

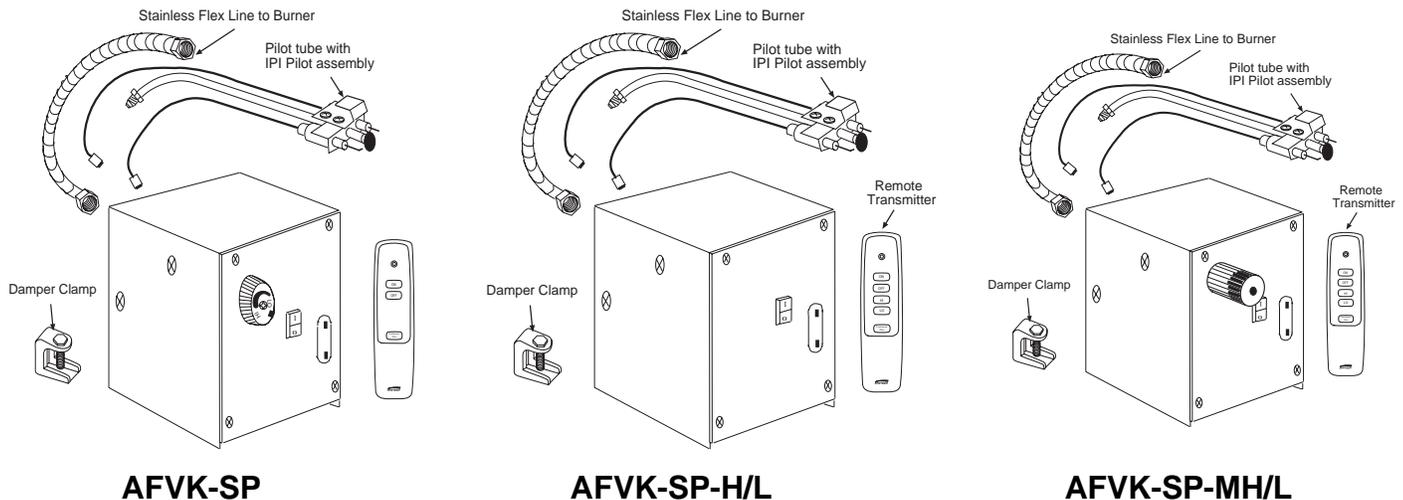
Electronic Safety Pilot System

Models:

- AFVK-SP** Manual Flame Height Adjustment Hi to Lo (Natural/Propane Gas)
 - AFVK-SP-H/L** Remote Flame Height Adjustment Solenoid Hi to Lo (Natural/Propane Gas)
 - AFVK-SP-MH/L** Remote Flame Height Adjustment DC Motor Drive Hi to Lo (Natural/Propane Gas)
- (SPLPK-18 or SPLPK-24 Kits are available for Propane installations)

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

INSTALLATION AND OPERATING INSTRUCTION



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.

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

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.

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:

This section is for installing 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 six feet of the fireplace, or whatever the local inspection authority requires.
 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" 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 45-degree position. Connect pilot fitting to valve. **(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 AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L 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 (Fitting with **Plastic** cap) on the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L. **(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 AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L or gas outlet line from the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L be placed in or over 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 this valve kit) (This allows damper to remain slightly open to allow the pilot gases to vent).
- NOTE: On all PROPANE installations it is recommended that an inlet pressure regulator be used.**

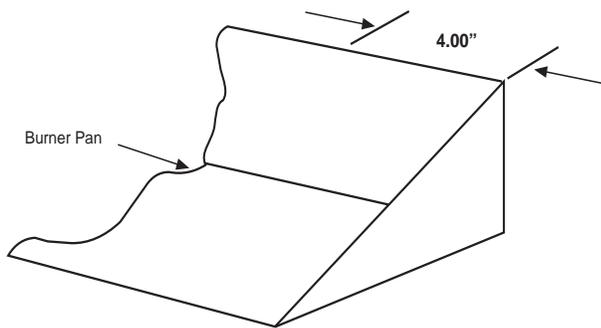
This section is for installing valve kit with new log set:

