PRUSA RESEARCH by JOSEF PRUSA

1. Introduction

A few tips for making the assembly easier.

Written By: Dozuki System

Step 1 — All the required tools are included

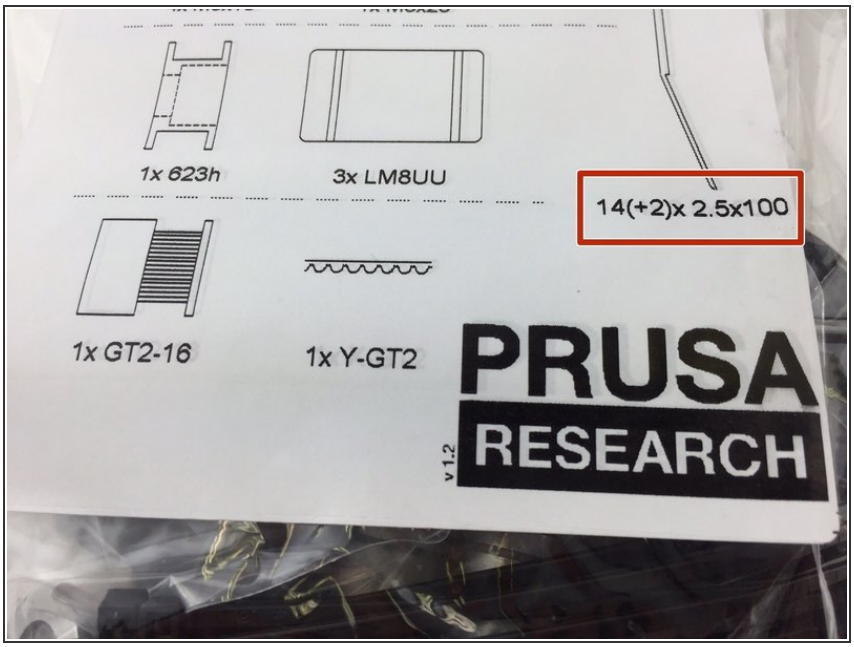
No soldering is required.

No wire crimping is required.

Step 2 — Use labels for reference

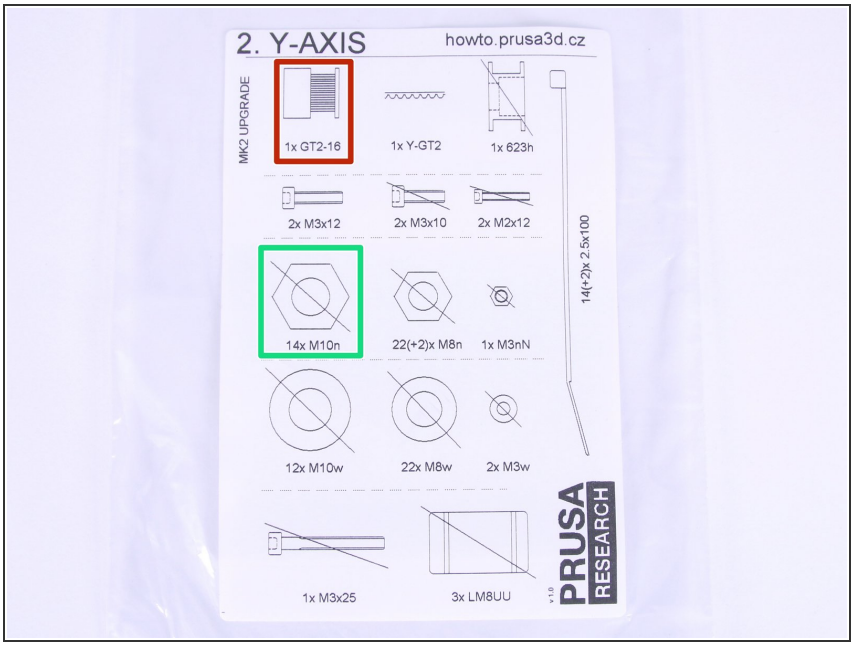
Most of the labels are scaled 1:1 and can be used to identify the part :-)

Step 3 — Critical parts are spare back-uped



- Critical parts, like zipties, have a spare for back-up.
- No need to worry if you mess up cable management or something, you have a spare ziptie ready.

Step 4 — Labels guide



- You have almost the same bags as new builders have!
- You don't need to extract M3 nuts or reuse washers.
- Parts shown uncrossed are in the package.
- Parts shown as crossed are going to be used from your old printer.

Step 5 — View high resolution images

When you browse the guide on http://manual.prusa3d.com, you can view the original images in high resolution for clarity.

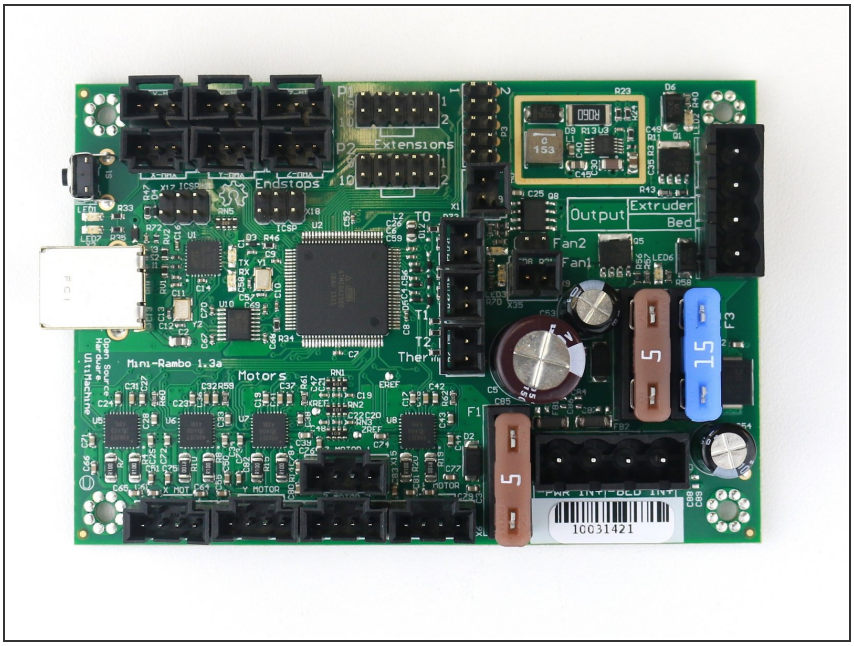
- Just hover your cursor over the image and click the "View Original" button.
- You can start by disassembling your printer in the next chapter - 0. Printer disassembly

PRUSA RESEARCH by JOSEF PRUSA

2. Printer disassembly

Written By: Josef Prusa

Step 1 — Disassembling Electronics



- Using the supplied tools, open up the RAMBo cover and disconnect all the electronics.

