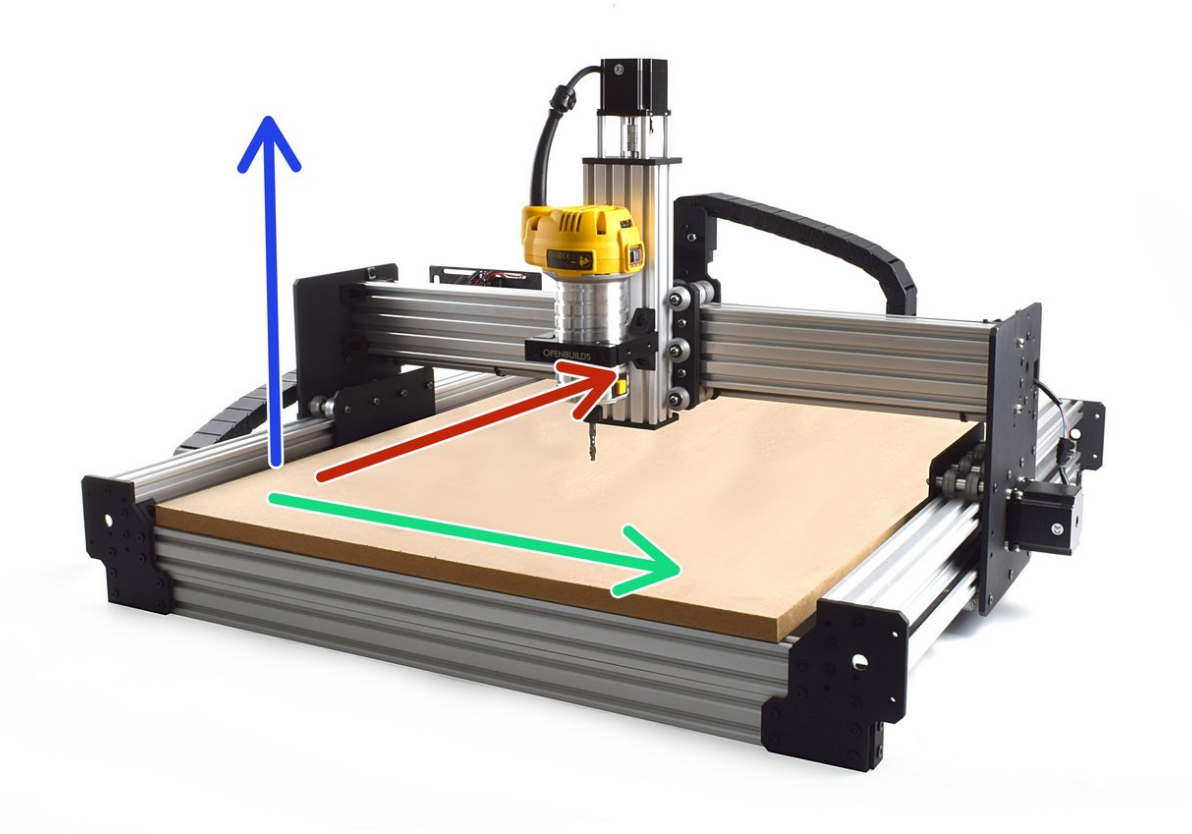
3. Testing Your WorkBee

This guide goes over testing the WorkBee CNC Machine to make sure everything is functioning correctly.

