



WATER TURRET

Assembly Instructions - V1.5

STEPS

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- B - [CONTROL CONFIG.](#)
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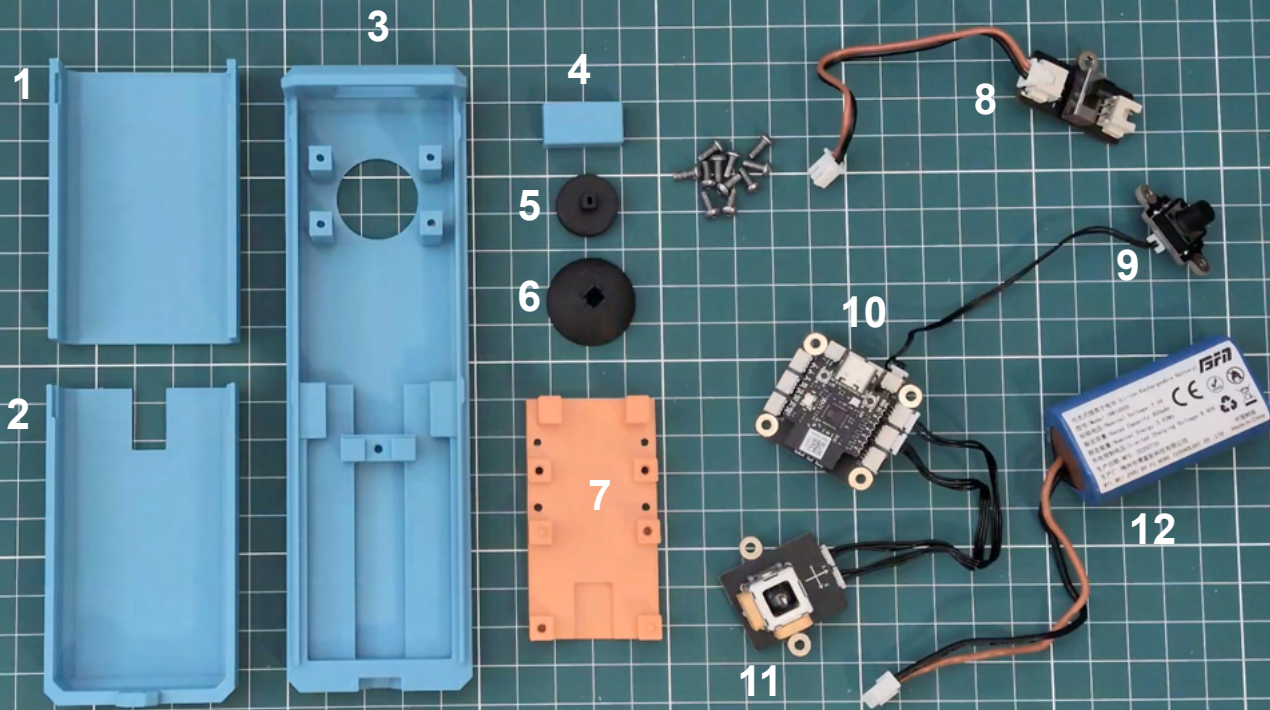


Assembly video: you can follow along with each step in [this video](#).

Also, you can click on the "Watch Step" button on each page to skip to that part of the assembly video.



CONTROLLER



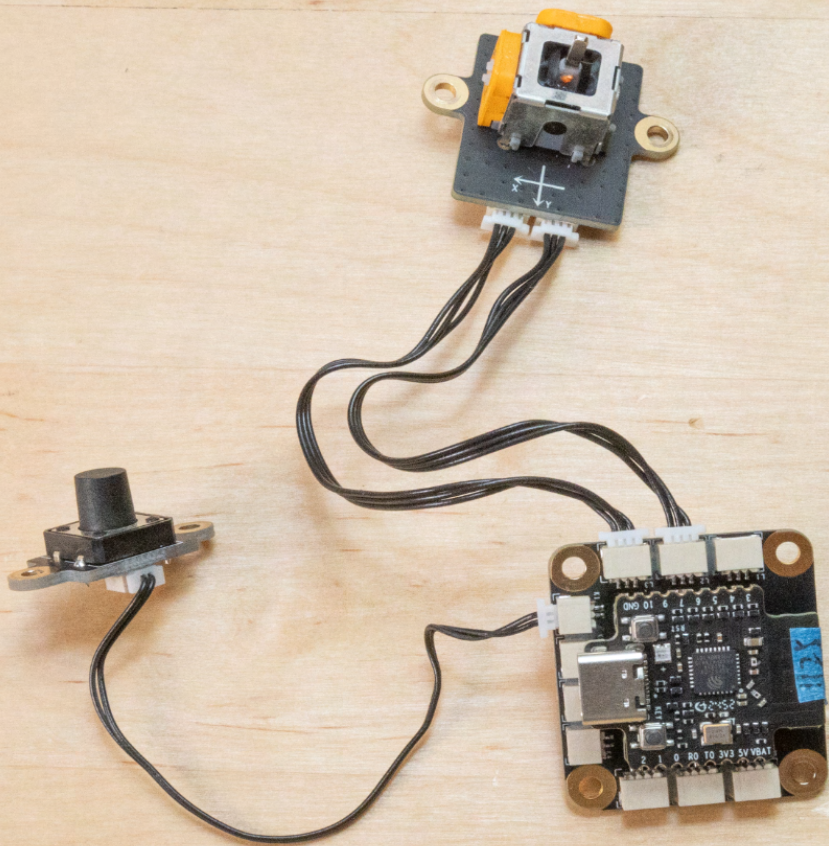
1

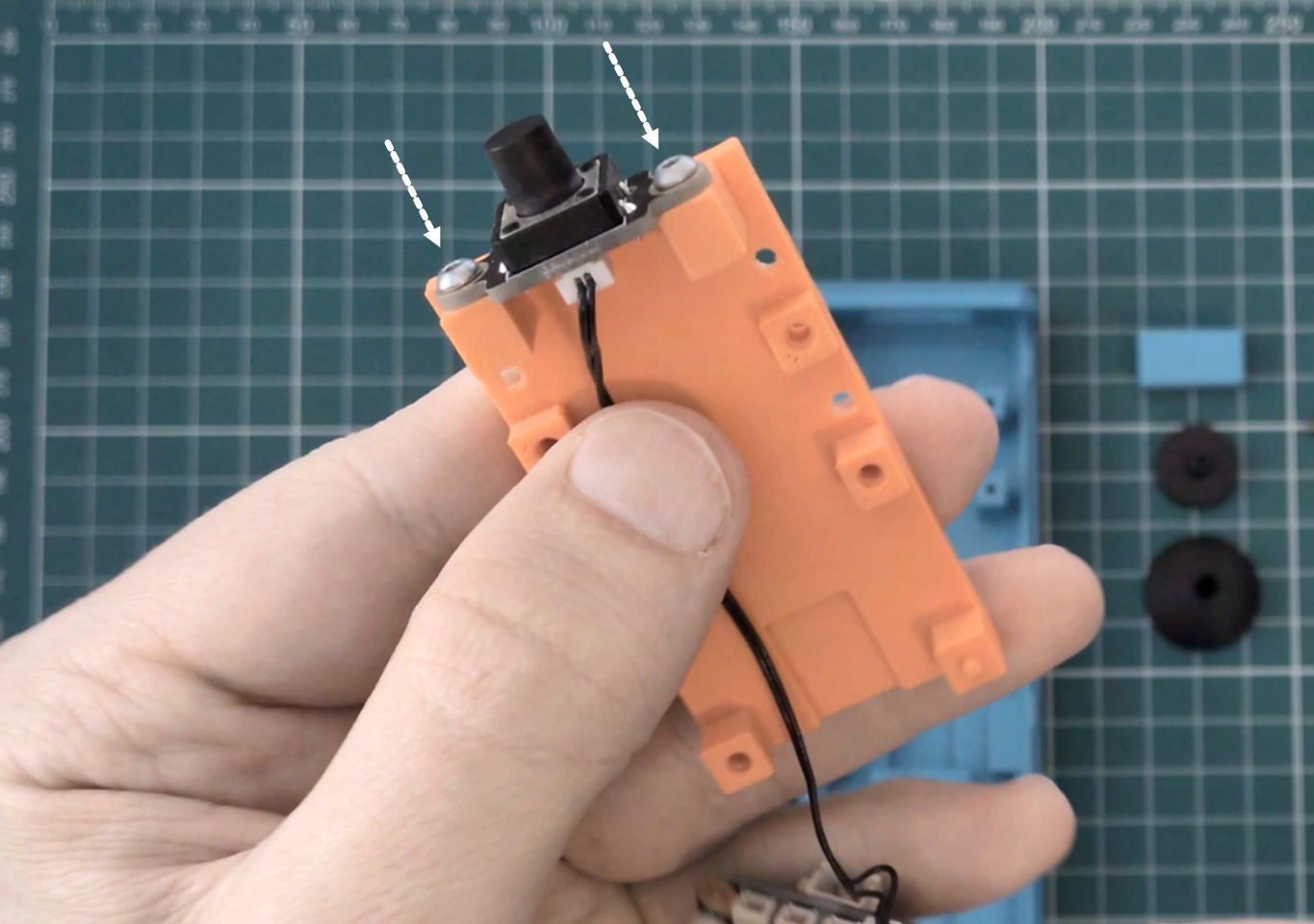
Controller Parts

1. Controller Back (upper)
2. Controller Back (lower)
3. Controller Front
4. Button Cover
5. Joystick Pad
6. Joystick Base
7. Controller Skeleton
8. Power Switch Module
9. Button
10. Control Board
11. 2 Channel Joystick
12. Li-ion battery

2

Connect the components as shown. Because these components are close to each other, it's easier to connect them before you begin attaching the components to the base.





