



3D Printed Hand Tutorial

(Print and assemble)

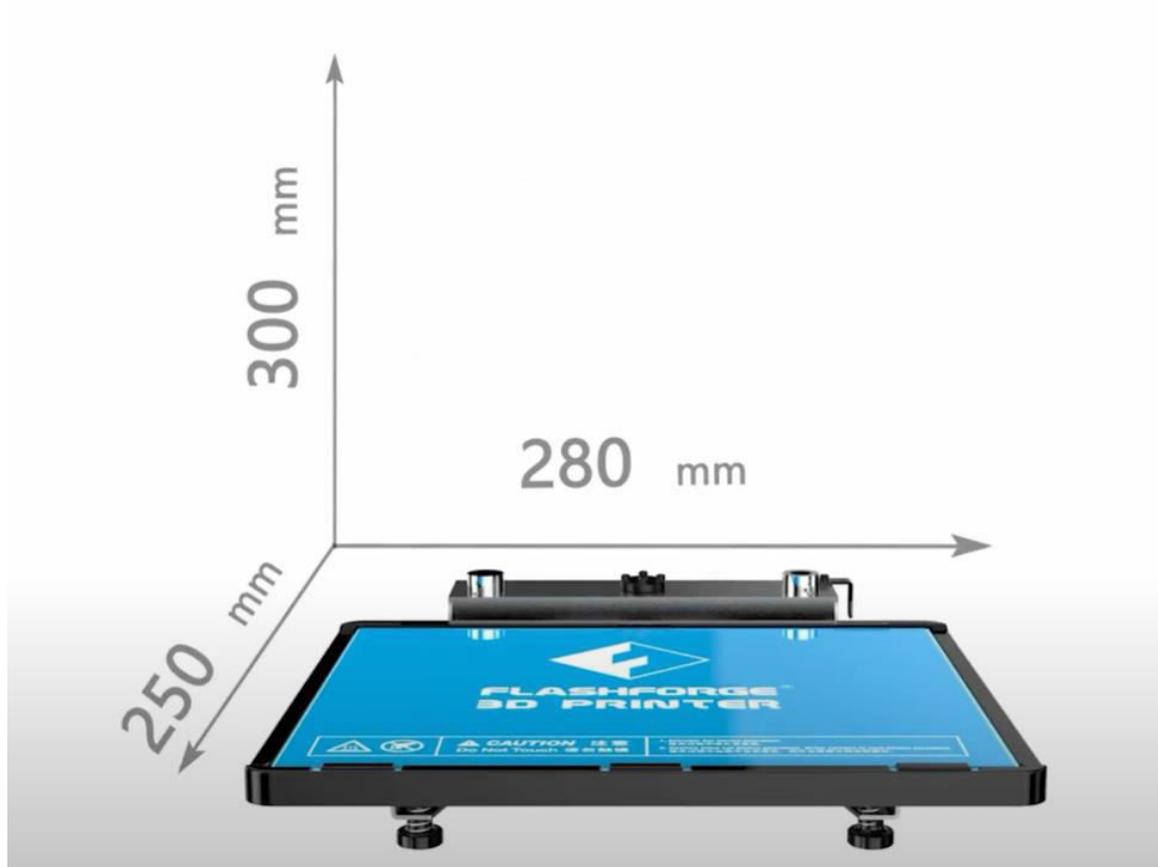
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Division of Computer Engineering
School of Computer Science and Engineering
University of Aizu

Jiangkun Wang
Nov 1st, 2021

3D printer (FLASHFORGE GUIDER2)

