



MODULATING MILLIVOLT INSTALLATION AND OPERATION MANUAL

For Natural and Propane Gas Types

MODELS: MMVKR-N and MMVKR-LP

FEATURES:

- Flame Modulation
- Remote Included
- Standing Pilot System

BURNER CAPABILITY:

- 2 Burner - Up to 42"
- 3 Burner - Up to 42"
- Kiva - All Sizes
- Glass Burners - Up to 42"



⚠ WARNING

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.

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

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

INSTALLER: Leave this manual with appliance. **CONSUMER:** Retain this manual for future reference.

Grand Canyon Gas Logs burner system is to be installed only in a solid-fuel-burning fireplace with a working flue constructed of noncombustible material. Solid fuels shall not be burned in a fireplace where the unit is installed. The installation, including provisions for combustion, ventilation air, and required minimum permanent vent opening, must conform with the National Fuel Gas Code (ANSI Z223.1/NFPA 54) and applicable local building codes. In Canada, the installation must conform with the Natural Gas and Propane Storage and Handling Installation Code (CSA-B-149.1). A damper stop clamp is included to maintain the minimum permanent vent opening and to prevent full closure of the damper blade. **The chimney damper must be fixed fully opened when burning the unit. The burner system is designed to burn with yellow flames; thus, adequate ventilation is absolutely necessary. If any of these parameters are not met, the warranty could be voided.**



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.

Grand Canyon Gas Logs

3515 East Atlanta Avenue, Phoenix, Arizona 85040 | 602-344-4217 | grandcanyongaslogs.com

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NOTE: Changes may occur without notice. Changes will be shown on updated versions.

SPECIFICATIONS

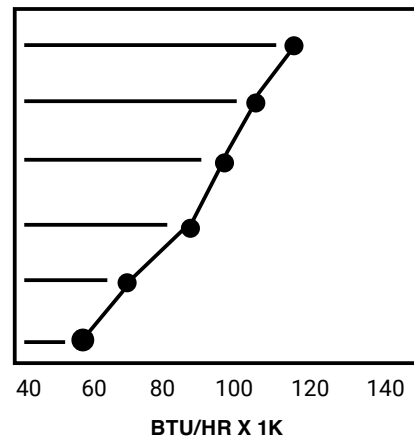
AF-1000 VOLTAGE / CAPACITY RATINGS

Model	Position	Thermocouple	Capacity @ 1" Pressure Drop Side Inlet & Back Outlet	Capacity @ 1" Pressure Drop Back Inlet & Back Outlet
AF-1000	Front Facing	30 mV	120,000 BTU/hr	120,000 BTU/hr

PRESSURE DROP IN. W.C.

- 7.0" inlet @ 3.5 outlet = 3.5 pressure drop
- 6.0" inlet @ 3.0 outlet = 3.0 pressure drop
- 5.0" inlet @ 2.5 outlet = 2.5 pressure drop
- 4.0" inlet @ 2.0 outlet = 2.0 pressure drop
- 3.0" inlet @ 1.5 outlet = 1.5 pressure drop
- 2.0" inlet @ 1.0 outlet = 1.0 pressure drop

**Pressure Drop & Capacity Curve
AF-1000 Series Gas Control**



CHECK TO BE SURE THAT THE PROPER FUEL GAS IS BEING USED WITH THIS CONTROL SYSTEM.

The installation, including provisions for combustion and ventilation air, must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code (ANSI Z223.1/NFPA 54).

This component and its individual shutoff valve must be disconnected from the gas-supply piping system when testing at pressures that exceed 1/2 PSIG. This is accomplished by closing the gas-supply line valve.

A fireplace screen must be in place when the gas burner system is in operation. Unless other provisions for combustion air are provided, the screen shall have an opening(s) for introduction of combustion air.

WHEN GLASS FIREPLACE ENCLOSURES (DOORS) ARE USED, OPERATE THE BURNER SYSTEM WITH THE GLASS DOORS FULLY OPEN; BOTH SIDES IF THE FIREPLACE IS A SEE-THROUGH TYPE.

This appliance may be installed in an aftermarket, permanently located, manufactured (mobile) home where not prohibited by local codes. Installation of appliances designed for manufactured homes or mobile homes must conform with Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280 in the U.S.; or with CAN/CSA Z240 MH in Canada; or with ANSI/NCSBCS A225.1/NFPA 501A, Manufactured Home Installations Standard when such as standard is not applicable.

