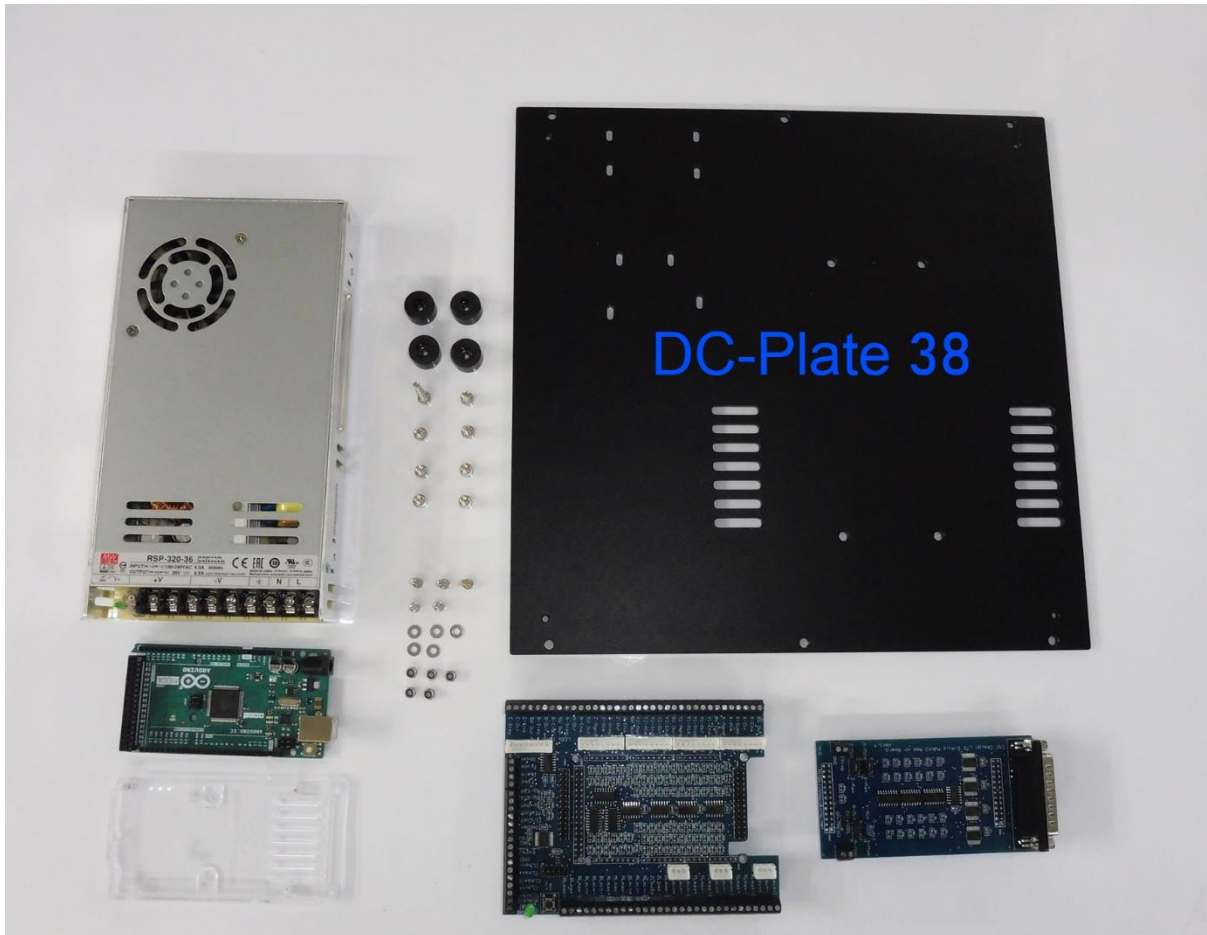




CNC D-500 Wiring Controller Box V1.0

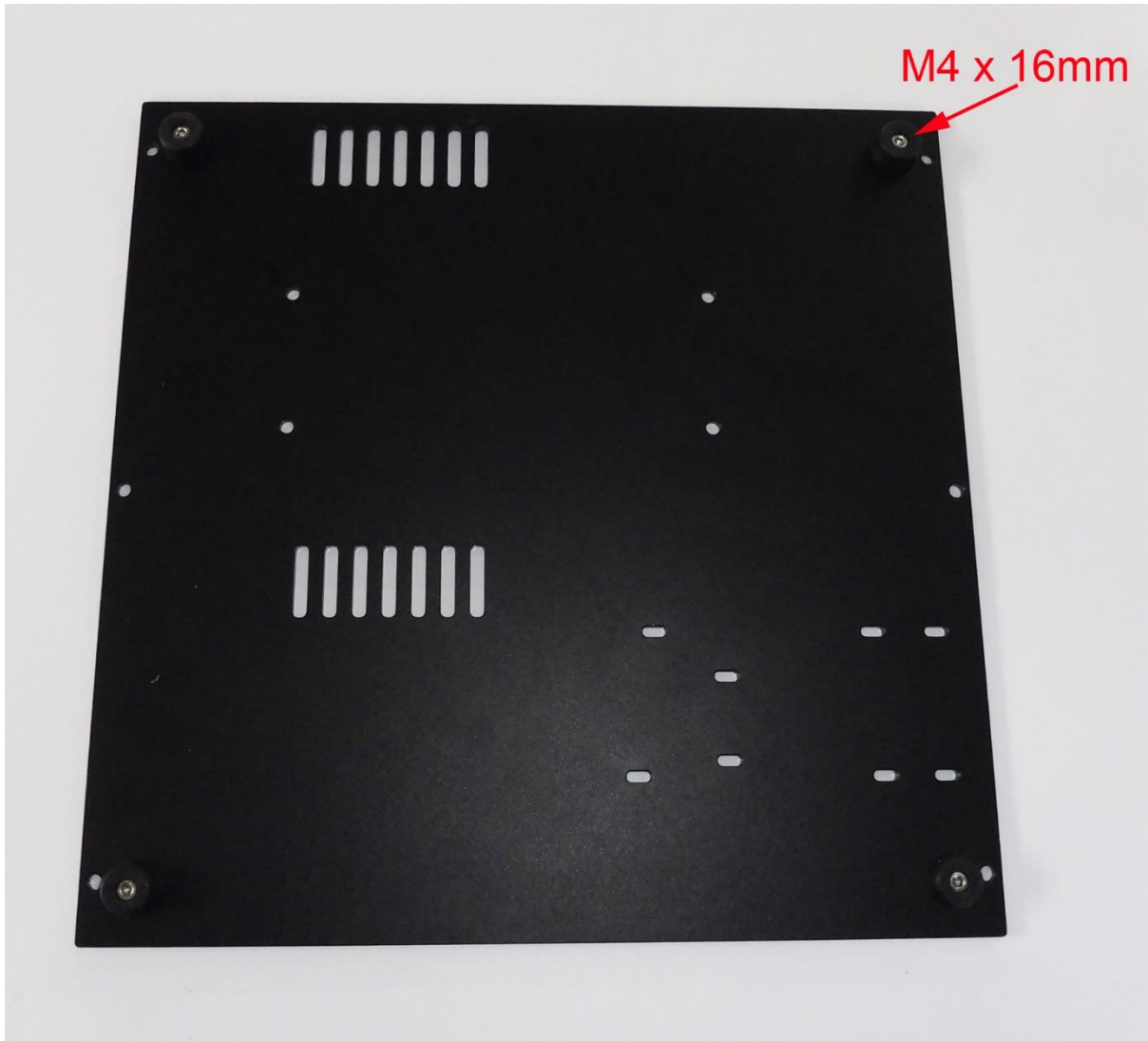
<http://www.ukcnc.net>

Please make sure you have checked the Checklist and that all the parts have been received. Before proceeding with these build instructions.

