

Jubilee Assembly Notes

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Images in the doc is from this link: [Jubilee Assembly Instructions Manual](#)

Additional Tools/Items Needed (Not Provided in the Kit):

1. General Purpose Lubricant (e.g., WD-40)
2. Soldering Iron (for heat inserts)
3. Tool Box with Hammer or Hydraulic Benchtop Press
4. Larger Bar Clamps (24-inch recommended)
5. Filaments for additional 3D printing
6. Ruler and/or Calipers

Important Notes:

1. **3D-Printed Parts Identification:** Most 3D-printed parts have ID codes (e.g., BBC-04 or LBC-04). Ensure all parts are included in the kit to avoid needing additional 3D printing.
2. **Fit Issues in 3D-Printed Parts:** The holes of the 3D-printed parts may be too large or too small. Additionally, repeated screwing and unscrewing can loosen the holes. If you have access to a 3D printer, consider printing a replacement part when needed.
3. **Heat Set Inserts:** A heat set insert tool, purchased separately (e.g., from Filastruder), is required for easily inserting heat inserts into the holes of the 3D-printed parts.
4. **Screws:** The provided screws are in exact quantities. Do not lose any, as replacements may not be provided.
5. **Components Overview:** See "[Items.md](#)" for a visual representation of all components provided in the kit.

Section 1

Outer Frame Assembly:

- **Clamps:** Larger adjustable bar clamps (24-inch recommended) are required. The two smaller clamps provided in the kit are insufficient for this step (refer to **Sheet 2 of 28**).
- **Lubrication:** Lubricate the corner brackets with general-purpose lubricant (e.g., WD-40) to facilitate easy insertion into the 2020 extrusions (**Sheet 3 of 28**).

Aluminum Motor Plate Assembly:

- **Y-Axis Limit Switch:** Attach the Y-axis limit switch with its harness to RMS-05 (**Sheet 2 of 11**).

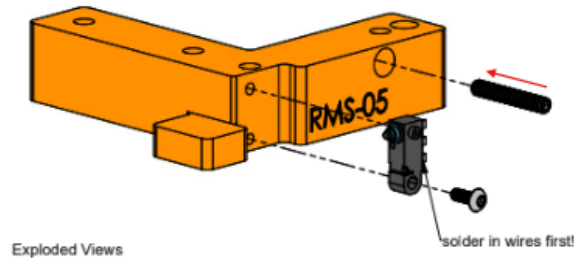


Image from Motor Plate Assembly Instruction. ^[1]

- **Set Screw Orientation:** Ensure the head of the set screw faces outward during installation (**Sheet 3 of 11**).

Double Pulley Corner Plate Assembly:

- **Gates Brand Pulleys:** Follow the assembly instructions specific to the Gates brand pulleys. Skip **Sheet 2 of 7** and **Sheet 5 of 7**.
- **Screw Installation:** Press fit the M3 button-head screw (8mm) and the M4 shoulder screw (25mm) into the corner pulley reinforcement plate (**Sheet 3 of 7** and **Sheet 6 of 7**).

Remote Elastic Lock Assembly:

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Aluminum Crossbar Assembly:

- **Gates Brand Pulleys:** Follow the Gates brand pulley instructions. Skip **Sheet 2 of 8** and **Sheet 5 of 8**.
- **Screw Installation:** Press fit the M3 button-head screw (8mm) and the M4 shoulder screw (25mm) into the crossbar pulley reinforcement plate (**Sheet 3 of 8** and **Sheet 5 of 8**).

Toolchanger Carriage Assembly:

- **Pin Insertion:** The Pin Insertion Fixture is not provided, so you'll need to hold the part by hand or use a clamp.
- **M4 Dowel Pins:** Insert the M4 dowel pins into the carriage front plate by carefully hammering them in or pressing them with a hydraulic press. Pre-drilling the dowel pin holes was not necessary.
- **X-Axis Limit Switch:** Attach the X-axis limit switch to CBP-05 (**Sheet 6 of 7**).

- **Z-Axis Limit Switch:** Attach the Z-axis limit switch to the carriage center plate (**Sheet 7 of 7**).

Build Plate Assembly:

- **Magnetic Sheet:** Do not attach the magnetic sheet to the top if you're not using it for 3D printing (**Sheet 2 of 13**).
- **Heating Pad:** We are not using the heating pad. Skip Sheet 6 of 13 and Sheets 10–12 of 13.

Duet 2 Electronics Panel Assembly:

- **Back Panel Holes:** The holes shown in the figure do not match those on the provided back panel. The necessary holes are present on the back panel, so insert screws as instructed by the diagram in the assembly instructions.