The only things you'll need for future assembly are the RAMBo electronics, spiral wrap and screws.

If you damage a 3D printed part, it's ok, you won't need it anymore.

If you have troubles with disassembling, you can simply follow 8. Electronics from Assembly Instructions for Original Prusa i3 MK1 backwards.

Step 2 — Disassembling PSU and Heatbed

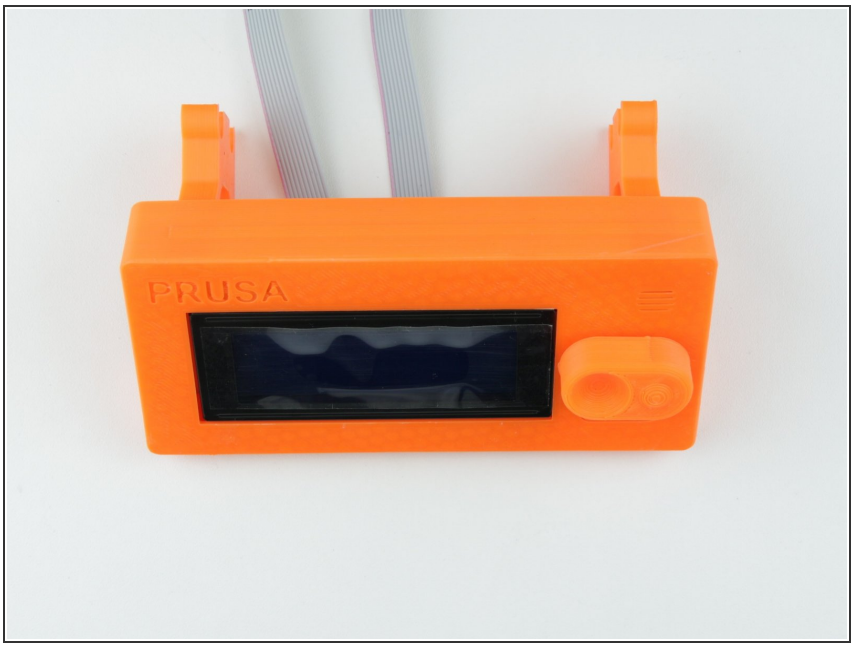
- Using the supplied tools, disassemble the Heatbed and PSU.

The only things you'll need for future assembly are the PSU and screws.

If you have troubles with disassembling, you can simply follow 7. PSU and Heatbed from Assembly Instructions for Original Prusa i3 MK1 backwards.

Do NOT disassemble the PSU cover !!

Step 3 — Disassembling LCD



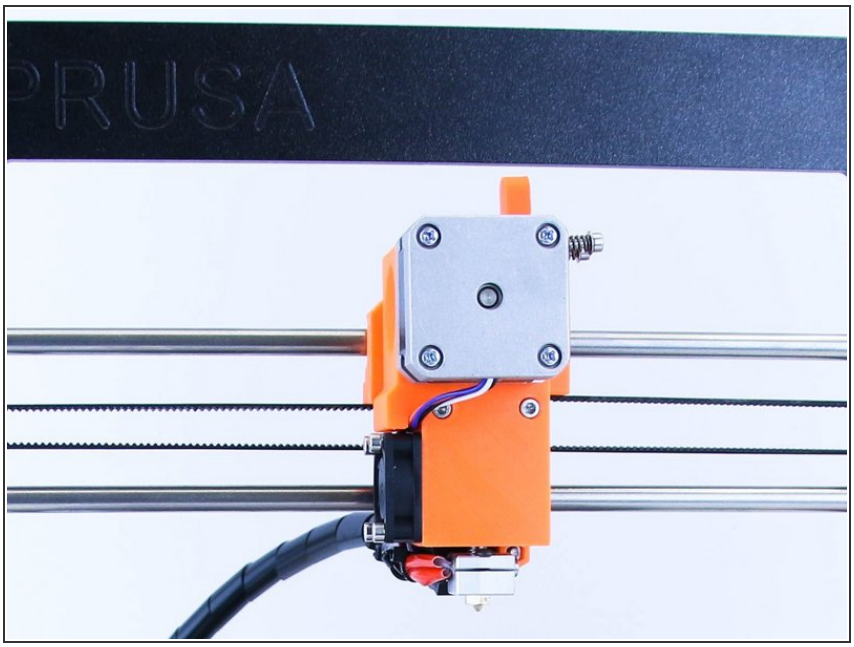
- Using the supplied tools, disconnect the LCD cables and disassemble the LCD cover.

The only things you'll need for future assembly are the LCD panel and LCD cables.

Be EXTREMELY careful while cutting zipties holding the cables. DO NOT damage the cables.

If you have troubles with disassembling, you can simply follow 6. LCD from Assembly Instructions for Original Prusa i3 MK1 backwards.

Step 4 — Disassembling Extruder



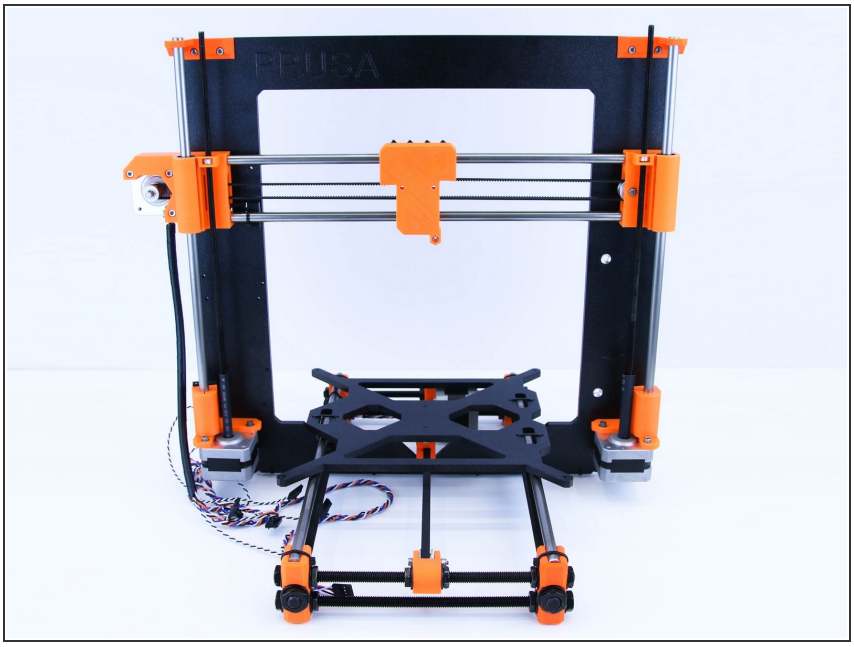
- Using the supplied tools, disassemble the Extruder.

The only things you'll need for future assembly are the 5015 print fan, spiral wrap, M5w washers, 625 bearing, printed shaft for bearing, springs and screws.

