

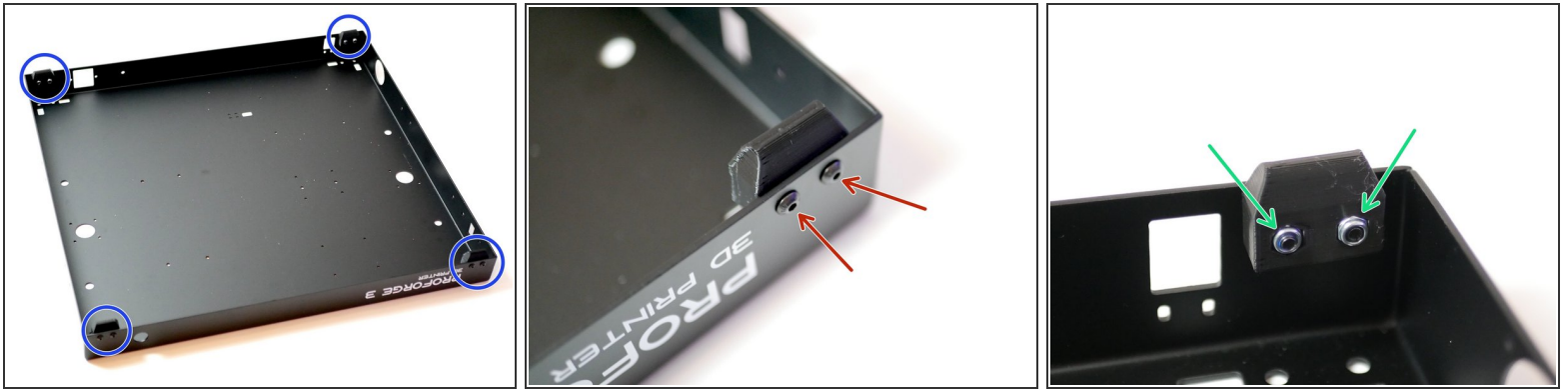
Makertech

Stage 01: Base

Written By: Makertech 3D




Step 1 — Rubber Feet




- Attach the four rubber feet to the corners of the Base.

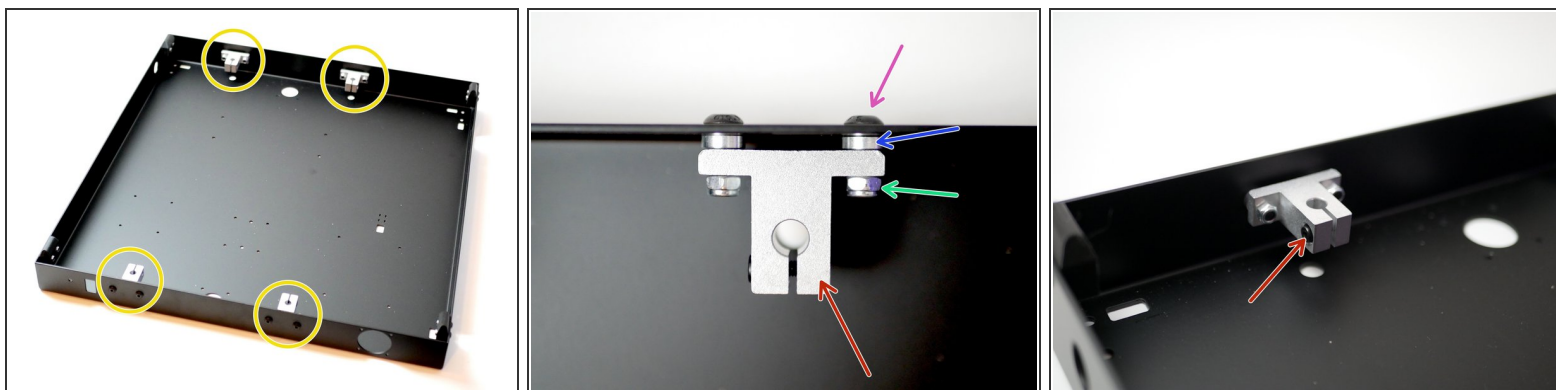
- M4 x 16mm Button

- M4 Nyloc Nut

 Photographed are 3D printed feet, however the ones included are injection moulded rubber.

 The Feet are silicone rubber, pliers will be needed to help hold the nyloc nuts in place whilst fastening. This was an unfortunate oversight, and one we weren't able to correct due to the cost of tooling for these injection moulded parts.

