MP32 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 :

- MP32 Schematics
- MP32 Components layout
- MP32 Parts list
- MP32 Circuit options
- MP32 Output transformer options
- SKMP Assembly guide
- MP32 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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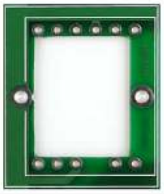
1. Transformer cut-out

First of all, check if you have to extend the transformer cut-out in the "MP32 Output Transformer Options" document. If so, follow instructions in this document. It is an easy operation if performed first. It become difficult once components have been soldered to the board.



2. DOA Pin Sockets

Next you should solder the 14 pin sockets for the two DOA's. Solder one at a time. Insert one socket, turn over the PCB and press against a solid but flexible surface like cork or dense foam then solder. The correct positioning of the sockets is very important for easy insertion of the DOA.

3. Diodes

Add D1 to D4, D5 to D8, D13, D10, D11 and D12. 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.

4. Resistors

Add R1 to R34 and RL1. Check the value of RZ1 in the "Output transformer options" document. Control the resistor values with a digital multimeter. Bend the leads at 0.4" with a lead forming tool.

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5. Integrated Circuit

Insert U1 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.

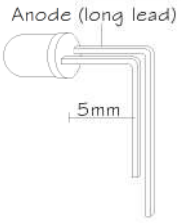
6. Inductors

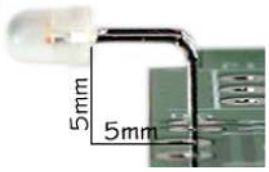
Add L1, L2. Bend at 0.5".
Add L3, L4. Bend at 0.6".
Add L5, L6. Bend at 0.8".

7. Led

Bend the leads of D9 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.





8. Test pins

Solder the 3 test pins TP1, TP2, TP3.

9. Jumpers

Solder the jumper header JMP1, if needed. Look at the "Output transformers options" document.
Solder one pin first, adjust the verticality, then solder the other pins.

10. Ceramic capacitors

Add C3, C34. Add C14 and C15 unless your DOA's are SK47. In that case, just leave the capacitor unconnected.

11. Small film capacitors

Add C1, C2, C10, C11, C12, C17, C19. Check the value of CZ1 in the "Output transformer options" document.

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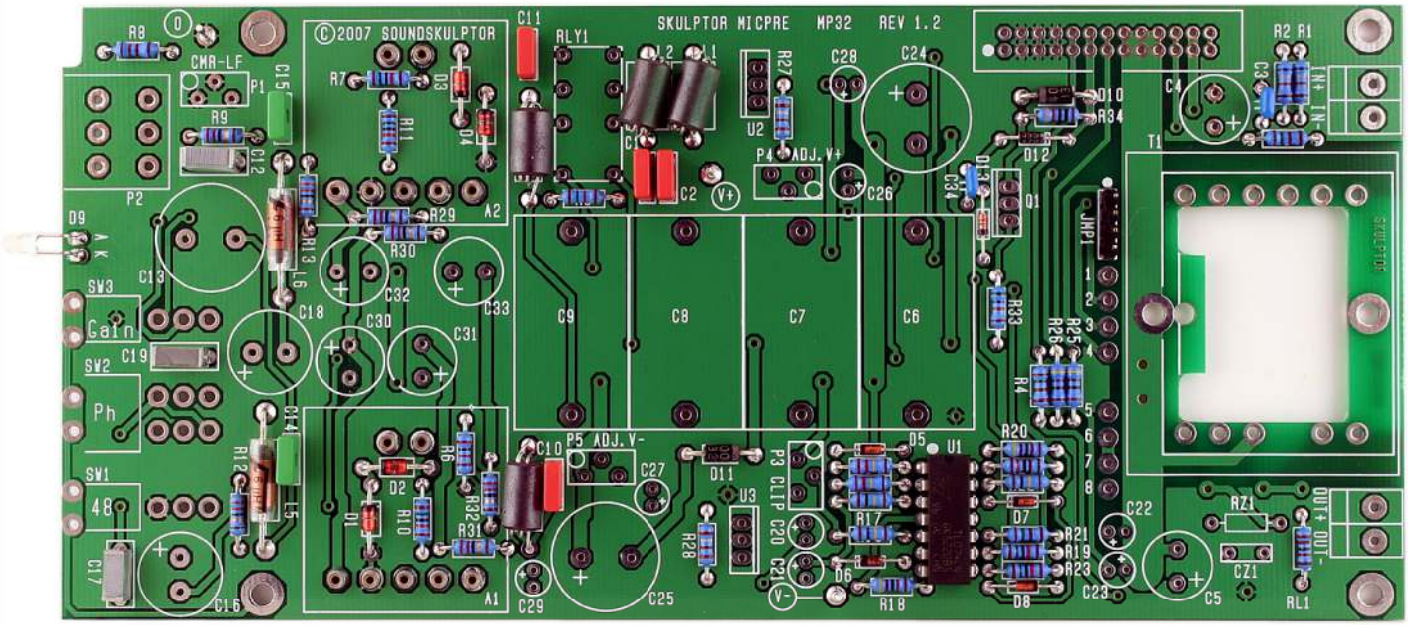
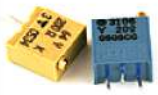


