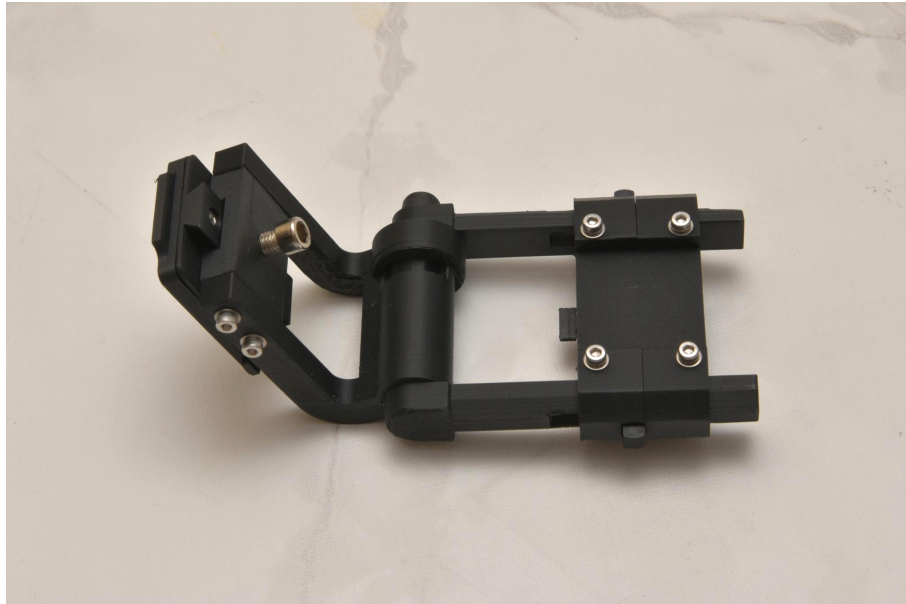


WARTHOG - Night Vision Mount Assembly Instructions

V1.0

Written by Markus Appel



Original document:

https://docs.google.com/document/d/1NejpL_fhWZOMTBt9t-dLtOY-cCIQJ-R0zfCnfCjdcJo

Notice

These instructions were made for V1 of the project. Until I remake them for V2, they can still be used, with the assembly process being essentially unchanged..

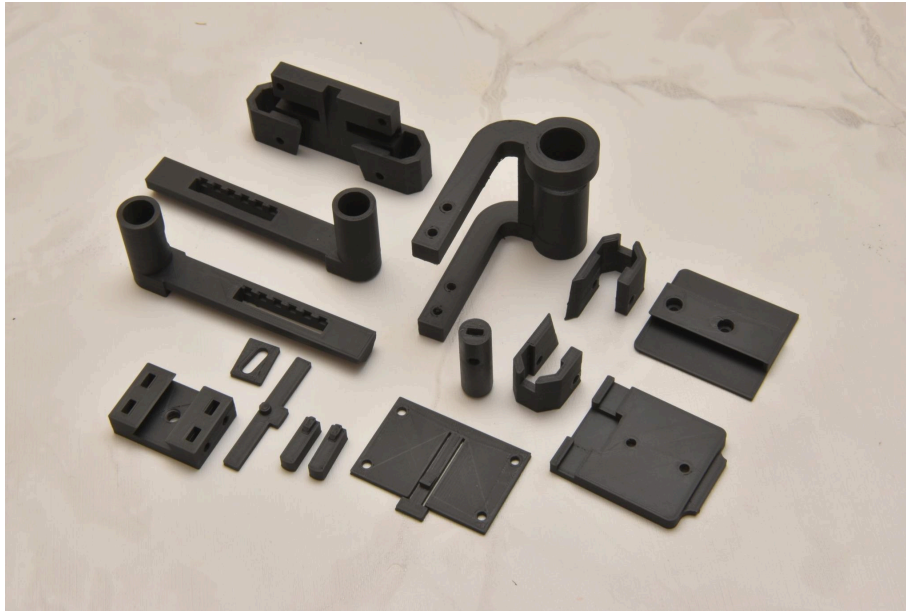
Printing

Print all parts in the files list.

For best results, use a strong material or 100% infill, or both. Use supports where necessary.

The file "Spacer.stl" is optional for step 16.

The picture below shows all required pieces, in the orientation they should best be printed in.



Parts



You will need the following additional parts to complete the build:

- 4x M3x25
- 4x M3x14
- 2x M3x8
- 1x M3x10
- 1x M6x11 (thumb screw recommended)*
- 12x M3 washer
- 11x M3 nut
- 2x 5.5mm x 17mm spring "A" **
- 1x 9.5mm x 55mm spring "B" ***

* can be between 11mm and 6mm long

** slightly different dimensions o.k., just not wider

*** slightly different dimensions o.k., can also be two or more stacked springs

Tools



You will need the following tools:

- Screwdriver compatible with M3 and M6 bolts
- Wrench / nut driver compatible with M3 nuts
- Silicon spray
- Rounded and flat files or sandpaper

Assembly

Step 1



Place the vertical slider in the base plate as pictured.

