

## SPARK IGNITION SAFETY MANUAL

### Installation Guide & Owners Manual



#### Models:

OPT-2322LP  
OPT-2322LPHC  
OPT-2322NG  
OPT-2322NGHC

**WARNING: FOR OUTDOOR USE ONLY**

**\*READ THIS MANUAL BEFORE INSTALLATION OF THE UNIT**

#### WARNING:

Improper installation, adjustment, alteration, service, or lack of maintenance can cause injury or property damage. Read the installation, operating, & maintenance instructions thoroughly before installing or servicing this equipment.

#### WARNING:

Do NOT Store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance. A liquid propane cylinder not connected for use shall not be stored in the vicinity of this or any other unit.



#### Installation

We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping.

#### Service

We suggest that our products be serviced by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists.

#### CARBON MONOXIDE HAZARD

This appliance can produce carbon monoxide which has no odor. Using it in an enclosed space can kill you. Never use this appliance in an enclosed space such as a camper, tent car or home.

#### WARNING:

For use with Natural Gas or Liquid Propane only. NO SOLID FUELS TO BE USED

Installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 / NFPA 54, or International Fuel Gas Code. The appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electric Code, ANSI/NFPA 70, if applicable.

#### WARNING

This Product May Contain A Chemical Known To The State Of California To Cause Cancer, Or Birth Defects Or Other Reproductive Harm

## DANGER

If you smell gas:

- 1) shut off gas to appliance.
- 2) Extinguish any open flame.
- 3) If odor continues, keep away from appliance and immediately call gas supplier or fire department.

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## GENERAL INFORMATION

Please carefully follow the instructions in this manual to prevent personal injury or property loss. Instructions are updated as needed. It is the installer's responsibility to periodically review instruction for applicable updates.

The steps listed as

**WARNING:** Contains information critical to the safe installation and operation of the fire bowl.

**WARRANTY REQUIREMENT:** Must be strictly followed to qualify for product warranty. Warranty will be void if not followed.

**IMPORTANT** are notes and insights to help ensure product satisfaction and serviceability.

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**WARNING:** It is the installer's responsibility to ensure a safe installation and to educate the end user as to proper operation. Leave this manual with the end user.

**WARNING:** Never alter product or configuration in any way.

**WARNING:** We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping. We suggest that our products be serviced annually by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists or in Canada by WETT (Wood Energy Technical Training). Installer must follow all instructions carefully to ensure proper performance and safety. The Outdoor Plus Co, Inc is not responsible for your actions.

**WARNING:** Product is not intended to be a starter for wood or any other combustibles.

**WARNING:** It is the responsibility of the installer to follow ALL LOCAL CODES concerning the installation and operation of the fire pit. In the absence of local codes, please follow:

- The National Fuel Gas Code, ANSI Z223.1/NFPA 54 or International Fuel Gas Code.
- The National Electrical Code, ANSI/NFPA 70.

**WARNING:** Verify correct gas/fuel type and pressure. Never use an alternative fuel to include bio-fuel, ethanol, lighter fluid or any other fuel. Gas pressure and type should be checked prior to use and installation.

- **Natural Gas:**

Supply Pressure: Minimum: 3.5" W.C.; Maximum: 7.0" W.C.

- **Liquid Propane:**

Supply Pressure: Minimum: 8.0" W.C.; Maximum: 11.0" W.C.

## SELECTING THE LOCATION

- WARNING:** All fire pits, match lit kits, and spark ignition systems are designed and intended for outdoor use only.
- WARNING:** All fire pits must have a gas shutoff on the outside of the exterior of the fire bowl to allow for emergency shut off and maintenance.
- WARNING:** Select a location where the fire pit can be attended during operation. Never leave an operating fire bowl unattended or by someone not familiar with its operation or emergency shut off locations.
- WARNING:** Both children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns and clothing ignition.
- WARNING:** Young children should be carefully supervised when they are in the area of fire pit.
- WARNING:** Clothing or other flammable materials should not be placed on or near fire bowl.
- WARNING:** Fire pits create very high temperatures - Combustibles must be located far enough away that there is no risk of ignition. (See Clearance From Combustibles diagram at the end of this document)

