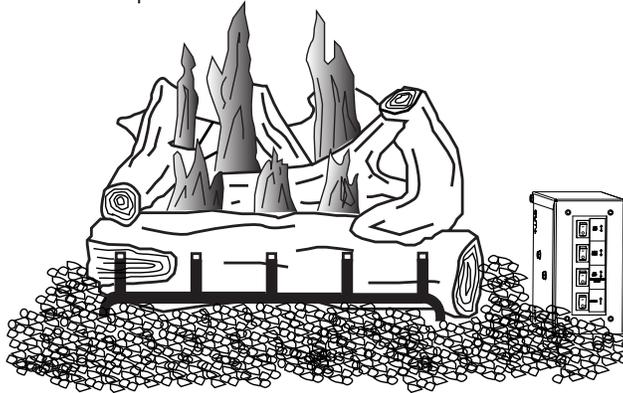




SKYTECH

PRODUCTS GROUP



ecoflow
Control System

Model: ECO-VK-SP-MH-L

This gas valve (Safety Pilot) kit is designed for a Natural gas application for **IN-DOOR USE ONLY**. It is manually operated with the option of adding a remote installation at time of set up or a later date. It features a HI/LO capability with a continuous pilot option.

LP conversions kits ECO-VK-LPK-18 & ECO-VK-LPK-24 are available.

DUE TO HIGH TEMPERATURES THESE MODELS ARE NOT RECOMMENDED FOR INSTALLATION IN SEE THROUGH FIREPLACES

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

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 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.

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.



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

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DESCRIPTION: This gas valve kit is manually operated using the switches on the control box or you can turn it ON and OFF with an optional remote control (see optional accessories on back page). It can accept a total of three remote controls. In addition the valve kit has a unique hinged panel that raises upward to enable replacement of batteries or servicing the system. The gas inlet and outlet connections are 3/8-inch flared fittings for simple connection. The valve kit measures 6½" tall x 3½" wide x 8" deep to the gas fittings.

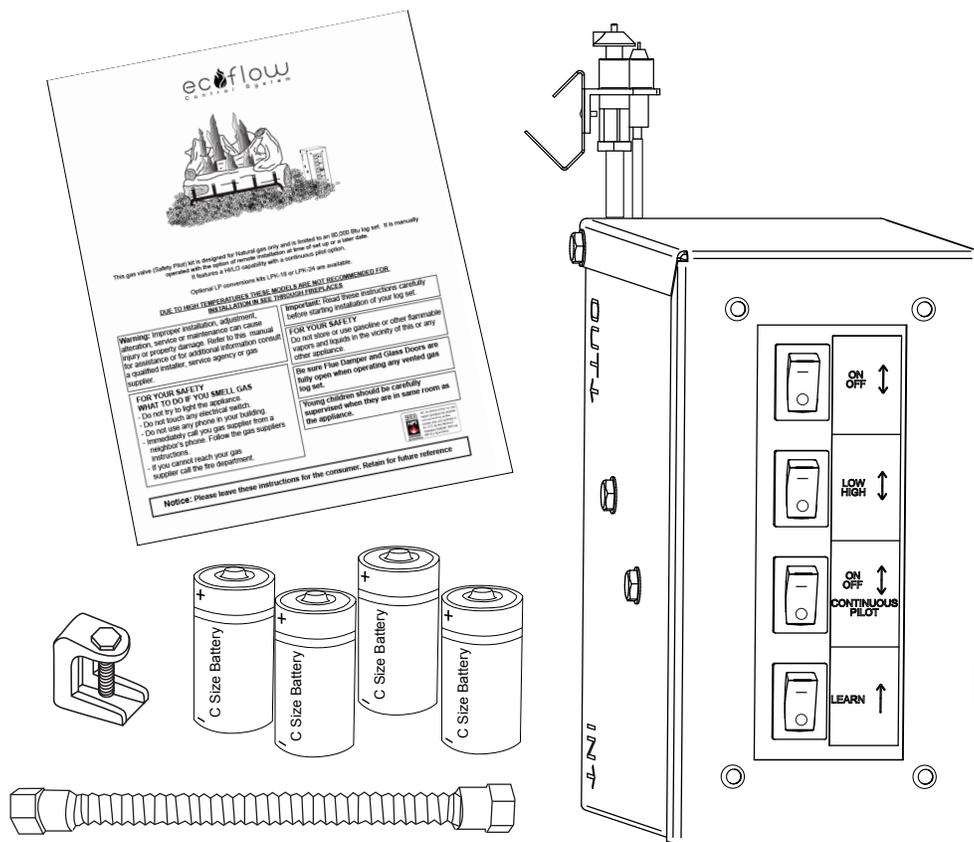


Fig. 1 Contents

Contents: Valve kit assembly, flex connector, damper clamp, (4) C Batteries, and install manual.

