



MP66 Assembly guide



Safety warning

This kit is not for beginners ! The board carries high voltages that are potentially very lethal. Under no circumstance should someone undertake the realisation of a kit unless he has full knowledge about safely handling main powered devices.

Please read the “DIY guide” before beginning.

Print or open the following documents :

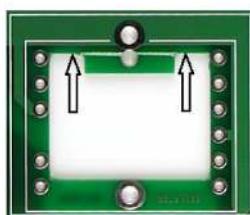
- MP66 Schematics
- MP66 Components layout
- MP66 Parts list
- SKMP Assembly guide
- MP66 Setup guide

Follow this guide from item number 1 till the end, in this order. The assembly order is based on components height, from low to high profile, in order to ease the soldering process : The component you are soldering is always taller than the previously assembled ones and it is pressing nicely against the work area foam.

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1. Transformer cut-out



Step 1



Step 2



Step 3

Unless you are not using the specified Cinemag transformer, you must extend the transformer cut-out on the PCB.

Step 1 : With a ruler and sharp tool, strongly mark the white line identified by arrows until you get a nice little groove. Repeat on both sides of the PCB.

Step 2 : With flat nose pliers, snap off the PCB bits on both sides of the centre hole.

Step 3 : With a small file, smooth out the cut. Check that the transformer fits easily.



2. Diodes

Add D1 to D6, D8 to D14. Use a lead forming tool to cleanly bend the leads at 0.4”.

Warning : Make sure to respect the direction of the diodes which is marked by a ring on the component and a double line on the PCB marking.

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3. Resistors



Add R1 to R60, RL1 and RL2.

Control the resistor values with a digital multimeter. Bend the leads at 0.4" with a lead forming tool, except for R49 which is bent at 0.6".

4. Leaded inductor



Add L3

5. Integrated Circuit



Insert U1, U2 and U3 and solder. You will need to bend the pins slightly inwards before inserting. Make sure you are not charged with electrostatic electricity before handling the IC (or remove your shoes).

Warning : Make sure to respect the IC direction, marked by a notch.

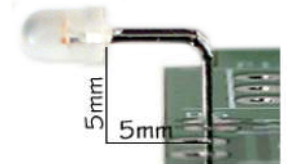
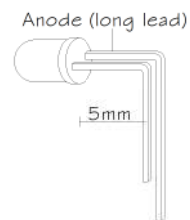
6. Led



Bend the leads of D7 at 5mm from the body taking care of the anode position (the longest lead).

Warning : it is easy to bend it in the wrong direction !

Solder the LED at 5mm from the board. Start by soldering one lead, adjust the position, then solder the second lead.



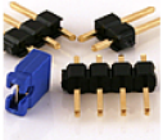
7. Test pins



Solder the 7 test pins TP1 to TP7.

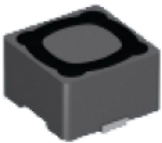
Warning : there is an cancelled TP7 near the 26pins connector. Don't use it.

8. Jumpers



Insert JMP1. Solder one pin first, check the position, then solder the other pins.

9. Surface mount shielded inductor



Tin one of the contact surfaces of the inductor by spreading a thin layer of solder on it. Next, tin both PCB contact surfaces. Place the inductor in the right position and warm up the contact from the side, while pressing the inductor down, until the solder melts. Once the first contact is done, heat the second contact while adding some fresh solder until a good joint is done.



10. Diode D15



Add D15 vertically, cathode up.

11. Ceramic capacitors



Add C2, C22, C24, C26, C27, C28, C30.

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I 2. Small film capacitors



Add C7, C8, C9, C10, C12, C13, C14, CL1.

