Test instructions:

1. Power

### Unit Power

* Verify the unit will not power on without being connected to a system controller.
* Plug the system into a system controller and verify that the unit will now power on.
* Verify the pump, AC fan, and microcontroller is on.

### Setting the Cosel High and Low voltages .

* Unplug connectors J9 and J20. You are now able to adjust the low temperature voltage by twisting the potentiometer on the Cosel supplies.
* Plug in connector s J9 and J20 and set the Cosel to over 110 degrees. The stage needs to heat up to over 100C. You can now set the high temperature with the potentiometers R2 and R1
* Verify the unit switches into high power mode when the stage is set over 100C and the set temp is over 110C.

### Shutoff

* Unplug the Athena DB9 connecter and verify the unit shuts off.

1. Safety Switches

### Bi- metallic

* Short the bi-metallic switch on the stage – verify the unit shuts off
  + Press the reset button and verify the unit will come back on. The unit will flow water to cool down the stage when the button is depressed. When the button is released the bimetallic will be active again
* Verify the overheat LED lights up

### Level Switch

* Unplug level switch connector and verify the red LED indicator switched to red and the unit shuts off.
  + Verify the rest turn the unit back on. When the reset button is depressed verify that the unit operates correctly.
* Verify the RED fluid LED illuminates.

### Water Temp switch

* Short the water temp switch and verify the fan come on. Un-short the switch and the fan should stay on for 3 minutes.

1. Water Flow

### Water Flow

* Place a flow meter in line with the water tubes and verify that there is adequate water flow (this is somewhat subjective – but the meter should spinning relatively fast)

1. Communication

### USB communication

* Plug in a UCB cable into the unit and into the computer. Run stagemaster and verify that you are able to set the stage temp

### Micro controller

* Verify the microcontroller sets the start temp to 35C on power up.

1. Burn in

Run the thermal graphing application and run the burn. This will ramp the unit for 16hrs and record the data in a graph. Compare the data to comparable units.