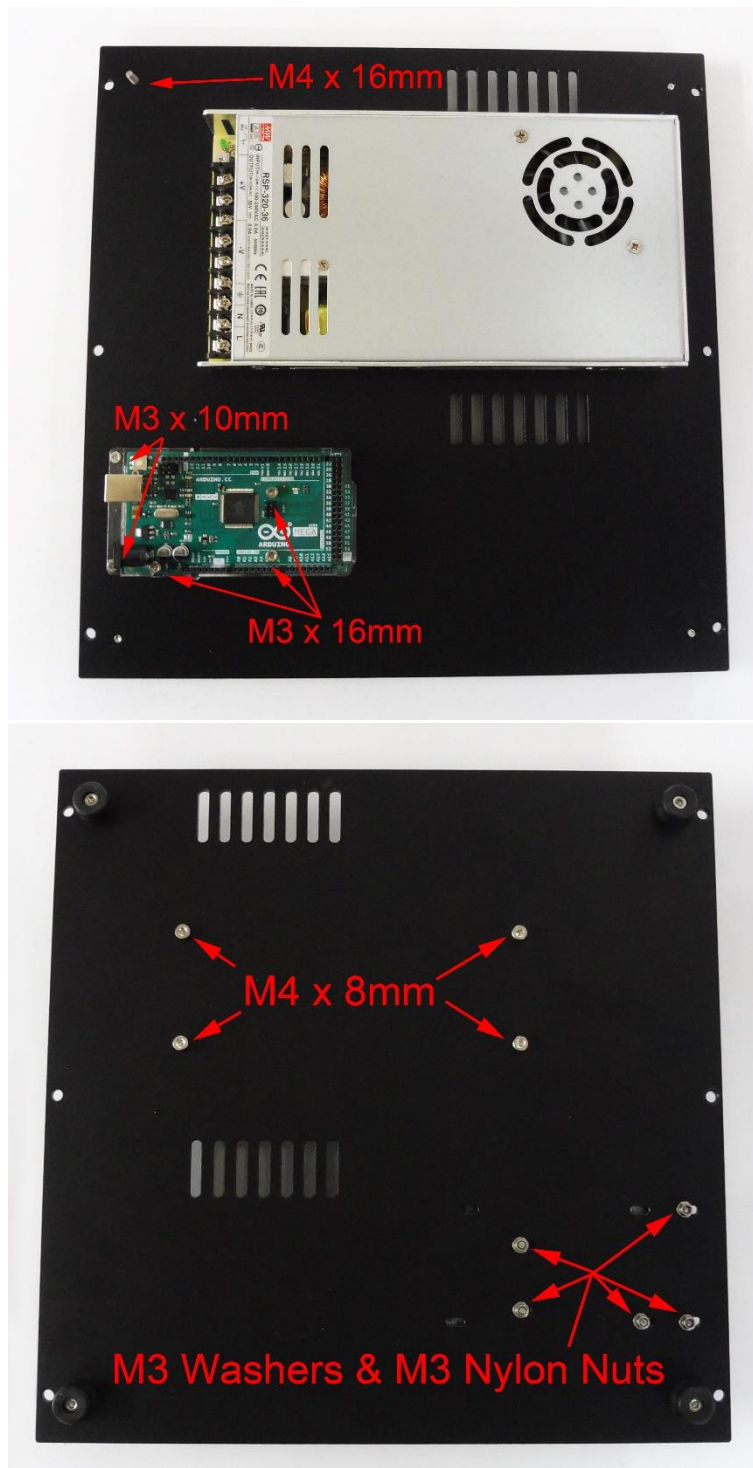


Make sure you have the following:

- 7 * M4 x 8mm bolts
- 1 * M4 x 16mm bolt
- 3 * M3 x 16mm bolts
- 2 * M3 x 10mm bolts
- 5 * M3 Washers
- 5 * M3 Nylon locking nuts
- 4 * Rubber feet
- 1 * DC-Plate 38
- 1 * 36v Power supply
- 1 * Arduino MEGA 2560 board
- 1 * 6-Axis CNC controller board
- 1 * Dual input Mach3/GRBL board



Attach 3 rubber feet using 3 * M4 x 8mm bolts and ensure the fourth rubber foot is bolted on with an M4 x 16mm and is located at the top right as shown above.

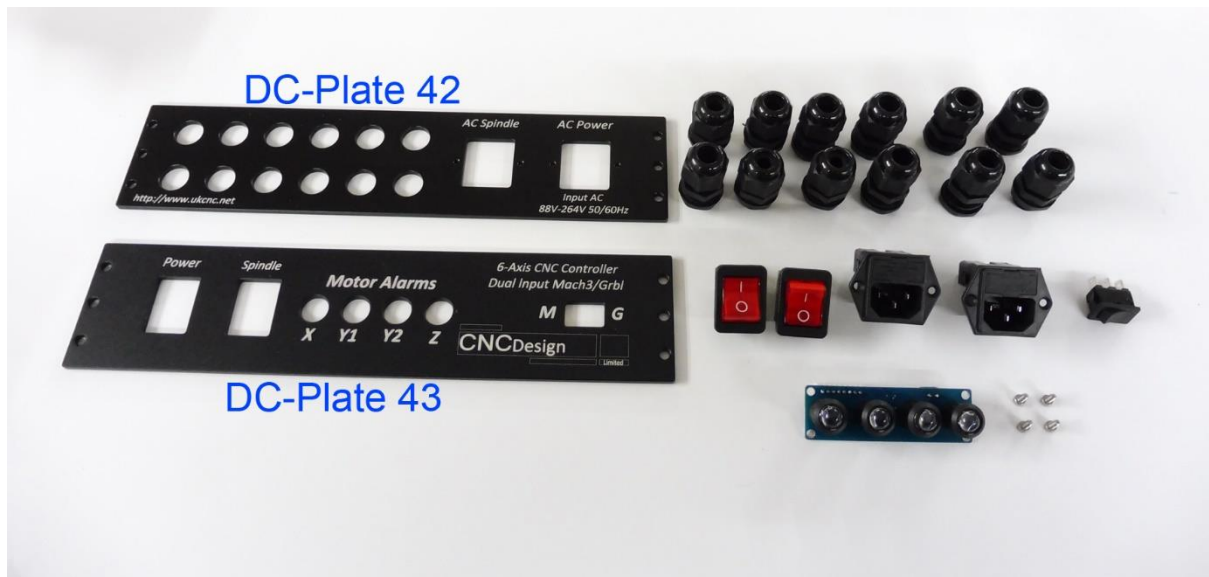


Secure the Power supply to the plate with 4 x M4 x 8mm Bolts.
Mount the Arduino MEGA 2560 as shown using 2 * M3 x 10mm at the front and 3 * M3 x 16mm for the other 3 holes, secure these with M3 nylon nuts and washers.