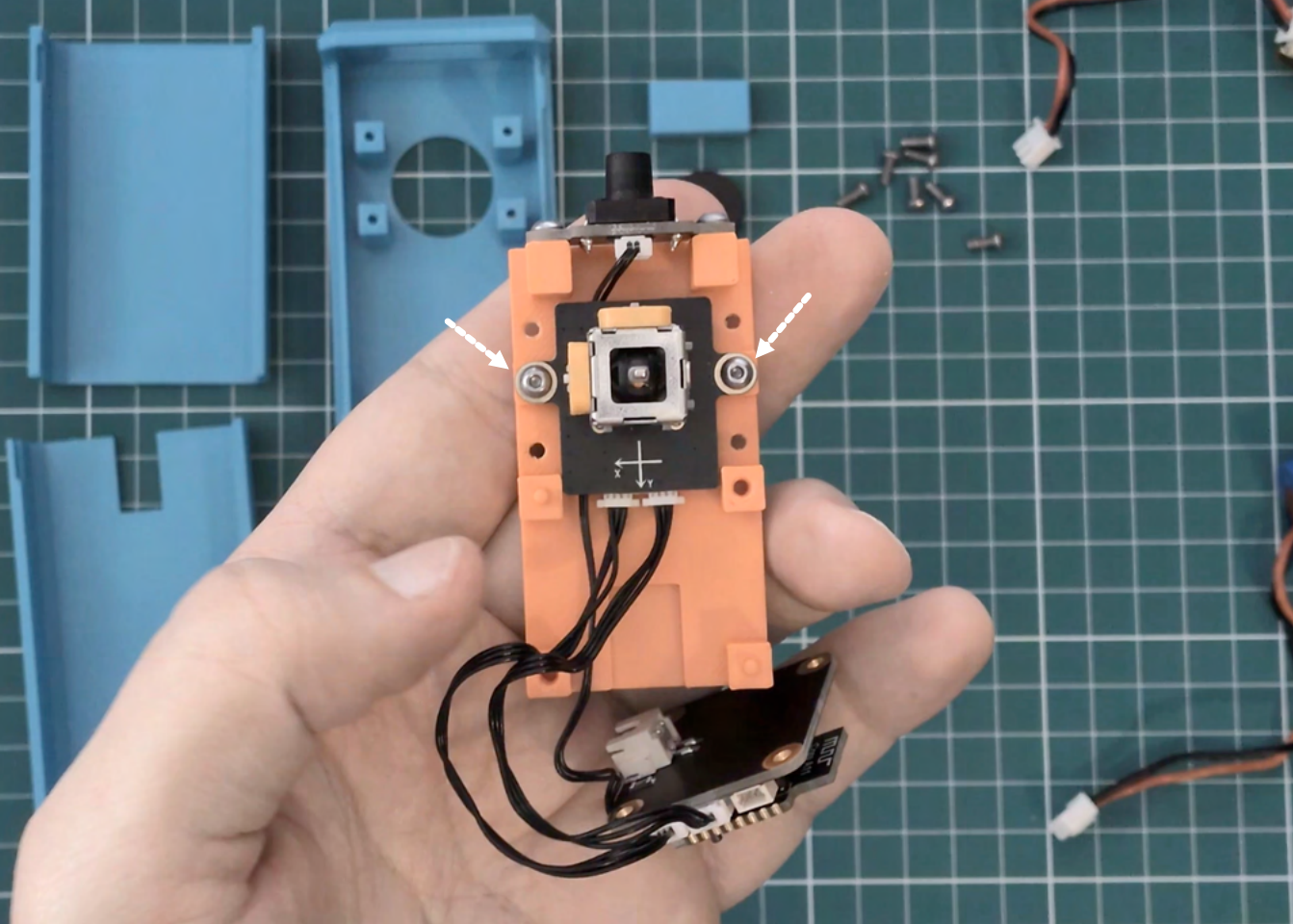
3

Attach the button board to the front of the skeleton using two screws. Ensure that the port is facing 'up'.

Note that the controller only uses the M2.5x6 BHCS Machine Screws that come with the CyberBrick kit.

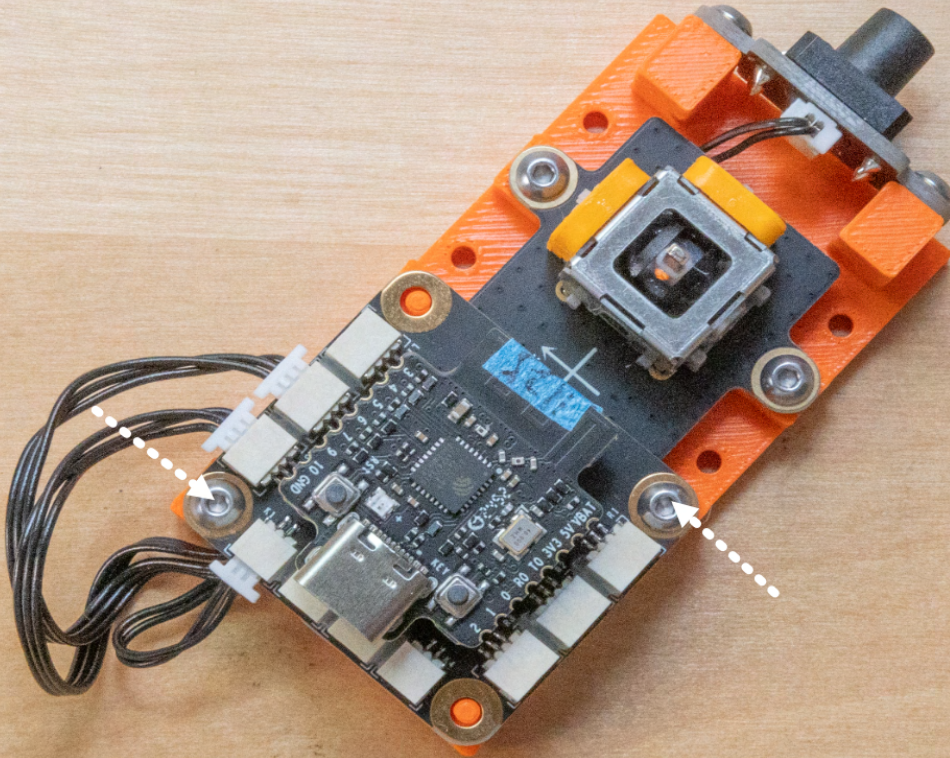
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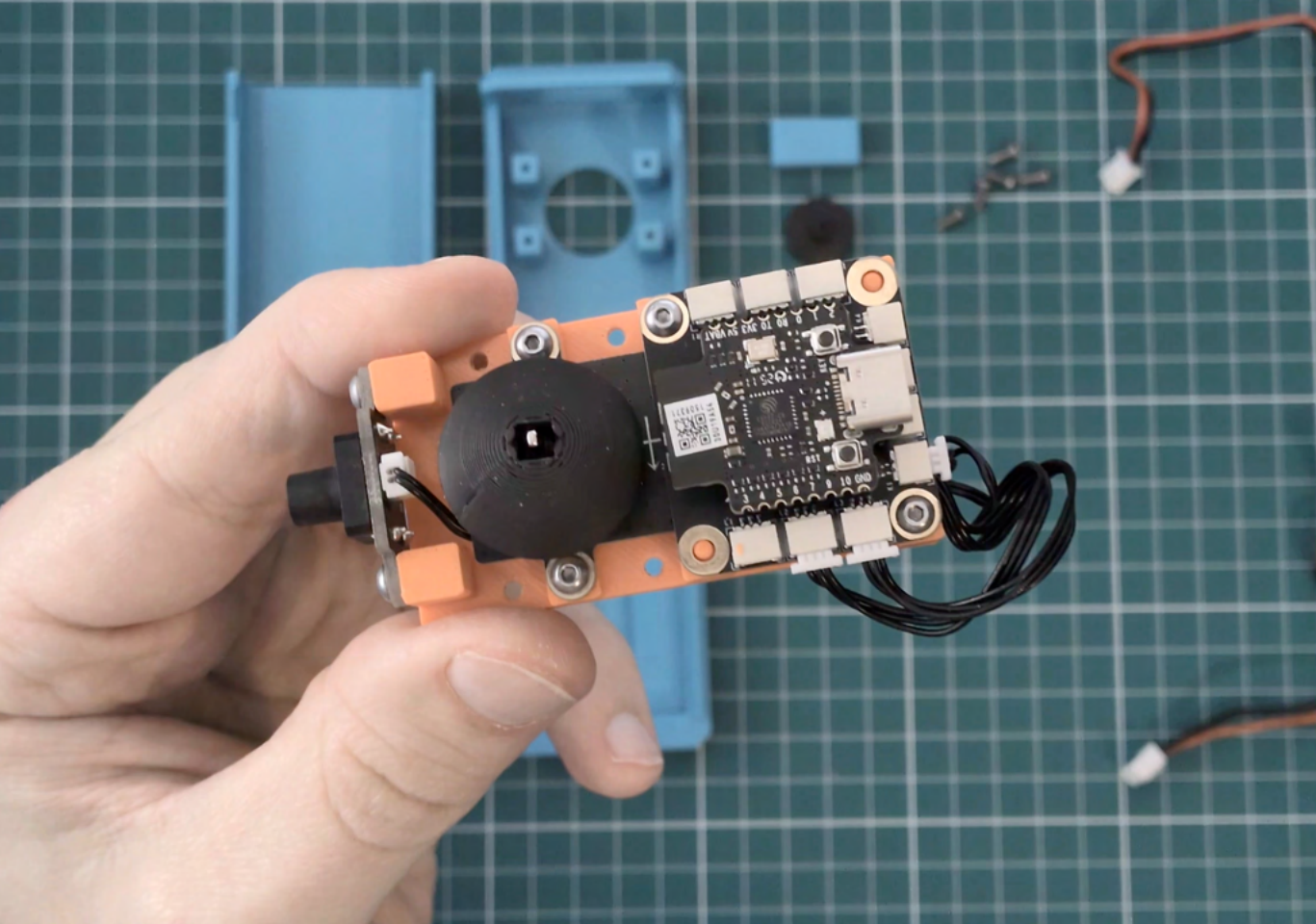
With the wire from the button underneath, attach the joystick board to the skeleton aligned as shown.



