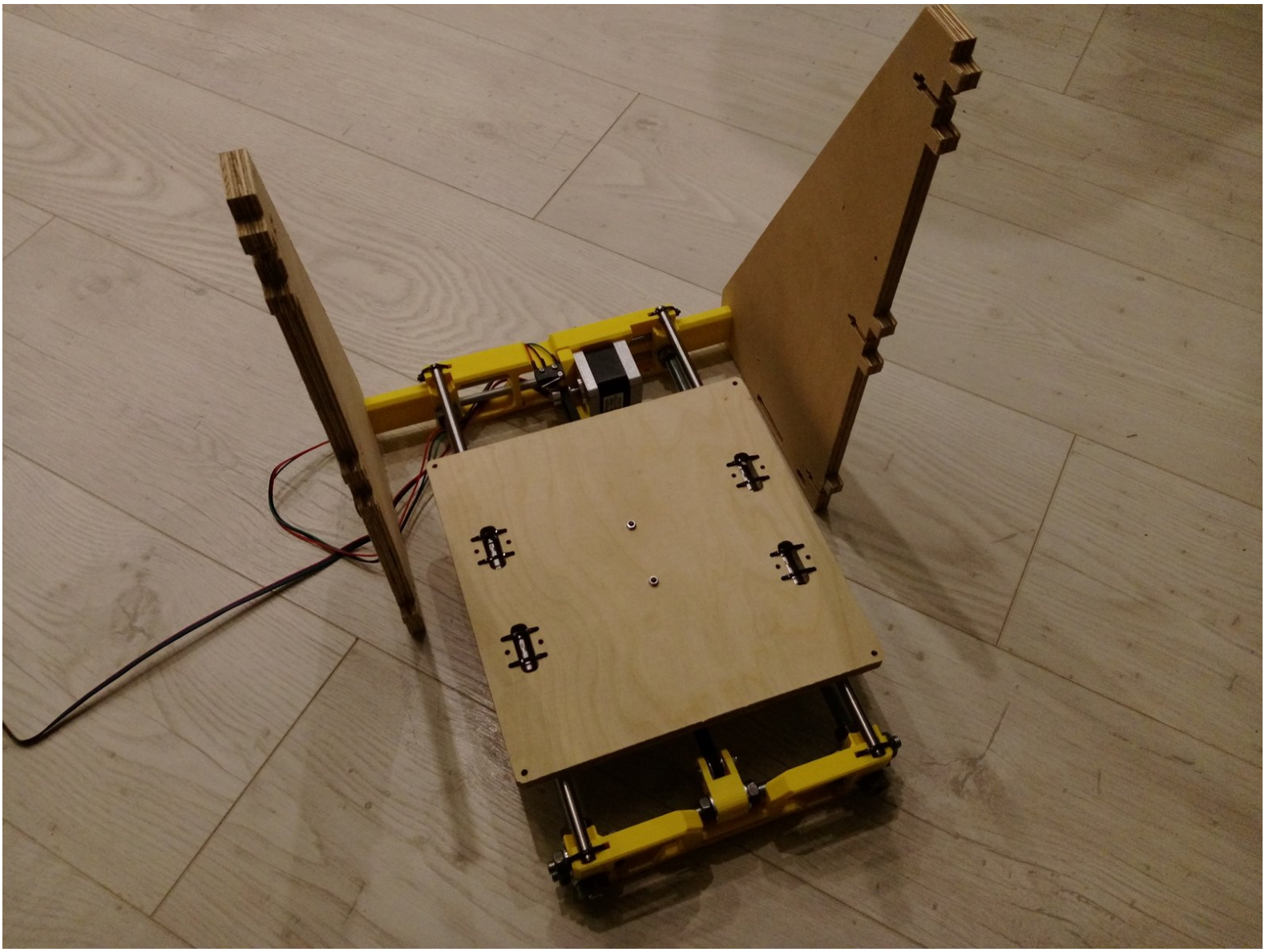
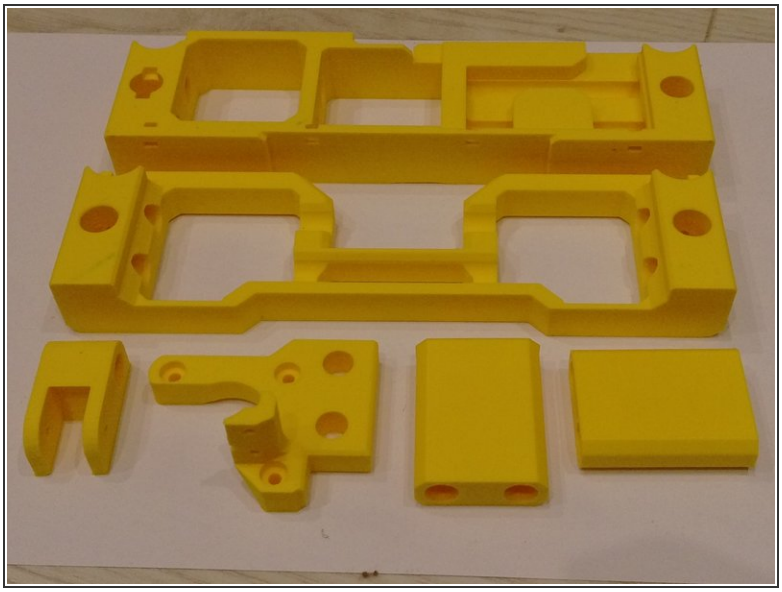
MK2Clone

