



MP573 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 :

- MP573 Schematics
- MP573 Components layout
- MP573 Parts list
- MP573 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.

MP573 Assembly guide



1. Diodes

Add D1 to D6, D8 and D9. Use a lead forming tool to 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.



2. Resistors

Add R1 to R54.

Control the resistor values with a digital multimeter. Bend the leads at 0.4” with a lead forming tool, except for R22, R40 and R52 which are bended at 0.6”.

Warning : R2 and R3 are soldered on the back side of the PCB.



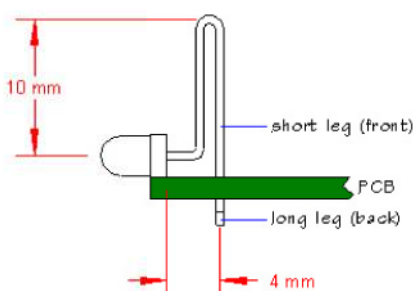
3. Integrated Circuit

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. Do not use a socket because it would be too high for the DiO1 board.



4. Led



Bend the leads of D7 right angle at 2mm from the body taking care of the anode position (the longest lead). Then bend back at roughly 10mm from the led body. This shape will allow easy positioning of the LED against the front plate. Solder with the LED body touching the PCB.

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



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5. Test pins

Solder the 4 test pins TP1 to TP4.



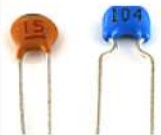
6. Jumper header

Solder the jumper header JMP1. Solder one pin first, check verticality, then solder the other pins.



7. Connector

Solder the connector socket CN3. Solder one pin first, check verticality, then solder the other pins.



8. Ceramic capacitors

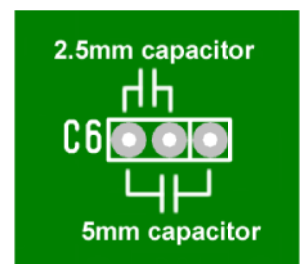
Add C21, C25, C28.



9. Film capacitors

Add C8, C2, C18, C10, C14, C9, C19, C6.

Warning : most film capacitors have provision for 2 sizes. Small size capacitors must be inserted in the correct holes as shown in the picture.



10. Tantalum capacitors

Add C7, C17, C13, C15. 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 !



11. Transistors

Add Q1 to Q5.

Warning : Watch out the transistor direction.



12. PTC 1

Solder the thermistor PTC1.

Warning : PTC2 is replaced by a resistor, see below.