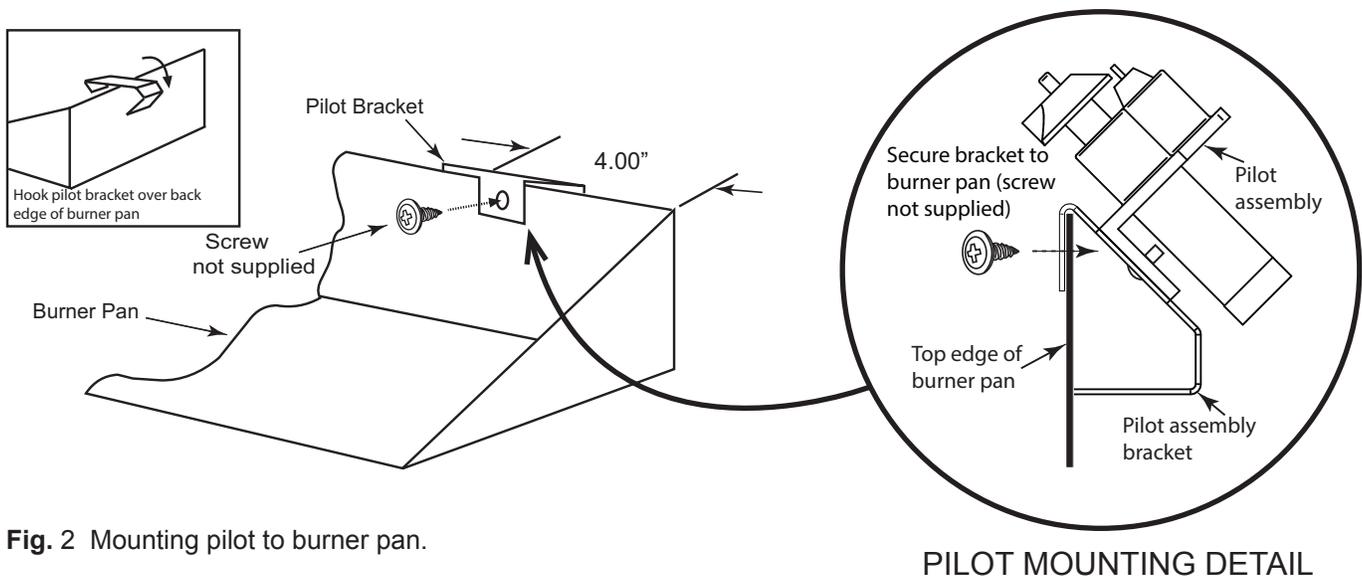
CAUTION: Before installing this valve kit into the fireplace ensure you can maintain proper clearances from the valve box to the basket grate (See Fig. 3 page 3). The valve kit measures 6½" tall x 3½" wide x 8" deep to the gas fittings. If proper clearances cannot be maintained, then you should not install this valve kit.