1. Make sure gas is completely turned off to the fireplace. Make sure you have a certified and approved shut-off within six feet of the fireplace, or what ever the local inspection authority requires.
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)
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

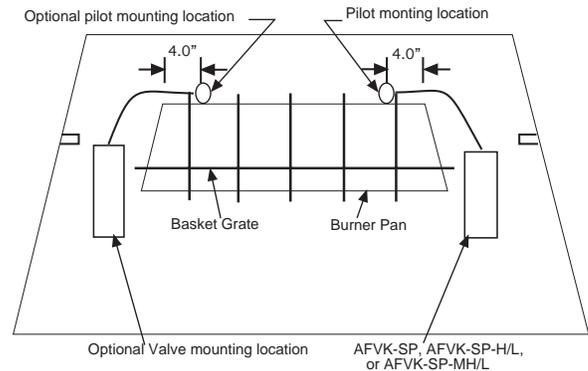
pilot assembly until the bottom of the pilot bracket is resting against the pan. This will hold the pilot at the 45-degree position then connect pilot fitting to valve. (**Use caution when bending pilot tubing not to kink the tubing and when locating the igniter and flame sensor wires not to locate the wires and the tubing in or over the burner pan.**)

4. Locate the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L 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 (Fitting with **Plastic** cap) on the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L (**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 AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L or gas outlet line from the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L be placed in or over 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 this valve kit) (This allows damper to remain slightly open to allow the pilot gases to vent)

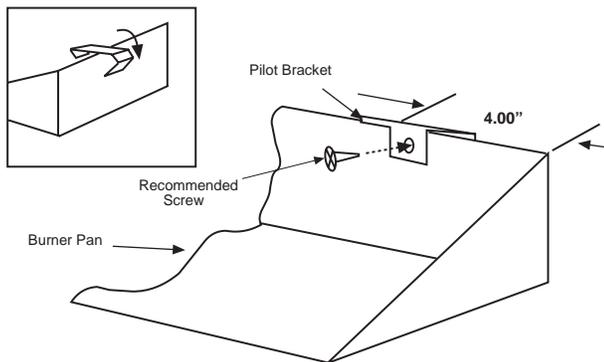
NOTE: On all PROPANE installations it is recommended that an inlet pressure regulator be used.



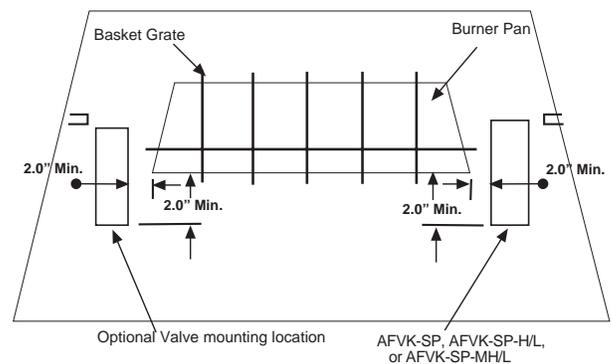
(Figure #1)



(Figure #2)



(Figure #3)



(Figure #4)

Note: (The following section is for reference ONLY) The pilot tubing connection and pilot wiring comes assembled to the electronic module (AF-4000MOD) and the valve.

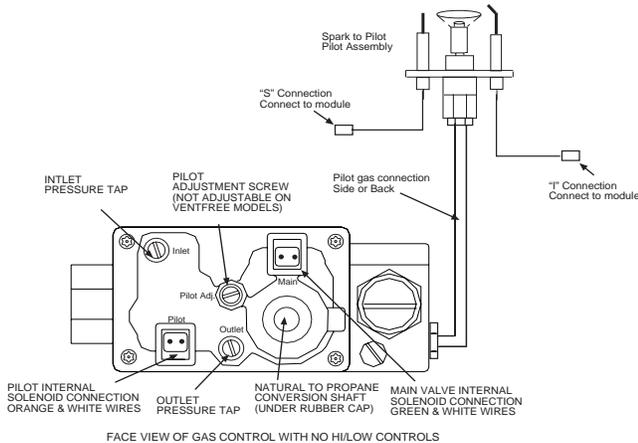
Spark to Pilot Burner Connections

This AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L electronic valve kit uses a spark to pilot burner assembly. The pilot gas connections are as follows.

