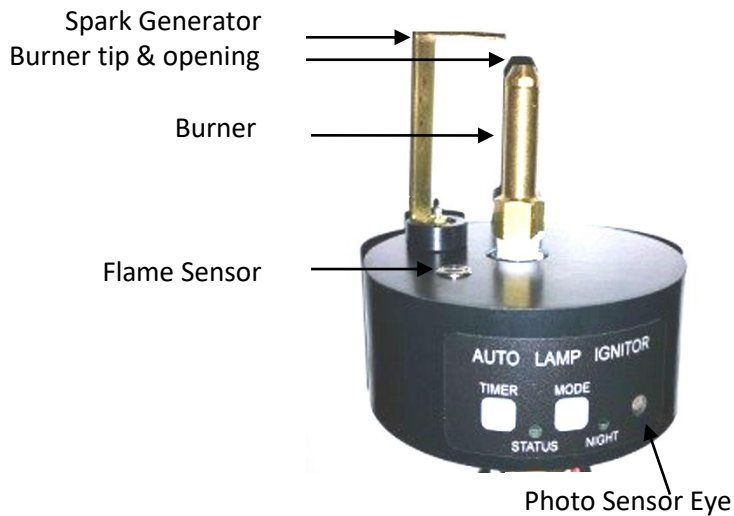


# “AGLW” GAS LAMP IGNITER PRODUCT INFORMATION GUIDE



**Your American Gas Lamp Works Lamp has been installed with an AGLW Gas Lamp Igniter. Before attempting to operate your Gas Lamp Igniter, it is important to read the entire product information guide and familiarize yourself with the products features and operation.**

**\*\*Installation of this product must be installed to conform with local codes or in absence of local codes, with the latest edition of National fuel gas code ANSI Z21.42-2013 or CSA B140.1 or CSA B149.2**



**\*\*\*INSTALLER: PLEASE LEAVE THE PRODUCT GUIDE WITH THE APPLIANCE FOR THE CONSUMER TO RETAIN FOR FUTURE REFERENCE**

## GENERAL

The Gas Lamp Igniter provides automated control to a gas lamp burner. The Gas Lamp Igniter controls the gas flow to a burner, ignites the burner, monitors the flame ensuring burning anytime the gas is flowing to the burner, senses day/night light levels, and provides a burn timer. The Gas Lamp Igniter provides continuous burn and night time burn options. This document describes the features and operation of the Gas Lamp Igniter.

**WARNING!** – When the Gas Lamp Igniter is operating and in the ignition cycle (Status LED is Slow Flashing) a high voltage pulse is generated through the Spark Gap Rod. To prevent risk of electrical shock maintain a minimum clearance distance of 2 inches from the Spark Gap Rod and Burner.

## POWER SUPPLY

**CAUTION:** Connecting the Gas Lamp Igniter directly to 120VAC will damage the unit and void the warranty.

The Gas Lamp Igniter requires (and is supplied with) a 12V DC (10W minimum) power supply connected to the Red (+12V DC) and Black (GND) power wires extending from the bottom of the Gas Lamp Igniter. If the power supply is not already installed in your lamp, it is recommended that it be installed in a junction box or in a weather protected area and run the appropriate gauge wire (minimum 18gauge) from the power supply to the igniter.

The blue wire from the power supply is to be connected to the white (neutral) wire of the main (120vac) supply and the brown wire of the power supply is to be connected to the black (hot) wire of the main (120vac) supply.

## FEATURES

- **Gas Manifold Inlet** – Located on the bottom center of the Gas Lamp Igniter. It is a 1/8 NPT Female inlet for connecting the gas supply to.
- **Gas Manifold Outlet** – Located on the top center of the Gas Lamp Igniter. It is a 1/8 NPT Female outlet for connecting the burner to.
- **Spark Generator** – A 2-56 Threaded rod that protrudes through the top of the Gas Lamp Igniter. The Spark Gap Rod is attached to the spark generator using a 2-56 hex nut, lock washer, and #4 ¼ inch nylon spacer (Keystone Electronics P/N 876). The Spark Gap Rod is used to direct the generated spark to the burner tip. The positioning of the Spark Gap Rod is important to the proper operation of the igniter. The Spark Gap Rod pointed tip should be aligned to the burner to provide an approximate gap of 0.150" between the Spark Gap Rod tip and the burner.