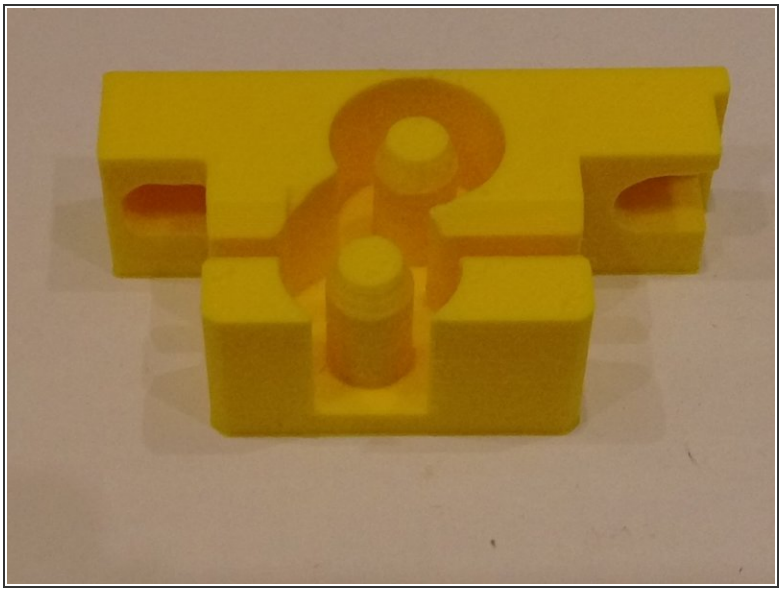
1. Y-axis assembly

Written By: q3ok



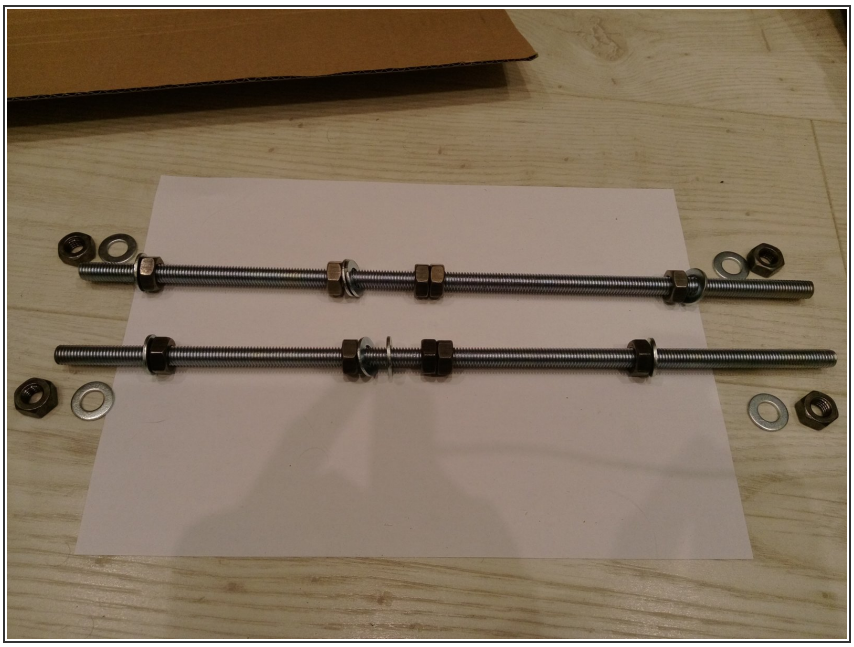
Step 1 — Printed parts needed





- y-axis-rear
- y-axis-front
- y-idler
- y-motor-holder
- 2x y-rear-spacer
- y-belt-holder

Step 2 — Y-axis rods



- 2x M10x430mm threaded rod
- 12x M10 washer
- 14x M10 nut

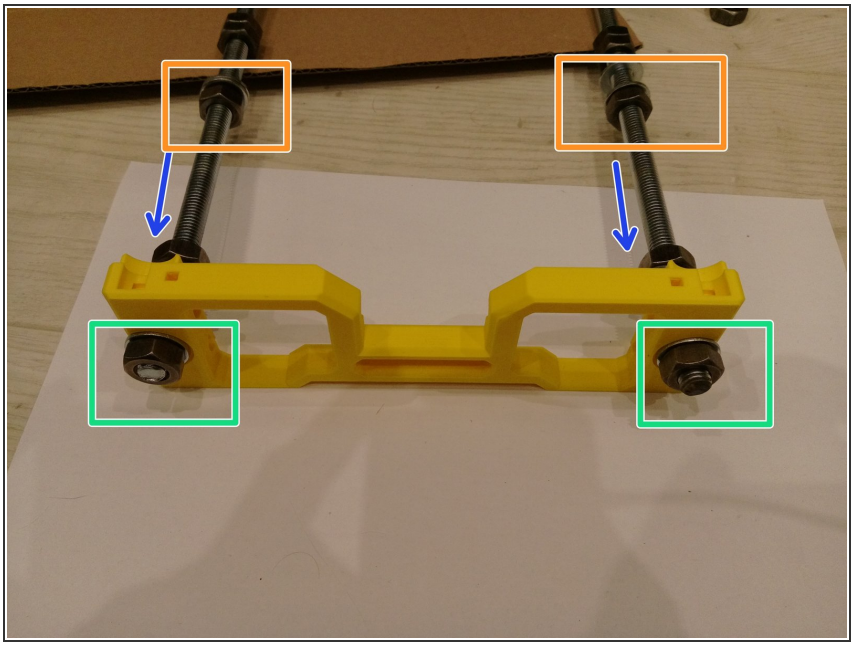
Screw the nuts and washers as it on photo. Four nuts and washers should not be used right now.

Order of nuts and washers:

- --WN-NW-WNN-NW--
- Where W - washer, N - nut

The fastest way is to start with the three nuts and then adding the washers and nuts

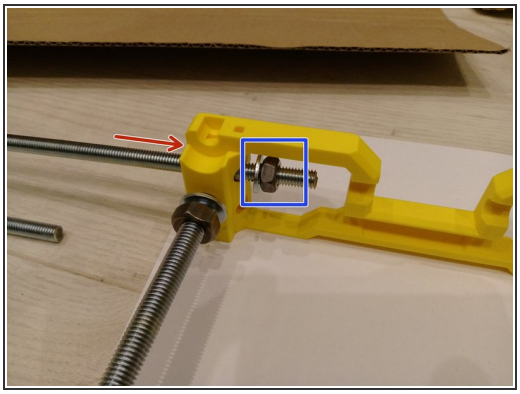
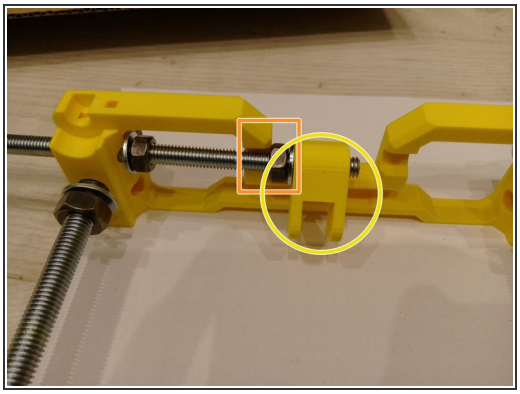
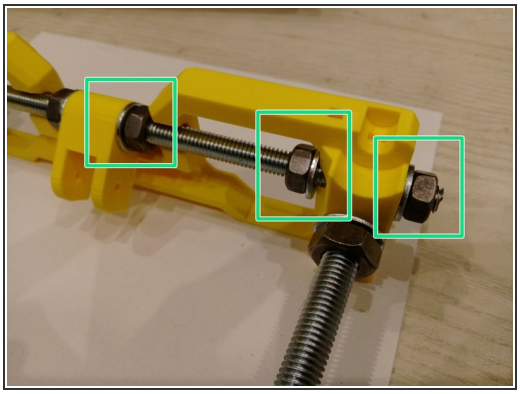
Step 3 — Y-axis front



