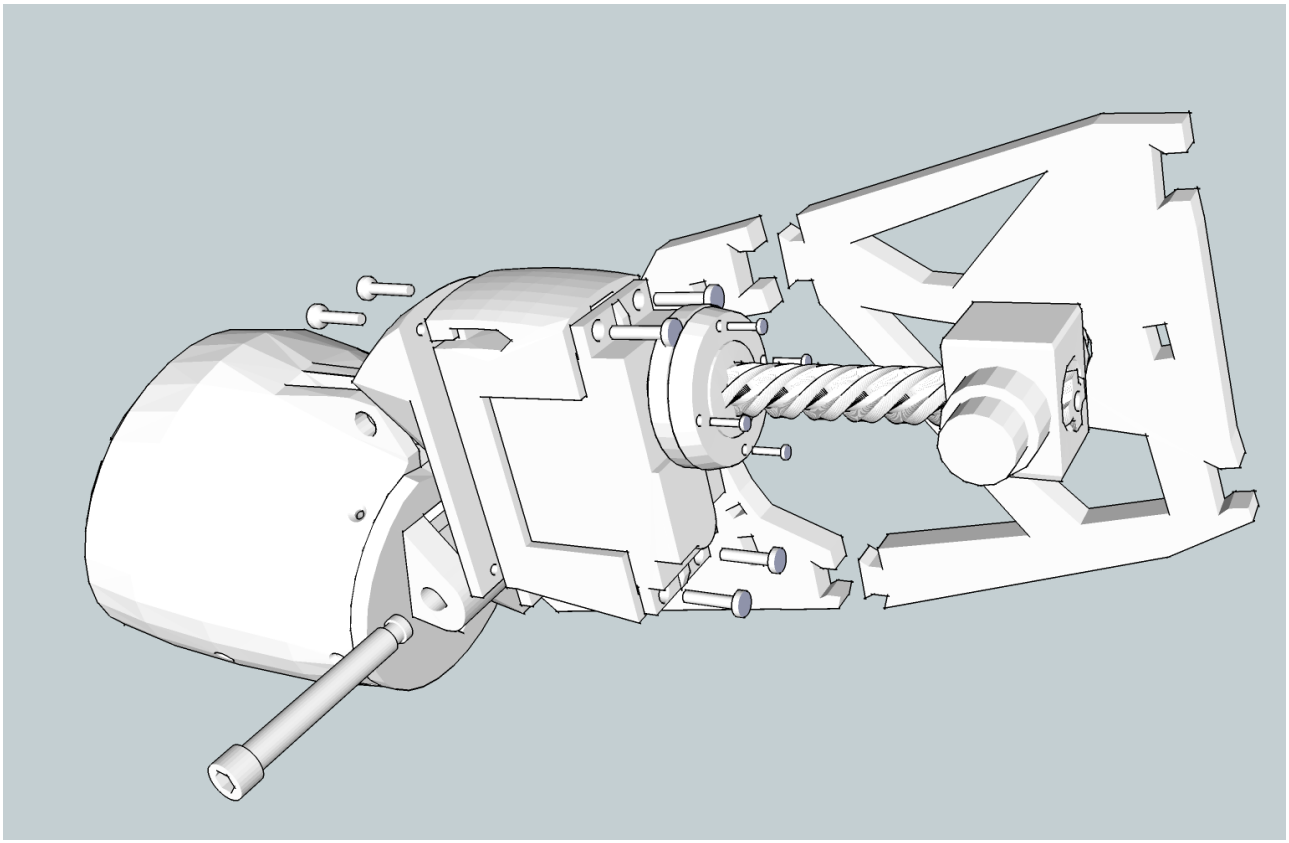
PART: BICEP



The Biceps

I have tried to make this as simple as I could, and I hope you will find answers to your questions here. Once you have printed the parts you can start the job. On these pictures I was assembling the left arm so take that in consideration if you are building the right arm.

Assembly

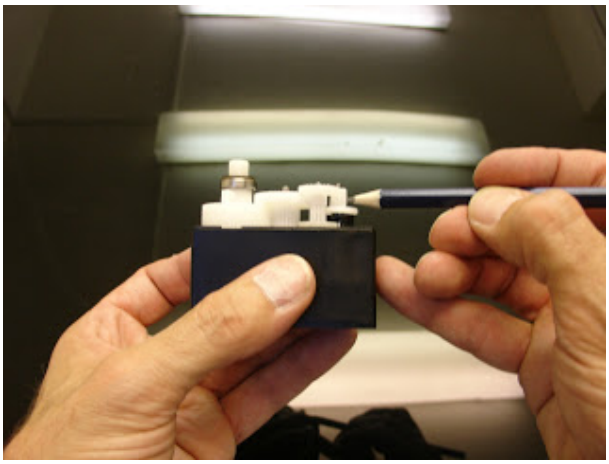
The biceps, together with the shoulder is one of the components for the second arm. It has a servo motor in the core and in order to weld it to the lower part of the bicep it is necessary to install an extra cable.