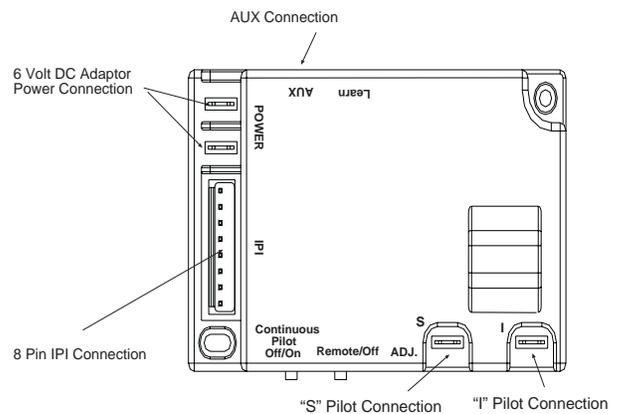
1. Connect the pilot tubing fitting into the pilot outlet connection at the rear of the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L and tighten. (Use caution on brass connectors)
2. After installing the pilot tubing connector and gas has been turned on check all connections for leaks with rich soap and water solution.

Wiring The Pilot

1. The “S” & “I” wires from the pilot assembly are pre connected at the factory to the “S” & “I” terminals on the (AF-4000 MOD) module. Note: The terminal locations Figure #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)



(AF-4000 MOD) Module Top

(Figure #6)

Instructions for installing batteries into the AFVK-SP, AFVK-SP-H/L & AFVK-SP-MH/L battery pack

The battery pack is located at the back of the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L valve kit inside the metal case.

Note Figure #7 & #8 & #8A & #9 & 10

- A. On the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L the battery pack has a 6” (4) wire harness connecting the battery pack to the module. **Note Figure # 11**
- B. Prior to installation Note: The location of the battery pack (Figure #5 & #6) is located just in the metal housing at the back of the valve kit. Note: Remove the battery pack during installation.

Note: The AFVK-SP, AFVK-SP-H/L, & AFVK-SP-H/L are DC volt Battery powered systems and will not operate without the battery pack

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

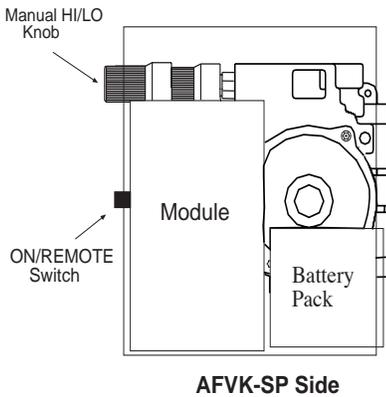
1. Install (4) AA alkaline batteries (Included) in the battery pack as shown in figure #10.
2. The (4) pin male connector on the 6” (4) wire battery pack comes pre connected to the (4) pin female connector located on the battery pack and module. **Note: Figure #9 & #11 for reference**
4. On the AFVK-SP-H/L & AFVK-SP-MH/L there are also (2) 18” wires (Red & Black) that are connected to the High / Low solenoid. **Note Figure #11**
5. After the valve kit installation process is completed reinstall the battery pack back into the rear area of the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L metal case as shown in Figure #7 & #8 & #8A
6. Use caution that the excess wire of the (4) pin wire harness and HI/LO wire harness is tucked in the metal case 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.

