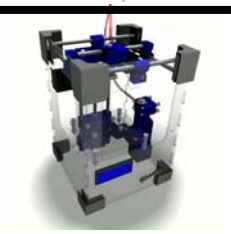
Tantillus

The Portable Open Source 3D Printer



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Getting started

Before you begin assembly it's advised that you confirm you have all the parts and tools required to complete the build. Please see the BOM for a complete list of all parts required.

Printed parts may require cleanup using a utility knife and drill.

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Printed parts may have a flared edge where they were attached to the print bed. To remove this edge you can use sand paper or a utility knife to scrap the lip off. Do not cut the edge off with the knife as it may damage the part only use a scraping action or sand paper.

Contents

Bolt holes in printed parts may require reaming or drilling out to remove stray plastic. Use caution not to drill all the way through parts or to be to aggresive and damage the part.

Please work safely and observe all safety precautions included with your tools.

Tools

- 5/32" Allen key (hex wrench) (included in Tantillus.org kits)
- 9/64" Allen key (hex wrench) (included in Tantillus.org kits)
- 7/64" Allen key (hex wrench) (included in Tantillus.org kits)
- 2.5mm Allen key (hex wrench) (included in Tantillus.org kits)
- 3/32" Allen key (hex wrench) (included in Tantillus.org kits)
- 0.05" Allen key (hex wrench) (included in Tantillus.org kits)
- 1/2" Spanner (pliers, crescent wrench or 13mm spanner will suffice)
- Pliers
- Soldering Iron (not required for Tantillus.org complete kits)
- Wire Strippers / Cutters / crimpers
- Utility Knife
- Drill
- Assorted drill bits to clean out printed plastic parts holes
- 5/16" drill bit (8mm)
- 13/64" drill bit (5mm)
- Small drill bit 1/16" - 5/64" (1.5mm - 2mm) (not required for Tantillus.org kits)
- 8-32 tap (not required for Tantillus.org kits)
- 9/64" dill bit (3.5mm)

Identify the parts

Nuts and Bolts

If you are unsure of the bolt sizes please refer to a lay-over chart for Imperial socket head cap screws and nuts. For your convenience there are ones available online that you can print out at home, like these ones.

Motors

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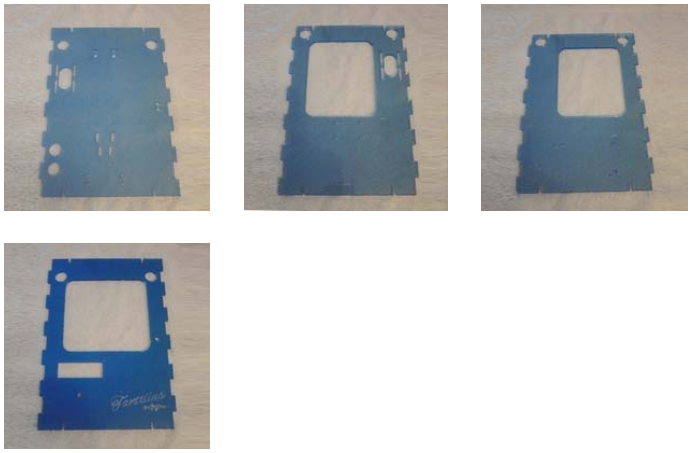
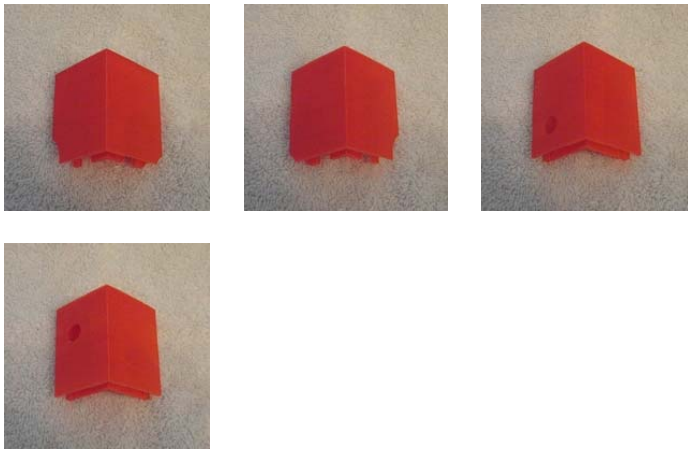
- X axis = Long wires.
- Y axis = Long wires.
- Z axis = Short wires.
- Extruder = Short wires, flats on motor shaft.