Once you have done that, you can start putting all the printed pieces together.

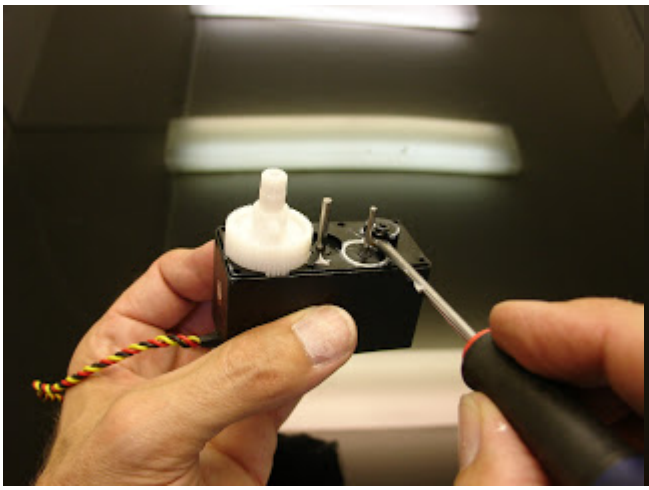
PART: BICEP

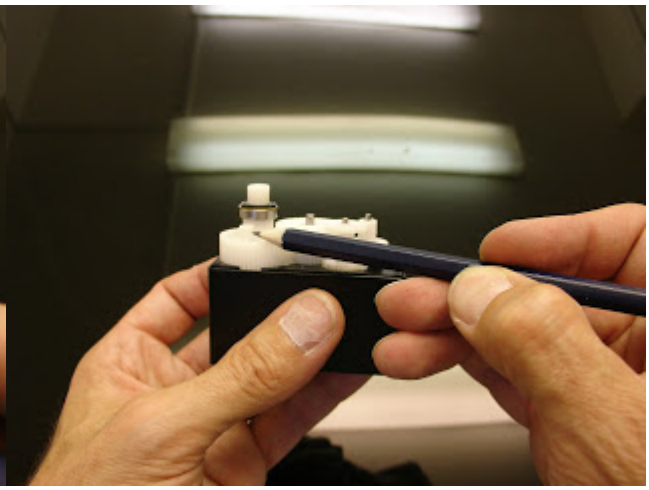
Step 1

What we want to do in this first tuto is to extract the potentiometer of the 2 servos and adding by welding, extra cable length:



We will start by opening the Hitec HS-805BB servo by unscrewing all the screws at the bottom. It comes apart in three parts. Make sure to work in a clean place, you don't want to lose anything and spoil the grease it contains. Once the top is removed, note or take a picture of each gears placement, check well there are two looking almost alike (shown on pictures).



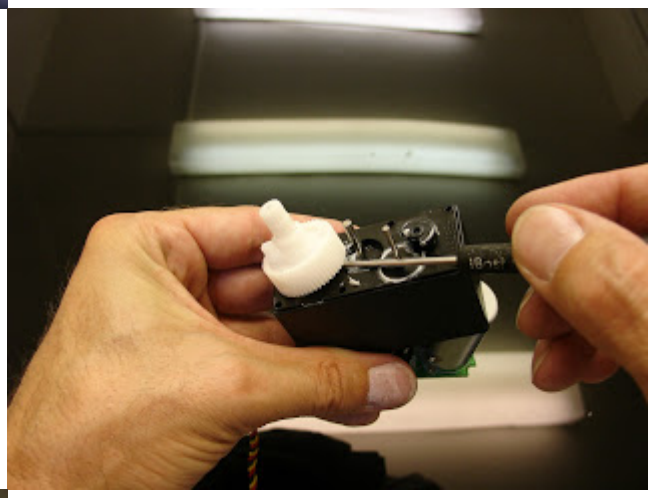


Remove the bearing and it's rings(note the order). It can be a little hard to remove it, I used a small screw driver placed under the bearing.

