



MP73 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 :

- MP73 Schematics
- MP73 Components layout
- MP73 Parts list
- SKMP Assembly guide
- MP73 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. Diodes

Add D1 to D7, D9, D12, D10, D11. Use a lead forming tool to cleanly bend the leads at 0.4” except for D5 which is bent at 0.35” and D11 bent at 0.6”.



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.



2. Resistors

Add R1 to R65.

Control the resistor values with a digital multimeter. Bend the leads at 0.4” with a lead forming tool, except for R36 and R65 which are bended at 0.6”.



3. Integrated Circuit

Insert U1 and U2 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).

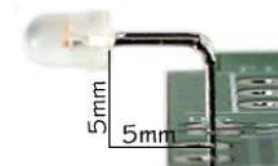
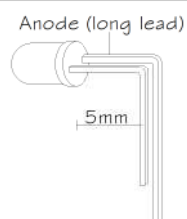
Warning : Make sure to respect the IC direction, marked by a notch.



4. Led

Bend the leads of D8 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.

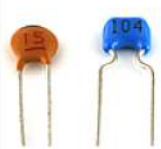


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5. Test pins

Solder the 4 test pins TP1 to TP4.



6. Ceramic capacitors

Add C2, C13, C16.



7. Film capacitors

Add C4, C18, C28, C38, C41, C20, C30, C24, C34, C19, C29, C39, C9.



8. Tantalum capacitors

Add C17, C27, C37, C23, C25, C33, C35. The plus lead is always on the right when facing the marking with the leads pointing down.

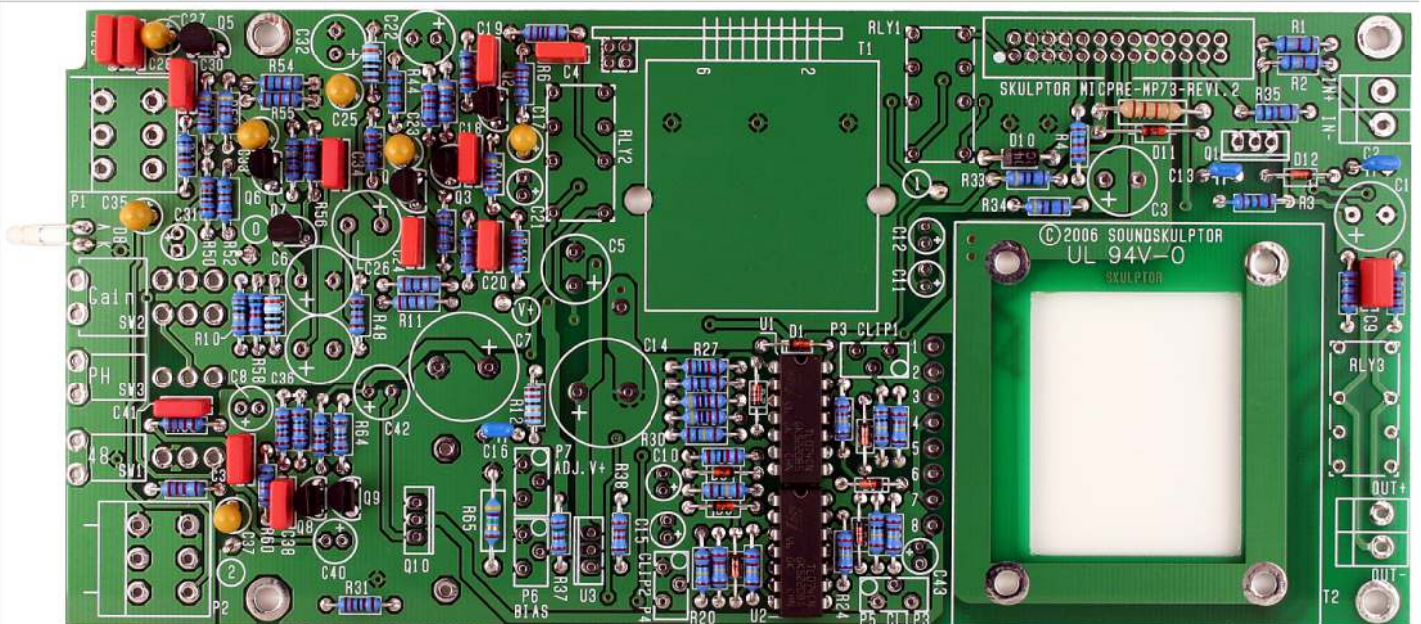
Warning : The +lead must go into the +hole. Do not reverse !