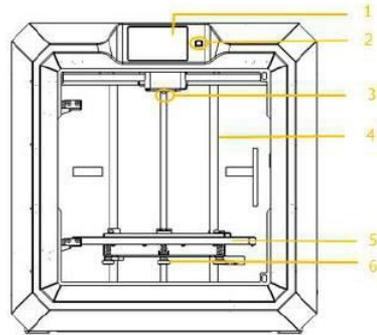


3D printer tutorial

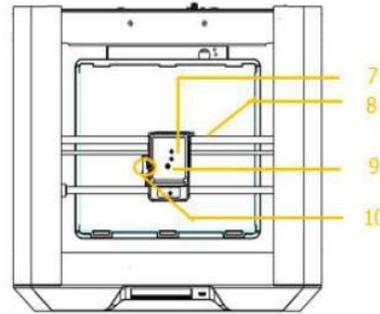


<https://www.youtube.com/watch?v=lpFeCz0mbfE>

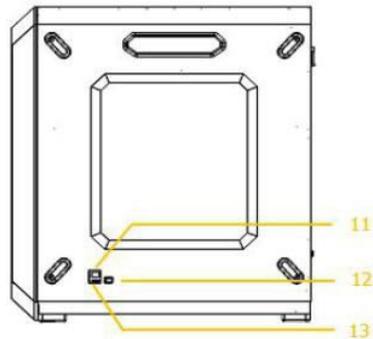
Views



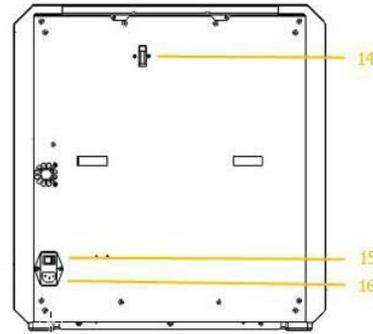
Front



Top



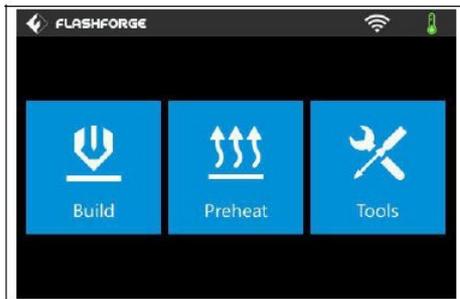
Right

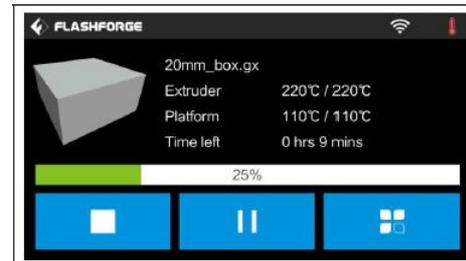


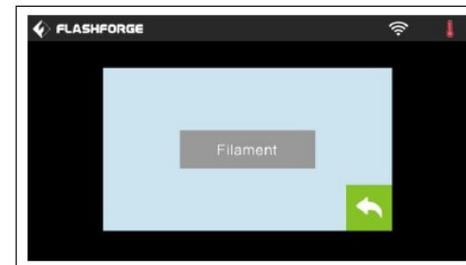
Back

- | | | |
|------------------------|---------------------|-----------------------|
| 1. Touch screen | 6. Leveling knob | 11. Ethernet input |
| 2. Touch screen button | 7. Extruder | 12. USB cable input |
| 3. Nozzle | 8. X-axis guide rod | 13. USB stick input |
| 4. Z-axis guide rod | 9. Filament intake | 14. Filament detector |
| 5. Build plate | 10. Spring presser | 15. Power switch |
| | | 16. Power input |

Interface Menus

 <p>The screenshot shows the 'FLASHFORGE' interface with three main menu items: 'Build' (represented by a hand icon), 'Preheat' (represented by three upward arrows), and 'Tools' (represented by a wrench and screwdriver icon).</p>	<p>Build</p>
 <p>The screenshot shows the 'FLASHFORGE' interface with three options: a printer icon with '29MB' and '6835MB' below it, a USB stick icon with 'None' below it, and a green arrow icon for 'Back'.</p>	<p>Read the print file from</p> <ul style="list-style-type: none"> ⌘ The local memory card ⌘ The USB stick ⌘ Back
 <p>The screenshot shows the 'FLASHFORGE' interface displaying a file list for '20mm_box.gx' with a 'Total: 0 hrs 18 mins' estimate. Below the list are four buttons: 'Build' (blue), 'Copy' (grey), 'Delete' (blue), and a green arrow icon for 'Back'.</p>	<p>Select the target print file among the list</p> <ul style="list-style-type: none"> ⌘ Build: To begin printing. ⌘ Copy: To copy the files to the local memory card from the USB stick.(The button is not available while printing from local memory card) ⌘ Delete: To delete the print file. ⌘ Back

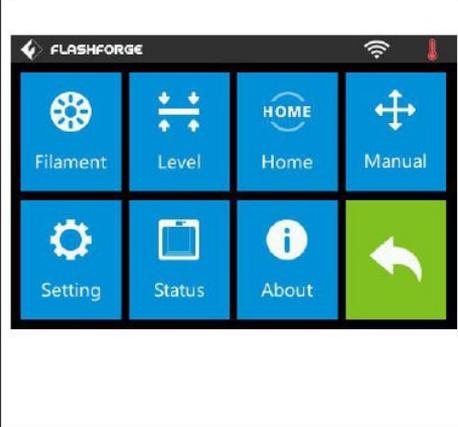
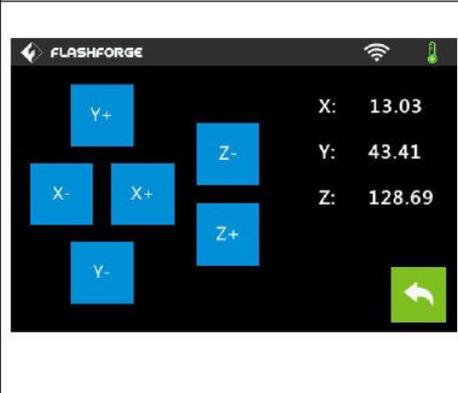
 <p>The screenshot shows the 'FLASHFORGE' print progress screen for '20mm_box.gx'. It displays 'Extruder 220°C / 220°C', 'Platform 110°C / 110°C', and 'Time left 0 hrs 9 mins'. A progress bar is at 25%. At the bottom are three buttons: a square icon, a pause icon, and a grid icon.</p>	<p>Print interface</p> <ul style="list-style-type: none"> ⌘ Abort: To abort the print job. ⌘ Pause/Resume: To suspend or resume the print job. ⌘ More: To change filament.
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 <p>The screenshot shows the 'FLASHFORGE' filament selection screen with a large light blue area and a 'Filament' button. A green arrow icon for 'Back' is in the bottom right corner.</p>	<p>Tools in print interface</p> <ul style="list-style-type: none"> ⌘ Filament: To change filament during printing. <p>(Note: You need to suspend the operation first)</p> <ul style="list-style-type: none"> ⌘ Cancel: To end the tool orders and return to the print interface.
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Interface Menus