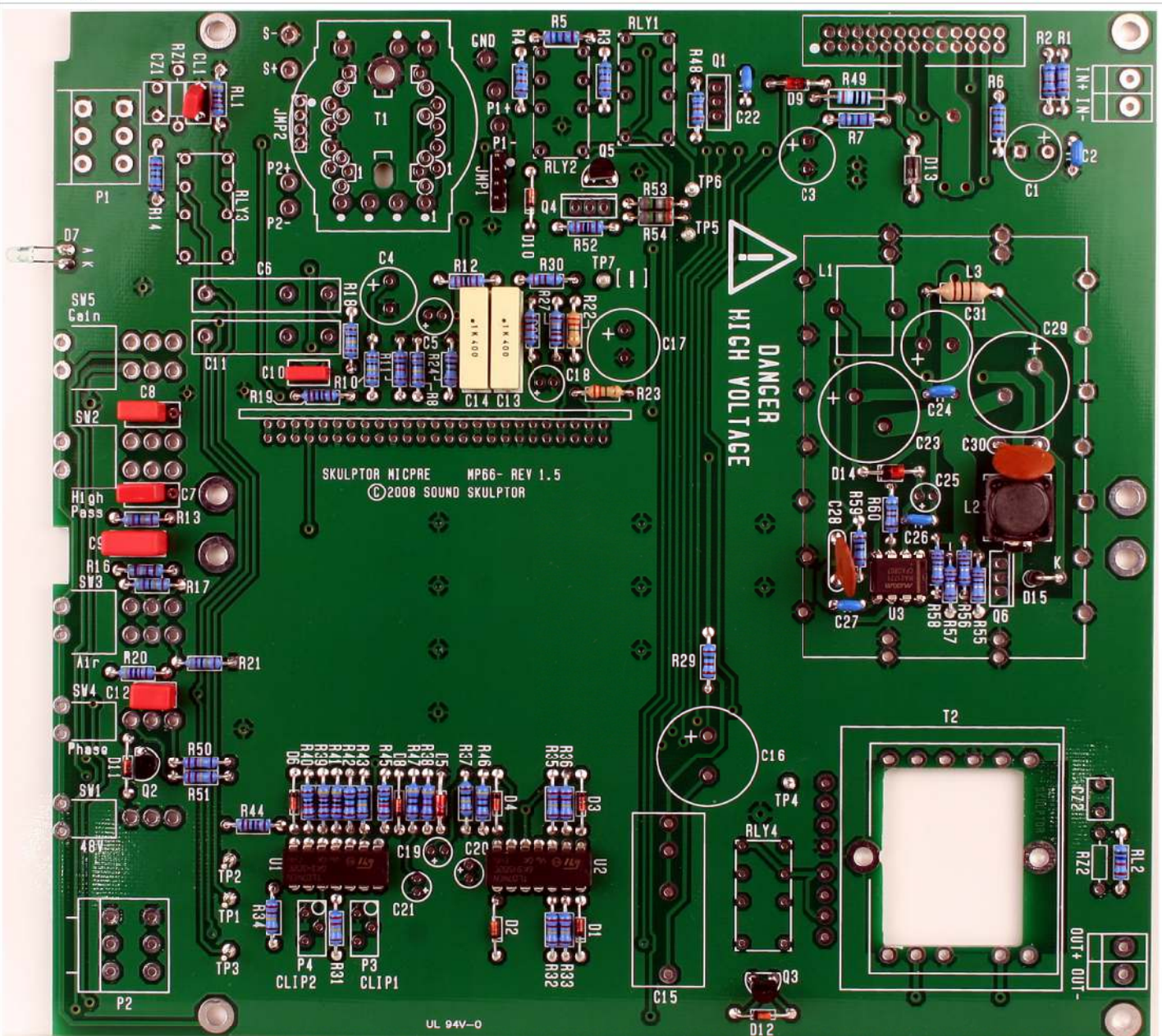
Be careful when bending the legs of CL1 to fit into the 5mm spaced holes.

I 3. Small Transistor



Add Q2, Q3, Q5.

Warning : Watch out the transistor direction.



I 4. Connector



Add CN3. Start soldering one pin, check the position, then solder the other pins.

Warning : Check the position of the slot, it must not be mounted backwards.

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15. Trimmer potentiometers



Add P3 and P4. Solder one pin, check verticality then solder the other pins.