9. Transistors

Add Q2 to Q9.

Warning : Watch out the transistor direction.



10. 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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11. Trimmer potentiometers



Add P3 to P7. Solder one pin, check verticality then solder the other pins.

12. Relays



Add RLY1, RLY2, RLY3.

13. Small electrolytic capacitors



Add C10, C11, C12, C15, C21, C31, C43.

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 !)

14. 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 !

15. Switches



Add SW1, SW2 and SW3. 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.

16. 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.

Warning : The potentiometers have the same value but are mechanically different. P2 has a longer spindle by 2mm.

17. Regulators and power transistor Q1



Add U3 and Q1. 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.

18. Power transistor Q10



Clip Q10 into its heatsink making sure it is well centred. Insert into the PCB holes and solder one pin of Q10. Check position then solder the other 2 pins of Q10 as well as the two heatsink pins.



19. Large electrolytics

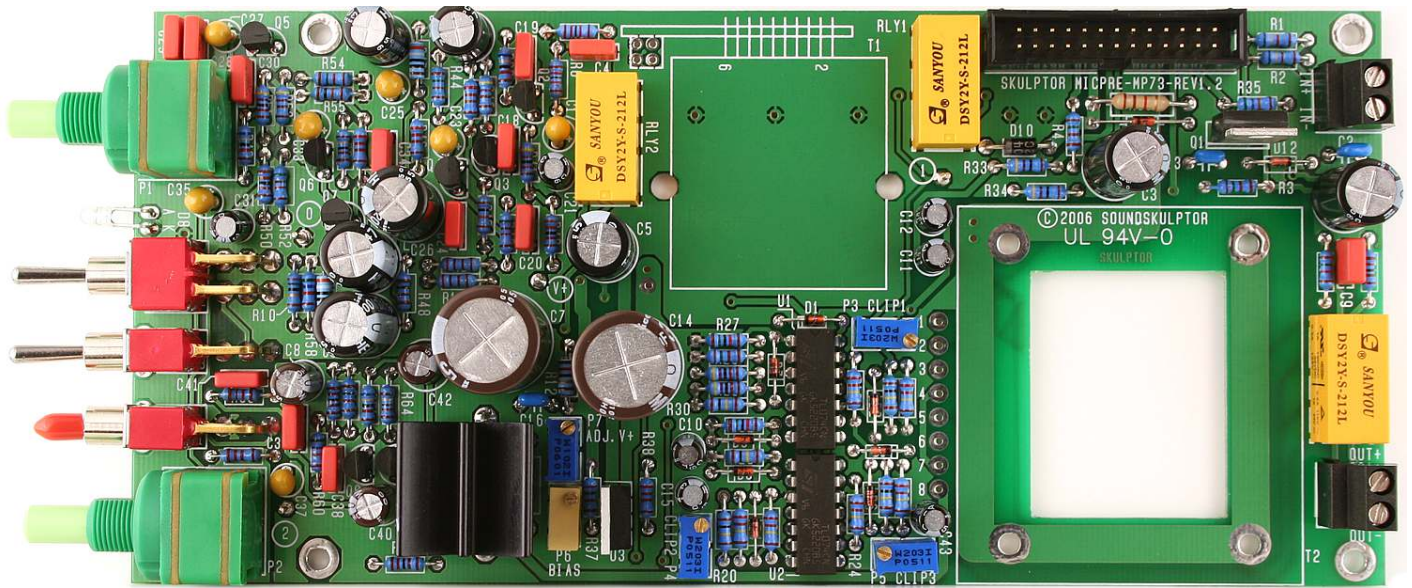


Add C8, C40, C42, C1, C3, C22, C32, C5, C6, C26, C36, C7, C14.

