

Assembly Instructions



Let the build begin! Image Credit: @Danal on Discord

The instructions for one Jubilee frame are broken down below.

For assembly instructions and wiring diagrams related to tools, see the page for that particular tool from the [Tools](#) page.

Questions about the assembly? Check out the [FAQs \(https://jubilee3d.com/index.php?title=FAQs#Wiring\)](https://jubilee3d.com/index.php?title=FAQs#Wiring), or reach out on [Discord \(https://discordapp.com/invite/XkphRqb\)](https://discordapp.com/invite/XkphRqb).

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Hardware

For the mechanical assembly, all subassemblies are detailed with step-by-step visual instructions.

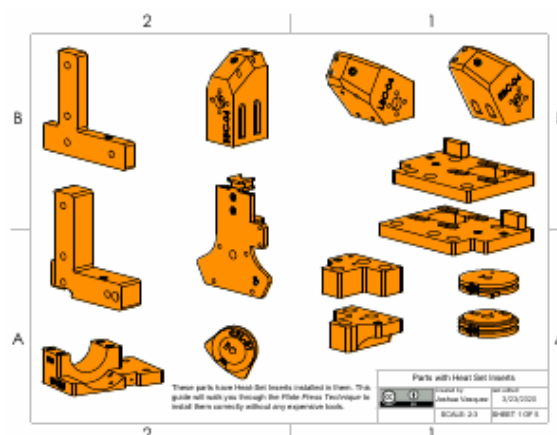
Pre-requisite Knowledge

- [Working with Heat-Set Inserts via the *Plate Press* Technique \(https://hackaday.com/2019/02/28/threading-3d-printed-parts-how-to-use-heat-set-inserts/\)](https://hackaday.com/2019/02/28/threading-3d-printed-parts-how-to-use-heat-set-inserts/)
- [Working with Inside Corner Brackets](#)
- [How to use an Arbor Press](#)
- Tip: print this [Fastener Reference Sheet \(https://docs.google.com/viewer?url=https://github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/vitamin_reference_sheet.pdf\)](https://docs.google.com/viewer?url=https://github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/vitamin_reference_sheet.pdf) at 100% scale for an easy sanity check.
- [How to crimp Molex Connectors \(https://www.youtube.com/watch?v=8jcfD1UW8SE\)](https://www.youtube.com/watch?v=8jcfD1UW8SE)

Frame Assembly Instructions

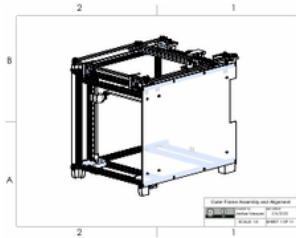
The instructions must be completed sequentially from *Section 1* to *Section 3*. Instructions in the same section don't depend on each other, so they can be done at the same time with a friend.

Part Prep

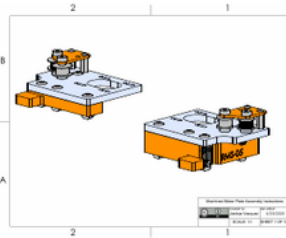


Heat Set Insert Installation

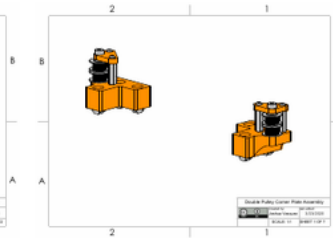
Section I



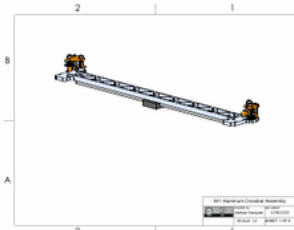
Outer Frame and Alignment Assembly



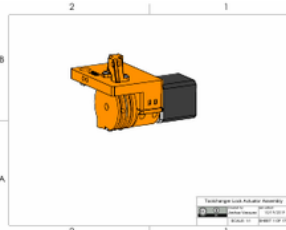
Aluminum Motor Plate Assembly



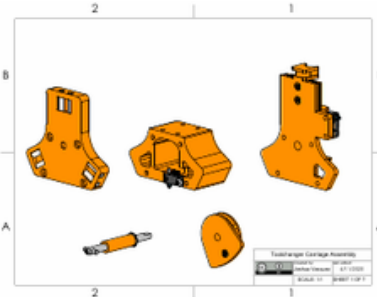
Double Corner Pulley Assembly



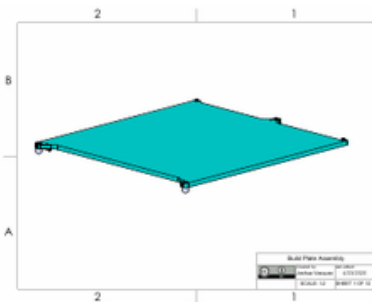
Aluminum Crossbar Assembly



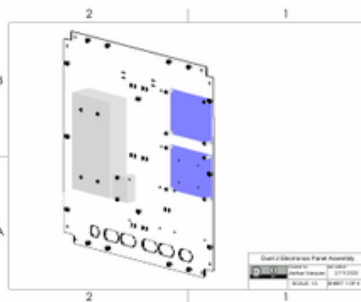
Toolchanger Remote Elastic Lock Assembly