Note: The M4 x 16mm Bolt should be in the position shown above.

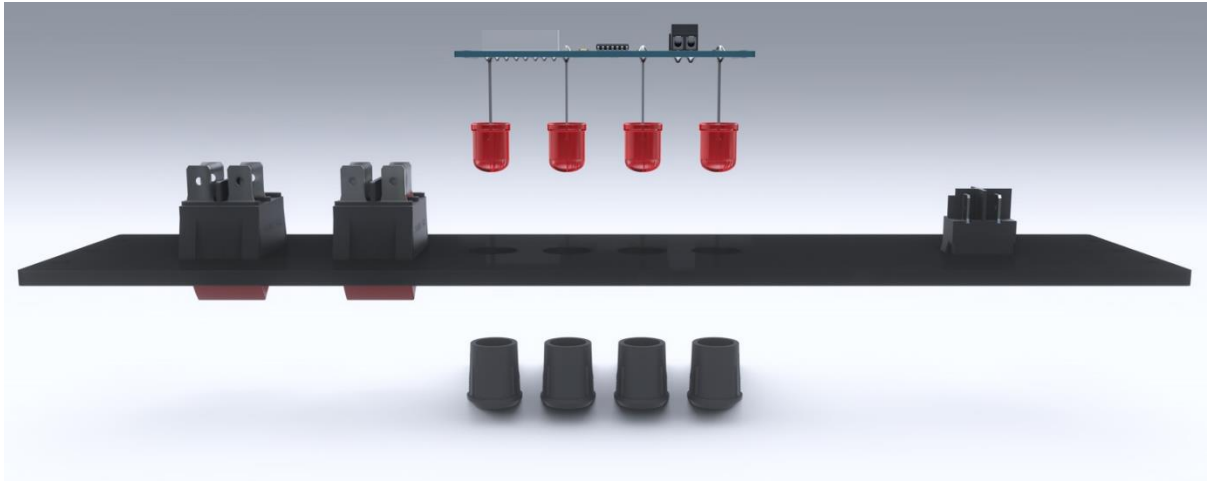


Mount the 6-Axis CNC controller and dual input Mach3/GRBL boards onto the Arduino MEGA 2560.

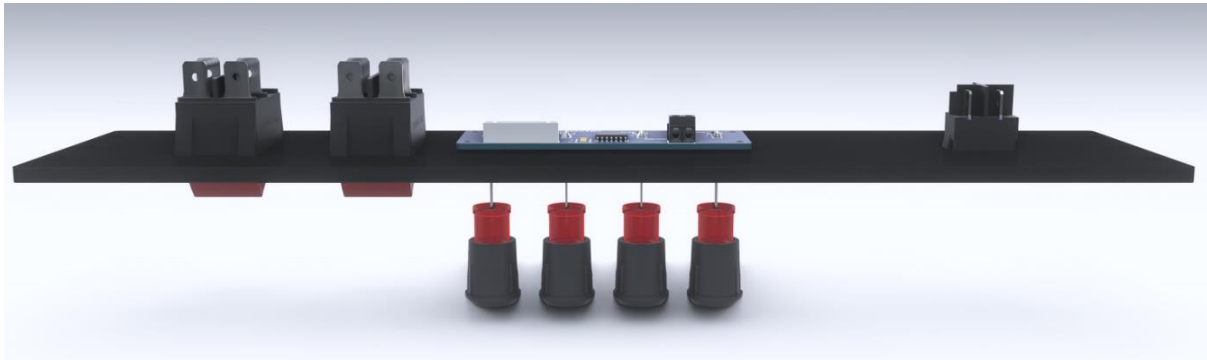


Make sure you have the following:

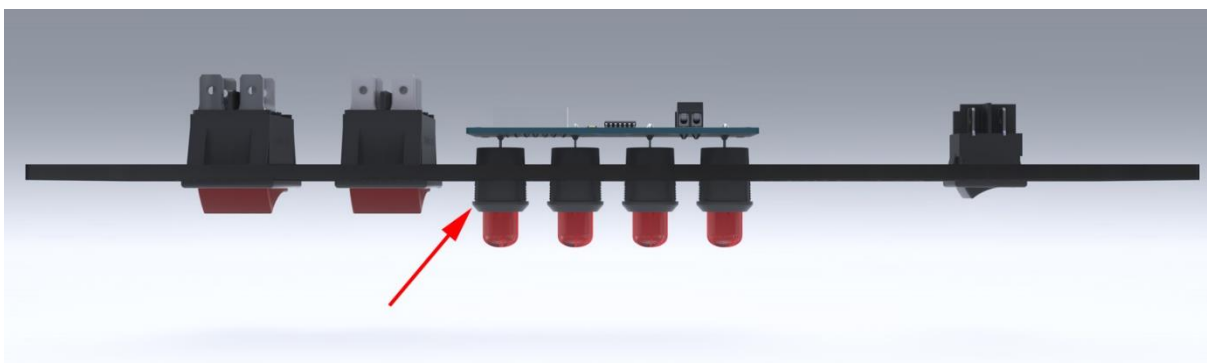
- 4 * M3 x 6mm bolts
- 12 * M16 Glands
- 2 * Power rocker switches
- 2 * Power Socket
- 1 * Input rocker switch
- 1 * DC-Plate 42
- 1 * DC-Plate 43
- 1 * Alarm Board



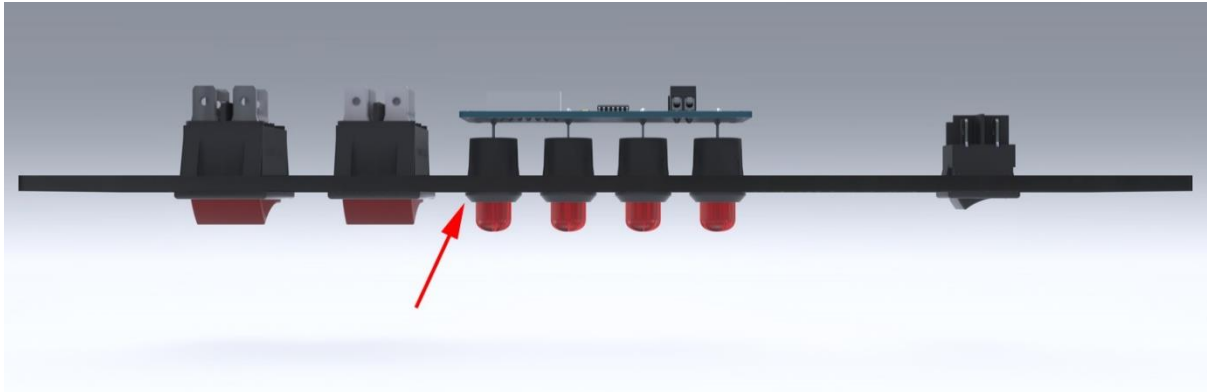
Insert the 2 Power rocker switches into the slots on the left side of the plate and the input rocker switch into the slot on the right side of the DC-Plate 43.



