6. Assemble Duet Controller

Assembling the Duet 3D Controller with Fans and Mounts.

Written By: Ryan Christy

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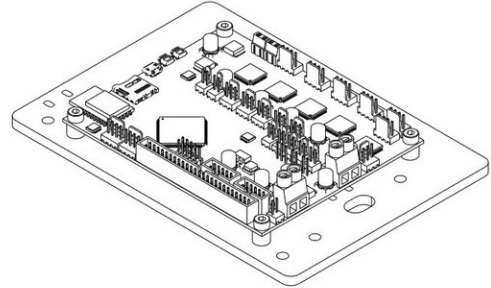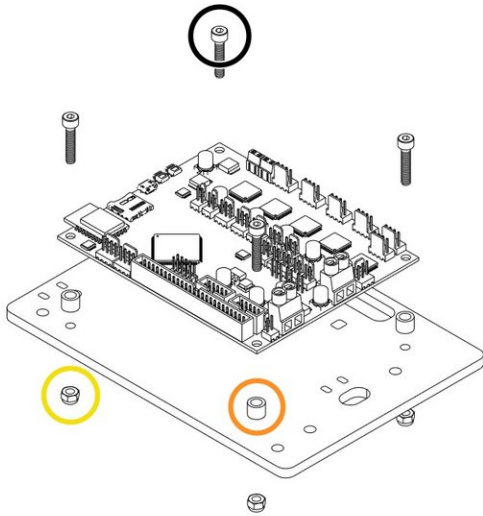© 2022

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Page 1 of 7

Step 1 — Fixing the Cable Ties into position

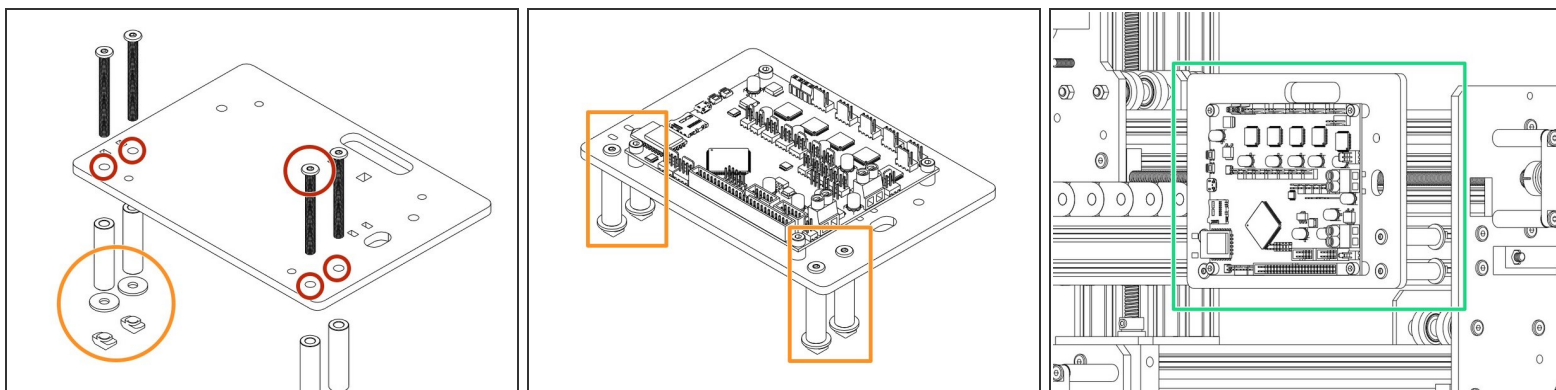⚠ Making sure the board is orientated in the correct way as displayed in the image.

- The Large Cable Tie highlighted in Orange is for the 4 Stepper Motor Cables and the Limit Switches.

- The Small Cable Tie highlighted in Red is for the power cable.

- The Small Cable Tie highlighted in Yellow is only needed if you have the Ethernet Version, and is to secure the Ethernet Cable.

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Page 2 of 7

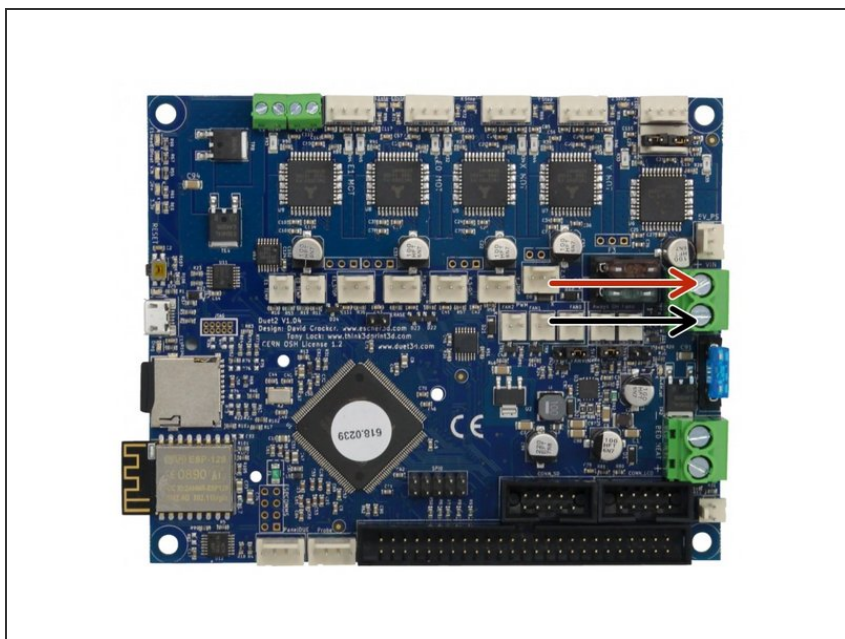## Step 2 — Mounting the Controller to the Duet Mount