Written By: Robert

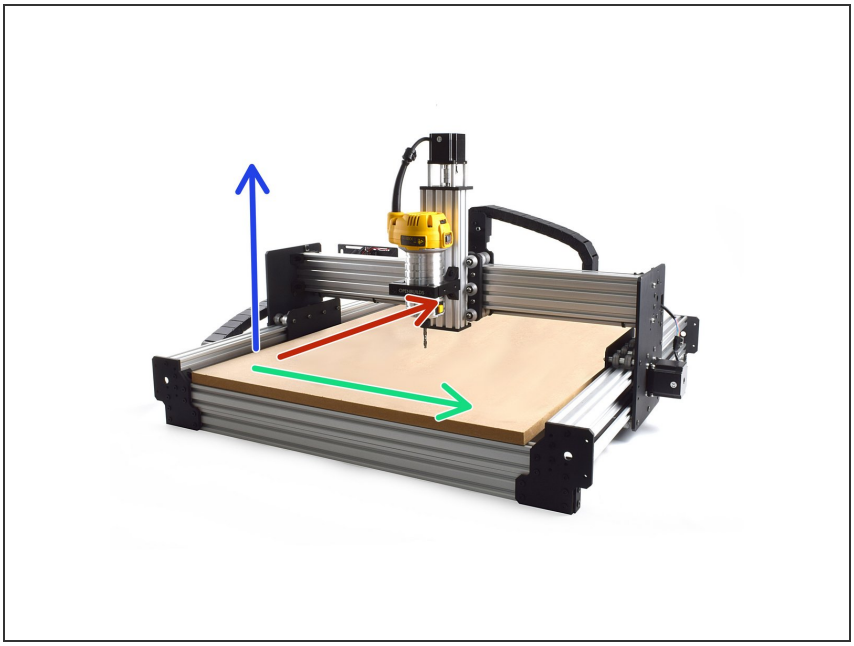


INTRODUCTION

Please read before proceeding to avoid damaging the controller and voiding your warranty

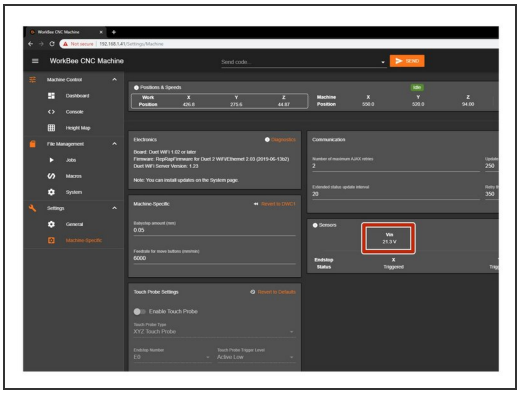
1. Avoid connecting the Duet via USB when you do not need to. (Except when instructed to in the guides)
2. Always unplug the WorkBee Power Supply before connecting the USB Cable.

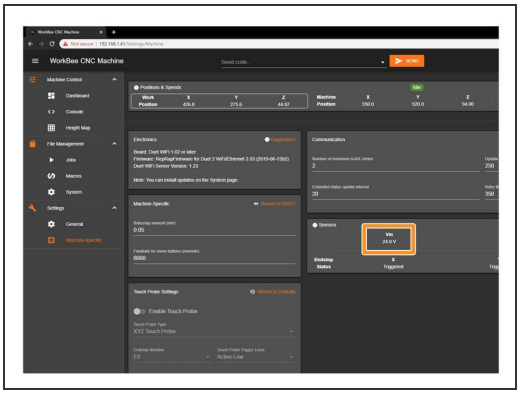
Step 1 — Axis Movement Direction



- If looking at the machine from the front the correct axis motion is, X-Axis is positive towards the right.
- The Y-Axis is positive going away.
- The Z-Axis is positive going up.

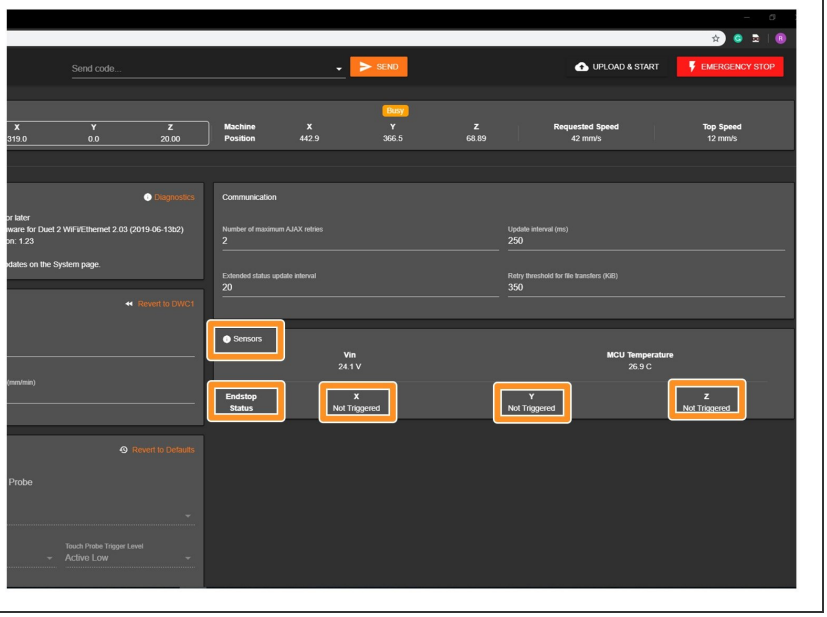
Step 2 — Adjusting the PSU Voltage





- In WorkBee Control, under Settings > Machine-Specific > Sensors, take note of the Vin number. It needs to read 24.0V. If it does not read 24.0V, please follow the steps below.
  - Using an insulated Phillips Screw Driver adjust the Power Supply output voltage by rotating the white plastic screw inside the Ooznest Logo.
  - Adjust the output voltage so it reads 24.0

