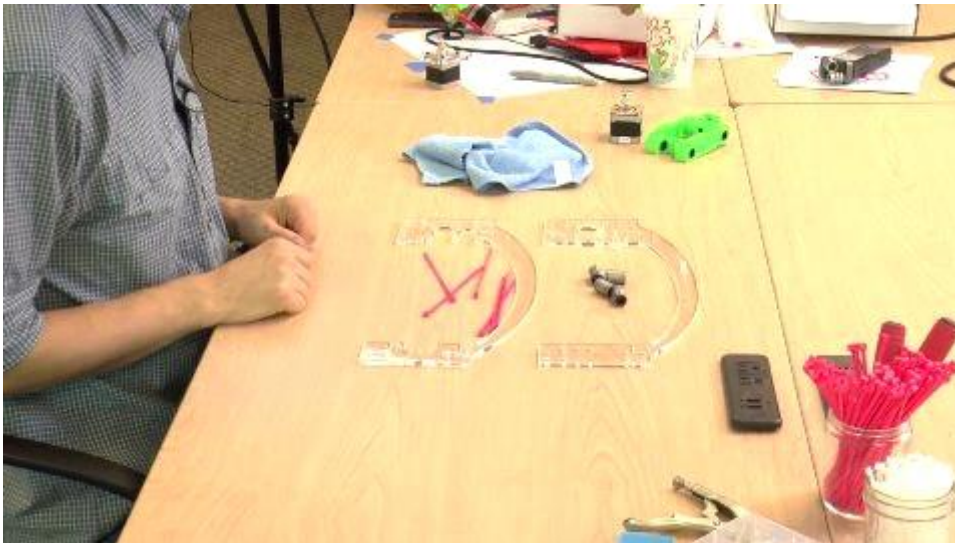# #prep X Assembly 01

JellyBox Build: 06_X-Assembly Part 1

In this video, we build the X-assembly; the mechanical part of the X axis.
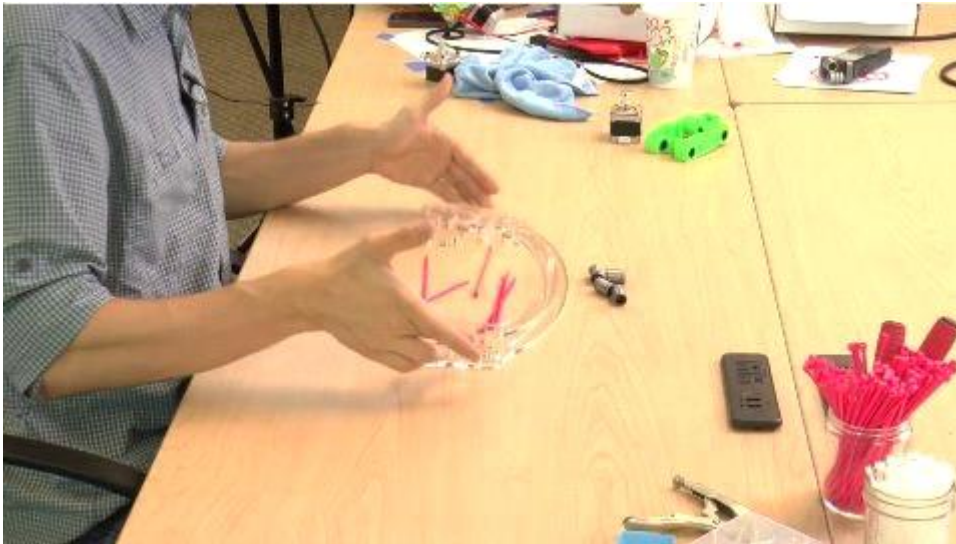
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You'll need:

X assembly front and back acrylic pieces
LM8UU linear bearings (4)
6" zip ties (8)
Vise grip

Title: Bearings

Tip: Clean the Acrylic Pieces
Good precaution to first clean the acrylic pieces with cloth before joining as later the space between them will be inaccessible.
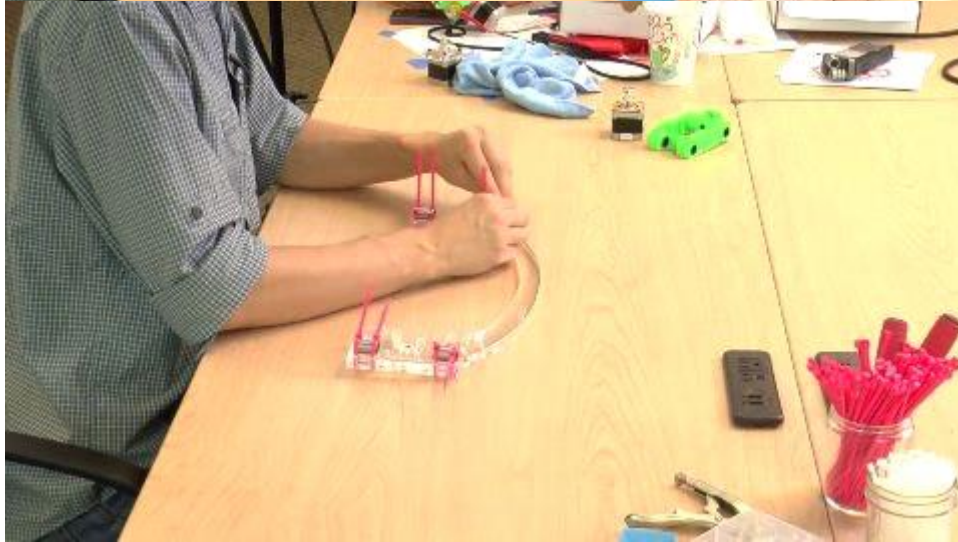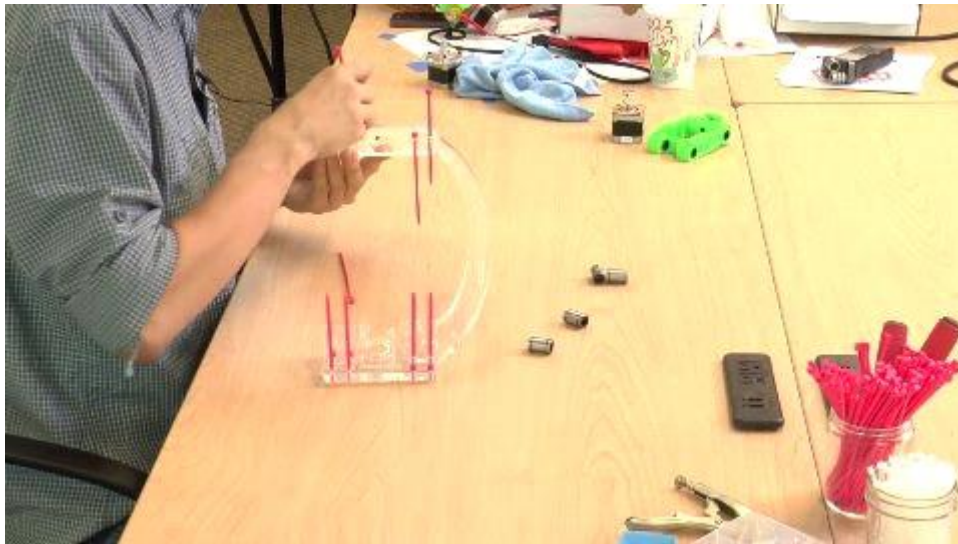