	<p>Preheat</p>
	<p>Tap the [Preheat] button to enter the preheat interface. Tap the [Start] button to heat up to the setting temperature. The default temperature is 220 °C. Tap the temperature display bar to set the temperature.</p>
	<p>To set the preheat temperature. Tap [Yes] to save the setting while tap [No] to cancel the setting.</p>
	<p>The picture displays the preheat interface. It shows the actual temperature and the target temperature. Tap the [Abort] button to abort the preheat job.</p>

Interface Menus

	<p>Tools</p>
	<p>Tap [Tools] to enter tool options.</p> <ul style="list-style-type: none"> ✎ Filament: To load/unload the filament. ✎ Level: To adjust the build plate. ✎ Home: To make the X, Y and Z axes back to the zero point. ✎ Manual: To manually adjust the positions of X, Y and Z axes. ✎ Setting: To implement relevant function setups. ✎ Status: The check the real-time status of the printer. ✎ About: Information about the printer. ✎ Back
	<p>Manual adjustment</p> <ul style="list-style-type: none"> ✎ Y+: The extruder moves to the zero point, that is, the back of the machine ✎ Y-: The extruder moves to the direction opposite to the Y+. ✎ X+: The extruder moves to the zero points, that is, to the right direction ✎ X-: The extruder moves to the direction opposite to the X+. ✎ Z+: The build plate elevates. ✎ Z-: The build plate descends. ✎ Back

Power on

Take the top cover out of the printer.





Software Installation

Open the link below to download the installation package:

<http://www.FlashForge.com>

Steps:

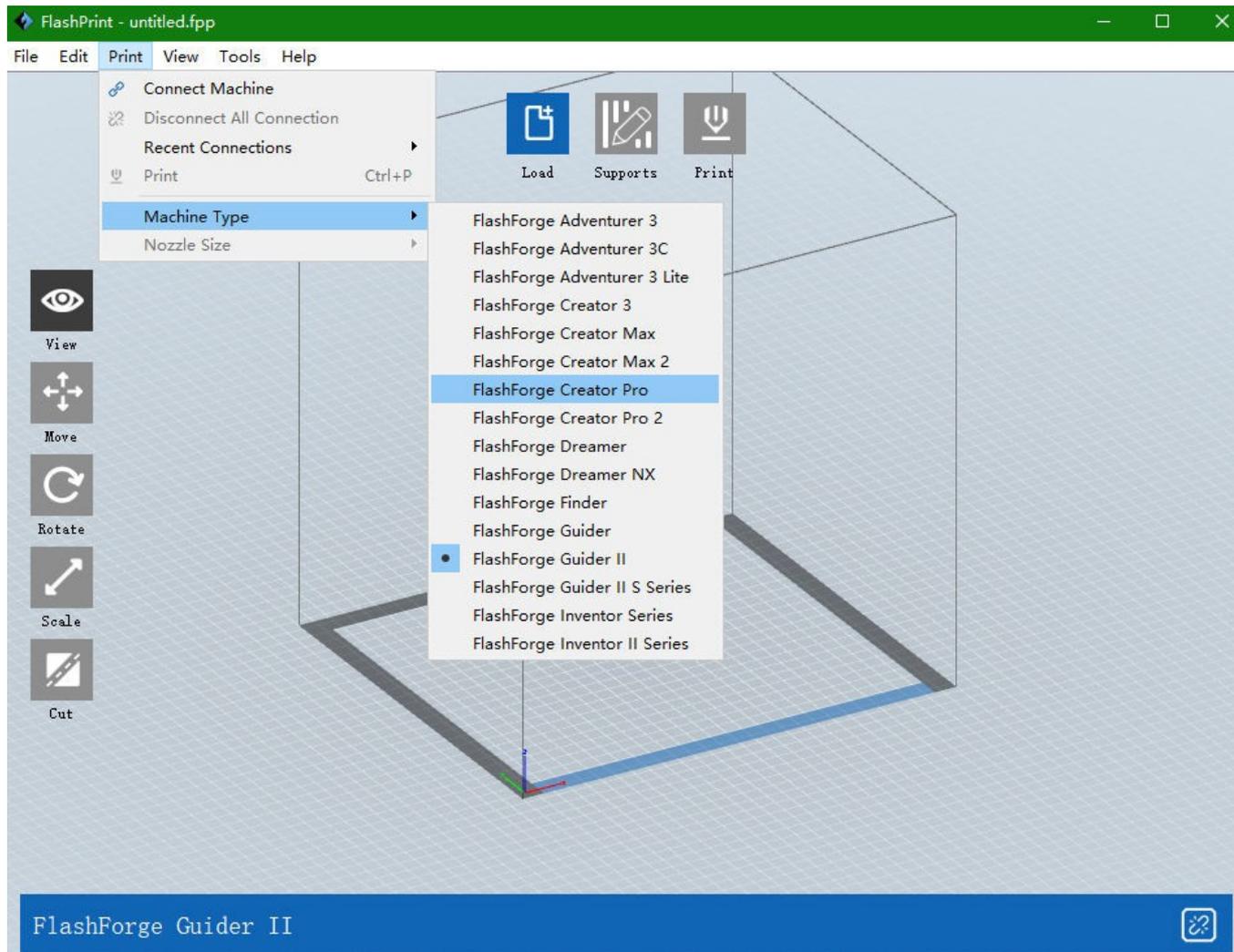
Support---Downloads---FlashPrint---Choose the software version---Download