16. Relays



Add RLY1, RLY2, RLY3, RLY4.

17. Small electrolytic capacitors



Add C19, C20, C21, C25, C5, C18.

Solder one lead first, adjust verticality then solder the second lead.

Warning : The +lead must go into the +hole. Do not reverse (they may explode !)

18. Terminals



Add CN1 and CN2. Screw down the terminals all the way before soldering.

Warning : the wire apertures should point towards the outside of the board !

19. Toroid inductor



Add L1

20. Switches



Add SW1 to SW5. The position of the switches is critical for a good front-plate matching. They must sit flat on the PCB. Press firmly the switch on the PCB and solder one of the front pins (housing). Check verticality and horizontality. Then solder the other pins.

Warning : Do not mix up the switch types : SW1 is short lever.

21. Potentiometers



Add P1 and P2. The position of the potentiometer is critical for a good front-plate matching. It must sit flat on the PCB. Press firmly the potentiometer on the PCB and solder one of the centre pins. Check verticality and horizontality. Then solder the other pins.

22. Power transistors



Add Q1, Q4 and Q6. Insert them as far down as possible, solder one pin, adjust the verticality, then solder the two other pins.

Warning : Watch out the direction, the metal tab at the back of the device is symbolized by a double line on the PCB marking.

23. Large film capacitors



Add C6, C11, C15.