PART: BICEP

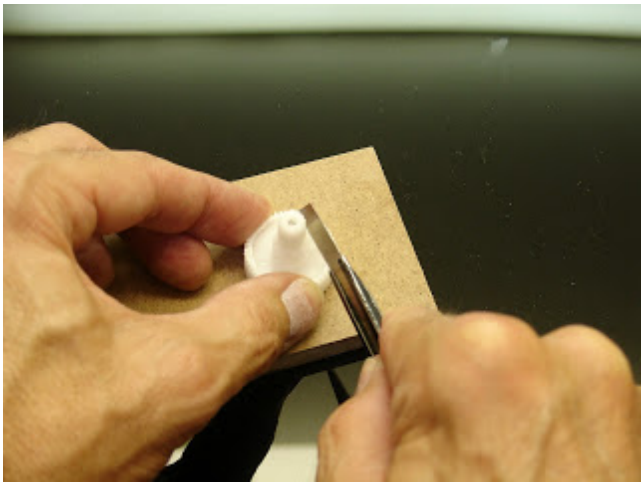
Now we want to remove the pcb card and it's motor by unscrewing the bottom lid of the servo, on some of them it just came easy, but you might encounter bit of glue around the motor, if so push the motor down by pressing the little metal gear placed at the tip of my screw driver.

When it comes out, release the potentiomenter (pointed by the screwdriver in the picture above). Do so by helping yourself with your small screwdriver as in the pictures to the right and beneath.



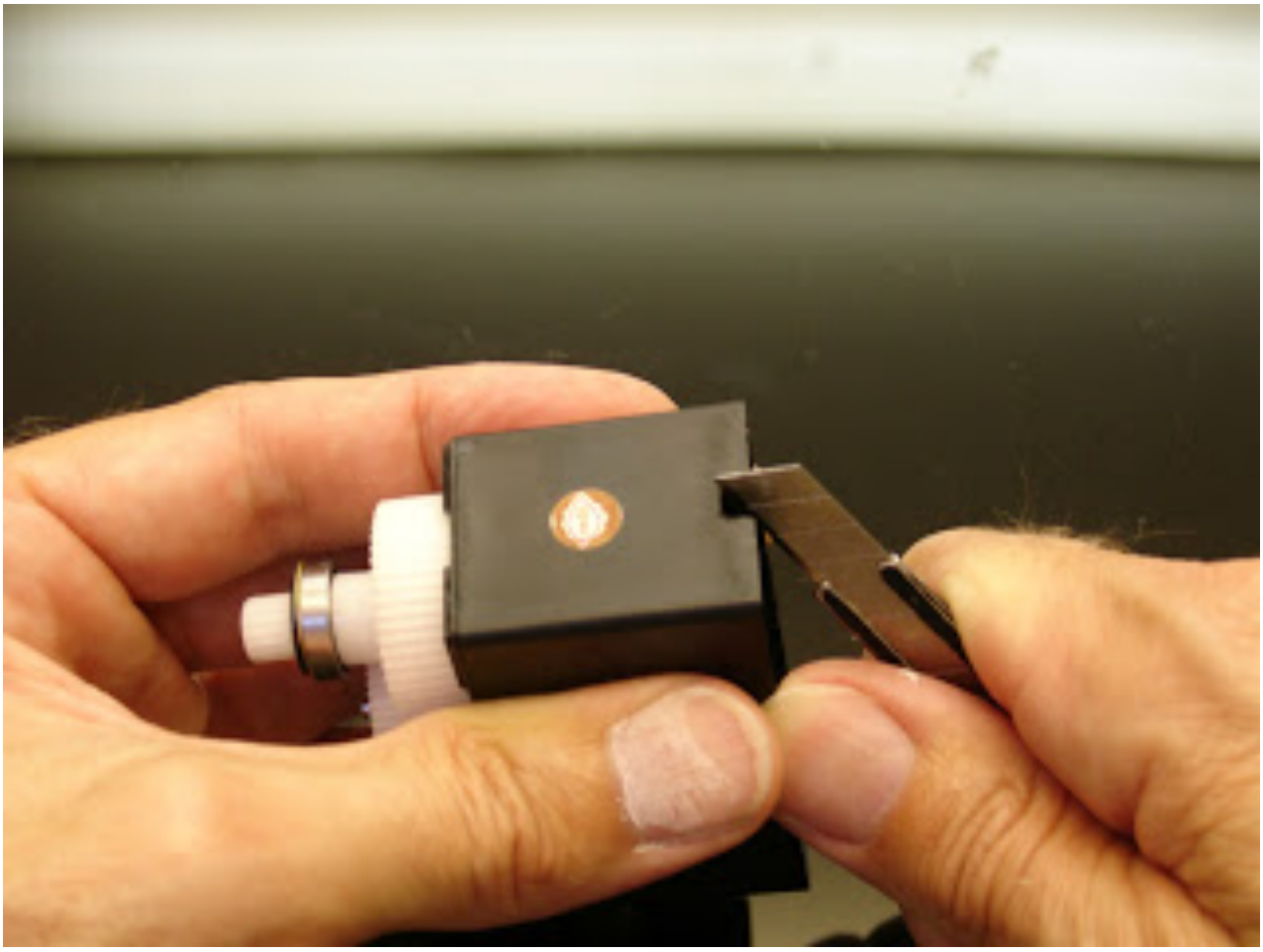
Remove the plastic washer and save it. We won't need it but you never know.