Please arrange it in the following arrangement

Duet 3 Mini + 3HC

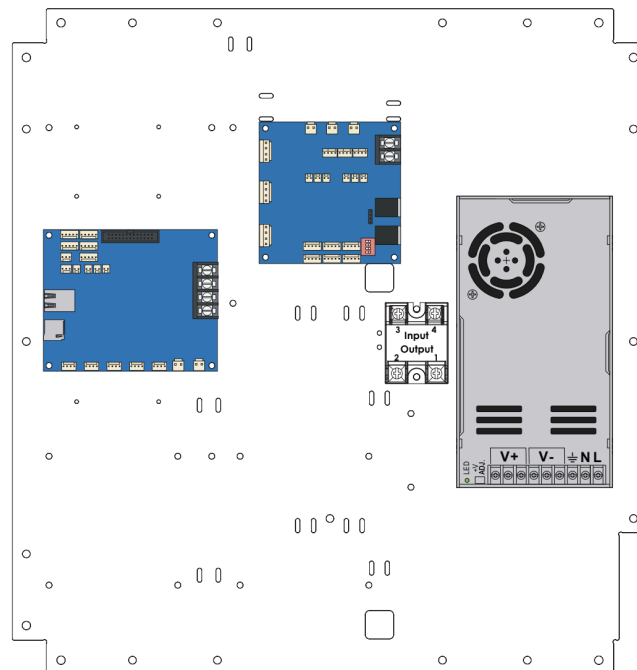


Image from Duet 2 Layout ^[2]

Section 2

Lower Frame Assembly:

- **Wire Direction:** Ensure that the wire sticks out in the direction specified in the diagram (**Sheets 4–6 of 10**).
- **Back Plate Positioning:** The back plates must be positioned exactly in the middle of the rails with a tolerance of ± 0.2 mm (**Sheet 8 of 10**).

XY Frame Assembly:

- **Hex Nut Handling:** It is difficult to hold the hex nut while screwing the carriage center assembly with the crossbar assembly. Use an M3 Hex Nut Driver to securely hold the nut in place before screwing (**Sheet 4 of 18**).
- **Pulley Alignment:** Ensure that the Left Corner Pulley Assembly is aligned in a straight line with the Left Motor Plate Assembly. Similarly, ensure that the Right Corner Pulley Assembly is aligned with the Right Motor Plate Assembly (**Sheet 9 of 18**).

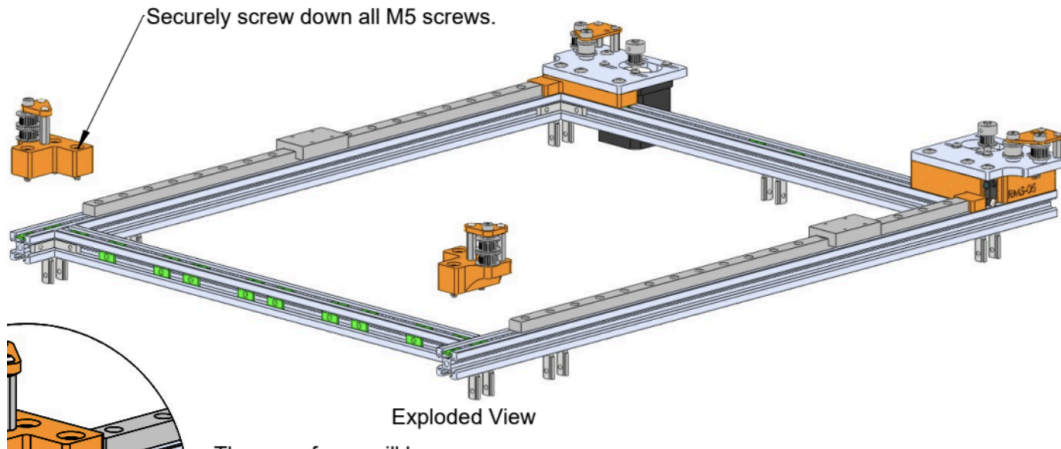


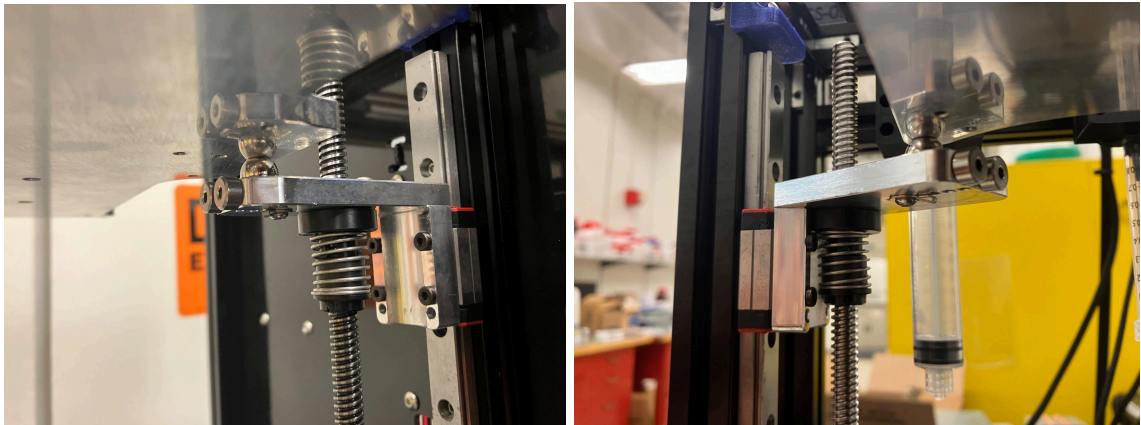
Image from XY Frame Assembly Instruction. ^[3]