Align Acrylic Pieces
The front piece has a bird etching on the lower left corner and the back piece has a branch etching in the lower left corner.
'Put the bird on the branch' on your left side to align the acrylic pieces.
That is, the 'branch' piece will be on the bottom, and the 'bird' on top. After all, have you ever seen a branch on a bird?
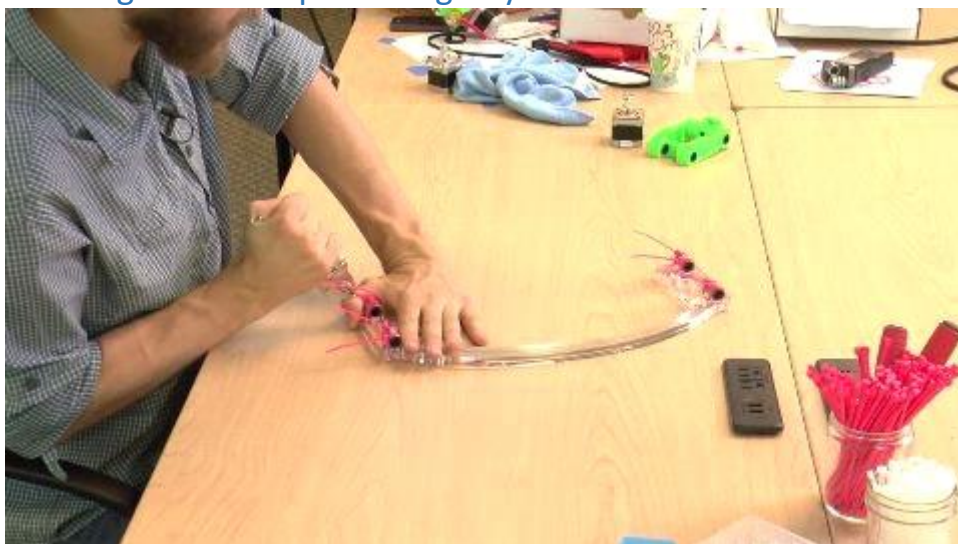
Thread in 8 zip ties through holes in the joined acrylic piece on both sidea of the assembly.

! Make sure the head of the zip tie is on the back acrylic piece which has a slot for the bearings.

Fit the bearings into the slots and finger-tighten the zip ties around them.

