



1. Introduction

Written By: Robert

ASSEMBLING YOUR WORKBEE - V2.4

Start Here

Mechanical Assembly

Electronics Assembly

Connecting

Connect Via Wifi

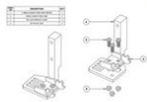
Connect Via Ethernet

Testing

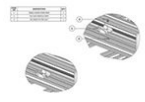
Electronics Assembly

Edit

1. Y-Axis Drag Chain Assembly



2. X-Axis Drag Chain Assembly



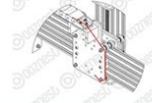
3. Mains Power



4. Limit Switch Assembly & Mounting



5. Wire Routing



6. Assemble Duet Controller



Connecting

Edit

Connect Via Wifi

First, get connected via USB. Follow the guide matching your operating system.

1. Connecting your Duet via USB - MacOS



1. Connecting your Duet via USB - Windows



Next setup the Wifi Connection.

2. Connecting your Duet to a Network - Wifi

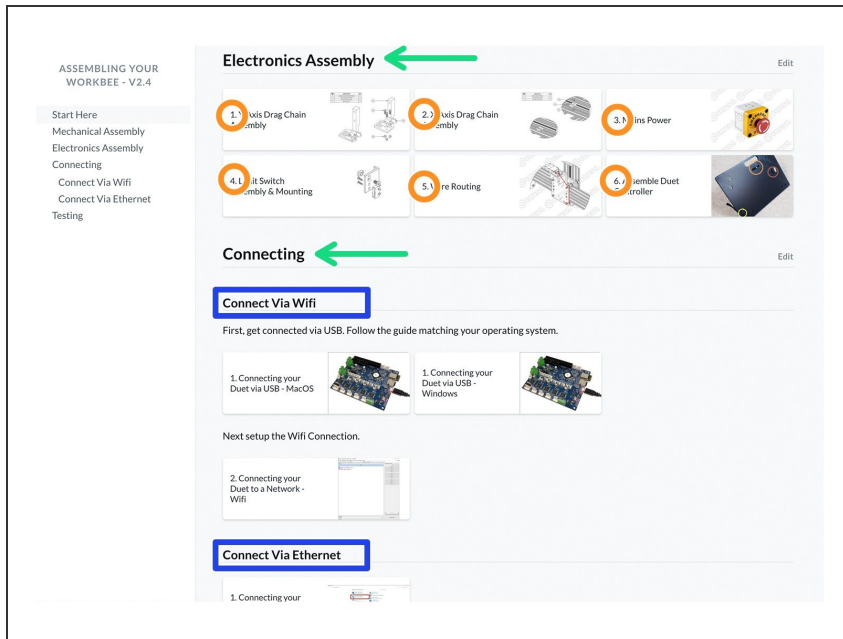


Connect Via Ethernet

1. Connecting your



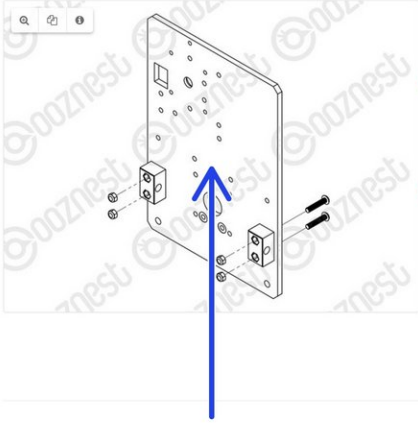
Step 1 — Following the Manual



- Your WorkBee will be given a version number. You may need to know the version number at points in the guide.
- The Version Number of your WorkBee can be found on the Flyer included in box.
- *i* The number below the version number is the serial number of your WorkBee.
- The manual is broken down into sections: Mechanical Assembly, Electronics Assembly, Connecting and Testing.
 - Connecting is broken into two sub sections - **Connect Via Wifi** and **Connect Via Ethernet**.
 - ⚠ Only follow the sub section matching the connectivity of your machine.
 - ⚠ For the Ethernet version, you do not need to connect via USB.
- Within each section follow through the guides in numerical order.