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- **Flame Sensor** – Round chrome sensor with red eye located on top side of the Gas Lamp Igniter. Detects the gas flame and must remain unblocked to ensure proper operation.
- **Status LED**– Located on side of the Gas Lamp Igniter. The Status LED indicates the current Status of the Gas Lamp Igniter or is also used to indicate the Burn Timer setting.
  - **Fast Flash** (~8 flashes per second) – Indicates Gas Lamp Igniter initial Startup delay, a High Voltage Fault or Flame Sensor Fault.
  - **Slow Flash** (~ 2 flashes per second) – Indicates Gas Lamp Igniter is operational and in the ignition cycle.
 

**WARNING!** – In the ignition cycle a high voltage pulse is generated through the Spark Gap Rod. To prevent risk of electrical shock maintain a minimum clearance distance of 2inches from the Spark Gap Rod and Burner.
  - **Very Slow Flash** (~ 1 flash every 2 seconds) – Indicates Gas Lamp Igniter is operational and the configured Burn Timer burn time has been completed.
  - **On** – Indicates the Gas Lamp Igniter is operational and is in the burn or wait for night cycle.
  - **Pulse** – The Status LED is used to display Burn Timer hour count. When displaying a count the Status LED is pulsed a number of times equal to the count and then the Status LED is off for a short delay and the pulses repeated.
- **Night LED** – Located on side of the Gas Lamp Igniter. Used to indicate if the Night burn mode or Continuous burn mode is activated. The Burn Mode LED is only valid during the Normal Operation mode.
  - Off – Indicates Continuous Burn mode is enabled
  - On – Indicates Night Burn mode is enabled
- **Mode Button** – Located on the side of the Gas Lamp Igniter and used to switch between Continuous burn or Night burn modes.
- **Timer Button** – Located on the side of the Gas Lamp Igniter and used to change the Burn Timer settings.
- **Photo Sensor Eye** – Located on the side and near the bottom of the Gas Lamp Igniter the Photo Sensor Eye is used to determine light and dark levels. Blocking the sensor or placing the sensor in a position such that an artificial light source can directly shine on the sensor may cause improper operation of the Night Mode operation.

## BURNER ALIGNMENT AND SPARK GAP ROD POSITIONING

Proper alignment of the Burner and Spark Gap Rod positioning are important to optimal operation. The burner should be installed so that the burner slit is aimed in the direction of the Flame Sensor. Refer to pictures below for optimal alignment and positioning.

This product was pre-assembled with the proper alignment and tested by the manufacturer.



## OPERATION

- **Startup** – When power is first applied the Gas Lamp Igniter first displays the software Version and Revision number using pulses of the Status LED. The Version number is displayed first and then following a short delay the Revision number is displayed. The count of the pulses corresponds to the Version or Revision number. Example: Version 1 Revision 3 – The Status LED would be pulse once, then a short delay and then 3 pulses.

After displaying the software Version and Revision an approximately 15 second startup delay occurs and is indicated by the Status LED fast flash. After the Startup delay normal operation is entered.

**\*\*\*If after the 15 second startup, the igniter does not try to ignite, check to make sure the night LED light is not on. If it is, press the mode button to turn it off and the igniter should proceed the startup operation again. If the igniter is in night mode, it will not follow through with the startup until evening\*\*\***

- **Fault** – When a High Voltage or Flame Sensor fault is detected the Gas Lamp Igniter Status LED will be a constant and continuous Fast Flash. The Gas Valve is closed while a fault is detected.
- **Continuous Mode** – In Continuous Mode the Gas Lamp Igniter will attempt to ignite and maintain a continuous burn any time power is applied to the Gas Lamp Igniter. Anytime during the Continuous Mode operation that the Flame is not detected, the Gas Lamp Igniter will perform an ignition cycle of turn on the gas, spark 10 times or until Flame is detected. If after 10 spark attempts the Flame has not been detected the gas is turned off and the Gas Lamp Igniter waits 20 seconds before performing the next ignition cycle. During the ignition cycles the Status LED will Slow Flash. The ignition cycles repeat indefinitely until a Flame is detected.

Once a Flame has been detected the Status LED will be On constant and the ignition cycle stopped and the gas valve remains on. At anytime during the Continuous Burn if the Flame is extinguished the ignition cycle will restart.

**WARNING!** – In the ignition cycle a high voltage pulse is generated through the Spark Gap Rod. To prevent risk of electrical shock maintain a minimum clearance distance of 2 inches from the Spark Gap Rod and Burner.

- **Night Mode** – In Night Mode the Flame is ignited only when ambient light levels are low indicating darkness. The same operation as Continuous Mode is performed except only at night. During the daytime the ignition cycle is stopped and the Status LED and Night LED is On constant and the gas valve closed.