Title: Tighten the Zip Ties Mightily

Use vise grip to pull the zip ties in the opposite direction of how they naturally 'stick out' to tighten them well.
Make sure when tightening that the zip ties stay on the head of the bearings and don't slip off.
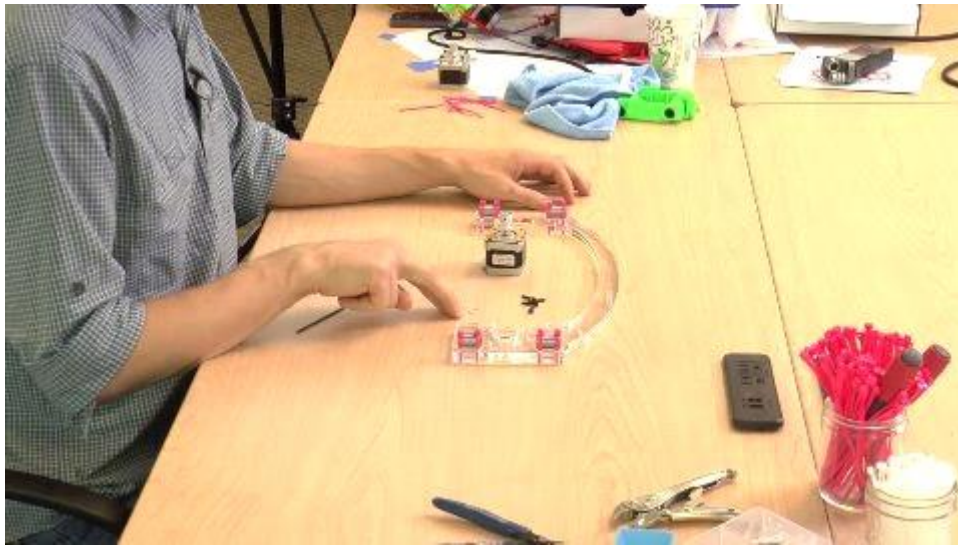
! Take special care to tighten these zip ties well. If these bearings are loose, it could affect the print quality.
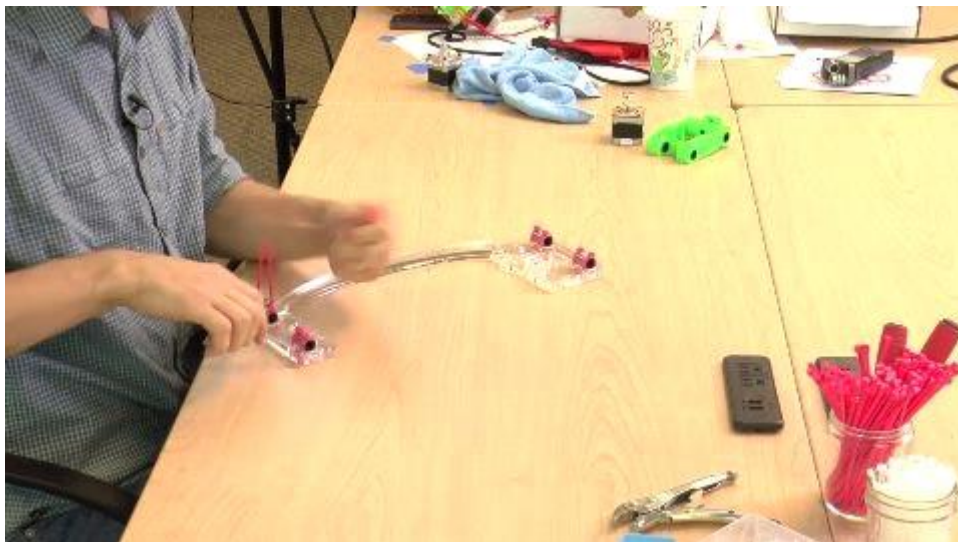
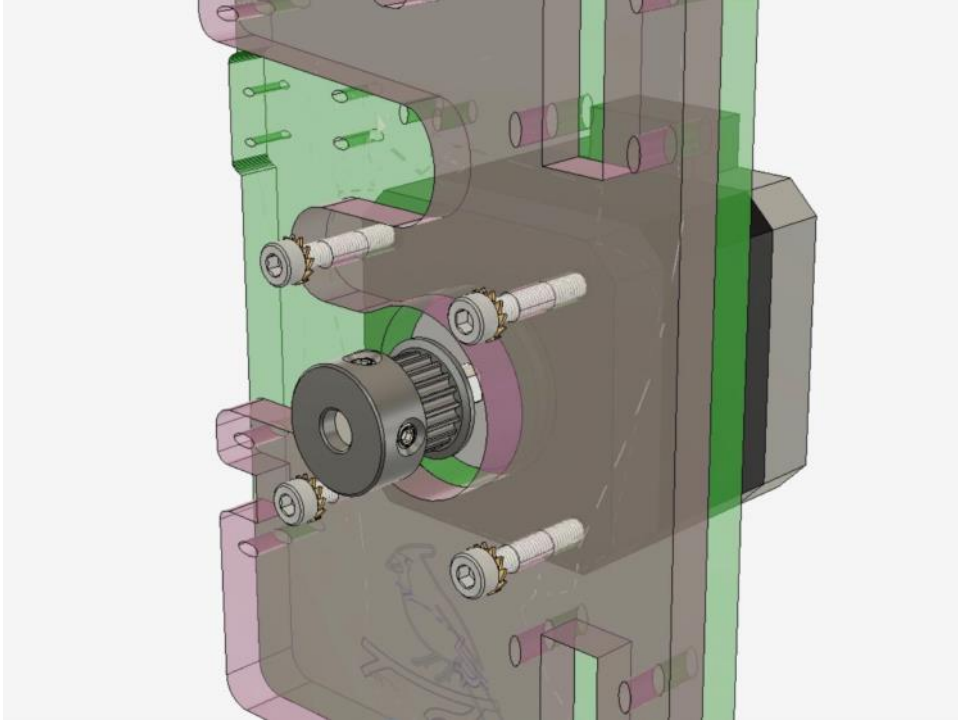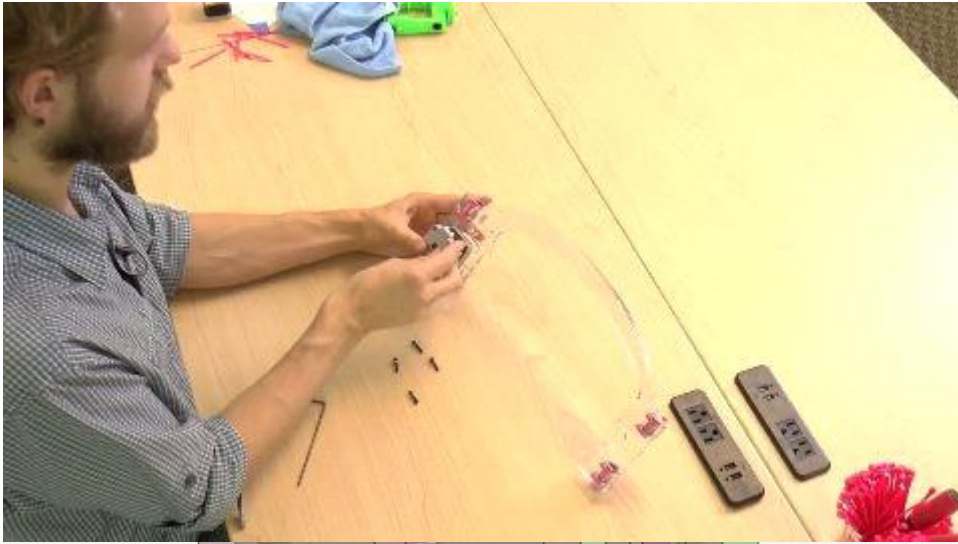Use your snips to clip the zip ties.