12. Connector

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.



13. Trimmer potentiometers

Add P1, P3, P4, P5. Solder one pin, check verticality then solder the other pins.

14. Relay

Add RLY1.

15. Small electrolytic capacitors

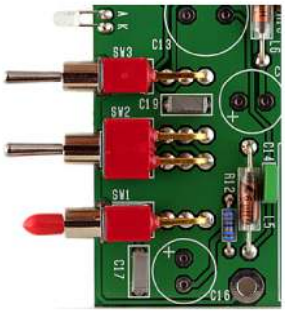
Add C21, C20, C22, C23, C26, C27, C28, C29.
Solder one lead first, adjust verticality then solder the second lead.
Warning : The +lead must go into the +hole (except C5 and C13 which are bipolar). Do not reverse (they may explode !)

16. 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 !

17. 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.



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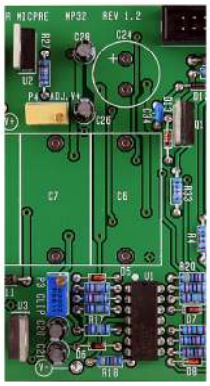
18. Potentiometer

Add 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.

19. Regulators and power transistor

Add Q1, U2 and U3. 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.



20. Large film capacitors

Add C6 to C9.

21. Large electrolytics

Add C4, C5, C30, C31, C32, C33, C24, C25, C16, C18, C13.
Solder one lead first, adjust verticality then solder the second lead.
Warning : The +lead must go into the +hole except for C13 which is bipolar. Do not reverse (they will explode !)

22. Output transformer

Follow instructions from the "Output transformer options" document.

23. Heatsinks

Clip on the heatsinks of Q1, U2 and U3

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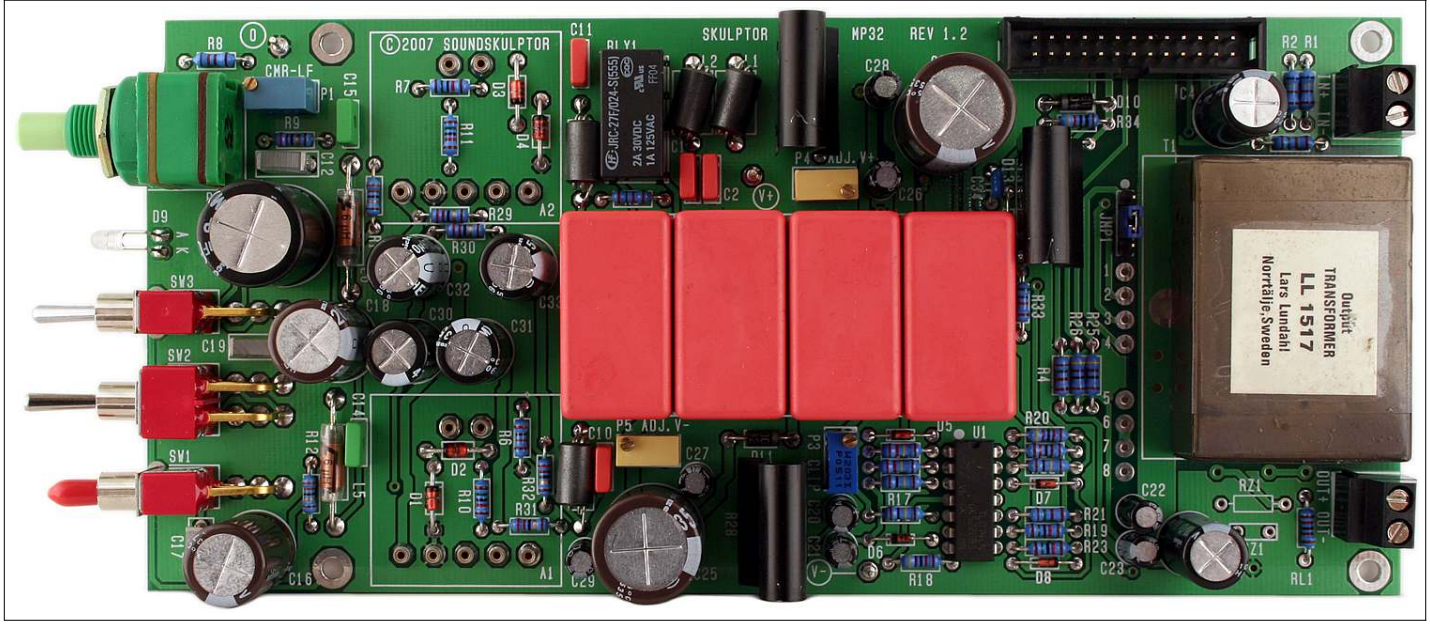


