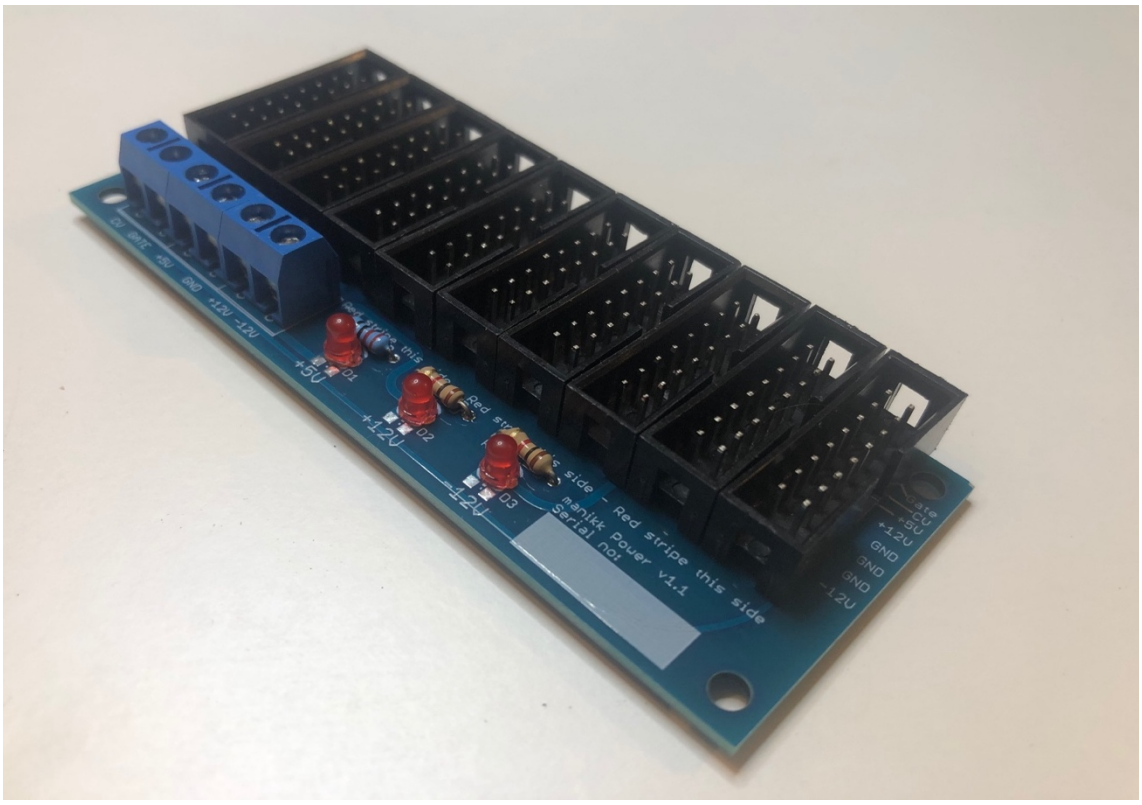
Power distribution board – Building instructions

