

# Paragon FireFly Instructions

## Introduction

Thank you for choosing a Paragon FireFly kiln! We have designed it to give you many years of reliable service.

We have included a copy of “Paragon Caldera Instruction & Service Manual” in your instruction packet because the Caldera kiln is so similar to your FireFly. As you read the Caldera manual, skip over references to the following:

- The support blocks placed under the Caldera
- Enameling
- Annealing flame-worked glass beads
- The digital controller

## Important Safety Rules

An electric kiln is extremely safe to operate provided you follow these basic safety rules:

- Unplug kiln when not in use.
- Do not touch hot sides.
- Keep unsupervised children away.
- Before connecting power, place the kiln on a non-combustible surface.
- Do not install closer than 12” from any wall or combustible surface.
- Fire only in a well ventilated, covered and protected area.
- Keep cordset away from hot sides of kiln.
- DANGEROUS VOLTAGE: Do not touch heating elements with anything.
- Disconnect kiln before servicing.
- Do not leave kiln unattended while firing.
- Wear safety glasses when cutting glass.
- Wear firing safety glasses when looking into a hot kiln.
- Keep food away from your work area.
- Never fire tempered glass inside a kiln. It could explode.
- Avoid firing toxic materials inside the kiln, such as styro-foam (used as a core for silver clay hollow beads).

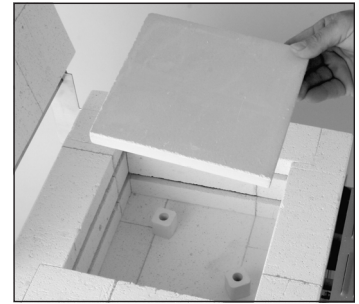
## Venting the Kiln

Some types of ware, such as ceramics, contain impurities that burn off during firing. These impurities must be released from the kiln at the beginning of the firing. Otherwise they can affect the quality of the ware. To vent the kiln, place a ½” post under the lid.



## Ceramic Shelves & Posts

Shelves and posts are fireclay that has been fired to a higher temperature than will be encountered in your kiln. Ware is placed on the shelves. Shelves can be stacked using posts.



## The Infinite Control Switch

The infinite control switch in your kiln is a bimetallic timer that cycles on and off to regulate heating. The higher the switch setting, the longer the element stays on during each cycle. On High, the element stays on continuously. This is why the clicking noise stops after the switch is turned to High.



The pilot light above the switch serves as the pointer mark for the numbers on the switch knob. As you turn the knob from LOW through MED and higher, the kiln will fire progressively faster. When you turn the switch to HIGH, the element will stay on continuously. The switch settings do not correspond to a particular heating rate or temperature hold.

Keep firing records in a notebook. Write down the temperature every 10 minutes.

**Note:** Clip a small kitchen timer to your clothing and wear it during kiln operation. Set the timer to remind yourself to check on the kiln every few minutes.

## Switch Positions

- 1 Turn the switch to a slow setting such as 1 or 2 especially if you are firing ceramics or thick glass. If you want to fire faster, turn to MED.
- 2 At 1000°F turn the switch higher.

- 3 If you are firing glass, lift the lid just enough to check on the progress of the glass. If you are firing ceramics, you can also open the lid to see the pyrometric witness cone.

**Caution:** Look at the ware for only several seconds at a time.



Then close the lid. Wear firing safety glasses and protective gloves. Lift the side handle on the lid.

- 4 Turn off the power when the glass or ceramic ware is finished. Keep the lid closed and do not remove the ware until the kiln has cooled to room temperature.

### How to Hold a Temperature

Some materials, such as silver clay, need a temperature hold. (This means keeping the temperature steady for a specified period.)

A low temperature hold (i.e. 200° - 300°F) is more difficult to maintain than higher temperature holds (1400° - 1700°F). When holding at a low temperature, heat the kiln slowly. Otherwise the temperature may overshoot the desired hold.

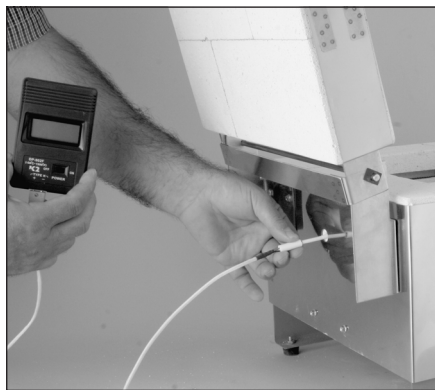
To hold the temperature, sit with the kiln and make very small adjustments to the switch every 3 minutes or so. With a little practice, you will sense when to adjust the switch before the temperature begins to drift from the desired hold.

### Installing the Thermocouple

You will find a rod, called the thermocouple, packaged with your pyrometer. The thermocouple senses temperature and sends a signal to the pyrometer. If the tip of this rod is pushed out of the firing chamber, the pyrometer will assume that the firing chamber is cooler than it actually is.

The thermocouple should extend into the firing chamber by 3/4" - 1". Insert the thermocouple into the kiln through the pre-drilled hole near the hinge.

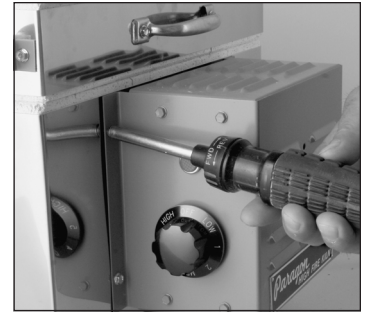
When the thermocouple is positioned properly, make a pencil mark on the outside of the thermocouple that is flush with the kiln case. During firing, the pencil mark will indicate that the thermocouple is positioned in the firing chamber by the correct distance.



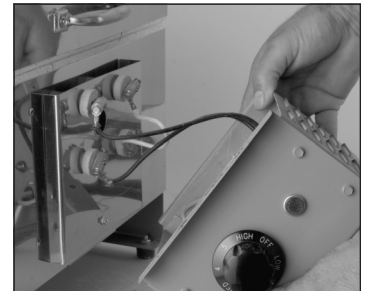
### Replacing a Switch

- 1 UNPLUG kiln.

- 2 Remove the screws on the sides of the switch box that hold it to the kiln. Gently lift the box away from the kiln.



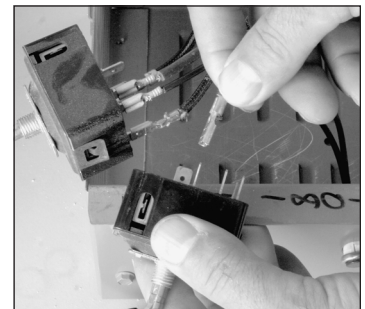
- 3 Pull off the switch knob with fingertips. Remove the single nut from the front of the defective switch. Remove the switch.



- 4 Hold the new switch at the side of the defective switch, aligned in the same direction. Remove and transfer one wire at a time from the old switch to the new one. Make sure each connection is tight. Replace push-on connectors and wires damaged by heat. If wire connectors do not fit snugly on terminals, gently squeeze the end of the terminal with pliers.



- 5 Put the new switch in place making sure it is right side up. Reinstall the shaft nut checking to be sure it is not backwards. Tighten the switch so that it will not turn during operation.



- 6 Check to see that wires are not touching kiln case or the element connectors. Wires touching element connectors or the kiln case will burn out. Move switch box into place and reinstall switch box screws.

  
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