24. Large electrolytics

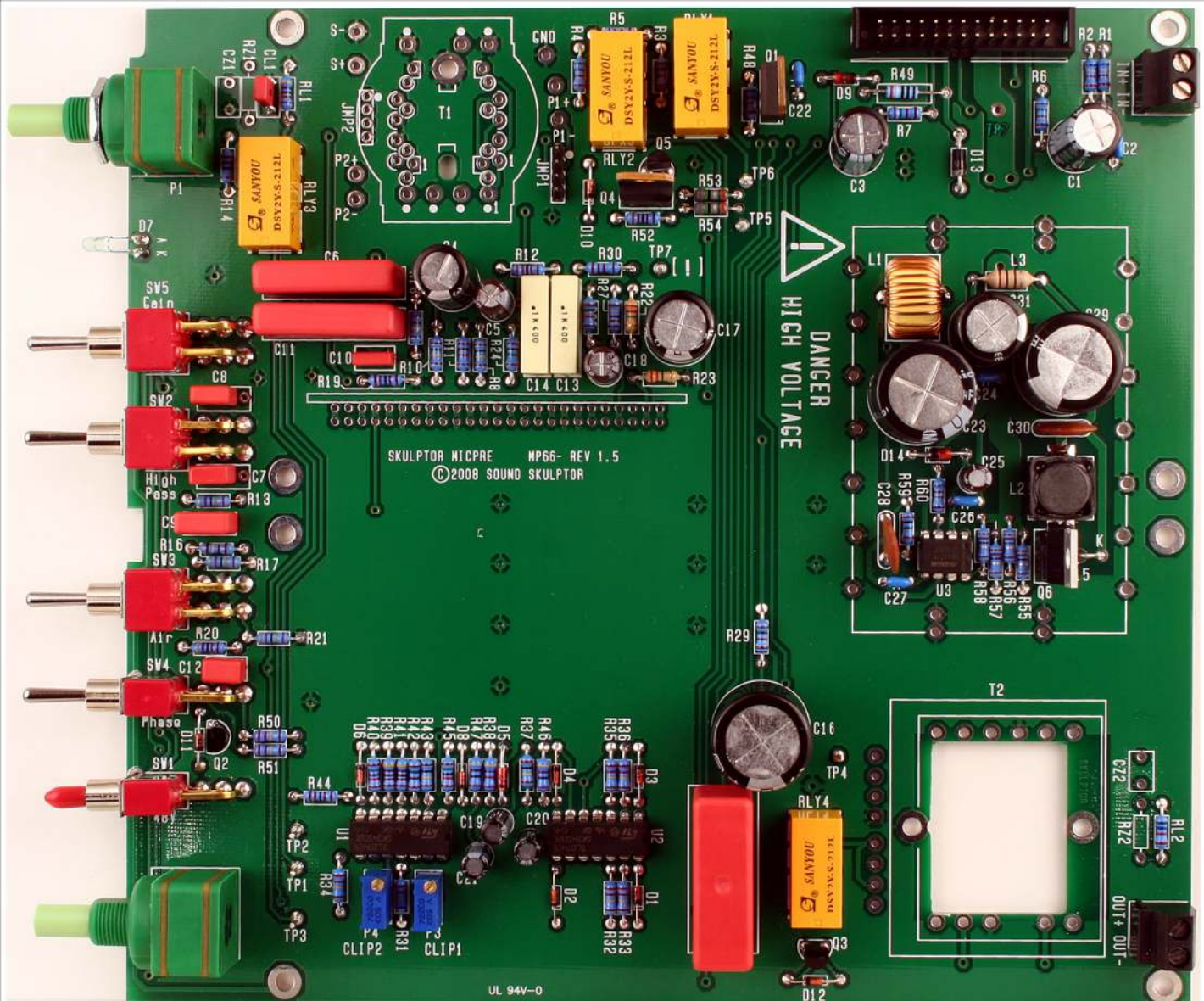


Add C1, C3, C23, C4, C17, C31, C16, C29.

Solder one lead first, adjust verticality then solder the second lead.

Warning : Some of the capacitors are at 300V voltage. Be extremely careful not to mix capacitors. The +lead must go into the +hole. Do not reverse or they will explode !

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25. Input transformer

The transformer pin holes on the PCB are identified by small white dots.

It is necessary to leave a small gap between the transformer and the PCB surface in order to avoid any electrical contact between the metal case and pads. Fit a piece of double sided adhesive tape (supplied with the kit) on the transformer, between the pins. It is not necessary to remove the second protective layer from the tape as it is only used as a spacer.

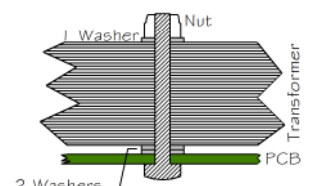
Start by soldering 2 opposite pins, check the position, adjust if necessary then solder the other pins.



26. output transformer

The transformer is mounted using two 25mm M3 screws inserted from the back of the board. Two metal washers are fitted on each screw to prevent the transformer touching the PCB. One more washer is used before the nut to protect the lams.

Shorten the leads to the necessary length, around 6 cm. Strip on 5mm and tin. Insert in the pad hole and bend the tinned tip flat on the pad before soldering. Cut flush.



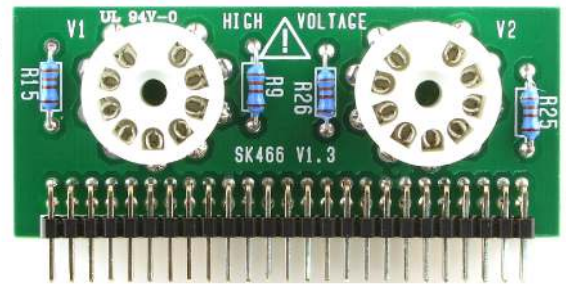
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27. SK466 assembly

Solder R9, R15, R26 and R25 on the SK466 PCB.

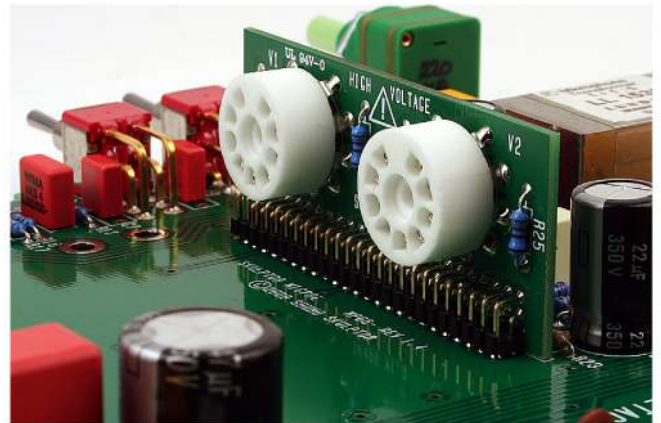
Solder the 2 x 25 pins 90° pin header. Make sure the pins are sitting perpendicular to the PCB. Work slowly and carefully. The pads are small and close together. After soldering cut the pins flush.