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 control system and any gas control that has been underwater.

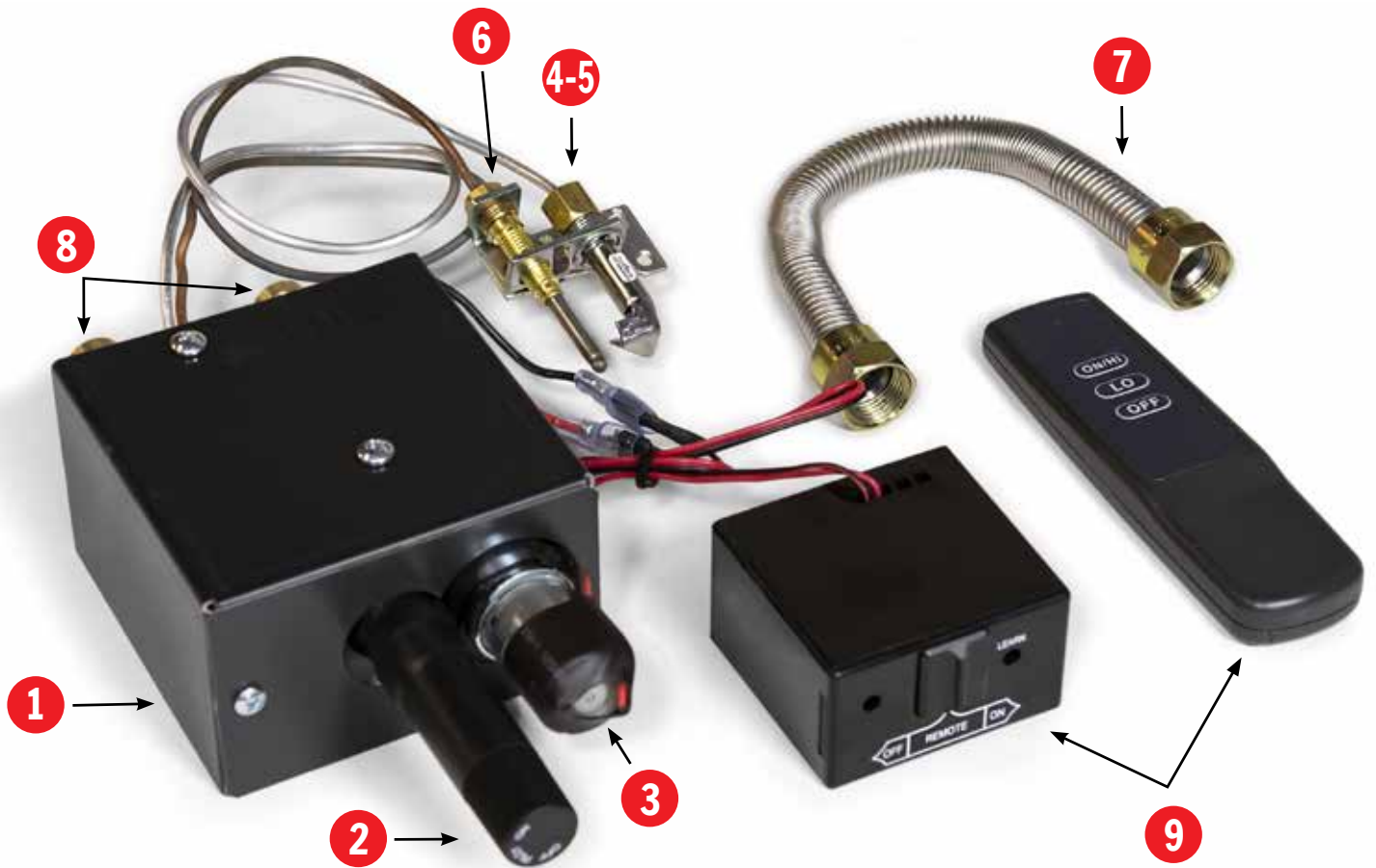
TO PREVENT VALVE DAMAGE AND FAILURE

IT IS **CRITICAL** THAT THE HEAT SHIELD BE PLACED CORRECTLY OVER THE VALVE. KEEP LAVA, VERMICULITE, EMBERS, FIRE GLASS AND ALL FOREIGN OBJECTS AWAY FROM THE PILOT ASSEMBLY, VALVE ASSEMBLY, AND HEAT SHIELD DURING MEDIA PLACEMENT AND AT ALL TIMES.