Start-up

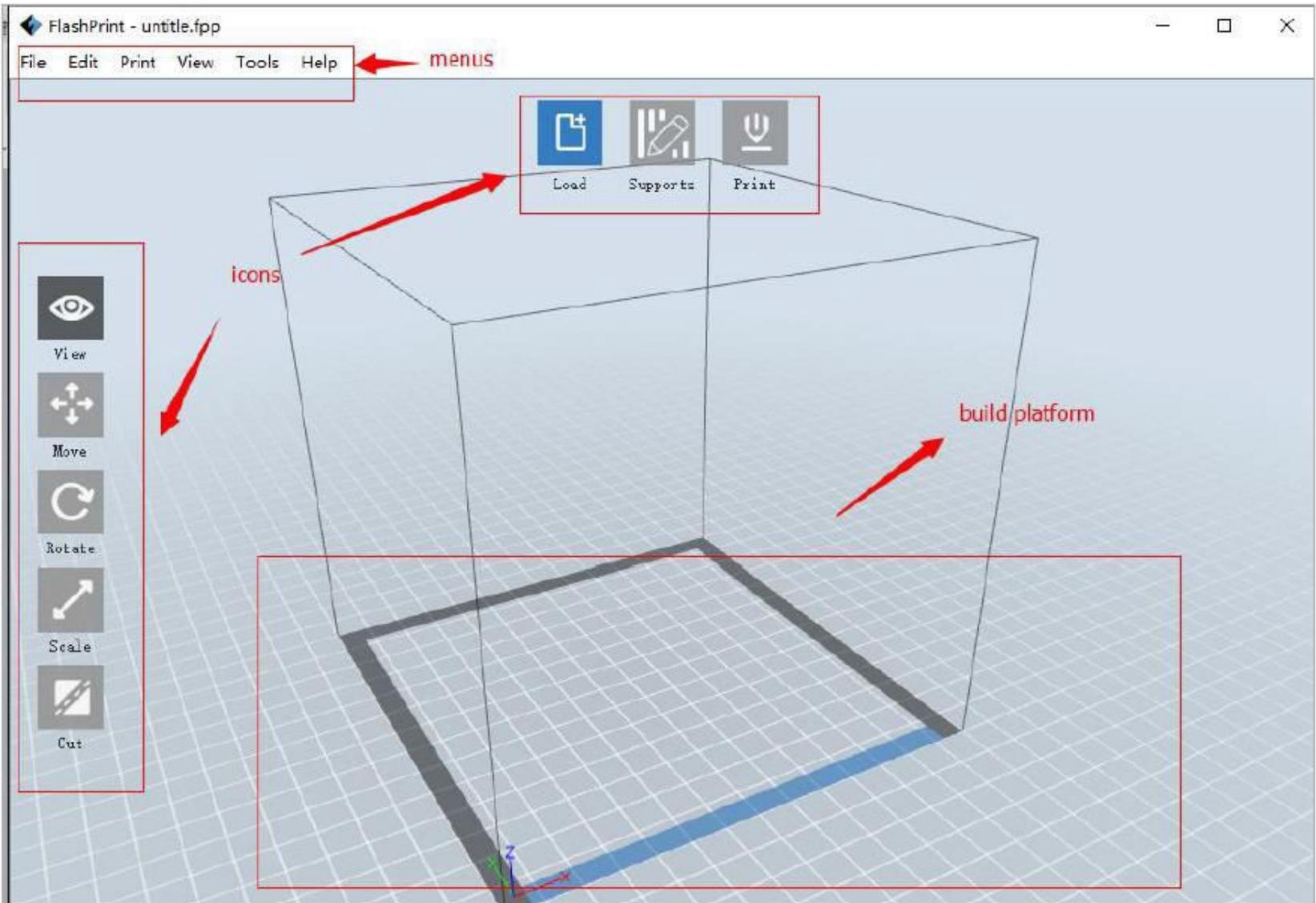
1. Decompress the zipped file or start the installation program, and then install the software according to the direction.
2. Start the software with the start menu shortcut or by clicking the software icon.