Step 2



Place the horizontal slider into the base plate as pictured. The small round extrusion should fit into the diagonal cut in the vertical slider. The slider should fit very snugly into the slightly curved cutout in the base plate.

After pushing it in all the way, it should be possible to move the horizontal slider back and forth with a considerable threshold. If the slider moves too easily it needs to be reprinted with different settings. If it cannot be moved carefully use a file on the sideways extrusion until it can.

Step 3



Place the top part as pictured on the assembly.





While holding the parts together, place a M3 nut in the lower hole in the back and secure it with a M3x8 bolt. Do not overtighten.

Step 4



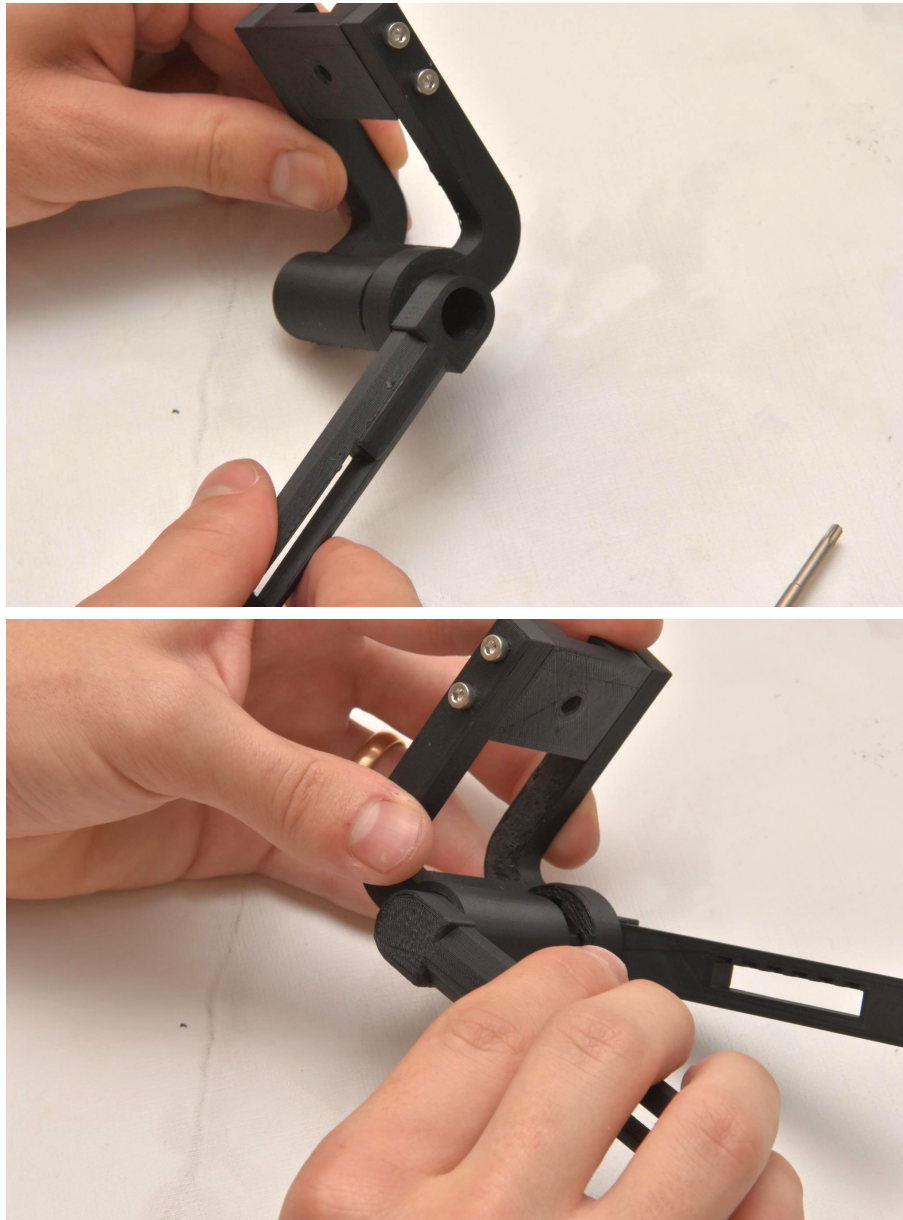
Repeat with the upper hole.