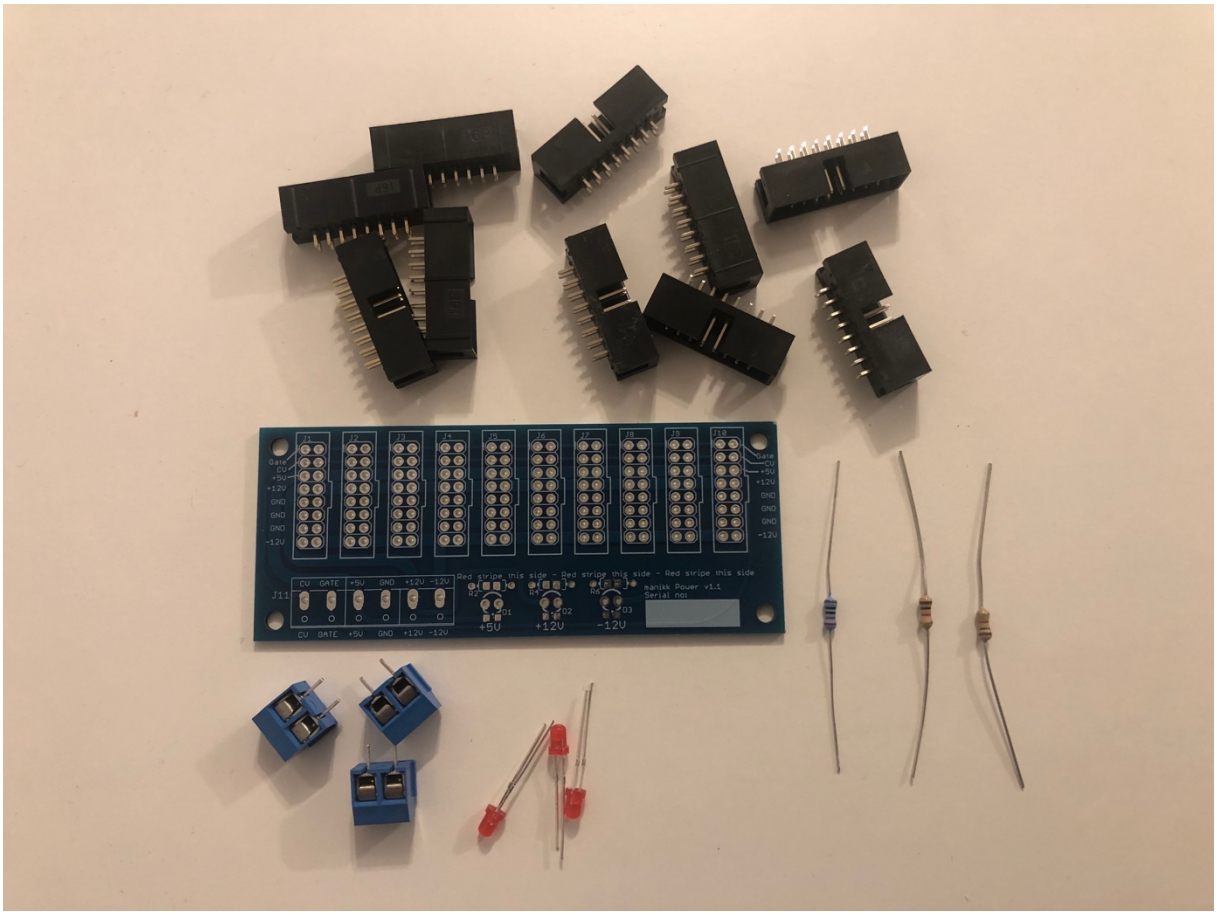


This board can be used to distribute power to up to 10 eurorack synthesizer modules.
It is very compact, designed for small systems.

This board can be powered in 3 ways:

- Connecting power cables to the terminal screw block
- Using a eurorack modular synthesizer IDC ribbon cable as input in one power connector, and the other 9 power connectors as outputs.
- Linking together two power boards by connecting a eurorack modular synthesizer IDC ribbon cable from one board to the other.

Parts



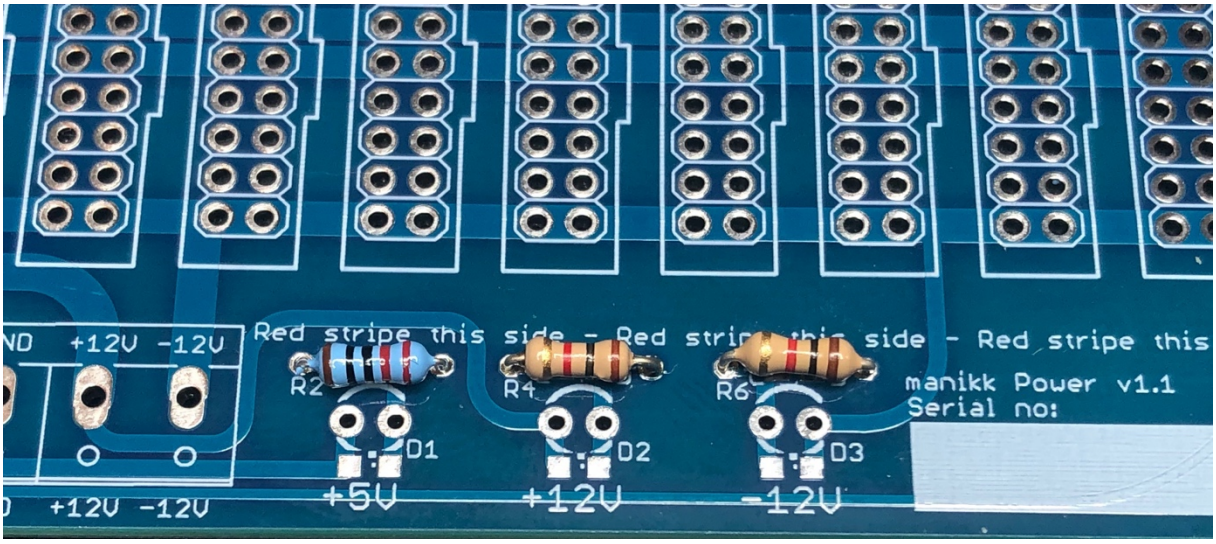
- 1 PCB
- 10 power connectors
- 1 6-pole terminal screw block (may be divided by smaller units that must be mounted together before soldering)
- 3 Red LED’s
- 2 Resistors 1k ohm (brown, black, red)
- 1 Resistor 220 ohm (red, red, black)