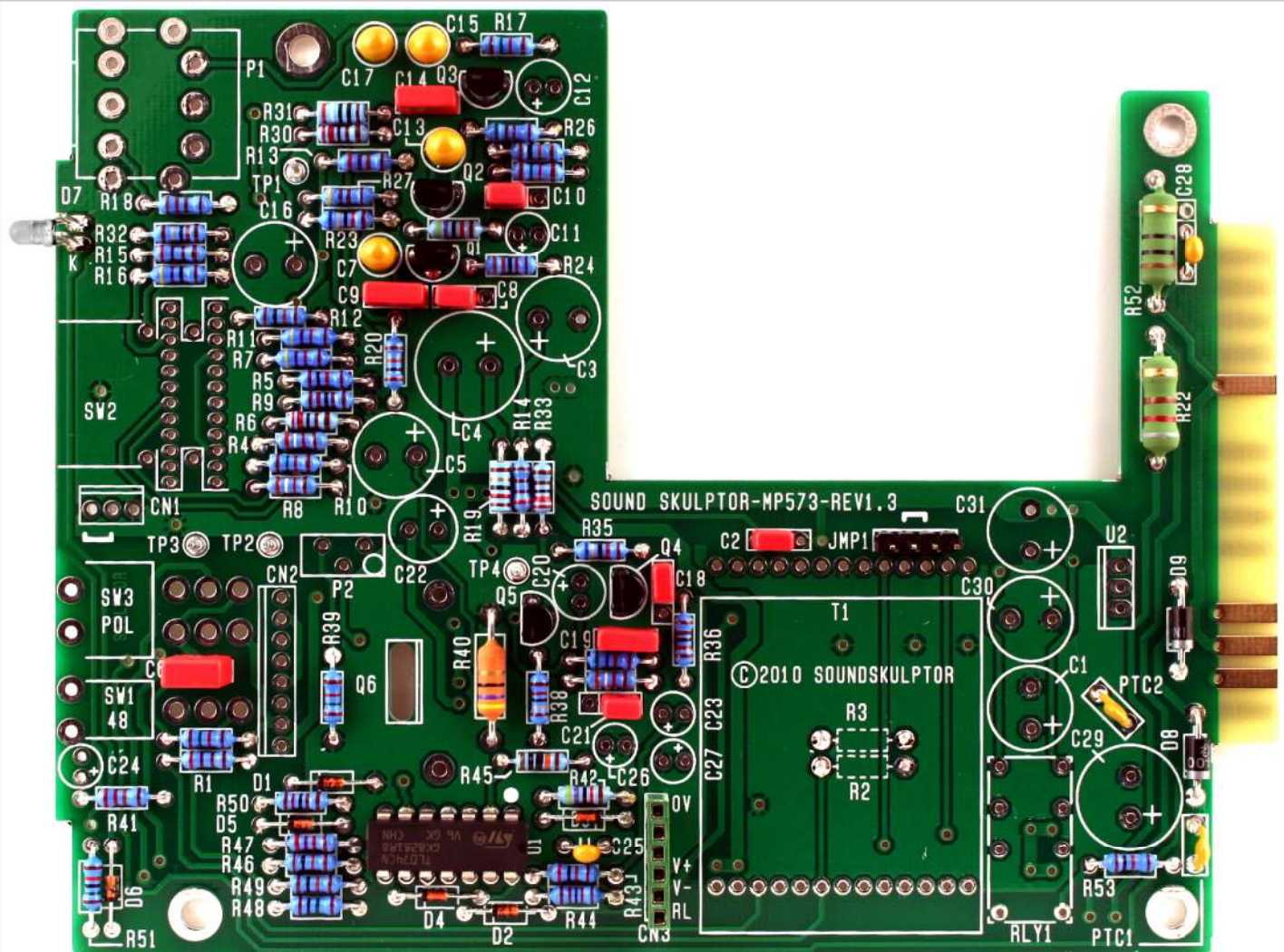
13. Resistor R55

Add resistor R55 in the spot marked PTC2.

The resistor is placed vertically, the resistor body towards C1.

Warning : The pictures of the PCB in this document are not up to date for R55.

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14. Connectors



Solder the connector headers CN1 and CN2. Solder one pin first, check verticality, then solder the other pins.

15. Trimmer potentiometer



Add P2. Solder one pin, check verticality then solder the other pins.

16. Relay



Add RLY1.

17. Small electrolytic capacitors



Add C26, C11, C23, C24, C27, C12.

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 !)

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18. Switches

Add SW1 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.



19. Medium size electrolytic capacitors

Add C20, C22, C1, C3, C5

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 !)



20. Potentiometer

Place the bracket on the potentiometer bush. Do not insert the nut yet. Insert potentiometer and bracket into the PCB holes. Solder the 2 central potentiometer pins, taking care that it sits perfectly flat on the PCB. Once the position is correct, solder the other 4 potentiometer pins.

Now attach the washer and nut to the potentiometer bush and tighten gently.

Last, solder the 4 bracket pins.



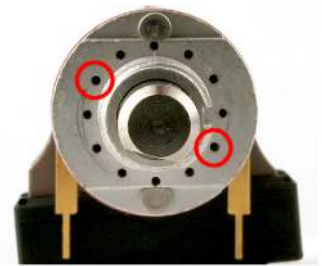
21. Rotary switch

For those who have got the switch with adjustable stops, insert the supplied metal stops into the holes that are circled in the picture. Then place the adhesive sticker to lock them in place.

Warning : Work carefully over a large tray because these metal stops are incredibly easy to drop and lose!

Insert SW2. Make sure that the switch is sitting perfectly flat on the PCB. Solder 2 opposite pins, check position then solder the other pins.