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

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

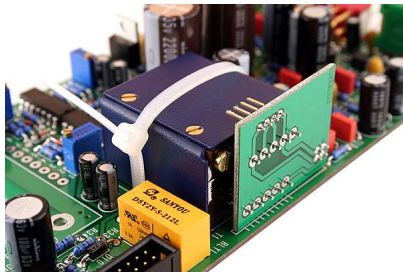
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20. Input transformer



Solder JMP1 (1x4) and the 90° (2x2) pin headers on the SK468 PCB.



Insert the transformer into the PCB. Check the pin number matching. Do not solder yet.

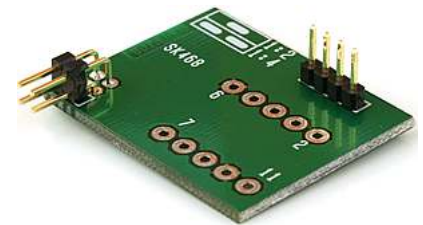
Insert the transformer+PCB ensemble into the main PCB. Do not solder yet. Place the cable tie around the transformer, going through the two holes in the main PCB. Make sure to place the cable tie grip terminal on one side of the transformer (to keep the total height low). Tighten very moderately for now. Check the position of the SK468 PCB. It

should be vertical and parallel to the main PCB.

Once everything falls in place nicely solder two transformer pins, then solder the 90° pin header on the main PCB. Finish soldering the transformer pin.

Tighten the cable tie firmly.

Place the jumper on JMP1.



21. Output transformer

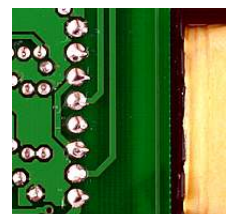


The transformer is mounted using four 30mm M3 screws inserted from the back of the board. The transformer is directly sited on the PCB, without washer. The screws are locked with four self locking nuts on four metal washers.



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.

The wire colour/pad number correspondence is indicated in the "MP73 Components layout" document.

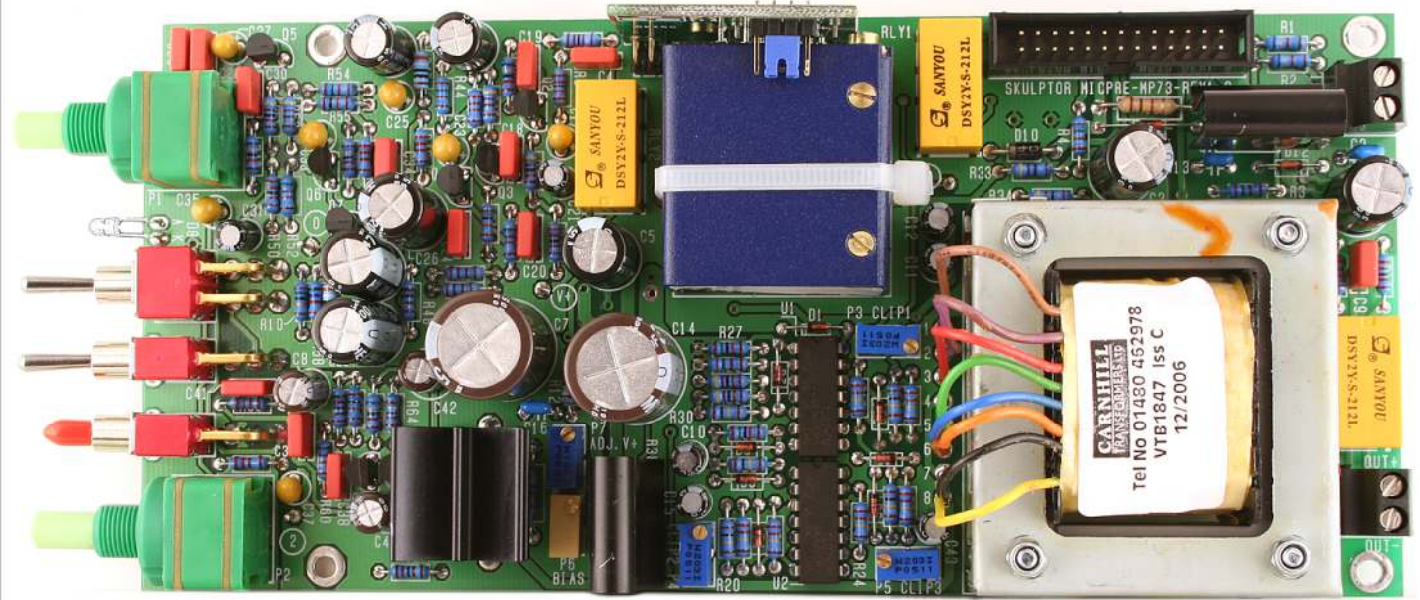


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22. Heatsinks

Clip on the heatsinks of Q1 and U3.