Place the Alarm board into the plate so the LEDs follow through the 4 holes on the plate.



Clip the LEDs into each holder as shown above.



Then push the holders into the plate.



Screw the M16 Glands into the 12 holes on the left side of DC-Plate 42 and attach the 2 power sockets on with 4 * M3 x 6mm bolts.

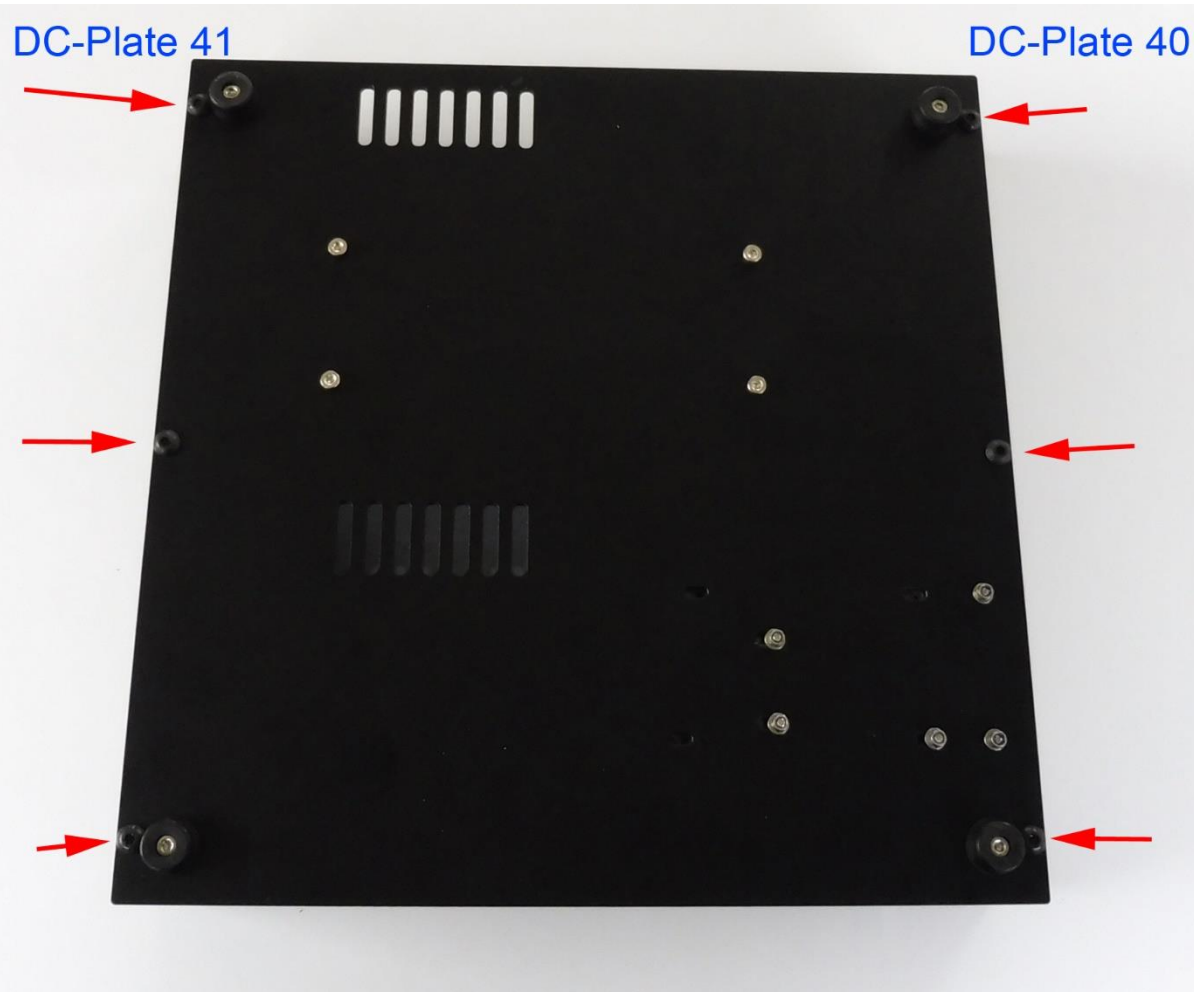


Make sure you have the following:

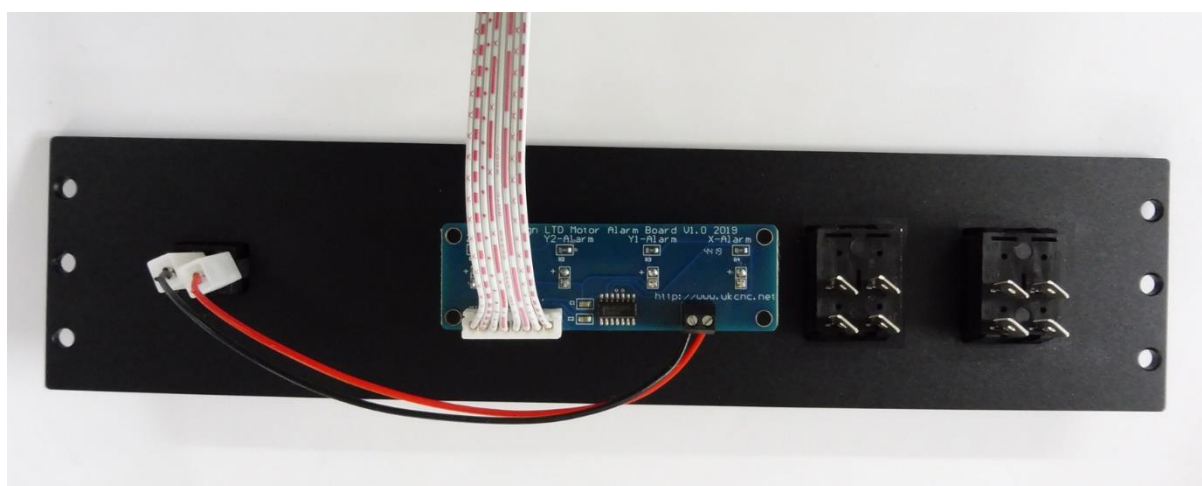
24 * M5 x 10mm Button head bolts

1 * DC-Plate 40

1 * DC-Plate 41



Attach DC-Plate 41 on the left and DC-Plate 40 on the right.