There is no need for taking out the M3 nuts from traps, you'll get new ones.

If you have troubles with disassembling, you can simply follow 5. Extruder from Assembly Instructions for Original Prusa i3 MK1 backwards.

Step 5 — Disassembling Z axis

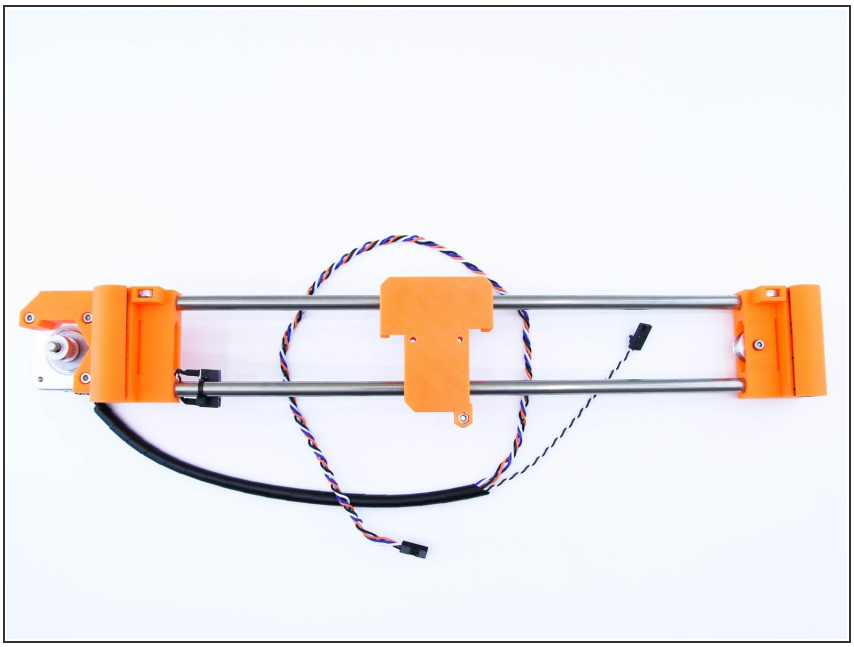


- Using the supplied tools, disassemble the Z axis.

The only things you'll need for future assembly are the smooth rods and screws.

If you have troubles with disassembling, you can simply follow 4. Z axis from Assembly Instructions for Original Prusa i3 MK1 backwards.

Step 6 — Disassembling X axis



- Using the supplied tools, disassemble the X axis.

The only things you'll need for future assembly are the smooth rods, linear bearings, 623h bearing with housing, spiral wrap and screws.

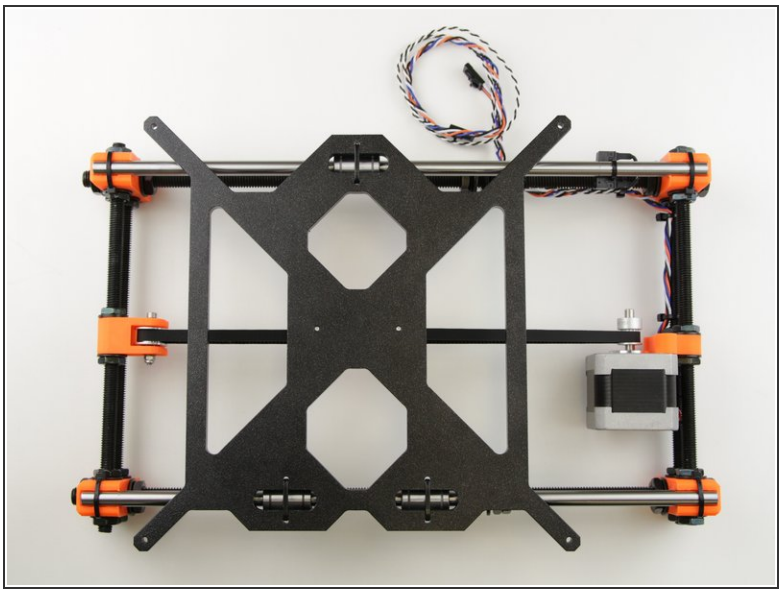
There is no need for taking out the M3 nuts from traps, you'll get new ones.

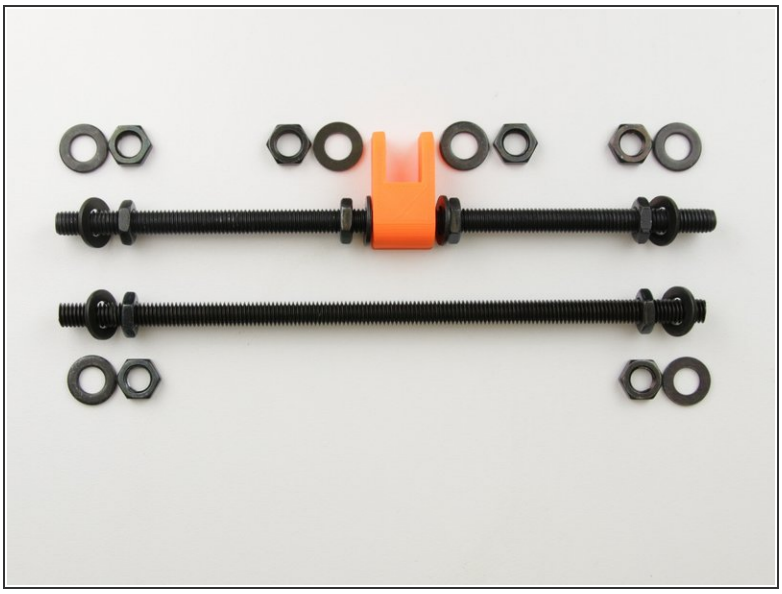
If you have troubles with disassembling, you can simply follow 3. X axis from Assembly Instructions for Original Prusa i3 MK1 backwards.

While extracting linear bearings, you may damage the X-ends parts, don't worry, you won't need them.

- For extracting linear bearings from parts, you can insert flathead screwdriver between them and slide them out as shown in the second picture.