Machine Type Selection



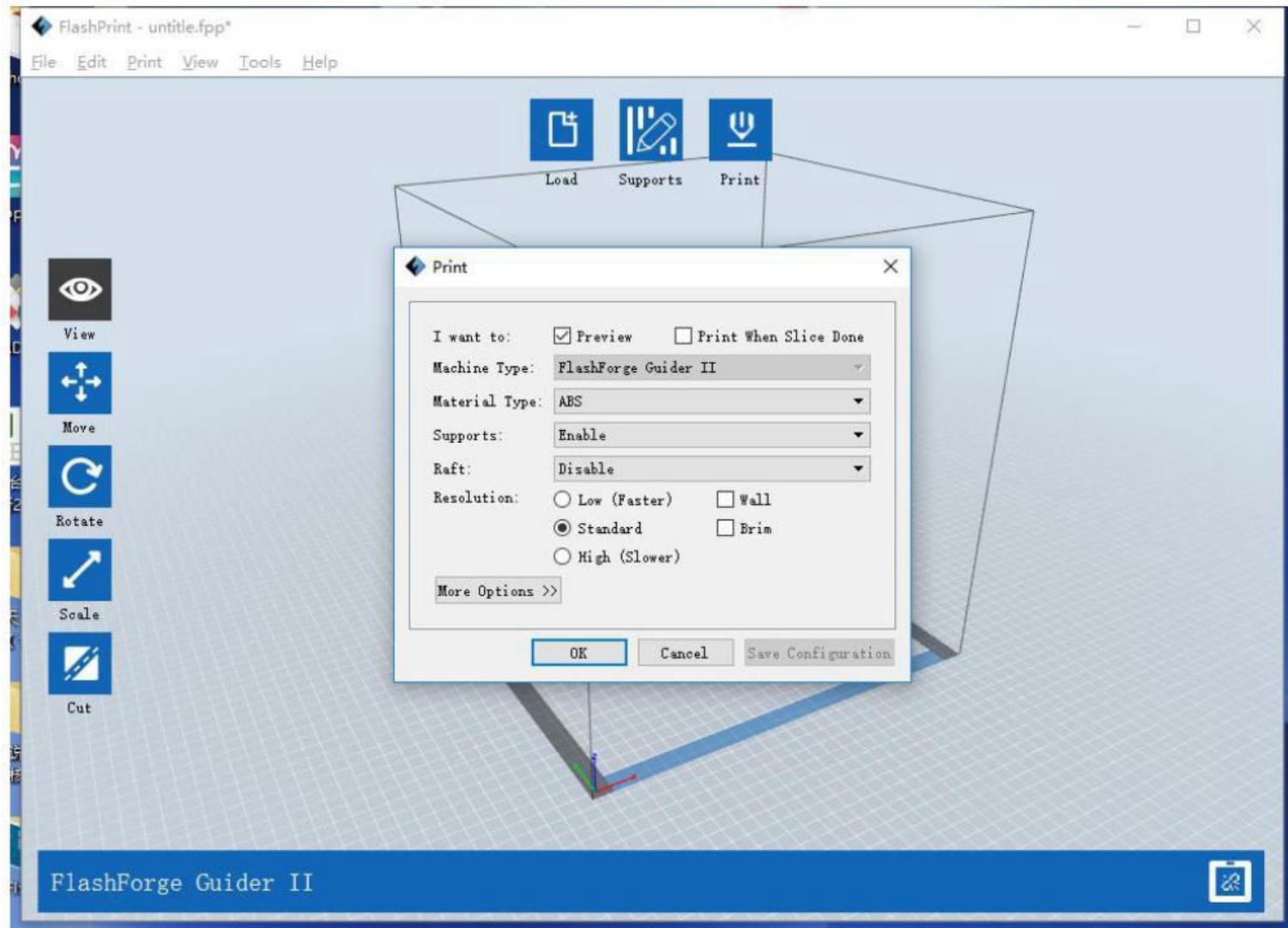
Software Introduction



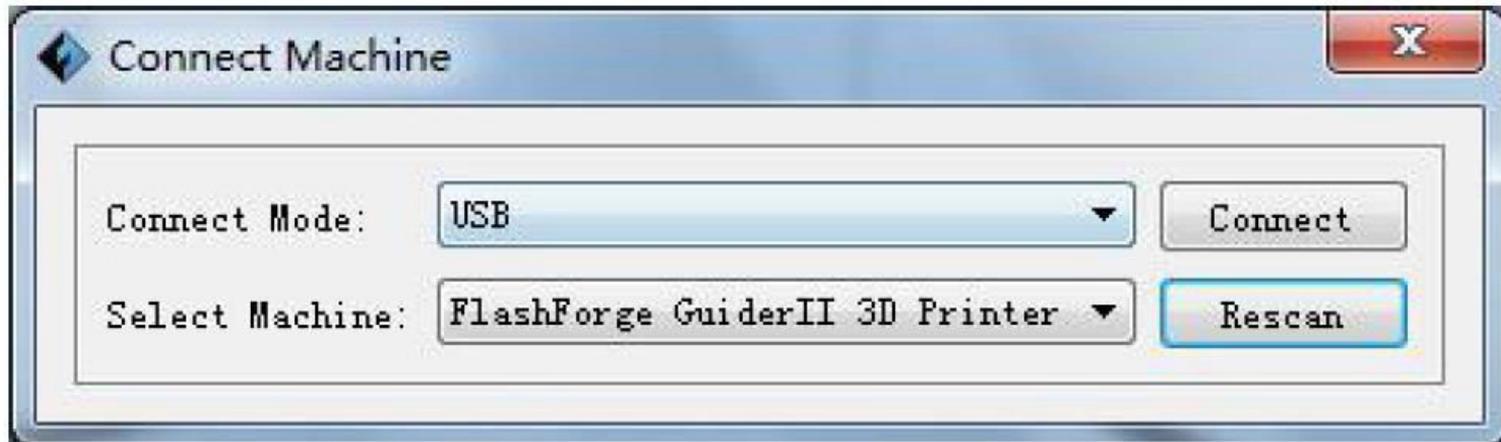
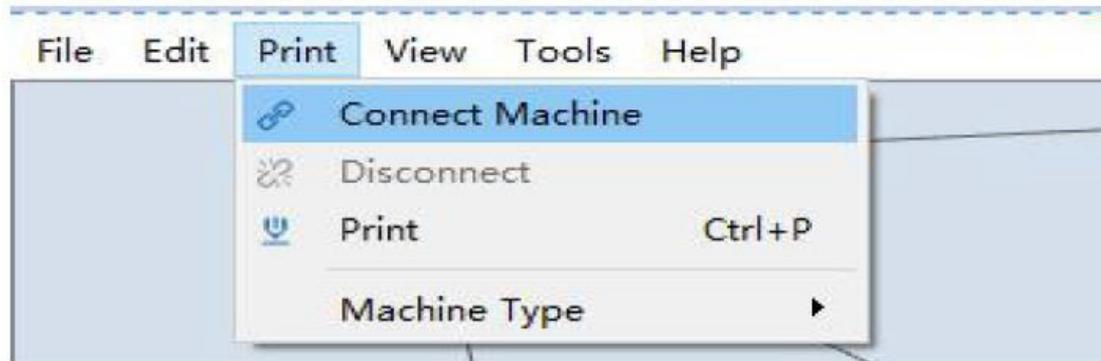
Software Introduction