Step 2 — Z-Rod Brackets



⚠ If building the Proforge 3.5, skip this step.

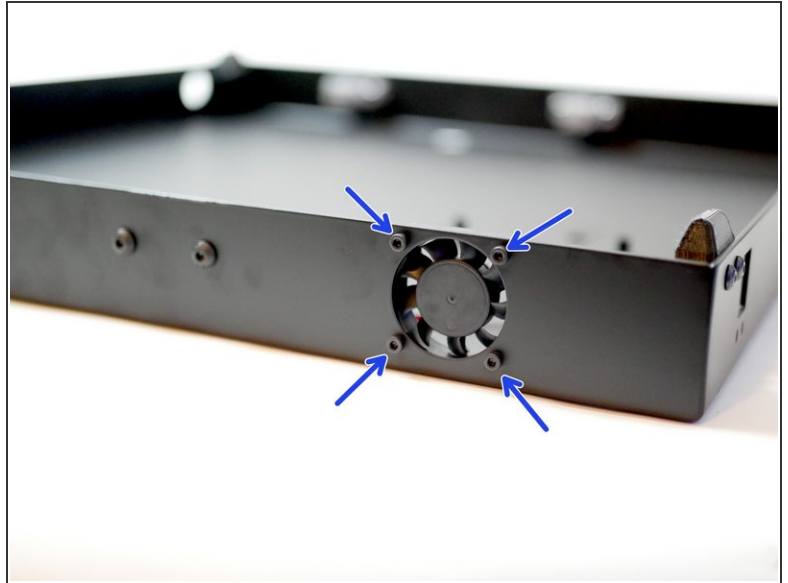
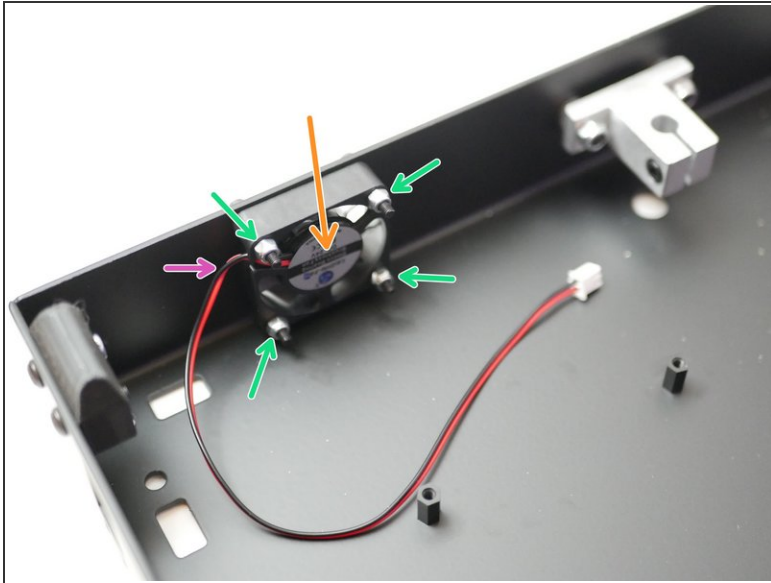
- Fix the four metal brackets to the sides of the base.

- Bracket
- M5 x 3mm Spacer
- M5 x 16mm Button
- M5 Nyloc Nut

⚠ Do not tighten yet, just hand fasten to leave the bracket fixed loosely.

⚠ Make sure the bolt on the bracket is facing outwards and away from the centre of the base panel.

Step 3 — Electronics Fan




i Install the electronics fan as shown:


- Make sure the sticker side of the fan points inwards.
- Make sure the cable is also orientated as shown.
 - M3 x 20mm CAP
 - M3 Nyloc

Step 4 — Control Board




 Fix four stand-offs to the base:

- M3 x 10mm threaded stand-off
- M3 x 6mm Button

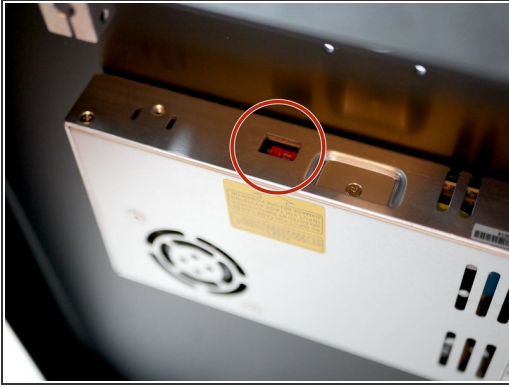
 Before removing the control board from it's packaging, make sure that you are earthed, you can do this by touching a large metal object. This is to ensure a static shock doesn't damage the board.

