



FLARE FIREPLACES

Conversion (GV60 to SIT-DG)

Version 1.0

Frameless Is More

CAUTION: READ & UNDERSTAND THIS SERVICE BULLETIN THOROUGHLY BEFORE BEGINNING. ONLY A TRAINED, EXPERIENCED SERVICE TECHNICIAN SHOULD ATTEMPT THIS SERVICE PROCEDURE

CSA APPROVED

SAFETY & QUALITY FIRST

**SERVICE TECHNICIAN USE
ONLY**

**CONTACT FLARE
FIREPLACES FOR
SUPPORT**

FLARE FIREPLACES

890 N Dorothy Rd, St. 900

Richardson, TX 75081

WARNING

Please consult specific unit Spec Sheet listed on products page of Flare Fireplaces website to confirm proper orifice sizing prior to conversion or replacing orifice.

Preparing GV60 to SIT Conversion for the SIT gas valve system

Flare Fireplaces can be converted from Maxitrol GV60 to SIT Proflame II. Components to be changed will include, orifices, pilot assembly, full gas system (valve and receiver), necessary cables and SIT Control Board (if applicable).

NOTE: This spec manual is only for Maxitrol (GV60) to SIT Proflame II Conversions on Flare Fireplaces with Screen Safety Barrier. If you have a Double Glass safety barrier or a low voltage Power Vent, please see spec manual that corresponds with your fireplace's features. Only an authorized Flare technician can convert a unit from GV60 to SIT. A conversion done by an unauthorized installer will void the service warranty for your fireplace. Please contact Flare Fireplaces for more details on your unit's gas valve system if unknown.

- A) Verify your fireplace & gas is turned off before beginning any service on your Flare. Removing power is strongly recommended.
- B) Confirm the correct Spec Sheet based on fireplace size has been acquired for the conversion. Note the example below which highlights the relevant information for your conversion.

CONFIRM CONVERSION INFORMATION BY READING SPEC SHEET:

SIT											
MODELS	GAS	INLET PRESSURES		MANIFOLD PRESSURES	BTU OUTPUT	ORIFICE SIZE			BURNER SIZE		
		MIN.	MAX.			Burner 1	Burner 2	Burner 3	Burner 1	Burner 2	Burner 3
FF-45	(NG)	7.0" WC	8.0" WC	3.6" WC	36,000	1100			31 12/16"		
FF-45	(LP)	10.0" WC	11.0" WC	9.6" WC	28,000	320					

PLEASE NOTE: Orifices are packed in individual bags & labeled when ordered from Flare Fireplaces.

C) Confirm correct orifice size, per specified burner, by examining the number printed on the orifice thread face



LEFT BURNER

CENTER BURNER

RIGHT BURNER

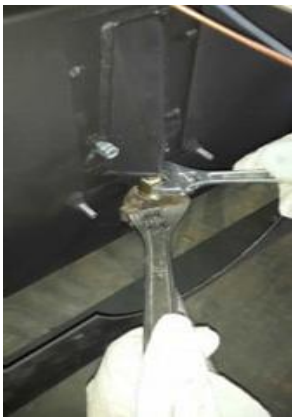
FIND & COMPARE SPECIFIED ORIFICE SIZE ON HAND TO SPEC SHEET:

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Step 1: Replacing Burner Orifices

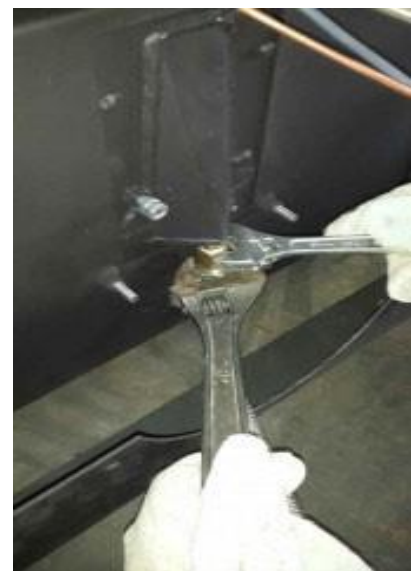
- 1) To begin, disconnect all power and remove glass layer(s). Remove all media covering burner tray and remove burner tray itself. Once tray is out, remove burner as well. Disconnect orifice from burner and attach new orifice to burner (with washer in between orifice and burner).

PLEASE NOTE: Units 60" & larger are equipped with 3 burner & have 3 burner orifices. Each orifice will need to be changed to ensure safe operation. Note the side burners have a different orifice size than the center burner.