Warning : Double or triple check the switch position before committing to solder because it is impossible to unsolder and pretty expensive to replace. The pads are small and take some care to solder.



22. Regulator

Add U2. Insert as far down as possible, solder one pin, adjust the verticality, then solder the two other pins.

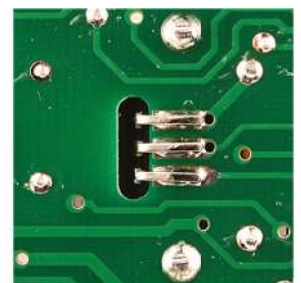
Warning : Watch out the direction, the metal tab at the back of the device is symbolized by a double line on the PCB marking.



23. Power transistor Q6

Clip Q6 into its heatsink making sure it is well centred. The transistor must be firmly pinched by the clip. If available a drop of thermal paste can be layered on the back of the transistor.

Insert the 2 heatsink pins all the way down into the PCB holes. The transistor pins are going through the slot. Solder the heatsink pins. Bend the 3 transistor pins 90° in direction of the 3 rectangular pads underneath the PCB. Cut the pins slightly shorter than the pads and solder.



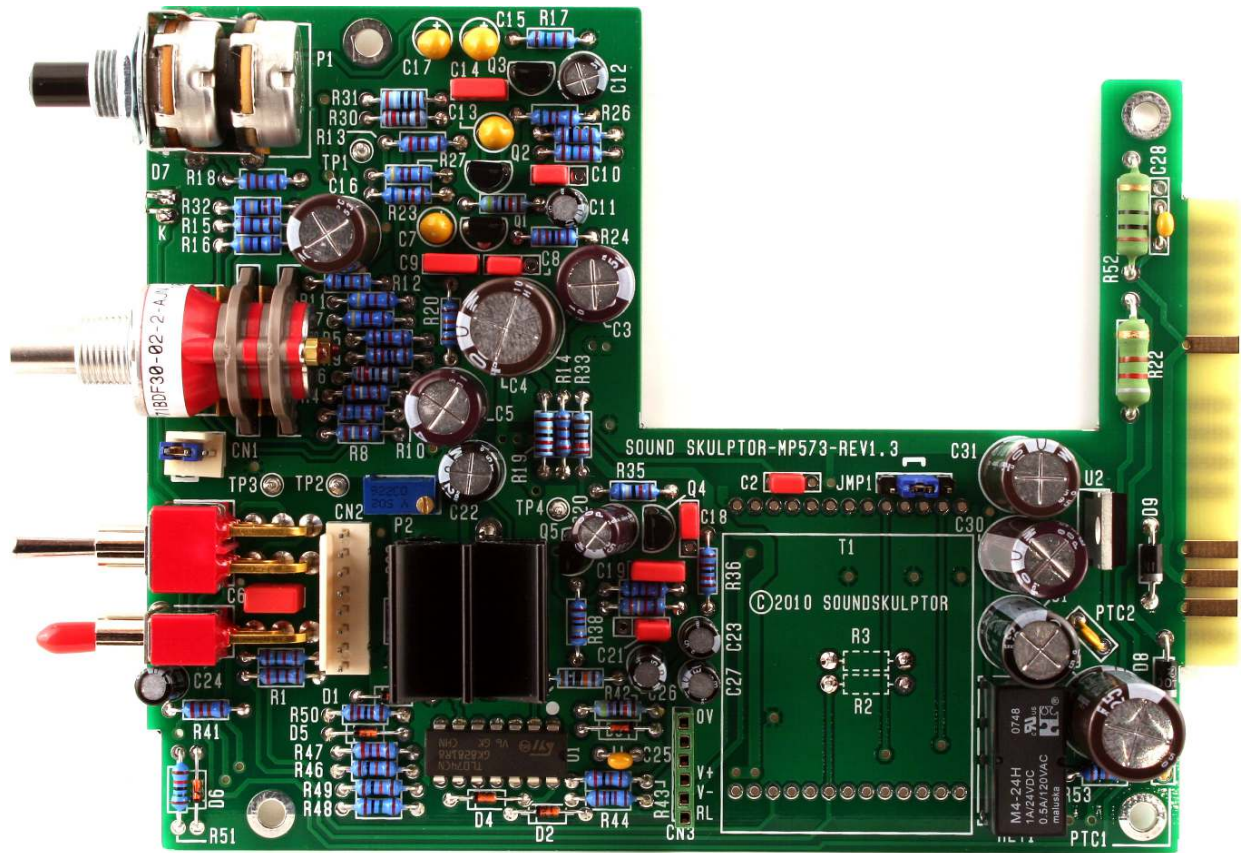
24. Large electrolytics

Add C30, C16, C31, C4, C29.

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 !)

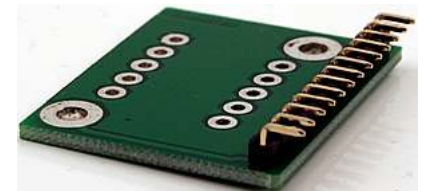
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25. Input transformer – SK5468 Version 1.2



Check the version number of the SK5468 PCB. If it is version 1.2, Insert the 90° 13 pin headers into the SK5468 PCB. It must be inserted from the solder side (the side without white text), long tail into the hole. Solder one pin, adjust the position then solder the other pins. Cut flush. Do the same for both SK5468's.



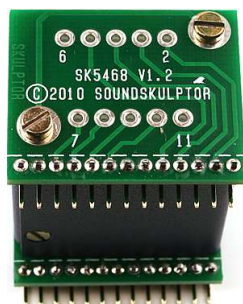
Warning : the pin headers must sit perfectly perpendicular to the PCB surface for a good matching with the main PCB.

Remove the 2 screws from the transformer pin side and place 2 nylon washers on the holes.