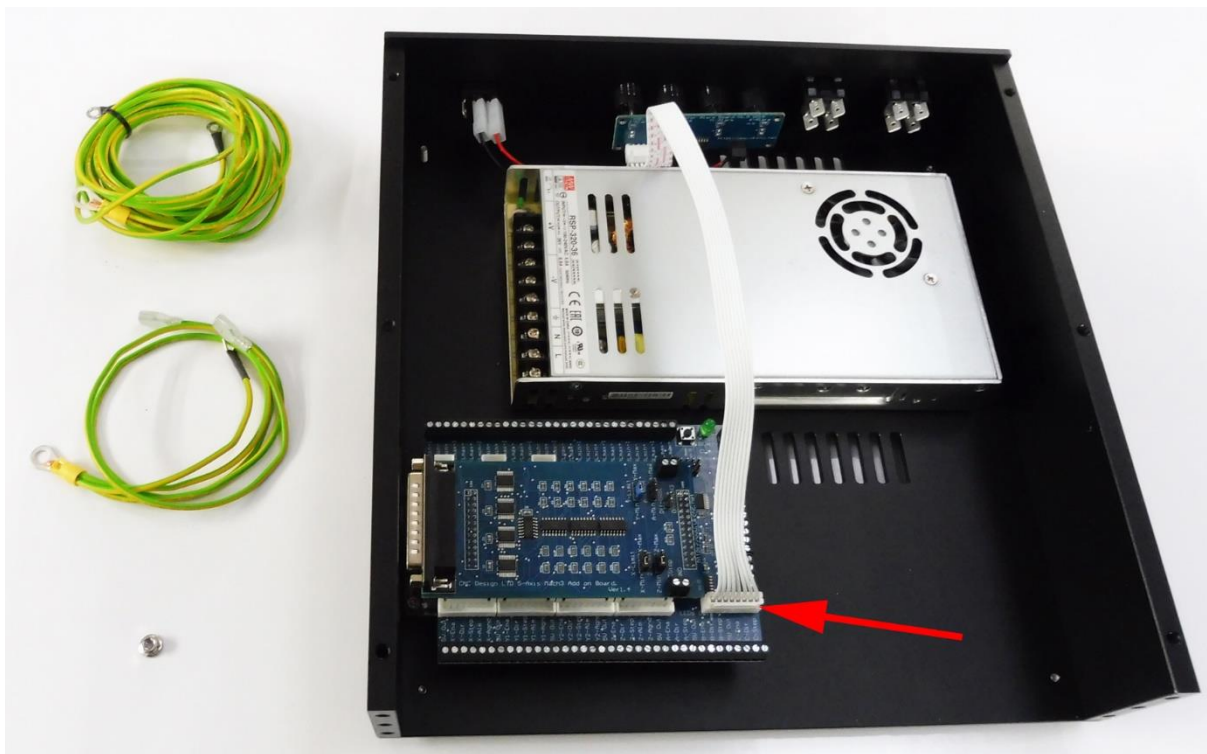


Insert the ribbon cable into the LED Board.

Wire the input switch to the Block on the LED Board.



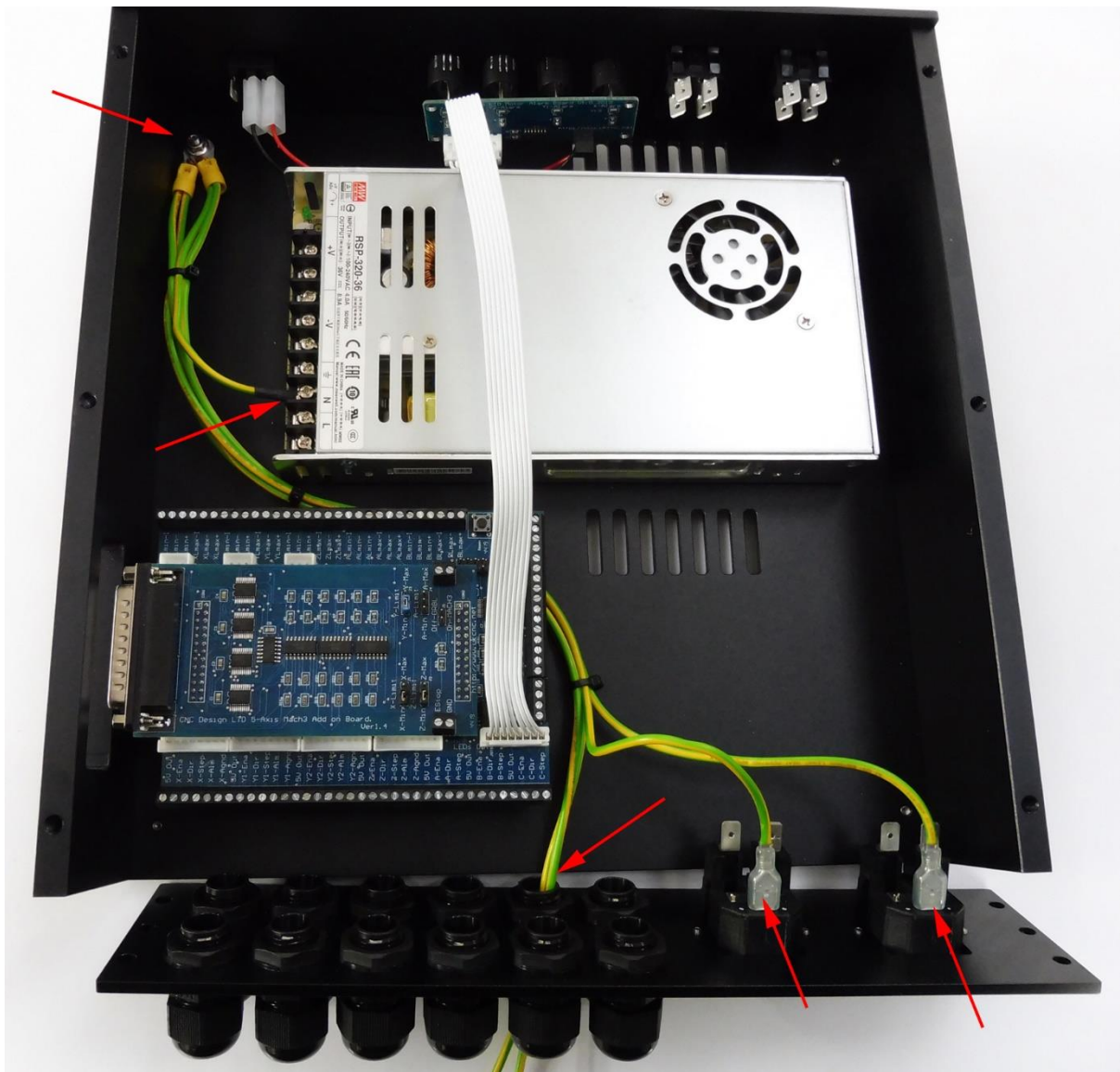
Bolt DC-Plate 43 as shown above.



Plug the ribbon cable into the 6 Axis controller board.

Make sure you have the following:

- 1 * 2 way Earth cable
- 1 * 3 way Earth cable
- 1 * M4 Flanged Nut



Wire the 3 way Earth cable into the 2 power sockets and power supply.

Thread the 2 way Earth cable through the gland shown above.