After your board has been stuffed, brush the solder side with a hard tooth brush to remove any remaining solder bits.

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 MP32 is now ready for test and setup. Please follow instructions in the "MP32 Setup" document.

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.

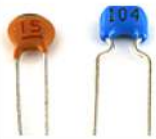
Please read the "DIY guide" before beginning.

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 !)

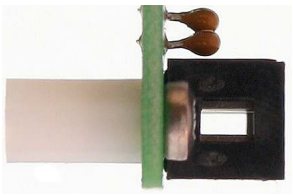
5. Bottom connector

Add C1 on the back side of the PCB.

V12V2 Adapter board - Assembly guide

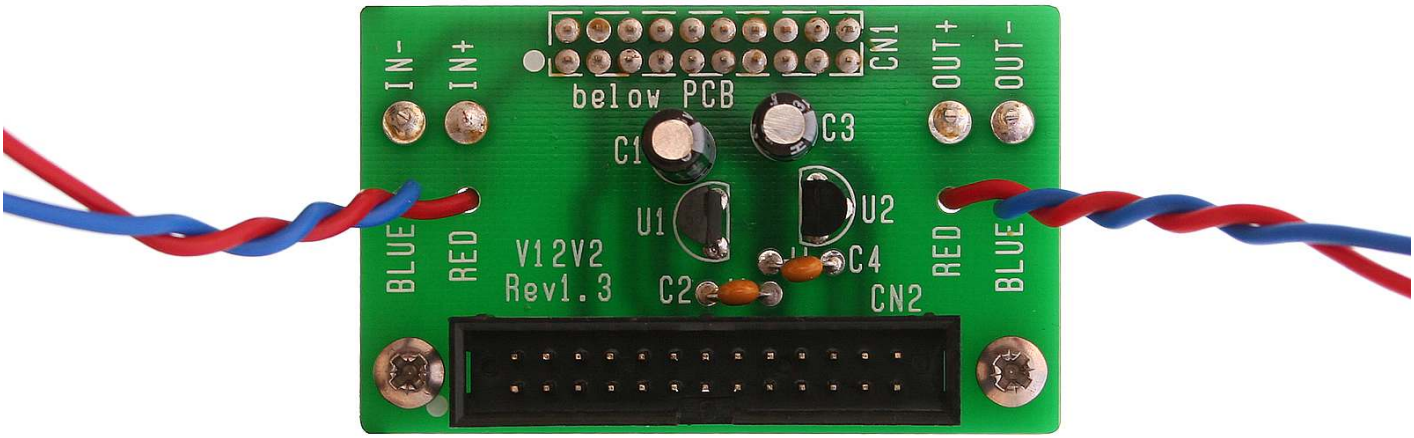
6. Spacers

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.

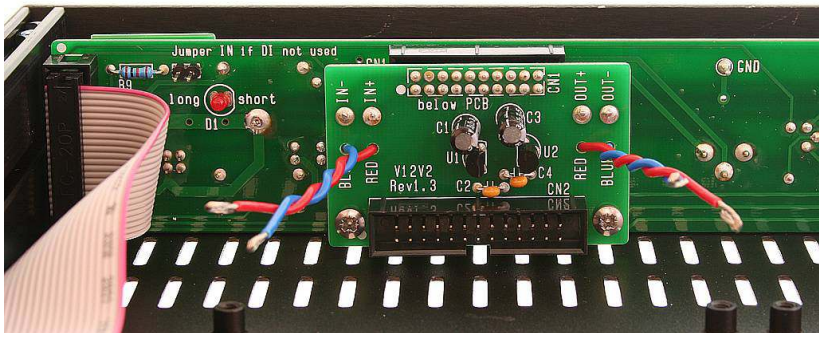


8. Check

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 -

V12V2 Adapter board - Assembly guide