- 2) Replace burner orifice by properly aligning threads, tightening with wrench, & reinstalling the orifice housing.

PLEASE NOTE: The orifice housings have flared heads, allowing for a proper seal if threaded correctly.

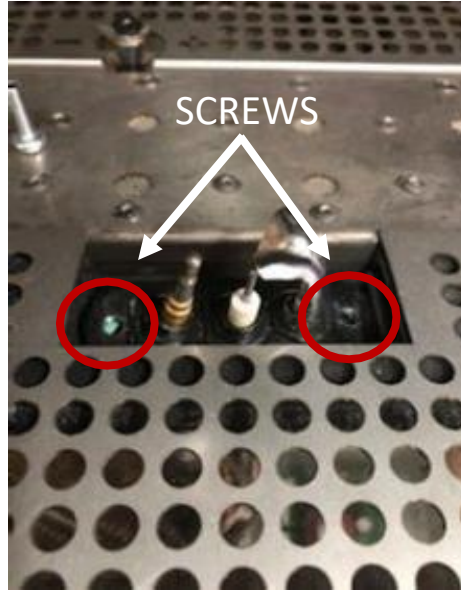


Step 2: Replacing pilot assembly

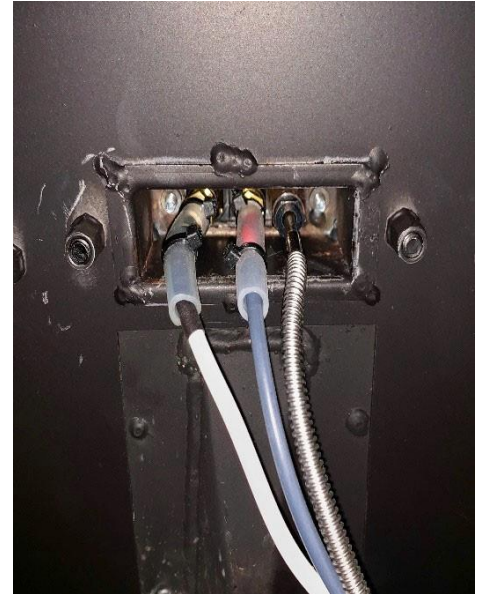
1) To gain access to pilot orifice remove the Pilot Orifice Assembly by removing 2 screws outlined below.



SIT PILOT ASSEMBLY

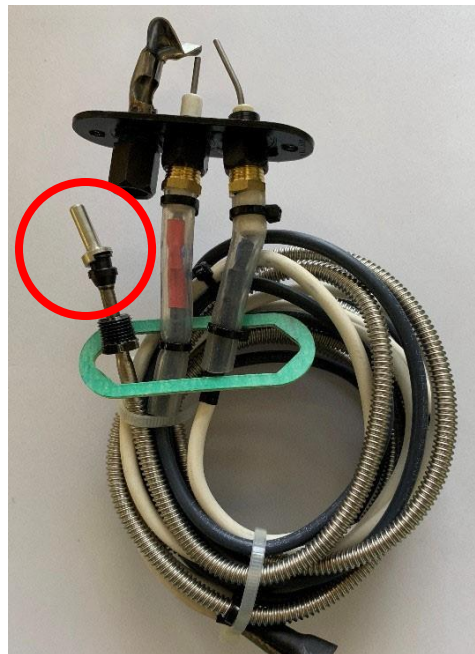


MAXITROL PILOT ASSEMBLY



PILOT ASSEMBLY UNDERSIDE

2) Remove GV60 Pilot assembly and replace with SIT Proflame Pilot Assembly.



PLEASE NOTE: Make sure you have correct gas type orifice (LP or NG) on pilot assembly.

Step 3: Swapping out Full Gas System

- 1) Disconnect gas lines under fireplace and remove complete GV60 full gas system. Replace with SIT Proflame II full gas system. Reconnect inlet and outlet gas lines to new Proflame II Valve.

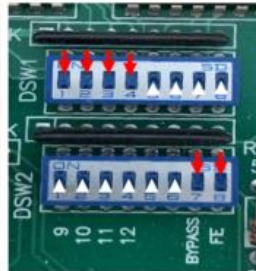


- 2) Connect all Gas Lines to the inlet and outlet of the new SIT Proflame II Gas Valve (ensuring a tight fit – this will need to be leak tested before completing the job).
- 3) Ensure that all dipswitches on control board have been properly set to account for any double glass fans as well as any power vent that may be a part of the project.
 - DSW1 and DSW2 are for the individual fan relays for your Double Glass fireplace. Each fan must have a corresponding dipswitch pushed in the OFF position (away from the green LEDs within the CB). All other switches should be left in the ON (bypass) position.
 - If you have a Power Vent on your fireplace, the FE(X) dipswitch must be in the off position as well (away from the LED lights within the CB).