5

With the wires from both the button and joystick underneath, attach the control board to the skeleton.





6

Add the joystick base onto the top of the joystick board. This will just loosely sit on this board until a later step.

7

Place the competed skeleton into the controller top and attach with 4 screws.

Be careful to ensure that they joystick base stays in place during this process.

The skeleton should position onto the controller base without

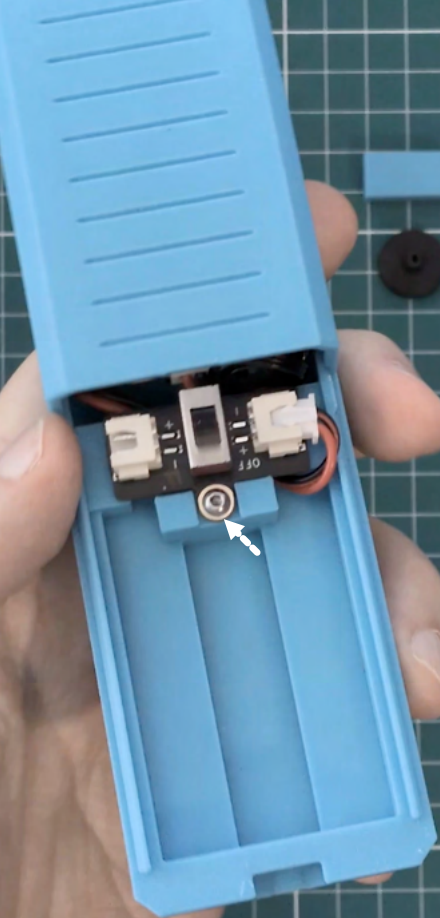


8

Connect the power switch to the control board as shown.

Slide the upper controller back onto the remote - note that there are notches on the side of this part that should be oriented towards the button-side of the remote.

(note that this rechargeable battery pack was added long after the model was published which is why the filament colors do not match. All other steps are still valid and unchanged)



9

Attach the power switch using a single M2.5x6 BHCS Machine Screw. This space will be tight so it can be helpful to run the wire underneath the switch as shown.

Place the battery pack into the controller top. This will be a tight fit - there's space under the battery pack for the wires if needed.

Slide the lower controller back onto the controller as shown. You can optionally affix this piece using a screw at the bottom of the remote but a press-fit will be enough for most users.

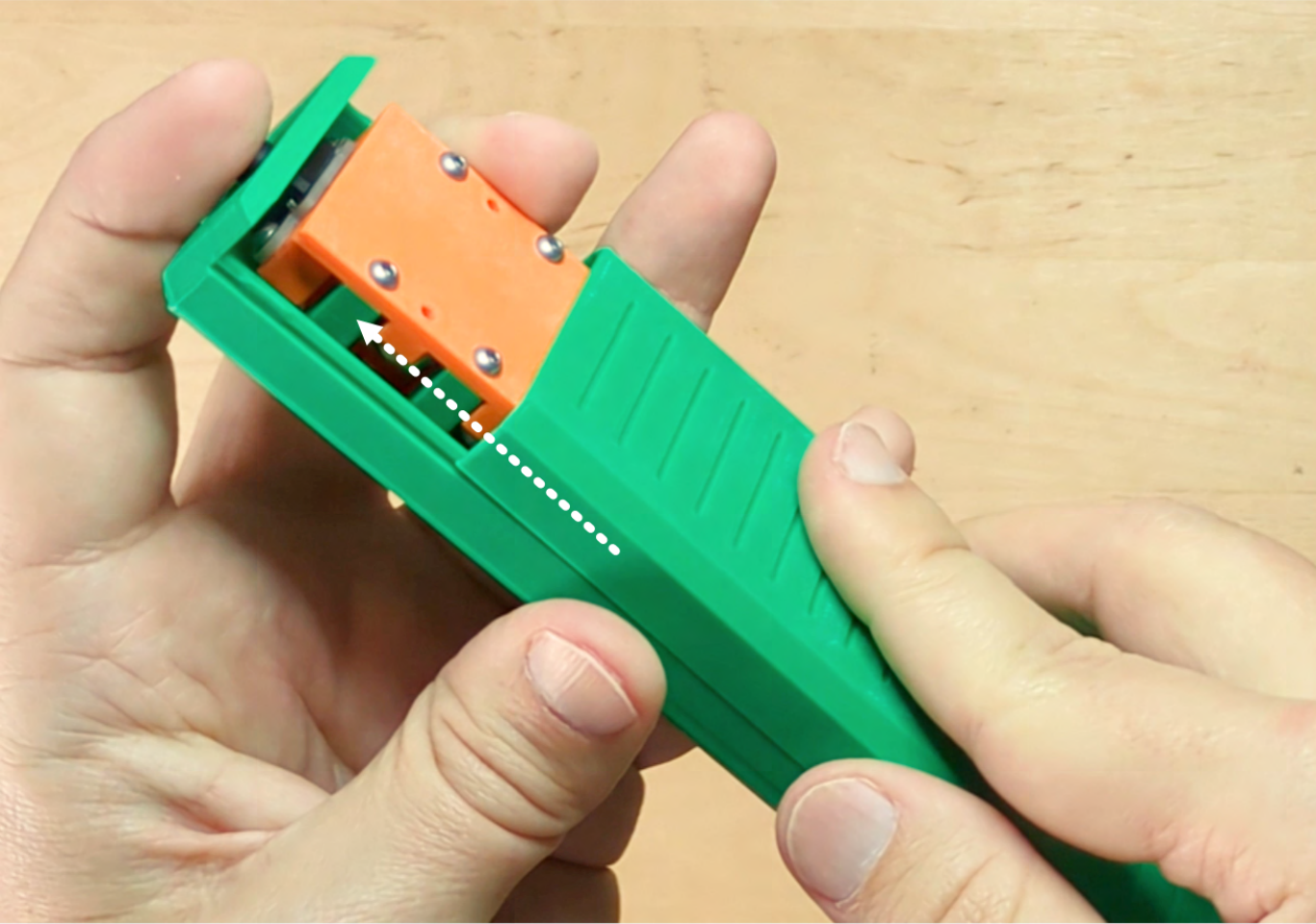
(note that this rechargeable battery pack was added long after the model was published which is why the filament colors do not match. All other steps are still valid and unchanged)

10

Note: follow these steps only if you are using the AAA battery case. This component was included in the BoM until 1/13/26 where it was replaced by the rechargeable pack. Please ignore this step otherwise.

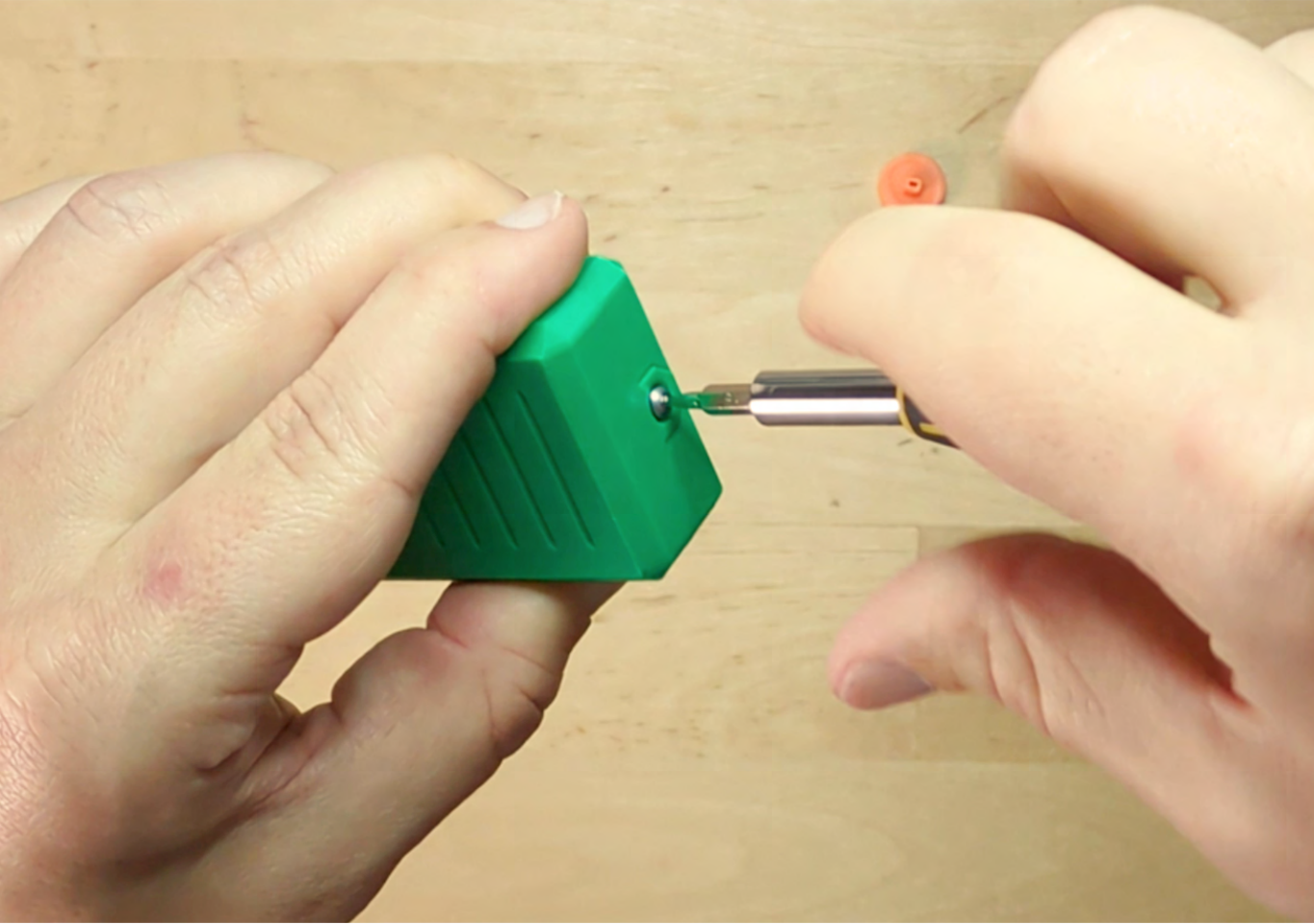
Place batteries in the battery pack, plug it into the control board.