Title: X Motor
Title: You'll need

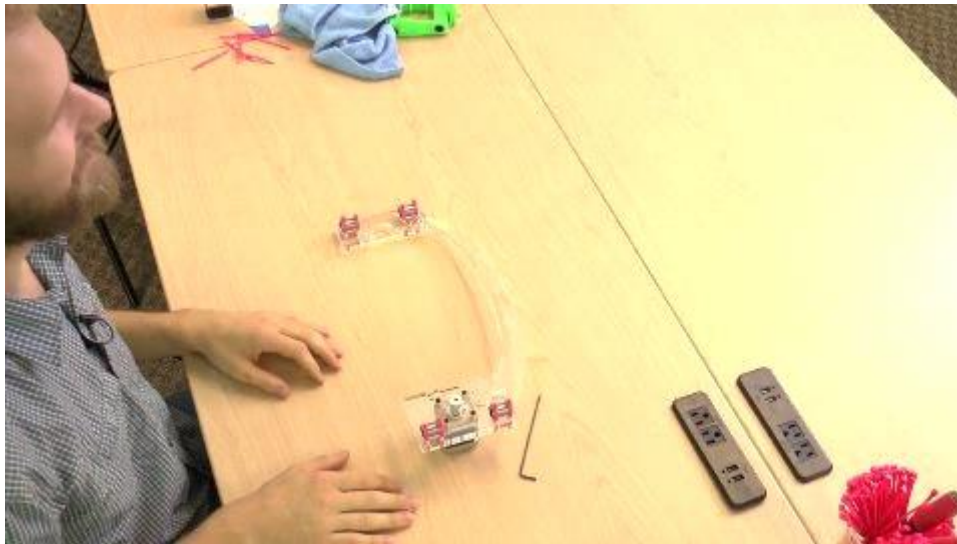X assembly
X motor
M3x16 bolts (4)
M3 serrated washers (4)

Slide four M3 serrated washers on four M3x16 bolts.

Title: Align the X Motor

Follow the instructions etched on the X assembly, "X Motor adjoins right here to this side". The text is located just above the bird.

Make sure the X motor connector is facing **upwards** and that the **motor is on the opposite side than the bearings**.

Turn the X assembly over with the X motor securely in place aligned properly and secure it to the assembly with the M3x16 bolts and serrated washers.
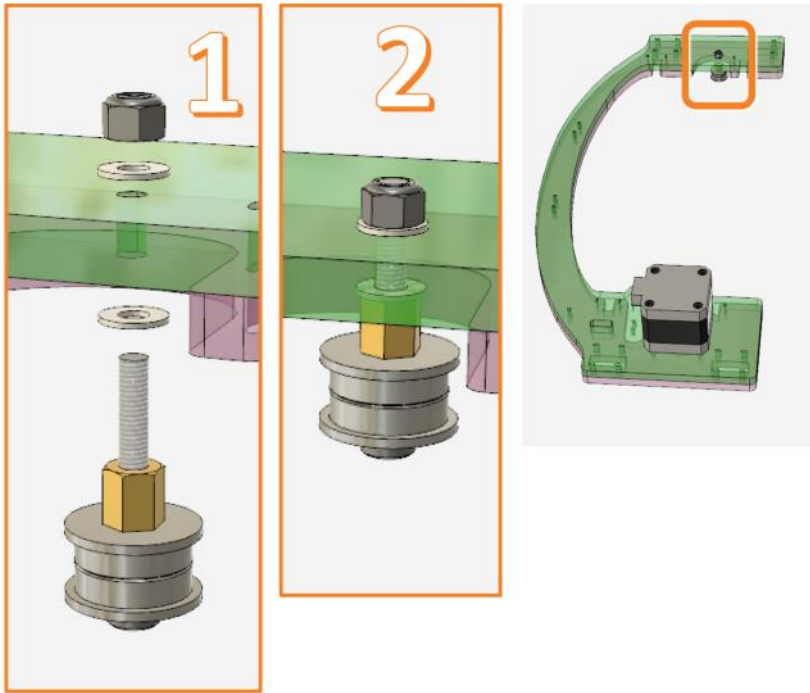
Title: X Idler
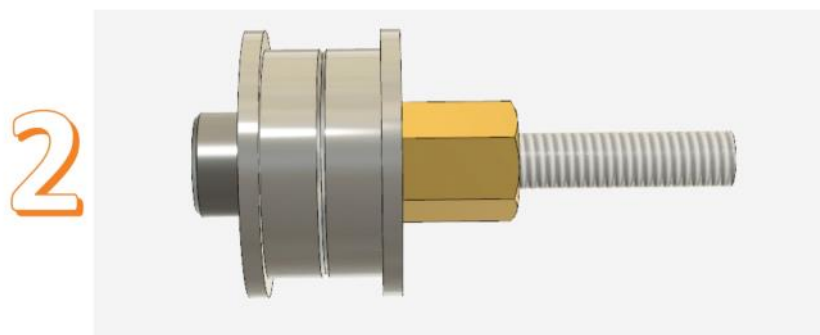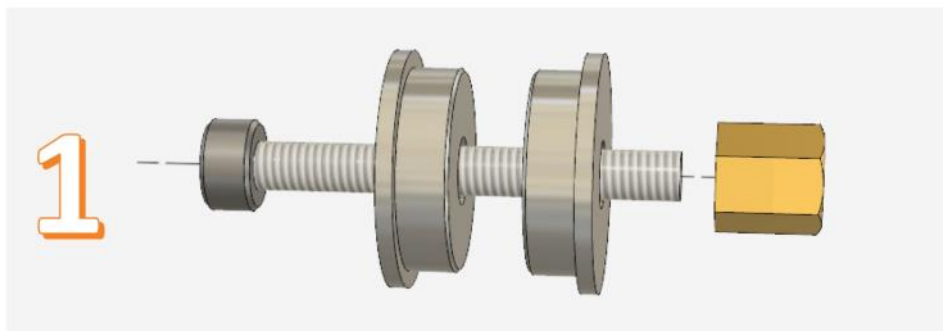
First, slide the two x idler bearings onto the M3x25 bolt and tighten them with 4mm hex spacer. (That's the **shorter of the two spacers**!)
Tighten well.
The hex spacer is not exactly M3 size. The IMADE3D wrench has a special slot just for the spacer.