INSTALLATION INSTRUCTIONS

INSTALLATION: VALVE KIT WITH PRE-EXISTING LOG SET

1. Be 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 existing logs and basket grate. Set them aside on a protective area in the room.
3. Disconnect the existing manual valve from the inlet gas supply.
4. Remove existing pilot assembly (if applicable), manual valve and fittings from the burner pan.
5. Locate a position on the back lip of burner pan about 4-inches from the right or left side of the burner pan to mount the new pilot assembly (See Fig 2).
6. Mount pilot assembly to burner pan as shown in Fig. 2. **NOTE:** The pilot bracket clips over the top edge burner pan and holds the pilot at a 45° position onto the pan, an attachment screw is recommended but not included. Carefully 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° position. (Use caution when bending pilot tubing not to kink the tubing and when locating the igniter wire not to locate the wires and the tubing in or over the burner pan).
7. Locate the Ecoflow valve box in the right front corner (or left front corner if applicable) of the firebox **as far forward as possible** (See Fig. 3) and maintain a minimum of 2-inch clearance from the side of the basket grate. **CAUTION:** When installing logs on basket grate ensure no logs lay across valve kit. Some logs, depending on material, can transfer heat through the metal boxes and cause damage to internal components.
8. Connect inlet supply line to the 3/8" flare fitting on the gas valve. (If using aluminum tubing use caution not to kink the aluminum tube when bending to attach to the valve).
9. Bend stainless flex line (supplied with new kit) and connect to valve outlet. Next connect other end to 3/8" flare fitting on burner pan, **CAUTION: Do not let inlet gas line to the valve kit or gas outlet line from the valve kit be placed inside or over-top of the burner pan.**
10. Turn gas supply **ON** and check ALL connections for leaks using soapy water solution before lighting the log set.
11. Follow valve lighting instructions. Once pilot is lit check pilot fittings for gas leaks.
12. Reinstall basket grate and logs.
13. 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.



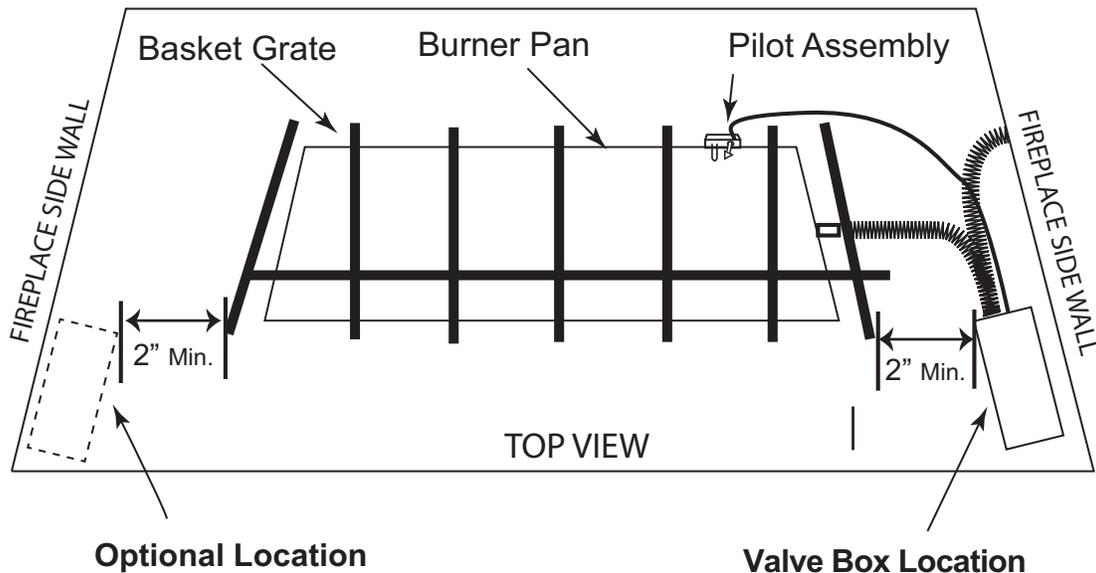


Fig. 3. Valve box location.

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 lip of burner pan about 4" from the right or left side of the burner pan (See Fig. 2).
4. Mount pilot assembly to burner pan as shown in (Fig. 2). **NOTE:** This pilot bracket clips on the burner pan and holds the pilot at a 45° position onto the pan, an attachment screw (not supplied) 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° position. (Use caution when bending pilot tubing not to kink the tubing).
5. Locate the valve box in the right front corner (or left front corner if applicable) of the firebox **as far forward as possible** (See Fig. 3) and maintain a minimum of 2-inch clearance from the side of the basket grate.
6. 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).
7. Bend stainless flex line and connect to valve outlet. Connect other end to 3/8" flare fitting on burner pan.
CAUTION: Do not let inlet gas line to the valve kit or gas outlet line from the valve kit be placed inside or over top of the burner pan.
8. Turn **ON** gas supply and check ALL connections for leaks using soapy water solution before lighting the log set.
9. Follow valve lighting instructions. Once pilot is lit check pilot fittings for gas leaks.
10. Follow the instructions supplied with the log set to install ember material, basket grate and logs.
11. Install Damper Clamp (supplied with valve kit) which allows damper to remain slightly open to allow the pilot gases to vent).
CAUTION: When installing logs on basket grate ensure no logs lay across and touch the valve or switch boxes. Some logs, depending on material, can transfer heat through the metal boxes and cause damage to internal components.