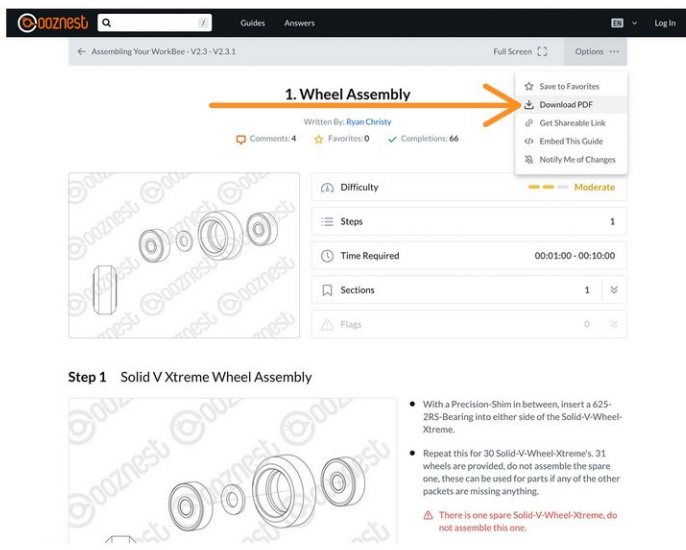
Step 2 — Following The Guides

Step 1 ACME Nut Blocks ←



- Attach 2 x ACME-Nut-Blocks to one of the Y-Plates using 4 x M5-Low-Profile-25mm bolts & 4 x M5-Nyloc-Nuts.
- ⚠ Only loosely tighten these bolts so the ACME-Nut-Blocks can still move side to side.
- Thread a Y-ACME-Lead-Screw through both ACME-Nut-Blocks. Tighten the bolts holding one of the ACME-Nut-Blocks, making sure it is square to the Y-Plate.
- To remove any backlash, pinch the loose ACME-Nut-Block towards the previous one, and tighten the bolts holding it.
- Leave the Y-ACME-Lead-Screw threaded through the ACME-Nut-Blocks.

[Add a comment](#)



1. Wheel Assembly

Written By: Ryan Christy

Comments: 4 Favorites: 0 Completions: 66

Difficulty: Moderate

Steps: 1

Time Required: 00:01:00 - 00:10:00

Sections: 1

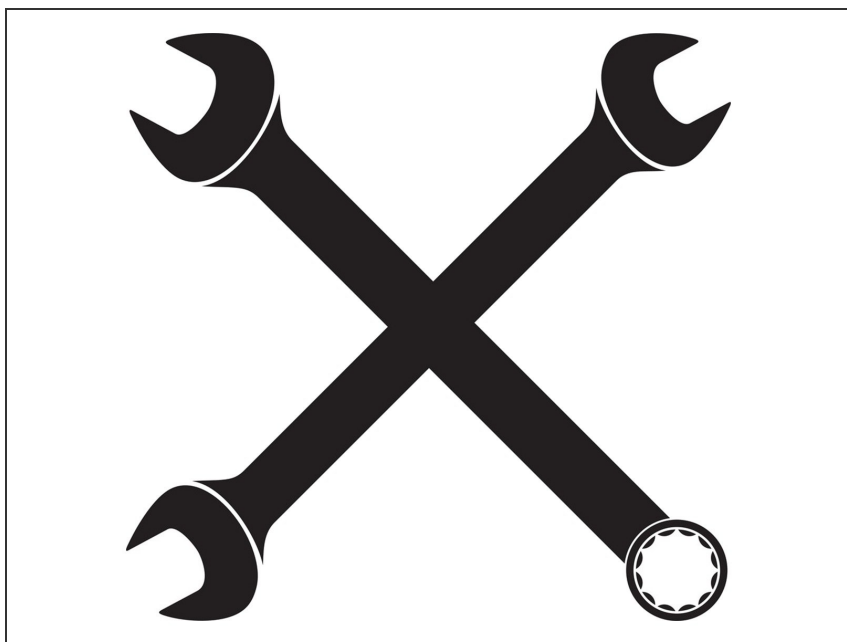
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Step 1 Solid V Xtreme Wheel Assembly


- With a Precision-Shim in between, insert a 625-285-Bearing into either side of the Solid-V-Wheel-Xtreme.
- Repeat this for 30 Solid-V-Wheel-Xtreme's. 31 wheels are provided, do not assemble the spare one, these can be used for parts if any of the other packets are missing anything.
- ⚠ There is one spare Solid-V-Wheel-Xtreme, do not assemble this one.