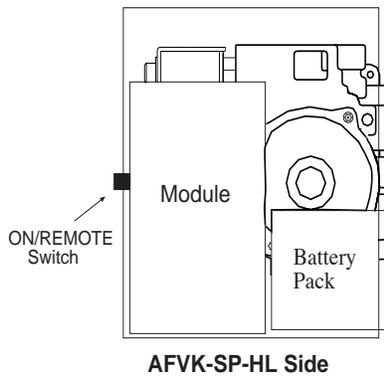
Note: On the AFVK-SP-H/L the battery pack switch must be set to LATCHING SOLENOID power to operate the HI/LO solenoid. This switch is located on the face of the battery pack Note Figure # 11

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



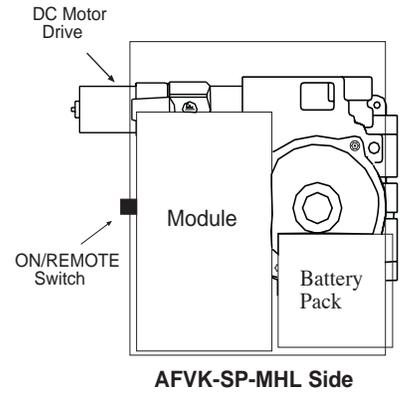
AFVK-SP Side

(Figure #7)



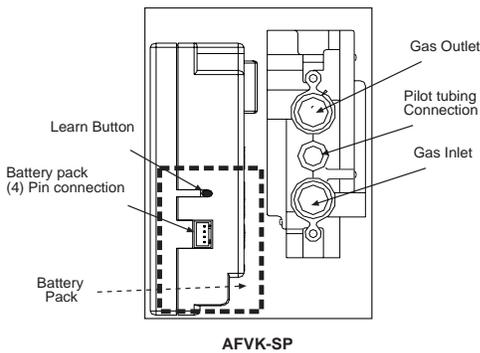
AFVK-SP-HL Side

(Figure #8)



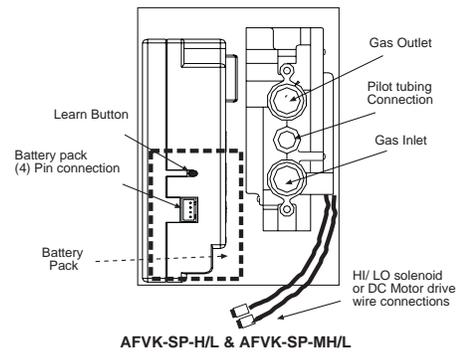
AFVK-SP-MHL Side

(Figure #8A)



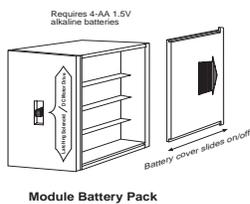
AFVK-SP

(Figure #9)

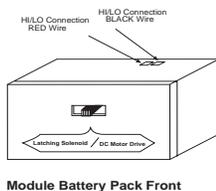


AFVK-SP-H/L & AFVK-SP-MH/L

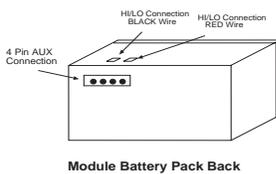
(Figure #10)



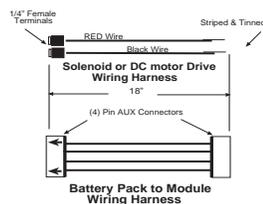
Module Battery Pack



Module Battery Pack Front

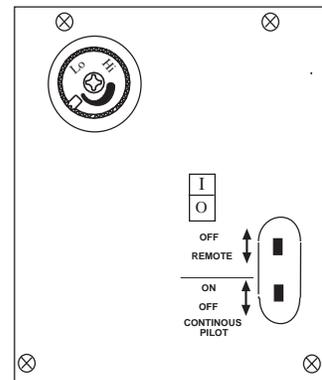


Module Battery Pack Back



Battery Pack to Module Wiring Harness

(Figure #11)



(Figure #12)

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

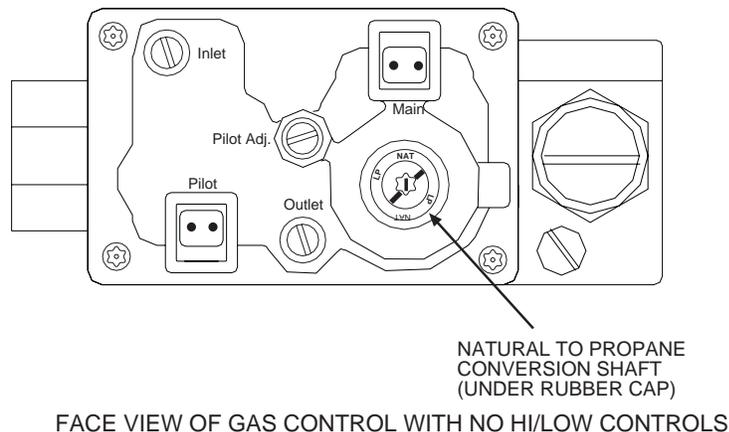
Note: When converting a vented log set from NATURAL to PROPANE it will be necessary to use the SPLPK-18 or SPLPK-24

The AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L electronic control valves are convertible 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 front cover to access the face of the control valve.
2. Remove the Black cap by pulling the cap straight off. 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 in the Simple Rotary knob and rotate 90°. 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 90°. 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 3.50"wc natural and 10.5"wc propane.
6. Replace the Black cover cap.

Note: see the SPLPK 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.



(Figure #12)

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 with an individual manual shut off.
3. **Never** operate this new system with the glass fireplace enclosures (doors) in the **closed position**.
4. Connecting 110-volt electrical power to this product will cause damage and will void warranty

Special Features On The (AFVK-SP, AFVK-SP-H/L, & AFVK-SP-MH/L Module

The (AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L) module has (2) special features built into the system.

CONTINUOUS PILOT FEATURE:

This allows the user to change from a spark to pilot system to a standing pilot system for use during Cold Climate conditions to maintain a draft in the chimney.

1. There is a switch located on the front of the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L that reads CONTINUOUS PILOT ON/OFF. **Note:** Figure #12. This switch will allow the user to manually select the pilot mode of operation, On at all time, Or only when the main flame is lite.
2. When the continuous pilot switch is in the OFF position and the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L's rocker switch is turned ON the pilot will spark and light, and when the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L's rocker switch is turned OFF the pilot will shut OFF when the main burner shuts OFF. When the continuous pilot switch is in the ON position and the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L's rocker switch is turned ON the pilot will spark and light, when the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L's rocker switch is turned OFF the pilot will stay ON when the main burner shuts OFF. This setting is generally used in Cold Climate conditions to maintain a draft in the chimney.
3. The hand held Remote Control can also activate the CONTINUOUS pilot feature mode.

REMOTE CONTROL FEATURE:

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

The (AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L) 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 switch located on the front of the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L that reads REMOTE/OFF. **Note:** Figure #12
2. When the remote/off switch is in the OFF position the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L will operate from the front mounted rocker switch. **Note:** Figure #12
3. When the remote/off switch is in the REMOTE position the appliance will operate from the Remote Control transmitter. **Note:** The AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L must be programmed to the Remote Control transmitter.
1. To program the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L (Make sure the batteries have been installed in the battery pack) locate the learn button on the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L (Note Figure #9 & #10). Press and release the learn button there will be a beep sound from the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L. Then press any key on the remote transmitter. Once the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L internal receiver accepts the transmitter code, there will be a series of confirming beeps.
2. The remote system is ready for use.

MAINTENANCE OF YOUR AFVK-SP, AFVK-SP-H/L, & AFVK-SP-MH/L 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.

TROUBLESHOOTING

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

If the pilot will not stay lit:

1. Confirm that the "S" wire and the "I" wire are properly connected to the (AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L) module "S" and "I" terminals. **Note:** Figure #6 for terminal locations.
2. Confirm that the Spark to Pilot burner is properly grounded to the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L 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.

- Optional check the position of the CONTINUOUS PILOT switch on the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L module. **Note:** Figure #12

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

- Confirm that the pilot sparks and lights.
- Check the (2) pin plastic connectors that plug in the face of the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L gas control valve **Note:** Figure #5
- Confirm that the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L gas control valve is properly grounded to the AFVK-SP, AFVK-SP-H/L, or AFVK-SP-MH/L module.

OPERATING PROCEDURE

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

- Turn on the main gas supply and check all fittings and connections for leaks with rich soap and water solution.
- Move the OFF/REMOTE slide switch on the front to the REMOTE position. **Note:** Figure #12
- 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.
- Adjust the main flame from HI to LO with the manual HI/LO knob.