Solder the 2 tube sockets for V1 and V2 and cut the pins flush.



28. SK466 installation

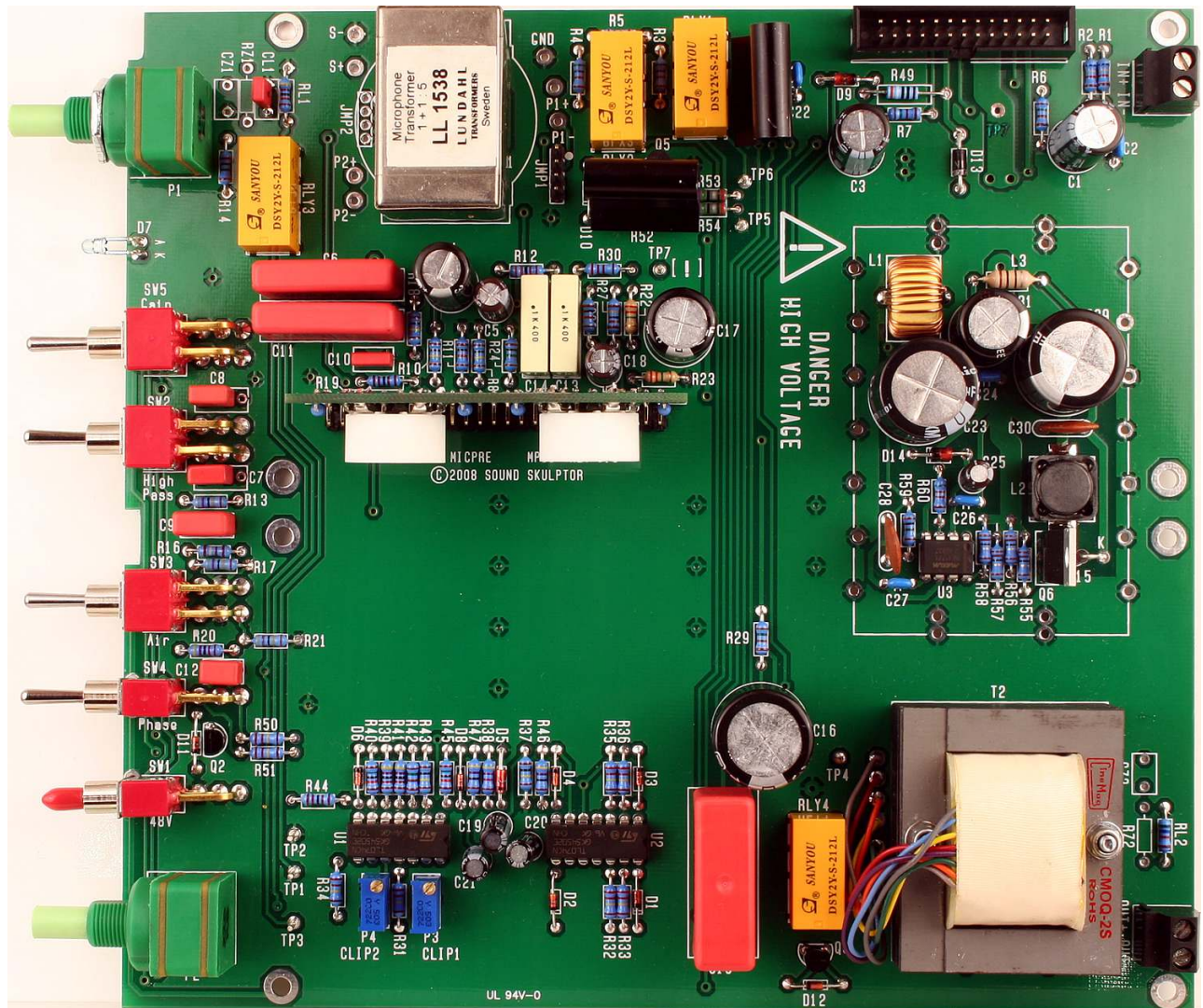
Install the SK466 on the main PCB and solder one pin. Check that the circuit sits perpendicular to the main PCB then solder all the pins. Cut flush.



