

Open Circuit Voltage Adjustment

Refer to drawing 114173 Assembly TB1 drawing. Once you have your Links set for the desired lamp current on TB1 (Red) board, set the Tap Switch to the lowest Lamp Current you will be using.

A few of ways to take the measurement of the Open Circuit voltage are:

1) The POS (+) or NEG (-) lead removed from the power supply heat sink. Measure the Open Circuit Voltage across the heat sinks.

2) Remove the Auto Strike Thermal Delay Relay K2 from the Igniter PCB and measure the Open Circuit Voltage across POS (+) and NEG (-) either at the top of the igniter or across the heat sink.

3) Remove the Relay K1 from the Igniter PCB and measure the Open Circuit Voltage across POS (+) and NEG (-) either at the top of the igniter or across the heat sink.

After powering up the power supply wait 30 seconds for the Open Circuit Voltage to somewhat stabilize before taking the Open Circuit Voltage measurement.

Now adjust the Open Circuit Voltage by moving the 4th link (The one that jumpers either R2A to 78 or R2A to 84) independently from the other three links and possibly changing wires 78, 81, 84, 87. Wire 78 is the lowest Open Circuit Voltage you can have and 87 is the highest. See the table below.

Open Circuit Voltage is:	4 th Link Position	With Wire	Action
Low	HI	78 on position 78	Replace wire 78 with wire 81 on position 78
Low	HI	81 on position 78	Move 4 th link to LO position
Low	LO	87 on position 84	Problem, voltage cannot be increased further
Low	LO	84 on position 84	Replace wire 84 with wire 87 on position 84
High	HI	81 on position 78	Replace wire 81 with wire 78 on position 78
High	HI	78 on position 78	Problem, voltage cannot be decreased further
High	LO	84 on position 84	Move 4 th link to HI position
High	LO	87 on position 84	Replace wire 87 with wire 84 on position 84

Now that you have the lowest Open Circuit Voltage set, set the Tap Switch to the highest Lamp Current you will be using and verify that the Open Circuit Voltage is within limits.

To prevent Resistors R2 & R4 from possible overheating and failing several steps should be taken:

- 1) Set Open Circuit Voltage to 120VAC nominal, 130VAC max.
All open circuit voltage is dropped across these resistors when the lamp is lit.
A lower voltage prevents excessive heating of R2 & R4.
The Open Circuit Voltage will vary with the Tap Switch position.
A lower Open Circuit Voltage provides a more robust Auto Strike, but below 100VAC it could cause the Auto Strike not to function.
Excessive Open Circuit Voltage causes the Auto Strike to burnout.
- 2) The fan mounted on the side of the SLC cabinet down at the power supply must be blowing in.
This fan is quite often mounted blowing out.
With this fan blowing in R2 & R4 temperatures are reduced considerably.
With this fan blowing in diode failures are greatly reduced.
- 3) Block the louvers on the panel the above fan is attached to.
This reduces R2 & R4 temperatures.
This keeps diodes cooler and thus reduces diode failures.
A panel without louvers is available; it is part number 195728-002 Rev 3.
Newer consoles have this panel from the factory.
- 4) Replace the bracket that holds the fan underneath the heatsink.
The new brackets part number is: 195795-001 Rev 3.
This bracket completes the cooling updates to the power supply.
This bracket greatly increases the cooling to the diodes.
This bracket is easily recognizable with an approximately 0.6 inch step up from where it screw mounts to the console to the fan mounting. (See attachment)
Newer consoles have this bracket from the factory.