- **Crossbar Assembly:** When installing the crossbar assembly with the carriage center onto the CoreXY Frame Assembly, ensure that the crossbar is straight before securing it with fasteners (**Sheet 10 of 18**).

Section 3

Z Axis Assembly:

- **Aluminum Z Yokes:** If using the Jubilee Aluminum Z Yokes by Mandala Rose Works, skip **Sheets 3-4 of 23** and **Sheet 8 of 23**.
- **Assembly Procedure:** Follow the same procedure as the Front Z Tower Assembly, but substitute the coupler assembly with the Aluminum Z Yokes (**Refer to Sheets 9-12 of 23**).



Aluminum Z Yokes Attachment on the rails and the bed plate.

- **Bed Plate Attachment:** Attach the bed plate onto the Aluminum Z Yokes using a zip tie to secure its position (**Sheet 23 of 23**).

Wiring Documentation:

- [Duet3 Mini Frame Wiring Harnesses](#)

Duet 3 Mini Frame Wiring Diagram

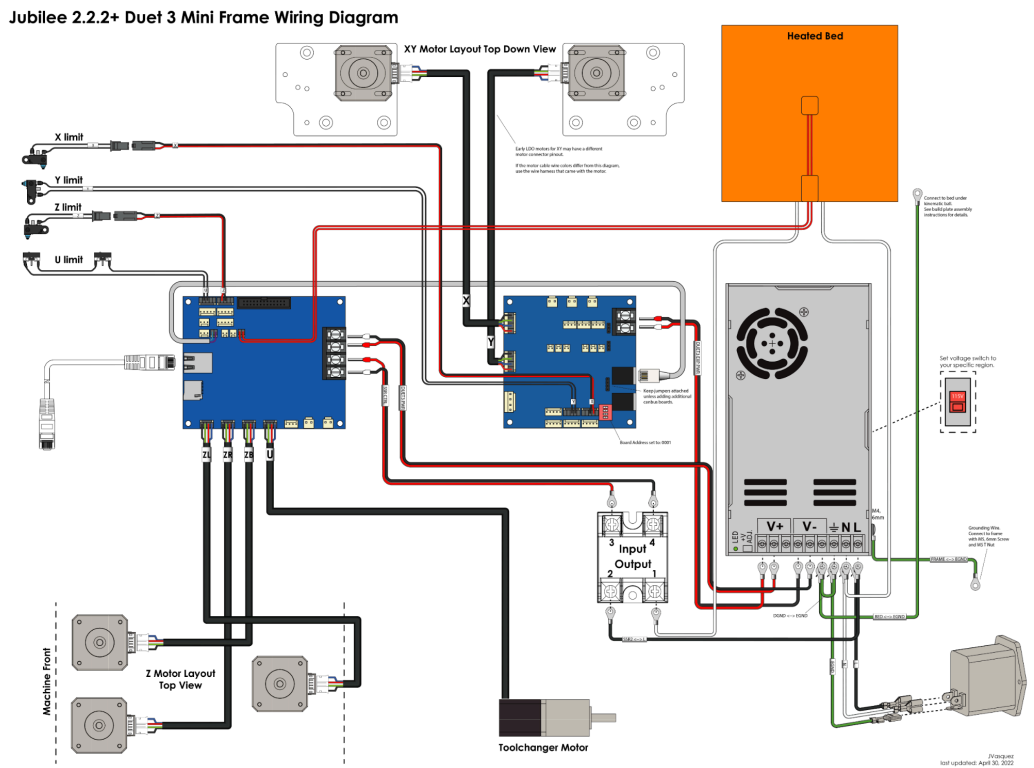


Image from Duet 3 Mini Frame Wiring Diagram. ^[4]

- Please ensure that you insert the provided fuse into the PSU socket, as illustrated in the picture below, before turning Jubilee on.



Horizontal View of the PSU Socket.



Vertical View View of the PSU Socket + Two Fuses