Title: Attach the Idler to the X Assembly

Tighten well and don't crack the acrylic.
Make sure the bearing is on the same side of the X assembly as the motor pulley.
Order of parts:
Nylock locknut
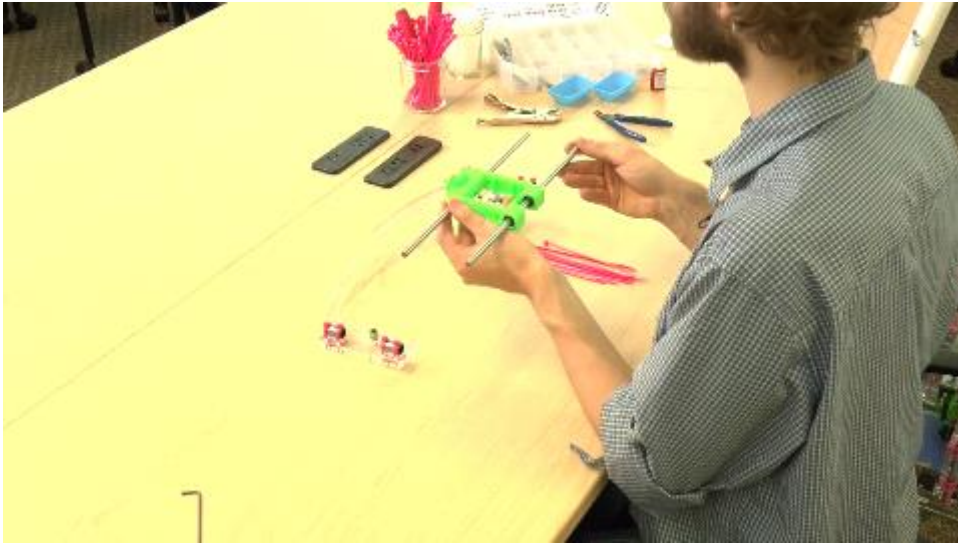Regular washer
Acrylic piece
Regular washer
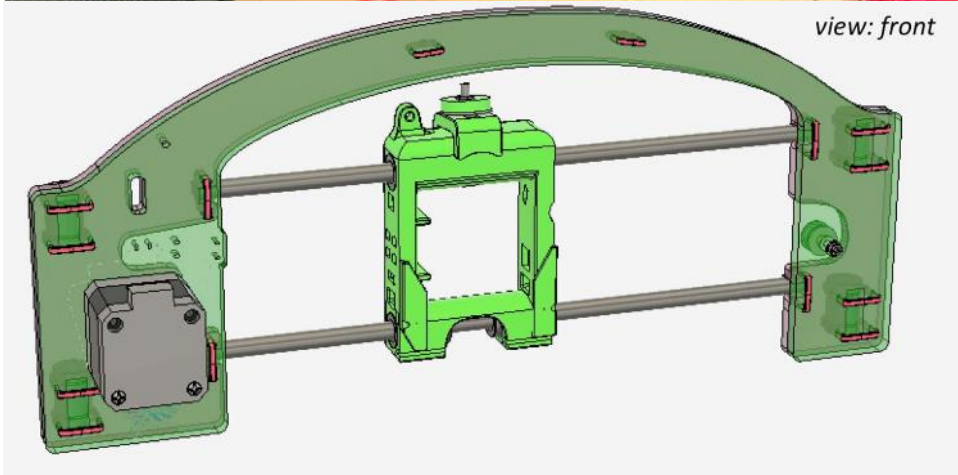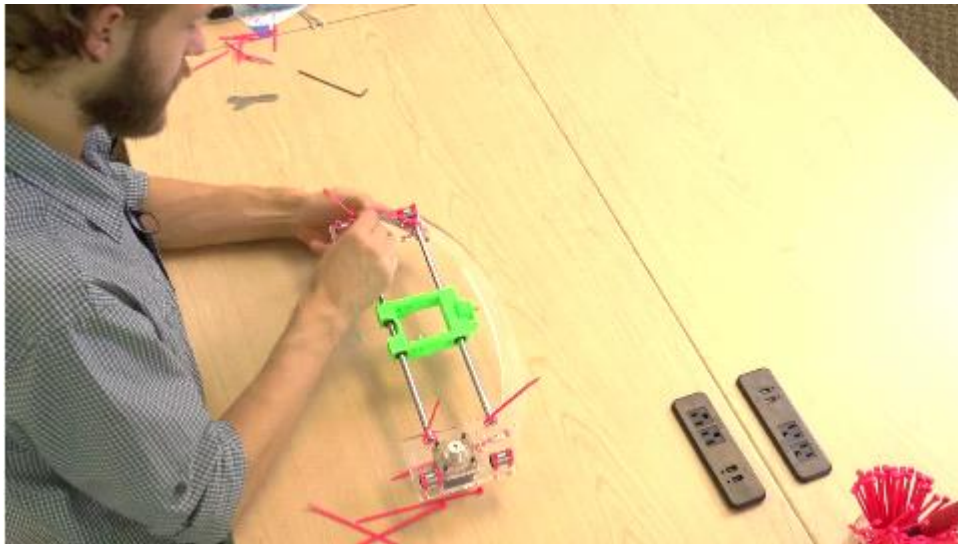