- Each Guide is broken down into a number of Steps.
 - Each Step is broken down into a number of coloured Points.
 - Complete all Points in each Step, and all Steps in each Guide to complete the Guide.
 - Some Steps/Points may not apply to your version. It will be clearly indicated to which version they apply.
- Each Step will have one or more image.
 - Click on the image to view the high resolution version.
 - Try it now!
- Go to 'Options' > 'Download PDF' to get a printable version of each guide.

Step 3 — Tools Required



- 1.5, 2.0, 2.5, 3.0, 4.0, 5.0mm Hex keys
- 5.5, 7.0, 8.0mm Spanners
- Selection of Philips and Flathead Screwdrivers. Pozi #1 & Pozi #2 required. Insulated versions should be used on electronics
- Engineers Square
- Soft mallet or Rubber hammer
- Tweezers and Wire cutters
- A bearing lubricant such as SuperLube Grease

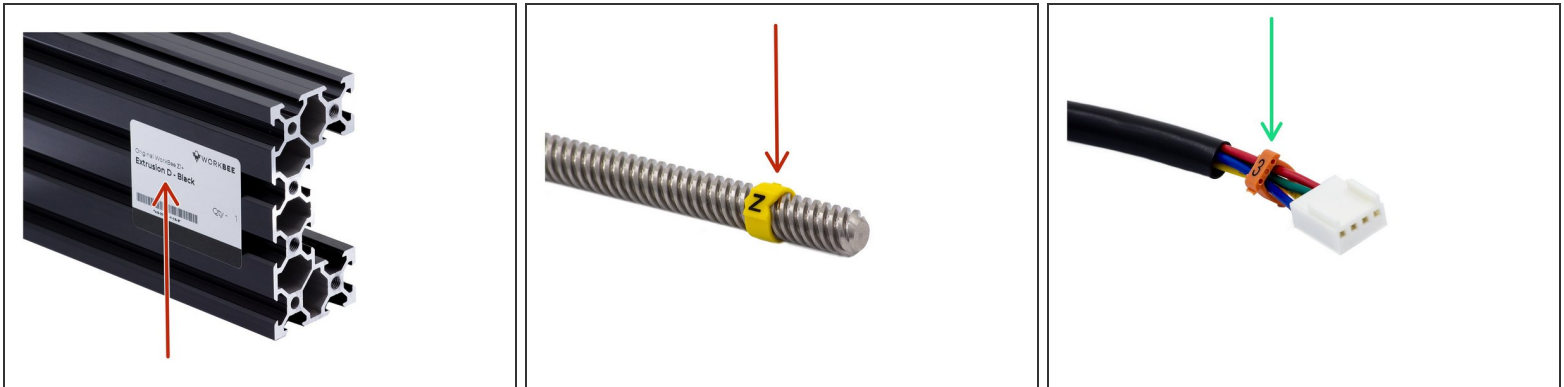
 **Do not use power tools to assemble the WorkBee Z1+**

Step 4 — Part Labels



- Most parts of the kit are labelled with the part name and quantity provided.
- The name on the label will match the name used in the guides.
- For most small parts we will provide spares.
 - ① The quantity on the label will include any spares.
- ① To quickly find which parts are in which box Download and print our [Box Cheat Sheet](#)

Step 5 — Extrusions, Lead Screws & Wires



- Each Extrusion or Lead-Screw is assigned a letter.
- In the Guide these will be referred to as Extrusion-A, Extrusion-B, Lead-Screw-Z etc
- ⚠ Extrusion-F and Lead-Screw-Y are matched pairs. Do not mix these with other Extrusions or Lead-Screws
- ❗ We recommend that the labels are not removed until the build is complete, as the guides will refer to these letters throughout.
- The wires coming from each Motor or Limit Switch will be assigned a Number & Colour based on the Axis they are used for.
- In the guides, these will be referred to as Limit-Switch-0, Motor-Wire-3, Motor-Wire-4 etc
- ❗ Download and print our [Motor Wire and Limit Switch Cheat Sheet](#)

Step 6 — Protect the Electronics!



⚠ Electronic Boards will come in an ESD Bag.

- Do not take the Electronic boards out of the bag until needed.
- Touch something metal before touching the board to discharge any static electricity.
- Never touch the components on the board. Always handle the board via the edges.