1 - Solder the lowest components first – the resistors

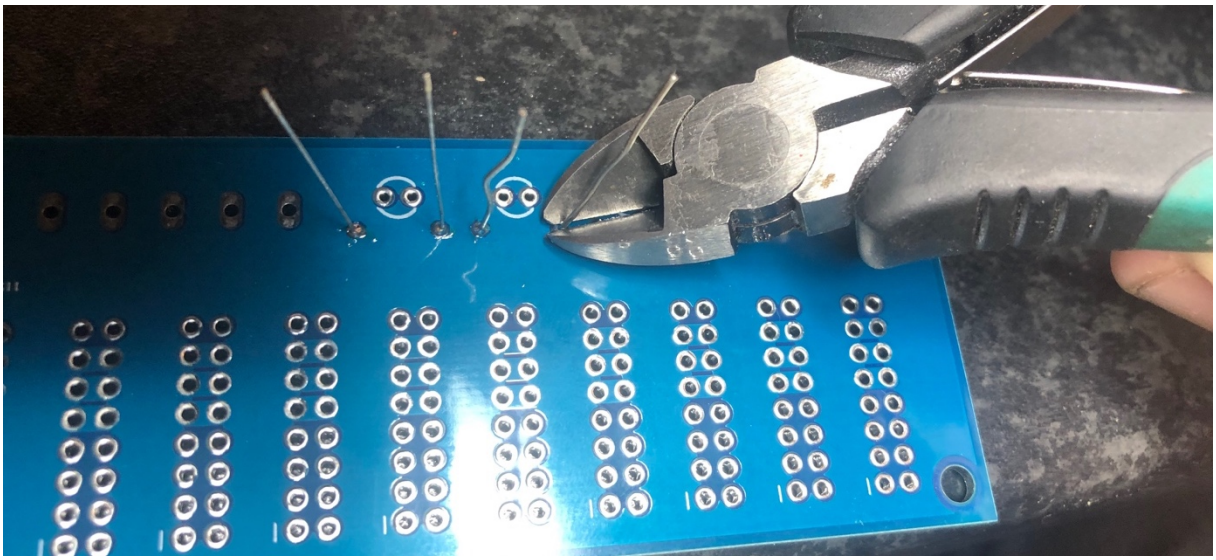
Start with the lowest components and then move on to bigger and bigger.
Finish with the highest components.

Single resistor for 5V Led is 220 ohm.
The two resistors for +12V and -12V are 1k ohm.

See picture.