Step 5



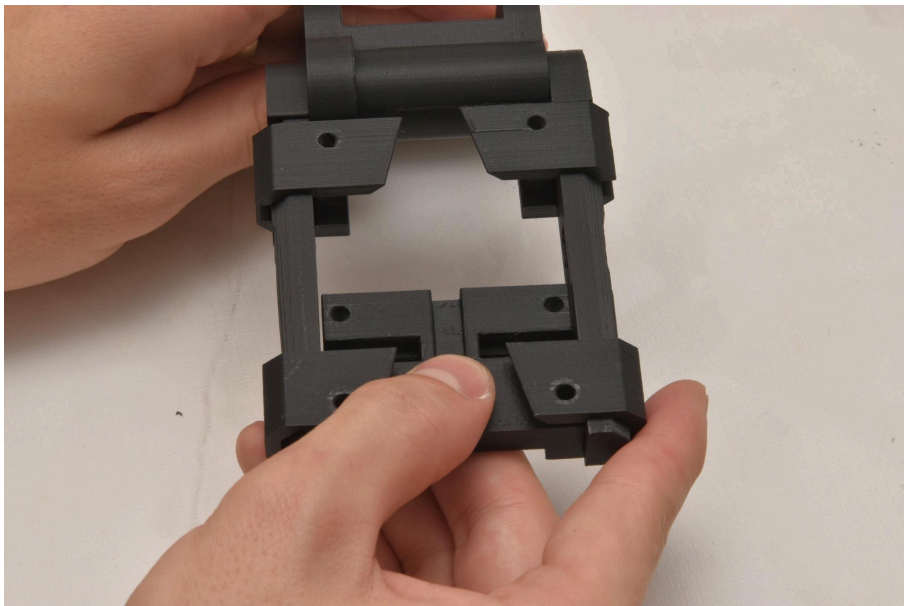
Place four M3 nuts in the cutouts as pictured. Secure them with four M3x14 bolts with washers. Do not overtighten.

Step 6



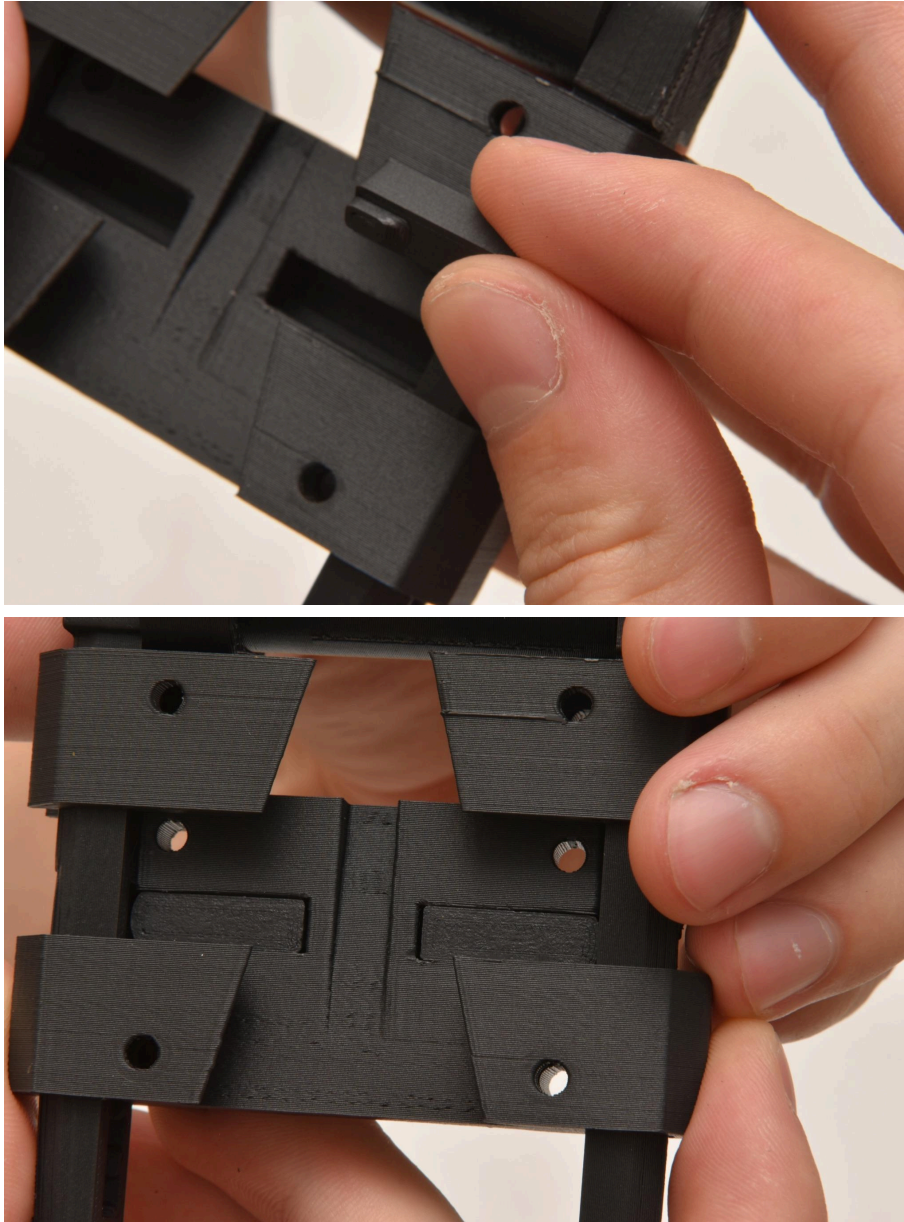
Insert the two rail parts into the holes on the assembly as pictured. Pay attention on which side the part with a hole, and on which side the part without a hole should be placed.