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?

When everything is correct, install the input and output XLR's as described in the SKMP Assembly Guide.

Your MP73 is now ready for test and setup. Please follow instructions in the "MP73 Setup" document.



V12V2 adapter board Assembly guide



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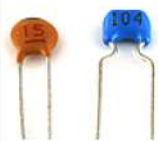
Please read the “DIY guide” before beginning.

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.

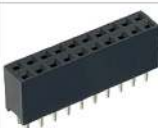
Warning : Check the position of the slot, it must not be mounted backwards.



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.

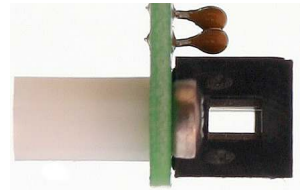


V12V2 Adapter board - Assembly guide



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.

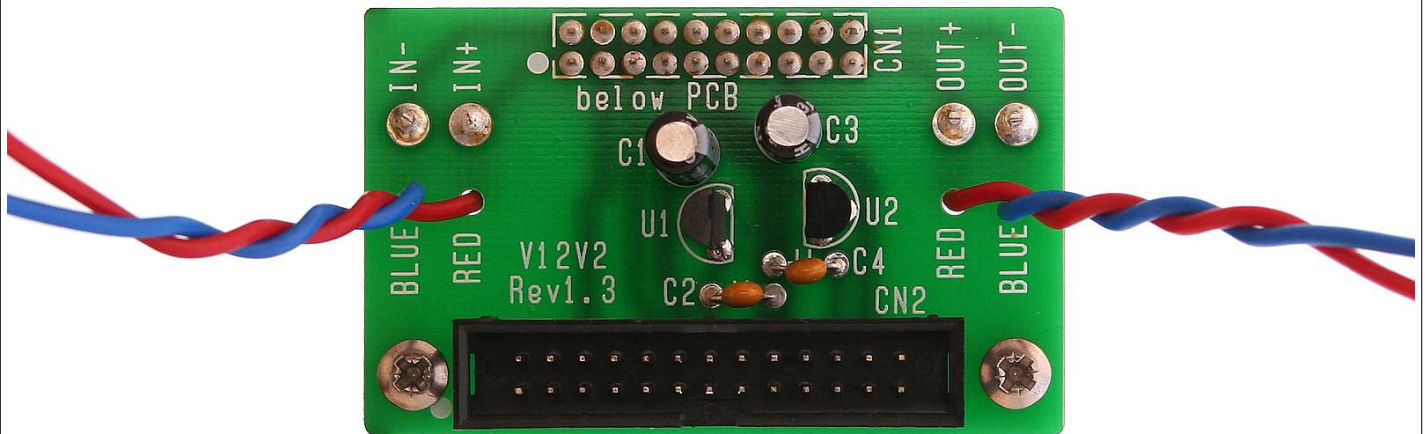
Strip 5mm of one end of each wire.

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.



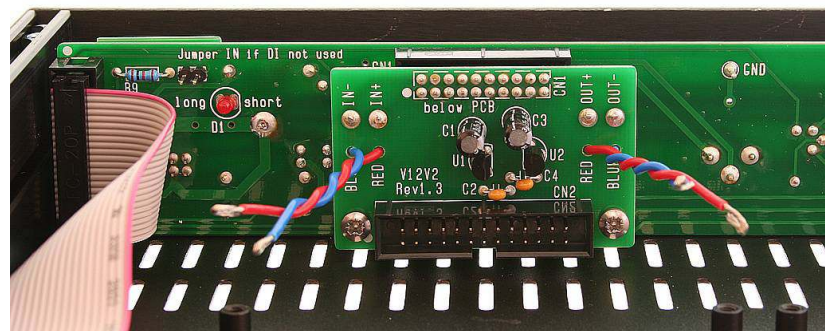
8. Check

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 -



VI 2V2 Adapter board - Assembly guide