Insert one SK5468 PCB on top of the transformer, white text down, checking the pin number correspondence. Assemble with the 2 screws. Solder the transformer pins.

Place the second SK5468 PCB on the other side of the transformer, white text up. Assemble with the last 2 provided screws.

Insert the transformer into the main PCB and solder the pins.

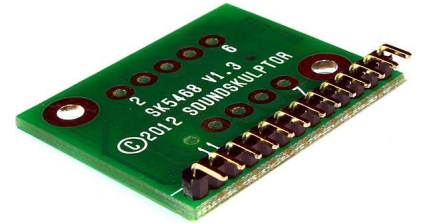


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26. Input transformer – SK5468 Version 1.3

Check the version number of the SK5468 PCB. If it is version 1.3, insert the 90°, 13 pins headers into the SK5468 PCB, long tails first, into the holes. Solder one pin, adjust the position then solder the other pins. Cut flush. Do the same for both SK5468's.



Warning : the pin headers must sit perfectly perpendicular to the PCB surface for a good matching with the main PCB.

Remove the 2 screws from the transformer pin side and place 2 nylon washers on the holes.

Insert one SK5468 PCB on top of the transformer, checking the pins number correspondence. Assemble with the 2 screws. Solder the transformer pins.



Place the second SK5468 PCB on the other side of the transformer, white text hidden. Assemble with the last 2 provided screws.

Insert the transformer into the main PCB and solder the pins.



27. Visual check

At this point, brush the solder side with a hard tooth brush to remove any remaining solder bits.

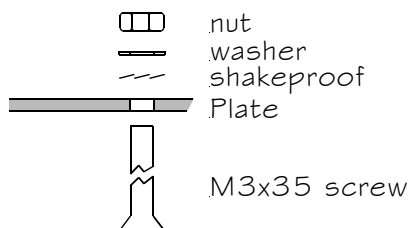
Make a full visual check. Any missing component on the board ? Any remaining component in the box ?

When everything looks correct, proceed with the frame assembly.

28. Frame assembly

Insert 4 M3x35mm countersunk screws into the side plate for the output transformer assembly. On each screw, insert 1 shakeproof washer, one metal M3 washer and one M3 nut, in this order. Tighten.

Assemble the front plate and the side plate with 2 M3x6mm countersunk black screws.