Step 7



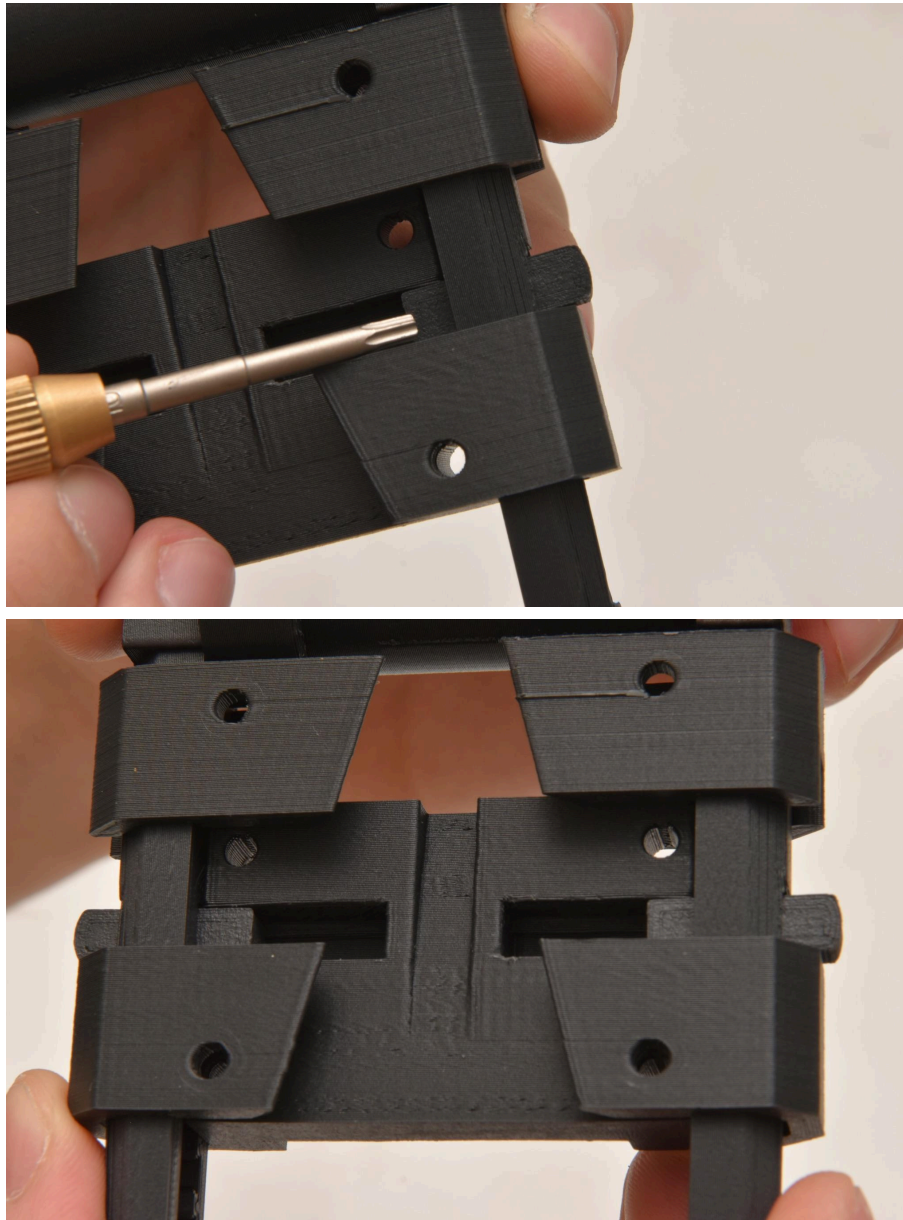
Slide the three parts onto the rails as pictured. Pay attention to orientation.