29. Heatsinks

Clip on the heatsinks of Q1 and Q4.

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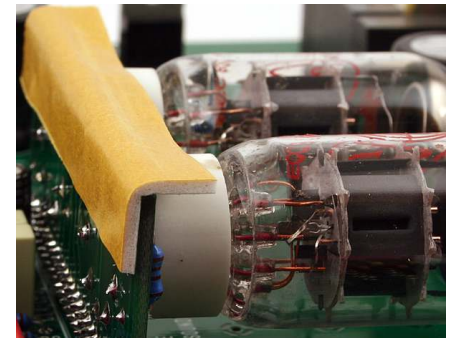
30. Visual check

Brush the PCB solder side with a hard tooth brush to remove any remaining solder bits. Make a full visual check. Any missing component on the board? Any remaining component in the box?

When everything is correct, install the input and output XLR's as described in the SKMP Assembly Guide. Your MP66 is now ready for test and setup. Please follow instructions in the "MP66 Setup" document.

31. SK466 protection

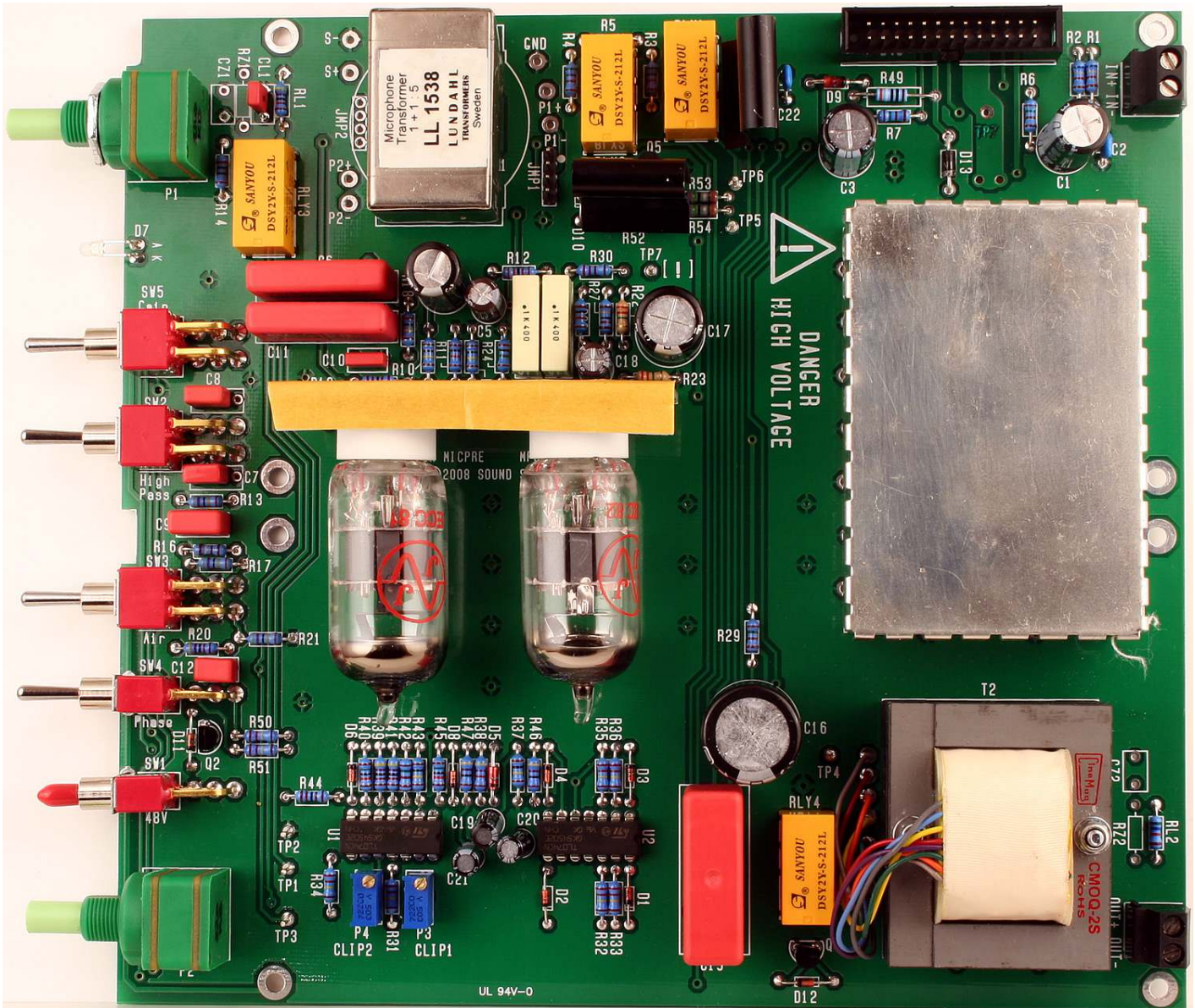
Stick the 75mm long adhesive tape on the back and along the top edge of the SK466 PCB then fold it 90° as shown on the pictures.