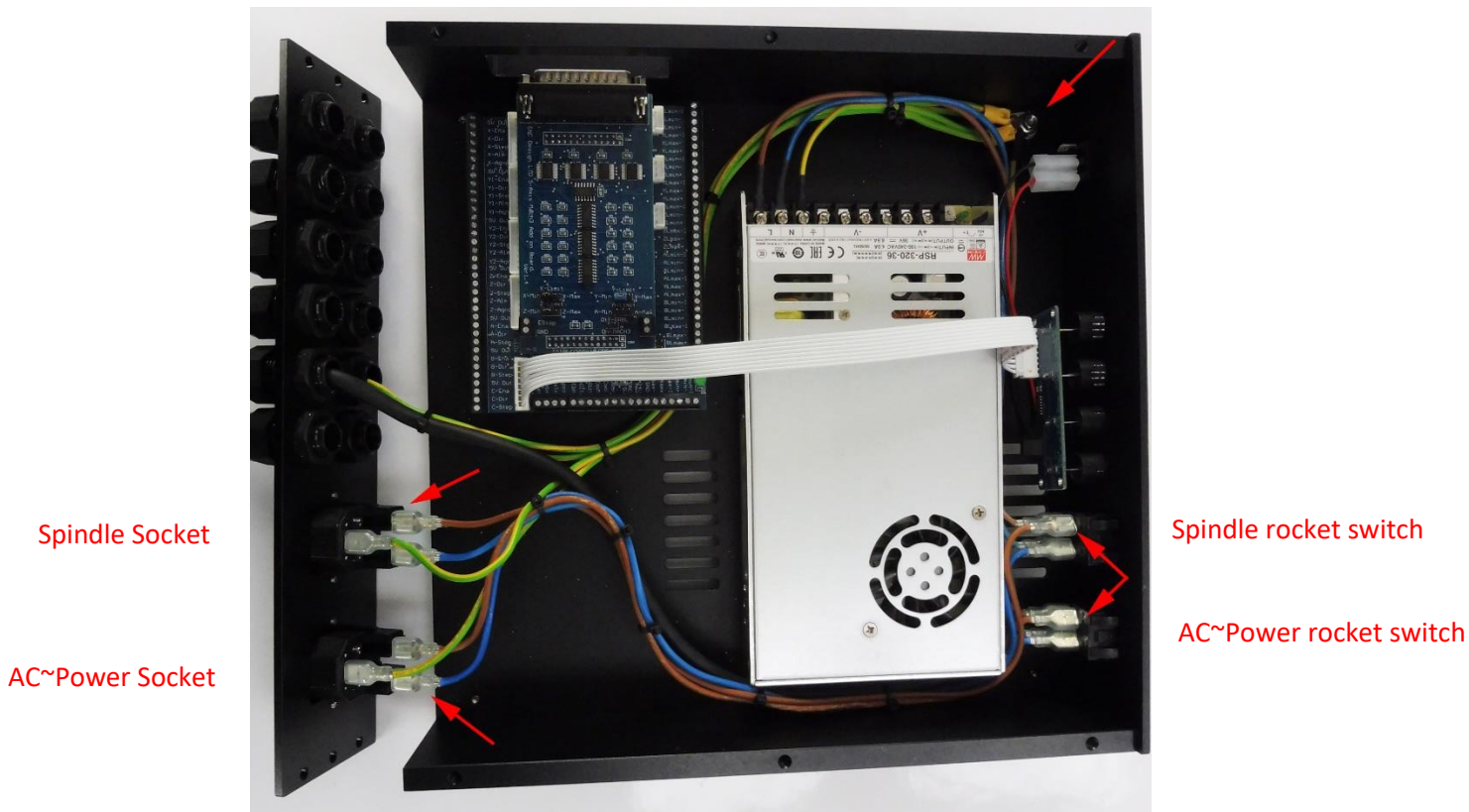
Note: View the gland diagram for more information.



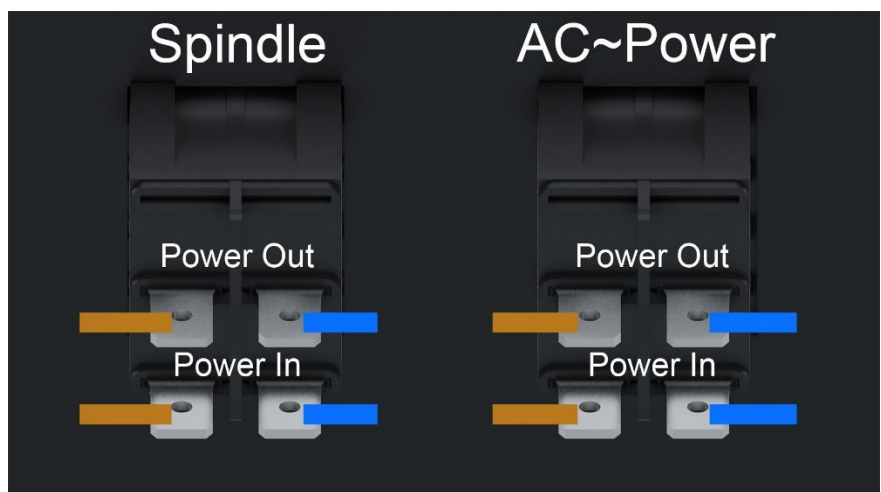


Make sure you have the following:

- 1 * 3 Core Spindle Cable
- 2 * Socket cables – Live + Neutral
- 1 * Power supply cables – Live + Neutral



Attach the spindle earth cable to the earth point.(Top Right)



Attach the spindle 3 core live + neutral cables to the power out spades on the spindle rocker switch.

Attach the spindle socket – live + neutral cables to the power in spades on the spindle rocker switch.

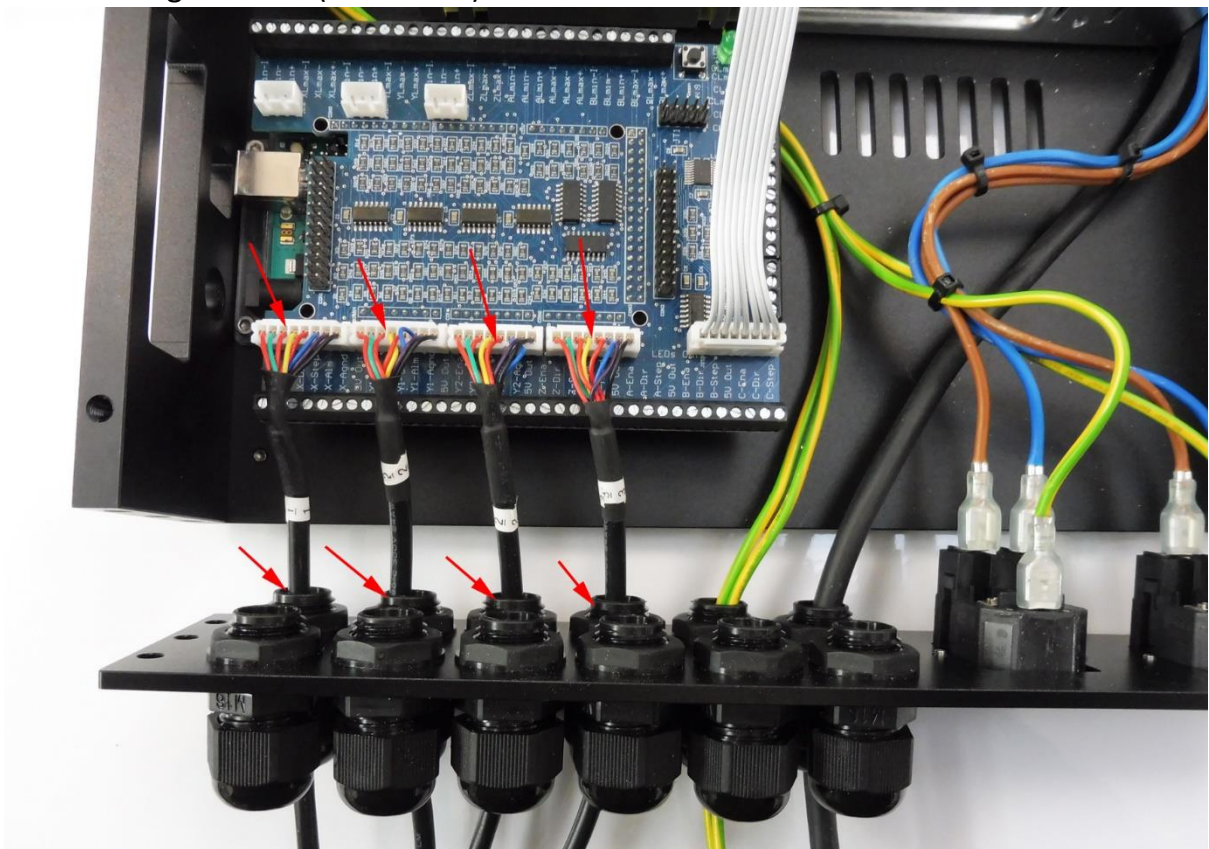
Attach the power supply live + neutral cables to the power out spades on the AC~Power rocker switch.