Step 8



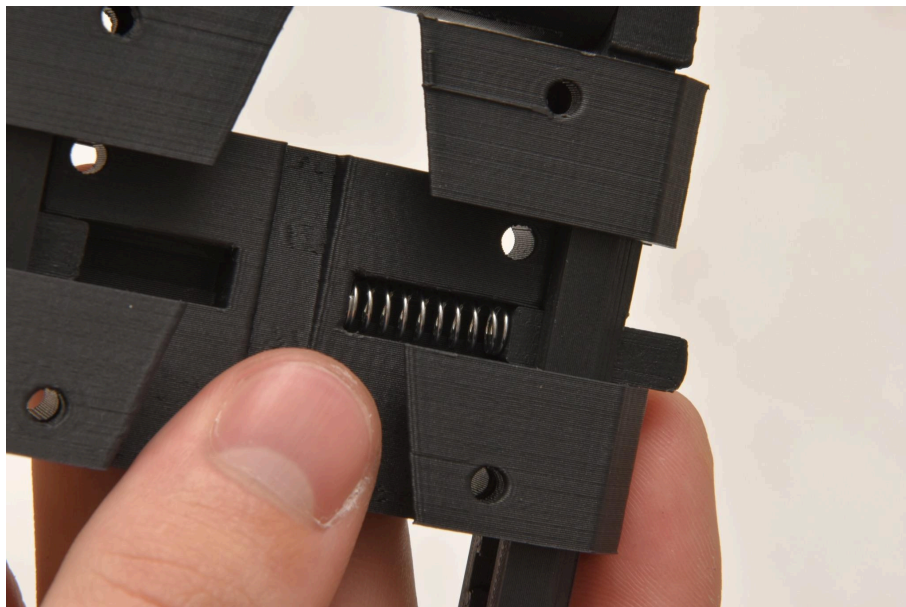
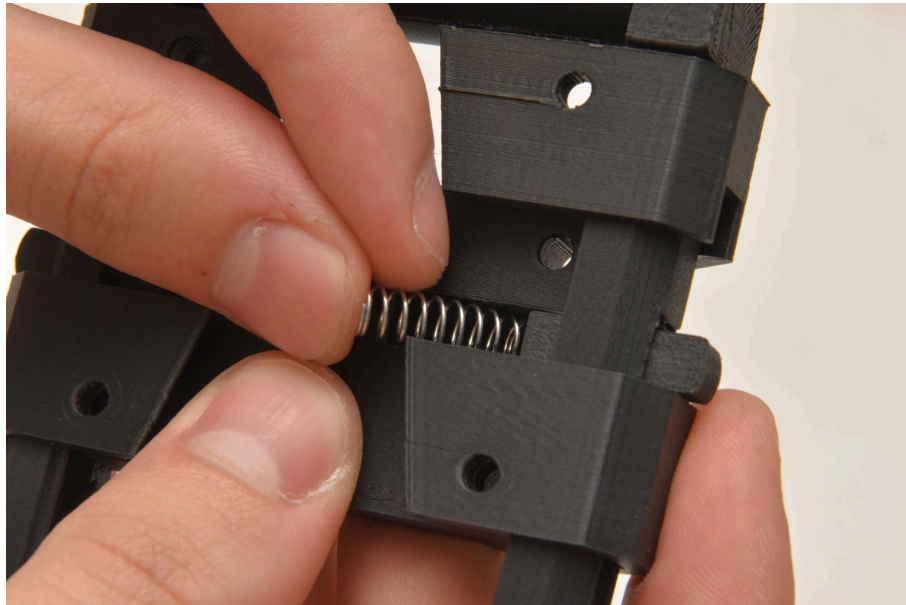
Place the two small sliders with the extrusion facing down and inwards into the cutouts.

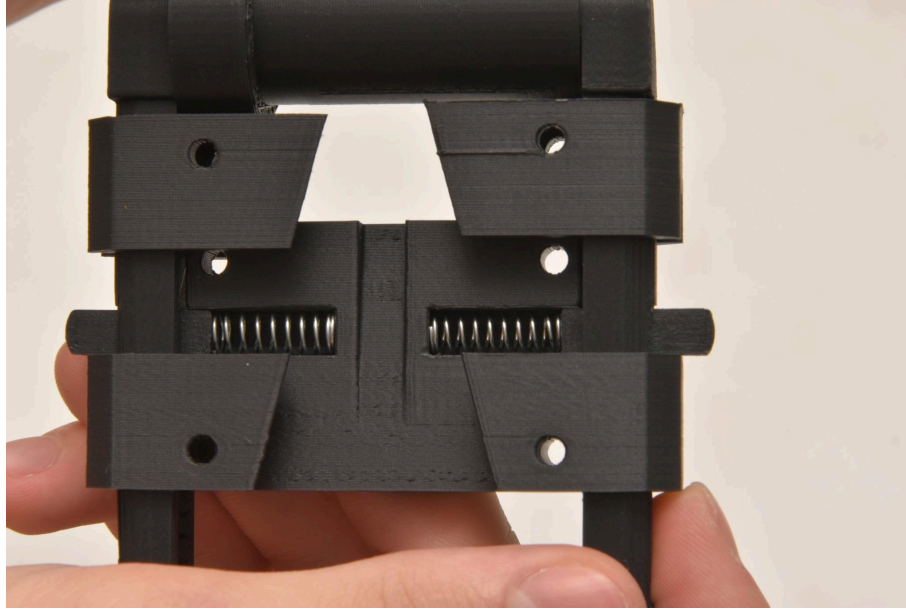
Step 9



Using a pointy object, slide the sliders towards the sides. They should stick out from the rails on the outside.