Place the battery pack into the controller top. Note the rotation so that the power switch will be accessible through the back of the controller. This will be a tight fit - there's space under the battery pack for the wires if needed.



11

Slide the controller base into place on the printed rails. This only provides a moderate fit but should be sufficient for light use.



12

If you are having trouble with the controller remaining closed, you can affix it with a 2.5x6 machine screw (that come with CyberBrick).

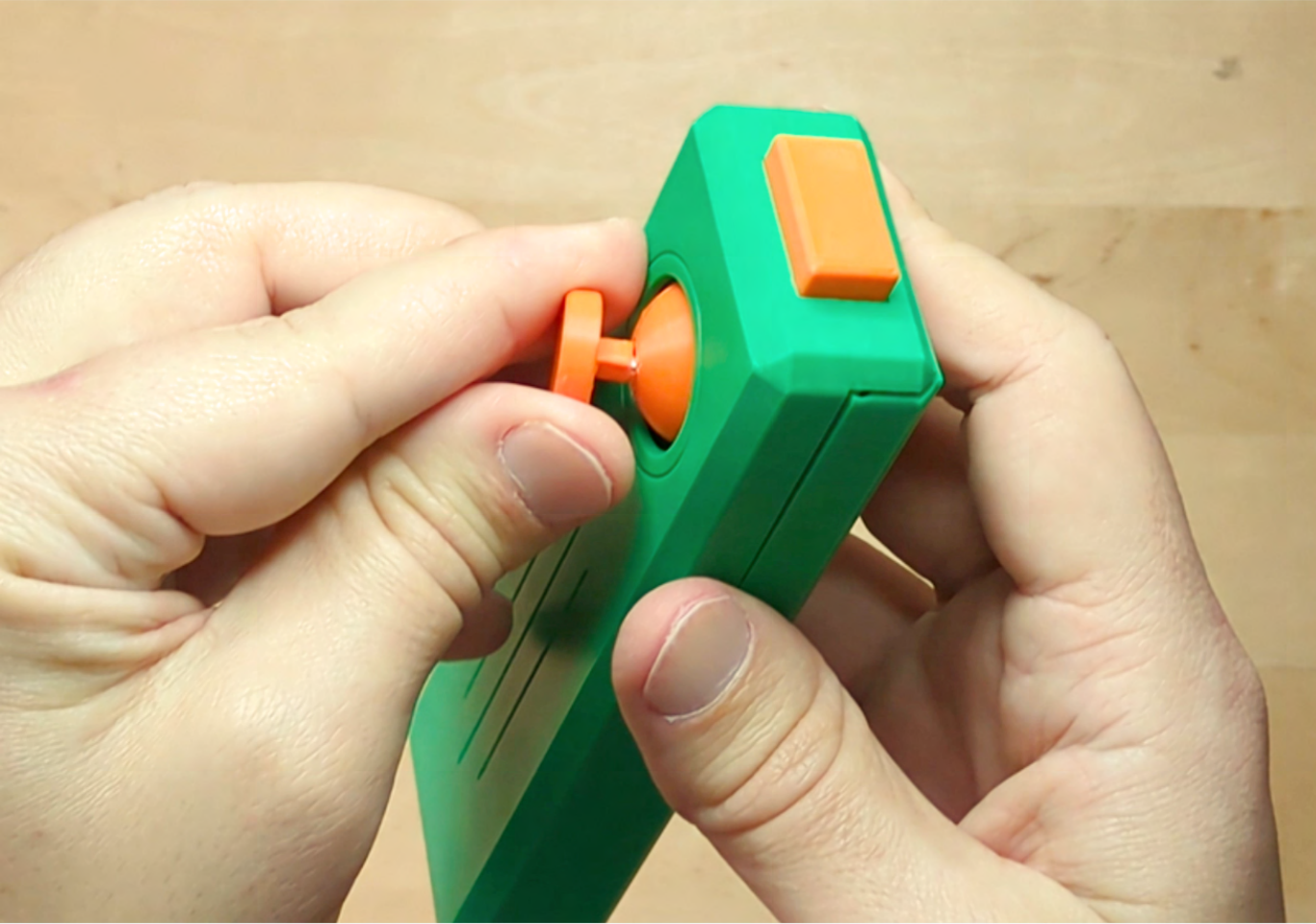


13

Press the button into place.

14

Press the joystick pad onto the metal rod from the joystick board. At the same time, align this rod with the joystick base and press it into place.

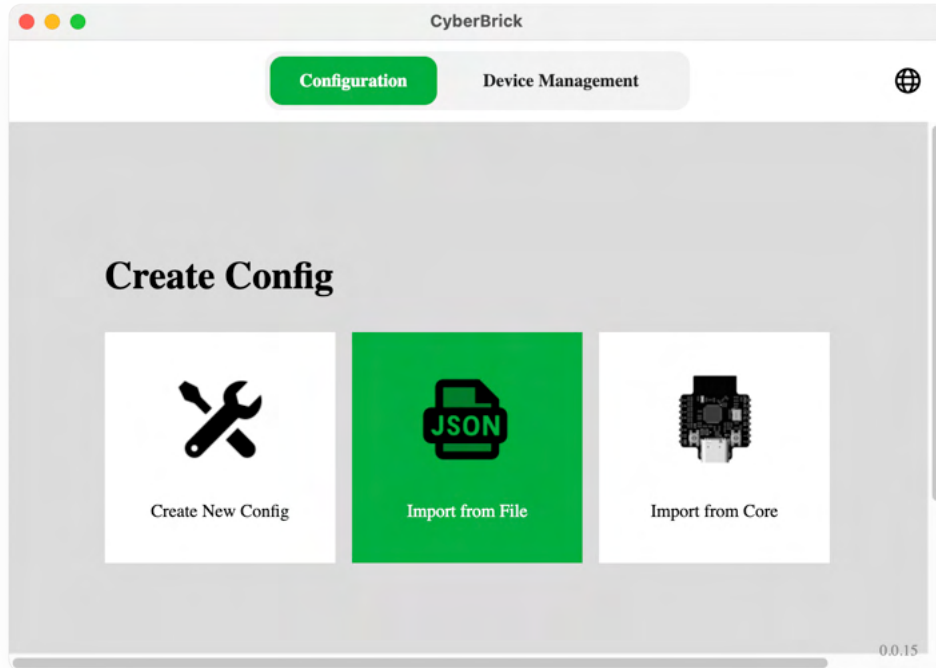




CONTROL CONFIG.

Setup

Download the configuration JSON for this project from the project listing on MakerWorld. You can then use the Cyber Brick application to import the JSON and configure your transmitter and receiver.