Attach the AC~Power socket – live + neutral cables to the power in spades on the AC~Power rocker switch.



Make sure you have the following:

- 1 * X-Axis signal cable (Labeled: 1)
- 2 * Y-Axis signal cable (Labeled: 2)
- 1 * Z-Axis signal cable (Labeled: 3)



Thread through the glands as shown and plug into the 6-Axis controller board.

Note: The Dual input Mach3/GRBL Board has been removed for this step.



Make sure you have the following:

- 1 * X-Axis limit cable (Labeled: 4)
- 1 * Y-Axis limit cable (Labeled: 5)
- 1 * Z-Axis limit cable (Labeled: 6)

- 1 * X-Axis motor DC cable (Labeled: 7)
- 2 * Y-Axis motor DC cable (Labeled: 8)
- 1 * Z-Axis motor DC cable (Labeled: 9)



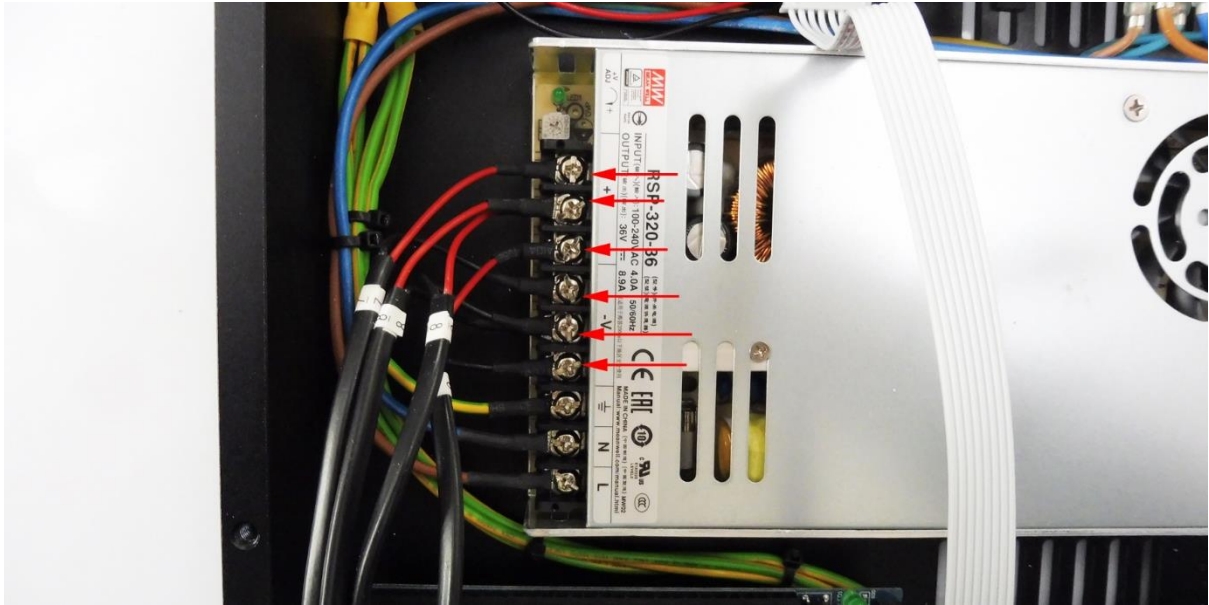
Remove the 3 top left gland lids and rubber inserts. Thread these through each limit switch cable as shown above.



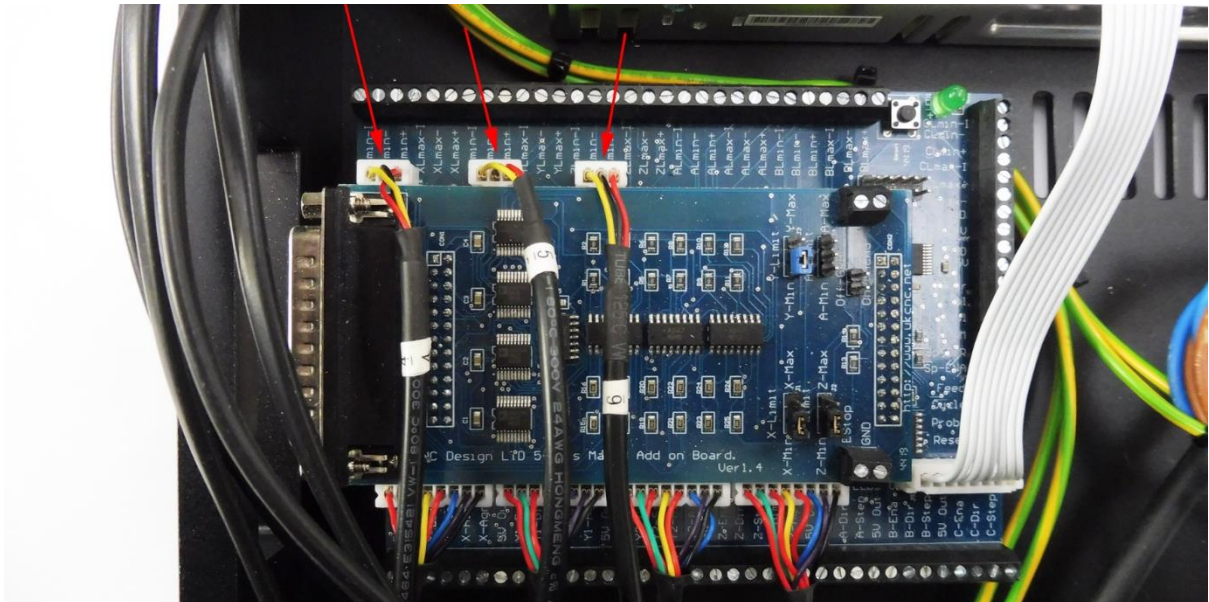
Place the inserts back into the gland and thread through as shown.
Thread the Motor DC cables into each gland.