Fire bowl Clearances from Combustibles (Diagram can be found at the end of this document)

- Sides Surrounding Fire bowl - 48" From Structure or Combustibles
- Overhead Clearance - 96" from combustibles overhead

**IMPORTANT:** It is recommended that material such as granite, marble or other dense stone be kept away from heat and especially flame due to risk of cracking. Manufacturer is not responsible for damage.

### TIPS FOR CHOOSING LOCATION

- Select a location with good drainage.
- Choose a location that allows easy access for installation and maintenance of the fire bowl.
- Pick a location that allows sufficient room to enjoy the fire bowl while allowing a safe distance from the heat and flame.

## CONSTRUCTION OF THE ENCLOSURE

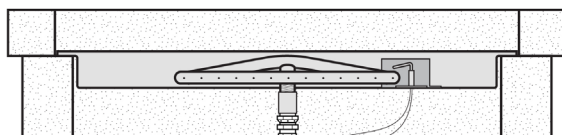
- WARNING:** All fire pits must have a gas shutoff on the outside of the exterior of the fire pit to allow for emergency shut off and maintenance. The gas shutoff should not be used to adjust flame height.
- WARNING:** Use non-combustible materials and construction for gas supply, power and enclosure. A metal outlet box should be used inside the enclosure for electronic ignition models.
- WARNING:** Always use proper materials and construction for gas supply, power and enclosure.

**WARNING:** The enclosure must incorporate 1 vent on at least 2 sides (2 vents total) at a minimum size of 18 sq. inches each (Example: 3"x 6" or larger) to ensure that heat and residual gas can escape. Some enclosures may require more ventilation based on material, size and extended use. Installation of the vents in the mid to lower area of the enclosure is recommended. Failure to properly vent enclosure may result in the fire pit overheating or explosion. Continuous overheating could lead to heat damage to internal components. The vent may work as a drain as well when installed at bottom sidewall to prevent water build up.

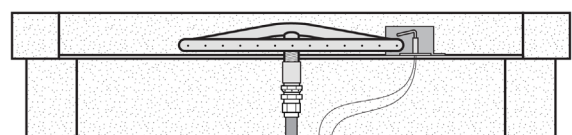
**WARNING:** The interior void space of the enclosure cannot be filled with any material (gravel, lava rock, crushed rock, concrete, etc.)

**WARNING:** Select materials that are non-combustible in both initial installations as well as over time.

**WARNING:** The pan and burner assembly should be recessed a minimum of 2" from the top of the enclosure to protect flame from being blown out. Some areas may require more- 4 to 6" is not uncommon.



**Drop In Pan - 4" Recessed**



**Flat Pan - 2" Recessed**

**WARRANTY REQUIREMENT:** The enclosure must be constructed on a stable surface. The weight of the fire pit must be supported by the pan and not by any control/valve box. For electronic ignition models the control/valve box must be above grade with adequate drainage to prevent water damage to the controls inside the box.

- Make sure that the structure is level.
- TOP recommends that the pan lip is recessed on trough (linear), and large round products.  
TOP cannot guarantee the lip on all of our products will be perfectly flat and will not warp due to heat.

**IMPORTANT:** Product must be accessible for service.

**WARRANTY REQUIREMENT:** Do not daisy chain wiring multiple systems. Each fire pit must have dedicated wiring .

# INSTALLATION OF A FIRE PIT

**WARNING:** We suggest that our products be installed by professionals that are locally licensed by the authority having jurisdiction in gas piping.

**WARNING:** We suggest that our products be serviced annually by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists.

**WARNING:** Confirm this appliance is built for gas used –natural gas or LP. Do not use natural gas appliance with LP or LP appliance with natural gas.