Step 3 — Test Limit Switches

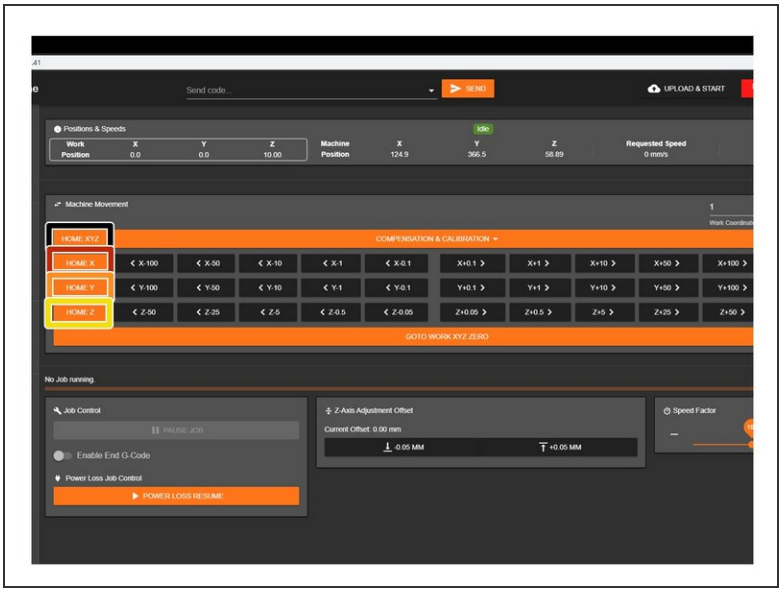


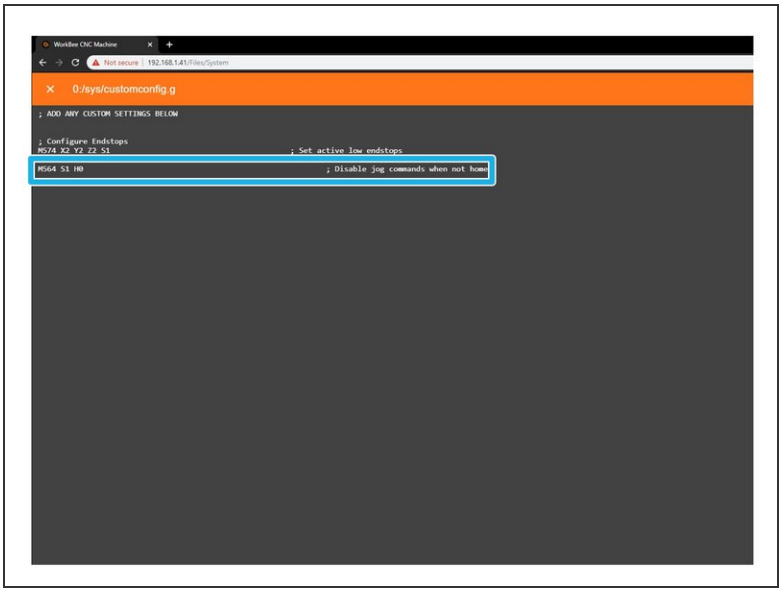
- In WorkBee Web Control under to Settings > Machine Specific > Sensors, you will find the statuses of the limit switches.
  - Activate the X-Axis limit switch with your finger. Hold for a few seconds.
  - The endstop status should change to 'Triggered'

    ⚠ It is normal for there to be a delay between pressing the limit switch and the status being updated. Please do not be concerned, the board will stop the motor instantaneously.
  - Repeat this procedure for the Y & Z Limit switches.

⚠ If any do not behave as intended do not proceed with this guide, please contact us: https://ooznest.co.uk/help/