CAUTION

THIS DEVICE SHOULD BE INSTALLED BY A QUALIFIED SERVICE TECHNICIAN WITH DUE REGARD FOR SAFETY AS IMPROPER INSTALLATION COULD RESULT IN A HAZARDOUS CONDITION.

PARTS LIST



#	Model #	Description	Qty
1	AF-1000	Millivolt Valve	(1)
2	AF-2000PK-2	Pilot Knob 2" Extension	(1)
3	AF-1000MH-L	Variable Flame Motor Drive for RCAF-1021-1 Remote	(1)
4	SPK-Pilot-18	NG Pilot Assembly	(1)
5	SPK-Pilot-18P	LP Pilot Assembly	(1)
6	1900-01H	18" Thermocouple	(1)
7	T200-9898-10	Whistle Free Flex	(1)
8	48-86	1/2" Flare to 3/8" FIP	(1)
9	RCAF-1020-1	On/Off/Hi/Low Transmitter, Receiver, and Batteries	(1)

STEP BY STEP PRE-INSTALLATION

Modulating Millivolt Control must be installed by a qualified professional service technician. Instructions must be followed carefully when installing to ensure proper performance.

These instructions must be used as a supplement to the instructions supplied with the Grand Canyon Gas Logs burner system. Follow the burner system instructions and make adjustments as appropriate for the addition of a millivolt system. Use gas pipe sealing compound that is resistant to all gases (or Teflon tape) and apply to all male pipe connections.

DO NOT apply pipe sealing compound to any flare connections. Make sure that all connections are tight and leak tested.

Modulating millivolt control system must be installed by a qualified gas professional. These instructions MUST be followed to ensure proper performance and safety. Failure to do so could result in serious injury or death.

Modulating Millivolt valve system is shipped pre-assembled with fittings and heat shields already attached. For systems ordered "Assembled" the valve system is pre-assembled and tested at the factory before shipping. Perform the installation with extreme care ensuring not to damage the valve or pilot assembly or other connections.

Pre-Installation

For assembly of control system to an existing gas log system, ensure that all the media has been removed and the burner is clear of all dust and debris. Check to ensure that the valve system and burner are labeled for the gas type supplied to the fireplace (Natural Gas or Propane). Also check to ensure that the proper gas pressure is supplied to appliance. (Minimum 5" W.C. Natural Gas, Minimum 10" W.C. Propane.)

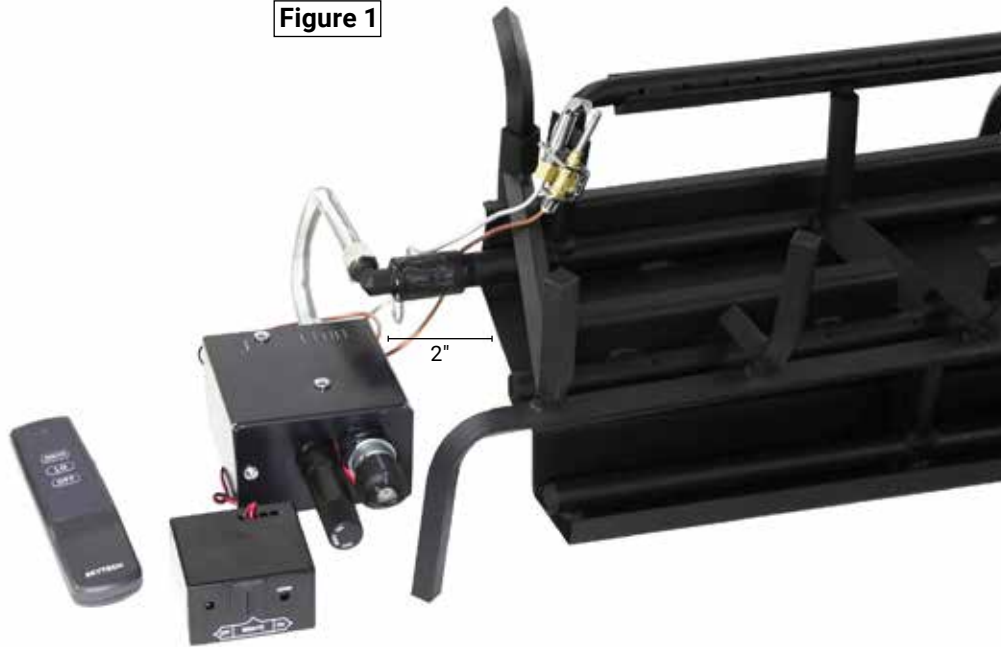
TURN OFF GAS SUPPLY AND ELECTRICAL POWER TO EQUIPMENT BEFORE SERVICING.