- Insert M10 threaded rods into y-axis-front
- Make sure that you put the y-axis-front on M10 rods from side with one nut
- Screw M10 washer and nut on both rods gently

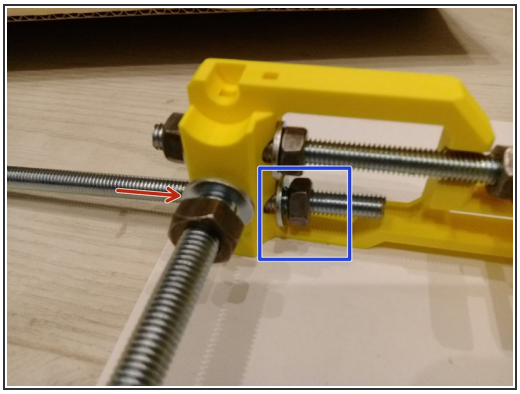
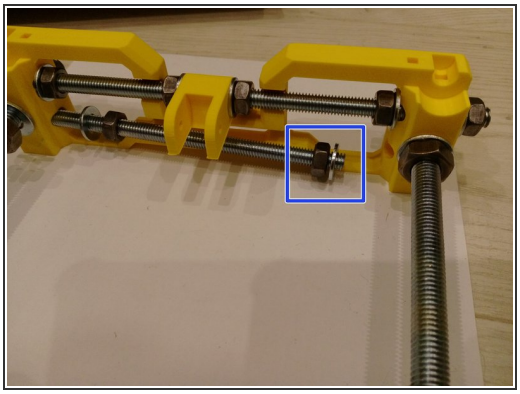
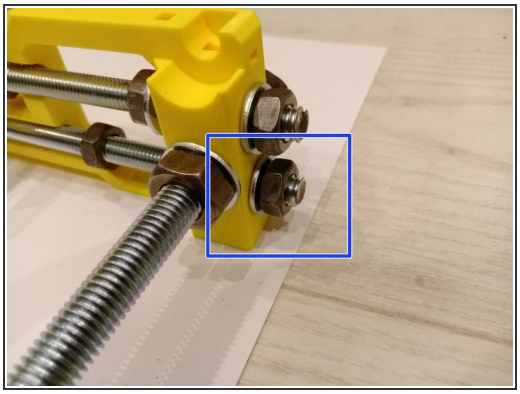
Do not tighten the nuts right now

Step 4 — Y-axis-front

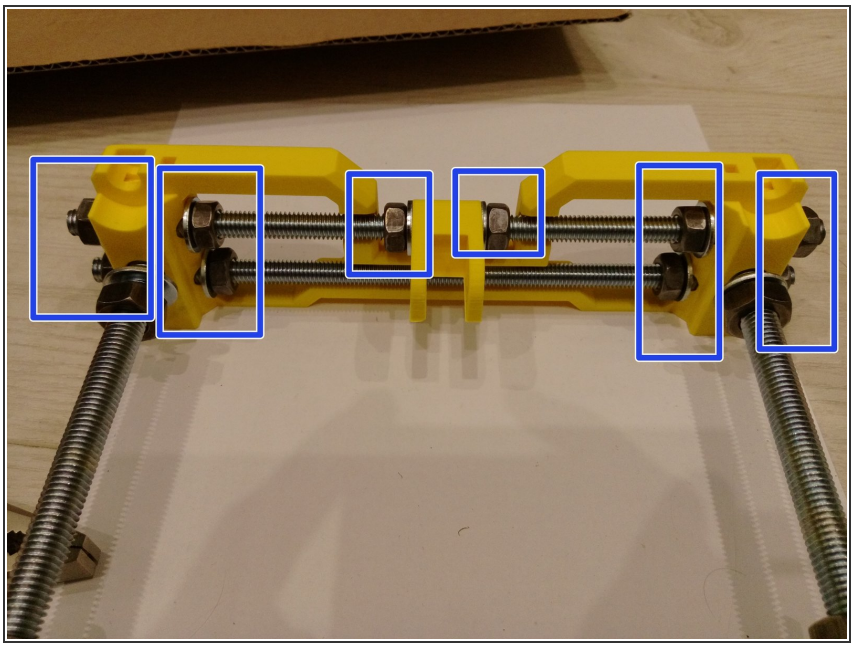
- Take one of the shorter M8 threaded rods and put it into y-axis-front as its on photo
- Insert the M8 washer and screw M8 nut
- Screw the M8 rod a little bit, and then screw a M8 nut and insert M8 washer
- Insert the y-idler on threaded rod
- Insert the remaining M8 washers and M8 nuts as shown on pictures

Step 5

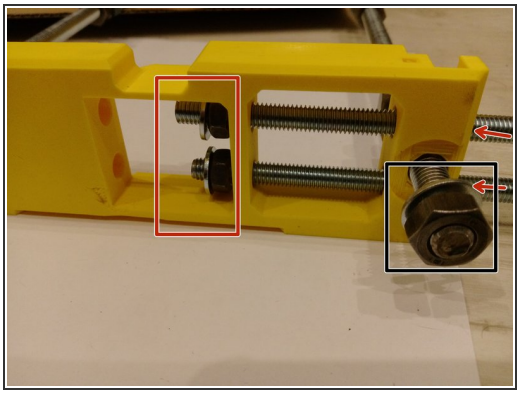
- Insert the second shorter M8 rod as on photos, and insert the washers and nuts