**WARNING:** To prevent damage, unhook fire pit from gas supply for pressure leak tests.

**WARNING:** Ensure that the mounting plate for the valve is properly secured to a rigid surface on the enclosure, check that the mounting plate will not move.

**WARNING:** Operate valve to ensure there is no movement and the valve is secure.

**WARNING:** Orient the valve so that there is no kink in the flex line.

**WARNING:** During the installation of the fire pit insert, check to ensure the flex line will not kink or pinch to avoid damage to the flex line.

**WARNING:** After hooking up the gas supply line, ensure the valve mounting is still secure.

**WARNING:** Check all connections and lines to ensure they are not under stress.

**WARNING:** Perform leak test on all connections. Repair as needed and double check that all mounting hardware is secure with no movement.

**WARNING:** Fuel line sizing is the responsibility of the installer and must be able to supply the stated maximum BTU for the product.

**WARNING:** Burn testing- It is the responsibility of the qualified installer to test for gas leaks at all connections.

**WARNING:** When filling the pan with lava and/or decorative glass, the instructions in media section must be followed.

**WARNING:** Gas Plumbing Connections: Use only joint compound or tape that is resistant to all gases. Apply joint compound to all male pipe fittings only- DO NOT use on FLARED fittings. Be sure to tighten every joint securely.

**IMPORTANT:** Ensure any flex line that may be used from the permanent main fuel supply to the product is rated to the stated max BTU of the product and certified to ANSI Z21.75\*CSA 6.27.

**WARRANTY REQUIREMENT:** Warranty is void if product is altered.

- Purge gas lines of air.
- Perform all leak test with leak detector or leak reactant.
- Verify correct gas type and pressure.
- Perform leak test on main gas supply. Repair leaks as necessary.
- Shut Off Gas Supply and Power to fire-pit.
- Connect fire-pit to main gas supply. If using flex lines, avoid sharp bends with flex line to prevent whistling.
- Turn on gas supply and perform leak test on all inlet connections. Repair as needed.
- Position fire pit safely with access to all gas connections for testing.
- Light fire pit. It may take several cycles to purge air from the lines.
- Once fire pit is lit, perform leak test on all gas connections. Repair as needed.
- Turn off fire pit and allow to cool.
- Apply media
- Turn on fire pit again and perform leak test with media correctly installed. If gas leak is detected verify correct media application and repair as needed.
- If trimmer valve is installed, adjust flame to desired height. Never alter the product configuration
- Set fire pit in properly constructed enclosure
- Verify correct operation and lighting.
- Review safety manual with end user and instruct not to change/ modify fire pit or media.
- Leave manual with end user.

# BURNING MEDIA

## LIQUID PROPANE WARNINGS

**WARNING:** for glass media usage with LP gas- when using approved decorative glass to cover burner apply only enough to hide burner.  
**WARNING:** Applying over 1/2" may create back Pressure and gas leakage from air mixer resulting in LP pooling under fire pit.  
**WARNING:** for glass media usage with LP gas- the unit must be tested with media over burner for confirmation of no back pressure creating gas to leak out of air mixer venturi holes. This may have to be done prior to placing in enclosure if no access door.

**WARNING:** The fire pit is designed to use media correctly installed over the burner to achieve proper combustion.

**WARRANTY REQUIREMENT:** Never install a mesh or screen under the media.

**IMPORTANT:** Media affects flame pattern greatly. It is possible to create an unusual flame pattern that could damage your enclosure. Enclosure damage from an open flame fire feature is not covered under any warranty.

**IMPORTANT:** Lava rock/glass coverage should be at a minimum to prevent smothering of the flame and for correct operation – See "Lava Rock & Glass Application" instructions before applying.