1

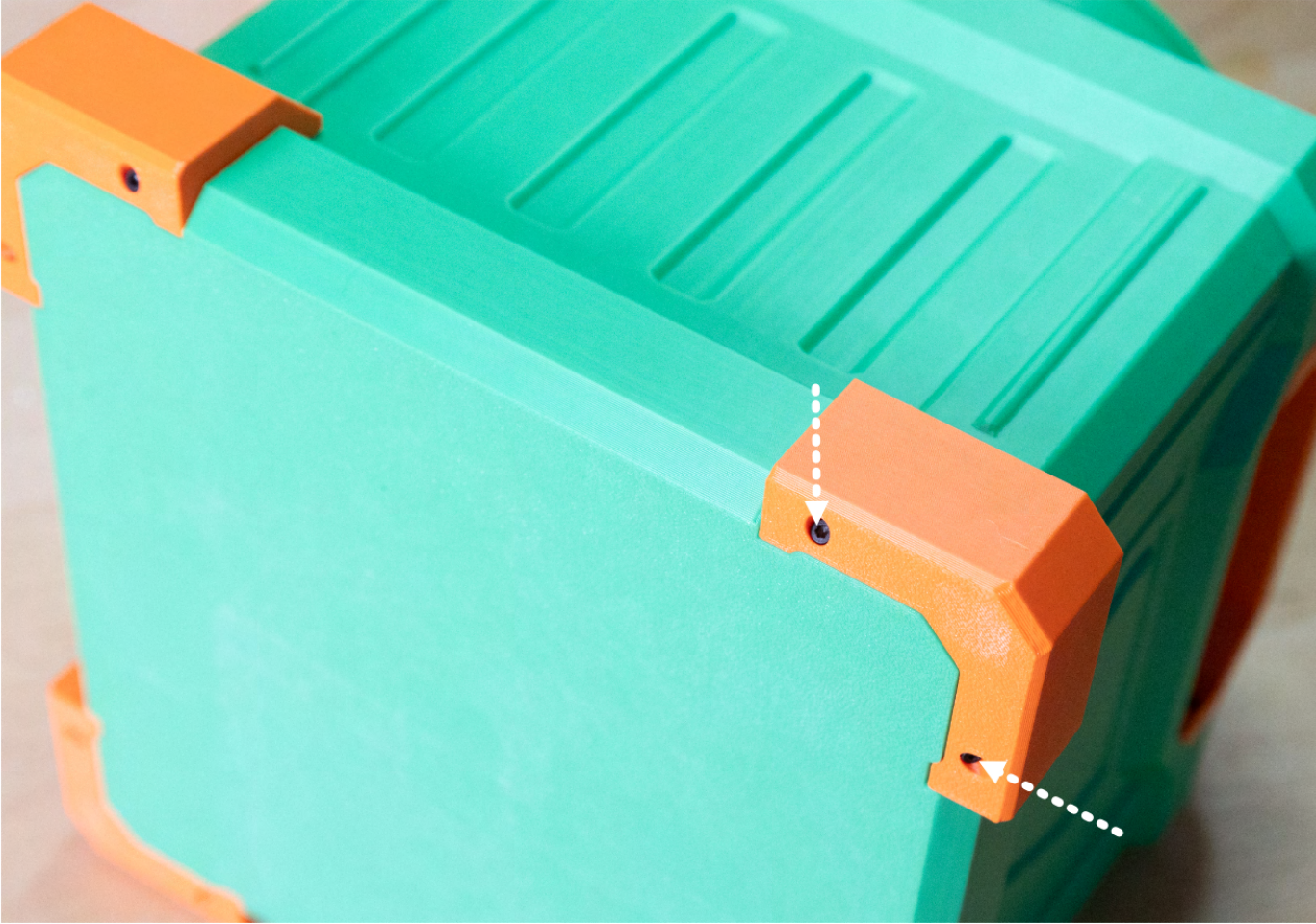
Water Tank Parts:

1. Water Tank
2. Handle (2)
3. Foot (4)
4. Cap

2

Attach the handles to the base with two 2x10 screws each. This is a tight space so it may help to get the screws started before positioning the handle. Also, a skinny screwdriver can help.





3

Snap the feet onto the base and attach with two 2x10 screws for each foot. Note that the screws are angled at 45 degrees.

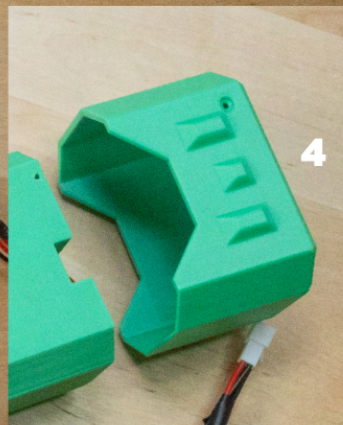
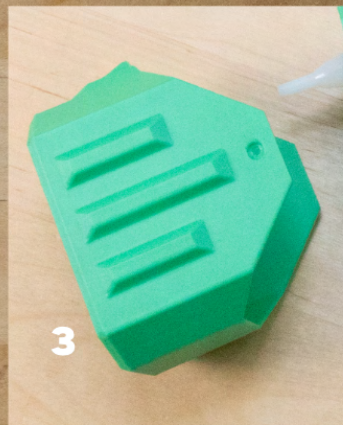
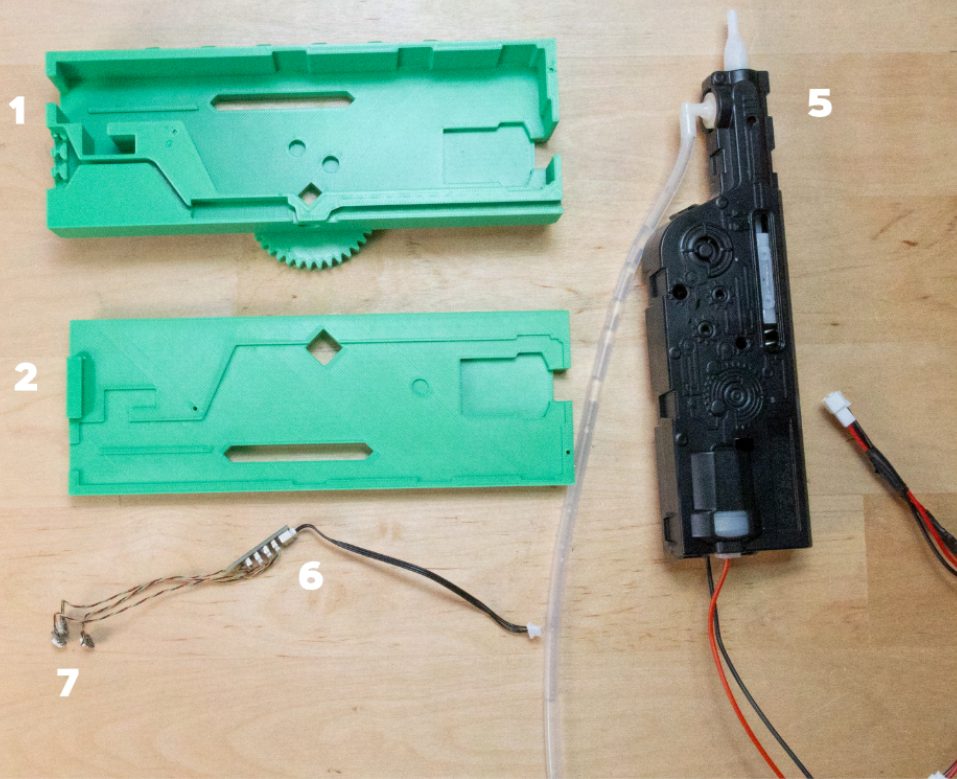


4

Place the cap into the base. This will be a loose fit and can be removed to add (or pour out) water.



WATER GUN



1

Water Gun Parts

1. Right Water Gun Case
2. Left Water Gun Case
3. Front Water Gun Case
4. Back Water Gun Case
5. Light Adapter Board
6. Ws2812 Lights (3)



x1



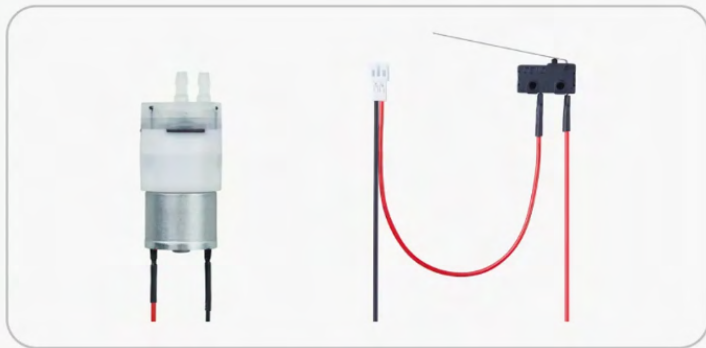
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x1