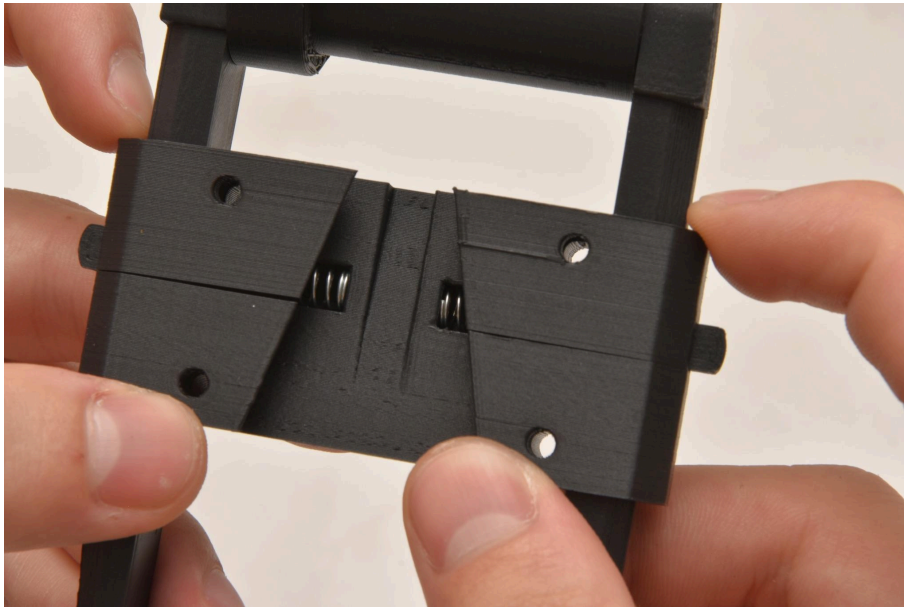
Step 10





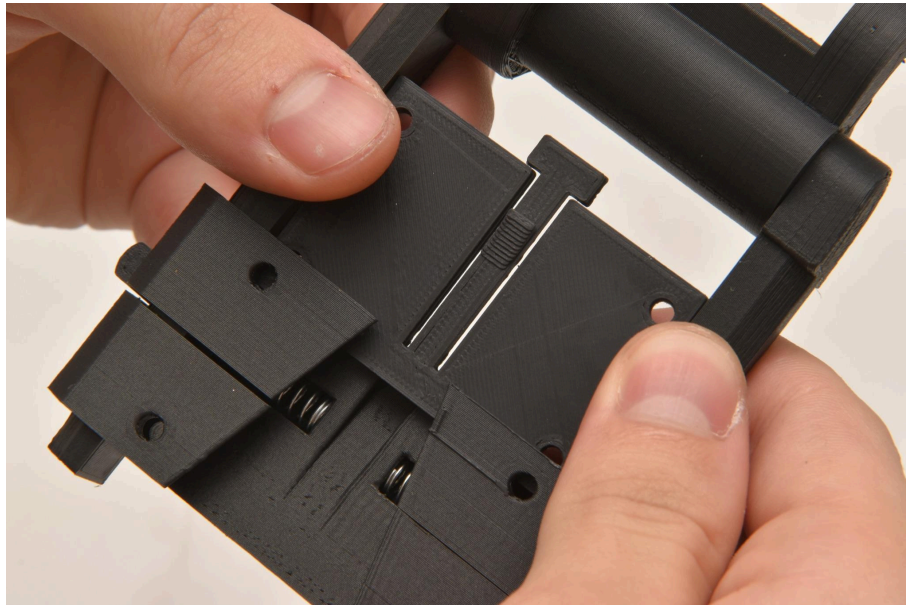
Insert the springs *A* into the open space of the cutouts as shown.

Step 11



Slide the two smaller parts on the rail over the big part.

Step 12



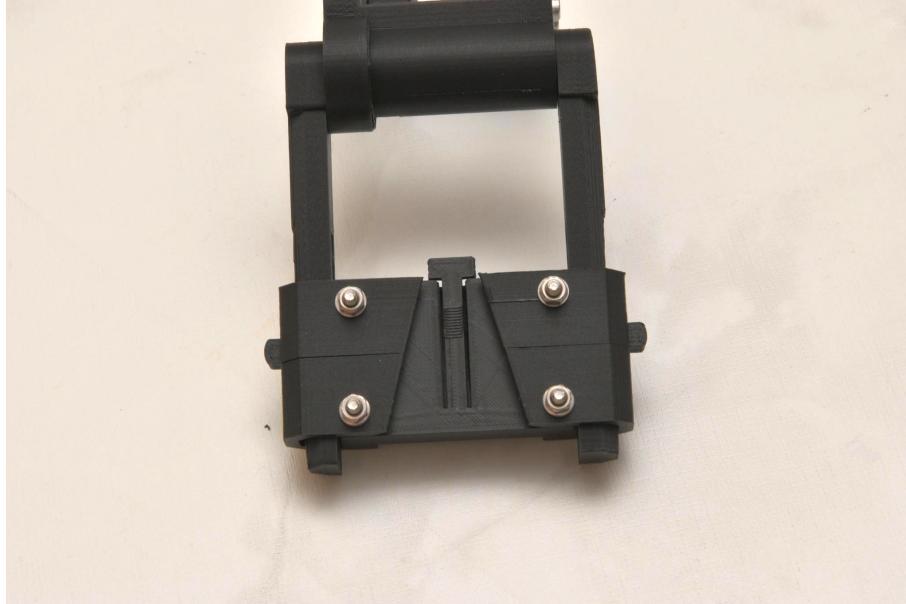
Insert the last part of the sled assembly as shown, with the small ramp facing outwards.