Note: View the gland diagram for more information.

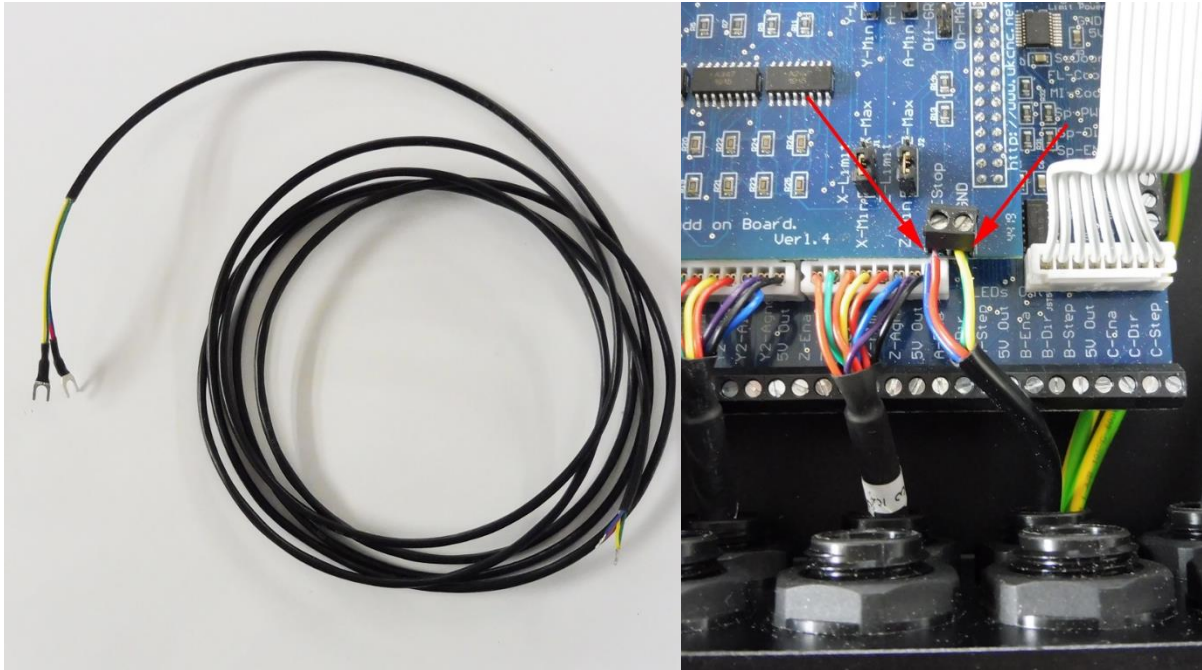




Wire the Motor DC cables as shown above.



Plug the Limit switches in from left to right – X-Axis(Labeled 4), Y-Axis(Labeled 5), Z-Axis(Labeled 6).

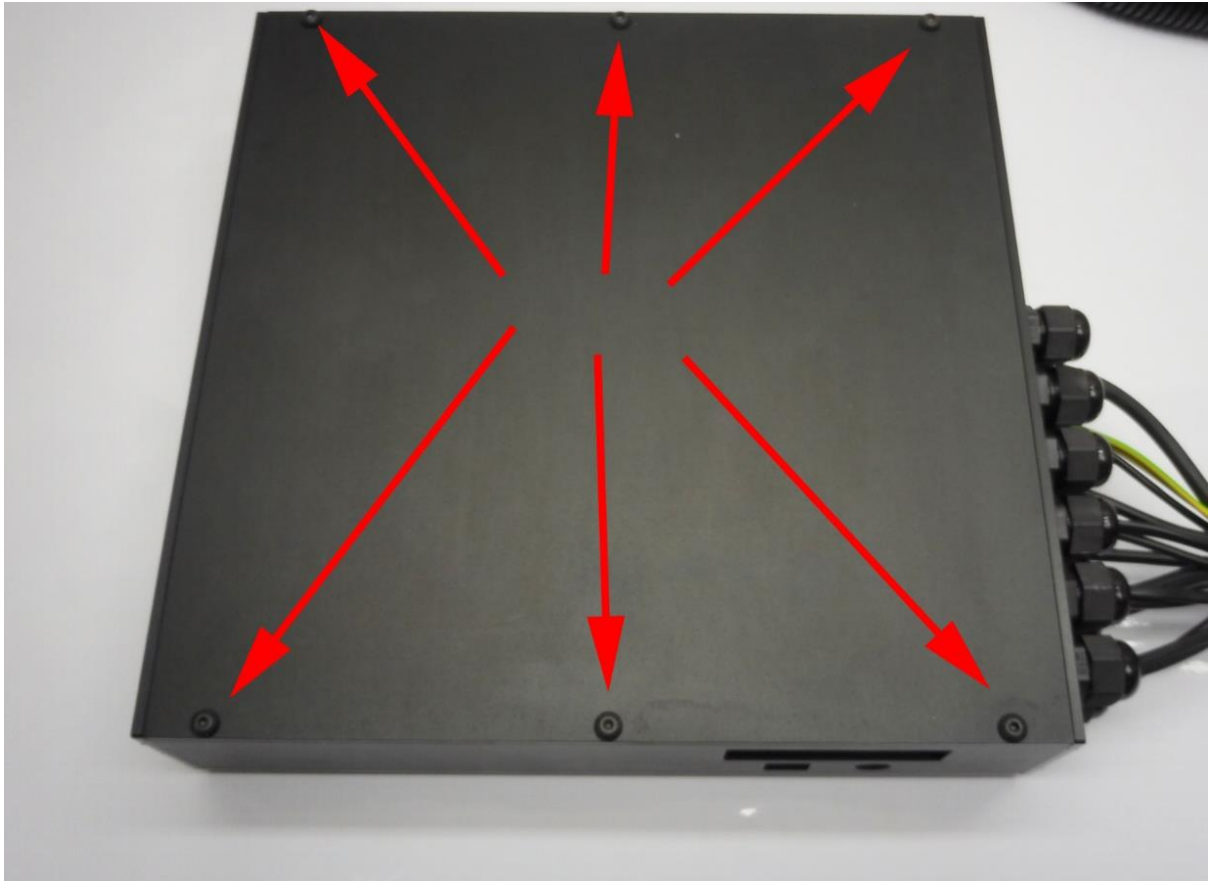


Screw the Emergency stop cable into the Emergency stop 2 way block on the Dual input Mach3/GRBL Board.



Thread the Emergency stop cable through the Earth gland.

Attach DC-Plate 42 with 6 * M5 x 10mm button head bolts.



Attach DC-Plate 39 to the top of the controller box using 6 * M5 x 10mm buttonhead bolts.



Tighten the bolts shown above.