**IMPORTANT:** The use of concrete logs is not recommended.

### LIST OF ACCEPTABLE MEDIA FOR FIRE FEATURES:

- Fire Rated Lava Rock (or other Igneous Rock)
- Fire glass approved for use in fire features
- Man-made stone for use in fire features (Reflective Material)

**WARNING:** Do not use any other material as filler/topping media inside fire features other than those listed above. Using improper media inside a fire feature could result in damage to property or injury to persons nearby due to media 'popping' or 'exploding' due to heat

## INSTALLATION OF MEDIA IN FIRE FEATURES

**INSTALLATION NOTE:** The use of media inside fire features is recommended because it improves the flames performance by forcing the gas from the burner to mix as it passes through the media. This 'mixing' of gases creates an even flame throughout the feature and helps spread the flame from the Pilot Burner throughout the burner quicker than when there is no media.

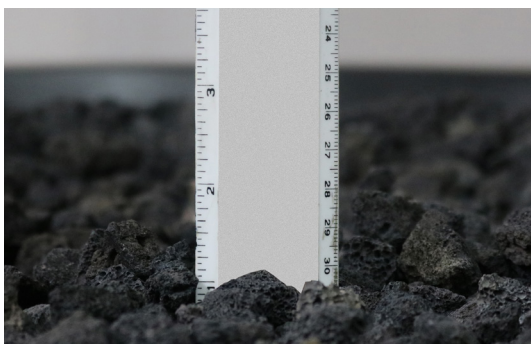
**IMPORTANT:** Recommended thickness of the media above the burner element is NO MORE than 2".

### Decorative Glass Application:

1. In this example we are using fire rated decorative glass.
2. Fill pan with glass. Cover the burner with 1/4" - 1/2" of glass. Do NOT overfill.
3. \*All LP installations must be tested and checked for back pressure. Damage may occur if this is not done.
4. Once glass is installed, be sure that the electrode cover is clear of media and not covered

### Lava Rock Application:

1. In this example we are using 1" lava rock.
2. Install your fire feature as demonstrated in your instructions
3. Apply a 2" thick layer of media to properly cover the fire feature.
4. For larger lava rock (3"-6" diameter), apply a loose layer over the burner.
5. Once lava is installed, be sure that the electrode cover is clear of media and not covered



**No more than 1" of burning media above the height of the burner. Adding more may cause damage**



### Do NOT cover the top of the electrode cover

- Covering the cover will cut off air required for ignition.
- Covering the cover will retain heat and cause the components to overheat and malfunction



## ASSEMBLY

**WARNING:** If a fire ring or "T burner" will be used indoors it is the installer's responsibility to follow all regulations, local codes and achieve independent certifications.

1. Ensure gas to the fire pit location is shut off.
2. Remove parts from packaging material.
3. Read Instructions.
4. Call Manufacturer for clarification as needed.
5. Inspect the Burner for any signs of damage or corrosion.
6. Apply pipe dope or gas rated tape to all threads.
7. Hard pipe valve to burner.
8. Perform leak test on all fittings.
9. Attach igniter to pan using bracket and screws provided and align with burner hole.
10. Mount push button switch to enclosure or SS face plate.
11. Wire push button switch to igniter. One wire to igniter and one wire to ground.
12. Install push button AAA batteries.
13. Connect fuel supply line to Key Valve.
14. Perform leak test as described in this manual.
15. Test ignition performance and adjust igniter location as needed.
16. Install unit in enclosure.