Step 4 — Test Homing





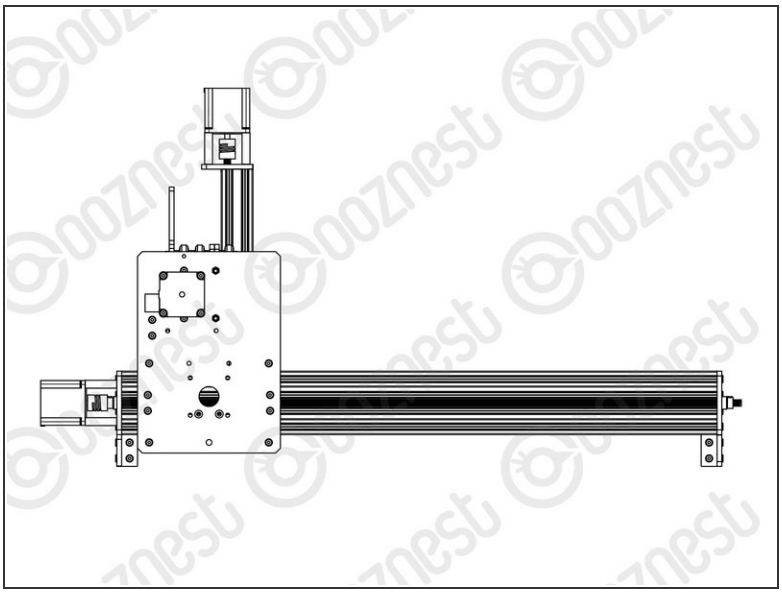
⚠ If any of the limit switches did not behave as intended in the previous step, do not proceed with this step & guide, please contact us: https://ooznest.co.uk/help/

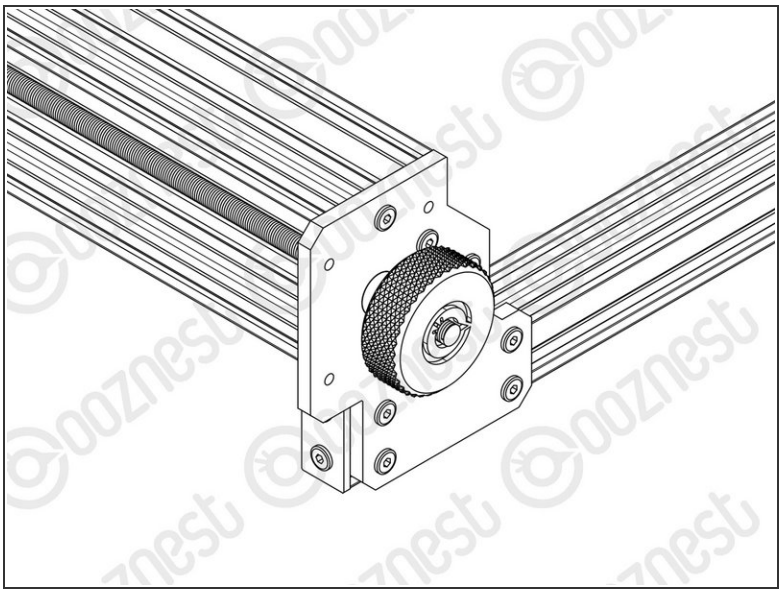
ⓘ When the machine homes, it will raise the Z-Axis, and then move the X and Y-Axis to the far right-hand corner.

⚠ If any of the points below do not behave as explained, do not proceed with this guide, please contact us: https://ooznest.co.uk/help/

- Press Home Z. The Z-Axis should raise upwards, bounce once on the limit switch, and then stop.
- Press Home X. The Z-Axis should home like the previous. The X-Axis should then move towards the right, bounce once on the limit switch, and then stop.
- Press Home Y. The Z-Axis should home like previous. The Y-Axis should then move towards the back, bounce once on the limit switch, and then stop.
- Press Home All. The Z-Axis should home like previous. Then the X and Y-Axis should home like previous.

