

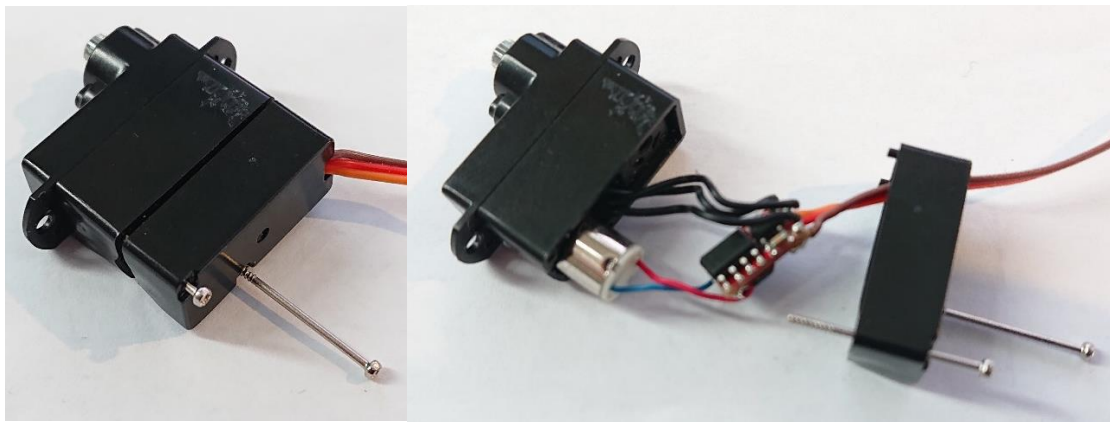
## Servo Assembly Manual

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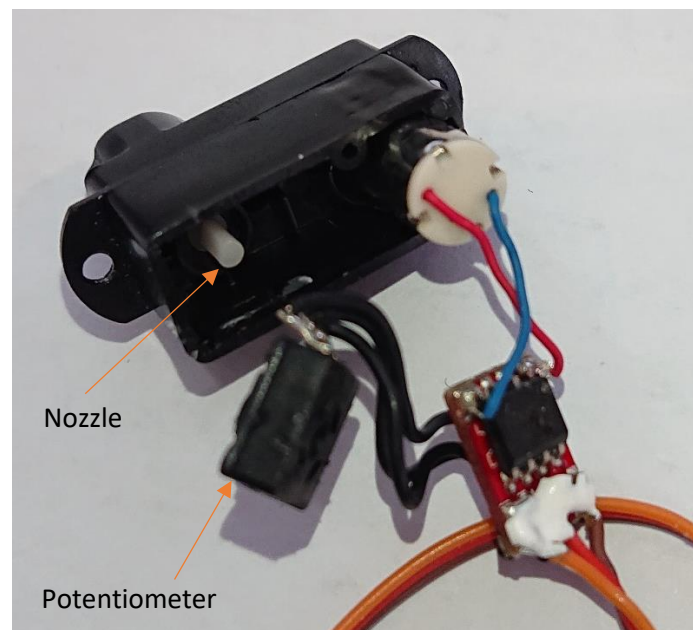
Parts needed:

- PowerHD HD-DSM44
  - M1x12 (2 pieces)
  - ServoBoard-Rev4
  - Magnet 2x2x2 mm
  - Servo magnet holder (3D Print)
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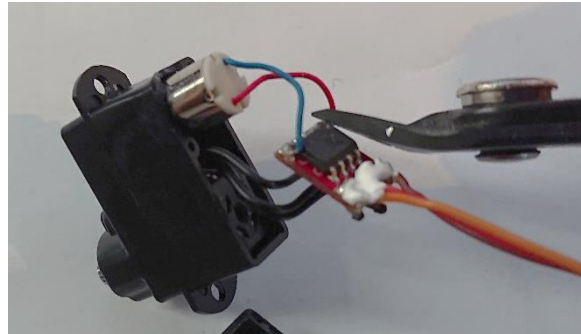
1. Unscrew the back of the Servo and remove it