Step 13



Using four M3x25 bolts with washers on both sides secure the parts of the sled together.





The assembly should be able to slide back and forth on the rails when depressing the buttons. When releasing the buttons and pushing the sled in any given direction, the buttons should pop out and lock the sled in one of the detents on the rail. If that's not the case, disassemble the sled and review if the parts seized up due to imperfections in shape or dimensions, and if necessary sand the parts or apply silicone spray for lubrication.

Step 14



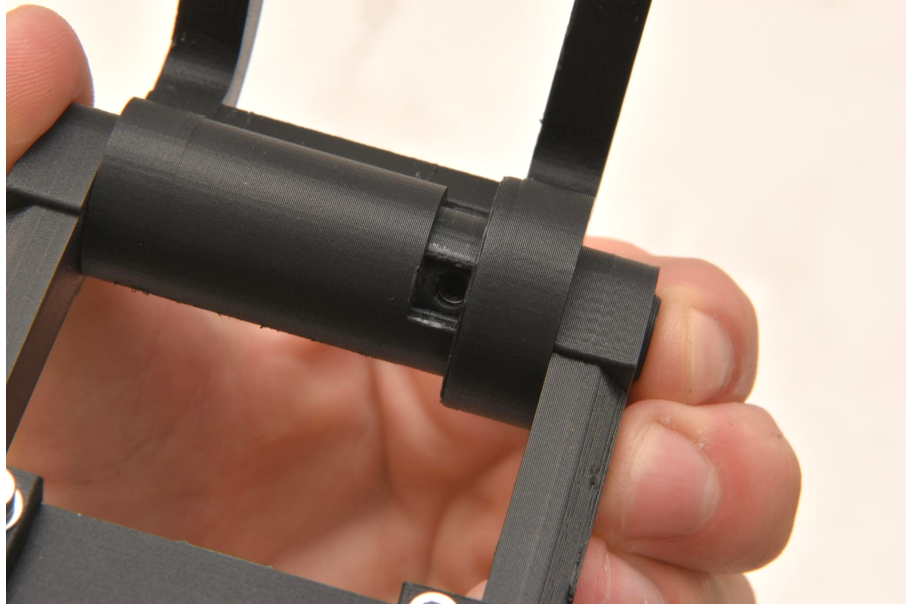
Push a M3 nut all the way into the button part using a long thin tool. It should be visibly aligned with the hole. (Note: In the picture, an existing nut is already visible all the way inside the slot. Ignore it.)

Step 15



Place spring *B* inside the hole of the joint on the main assembly.





Then, push the button into the hole, paying attention that the two parts of the joint and the hole in the button are aligned. If the button does not slide easily, remove the spring and sand down the button and the inside of the hole, and use silicone spray to lubricate both. The button should be pushed out at least a bit more than 5mm if let go.