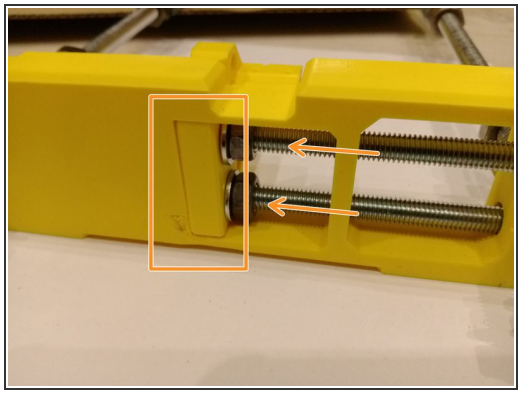
Step 6 — Y-axis-front

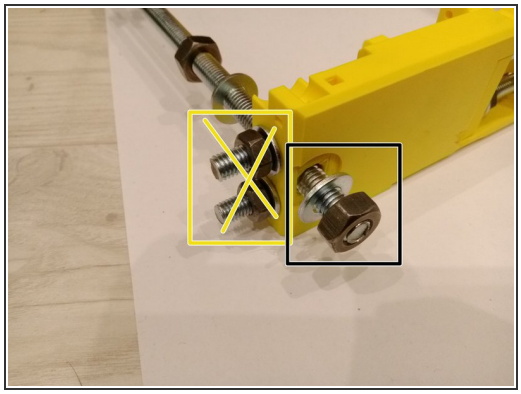


- Ensure that all the washers and nuts are inserted as on photo

Step 7 — Y-axis-rear

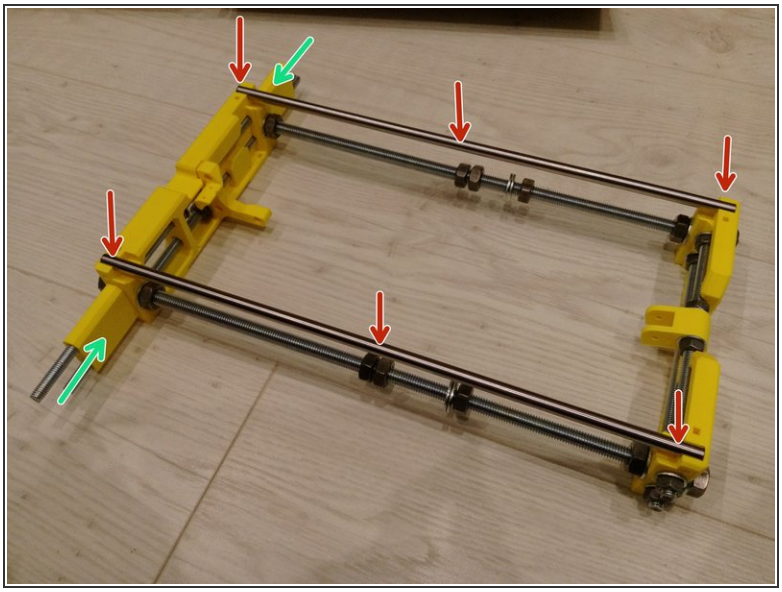


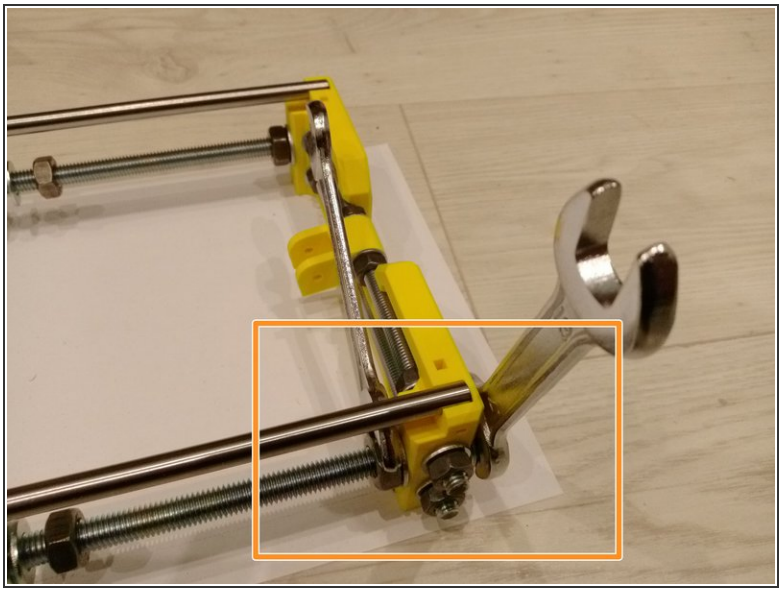




- Insert the y-axis-rear on opposite side of M10 rods and insert M10 washers and nuts as on photos
- Insert the two longer M8 rods to x-axis-rear and then screw two M8 nuts and insert M8 washers
- Insert the Y-motor-holder and screw the rods thru it and all of the part
- DO NOT insert M8 washers and M8 nuts on the second end of the y-axis-rear part

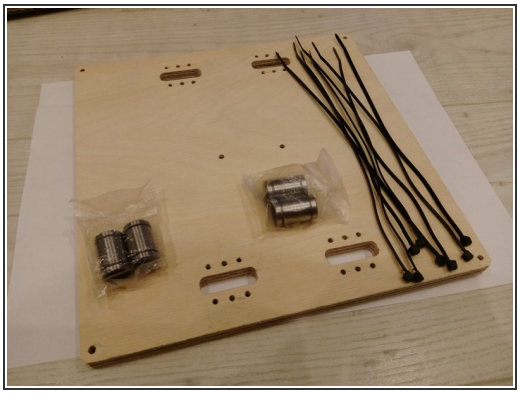
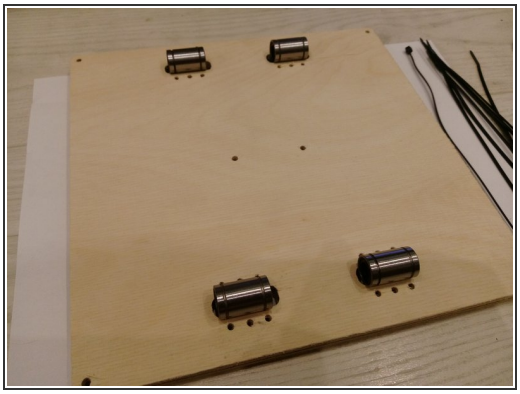
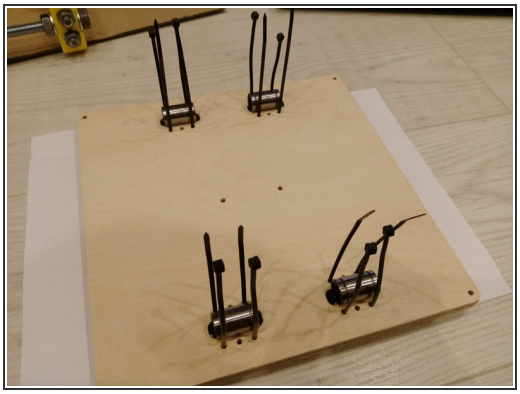
Step 8 — Adjust the length of Y-axis





- Insert the 400mm linear shaft on top of the construction (in r1 was 350mm)
- Adjust and tighten the M10 nuts holding y-end rear and front
- There should be no free space between plastic parts and the linear shafts
- Remove the linear shafts
- Put the Y-spacers on sides of Y-axis-rear