- Fix the board onto the mounts with four M3 x 6mm button head bolts.

 Make sure the board is orientated as shown.

- Plug the electronics fan into the control board as shown.

Step 5 — Power Supply



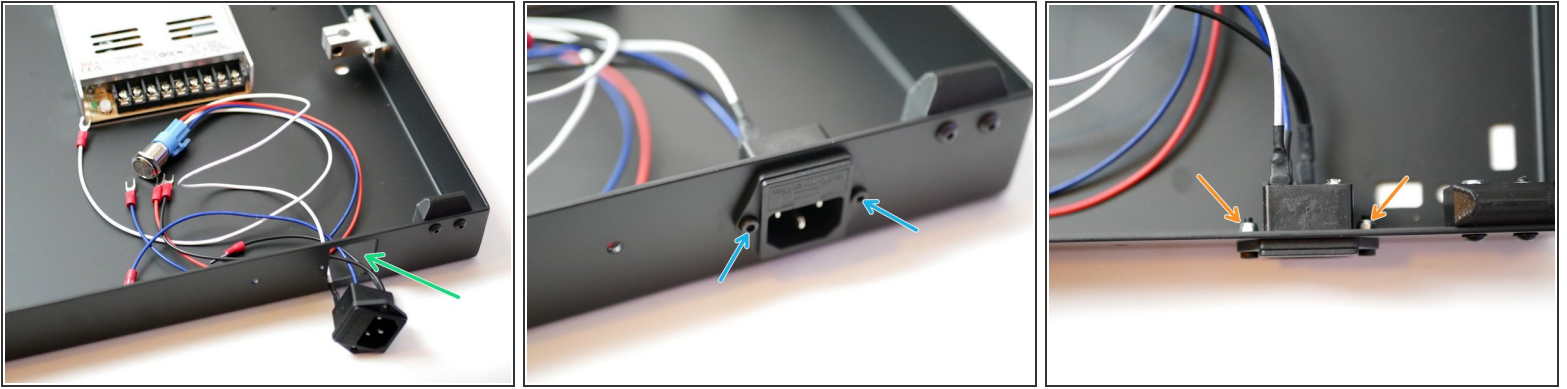
⚠ Before mounting the PSU, check that it's voltage input is adjusted correctly for your location. The switch on the side of the unit should be set to your mains voltage. In the UK this would be 230v, in the USA it would be set 110v.

● Fix the PSU to the base with four M4 x 6mm button head bolts.

☞ An easy way to line up the holes is to place the PSU under the base and look through the holes from the top until they line up, and you can secure one of the bolts. The rest should then easily follow.

⚠ Note the orientation of the PSU, it should match the third photo.

Step 6 — Power Socket



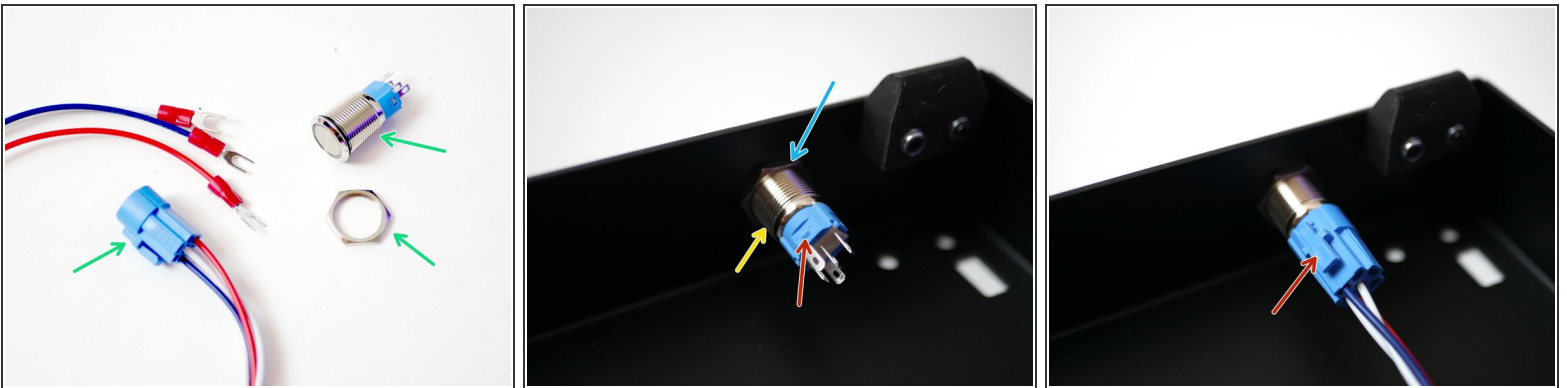
- Push the switch side of the assembly in through the rectangular cut-out at the back of the base.