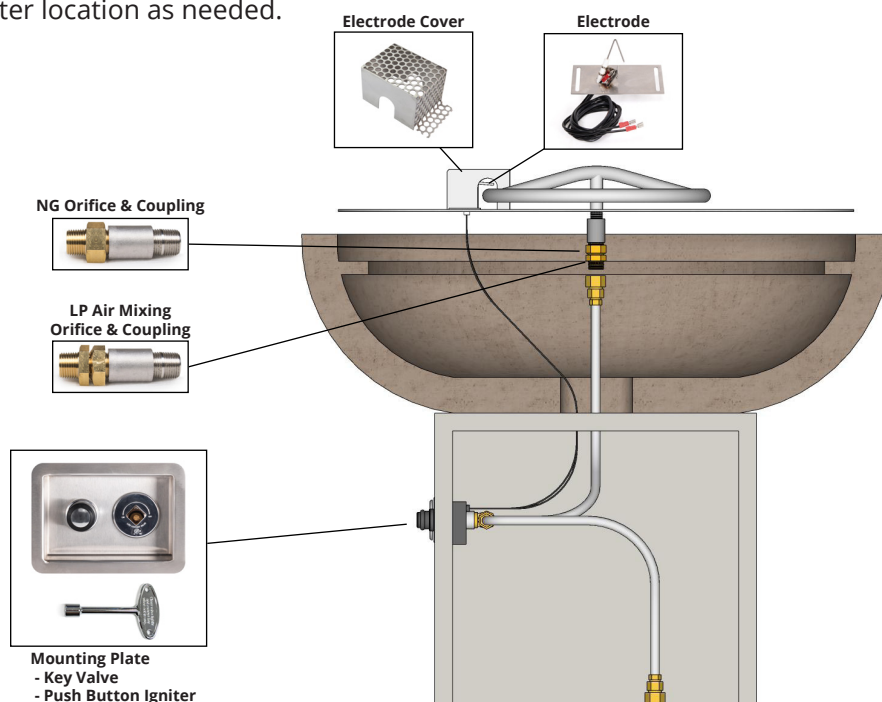
- To reduce whistling ensure flex line does not have sharp bends.

### Natural Gas Burner Assembly In this order:

Burner > Coupling > NG Orifice > Whistle Free Hose > Brass Key Valve > Whistle Free Hose

### Liquid Propane Burner Assembly In this order:

Burner > Coupling > LP Air Mixing Orifice > Whistle Free Hose > Brass Key Valve > LP Regulator



## FIRE PIT OPERATION

**WARNING:** Before use, be sure to test all gas connections for leaks. Do not use the fire feature if there is any evidence of leaking gas. If leaking gas is suspected, turn off the main gas supply and repair immediately.

**WARNING:** Wind and gusty conditions will affect the flame in an unpredictable manner. If conditions exist that are not safe for patrons, turn off the fire feature.

**WARNING:** Do not use fire feature if any part has been submerged under water. Immediately call a qualified service technician to inspect the fire pit.

**WARNING:** For electronic ignition models, power to fire feature must be turned off via wall switch or breaker when not in operation.

**WARNING:** Never use any material that is non-porous and holds moisture such as gravel, pebbles, river rock, etc. This material, when heated will cause the trapped moisture to boil and fracture unexpectedly. This material is not sufficiently porous to allow heated steam to readily escape which can break and cause personal injury or damage.

**WARNING:** Solid fuels shall not be burned in the fire pit. Leaves, sticks, wood, paper, clothing, food material, should be kept away from the fire pit. Make sure that there is no vegetation or other objects over the top or sides of the fire pit that could interfere with safe operation.

**WARNING:** If lava rock is wet, allow fire pit to burn for 45 minutes prior to coming within 15 feet of the fire pit.

**WARRANTY REQUIREMENT:** When not in use, the fire feature must be covered at all times.

## FIRE PIT START UP

1. STOP! Read the safety information on "What to do if you smell gas" (Pg. 1.)
2. Confirm there is no debris in fire pit (as mentioned in warnings) including water.
3. Press the rubber push button to begin spark.
4. Open gas Key Valve by turning counter clockwise SLOWLY.
5. Hold Button until flame ignites. Release push button switch when flame is present.
6. Adjust valve to desired flame height.
7. If Burner does not light turn valve off and allow gas to clear then repeat steps 2 - 6.
8. Never alter the design of the fire pit.
9. Never leave fire pit unattended by an adult that is not familiar with emergency shut-down.
10. Flammable materials should not be placed on or near the fire pit.
11. Children should be supervised when they are in the vicinity of the fire pit.
12. Inspect the fuel supply connection ( including all quick disconnect hoses ) before use.  
- Replace hose if there is evidence of abrasion or wear.
13. The proper hose and regulator must be used. Do not alter or change.
14. Turn off the fuel supply when not in use.