Piping

1. Make sure incoming gas piping into the fireplace is 1/2".
2. Pipe or tubing must be clean and free of scale and dirt.
3. Make sure gas piping is pressure tested before control is connected. High pressure can damage control if connected, Causing a hazardous condition. Do not subject control to more than 1/2 PSI, (14" W.C.) inlet pressure.
4. If it is not already installed, a drip leg (sediment trap) must be added to the gas supply line to control. All piping must comply with local codes and ordinances and with National Fuel Gas Code (ANSI Z223. 1/NFPA, No. 54).
5. Using pipe thread compound or tape (suitable for gas), apply a small amount on the male pipe threads. Leave the first two threads clean. Never use compound on female threads as it might be pushed into the control body.
6. Install gas valve so gas flow conforms with the inlet and outlet of the control.
7. **DO NOT** insert any object other than suitable pipe or tubing in the inlet or outlet of this control. Internal damage may occur and result in a hazardous condition. A backup wrench should only be used on the wrench boss provided for this purpose, never on the body of the control, as this could distort the casting. **NOTE:** Do not over tighten any pipe connections, as this could crack the valve body. A valve with a cracked valve body will not be warranted.

INSTALLATION

Figure 1



1. Remove the burner components from the burner box and the valve system parts from the valve box. Locate the pilot assembly. (Pilot hood, pilot bracket, pilot gas line and thermocouple.)
2. Turn the valve upside down with the back facing towards you and attach the pilot gas line to the valve, making sure to not tighten down too tight, only enough so the connection does not leak.
3. Connect the thermocouple end to the valve, first by hand, gently, taking care not to cross-thread the connecting nut. When the connector is turned fully by hand, use a 1/4" wrench to make the final quarter turn (See Figure 2).

Figure 2

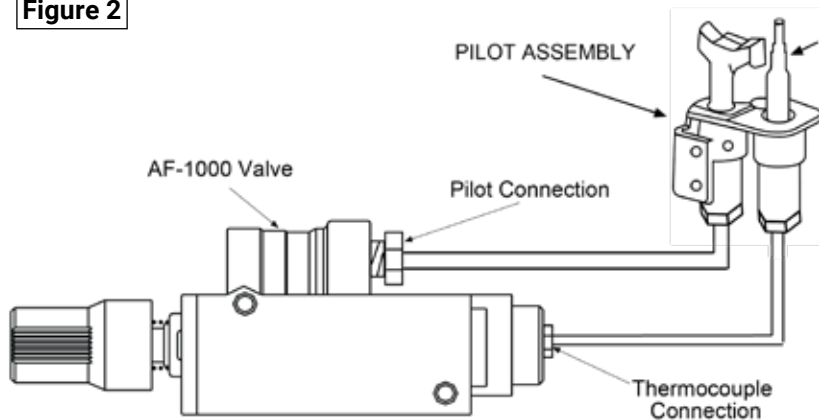


Figure 3



4. Turn valve right side up and locate the 1/2" gas flex line and 1/2" female to 1/2" flare connector that came with the burner. Then, using pipe thread compound and a wrench, connect the 1/2" female connector to the incoming gas line.
5. Connect one end of the flex line to the 1/2" flare side of the female connector on the incoming gas line and attach the other end of the flex line to the "In" side on the back of the valve, making sure both connections are nice and tight.
6. Find the 1/2" flex line that came with the valve system, attach one side of the flex line to the flare fitting that is on the "out" side on the back of the valve and attach the other end of the flex line to the 90 degree flare fitting on the burner using your wrench, making sure that both connections are nice and tight.

(NOTE: Pipe thread compound is not necessary on flare connections.)