Step 7 — Disassembling Y axis



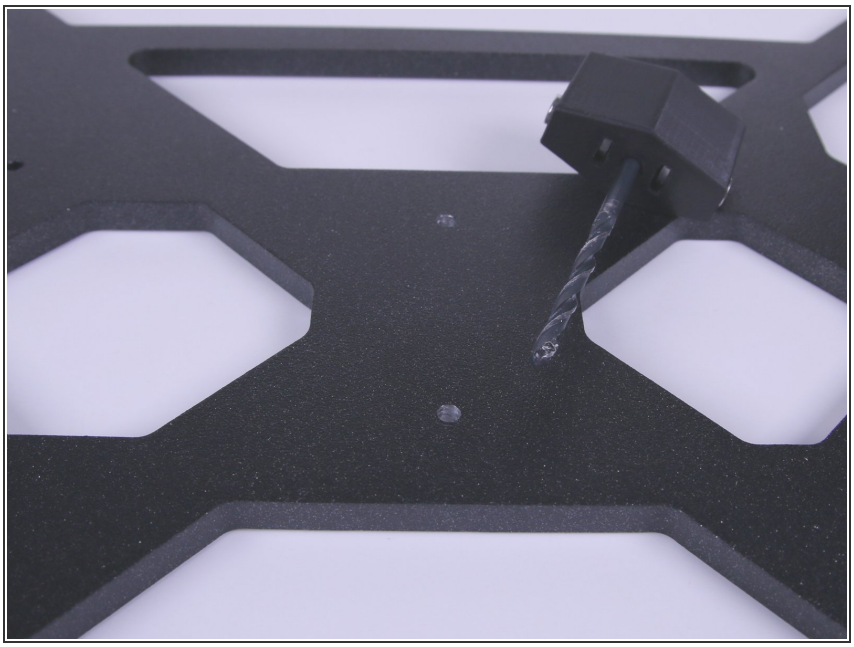


- Using the supplied tools, disassemble the Y axis.

The only things you'll need for future assembly are the smooth rods, linear bearings, threaded rods, Y-idler assembly (shown in the second picture), Y-carriage and screws.

If you have troubles with disassembling, you can simply follow 2. Y axis from Assembly Instructions for Original Prusa i3 MK1 backwards while skipping Step 6.

Step 8 — All good!

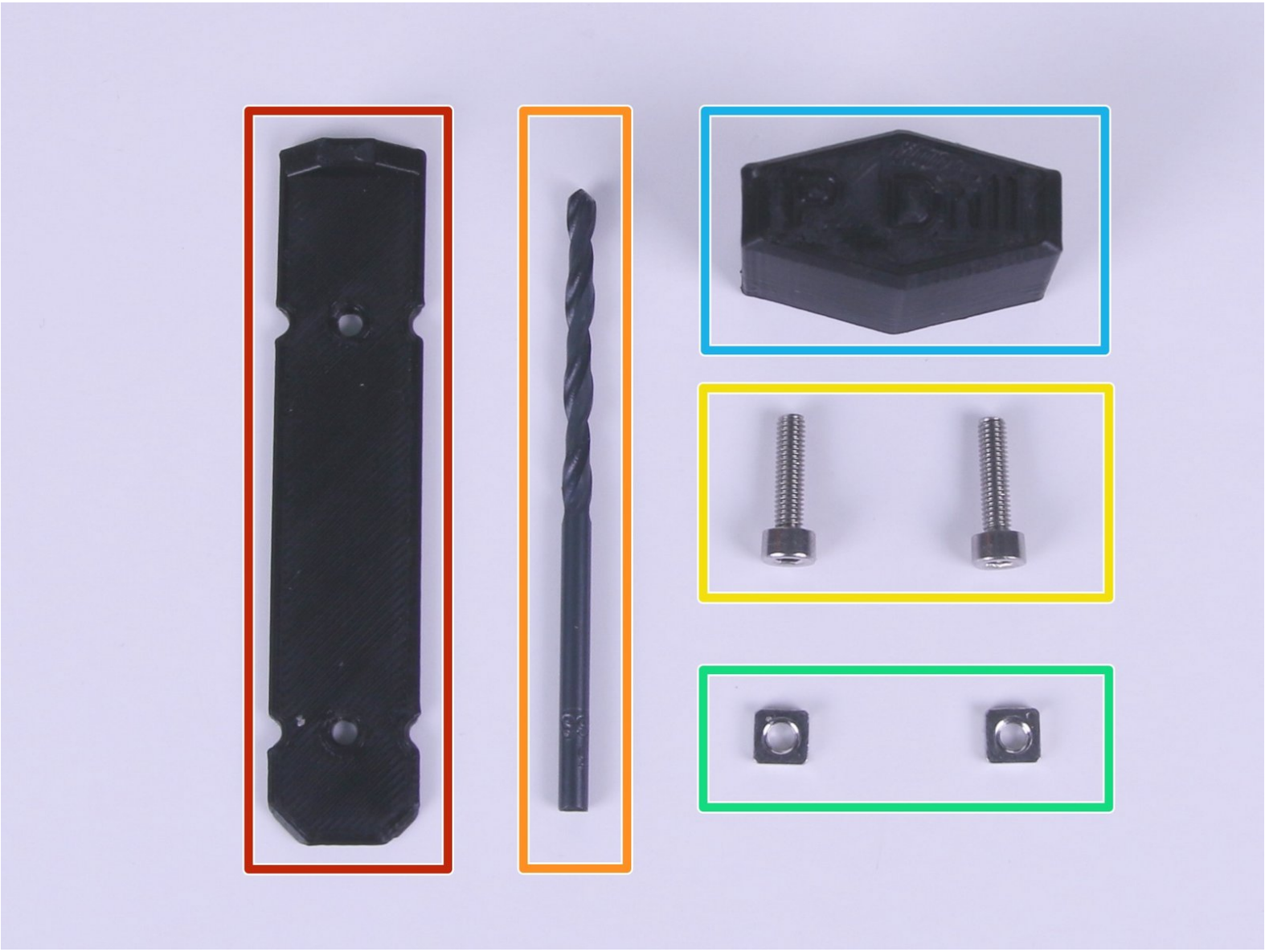


- Now you should have several types of screws in a bowl, smooth and threaded rods, spiral wraps and the frame, plus other things like motors.
- Now you are ready to prepare Y-carriage and then you can start assembling the new printer.
- Continue with the next chapter 2. Y-carriage drilling.