Warning : Do not confuse the M3x6mm countersunk black screws with the #4-40 3/8" black screw that are used to attach the module in the lunchbox.

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29. PCB mounting

Insert one 1 mm (or two 0.5 mm) flat washer and one shake-proof washer (in this order) into the rotary switch spindle.



Put the PCB in place, switches and pots going through the front panel. Watch out the LED position. Place the rotary switch nut and tighten.

Attach the PCB with 4 M3x6mm screws and 4 shake-proof washers.



30. Output transformer

Insert the transformer into the four 35mm M3 screws, leads facing down and attach it with 4 self locking nuts.

Twist the wires a few turns and plug the transformer connector into CN1.



31. Heatsink

Clip a heatsink on U2.



32. Jumpers

Insert 2 jumpers.

- One on CN1 (left) makes the connection between the first and second stage (this connector will be used in future to insert an EQ).

- One on JMP1 (centre pins) to set the input impedance to 1200 Ohms.



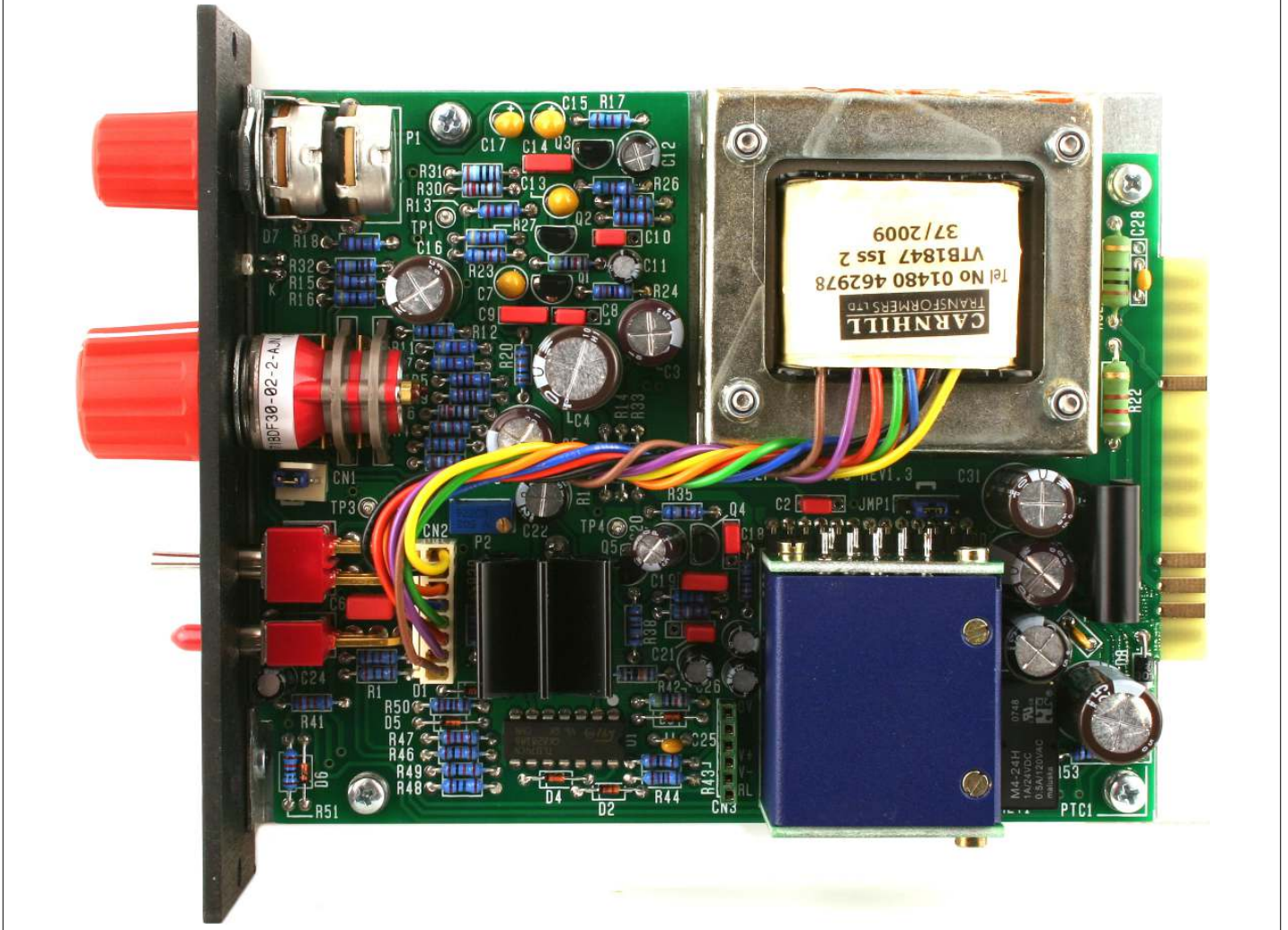
33. Knobs

Attach the 2 knobs.

34. Setup

Your MP573 is now ready for test and setup. Please follow instructions in the “MP573 Setup” document.

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DI01 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 :

- DI01 Schematics
- DI01 Components layout
- DI01 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.

DI01 Assembly guide



1. Diodes