- Insert a M4 Cap Head Bolt 20mm through each hole on all 4 corners on the Duet 3D Controller.

  - Onto each bolt slide a 1/4" Nylon Spacer.

  - Now it is time to join the Duet to the Duet Mount. Insert the bolts into the holes on the Duet Mount and secure using 4 x M4 Nyloc Nuts.

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Step 3 — Mounting the Controller to the Machine

- Insert 4 x 50mm M5 Low Profile Bolts through the holes indicated in the image.

- Place a 1-1/2" Aluminium Spacers over each bolt followed by a Slot Washer and finally a M5 Drop in Tee Nut.

- Once assembled line up with the 2040 Extrusion on the right-hand side of the machine looking from the back and fix into place tightening the M5 Bolts until the Tee Nuts engage

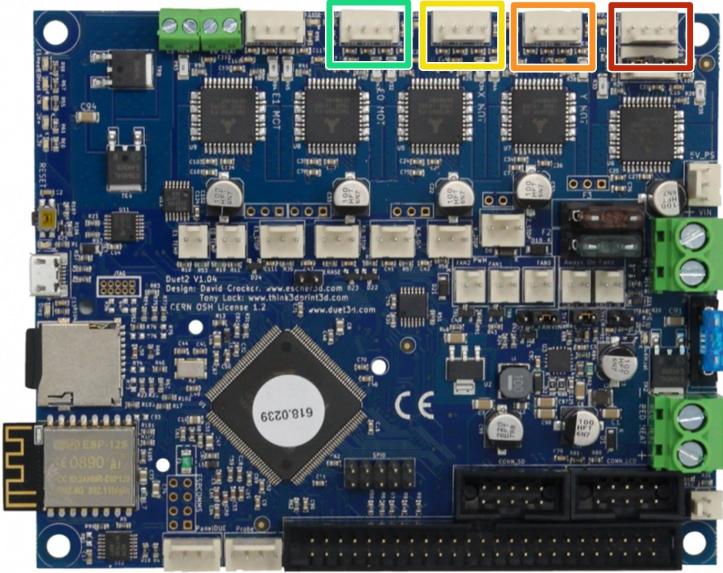## Step 4 — Connecting the PSU Input Cable

⚠ The Mains Power should remain off during all wiring of the Duet Controller.

- PSU Cable from Power Supply - Connect Red Positive Wire into the Top Screw Terminal and Black into Bottom Screw Terminal.

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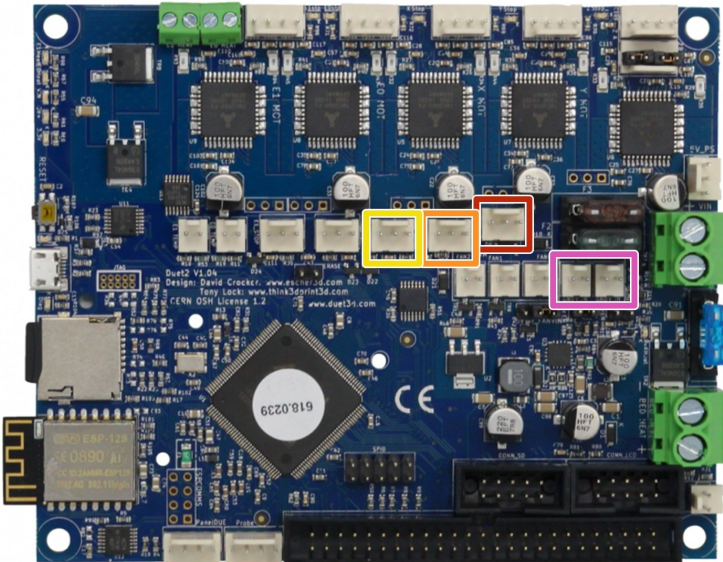
Step 5 — Stepper Motor Connectors

ⓘ The connectors for the Duet controller are keyed, so there is only one way which they can plug in.

● Z-Axis Stepper Motor Wire.

● Left Y-Axis Stepper Motor Wire.