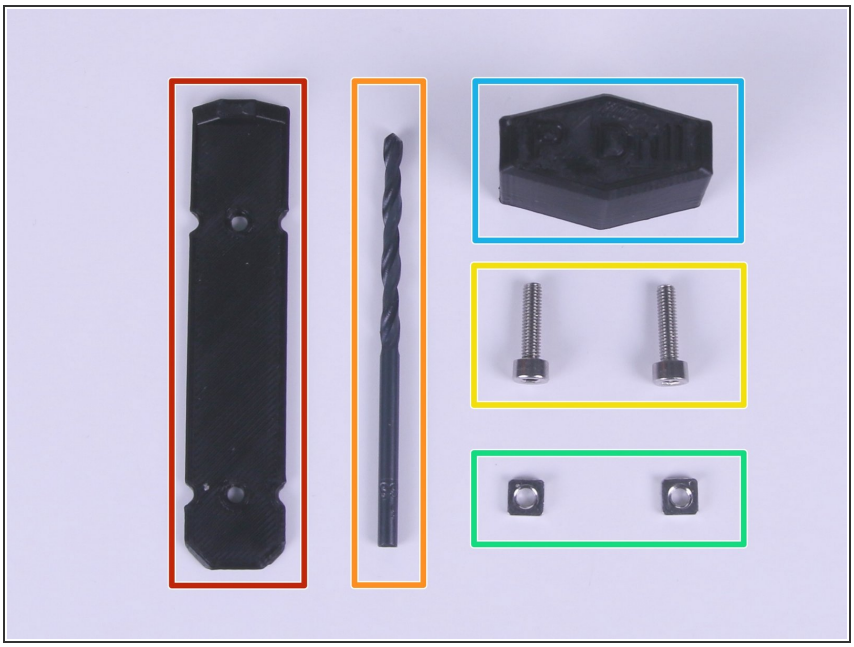
PRUSA RESEARCH by JOSEF PRUSA

3. Y-carriage drilling

Written By: Josef Prusa

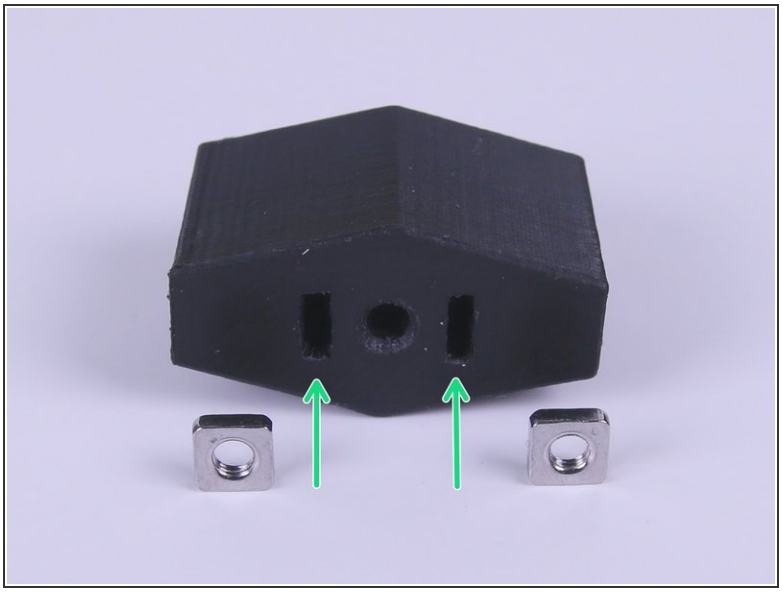


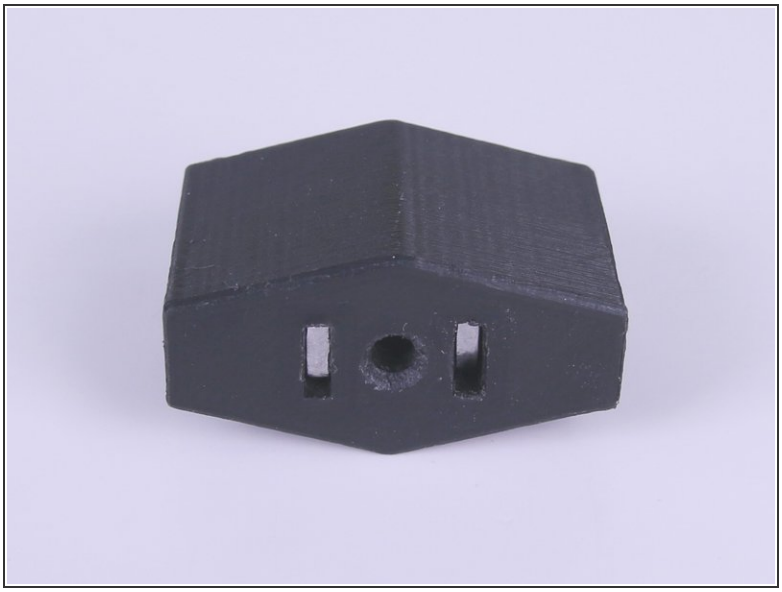
Step 1 — Assembling P-drill



- Y-identifier
- 3 mm drill bit
- P-drill
- M3x12 screws
- M3nS square nuts

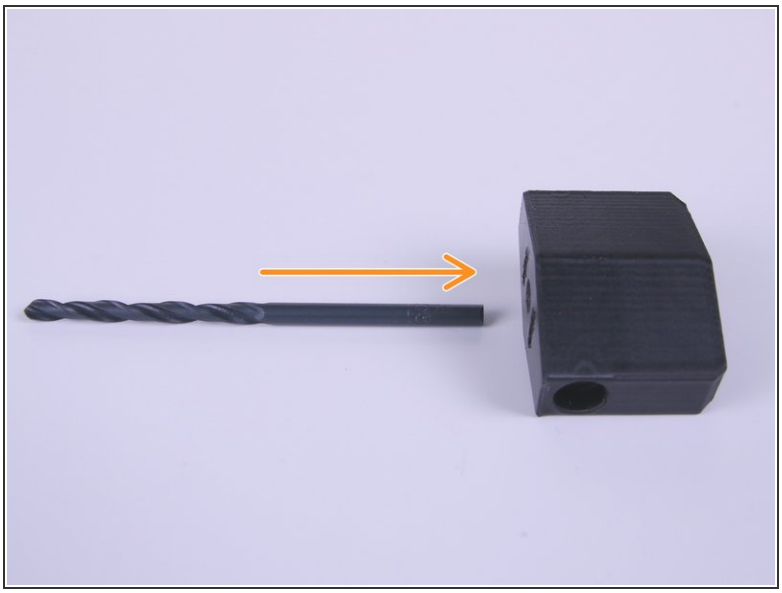
Step 2

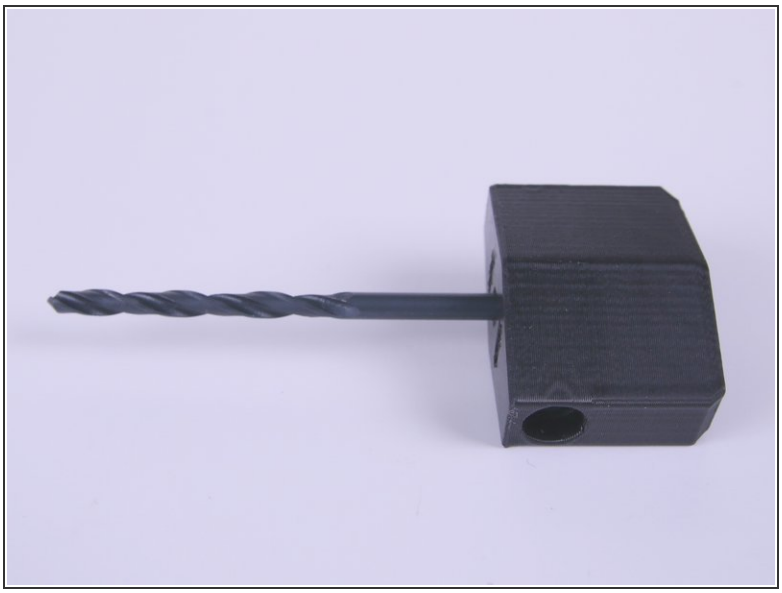




- Insert M3nS square nuts into the nut traps in the P-drill printed part.