**WARNING!** – In the ignition cycle a high voltage pulse is generated through the Spark Gap Rod. To prevent risk of electrical shock maintain a minimum clearance distance of 2 inches from the Spark Gap Rod and Burner.

- **Burn Timer** –In Night Mode, the Burn Timer is used to control how much time after initial ignition the Flame will be maintained for. After the amount of burn time has expired the gas valve is turned off and the Flame extinguished. Burn Timer is reset during the day and re-ignites with the next occurring evening. To enable Night Mode press the Mode button for 3 seconds then release. The Night LED will be solid green, the igniter will ignite at dusk and extinguish at dawn. If you want it to extinguish before dawn, you can set the burn timer for up to 8 hours.

The Burn Timer can be set for 0 – 8 hours in 2 hour increments. A zero setting disables the Burn Timer feature to where it will ignite at dusk and extinguish at dawn. The Burn Timer value setup is entered by pressing and releasing the Timer Button while in Night Time mode. After pressing and releasing the Timer Button the current Burn Timer value is flashed by the Status LED. The current Burn Timer value is displayed 3 times and then exits the Burn Timer setup if the user has not pressed any button before the Burn Timer value is displayed 3 times.

After the initial press of the Timer Button, each successive press of the Timer Button will increment the value by 2 hours and after 8 hours the next press resets the value to 0 hours (disabled). The Burn Timer may be disabled by pressing the Mode Button any time while in the Burn Timer setup. (The Mode Button must be pressed again to restart the burn timer set up) To exit the Burn Timer setup the user stops pressing any buttons and after a short timeout the Burn Timer setup is automatically exited and the Status LED and the Night LED will be solid green.

The Burn Timer value is determined by counting the brief flashes on the Status LED after entering the Burn Timer setup. Each flash counted equals 2 hours of time. The Burn Timer value is displayed 3 consecutive times before automatically exiting the Burn Timer setup. There is a short delay between each time the Burn Timer value is displayed.

Example: Burn Timer value equals 4 Hours. After first press of the Timer Button the Status LED will flash 2 times then be off for a short delay and then repeat the 2 flashes and delay two more times, and then exit Burn Timer setup mode. If the user presses the Timer Button once before the Burn Time setup mode is exited, the Burn Timer value will be incremented to 6 hours displayed as 3 flashes of the Status LED. The 6 hour value will be displayed 3 times and then the Burn Time setup automatically exited.

Once the Burner Time Setup is complete, the status LED and the Night LED will both be solid green.

## **MAINTENANCE**

Regular maintenance requires periodic cleaning of the Flame Sensor surface to remove any dust, dirt or residue that may interfere with the proper operation of the Flame Sensor. Use a clean, dry, soft cleaning cloth. It is recommended to periodically clean the burner tip slit with dental floss.

## TROUBLE SHOOTING

IGNITER DOES NOTHING AFTER INITIAL SET UP	<ul style="list-style-type: none"> <li>• Check all electrical connections. Make sure igniter is connected to the driver(power supply) not directly to 120V line</li> </ul>
	<ul style="list-style-type: none"> <li>• Is the main electric supply "ON"</li> </ul>
	<ul style="list-style-type: none"> <li>• Is the Night LED light solid green? If yes, take it out of night mode by pushing the mode button once and the LED light should go "off" and igniter should begin to cycle.</li> </ul>
IGNITER STRIKES BUT DOES NOT LIGHT	<ul style="list-style-type: none"> <li>• Is the gas connected to the valve</li> </ul>
	<ul style="list-style-type: none"> <li>• Is the main gas supply "ON"</li> </ul>
	<ul style="list-style-type: none"> <li>• Clean the burner by sliding a piece of dental floss back and forth in the slit at the top of the burner</li> </ul>
	<ul style="list-style-type: none"> <li>• Try using a match to light the flame for the first time.</li> </ul>
CONTINUES TO TRY TO IGNITE AFTER THE FLAME IS LIT	<ul style="list-style-type: none"> <li>• Is the flame flowing in the direction of the flame sensor</li> </ul>
	<ul style="list-style-type: none"> <li>• Is your flame large enough that it can be seen by the flame sensor, adjust the flame using the manual valve in the lamp</li> </ul>
	<ul style="list-style-type: none"> <li>• Clean the flame sensor using a soft cloth or cotton swab</li> </ul>
THE STATUS LED LIGHT IS BLINKING RAPIDLY AND IGNITER IS NOT OPERATING	<ul style="list-style-type: none"> <li>• Turn the power to the igniter off for a few seconds then power it back up again</li> </ul>