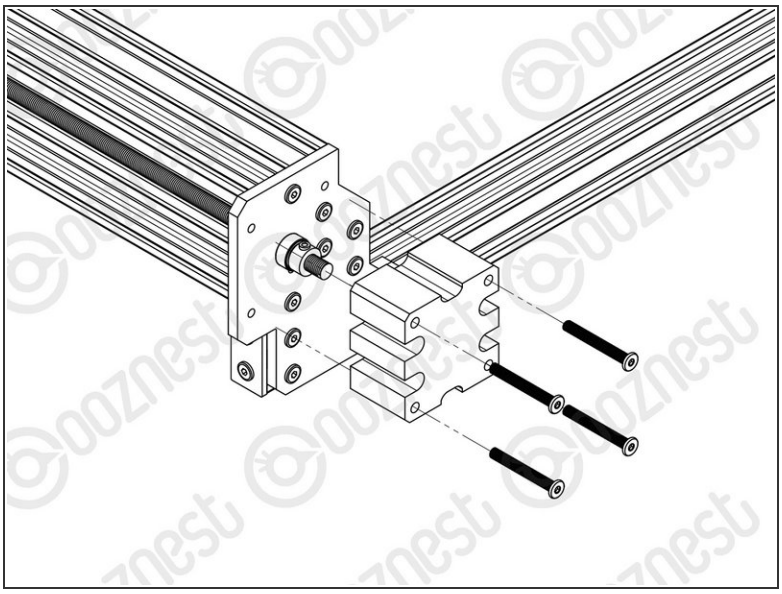
Step 5 — Tensioning the ACME Screws

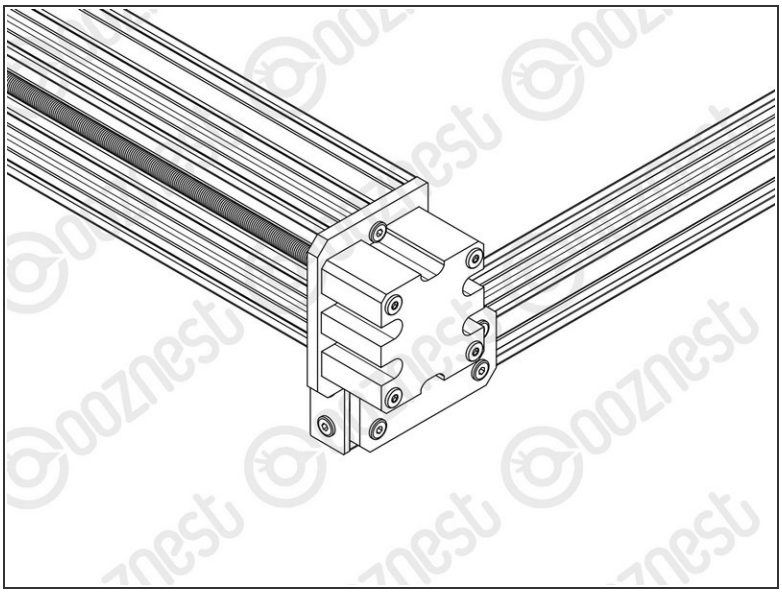




- Re-home the machine so the machine is at the maximum on all axes.
- On the Left Hand Y-Axis ACME Screw , if looking from the front, thread the Tensioning-Knob onto the end of the ACME Screw.
  - Loosen the 8mm-Clamping-Collar.
  - Turn the Tensioning-Knob clockwise, you will feel the screw tension, turn it until the motor clicks over.
  - Just before this point where the motor clicks, is the correct tension for the ACME Screw. While holding the tensioning knob at this point, push the 8mm-Clamping-Collar against the 8mm-Shim and F688ZZ-Bearing and tighten the 8mm-Clamping-Collar.
  - Remove the Tensioning-Knob.
  - Repeat for the Right Hand Y-Axis Screw.
  - To tension the X-Axis screw jog the machine furthest left and repeat the above steps to tension correctly.

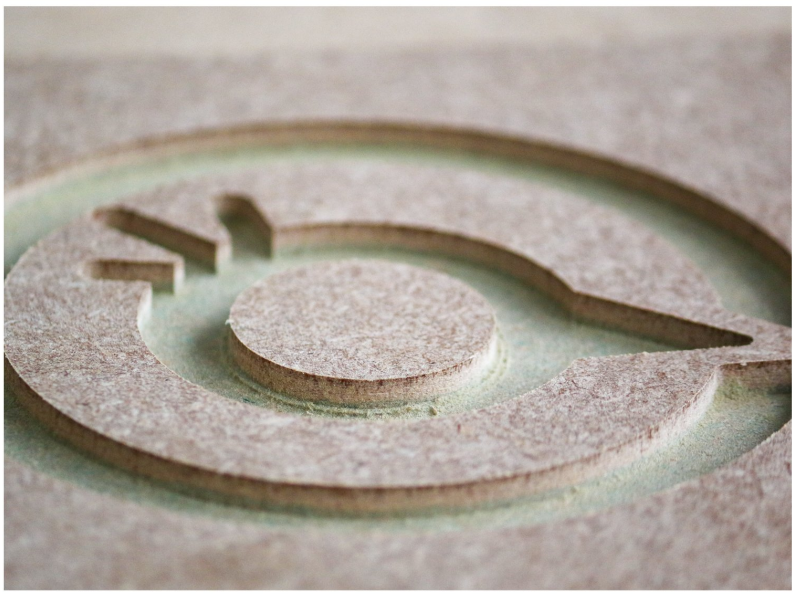
Step 6 — ACME End Caps





- Onto the end of each ACME Screw attach an ACME-End-Cap using 4 x M5-Low-Profile-40mm bolts.

Step 7 — Build Complete!



ⓘ Congratulations you have completed the assembly and testing of your Ooznest Original WorkBee CNC Machine.

ⓘ We recommend following these two guides to learn how to use your WorkBee: WorkBee Control Overview & How To Set up a Job on the WorkBee CNC Machine

Thanks for following the guide. Testing of the WorkBee is now complete!