● X-Axis Stepper Motor Wire.
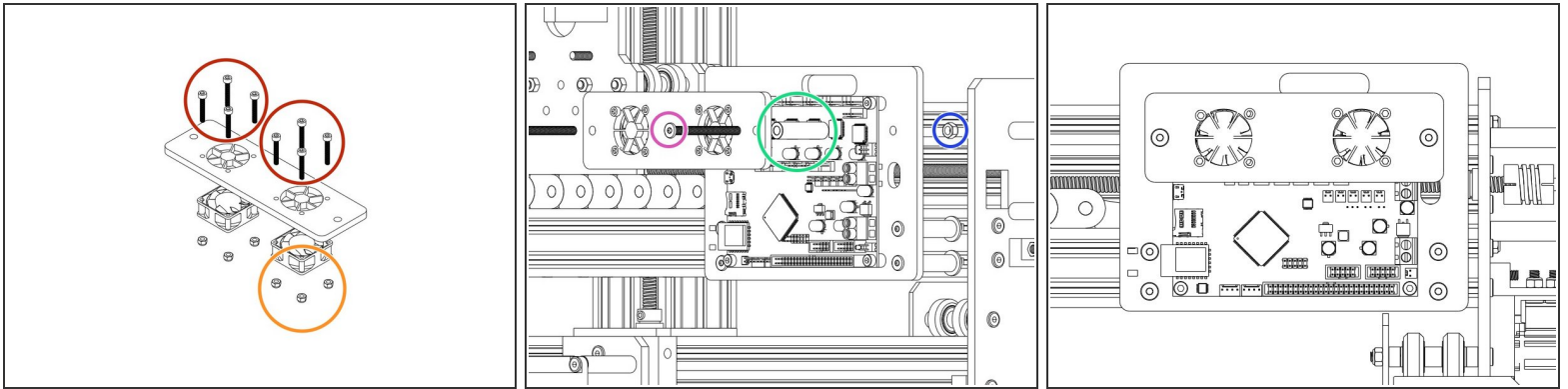
● Right Y-Axis Stepper Motor Wire.

Step 6 — Limit Switches & Fans

● Z-Axis Limit Switch

● Y-Axis Limit Switch

● X-Axis Limit Switch

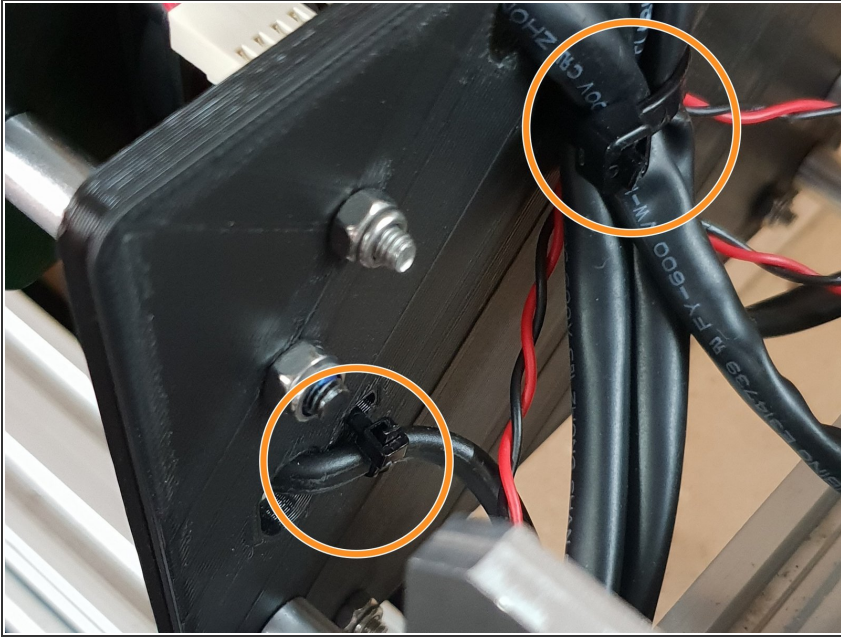● Fans connected to either of the Always on Fan Terminals.

Step 7 — Mounting the Fans to the Board

- Use 8 x M3 Cap Head 20mms to fix the fans highlighted in Yellow onto the Mount with the Fan label facing outward.
  - Secure the M3 Cap Head 20mm's using 8 x M3 Nyloc Nuts.

- Thread 2 x M5 55mm Low Profile Bolts through the fan mount.

- Slide the Aluminium-Spacers-1-1/2" over the bolts.

- Now attach to the Main Board mount using 2 x M5 Nyloc Nuts.
  - ⚠ Remember to connect the fans to Always on Fan connection of your Duet Controller before tightening the M5 Nyloc Nuts.

Step 8 — Tidying your Wires

- Using the already inserted cable ties fix the wires into place securely to prevent any unnecessary movement and to keep the machine looking neat!

- (i) If you have the Ethernet version also secure that.

Thanks for following the guide. Any issues, please contact us!

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Page 7 of 7