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

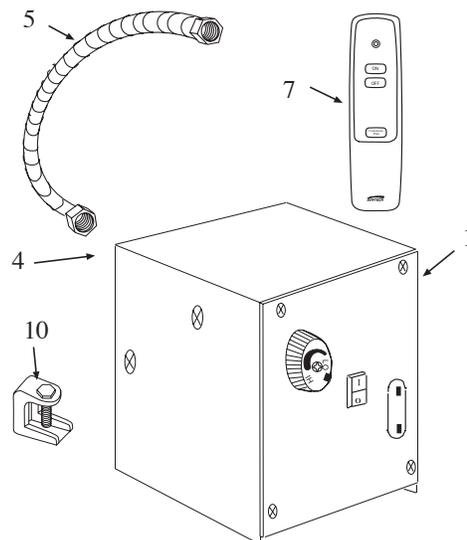
- Turn on the main gas supply and check all fittings and connections for leaks with rich soap and water solution.
- Move the OFF/REMOTE slide switch on the front to the REMOTE position. **Note:** Figure #12
- Push the ON button on the remote transmitter position this will start the ignition system. The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

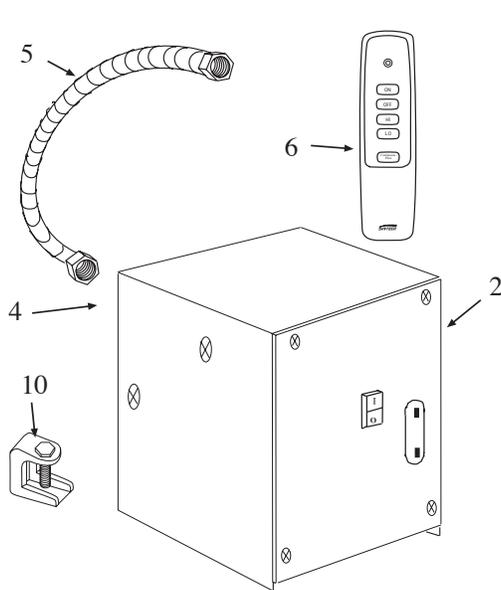
Note: On the AFVK-SP-H/L press and release the LO button and the flame will go to LO. Press and release the HI button and the flame will go to HI.

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.

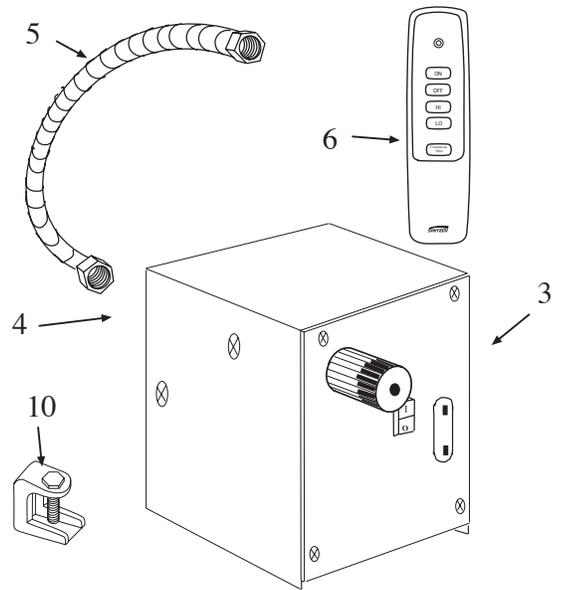
Note: On initial start up: due to air in the gas supply line it may take an extended amount of time for the pilot to light. There is a 60 second lockout built into the module. To reset turn the rocker switch OFF then ON or push the OFF button on the remote transmitter then push the ON button.



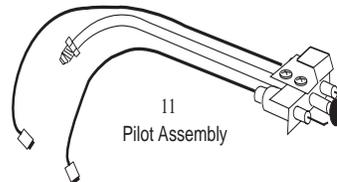
AFVK-SP



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
10	Damper clamp	685-14
11	Complete Pilot assembly	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 performed 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

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