Document revision 1.1 – Last modification : 22/04/08

PSL1 Setup guide

Safety warning

THIS KIT IS NOT FOR BEGINNERS !
This kit is main powered and use potentially lethal voltages. Under no circumstance should someone undertake the realisation of this kit unless he has full knowledge about safely handling main powered devices.

Follow the testing procedure in the shown order. If one test fails, find out the problem, correct it then resume.

Step		Description
1.	Test setup	Work on a clear area. The power chord is not connected yet. During the test, always remove power by unplugging the power chord. Turning off the power switch is not sufficient because in only cuts one phase of the mains. To adjust the output voltages, you need an insulated screw driver. Warning : NEVER USE A NON INSULATED SCREW DRIVER ! There are several points that carry high voltage that will kill you if you accidentally touch them with an uninsulated screw driver.
2.	Fuse installation	Insert the fuse : Slow blow 0,63A for 230V Slow blow 1,25A for 115V.
3.	Primary check	With your digital multimeter (DMM) set to Ohms, measure the resistance between the 2 main pins of the IEC connector. You should read an infinite resistor value when the switch is off. You should read around 48 ohms when the switch is on and the voltage selector is on 230V. You should read around 12 ohms when the switch is on and the voltage selector is on 115V.
4.	Voltage selection	Set the voltage selector switch on the correct position.
5.	Short circuit check	Do a basic short circuit check with your digital multimeter (DMM) set to Ohms : • Between Test point TP1 (0V) and TP2 (V+). • Between Test point TP1 (0V) and TP3 (V-). • Between Test point TP1 (0V) and TP4 (48V). In all cases you should get more than one kilo-Ohm. If it is not the case, find out and fix the short before applying power.
6.	Potentiometer initial position	Turn P3 counter clockwise about 10 turns. Do not move P1 and P2, they are initially set to a mid position.
7.	DMM installation	Set your DMM on DC Volts, on a 30V scale. Install the test hooks between TP1 (0V) and TP2 (V+). Warning : Make sure you are not creating any short circuit with the test hooks.

Step		Description
8.	V+ setup	Apply power and check the voltage on the DMM. You should read around 22V or 23V. Move P1. If the voltage follows the potentiometer moves then you are OK, adjust the voltage to +27V. If the voltage does not follow the potentiometer moves then remove power and check the circuit for mistakes. Remove power.
9.	V- Setup	Install the test hooks between TP1 (0V) and TP3 (V-). Apply power and check the voltage on the DMM. You should read around -22V or -23V. Move P2. If the voltage follows the potentiometer moves then you are OK, adjust the voltage to -27V. If the voltage does not follow the potentiometer moves then remove power and check the circuit for mistakes. Remove power.
10.	48V Setup	Set your DMM on DC Volts, on a 60V scale. Install the test hooks between TP1 (0V) and TP4 (48V). Apply power and check the voltage on the DMM. You should read around +30V or +40V. Move P3. If the voltage follows the potentiometer moves then you are OK, adjust the voltage to +48V. If the voltage does not follow the potentiometer moves then remove power and check the circuit for mistakes. Remove power.
11.	LEDs check	Once the voltages are set, the 3 LEDs should shine at about the same intensity.
12.	Congratulations	You're done !