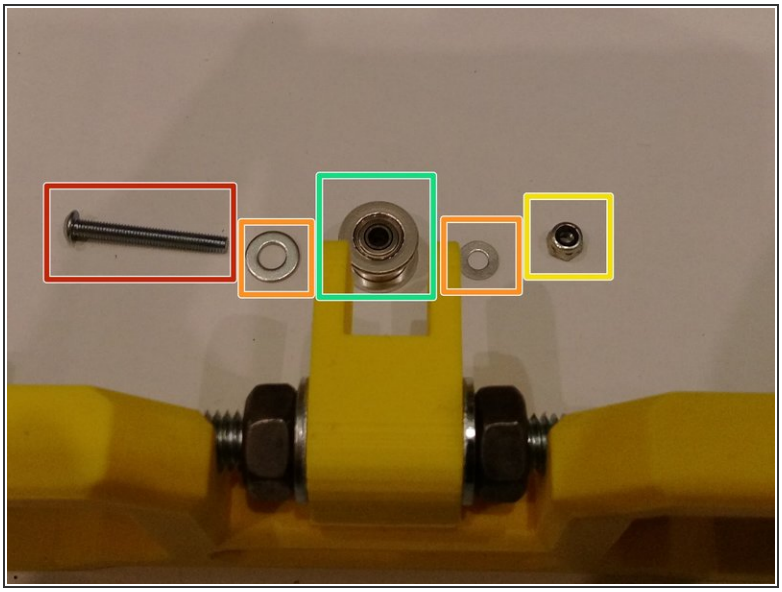
Step 9 — Y-carriage

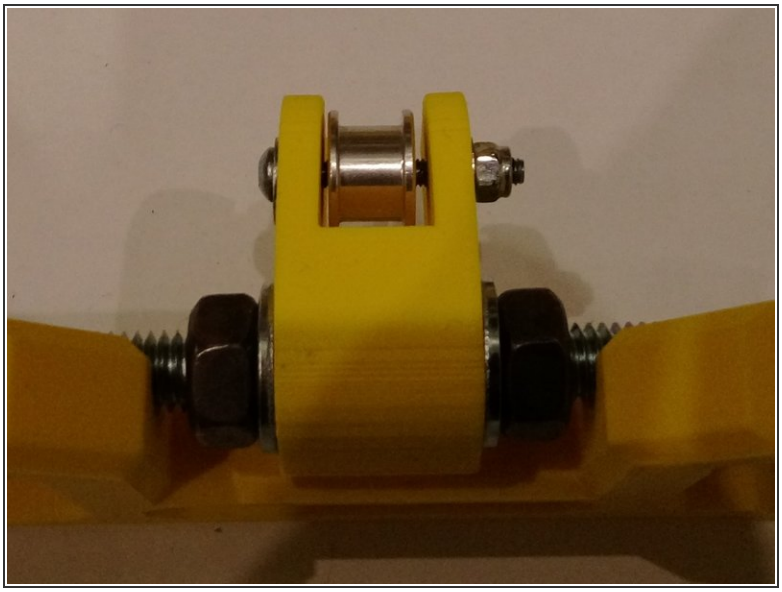




- Take the Y-carriage, four LM8UU and 8 zipties
- Put the LM8UU bearings on the carriage and secure them with zipties

(optional) if your wooden table is made from soft plywood, insert additionally y-axis-table-spacer between each bearing and the carriage

Step 10 — Y-idler assembly



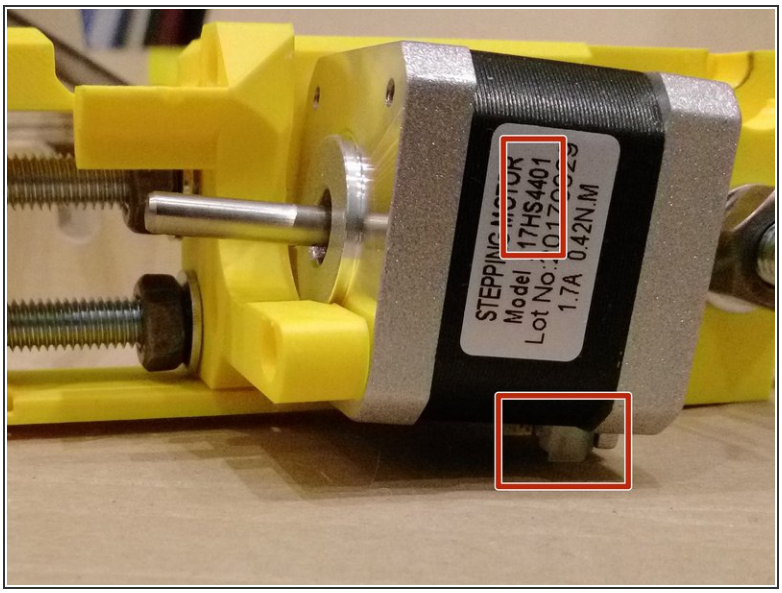


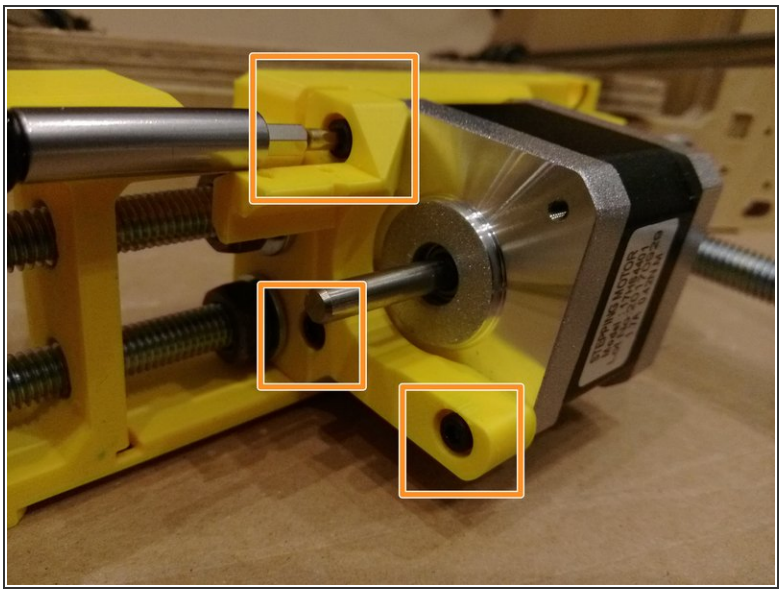
- 1x M3x25 screw
- 2x M3 washer
- 1x GT2-16 idler pulley without teeths, bore 3mm
- 1x M3 self-locking nut

To tighten the idler, use small pliers to hold nut

Tighten gently!