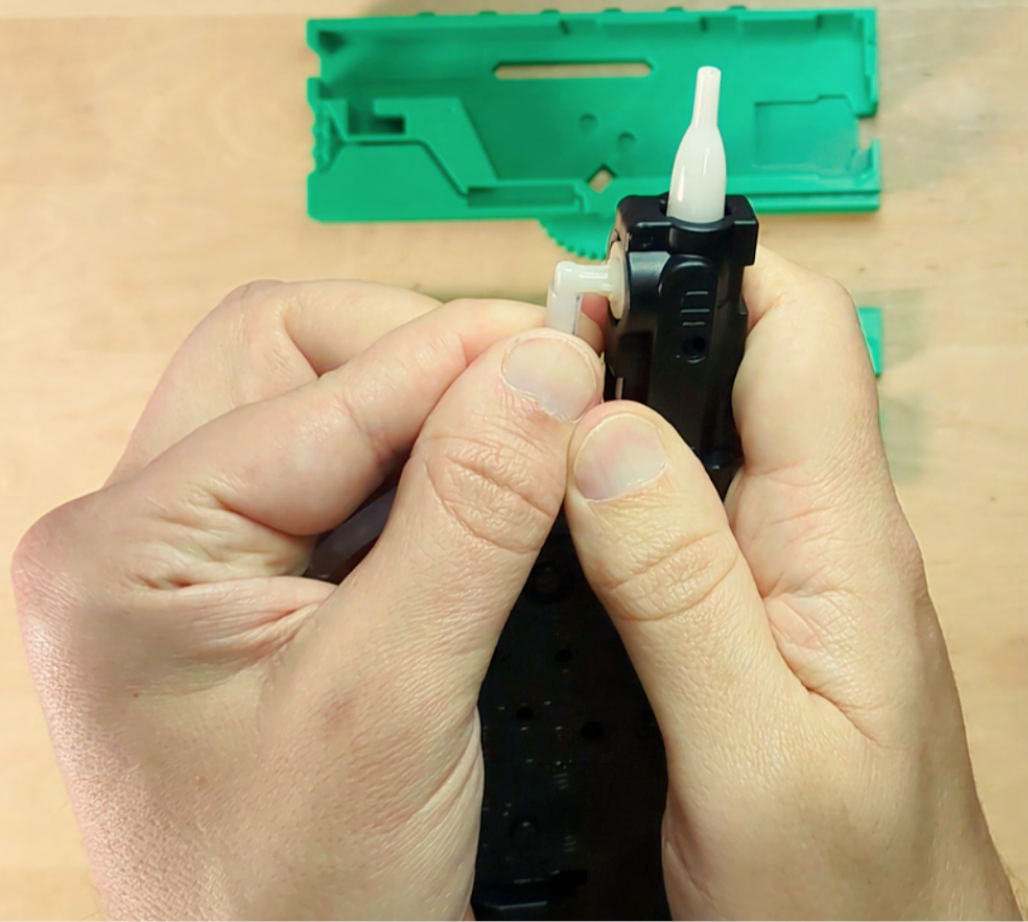
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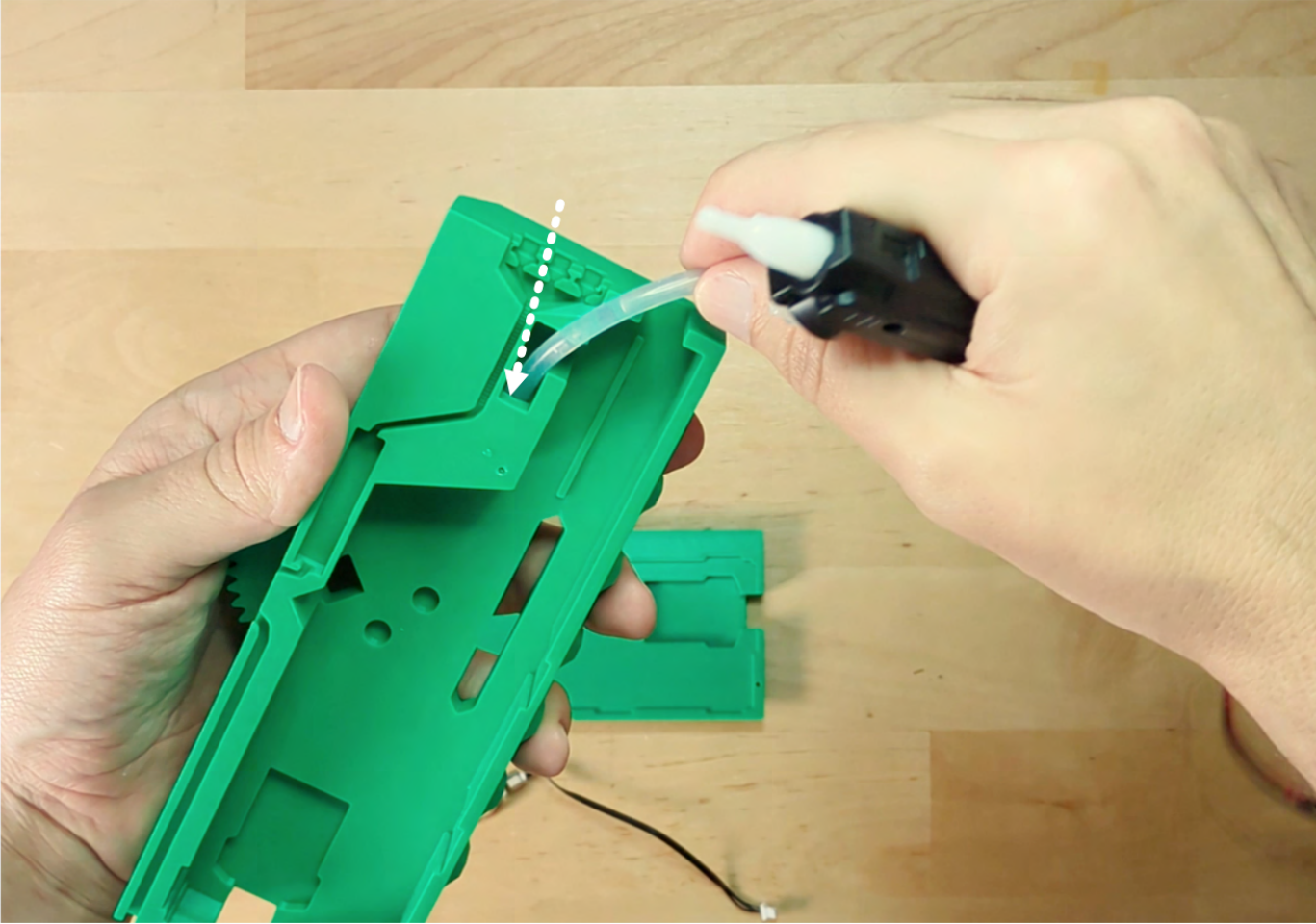
2

Collect the needed components from the water gun kit. You will only need the items outlined in green for this project.



3

Attach the silicon tube to the water gun as shown. You will need about 30cm of tube. If in doubt, leave it a little long - you can trim off some later (after the gun is assembled this can require disassembly to change).



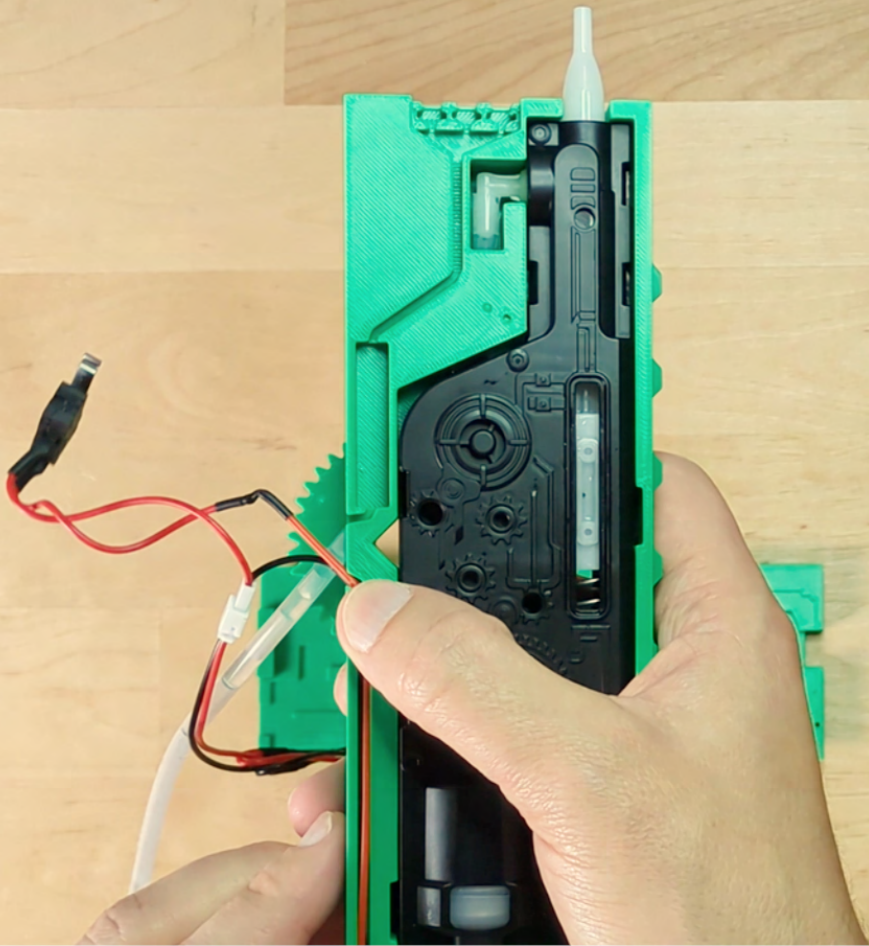
4

Feed the silicon tube through the channel in the Left Water Gun Case. Towards the end, you may need to use a screwdriver to get the tube to start feeding out.