NOTE: For any PROPANE installations see conversion kit instructions.

BATTERY PACK LOCATION

Lift the hinged top to locate the battery pack. Next slide the battery pack out of the holder and install four (4) C-size batteries. Replace the battery pack and close the hinged top. **CAUTION:** When closing the hinged top be careful not to pinch the wires.

NOTE: This valve kit is a battery powered system however an optional AF-4000ADP24 (120VAC to 7.5VDC adapter) may be used to eliminate the battery pack or the battery pack can remain installed as a battery back-up.

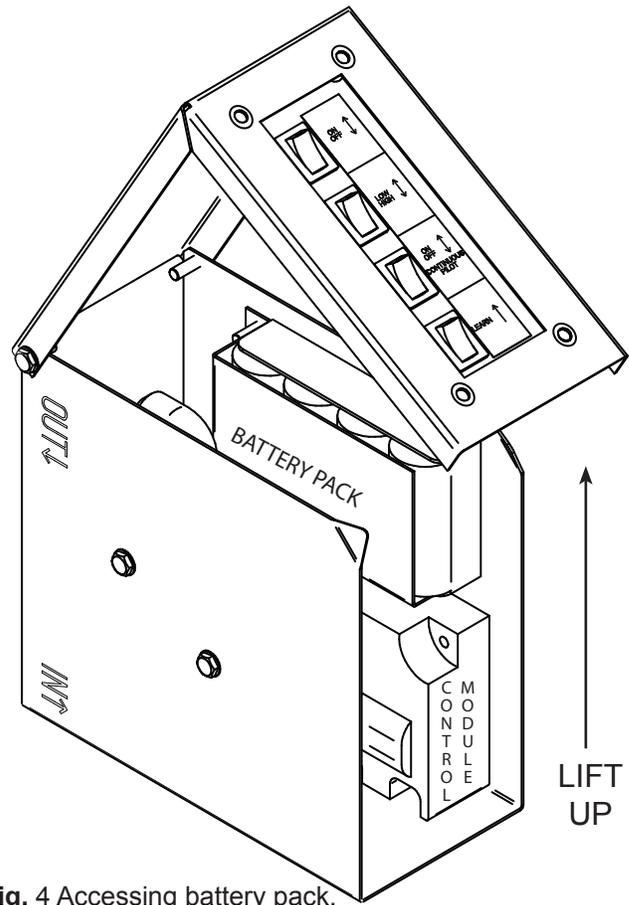
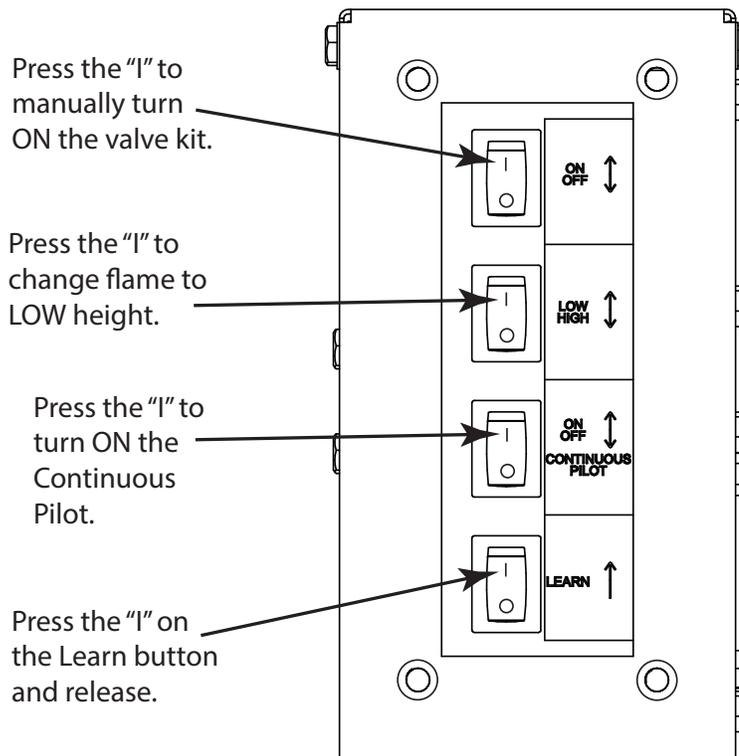


Fig. 4 Accessing battery pack.