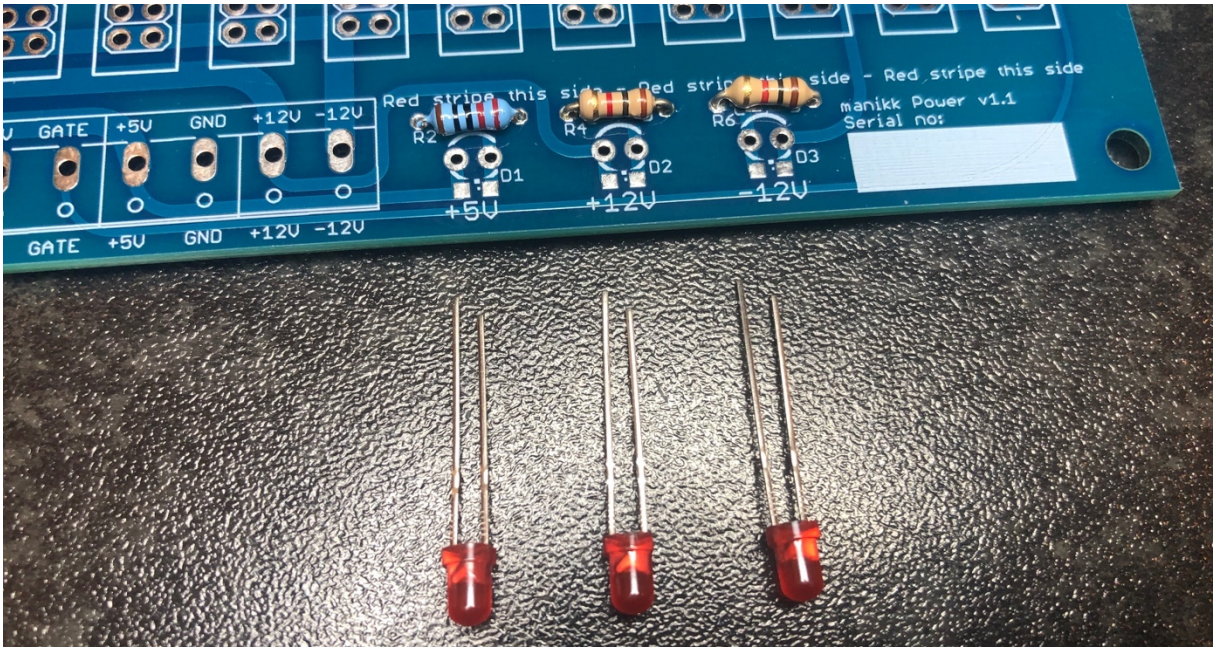


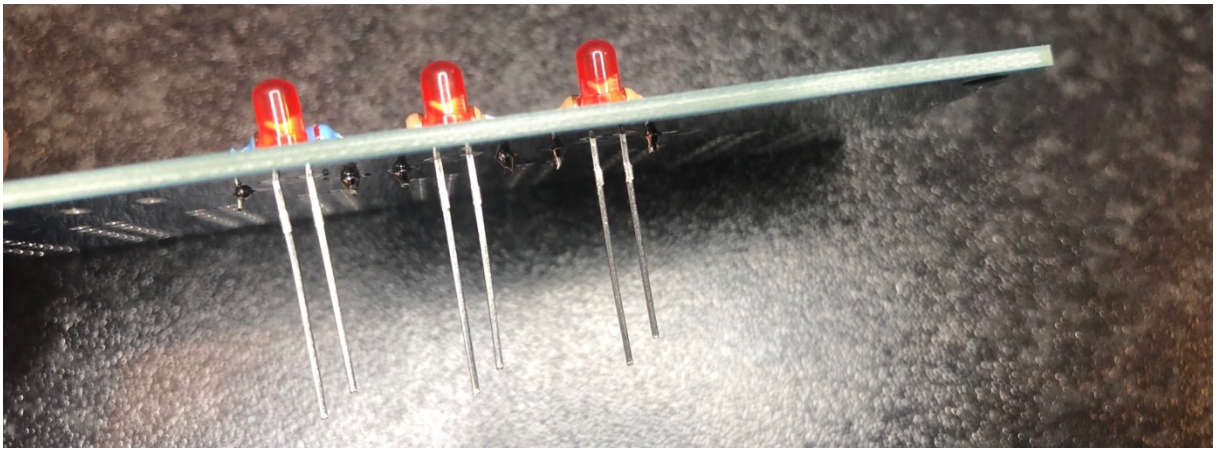
Cut the legs after soldering.

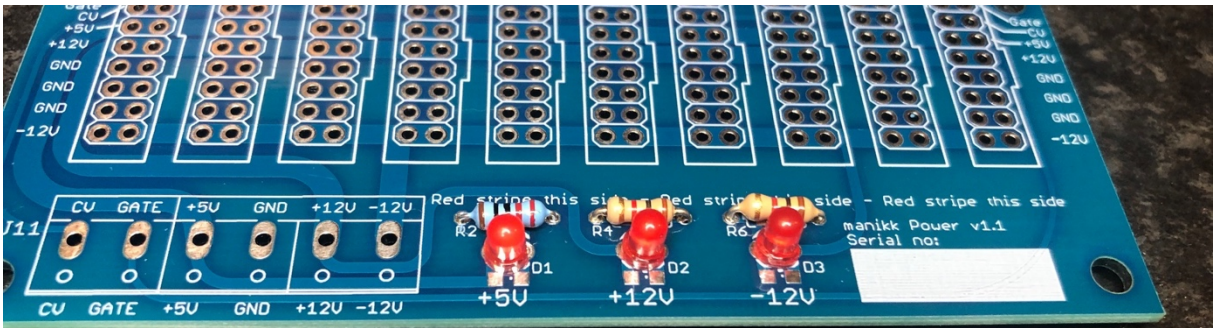


2 - Solder the LED’s

The LED’s have a longer and a shorter leg.
The short leg must be soldered to the right – towards the white serial number field.