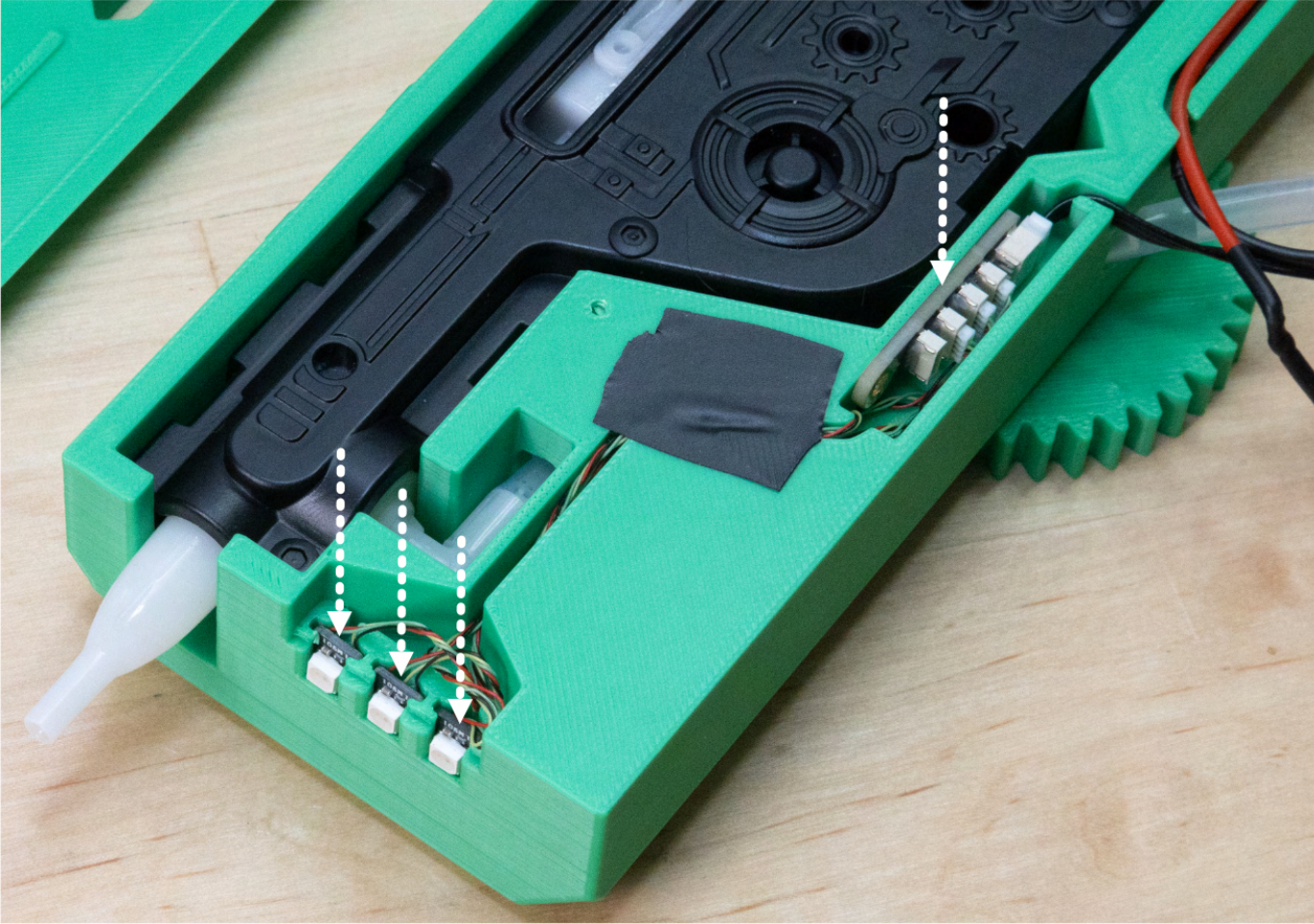
5

Gently pull the silicon tube while lowering the water gun into the case - this will be a snug fit. Feed The water gun wires through the channel in the back.



6

Feed the wires from the back of the water gun through the channel. Don't apply aggressive pressure to the wires but try not to leave much slack.

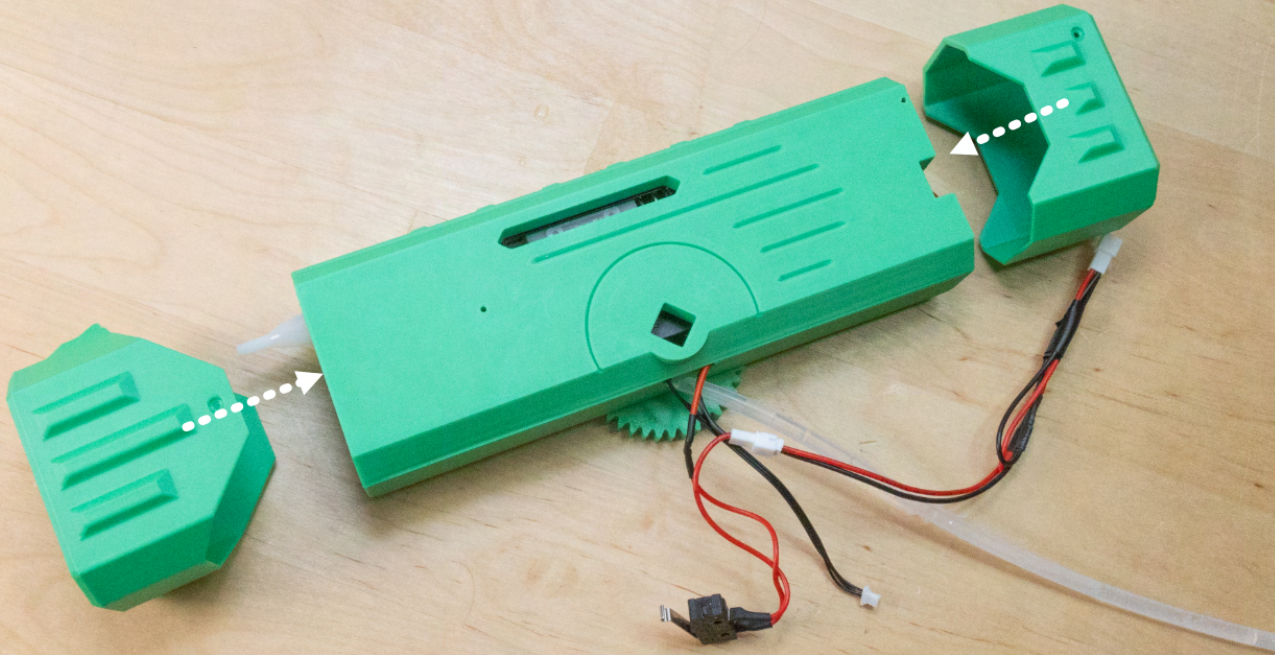


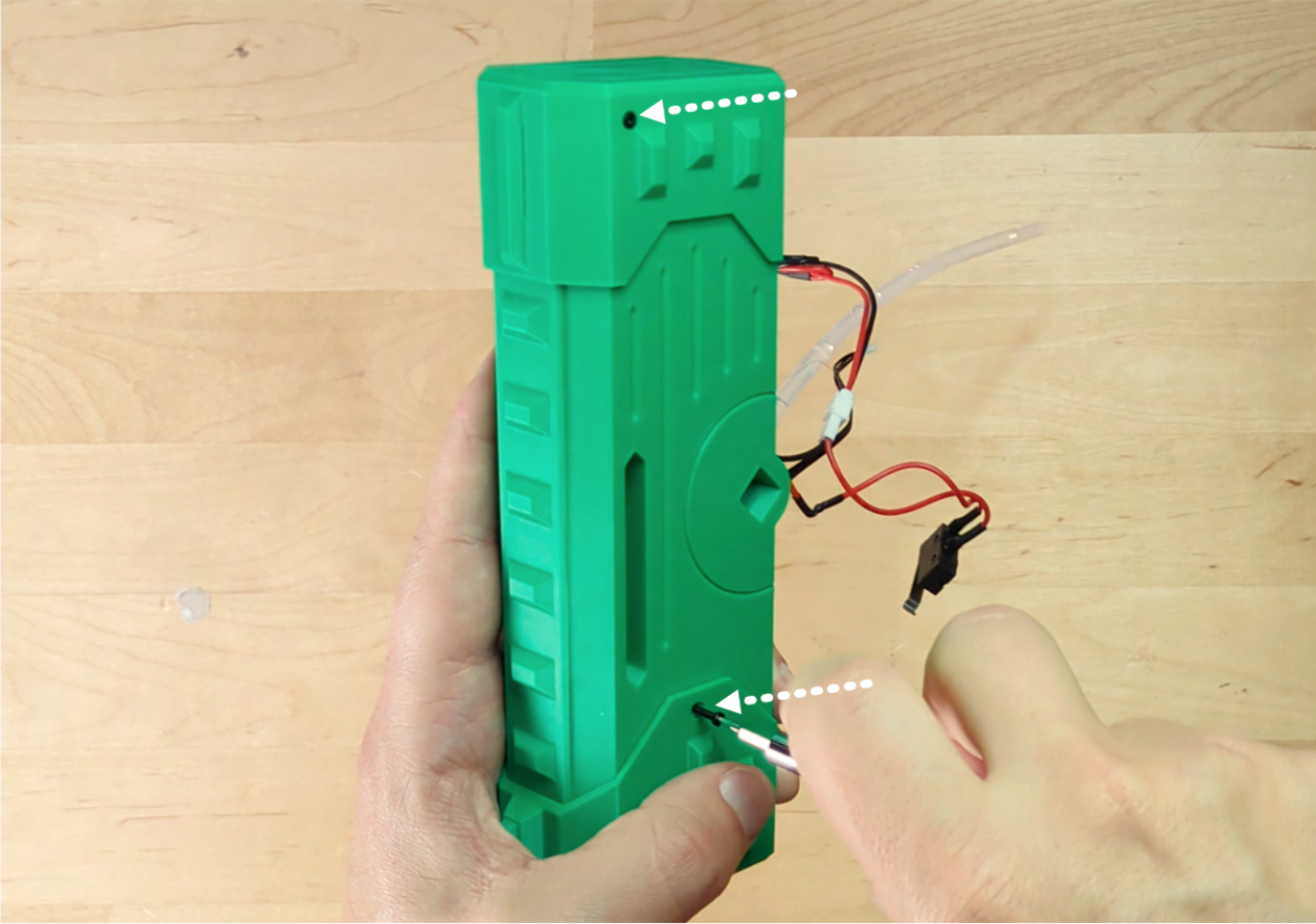
7

Attach the 3 LEDs to the LED board and then slide the LEDs into the indicated channels. Feed the wires back through the channel and place the board in the available cavity. The small wires to the LEDs may not want to stay in the channel - you can use a small pieces of electrical tape to keep them in place.