Title: Mount the X Carriage
Title: You'll need:
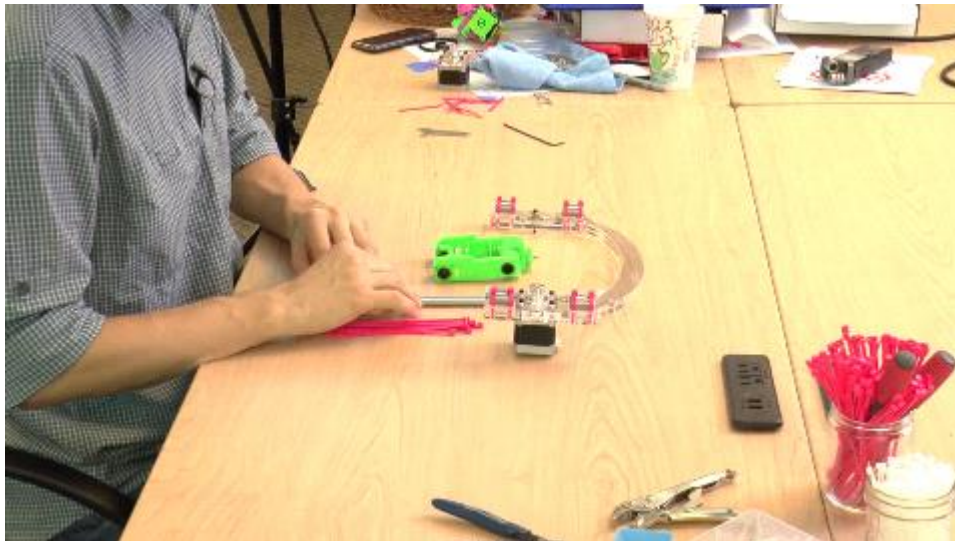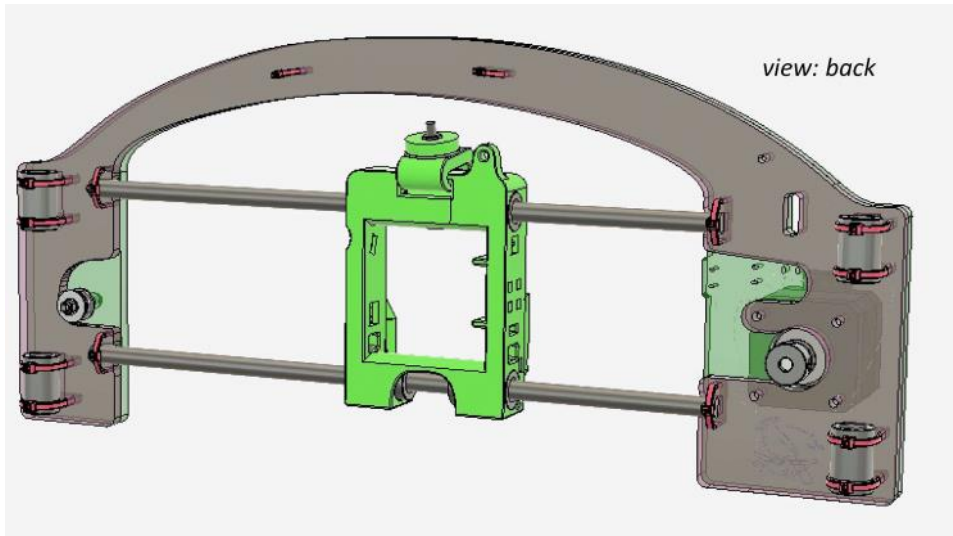

X assembly
X carriage
Smooth rods (2)
6" zip ties (4)

Slide two smooth rods through the X carriage bearings.

⚠ Thread carefully and without much force to avoid knocking out any balls out of the bearings.