7. Place the valve next to the burner, making sure that it is at least 2" away from the burner (See Figure 1.)

PILOT INSTALLATION 2 BURNER

On the 2 Burner, the pilot bracket is located on the back of the burner as shown in figure 1 and figure 2. On the 18" 2 Burner there will be only one in the center. On the 24" 2 Burner and above, there are two brackets, one on the left and one on the right. This is so that if the valve system is installed on the left, the pilot assembly will get attached on the left bracket, and if the valve is installed on the right, the pilot will get installed on the right bracket. The pilot assembly has two pilot hoods, one pointed towards the thermocouple and one that is free. When installing the pilot assembly, you need to make sure the pilot hood that is free is pointed toward the front of the burner, right over the back burner tube (See Fig 1 and 2.)



Figure 1



Figure 2

PILOT INSTALLATION 3 BURNER

On the 3 Burner, the pilot brackets are located on the left and right side of the back burner tube. The pilot attaches to the bracket on the side of the burner that the valve is installed on. (See Figure 3) The pilot assembly will get installed on the bracket so that the free pilot hood is facing the back burner tube with no more than 1 3/4" gap. The pilot bracket on the burner is designed to be adjustable so that this installation can be achieved.

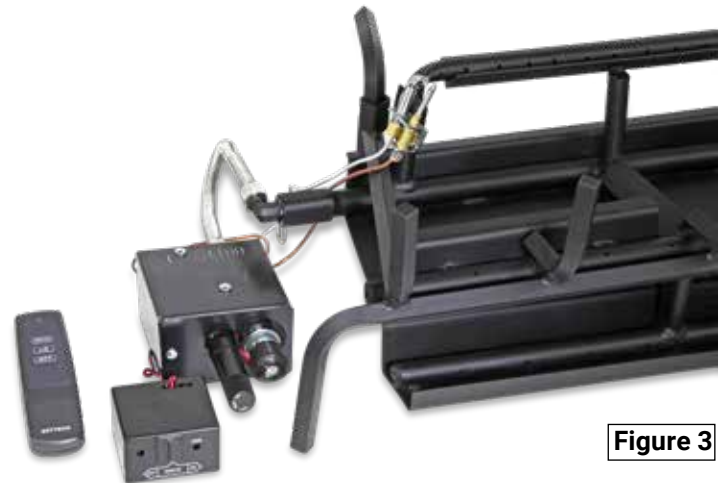


Figure 3

PILOT INSTALLATION GLASS BURNER

On the Glass Burner, there are 2 pilot brackets attached to it. This is because the burner can be installed with the gas connection on the left-hand side or the right-hand side. The bracket that will be used for the pilot is the one that is on the back of the burner when it is installed in the fireplace. Attach the pilot using a 1/4" self-tapping screw, making sure the open pilot hood is facing the burner tube so the burner can light with no delay (See Figure 4).



Figure 4

REMOTE INSTALLATION

Figure 1

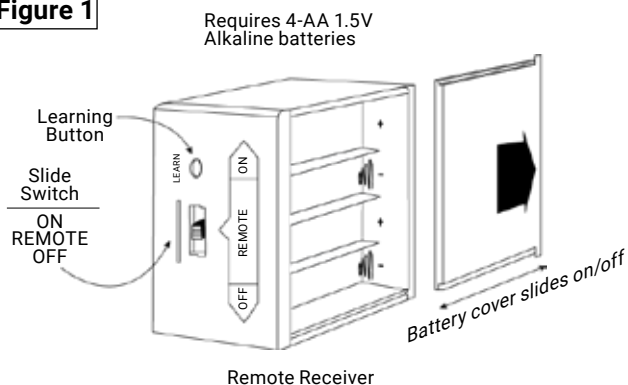


Figure 2

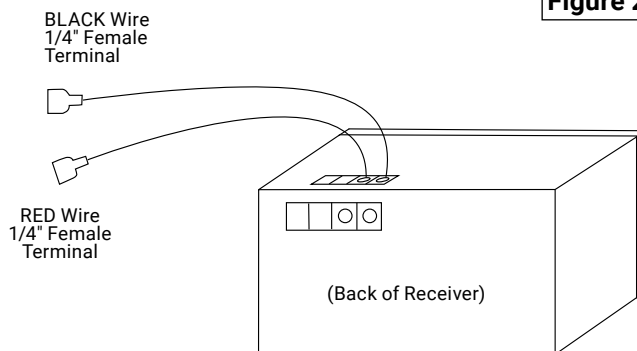
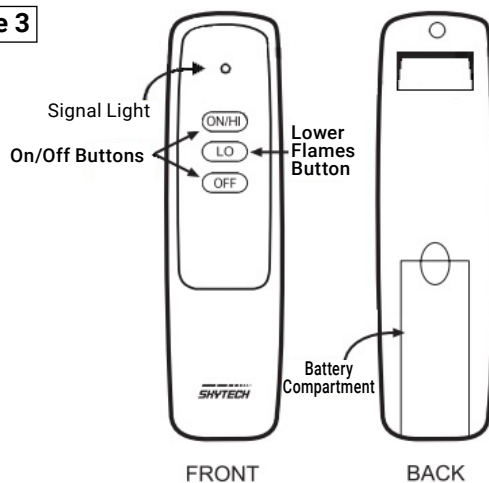