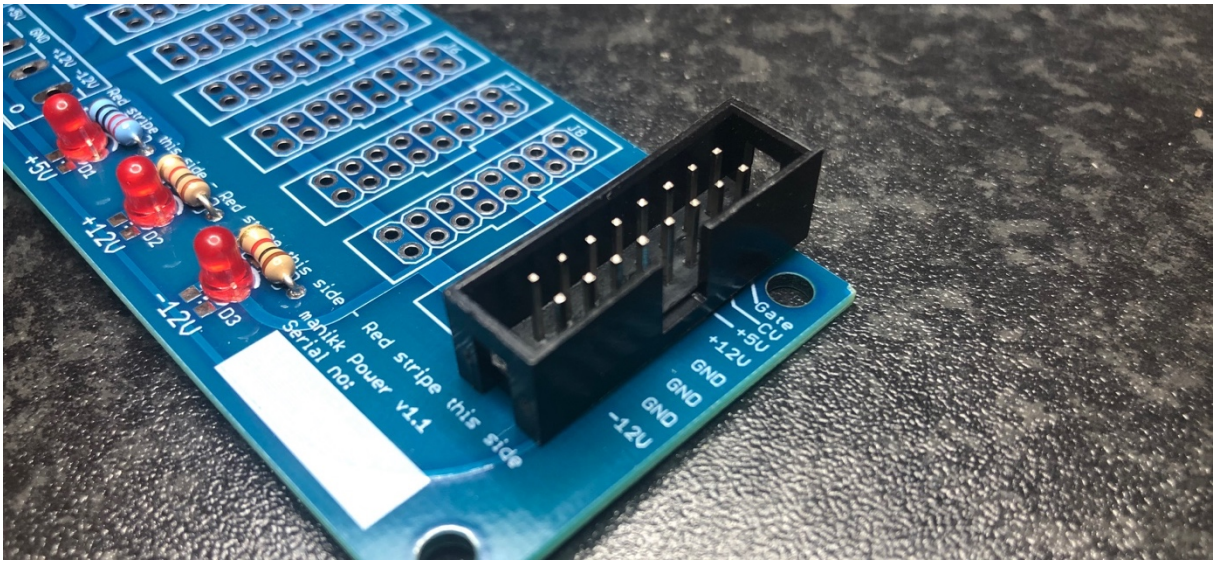


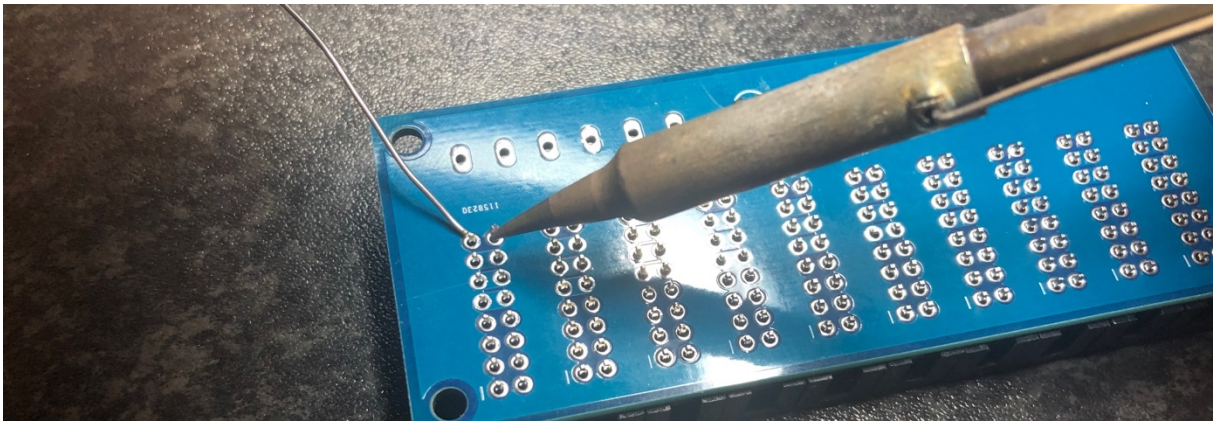




3 - Solder the power connectors

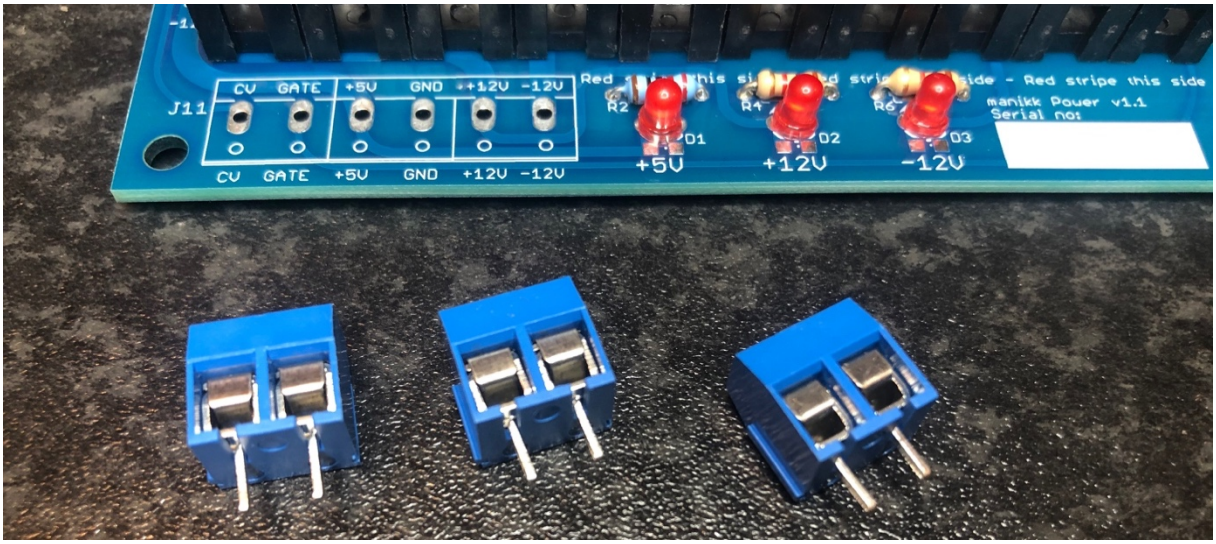
Each power connector has a small opening on one side.
This opening must be facing right, see picture below.
Mount and solder all 10 at the same time.
Be sure to not solder any shorts.