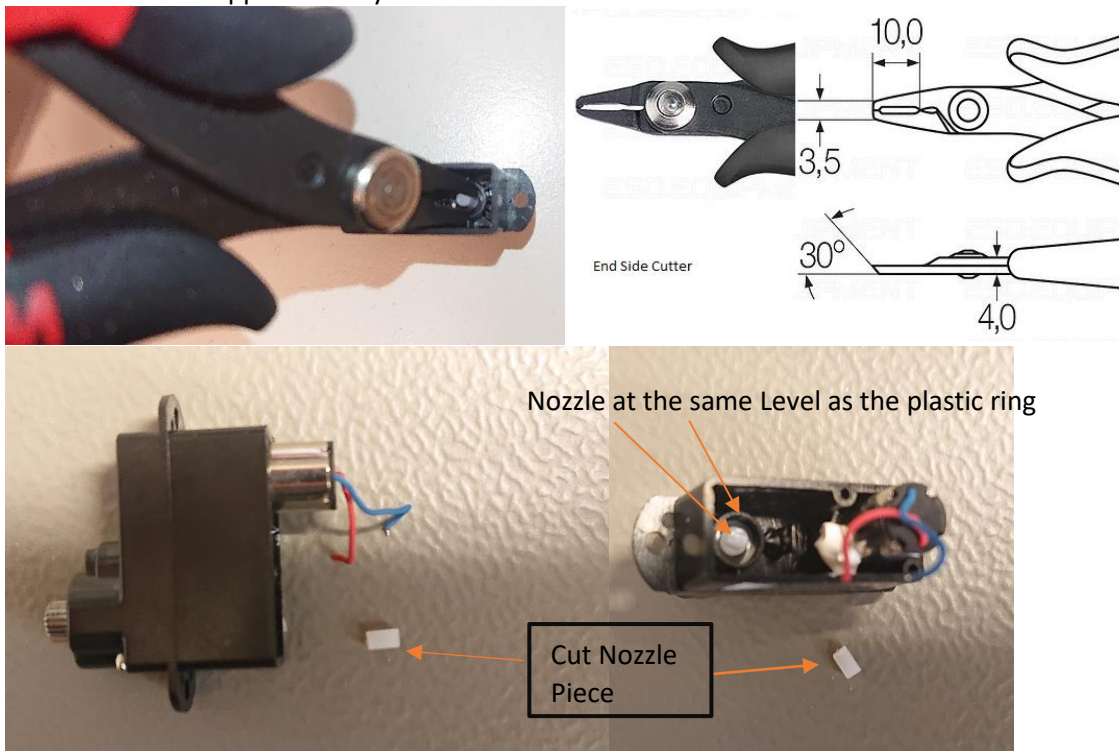
2. Carefully remove the Potentiometer



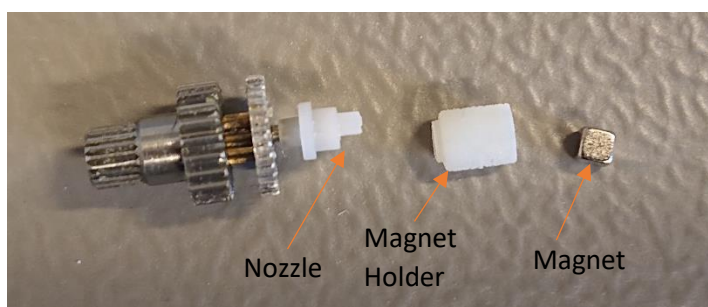
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3. Cut the cables of the Motor, leaving as much cable on the motor as possible



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4. Cut the “nozzle” that was stuck into the potentiometer using an “End Side Cutter”, to have approximately 2mm of Nozzle left.

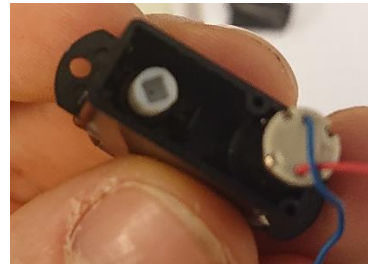
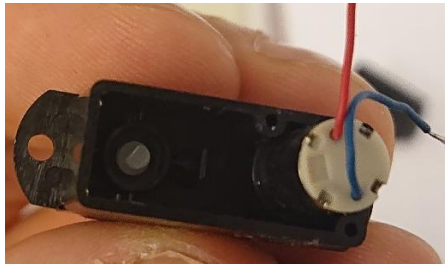


- in the next steps the magnet holder must be assembled as shown below.  
(Picture without the servo, this must be done with the servo intact) -



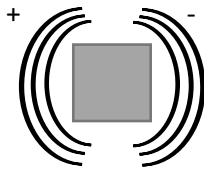
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5. Insert a little bit GEL instant glue into the D-Shaped end of the magnet holder and push it onto the nozzle.

(NO liquid glue, this might glue the gears in place)

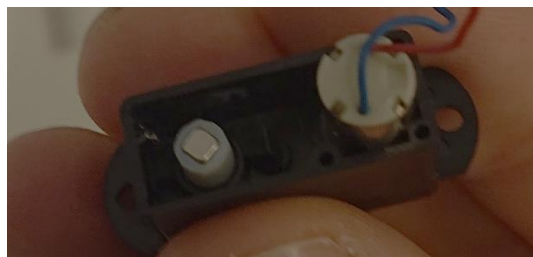


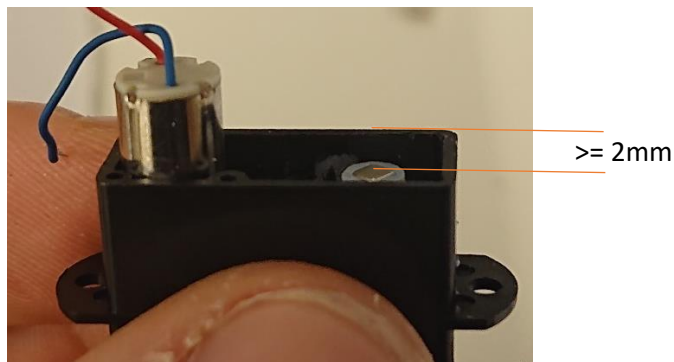
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6. Determine the polarization of the Magnet.  
For the Servo to work, both positive and negative side (i.e. the pole separation line) of the magnet need to be facing outside of the magnet holder.  
To determine the polarization, you can use a bigger magnet with known polarization.  
If the smaller magnet is centred on the bigger magnet, it should have the correct orientation, if it is off to the side it just faces one pole outside.

Outside facing side of the magnet.



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7. With this orientation set, you can glue the magnet into the magnet holder. Make sure, that the whole assembly stays below approximately two millimetres below the servo housing.

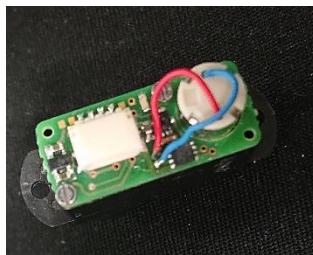




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8. Remove the top left screw from the top of the servo



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9. Attach the Servo PCB to the Servo and screw it in place



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10. Solder the Motor Cables to the respective pads on the motor.  
(WATCH OUT FOR CORRECT COLOURS)