OPERATION

After installation is completed follow these steps to operate the **ECO-VK-SP-MH-L**



Press the "I" to manually turn ON the valve kit.

Press the "I" to change flame to LOW height.

Press the "I" to turn ON the Continuous Pilot.

Press the "I" on the Learn button and release.

1. Turn **ON** main gas supply and check all fittings and connections for leaks with a soap and water solution. **NOTE:** After turning valve kit OFF, there is a 30-second wait time before turning back ON or error code will occur.
2. Push the "I" on the top button to turn ON (System will take approximately 7-10 seconds before ignition after the gas line is purged).
3. The main flame ignites in the HIGH position. It may be adjusted to LOW by pressing the "I" on the LOW/HIGH button.
4. A continuous pilot flame can be turned ON or OFF with the continuous pilot button.
5. If using a remote control proceed to LEARNING TRANSMITTER TO SECTION (See page 5) If not using a remote control the LEARN button will not be used.

Fig. 5 Switch identification.

PROGRAMMING OPTIONAL REMOTE CONTROLS

LEARNING TRANSMITTER TO MODULE

(Pairing the remote to the control module)

1. To **LEARN** (pair) the remote transmitter to the control module, press and release the LEARN button (switch) on the valve box. You will hear single audible beep indicating the module is ready to learn the transmitter security code. Press any button on the transmitter within 60 seconds. The code is accepted when you hear 4 short beeps in rapid succession. Security codes will be retained in memory indefinitely if power is removed.
2. To **Clear Codes**: Press and hold learn switch on for 6-seconds to clear all transmitter security codes retained in memory. Codes are clear when you hear three long beeps in succession.

TROUBLESHOOTING

The EcoFlow Valve box lid assembly is designed to lift up from the front as shown in the replacement parts diagram on page 6. This will provide you access for troubleshooting or replacing parts.

Error Codes

The control module has the ability to detect problems with the valve kit system and will initiate error codes when they occur. The error codes listed below will guide you to solving troubleshooting issues.

Ignition Safety Error: One short beep every one second.

Cause: Pilot did not light within the trial period of 50-60 seconds therefore step motor will turn gas valve to OFF position.

Corrective Action: Press OFF button to clear. Wait 30 seconds and try again.

Recycle Safety Error: Two short beeps every one second.

Cause: 1. Pilot automatically lights and drops out 3-times within 2-minutes causes step motor to turn gas valve to OFF position. 2. Someone has pressed the ON/OFF button 6-times within 2-minutes causing the step motor to turn gas valve to OFF position.

Corrective Action: Press OFF button to clear. After 5-minutes the beeping will stop then retry.

Sensor Safety Error: Four short beeps every one second (constant beeping).

Cause: Pilot flame sensor voltage too high, ground circuit not properly connected, pilot ground wire loose or not connected, or motor not plugged into control module therefore step motor will turn gas valve to OFF position.

Corrective Action: Press OFF button to clear. Wait 30-seconds to thermocouple to cool down. If persist, then check other possible causes and retry.

Thermal Safety: Four short beeps every two seconds.

Cause: System has overheated and exceeded 170°F internal temperature limit and the step motor will turn gas to OFF.

Corrective Action: Internal temperature must cool down to below 160°F then press the OFF button to clear and retry.