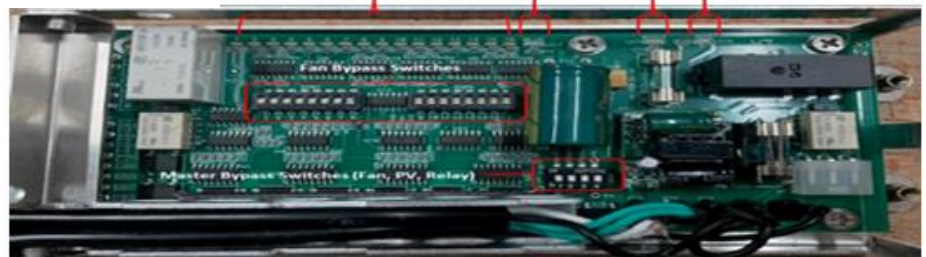
RED ARROWS: Indicate bypass is off, & fans are being monitored.

WHITE ARROWS: Indicate bypass is on, & the control board will bypass the safety check of the fans.

BOARD INTERNAL LAYOUT



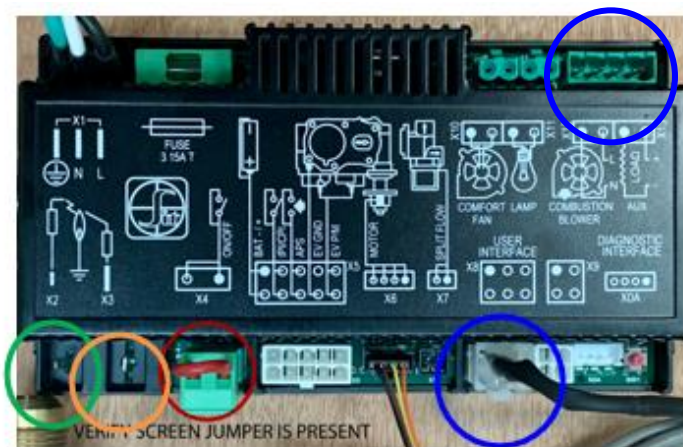
V5 SIT Control Board



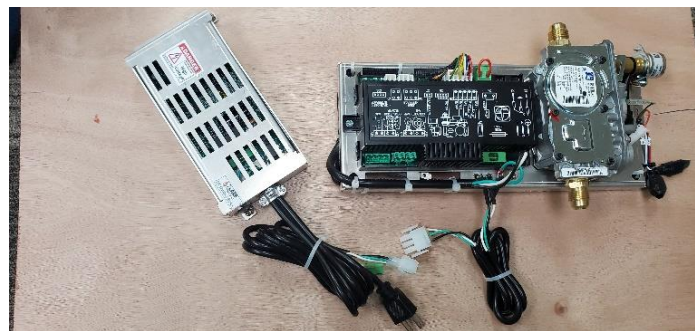
4) Ensure that your pilot assembly connections have been brought down from the pilot down to the SIT Receiver. The 2 cables included with the Pilot assembly will sit on the heads located on X-2 and X-3 on the Receiver. The brass fitting will connect to the gas valve.

Connect all additional wires/jumpers/fittings (see below; connection point for each component is shown with corresponding colors on the SIT Receiver):

- **SIT DG Relay Kit** gets connected to X-8 and X-13 Port on SIT Receiver (also plugs into Relay/WS on the SIT Control Board).
- **Spark Cable** from new SIT Pilot Assembly is connected to X-2 on the SIT Receiver.
- **Flame Sensor Cable** from new SIT Pilot Assembly is connected to X-3 on the SIT Receiver.
- **X-4 Green Connector (wired from SIT Control Board)** will need to be in place on the SIT Receiver.
- **Brass SIT Compression Fitting** connects from new SIT Proflame II Pilot Assembly to the SIT Gas Valve below (testing to ensure there is no leak).



V4
V5
→



5) For SIT Upgrades with **V4** SIT Control Board (see electrical diagram below):

Your Double Glass Relay Kit (plugged into X-8 and X-13 on the SIT Receiver) will also have 2 smaller molexes on the Relay Kit. These are connected into the RELAY and 6V OUT ports on your SIT V4 Control Board.