Step 11 — Y-axis motor

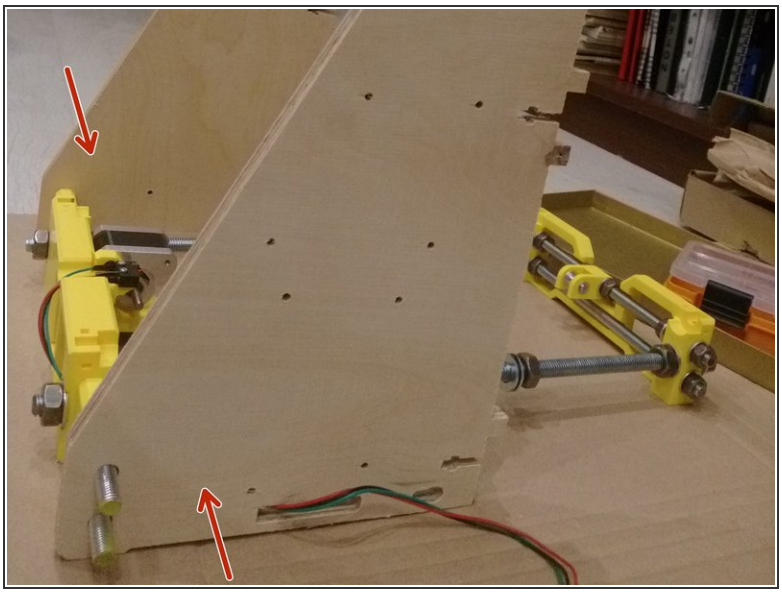


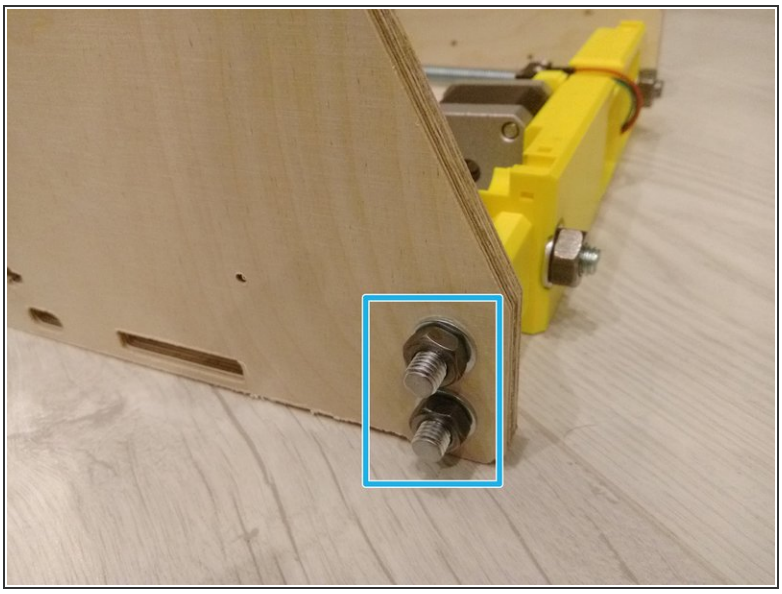


- Take the 17HS4401 stepper motor, make sure the connector is facing down
- Using 3x M3x10 screws screw the motor

Do not tighten the screws yet

Step 12 — Side supports



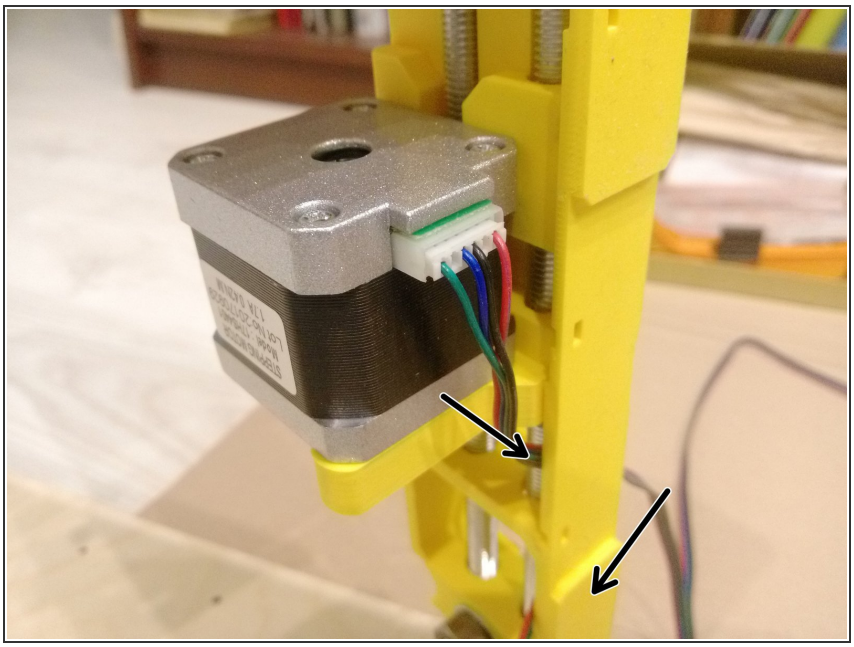


- Take the side supports and insert them on rods from y-axis-rear
- Using 4x M8 washers and 4x M8 nuts tighten the side supports on both sides

ⓘ First tighten the right side support against the nuts holding y-motor-holder, then tighten the nuts on left side.