	Load files.
	Enter the support edit mode
	Print it directly with your Guider II or export to your USB Stick
	View FlashPrint home screen from one of six viewing angles
	Move model around on XY-plane; shift+click to move along Z axis
	Turn and rotate your model
	Scale the size of your object
	Cut model into several parts

Software Introduction



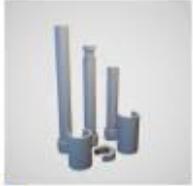
Software Introduction





Print

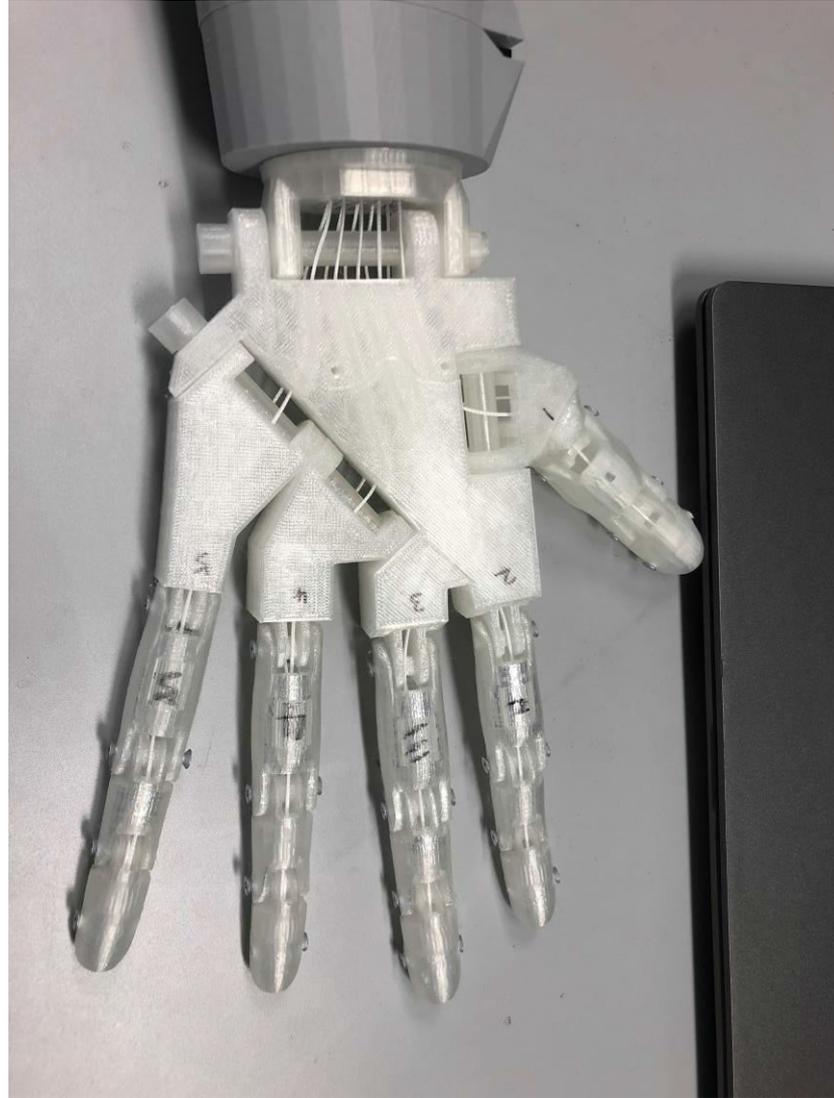
Print

								
✓ Auriculaire3.stl	✓ Bolt_entretoise7.stl	✓ FingerTipMoldV3.stl	✓ Index3.stl	✓ leftcoverfin...	✓ LeftRobCableBackV3.stl	✓ LeftRobCableFrontV3.stl	✓ LeftRobCap3V2.stl	✓ LeftRobpart2V4.stl
								
✓ LeftRobpart3V4.stl	✓ LeftRobpart4V4.stl	✓ LeftRobpart5V4.stl	✓ LeftRobServoBedV6.stl	✓ LeftRotawrist1V4.stl	✓ LeftRotaWrist2V3.stl	✓ LeftTensionerV1.stl	✓ leftthumb5.stl	✓ lefttopsurface6.stl
								
✓ lefttopsurfaceUP6.stl	✓ LeftWristlargeV4.stl	✓ LeftWristsmallV4.stl	✓ Majeure3.stl	✓ ringfinger3.stl	✓ RobCableBackV3.stl	✓ RobCableFrontV3.stl	✓ RobRingV3.stl	✓ RobServoBedV6.stl
								
✓ RotaWrist1V4.stl	✓ RotaWrist2V3.stl	✓ RotaWrist3V3.stl	✓ servo-pulleyX5.stl	✓ TensionerRig htV1.stl	✓ WristGearsV5.stl			