For SIT Upgrades with **V5** SIT Control Board(see electrical diagram below):

Your Double Glass Relay Kit (plugged into X-8 and X-13 on the SIT Receiver) will also have a 6-prong white molex that will need to be plugged into the RELAY/WS port on your SIT V5 Control Board.

****NOTE**** If your fireplace has a Low Voltage Power Vent or Summer Kit, you will be sent a V4 Control Board/Relay Kit. Your PV/SK relay will connect at the Fan Exhaust (green molex) on the SIT Control Board (see image below for details).

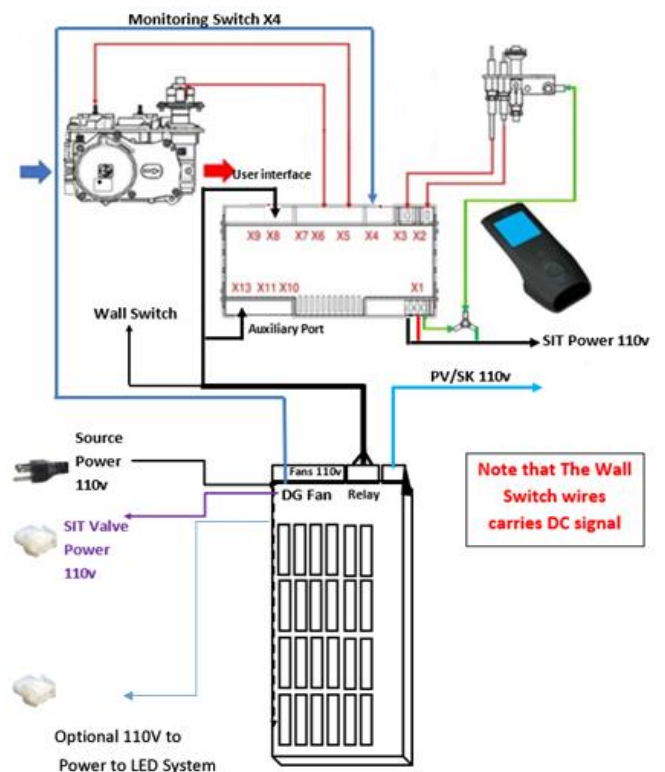
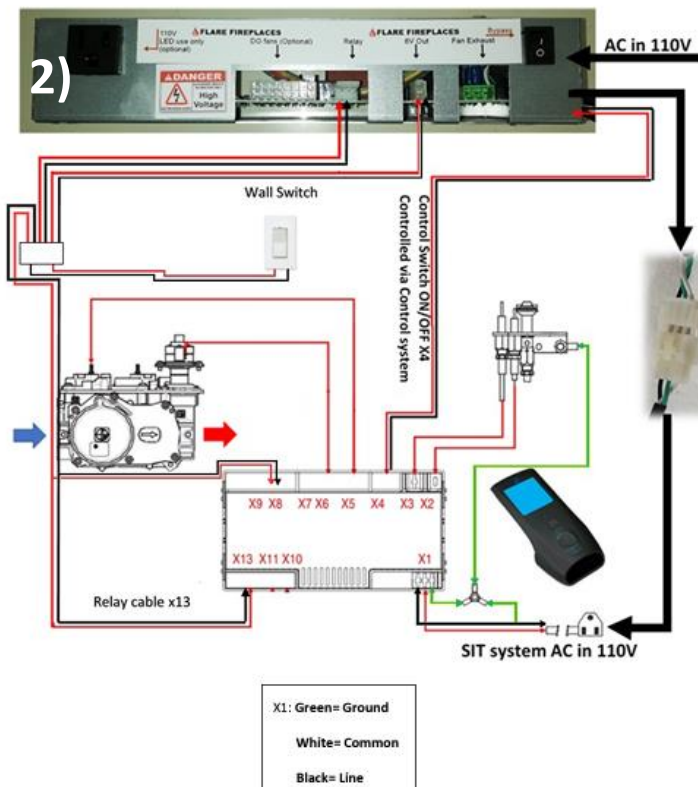