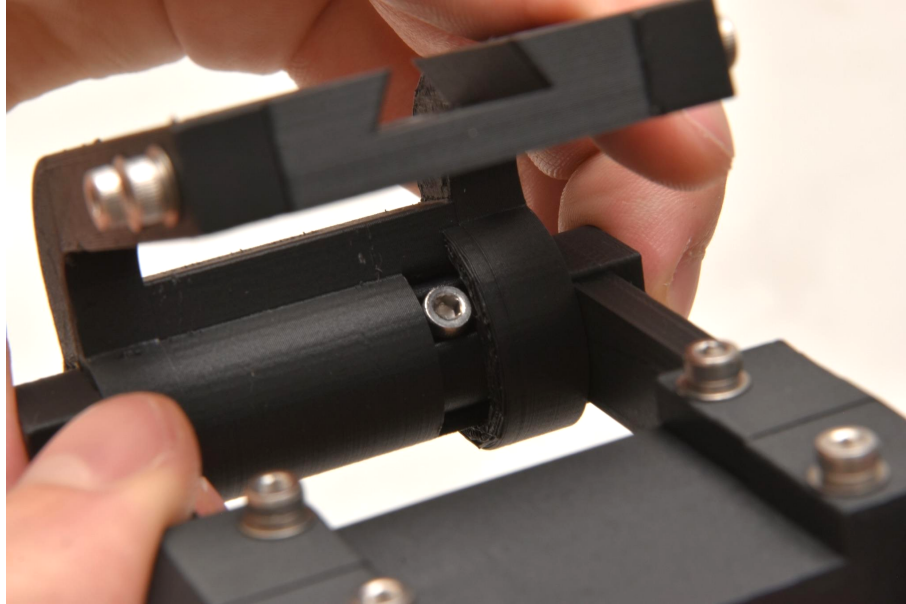
Step 16



Take the M3x10 bolt and, while keeping the joint and button aligned, screw it into the nut inside the button. The head of the bolt should be high enough to ride both grooves of the inside and the outside parts of the joint. If the bolt head has a rough surface, file it down until it is smooth all around. If only flat head bolts are available print the optional spacer part (adjust the height as necessary) and slide it over the bolt before screwing it back in.

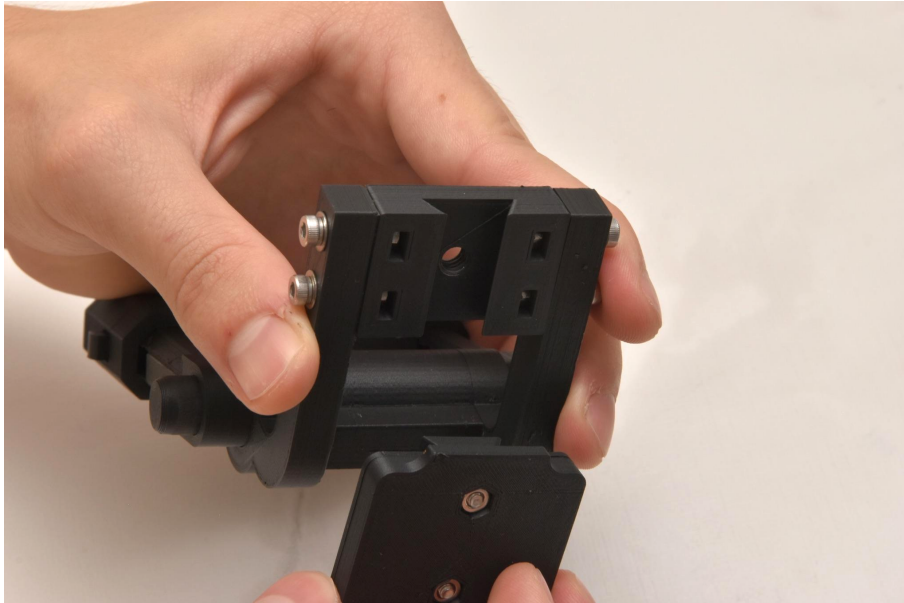
Lubricate the grooves with silicone spray.

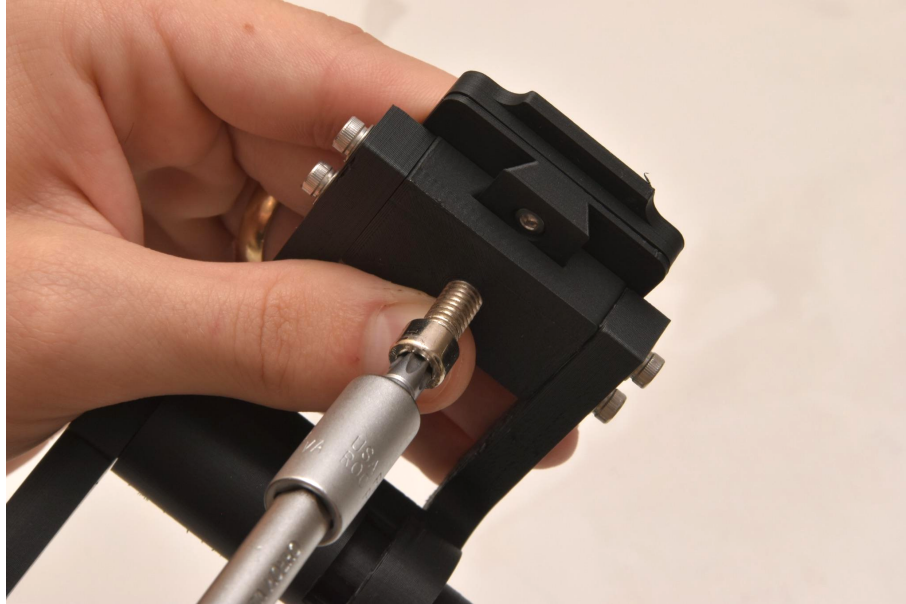




Finally, the bolt should be able to ride inside the U-shaped groove when the button is pressed, the joint is moved, and the button is let go. If this does not work, eliminate any points of friction that may be causing issues until it does. Review if the spring *B* that has been used is strong enough to push out the button.

Step 17





Finally, slide the shroud connector over the slider on the main assembly, and secure it with the M6 bolt. Tighten the bolt just enough so the slide doesn't move around if force is applied to it.