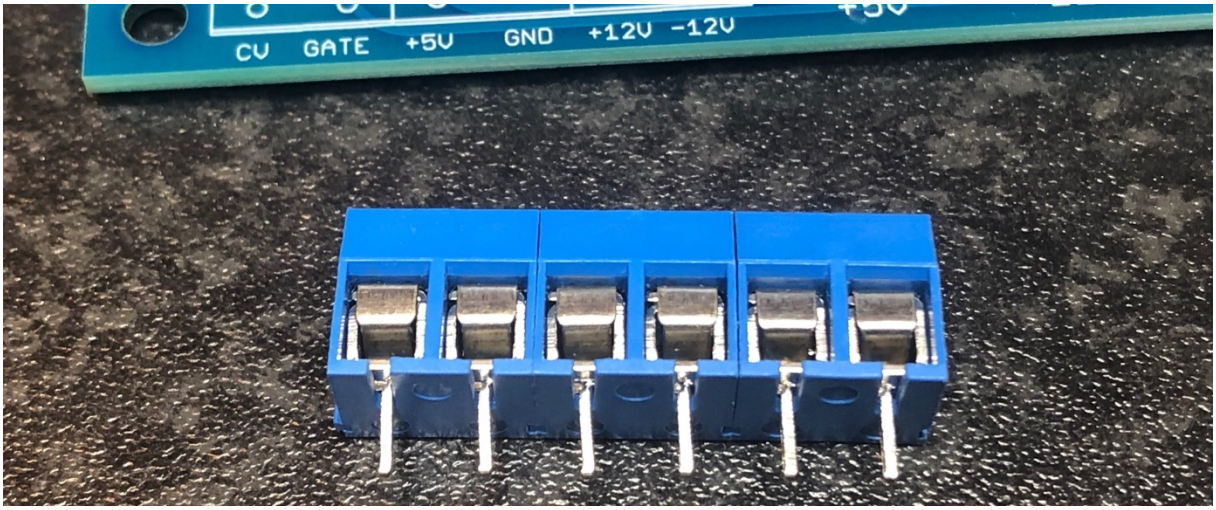


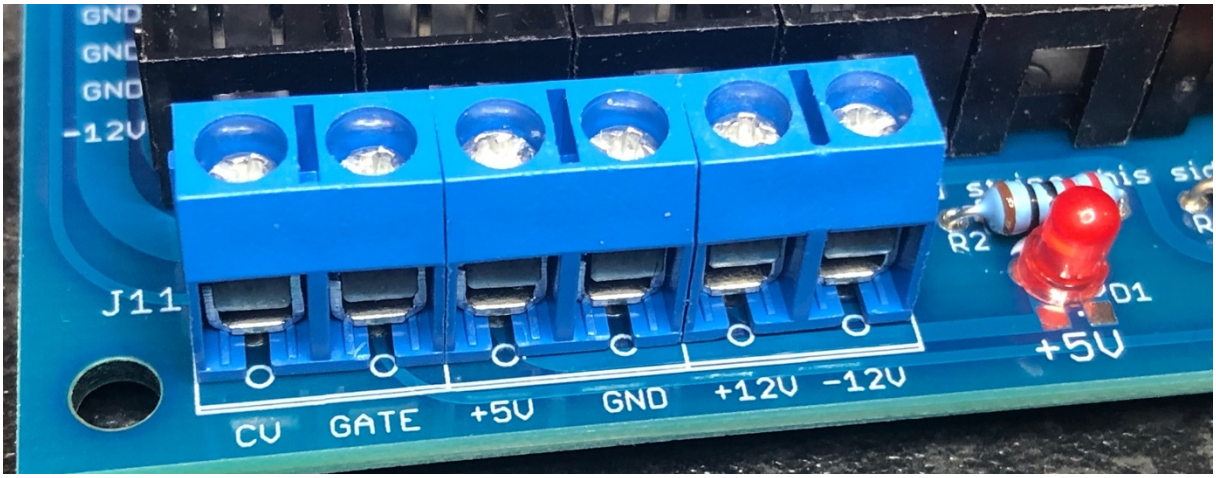


4 - Terminal screw block

If the terminal blocks are separated, mount them together side by side, before soldering them.