i Push the socket in and secure it in place with:

- M3 x 10mm Cap
- M3 Nyloc

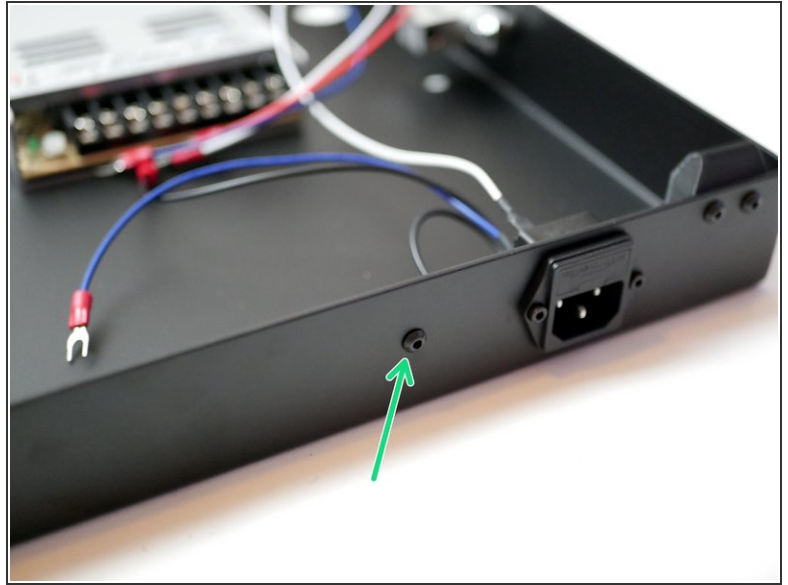
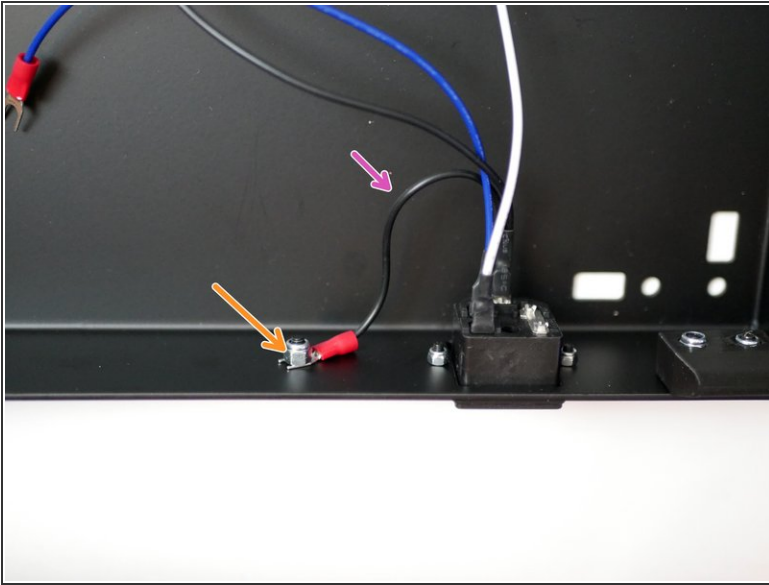
! Again, match the orientation of the socket as shown in the second image.

Step 7 — Power Switch



- Disassemble the switch assembly by pulling the adaptor off the switch and undoing the nut.
- Push the switch in through the hole at the front of the base.
- Fix the switch in place by tightening the nut back onto it. **DO NOT OVERTIGHTEN.**
- Plug the cable adapter back on, note the orientation, the side with the release lever should go on the side that has the tab on the switch housing.

Step 8 — Earthing



- Fix the earth cable (shorter black cable) from the socket to the frame.