V4
←
V5
→



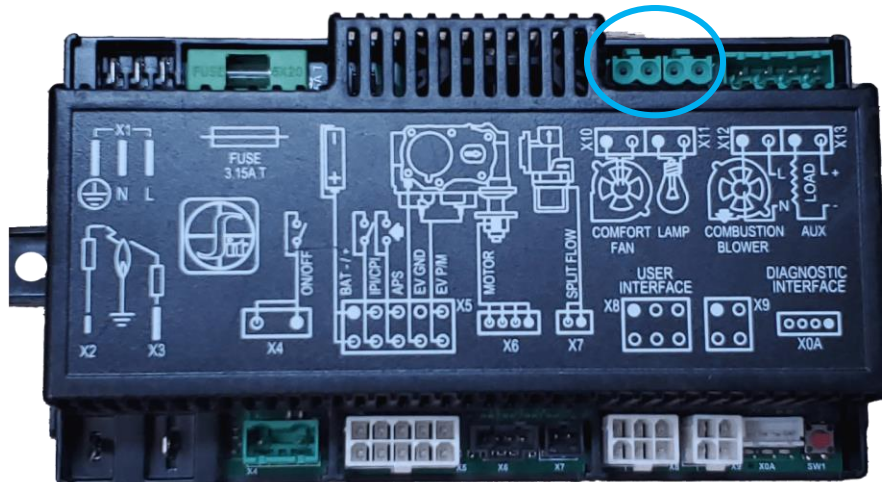
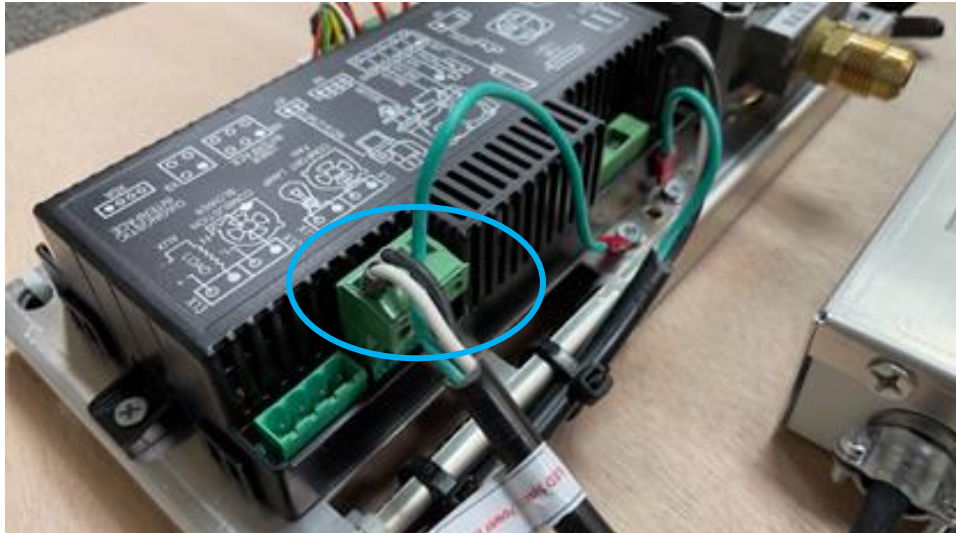
- **Aux port(X13)** is used as switch to open and close the relay port of the control system (To activate and deactivate the control system)
- ON/OFF switch(X4) are controlled via the Flare Control system

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NEW LED Connection (power driven to LEDs by SIT Receiver):

- **Option 1:** If your LEDs currently have a 3-prong plug to source 110V power, you can keep the LED components separate of the fireplace by plugging the power supply directly into an outlet for power. This will enable your lights to be on even when the fireplace is not.
- **Option 2:** You can connect your LED power supply to the SIT Receiver by replacing the 3-prong outlet plug on your power supply with an **X-11** LED Cable (This will require wire nuts to accomplish). Once power has been wired, the **X-11** cable will need to be grounded on the plate housing the Receiver/Valve with the Green Molex from the **X-11** cable being plugged into **X-11** on the SIT Receiver. This will provide power to the LED lights only when the fireplace is on. You will be able to turn the lights on/off via the fireplace SIT Remote, but all color/pattern changes will occur on the white LED Remote.