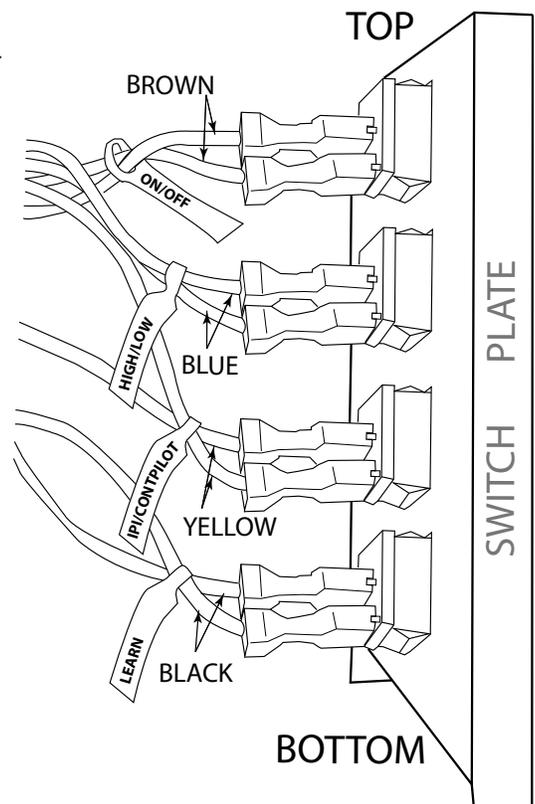
Communication Safety: One short beep every four seconds.

Cause: Transmitter and module are not communicating properly. Could be related to distance greater than 20-feet away from each other or weak/dead batteries in one or the other.

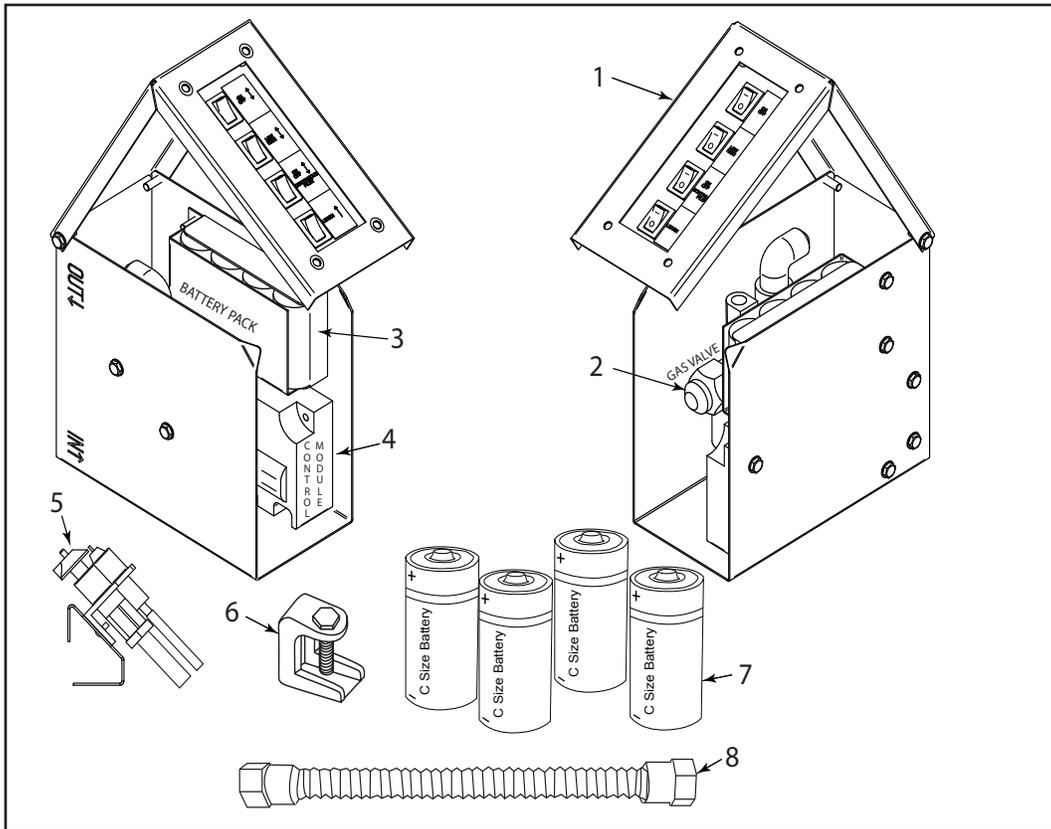
Corrective Action: Module must receive a signal from transmitter

General Troubleshooting

1. Check for pinched, or loose wire connections.
2. Check battery voltage.
3. Check for frayed wires.
4. Verify wire connections on switch plate. See fig. 6