view: front

view: back

Check: the smooth side of the X Carriage must be facing the back - same side as motor pulley and idler.
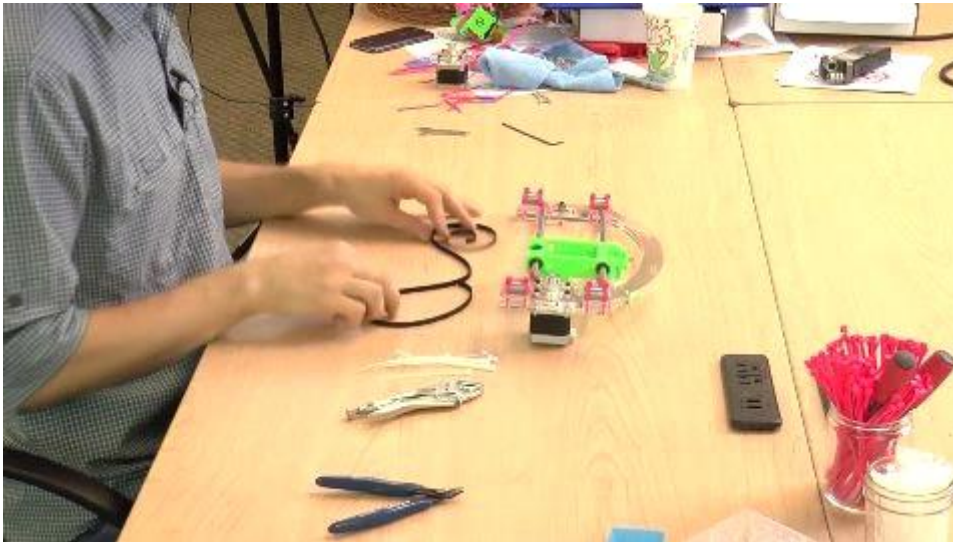Insert the smooth rods into the X assembly slots.
Secure the smooth rods with 6'' zip ties with the head of the zip ties laying on the smooth rods.
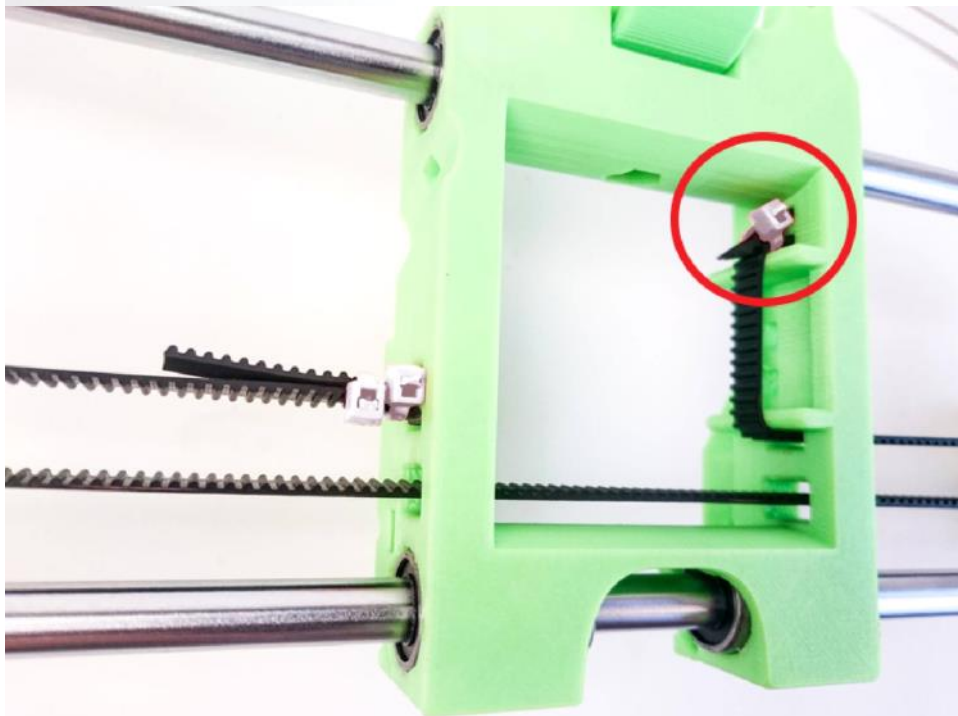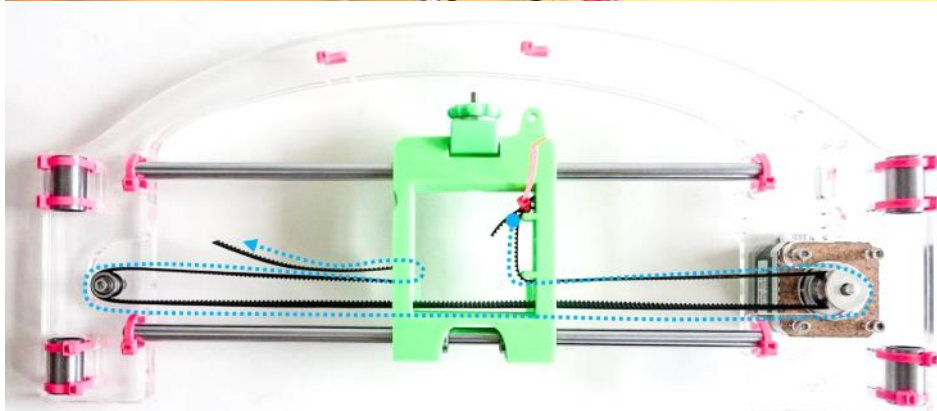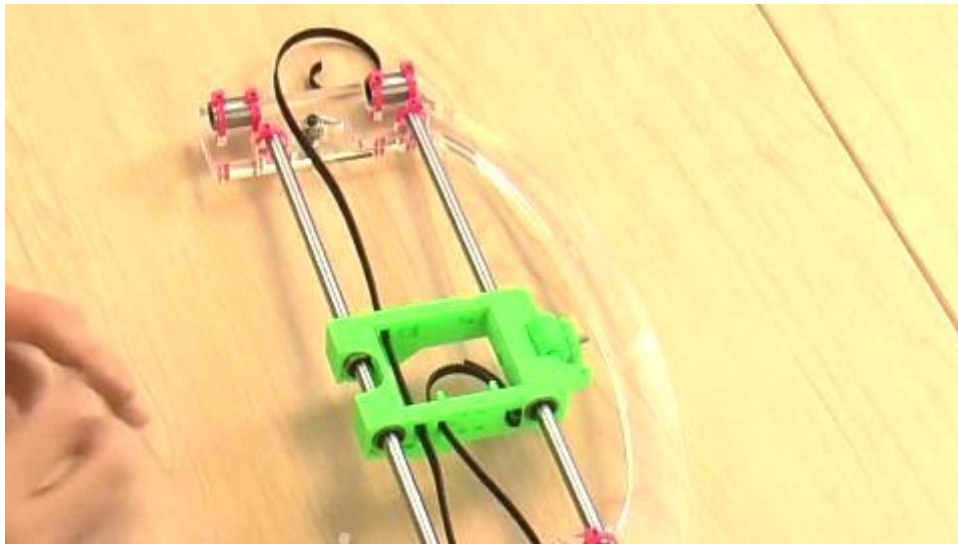Use vise grips to tighten the zip ties.

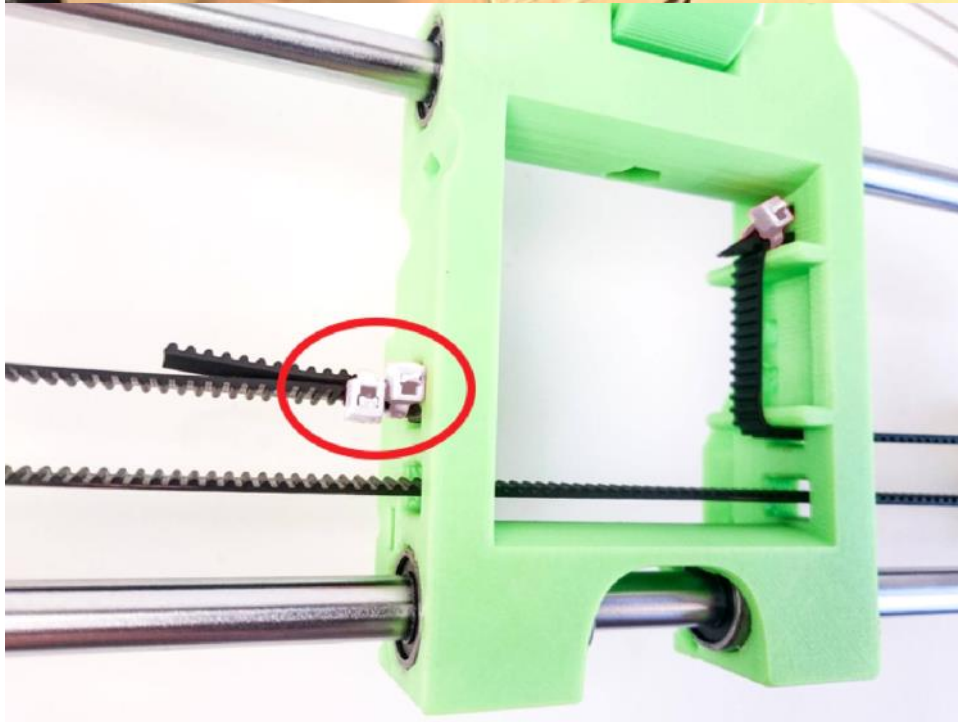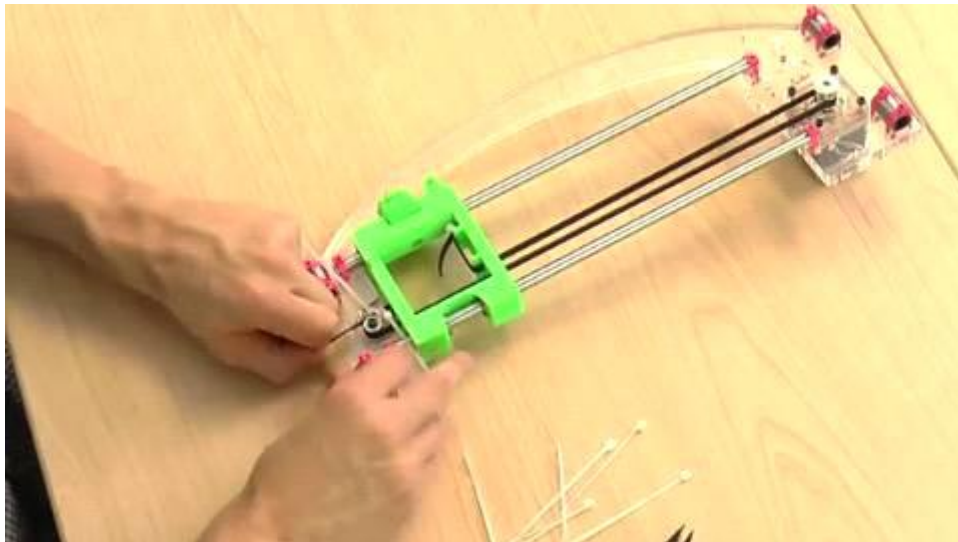# Title: X Linear Belt
You'll need:


