LS9D PSU installation Guide

ARNING!! HIGH VOLTAGE, PLEASE BE CAREFUL.

Introduction: LS-9D can outputs 240~400V, 100mA high voltage x 1 and DC heater voltage x 2. The heater default voltage is 12.6VDC, but you can modify to 6.3VDC. High voltage is using 6Z4 for current regulation; 12AT7 for comparison, 12B4A is used for output voltage adj.

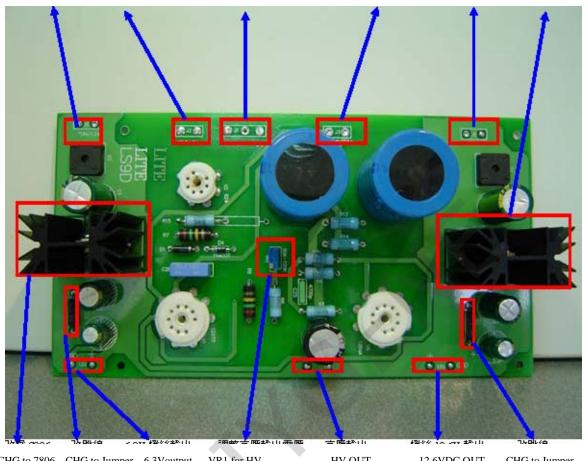
INSTALLATION:

- 1. Let use DIYGene 100VA R80-44 R Core transformer, and we need to output 1 x 250-280V, 1 x DC12.6V and 1 x DC6.3V. and it match perfectly with LS-26 preamp pcb. R80-44 got 2x0-300V, 1 x 0-15V, 2 x 6.3V
- 2. In default, factory use a 5.10hm for drop the voltage to 12.6V. but it is not the perfect solution from DIYGene opinion. You may use a jumper to short the 5.10hm and change the 7812 IC to 7806 IC. And you will have a more perfect heater voltage.
- 3. Let us handle the heater voltage, connect the 6.3V to the PCB 6.3V output set (input). and the high voltage's regulation tubes(3xtubes) needs 6.3V and 12.6V(AC), 1 x 6.3V can connect to the pcb directly, and then 12.6V(AC) needs to use 2 x 6.3 (AC) and connect in series to get the 12.6V(AC). You may mark on the wires, mark 1 & 2 on 2 x purple wires, mark 3&4 on 2 x grey wires.

 IF you connect the cable 1&1 to the 6.3V input, and then connect the cable 3 to one of the
 - 12.6V point. And connect the cable 4 to the cable 2. And use cable connects the 6.3V cable 1 to another point on the 12.6V set.
- 4. Connect the 0-15V cable to the DC12.6 set (amp board heater voltage) input point.
- 5. and now we handle the high voltage part, use 0-300V x 2 (from the transformer), they are white-blue, white-blue. First of all, connect first set blue wire to another set's white wire and connect this 2 wires to the 0V(or GND) on the PCB. And connect the remaining wires to the PCB's remaining holes.
- 6. Now you can connect to the power to test, $\,$ first you test the DC heater voltage , are they $\,$ 6.3V and $\,$ 12~15.5VDC.
- 7. And then we test the high voltage part, is it AC6.3V and AC12.6V? Normally 12.6V set is the problem area. If you got a few mV, please unplug the power. And switch the cable 3 and cable 4. And now you should have 12.6VAC.
- 8. NOW, you can put the tubes on the sockets. And you will see are there any light coming out from the tubes.
- 9. Finally you can adj the high voltage with the VR1.

USE R80-44 transformer and LS-26 preamp as example:

AC6.3V (PUR) AC6.3V(GRY) AC 300-300-0 (BLU/WHT/BLU/WHT) AC12.6V AC15V(ORG) CHG to 7812



CHG to 7806 CHG to Jumper 6.3Voutput VR1 for HV HV OUT 12.6VDC OUT CHG to Jumper