L electronic control valves are convertable from Natural gas to Propane gas by a Simple Rotary knob located on the front (Face) of the valve. Note: Figure 12

1. Remove the black metal cover from the valve box to access the face of the control valve.
2. Unscrew the aluminum cap on the front of the gas valve. **Note**: the position of the marker on the shaft of the Simple Rotary knob. This mark will point to NAT or LP that indicates the type of gas the valve is set on.
3. To convert the AF-4000 from the factory setting (NAT) push inward the Simple Rotary knob and rotate 90º. **Note**: the marker will now point to LP and the shaft will stay in.
4. To convert the AF-4000 back to the factory setting (NAT) push in the Simple Rotary knob and rotate 90º. **Note**: the marker will now point to NAT and the shaft will stay out.
5. After the conversion has been made check the outlet pressure with a manometer. The factory setting on the internal regulator is 3.5"WC natural and 10.5"WC propane.
6. Replace the aluminum cap.

Note: See the LPK 18 or 24 instructions to convert the burner pan to propane gas this involves installing an orifice air shutter pilot orifice and media.

Use extreme caution when changing this Simple Rotary knob.



FACE VIEW OF GAS CONTROL WITH NO HI/LOW CONTROLS

Special Features On The Valve Kits Module

All valve kits modules have (2) special features built into the system as follows:

1. CONTINUOUS PILOT FEATURE:

The AFVK-SP, AFVK-SPH/L & AFVK-SPMH/L valve kits have a **continuous pilot feature** that may be activated in cold climate conditions or to maintain a draft in the chimney. The **continuous pilot** can be activated by the following two methods.

Off/Continuous Pilot Switch on the Front of the Valve Kit

The Continuous Pilot feature may be activated by placing the "Off/Continuous Pilot" switch located on the front of the valve kit in the "Continuous Pilot" position. See figure 12. When this switch is turned to the Continuous pilot position the pilot will immediately spark to light the pilot and the pilot will remain ON.

Continuous Pilot Button on the Hand Held Remote

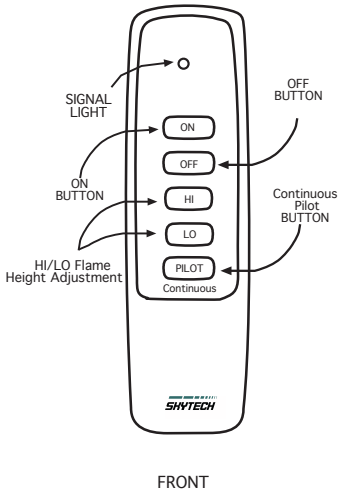


Figure #13

To use the continuous pilot feature from the hand held remote control ensure the "Off/Remote" switch on the front of the valve kit is in the "remote" position. See figure 12. Simply press the button on the hand held remote marked "Continuous Pilot" (See figure 13). The pilot will immediately spark to light the pilot and the pilot will remain ON.

2. REMOTE CONTROL FEATURE:

Note: The AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L comes with a remote control transmitter.

The valve kit module has a built in remote control receiver that allows the user to program a hand held remote transmitter to the appliance at any time during or after installation of the appliance.

1. There is a rocker switch located on the front of the valve kit that reads REMOTE/OFF. **Note**: Figure 12
2. When the remote/off switch is in the OFF position the valve kit will operate from the front mounted rocker switch. **Note**: Figure 12 *("O" is Off and "I" is for Ignite)*
3. When the remote/off switch is in the REMOTE position the appliance will operate from the Remote Control transmitter. **Note:** The valve kit module must be programmed to the Remote Control transmitter.
4. To program the module (Make sure the batteries have been installed in the battery pack) locate the learn button on the module (See figures 9 & 10). Press and release the learn button there will be a beep sound from the module. Then press any key on the remote transmitter. Once the modules internal receiver accepts the transmitter code, there will be a series of rapid beeps.
5. The remote system is ready for use.

MAINTENANCE OF YOUR AFVK-SP SERIES VALVE KIT SYSTEM

1. Your system should be checked once a year (At the start of the heating season) for proper operation by a qualified service representative.
2. Replace all batteries at the start of the season. Items to check: electronic valve operation, Spark to pilot operation, ON/OFF switch operation, damper operation, visual check of the burner and gas connections for leaks.