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32. Power supply shield

Once everything is working, you can install the PSU shield. Remove the lid to show the soldering pins and insert it on the other side of the frame. Insert the shield on the PCB and solder. You need a powerful enough soldering iron because there is a lot of metal to heat up.



33. Board installation

Finish installing the preamp board in the case as described in the SKMP Assembly Guide.

34. Congratulations

You're done !



V12V2 adapter board Assembly guide



Safety warning

The kits are main powered and use potentially lethal voltages. Under no circumstance should someone undertake the realisation of a kit unless he has full knowledge about safely handling main powered devices.

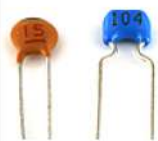
Please read the “DIY guide” before beginning.

Print or open the following documents :

- V12V2 Schematics
- V12V2 Components layout
- V12V2 Parts list

Follow this guide from item number 1 till the end, in this order. The assembly order is based on components height, from low to high profile, in order to ease the soldering process : The component you are soldering is always taller than the previously assembled ones and it is pressing nicely against the work area foam.

V12V2 Adapter board - Assembly guide



1. Ceramic capacitors

Add C2, C4.



2. Regulators

Add U1 and U2.

Warning : Watch out the case direction.



3. Connector

Add CN2. Start soldering one pin, check the position, then solder the other pins.

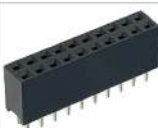
Warning : Check the position of the slot, it must not be mounted backwards.



4. Electrolytic capacitors

Add C1 and C3.

Warning : The +lead must go into the +hole. Do not reverse (they may explode !)



5. Bottom connector

Add C1 on the back side of the PCB.

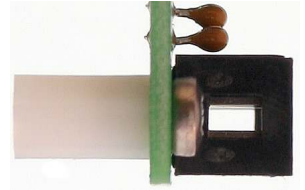


V12V2 Adapter board - Assembly guide



6. Spacers

Attach 2 10mm nylon spacers, below PCB, with 2 M3x6 screws on each side of CN2.



7. Wires

For MP12, MP32, MP73 cut two blue/red pairs of 8cm wires.

For MP66 cut one 8cm pair and one 17cm pair of blue/red wires.