Add D1, D2 and D3. Use a lead forming tool to bend the leads at 0.4”.

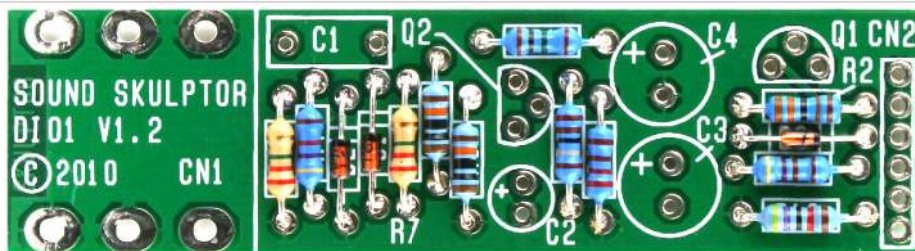
Warning : Make sure to respect the direction of the diodes which is marked by a ring on the component and a double line on the PCB marking.



2. Resistors

Add R1 to R11.

Control the resistor values with a digital multimeter. Bend the leads at 0.4” with a lead forming tool.



3. Film capacitor

Add C1.



4. Transistors

Add Q1 and Q2.

Warning : Watch out the transistor direction.

DI01 Assembly guide



5. Electrolytic capacitors

Add C2, C3, C4.

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 !)



6. Jack connector

Add CN1. The position of the socket is important for a good front-plate matching. It must sit flat on the PCB. Press firmly the socket on the PCB and solder one of the pins. Check position then solder the other pins.



7. Connector

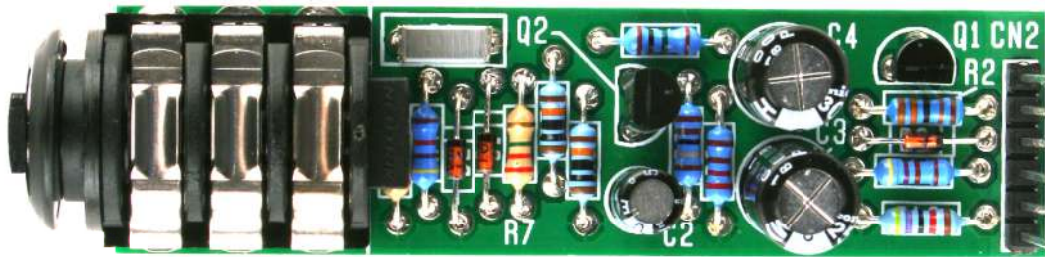
Solder the connector CN2. Solder one pin first, check verticality, then solder the other pins.

Warning : the connector pins must be exactly perpendicular to the PCB to allow proper insertion in the preamp board.

8. Visual check

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 ?

The DI01 is ready for testing !



9. Board installation

Place one 1.2mm plastic spacer on the jack sockets and insert into the front panel while fitting the CN2 connector pins into the socket on the preamp PCB. Screw in the front nut through the bevelled front spacer with an M1.2 socket spanner.