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.

1. This installation should be installed with provisions for combustion and ventilation air, must conform with local codes or in the absence of local codes to the national fuel Gas Code ANSI Z223 latest addition.
2. This product must be on a gas supply line that is less than 1/2 psi. and an individual manual shut-off.
3. **Never** operate this new system with the glass fireplace enclosures (doors) in the **closed position**.
4. Connecting 120-volt electrical power to a valve kit directly will cause damage and will void warranty. An optional AF-4000ADP24 adapter (step-down transformer 120VAC to 7.5VDC) can be installed to eliminate batteries. The battery pack must remain connected to enable the solenoid or motor drive operation however the batteries can be removed.

OPERATING PROCEDURE

After installation is completed follow these steps to operate the AFVK-SP.

1. Turn on the main gas supply and check all fittings and connections for leaks with soap and water solution.
2. Move the OFF/REMOTE slide switch on the front to the REMOTE position. **Note**: Figure 12
3. Push the ON button on the remote transmitter this will start the ignition system. The pilot will begin to spark and then light. Once the pilot is lit 2 seconds the main burner will light.
4. Adjust the main flame from HI to LO with the manual HI/LO knob on front of valve kit.

Note: Move the OFF/REMOTE slide switch on the front to the OFF position then push the rocker switch to the "I" position this will manually start the ignition system. Once the pilot is lit 2 seconds the main burner will light.

After the installation is complete follow these steps to operate the AFVK-SP-H/L & AFVK-SP-MH/L

1. Turn on the main gas supply and check all fittings and connections for leaks with soap and water solution.
2. Move the OFF/REMOTE slide switch on the front to the REMOTE position. **Note**: Figure #12
3. Push the ON button on the remote transmitter position this will start the ignition system. The pilot will begin to spark and then light once the pilot is lit 2 seconds later the main burner will light.

4. Adjust the main flame from HI to LO with the HI/LO buttons on the remote transmitter.

Note: Move the OFF/REMOTE slide switch on the front to the OFF position then push the rocker switch to the "I" position this will manually start the ignition system. Once the pilot is lit 2 seconds the main burner will light.

Note: On the AFVK-SP-H/L press and release the LO button and the flame will go to LO. Press and release the HI button and the flame will go to HI.

Note: On the AFVK-SP-MH/L press and hold the LO button and the flame will modulate to LO. Press and hold the HI button and the flame will modulate to HI.

Note: On initial start up: due to air in the gas supply line it may take an extended amount of time for the pilot to light. There is a 60 second lockout built into the module. To reset turn the rocker switch OFF then ON or push the OFF button on the remote transmitter then push the ON button.

TROUBLESHOOTING

IMPORTANT: An experienced qualified service technician should only perform troubleshooting procedures.

If the pilot will not stay lit:

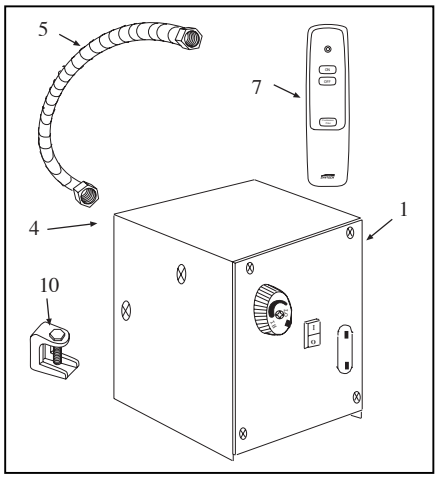
1. Confirm that the "S" sensor wire and the "I" igniter wires are properly connected to the module "S" and "I" terminals on the module. **Note**: Figure 6 for terminal locations.
2. Confirm that the Spark to Pilot burner is properly grounded to the gas control valve (Ground is provided through the pilot tubing).
3. Check the ground wire from the module to the gas control valve (Black ground wire on the 8 pin conector)
4. Check the power source battery pack connections and voltage of batteries.
5. Optional check the position of the CONTINUOUS PILOT switch on the valve kit module. **Note**: Figure 12

If main burner does not come ON when the manual rocker switch or remote control is turned ON:

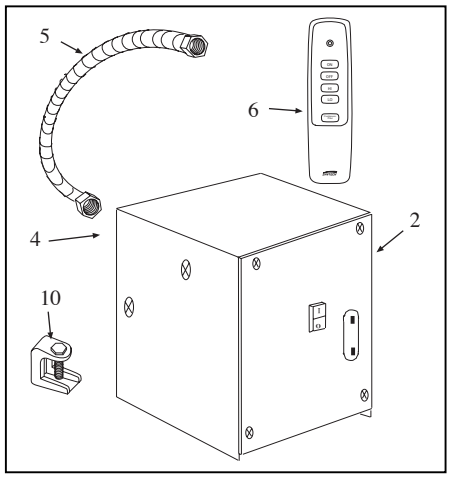
1. Confirm that the pilot sparks and lights.
2. Check the (2) pin plastic connectors that plug in the face of the gas control valve **Note**: Figure 5.
3. Confirm that the gas control valve is properly grounded to the valve kit module.

If remote won't operate valve kit

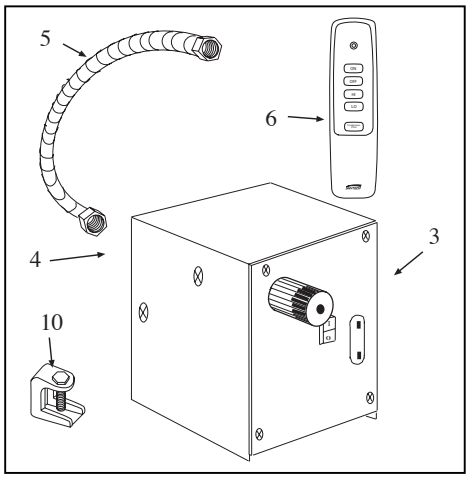
1. Ensure the module switch is in Remote position and check batteries in the remote and the battery pack.
2. Clear Codes: Memory in the module might be full if the learn button is pressed too many times. If this happens no audible beep will be heard. To clear memory, place the module slide switch into the REMOTE position. Press the learn button and release after 10 seconds. You should hear three (3) long audible beeps indicating all codes have cleared. You can now "relearn" the transmitter to the module as described below.
3. Press the LEARN button on the module to accept the transmitter security code. Ensure the slide button on the module in the REMOTE position; the module will **not** LEARN if the slide switch is in the OFF position. The LEARN button is located on the side of the module (See figure 10). Using the end of a paperclip or toothpick gently press and release the black LEARN button inside the hole. When you release the LEARN button the module will emit an audible "beep". After the module emits a beep press the transmitter ON button and release. The module will emit several beeps indicating that the transmitter's code has been accepted into the module then you can presume normal operation.



AFVK-SP



AFVK-SP H/L



AFVK-SP-MH/L

AFVK-SP & AFVK-SP-H/L PARTS LIST

Item Number	Description	Part Number
1	AFVK-SP Valve Assembly	238577-4
2	AFVK-SP-H/L Valve Assembly	238577-5
3	AFVK-SP-MH/L Valve Assembly	238577-16
4	3/8” Flare x 3/8” NPT connector	685-22
5	12”stainless steel connector line	685-11
6	SP1001H/L Transmitter (AFVK-SP-H/L & AFVK-SP-MH/L (Only)	238577-14
7	SP1001 Transmitter (AFVK-SP Only)	238577-15
8	Damper clamp	685-14
9	Complete Pilot assembly (not shown)	238577-13

Limited Warranty

American Flame warrants the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L Valve Kit for 12 months from the date of purchase or installation to the original purchaser to be free from defects in materials and workmanship. Damage to the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L Valve Kit caused by accident, misuse, abuse, or installation error, whether preformed by a contractor, Service Company, or owner, is not covered by this warranty. American Flame will not be responsible for labor charges and/or damage incurred in installation, repair, replacement, or for incidental or consequential damage. Some states, provinces, and nations do not allow exclusion or limitations of incidental or consequential damages, so the above limitations or exclusions may not apply. This warranty gives you specific legal rights. You may also have other rights that vary by state, province, or nation

American Flame, Inc. 9230 Conservation Way Fort Wayne, IN 46809
Phone (888) 672-8929 Fax (888) 672-8024

Troubleshooting information is available on line at:
www.skytechsystem.com