REPLACEMENT PARTS



ECO-VK-SP-MH-L Valve Kit Parts List

#	Part Number	Description	Qty.
1	ECO-VK-LID-ASSY	Box Lid Assembly Kit with All Switches	1
2	ECO-VK-VALVE	Copreci Gas Valve with #35 low rate set screw	1
3	VCS-ECOB BUC	Battery Pack (holds 4 "C" size batteries)	1
4	VCS-ECOMOD	Control Module	1
5	ECO-VK-PILOT	Copreci Vented Pilot Assembly	1
6	685-14	Damper Clamp	1
7	BATTC	"C" Size Batteries	4
8	T102-9898-10	Black Steel Flex Connector	1
9	ECO-VK-VWIRE	"V" Wire (not shown)	1
10	VCS-ECO8P8W24WHB	Control Module Wire Harness (not shown)	1

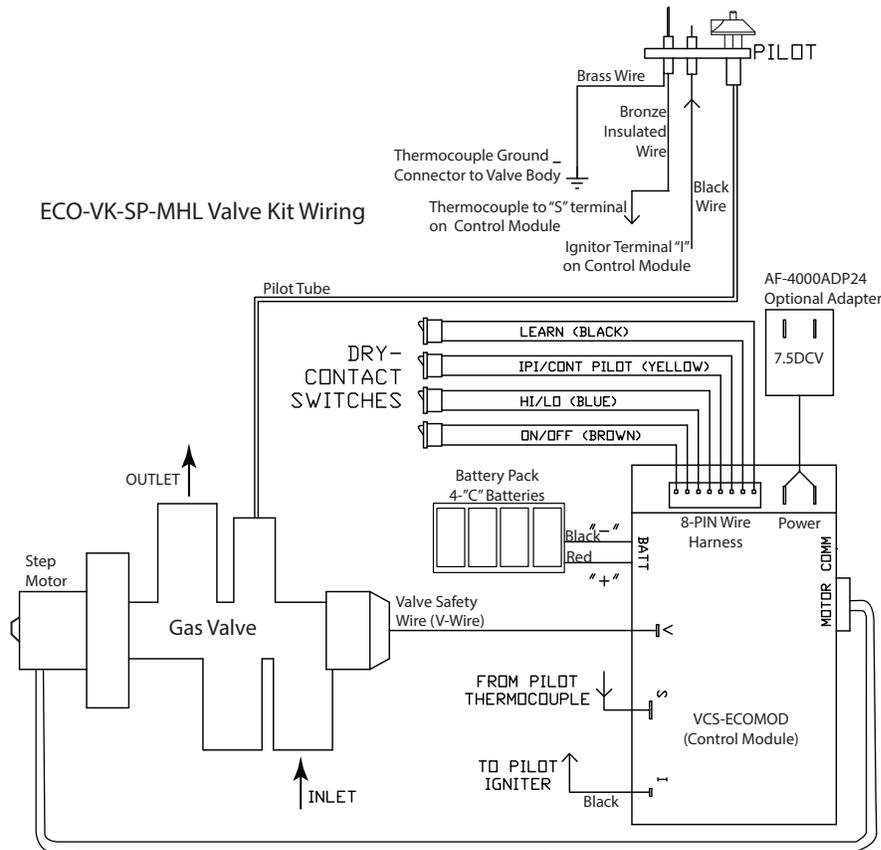


Fig. 7 Wiring diagram

OPTIONAL ACCESSORIES

1322WT	Wireless Wall Mount Transmitter with ON/OFF & HI/LO functions
SP1001	Wireless Transmitter with ON/OFF functions
SP1001H-LTH3	Wireless Transmitter with ON/OFF, Thermostat & HI/LO functions
TMR-AF1-TX	Wireless Wall Mounted Timer (30-60-120 Minute Time Options)
1001D-AF1-TX	Wireless ON/OFF Wall Switch
SPTS-H/L-TH	Wireless Touch-Screen Transmitter with ON/OFF, HI/LO, Thermostat & Programmable functions
AF-4000ADP24	120VAC to 6-volt Adapter (Allows system to operate without batteries)
ECO-VK-LPK-18	LP conversion kit for 18" gas log set
ECO-VK-LPK-24	LP conversion kit for 24" gas log set

Limited Warranty

Skytech warrants the ECO-VK-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. It is designed for IN-DOOR USE ONLY.

Damage to the ECO-VK-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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