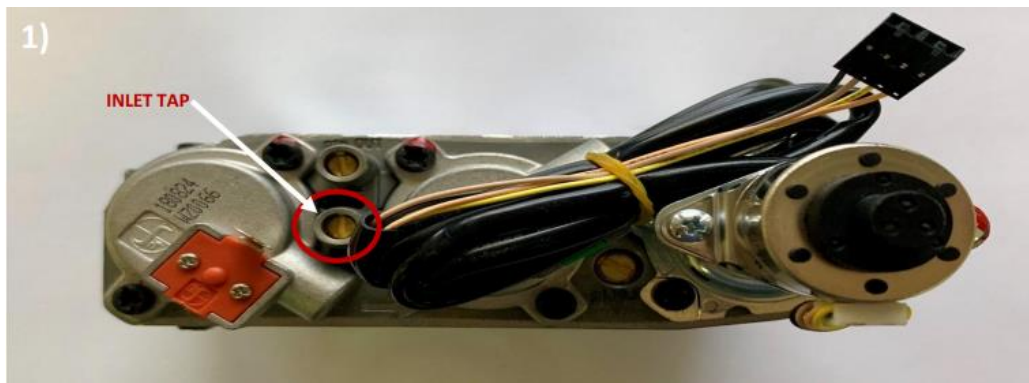


Step 5: After Conversion Pressure Verification

The Natural Gas (NG) gas pressure verification must be done by a licensed professional.

- 1) Validate **Inlet** Pressure using monometer. See “Inlet” tap in image below.

PLEASE NOTE: Loosen screw only to validate pressure, tighten upon completion.



- 2) Validate **Outlet** Pressure using monometer. See “Outlet” tap in image below.

PLEASE NOTE: Loosen screw only to validate pressure, tighten upon completion.



NG INLET PRESSURE: 7.0" WC – 8.0" WC

NG MANIFOLD PRESSURE: 3.5" WC

LP INLET PRESSURE: 10.0" WC – 11.0" WC

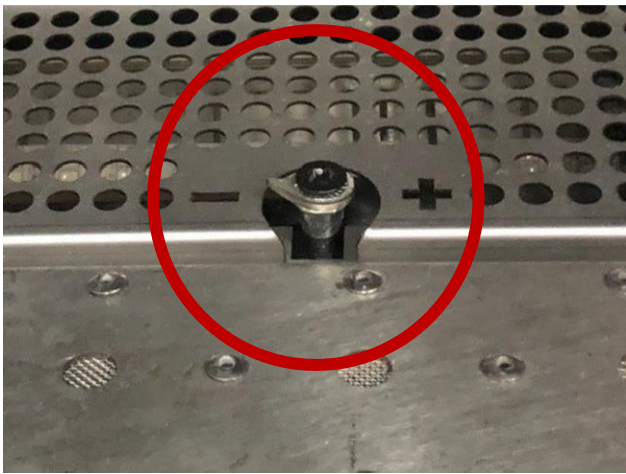
LP MANIFOLD PRESSURE: 9.5" WC

Step 6: Air Shutter Adjustment(s)

Natural Gas (NG) units require different air shutter settings to achieve the most natural & cleanest burn. Keep in mind Flare Fireplaces which are 60" & above will have 3 separate burners, so you'll need to adjust each air shutter individually to achieve a uniform burn across your unit.

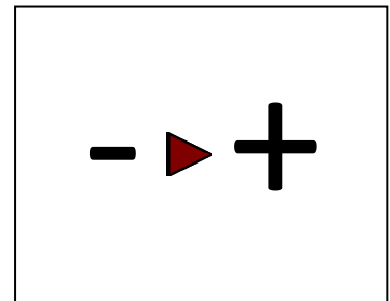
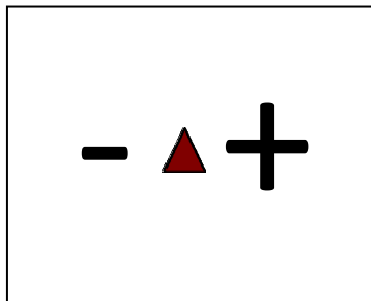
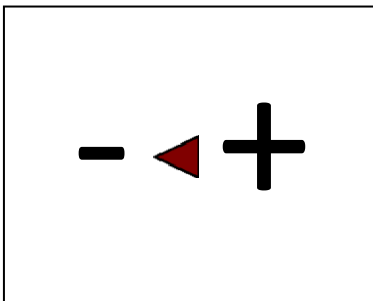
PLEASE NOTE: Incorrect air shutter adjustments will result in excess soot on the glass.

- 1) Locate your air shutter adjustment on the fireplace burner(s) between the - & + signs.



- 2) Using a phillips head screwdriver adjust mix of air & gas needed for a natural looking burn. See images below for what each setting achieves.

NO AIR | ORANGE FLAME 50/50 | HALF & HALF ALL AIR | BLUE FLAME



PLEASE NOTE: You are looking to have an orange top & a blue bottom to your flame. An all blue flame will be difficult to see, & an all-orange flame will cause severe sooting.