Assemble

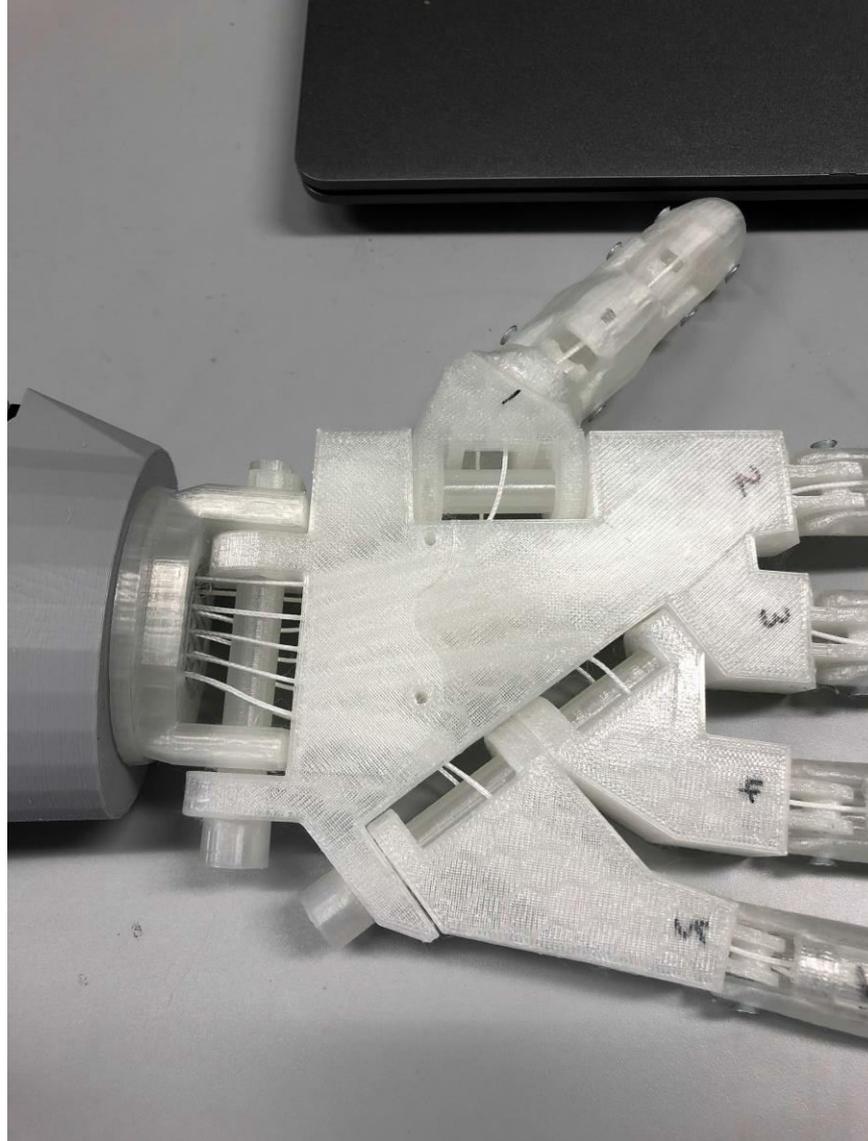
Fingers



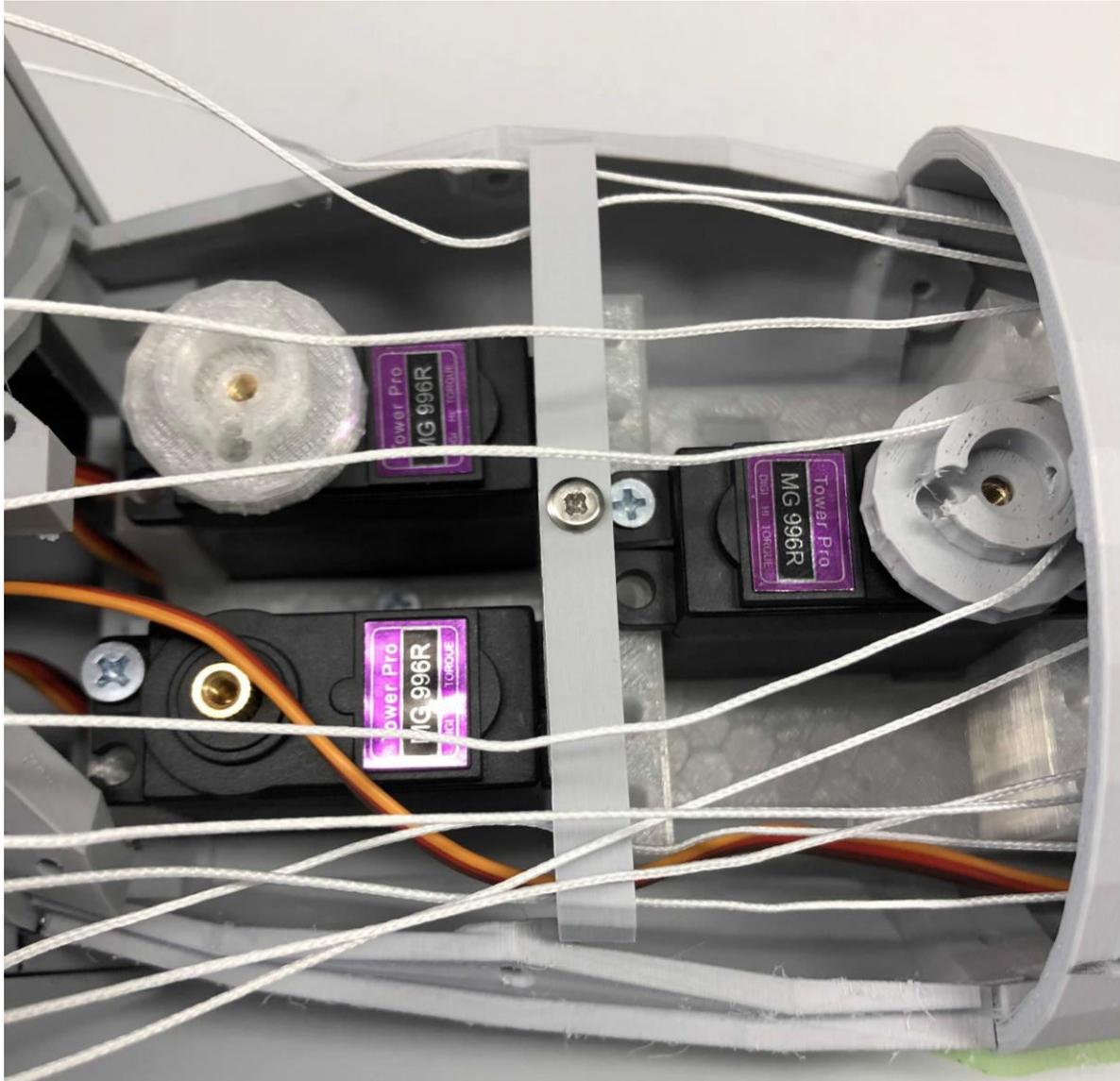