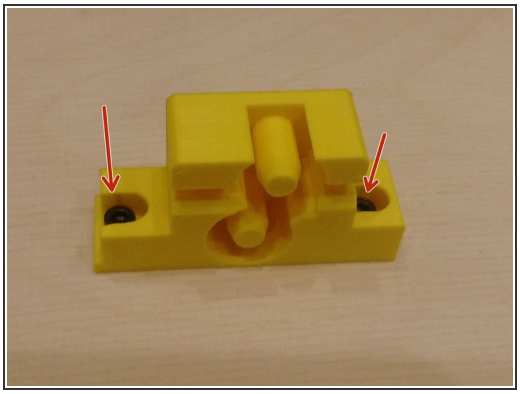
⚠ Make sure you use use correct side supports - the left one is with more holes

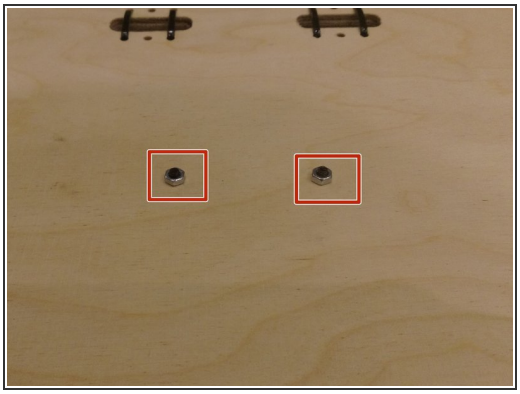
Step 13 — Cable guide

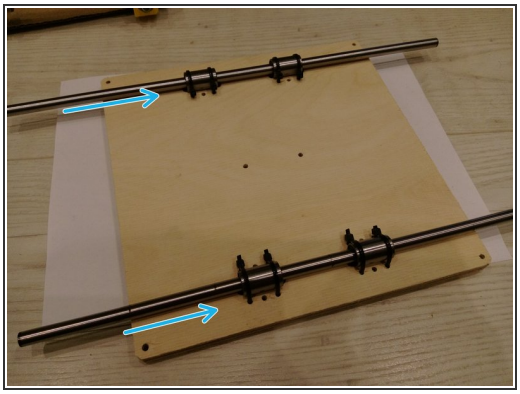


- Connect the wire for Y axis stepper motor and guide as shown on photos

Step 14 — Y-belt-holder

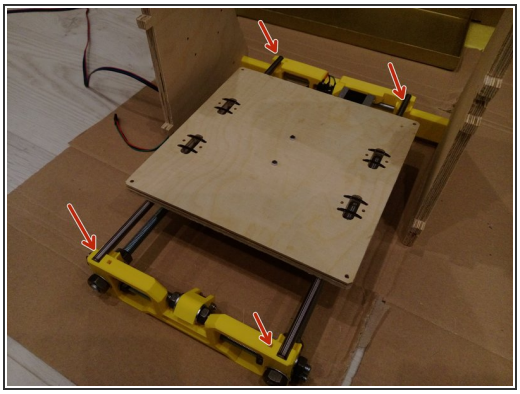
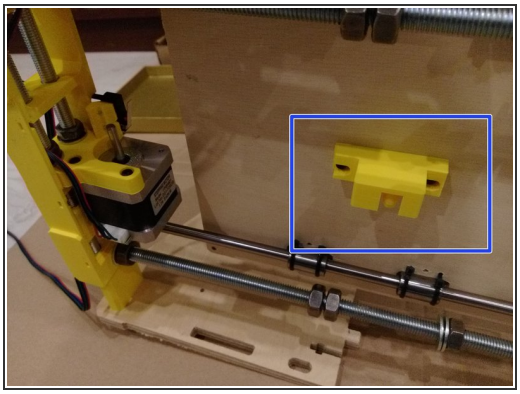
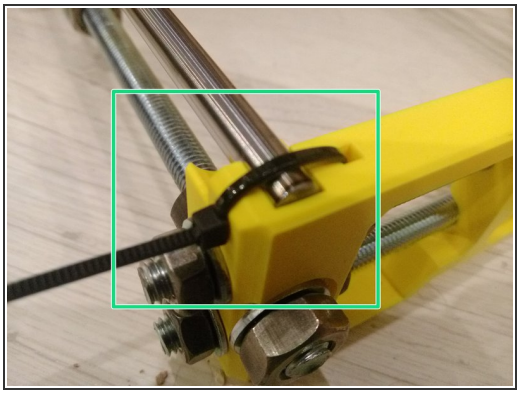






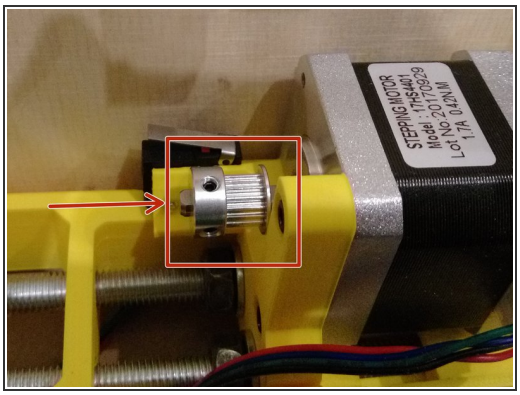
- Take the y-belt-holder, 2x M3x18 screws , 2x M3 nuts and 4x M3 washers
- Screw them as shown on photos (on the same side as the bearings)
- Take the 400mm linear rods and insert them as shown on photo
- Put 2 washers on both screws between head of the screw and the plastic part - otherwise you will be unable to mount the MK42 clone heatbed properly.

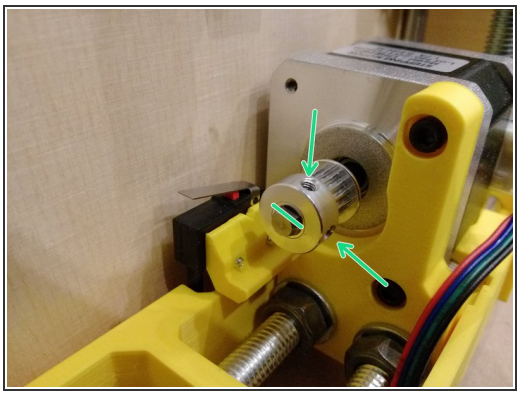
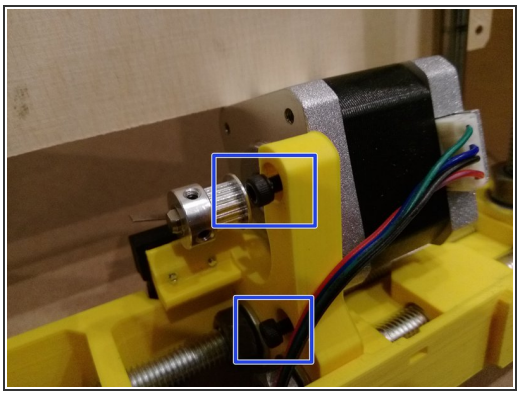
Step 15 — Insert the y-carriage

- Put the y-carriage with rods into already build construction
- Make sure that the y-belt-holder orientation is as shown on image
- Tighten the smooth rods with ziptie on every corner