PART: BICEP

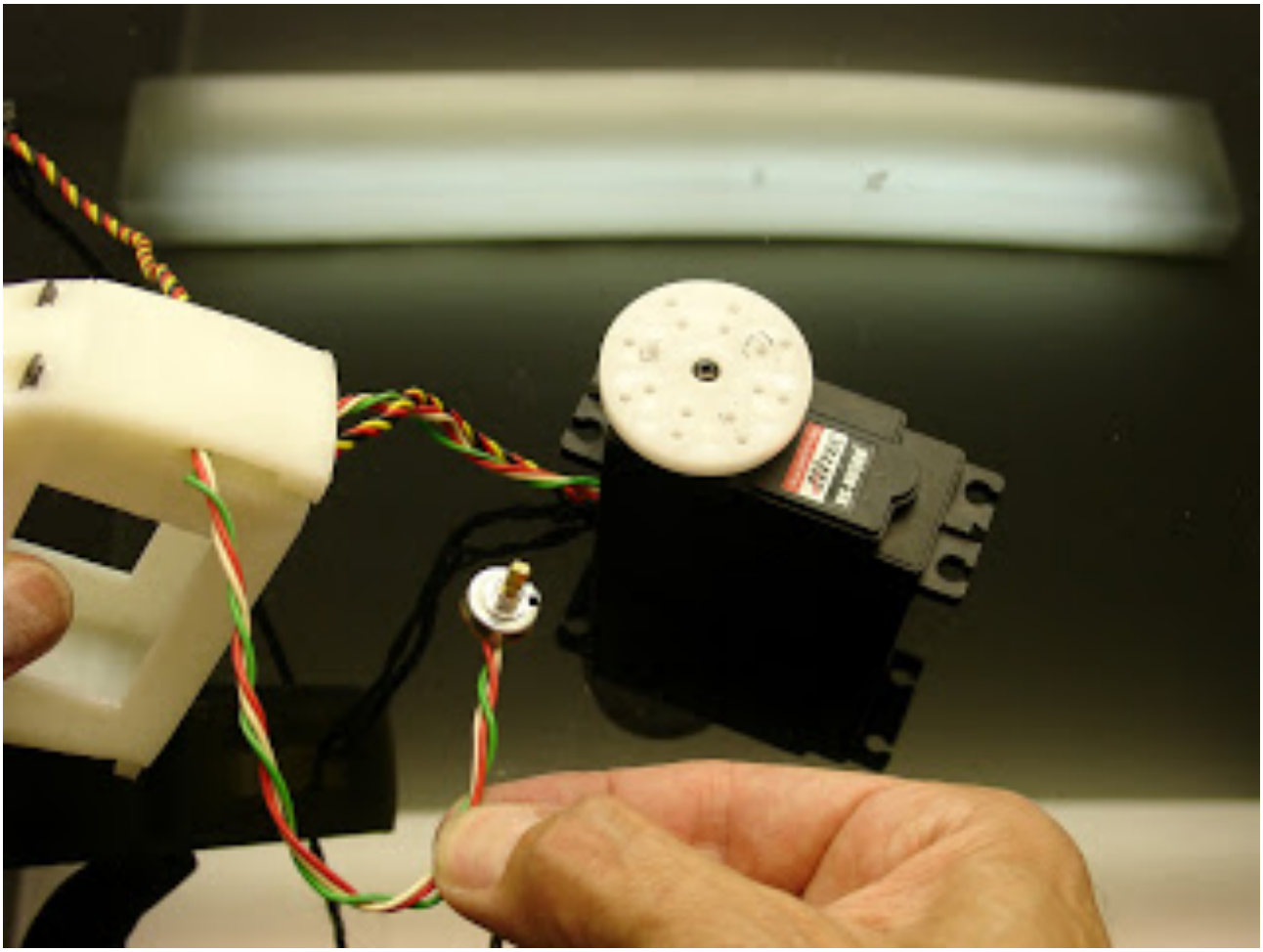


Cut the stopper with a knife or pliers. Be careful to not damage the gears.

Remount all the gears back in there original place. Arrange with your knife a bigger opening for the extra length cables. When unwelding the cables from the board and the potentiometer, note the colors of the cables and make sure you remember which is which.



PART: BICEP



Before welding the potentiometer of the low part of bicep, run your cables in the gap of servoHolder.

For the low part servo of the bicep, your cables should be welded in the **same** color order as when you opened the servo. Your cables should be about 25/30 cm long. Now we are set for to assemble the parts.

Note that you will have to do this a total of 4 times. Two for each arm, each of them having a low and high one.

For more instructions for welding the cables, refer to the videos in the main site.