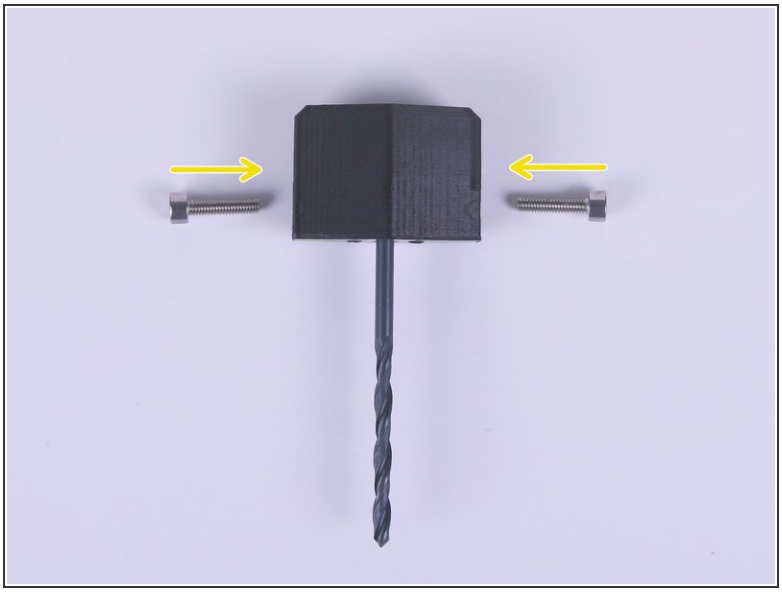
Step 3

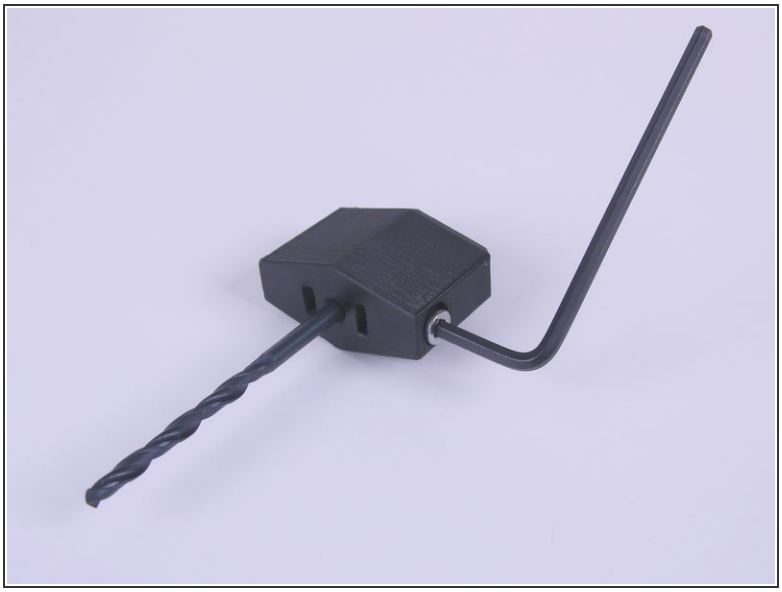




- Insert the 3 mm drill bit all the way into the P-drill printed part.

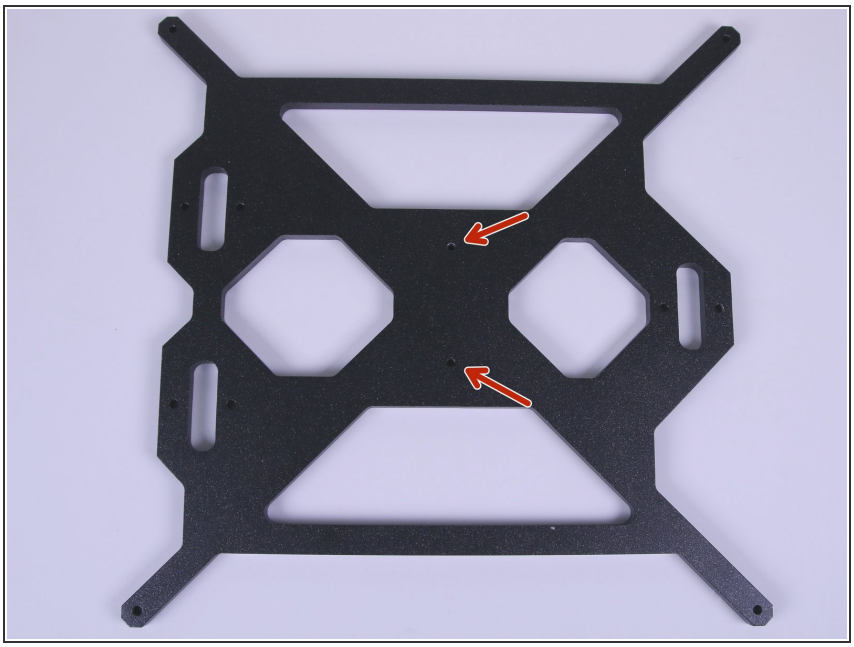
Step 4





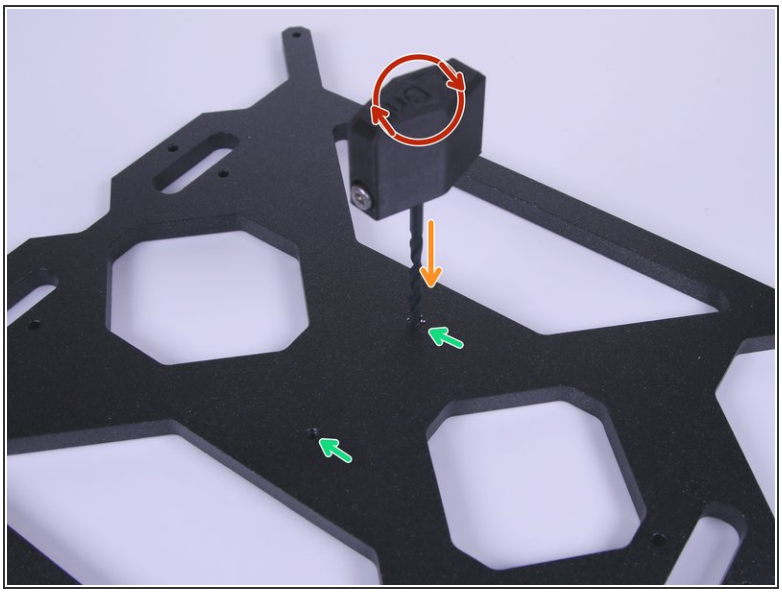
- Insert M3x12 screws into the P-drill printed part.
- Tighten the screws as much as possible.