Palm



Palm



Motor



Merits

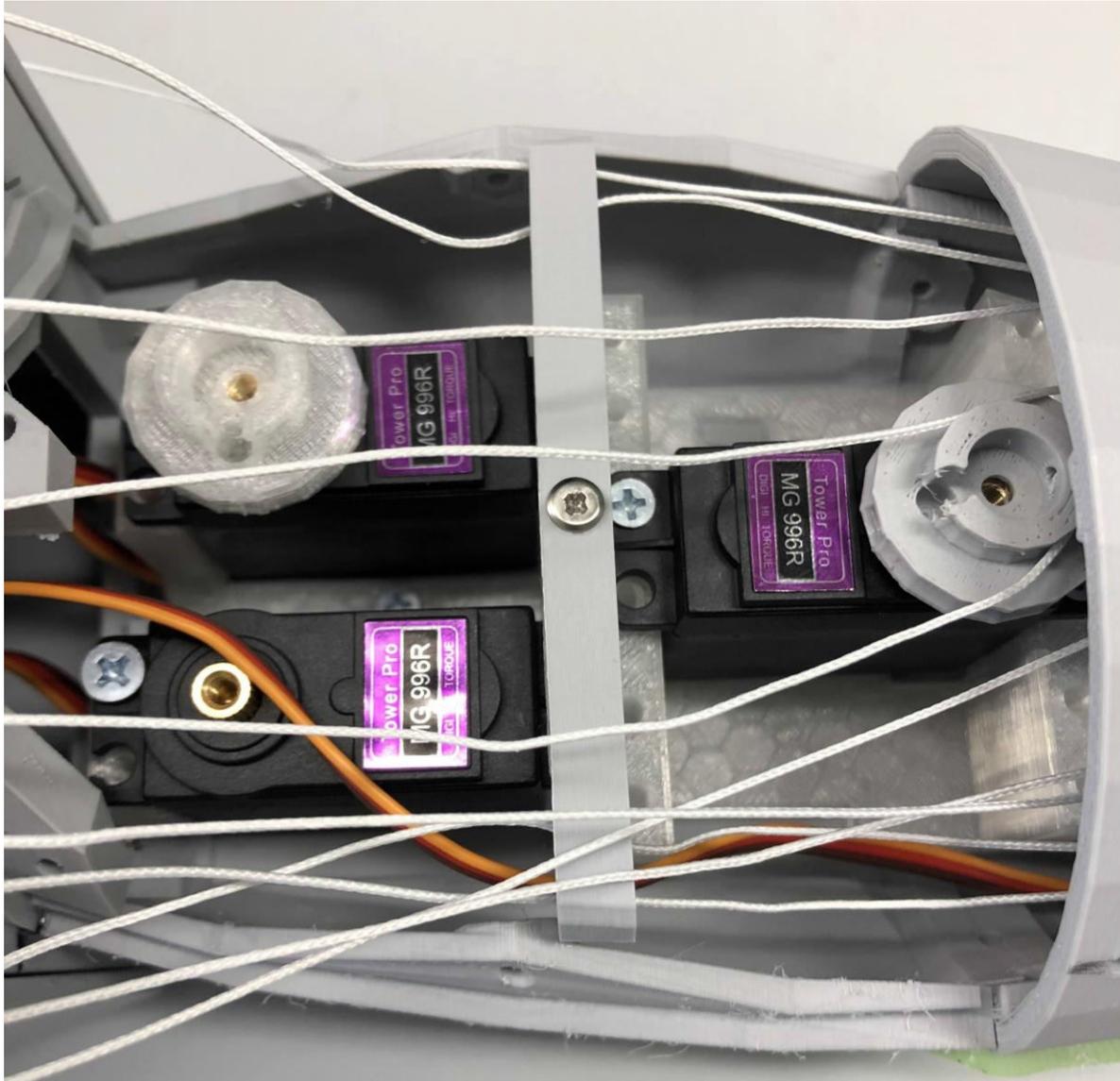
Arm



Hand



Motor



THANK YOU