Toolchanger Carriage Assembly



Magnetic Build Plate Assembly



Duet2 Electronics Panel Assembly

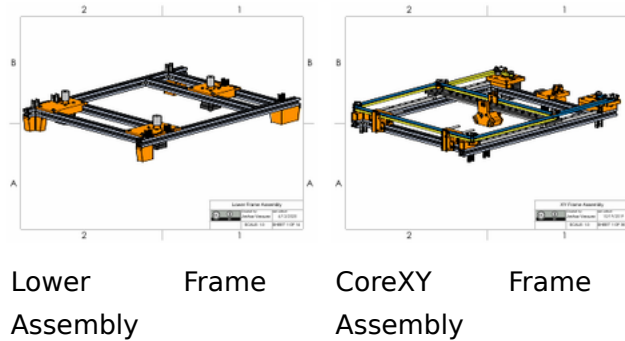


Coming Soon: Side Panel Assembly

Some instructions relate to older versions of the design. They are:

- [Carbon Fiber Crossbar Assembly](https://docs.google.com/viewer?url=github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/frame/crossbar_assembly.pdf) (https://docs.google.com/viewer?url=github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/frame/crossbar_assembly.pdf)
- [Printed Motor Plate Assembly](https://docs.google.com/viewer?url=github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/frame/motor_plate_assembly.pdf) (https://docs.google.com/viewer?url=github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/frame/motor_plate_assembly.pdf)

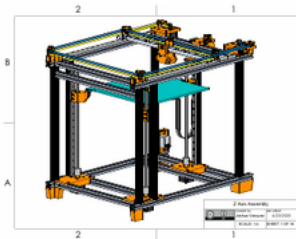
Section 2



Additionally, video Links to the CoreXY assembly are provided below:

- [03 Carriage Center Installation \(https://youtu.be/4dDEeGjjYc8\)](https://youtu.be/4dDEeGjjYc8)
- [04 Y Rail Assembly \(https://youtu.be/cdLz84XV2EM\)](https://youtu.be/cdLz84XV2EM)
- [05 Plate Installation 1/2 \(https://youtu.be/qILBMwtMxlk\)](https://youtu.be/qILBMwtMxlk)
- [06 Y Rail Installation \(https://youtu.be/seu1Uwjbq0I\)](https://youtu.be/seu1Uwjbq0I)
- [07 Plate Installation 2/2 \(https://youtu.be/v65LMde2QNw\)](https://youtu.be/v65LMde2QNw)
- [08 Crossbar Installation \(https://youtu.be/8J8ZPFDeBZc\)](https://youtu.be/8J8ZPFDeBZc)
- [08 Crossbar Adjustment \(https://youtu.be/dLEzAO9RLmA\)](https://youtu.be/dLEzAO9RLmA)
- [09 Carriage Back Installation \(https://youtu.be/WobgT8zh9s4\)](https://youtu.be/WobgT8zh9s4)