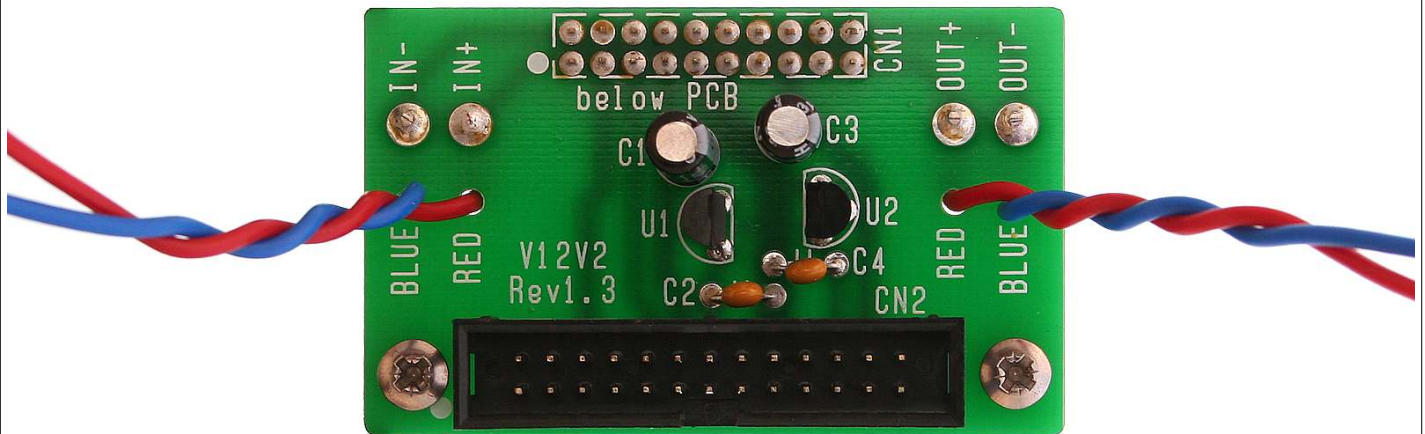
Strip 5mm of one end of each wire.

Solder the red wires at the bottom side of the PCB on the IN+ and OUT+ pads. Long wire on output for the MP66.

Solder the blue wires at the bottom side of the PCB on the IN- and OUT- pads. Long wire on output for the MP66.

Pass the wires through the corresponding holes.

Strip 15mm of the end of each wire and twist the wires by pairs.



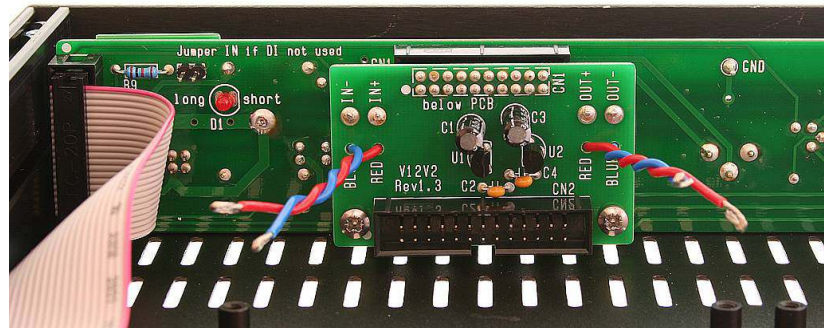
8. Check

After your board has been stuffed, brush the solder side with a hard tooth brush to remove any remaining solder bits.

Make a full visual check. Any missing component on the board? Any remaining component in the box?

9. Installation

plug the V12V2 adapter board on the corresponding SKMP connector. One V12V2 board is needed for each mic pre.



10. Connections

Plug in the 26 conductors ribbon cable between the V12V2 adapter and the mic pre board.

Connect the input and output wires between the V12V2 adapter and the mic pre terminals :

Red left to Input+

Blue left to Input -

Red right to Output+

Blue right to Output -



V1 2V2 Adapter board - Assembly guide