Panels



- Rear = Motor slots, bolt holes, NO window.
- Right = Motor slots, bolt holes, window.
- Left = NO motor slots, NO bolt holes, window.
- Front = NO motor slots, 1 small hole, large window.

Corners



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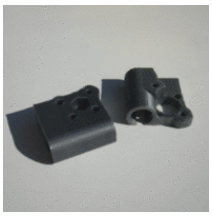
- Top Front Left = 55mm tall, NO holes.

- Top Front Right = 55mm tall, NO holes.
- Top Rear Left = 55mm tall, holes.
- Top Rear Right = 55mm tall, holes.
- Bottoms = 30mm tall, NO holes.

Carriage




- Carriage top = Hexagon hole.
- Carriage bottom = 16mm hole.
- Carriage middle = 3mm acrylic.

X/Y ends

- Left shown on left.
- Right shown on right.

Rods

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- Z lead screw = 1/4" x 170mm.
- X/Y cross bars = 8mm x 170mm.

- Z axis bars = 8mm x 230mm.
- X/Y drive bars = 5/16" x 230mm.
- X/Y idler bars = 5/16" x 210mm.
- Extruder idler bar = 5/16" x 22mm. (not shown)

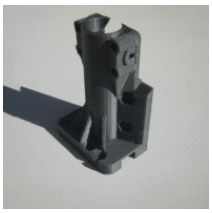
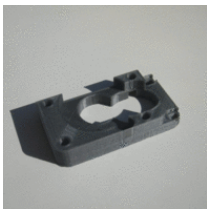
*5/16" bars on the fully printed version are shorter. (see BOM)

Gears




- X/Y upper = 65mm dia, Hexagon hole.
- X/Y motor gear = 65mm dia, 2 rectangular nut slots.
- Large extruder gear = 40mm dia, Hexagon hole
- Small extruder gear = 12mm dia (17mm base), 2 rectangular nut slots.

Extruder


- Extruder body.
- Motor mount.
- Idler.

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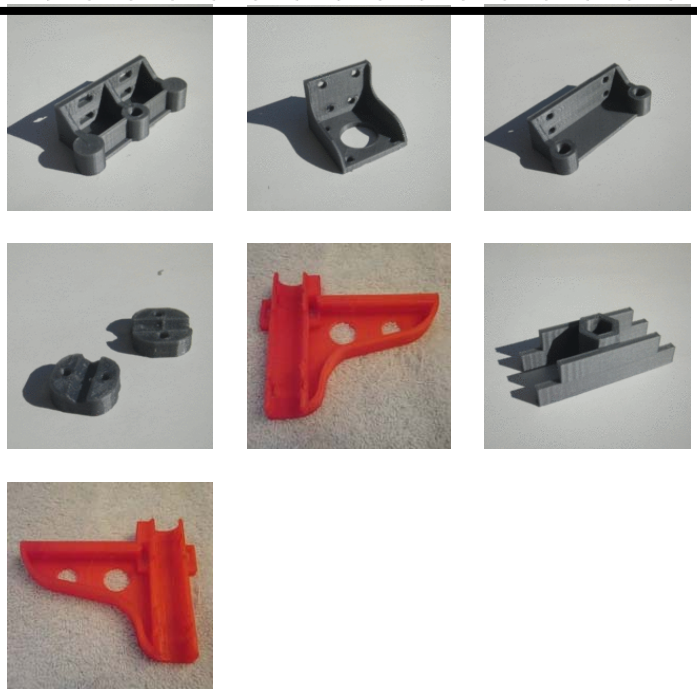
Z axis



- Z upper bracket.
- Z motor bracket.
- Z lower bracket.
- Z coupler.
- Z arm left.
- Z lift.
- Z arm right.

Case

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