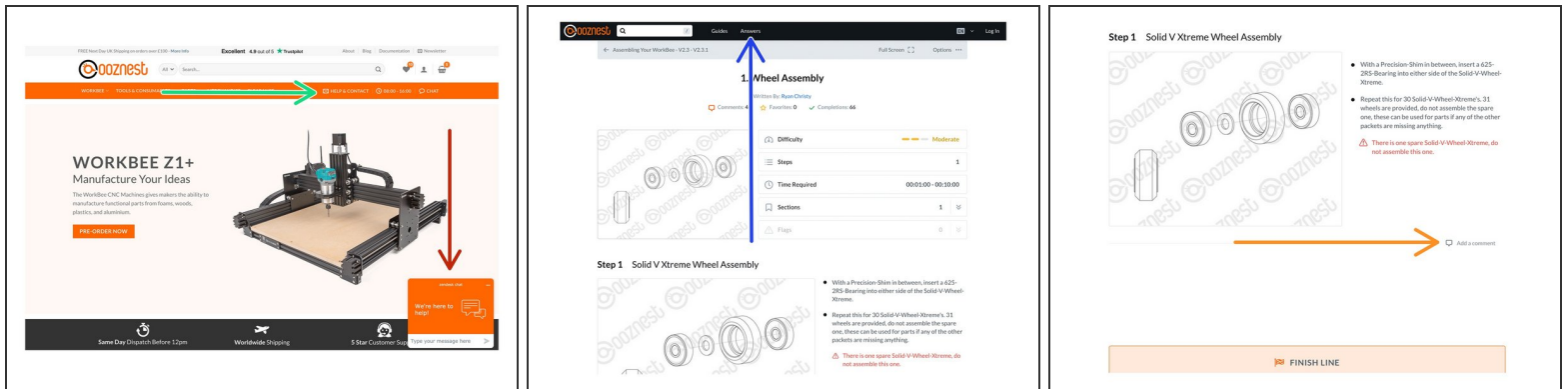
⚠ Be extra cautious when you are around static materials, such as carpets and wool.

Step 7 — Ethernet Users



- If you are using a USB to Ethernet adaptor it must have crossover detection.
- Not all USB to Ethernet adaptors have this feature. So double check your model.
- We sell a tested USB to Ethernet Adaptor on our [Website](#)

Step 8 — Need Help?



- Have an issue with assembly? Got a damaged Part? Missing a Part? Do one of the following:

- [Live Chat With Us](#)

- [Email Us](#)

- [Ask A Question](#)

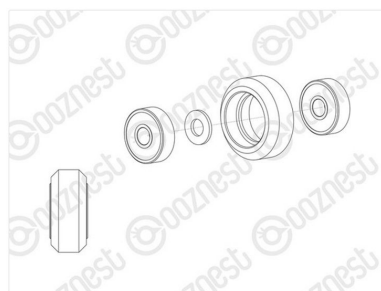
- [Make A Comment](#)

- [Discuss On The WorkBee Facebook Group](#)

- ① Please note to report a missing part, damaged part or get a replacement under warranty you will need to [Live Chat](#) or [Email Us](#)

Step 9 — Top Tips From Us

Step 1 Solid V Xtreme Wheel Assembly



- With a Precision-Shim in between, insert a 625-2RS-Bearing into either side of the Solid-V-Wheel-Xtreme.
 - Repeat this for 30 Solid-V-Wheel-Xtreme's. 31 wheels are provided, do not assemble the spare one, these can be used for parts if any of the other packets are missing anything.
- ⚠ There is one spare Solid-V-Wheel-Xtreme, do not assemble this one.

🗨 Add a comment

🚩 FINISH LINE

- Read each guide from start to finish before beginning. This will give you an idea of the direction you are heading.
- Don't just look at the pictures. The written instructions are as concise and clearly written as possible.

⚠ Follow these guides only! Do not follow other WorkBee build guides or YouTube videos. Do not even follow Ooznest's videos. They may not apply to your version.

- Everything should go together easily. If something is requiring a lot of force. Take a breather and read the guides again.
- M5-Tee-Nuts have to be inserted from the end of the extrusion. If you forget to insert one don't panic!
- Spare M5-Drop-In-Tee-Nuts are provided. Simply drop them in the slot, engage the bolt, and they will bite into the underside of the slot.
- Don't Rush! Building the WorkBee is as much fun as using it. The quicker you build it the less fun you will have :)
- You are ready to begin! Start with [1. Wheel Assembly](#)