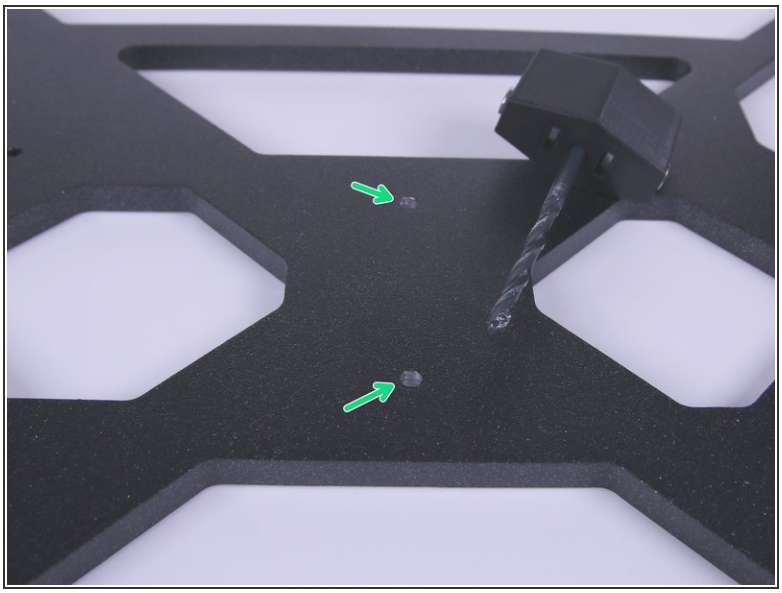
Step 5



- Highlighted holes are going to be drilled in next steps.

Step 6 — Drilling Y-carriage



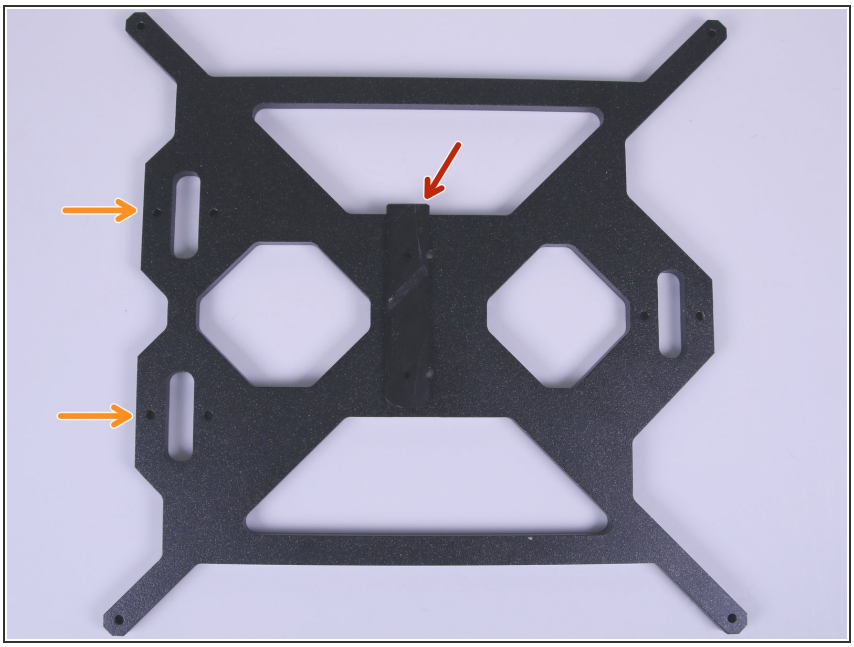


- Using the assembled P-drill, drill out the threads from highlighted holes.
- Rotate with the P-drill assembly clockwise as shown in the picture.
- Apply force in direction through the Y-carriage.

It's similar to opening a wine bottle, but don't apply that much force or the drill bit will get stuck. If it gets stuck, just rotate the opposite direction and repeat with smaller force.

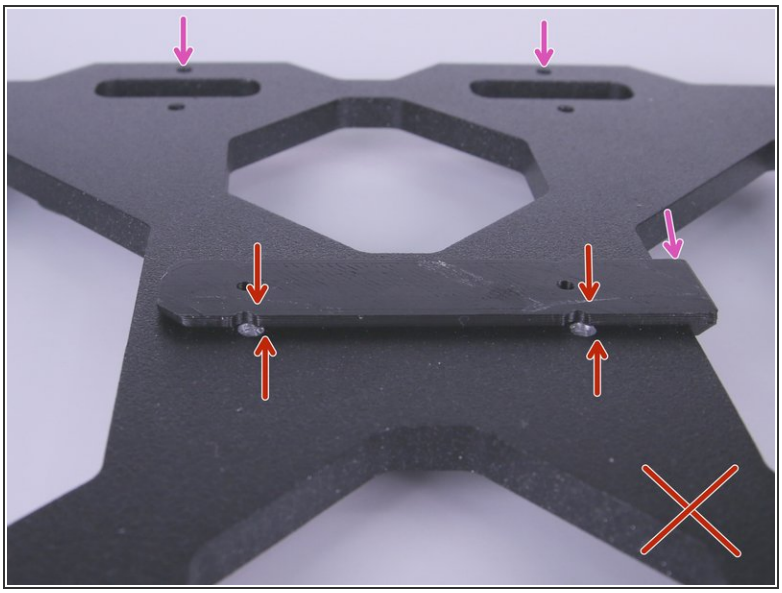
If the drill bit is slipping in the printed part, just tighten the M3x12 screws a little more.

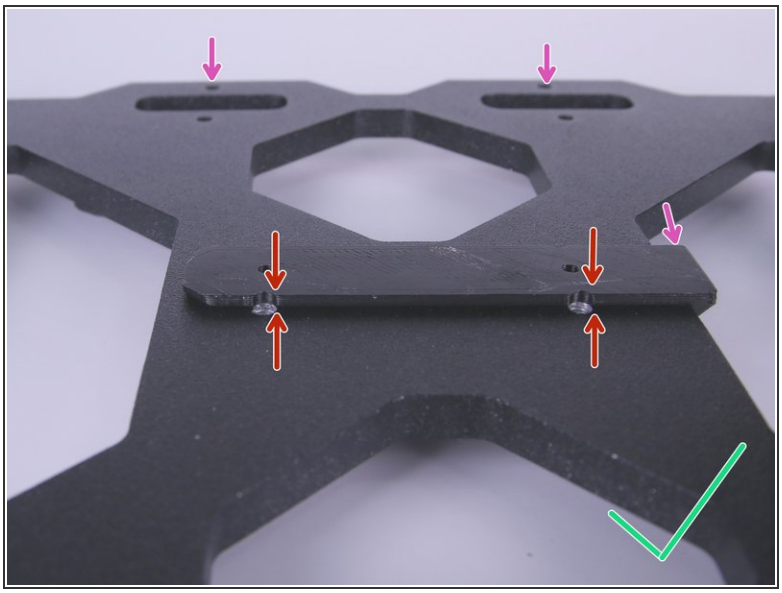
Step 7 — Identifying Y-carriage orientation



- Place the Y-identifier on the Y-carriage as shown in the picture (pin on the top, hanged on y-carriage, pushed as down as possible).
- Make sure that you have the side with two bearing holes on the left hand side.

