

3. Testing Your WorkBee

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

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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

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les on the S	ystem page.							
			Extended status updat 20				Retry threshold for file transfers (KiB) 350	
			Sensors					
		l		Vin 24.1 \/			MCU Temperal	ure
					_	Ē		
			Endstop Status	X Not Trigg	ered		Y Not Triggered	Z Not Triggered
	Touch Probe Trigger Level Active Low							

- 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: <u>https://ooznest.co.uk/help/</u>

Step 4 — Test Homing

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.+ Martina Mournard		
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HOME Z	240.5 < Z-0.05 Z+0.05 > Z+0.5 > Z+5 >	Z-/25 > Z-/50 >
	GOTO WORK XYZ ZERO	
lo Job running.		
Job Control	÷ 2-Axis Adjustment Offset	O Speed Fator
	<u>⊥</u> 0.05 MM	
Enable End G-Code		
Power Loss Job Control DOWER LOSS DESIME		

- 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: <u>https://ooznest.co.uk/help/</u>
- (i) When the machine homes, it will raise the Z-Axis, and then move the X and Y-Axis to the far righthand corner.

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

- 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!