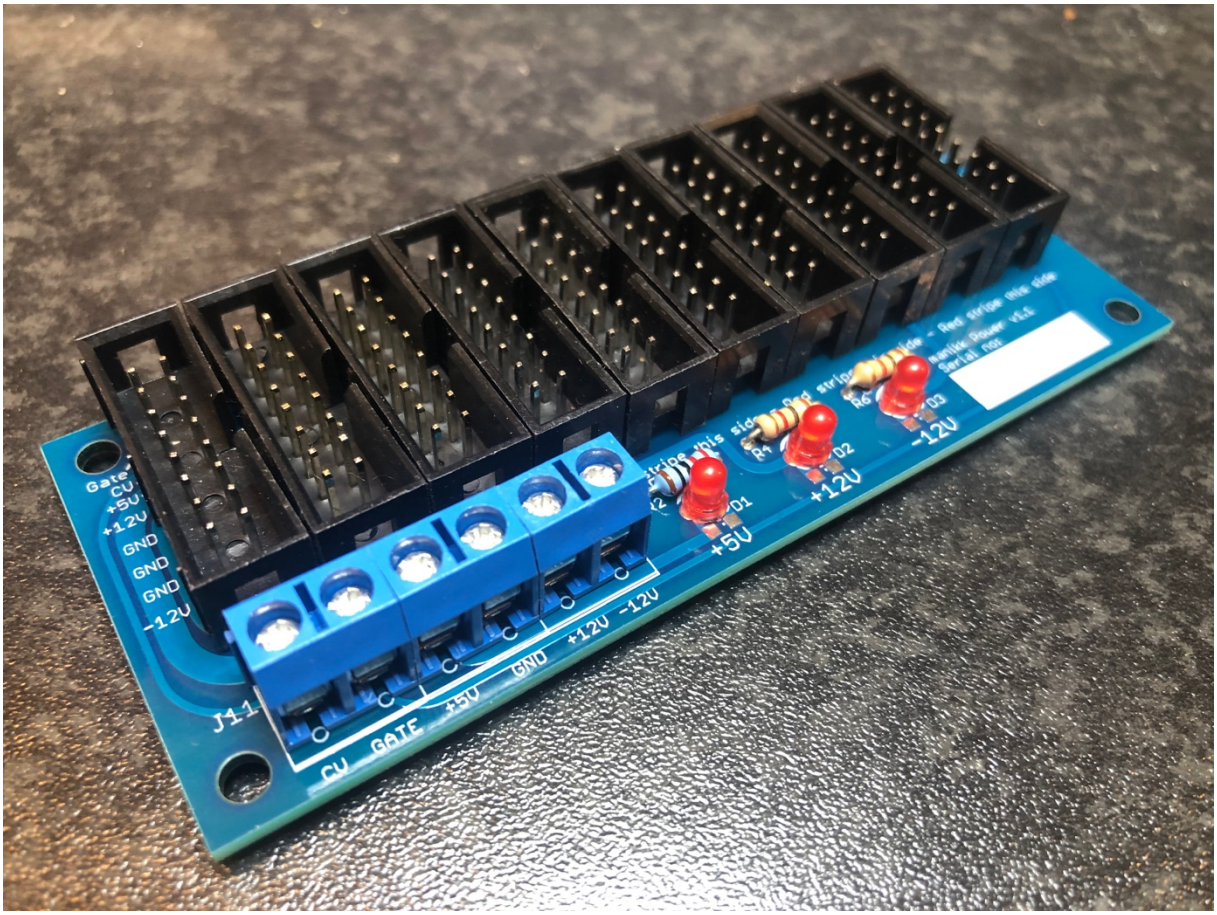






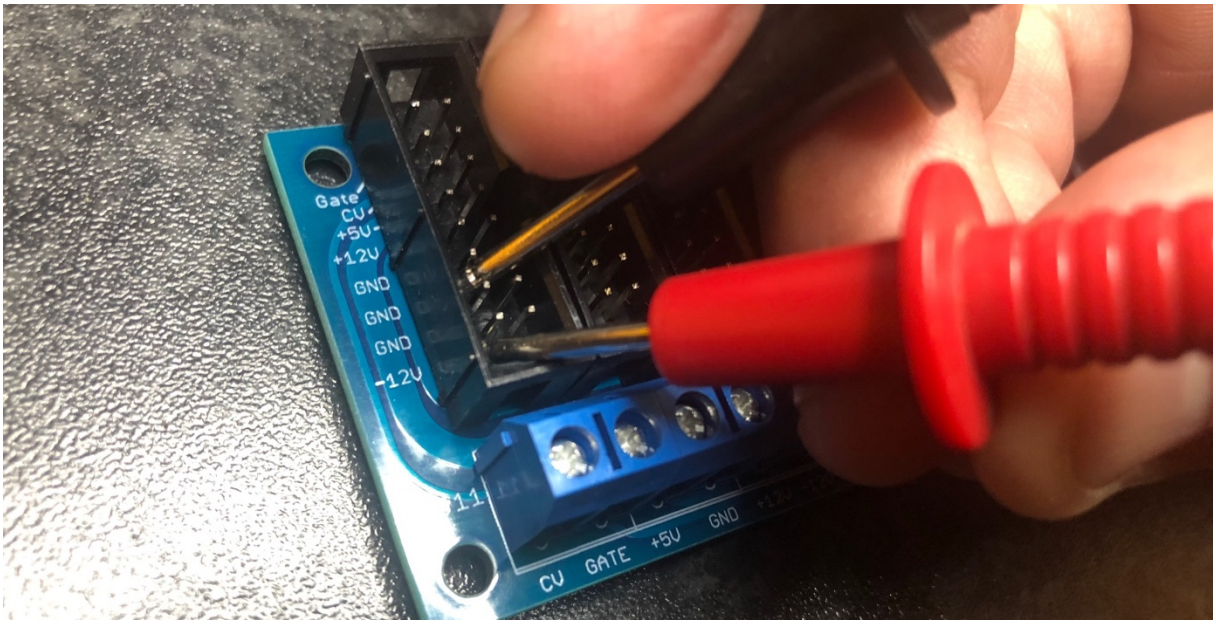
5 - Soldering Done!

Congratulations! All soldering done!
Now it’s time for some testing, before you use it for real.



6 - Testing

Continuity testing (beep) with a multimeter is good for detecting short-circuits.
Measure between all the pins in one power connector to detect unwanted shorts.



Test in one power connector

Gate	CV	No connection
CV	+5V	No connection
+5V	+12V	No connection
+12V	GND	No connection
GND	GND	All GND-pins should be connected together – BEEP!
GND	-12V	No connection

You can also continuity-test between one screw on the terminal block and a pin with the same name in the power connectors. These should be connected.

Test between terminal screw and pin in power connector

CV	CV	Connection - beep
Gate	Gate	Connection - beep
+5V	+5V	Connection - beep
+12V	+12V	Connection - beep
GND	GND	Connection from screw to all GND-pins in connector
-12V	-12V	Connection