Section 3



Z Axis Assembly

Electronics

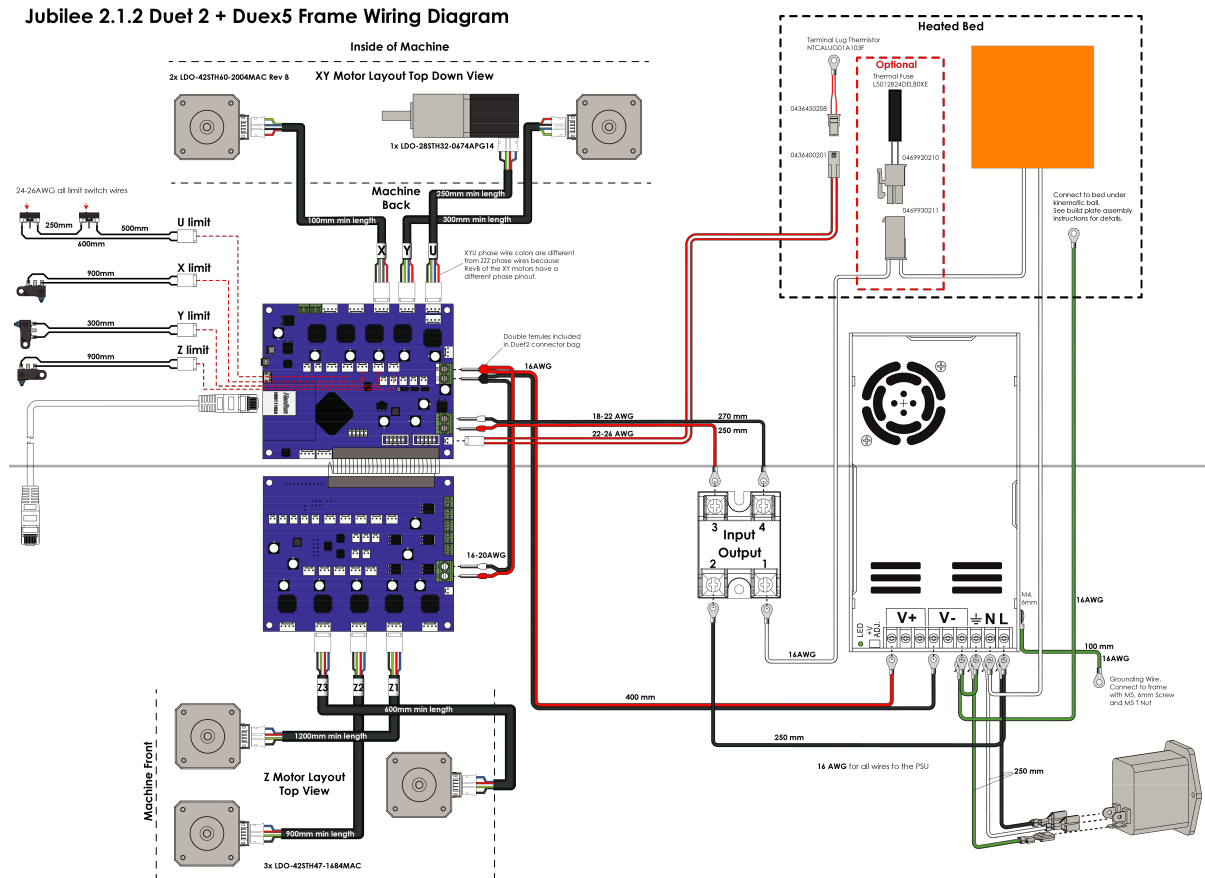
Pre-Requisite Knowledge

- [Crimping Wires](#)

Wiring Diagrams

All wires needed for the frame are called out in the corresponding wiring diagrams. **Important Note:** XY motors

and
ZZZ



(https://raw.githubusercontent.com/machineagency/jubilee/master/frame/assembly_instructions/wiring/duet2/duet2_frame_wiring.png)

motors have different pinouts, which means their wires will have a different color coding. This color coding is respected in the diagram, but it is easy to mix up the included cables in real life. Do keep motors and the wires they came with together as a pair. Do not mix motor cables.

Duet 2 Wiring

- [Duet 2 Frame Wiring Diagram PDF \(https://docs.google.com/viewer?url=github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/wiring/duet2_frame_wiring.pdf\)](https://docs.google.com/viewer?url=github.com/machineagency/jubilee/raw/master/frame/assembly_instructions/wiring/duet2_frame_wiring.pdf)
- [Duet 2 Example Back Panel Layouts](#)

Duet3 Wiring

- [Duet3 Frame Wiring Diagrams](#)
- [Duet 3 Example Back Panel Layouts](#)

This wiring configuration matches the existing config files for the corresponding control board.

Supported Control Boards

Currently, only the Duet2 in conjunction with the Duex5 Expansion board is fully supported. To get a sense of the firmware requirements needed for porting Jubilee to other control boards, see the page on [Adding Control Boards](#).

- [Configuring the Duet2 Control Board](#)
- [Connecting to Jubilee](#)
- [Updating the Firmware](#)

Tuning

Depending on your machine's target application, you may need to do some additional tuning.

Tuning Before Your First 3D Print

- [Mesh Bed Leveling](#)
- [Bed Heater Tuning](#)
- [Setting Tool Parking Positions](#)
- [Setting Tool Offsets](#)

Tuning Before Multicolor Drawing

Tools

For assembly instructions and wiring diagrams related to tools, see the page for that particular tool from the [Tools](#) page.

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This page was last edited on 31 August 2020, at 14:44.

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