X assembly
X belt
4" zip ties (3)

Thread the X Belt through the X carriage, around the X motor pulley, and around the X idler.
Use a 4" zip tie to secure the loop on the right side.

On the idler side, pull the belt tight and secure it with two 4'' zip ties.
(Good job for two. One pulls while the other one tightens zip ties.)
Check: The belt should be slightly tight when you finish.

Title: Tensioning System
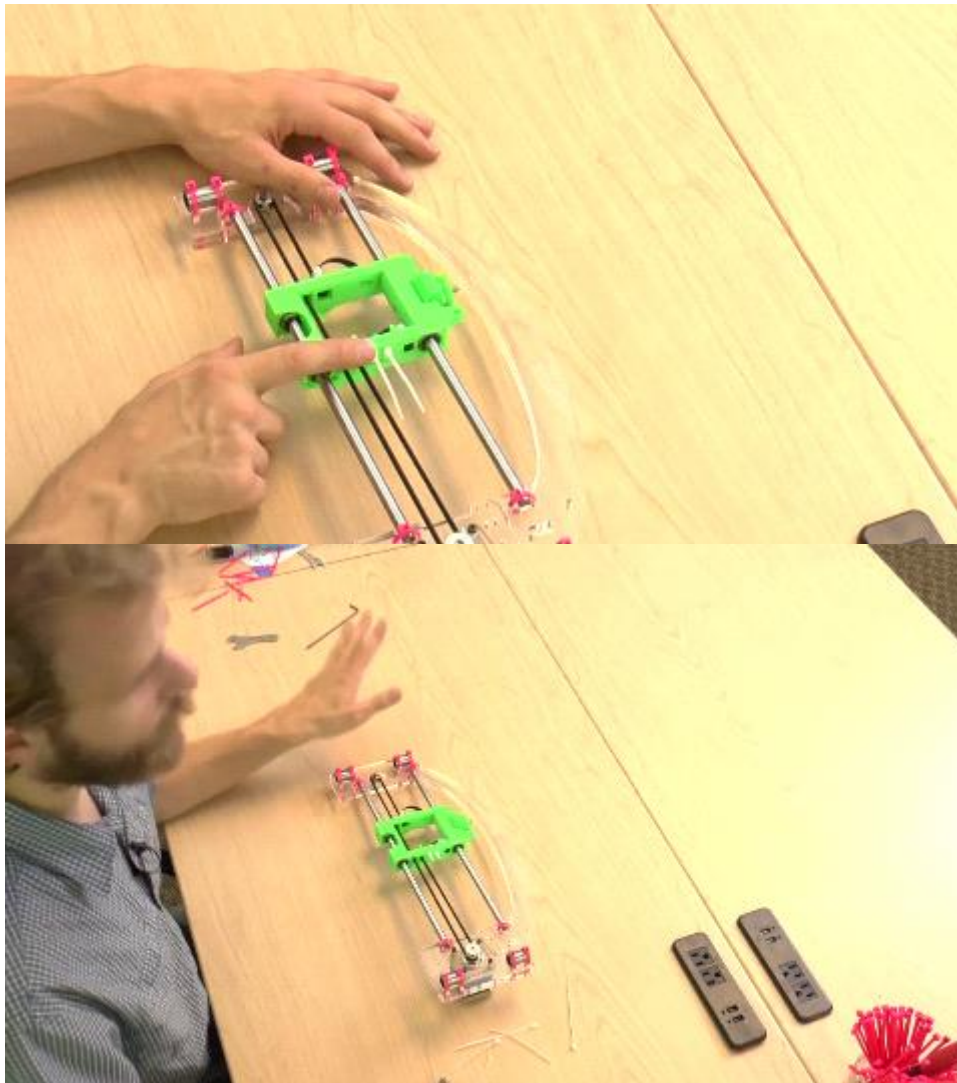
Loop in two small 4'' zip ties around the belt through the X carriage on the motor facing side.
Clip the zip ties, but make sure to leave enough so you can still grab them with vise grip.
These will be used later to tighten the belt once the printer is finished.