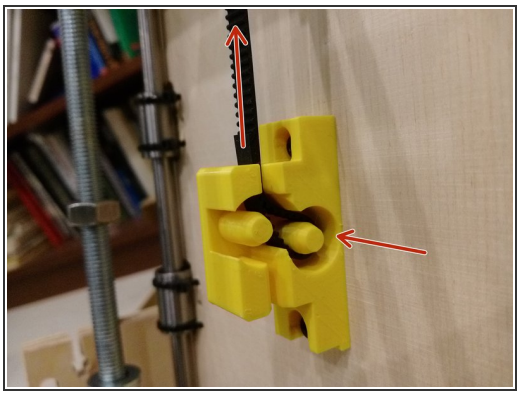
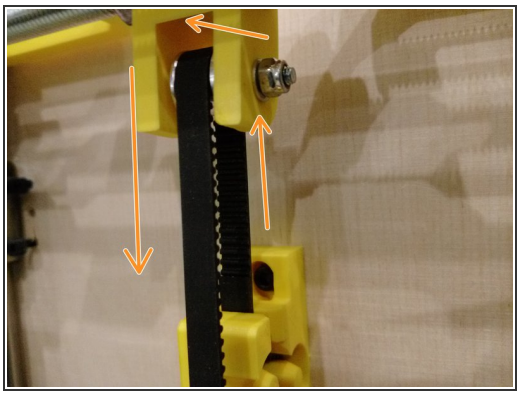
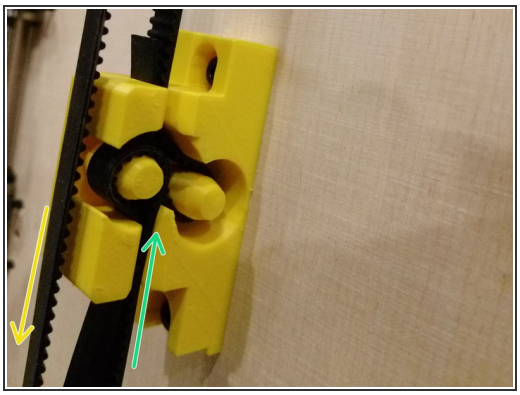
Step 16 — Y-axis motor pulley



- Take the GT2-16 pulley and put it on motor shaft as shown on image
- Tighten the pulley, making sure that one of pulley screws are on flat part of motor shaft
- Unscrew two M3 screws holding the motor

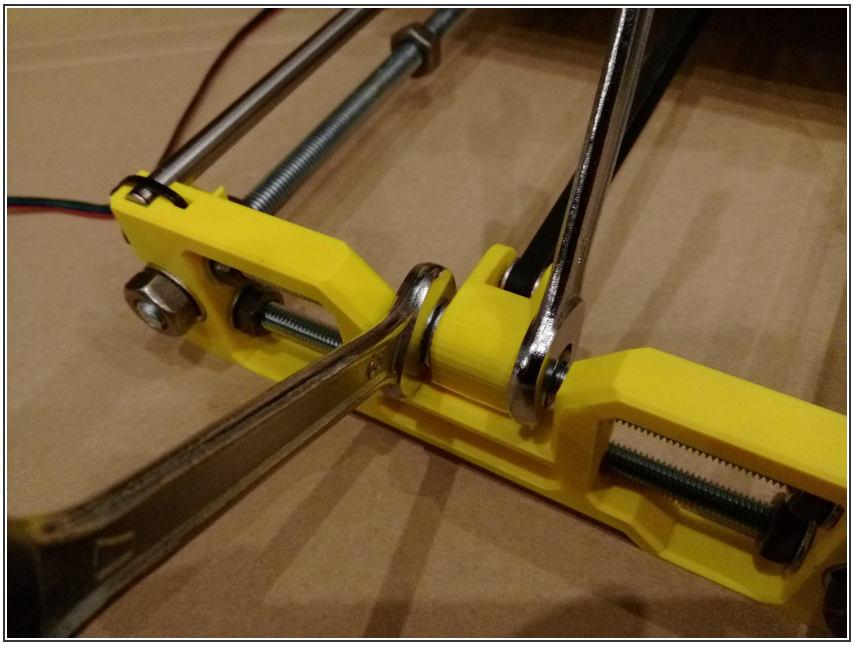
Step 17 — Y-axis belt guide

- Start guiding the belt from y-belt-holder to the front
- Guide the belt thru y-idler
- Guide the belt thru pulley on stepper motor and then back to y-belt-holder
- Screw back the two screws at y-motor-holder, tensioning the belt

⚠ If you have to use a true strength to move stepper motor back, then loose the belt from one side on y-belt-holder, otherwise you can damage something

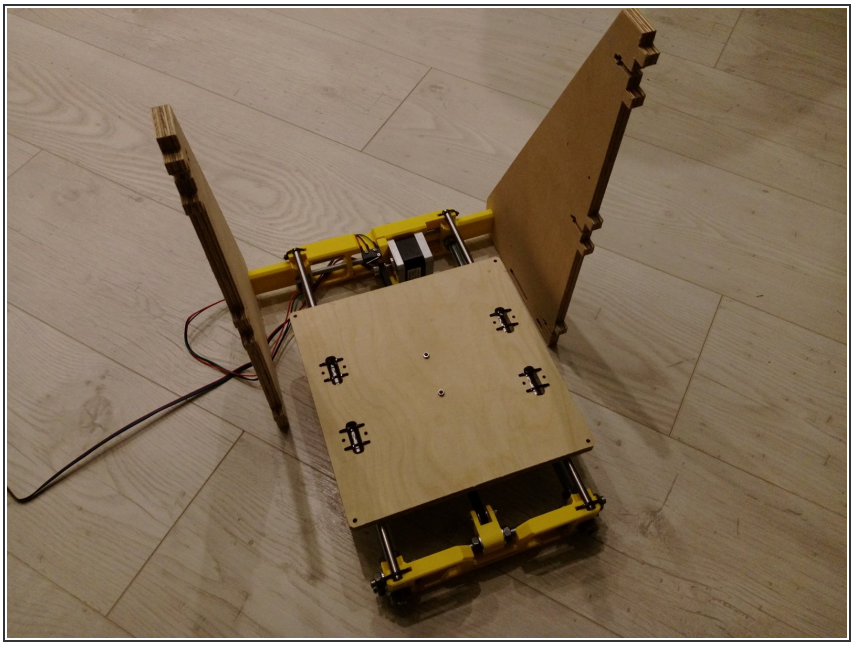
Step 18 — Tighten the front M8 nuts



- Tighten all of the M8 nuts on front

ⓘ Make sure, while tightening y-idler that its in line with the belt and the y-belt-holder

Step 19 — Y-axis DONE



Contratulations! You just have assembled the y-axis, probably the one with most steps

You can take your favourite drink from the fridge as you have done a good work.

If you are ready to go you can start assembling X-axis