Figure 3



IMPORTANT: New or fully charged batteries are essential to proper operation of the remote receiver as a servo motor's power consumption is substantially higher than standard remote control systems. It is also recommended that **ALKALINE** batteries be used for longer battery life and maximum microprocessor performance.

1. Locate the remote kit that came with the valve system and remove the remote receiver. The remote receiver (Figure 1) operates on four 1.5V AA size batteries.
2. Install the 4 AA batteries into the remote receiver, making sure they are in the proper polarity order (+ or -).
3. Locate the red and black wires coming from the remote receiver (Figure 2), connect them to the red and black wires from the valve motor, making sure to connect the red with the red wire and the black with the black wire.
4. The hand held remote works on a 12 Volt battery (A23), locate and install the A23 battery into the battery compartment on the remote.
5. The remote should already be synced with the receiver, but if it is not, you can sync the remote by having the slide switch, on the remote receiver in the **REMOTE** position, press in and hold the **LEARN** button until the receiver beeps. Then, let go of the **LEARN** button and press any button on the remote until you hear a beep from the receiver. This indicates that the remote is paired. If the receiver does not beep and pairing is unsuccessful, wait 1-2 minutes before trying the pair sequence again. This allows the microprocessor in the receiver to reset its timer circuitry.
6. The remote receiver needs to be placed as far forward in the fireplace opening as can be and to the side wall of the fireplace. This is because if the receiver temperature gets up to 130 degrees Fahrenheit, the receiver will automatically shut down the burner and the **RECEIVER** will beep twice every 4 seconds. The **OFF** button on the remote will need to be pressed to reset the receiver and it will then need to cool down to below 120 degrees Fahrenheit for the beeping to stop and the fireplace can be used again.

Remote Control Instructions

1. The remote control will operate the gas valve's servomotor and turn the valve from **OFF** to full **ON**.
2. When the **ON** button is pressed, the remote is sending a continuous **RF** (radio frequency) signal to the receiver. The receiver will then send a continuous 6 Volts of power to the servomotor, then the servomotor turns to open the gas valve and allow gas to flow to the burner in the full **ON** position.
3. When the **OFF** button is pressed, the remote sends an **RF** signal to the receiver, the receiver then sends 6 Volts of power to the servomotor for 5 seconds and the servomotor turns to close the gas flow from the valve to the full **OFF** position.
4. The remote control will only work with the receiver to turn the valve on and off and modulate the flames. The receiver slider switch will only put the system in the **OFF** position, so the burner will not turn on, and to the **REMOTE** operation position.