- M4 x 10mm Button

- M4 Nyloc

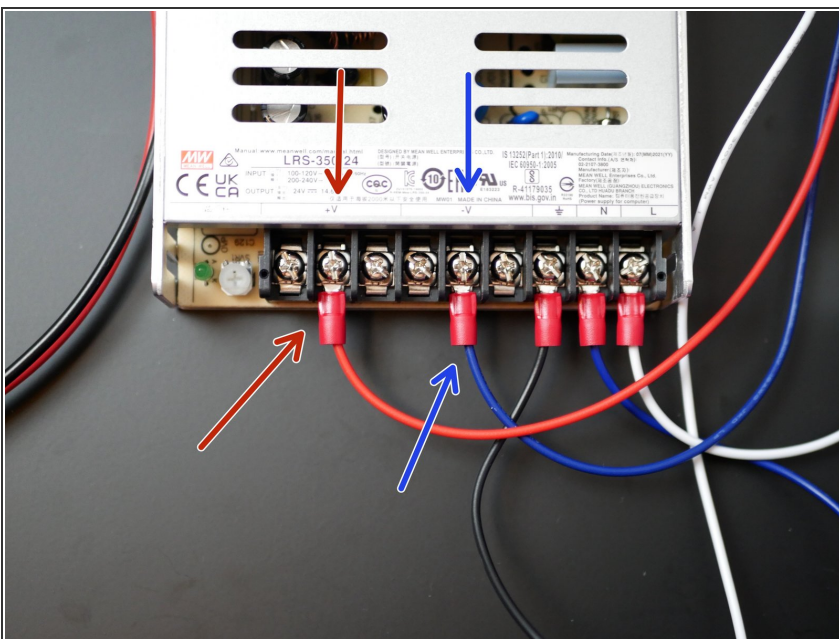
⚠ Scuff up the surface of the Base where the terminal makes contact here to get a better electrical contact with the frame.

Step 9 — Wiring



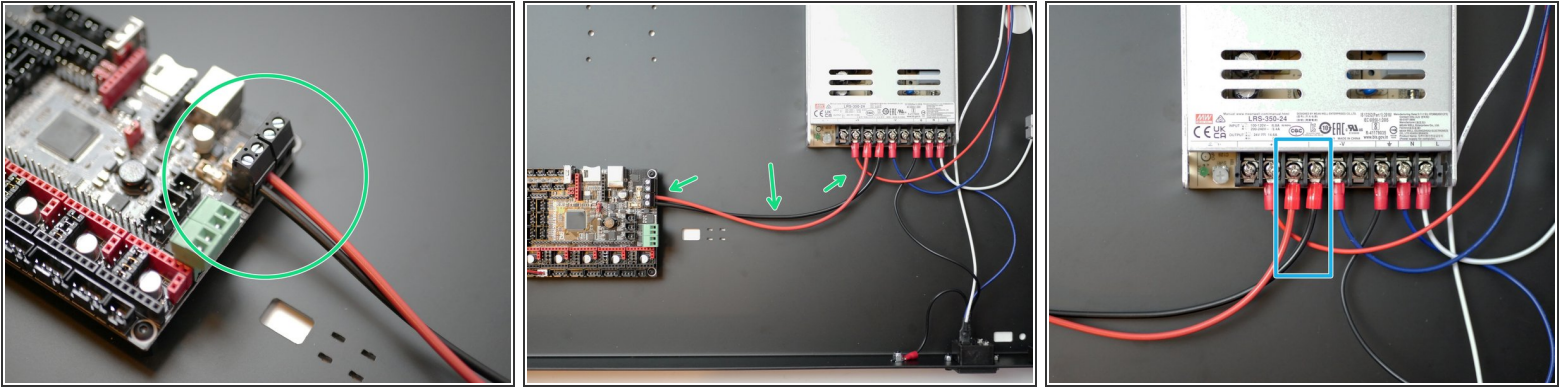
- Connect the longer black cable from the socket to the power supplies earth terminal.
- Connect the blue cable from the socket to the neutral terminal on the power supply.
- Connect the white cable from the switch to the live terminal on the power supply.

Step 10 — Wiring Continued



- ① Connect the red and blue cables from the switch to the terminal on the power supply as shown:
- Red to positive
 - Blue to negative

Step 11 — Control Board Power Cables



- Secure the black and red power cables to the control board as shown.
- On the power supply side, the red cable goes to positive and the black to negative.

⚠ Double check that all the cables are connected correctly, as shown in the images. Incorrectly connecting the cables can cause irreversible damage.

Step 12 — Z-Axis Motors



⚠ If building the Proforge 3.5, skip this step.

- Fix the two 1.8 degree NEMA 17 motors to the base. Serial No. 42BYGH438.
- M3 x 6mm Cap Head Bolt

⚠ Make sure that the cable header, on the motor, is facing inwards.