## FIRE PIT SHUTDOWN

1. Close manual valve by turning clockwise- flame should extinguish.
2. Remove key and place in safe location away from children.
3. Turn off fuel supply when not in use.
4. Once fire pit has cooled completely, use appropriate cover to protect fire pit.

## MAINTENANCE

**WARNING:** Any guard or protective device removed for servicing must be replaced prior to operating the fire pit.

**WARNING:** Installation and repair should be done by a qualified service person. Fire pits should be inspected prior to use and at least annually by a qualified service on.

**WARNING:** Ensure gas is shut off and fire pit is cool before servicing.

- Keep fire pit covered at all times when not in use.
- In some areas of the country, spiders or insects have been known to build nest and or lay eggs in the venture holes of the air-mixer for LP units. This can cause fuel to fill the fire feature cavity and result in personal injury or property damage.
- Periodical inspection by a qualified service technician of the air-intake is required to ensure your fire feature performs properly.



### Service

We suggest that our products be serviced by a professional certified in the US by the National Fireplace Institute (NFI) as NFI Gas Specialists.

### Prior to Each Use

1. Inspect for debris in Fire Feature – remove debris prior to use

### Semi-Annually

1. Visually inspect electrode for corrosion. Clean as needed
2. Battery Change. If needed, change the battery by unscrewing push button cap, replace battery, and tighten cap.

### Annually

1. Turn fire feature on to ensure proper operation.
2. Ring cleaning - If flames exhibit any abnormal shapes or behavior, or if burner fails to ignite properly, then the burner holes may require cleaning. The appliance can be cleaned by carefully removing media to allow access to burner. If evidence of damage, fire ring must be replaced with fire ring specified by manufacturer.

## TROUBLESHOOTING

Below are some potential causes and countermeasures to the symptoms indicated in bold. Please contact your retailer or certified technician for service & repair.

### **Will Not Light**

Air In Gas Line	Purge Gas. If New Install, This May Take Several Attempts
Debris In Gas Line	Confirm Gas Line Is Clear (Insulation, Dirt, Plastic, Excessive Pipe Sealer, Etc.)
Gas Pressure Improper	Confirm Proper Gas Pressure (Page 2)
Spark Igniter Not Sparking	Spark Igniter Must Be Correctly Aligned With Burner Holes
Weak Battering	Replace Batteries
Wire Is Shorted	Re-Route Wire Away From Conductive Materials

### **Will Not Stay Lit**

Improper Gas Pressure	Confirm Gas Pressure (Page 2)
Improperly Applies Media	Review Media On Page (Page 5)

### **Noise**

Whistling Sound	Change Flex Line Routing, Remove Kinks In Gas Line : Use Minimal Elbows
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## WARRANTY

### **LIMITED WARRANTY**

The Outdoor Plus Company (TOP) warranties all bowls against manufacturing defects that prevent safe and correct function as follows:

- Electronics, Gas Valve, & Pilot Assembly: Commercial-6mos; Residential- 1 yr.
- Stainless Steel Pan, Fire Ring, & Valve Box: Commercial-1yr.; Residential 3yrs.
- This commences from the date of original sale / shipment from The Outdoor Plus.
- This warranty is for parts and in-house (TOP) labor. The defective product must be sent back to TOP with a Return Merchandise Authorization (RMA) issued by TOP for that specific product and any other additional information for the nature of the defect or warranty claim.
- The warranty does not cover items that have been damaged by overheating, modification, abuse, or improper storage. Also any labor involving installation or maintenance with the unit is not covered.
- This warranty excludes claims for consequential, indirect-collateral expenses arising from product defects or warranty recovery.



## Clearance From Combustibles.

This diagram applies to all fire pits and fire features

### Flooring

All fire pits and fire features must be installed on non-combustible flooring. If the fire feature is installed on a combustible floor, such as wood decking, a non combustible floor paneling **MUST** be properly installed underneath.

### Installation

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### Service

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