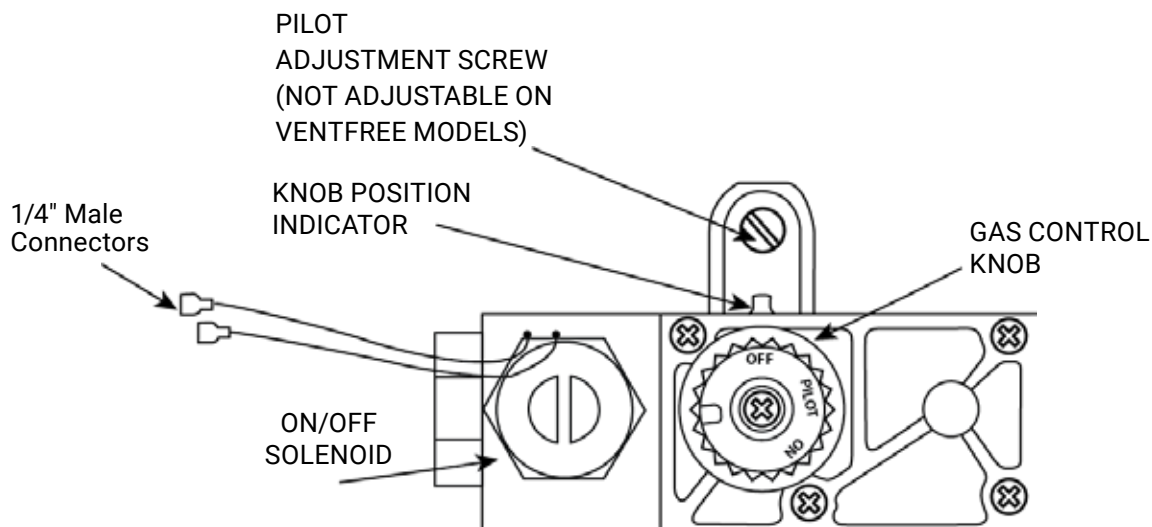


Pilot Lighting Instructions

NOTE: It may be necessary to bleed the gas line before the pilot will light.

1. Slightly depress the **OFF/PILOT/ON** knob and rotate it to the **PILOT** position.
2. Press inward on the control knob and immediately light the pilot with a match or lighter.
3. Once the pilot lights, continue holding the control knob in for approximately 45 to 60 seconds.
4. Once you held in the control knob for 45 to 60 seconds, release the knob and the pilot should stay on. If the pilot does not stay on, repeat steps 2-4.
5. Once the pilot is lit, turn the control knob to the **ON** position.

CAUTION: When turning the control knob to the **ON** position the burner flame may turn on.



FACE VIEW OF GAS CONTROL WITH SOLENOID

TROUBLESHOOTING

Problem	Cause	Solution
1. Pilot flame will not stay lit when releasing the pilot knob	1A. Pilot flame not touching the thermocouple 1B. Pilot flame too small 1C. Thermocouple not generating enough millivolts	1A. Make sure the pilot flame is hitting the top 1/3 of the thermocouple 1B. Adjust the pilot flame at the pilot adjustment screw on the valve or check and adjust gas pressure 1C. Test Thermocouple with multi meter, make sure it is generating at least 15-18Mv, if less than 15Mv, replace thermocouple
2. Pilot flame is too big/small or noisy	2A. Wrong gas type installed 2B. Gas pressure too high/low 2C. Blockage in pilot hood	2A. Double check correct gas type is installed 2B. Have your gas pressures checked by a qualified gas technician 2C. Clear out blockage in pilot with compressed air
3. Burner flame will not modulate or works backwards	3A. Batteries are going bad in the remote or receiver 3B. Receiver wires connected backwards	3A. Replace batteries in remote or receiver 3B. Make sure the wires are black to black and red to red
4. Flame height seems Hi/Low	4A. Wrong gas type installed 4B. Gas pressure Hi/Low	4A. Make sure your burner is using the correct gas type 4B. Have your gas pressures checked by a qualified as technician
5. Receiver does not have an audible beep when using the remote	5A. Batteries have gone bad 5B. Remote is not paired to receiver	5A. Replace batteries in receiver 5B. Pair remote with the receiver using the pair sequence on page 6
6. Burner flames turned off on their own and/or the receiver is beeping twice every 4 seconds	6A. Receiver is overheated. 6B. Thermocouple not generating enough millivolts	6A. Press off on the remote and let receiver cool down and move receiver as far forward and up to the fireplace wall as possible 6B. Test Thermocouple with multi meter, make sure it is generating at least 15-18Mv, if less than 15Mv, replace thermocouple

Burner:

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

Electrical and Valves:

Grand Canyon Gas Logs valves, remotes, and receivers carry a (2) year warranty against breakage or defects from date of purchase, by original purchaser, and must be installed by a licensed professional installer. This warranty only covers use with Grand Canyon Gas Logs burners and logs. In the event a defect or breakage occurs, a replacement will be available for pick-up from the dealer at which the burner was originally purchased. Batteries are not covered under this warranty.

SCAN QR CODE FOR WARRANTY



DO NOT RETURN TO STORE!



STOP CALL US FIRST

**For immediate help with installation, product information or
if your product arrives damaged, please call our toll free number at:**

1-602-344-4217

(Monday - Friday, 8:00AM - 5:00PM, AZ Mountain Time)

or email us at:

customerservice@grandcanyongaslogs.com

OUR STAFF IS READY TO PROVIDE ASSISTANCE

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