Step 8 — Y-carriage identifying

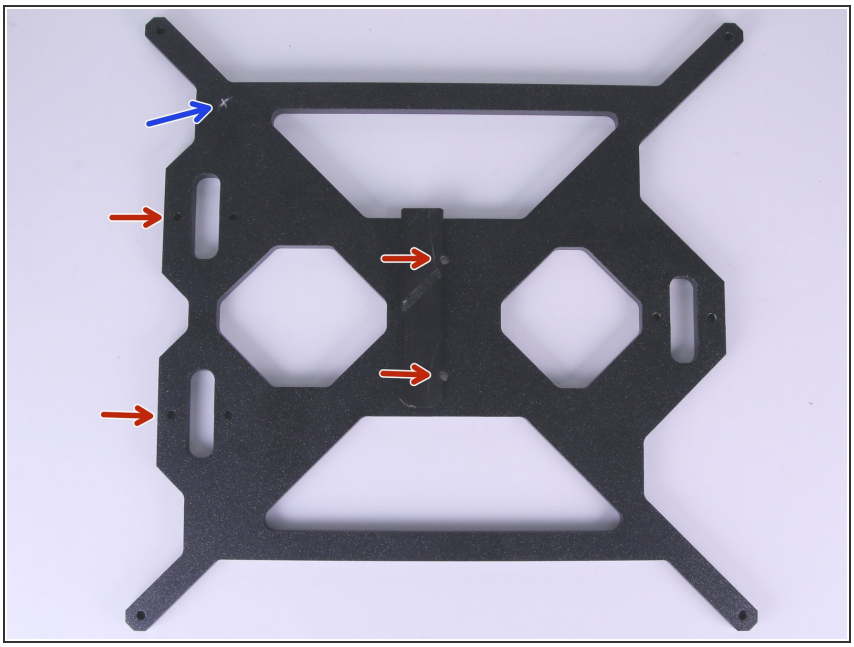




- Make sure that holes in the middle of the Y-carriage are perfectly aligned with the Y-identifier as shown in the second picture.
- If they are not, turn the Y-carriage upside down and it should be aligned.

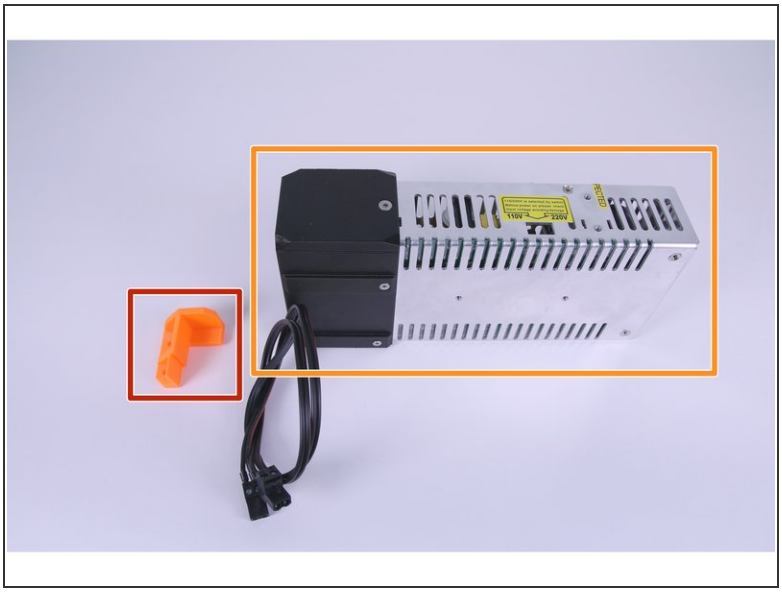
⚠ Keep in mind that you still need to have the side with two bearings on the same side as in the previous step. IT'S MANDATORY!

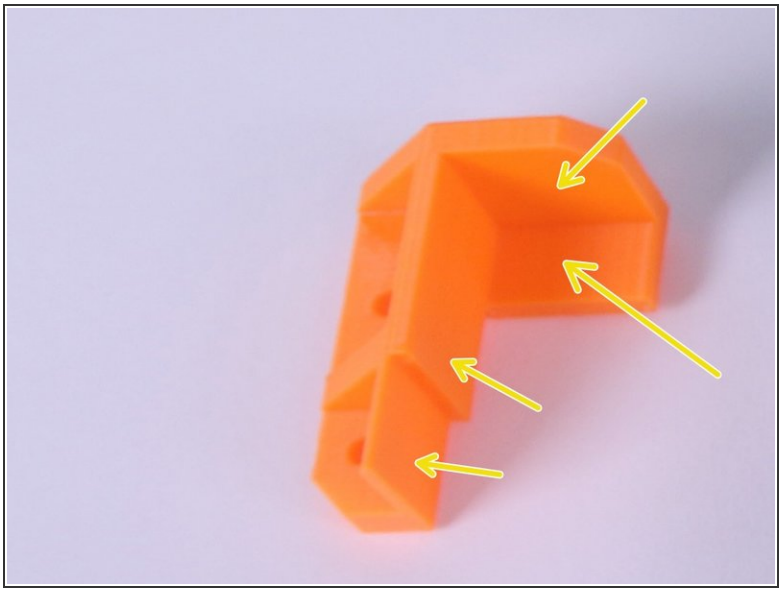
Step 9 — Y-carriage marking



- DOUBLE CHECK that you have aligned holes in the Y-carriage with the Y-identifier and two bearing holes on the left hand side.
- Make a mark on the top left corner (with a permanent marker or with the drill bit).

Step 10 — [OPTIONAL] PSU reinforcement part 1





If you want to have as close experience as MK2 builders have, you can glue PSU-reinfocement part to you power supply.

- PSU-reinforcement
- Power supply
- Apply superglue (or alternative) here.

Step 11 — [OPTIONAL] PSU reinforcement part 2

- Press the PSU-reinforcement with glue on your power supply and wait until the glue dries.

Step 12 — Let's assemble!

- Great, you're ready to assemble the new MK2 printer.
- You can continue by Assembly Instructions for Original Prusa i3 MK2.
- Happy assembling!