8

Place the right water gun case on top of the left while ensuring that no wires are pinched. Slide the front and back portions of the case over the left and right. This will be a snug fit. Be sure to note the location of the screw holes on each piece so that they are aligned.

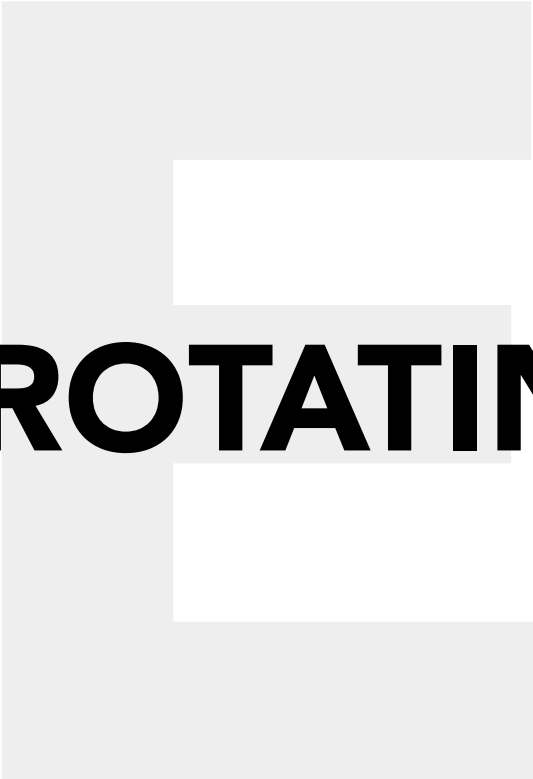




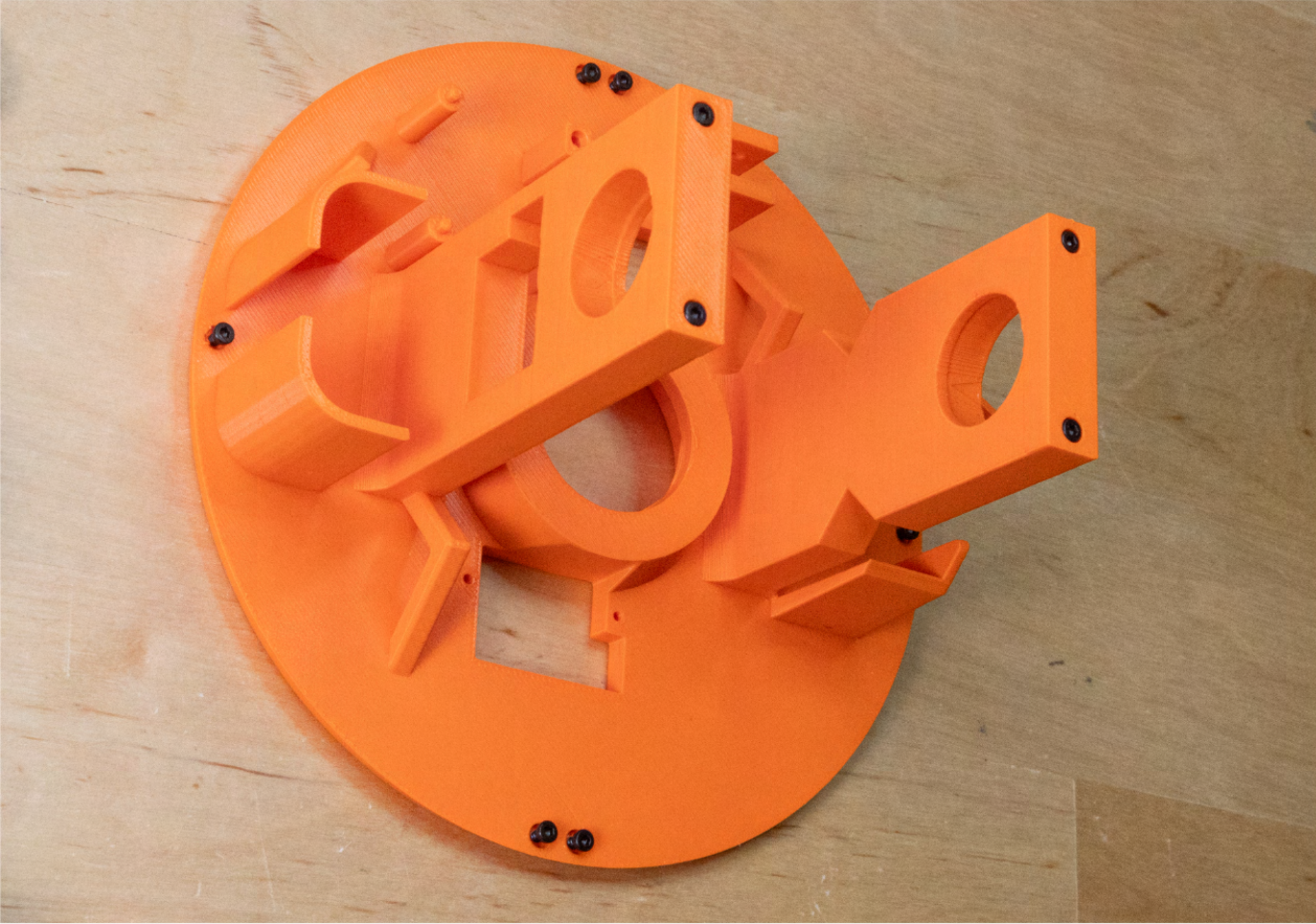
9

Use two 2x12 screws to attach the front and back pieces to the sides.

Optionally, tape the wires on the unused connector for the water gun so they don't get in the way.

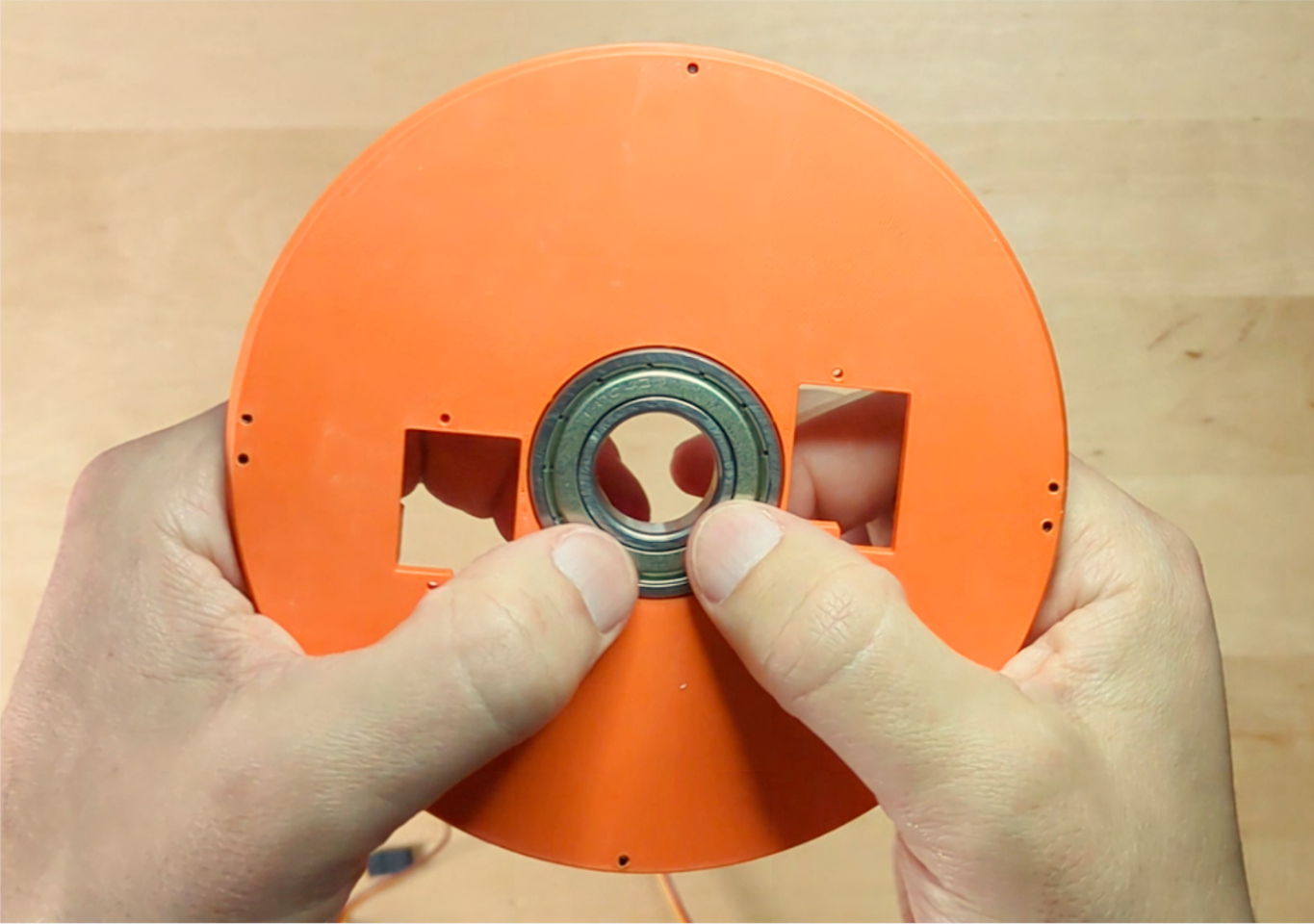


ROTATING BASE



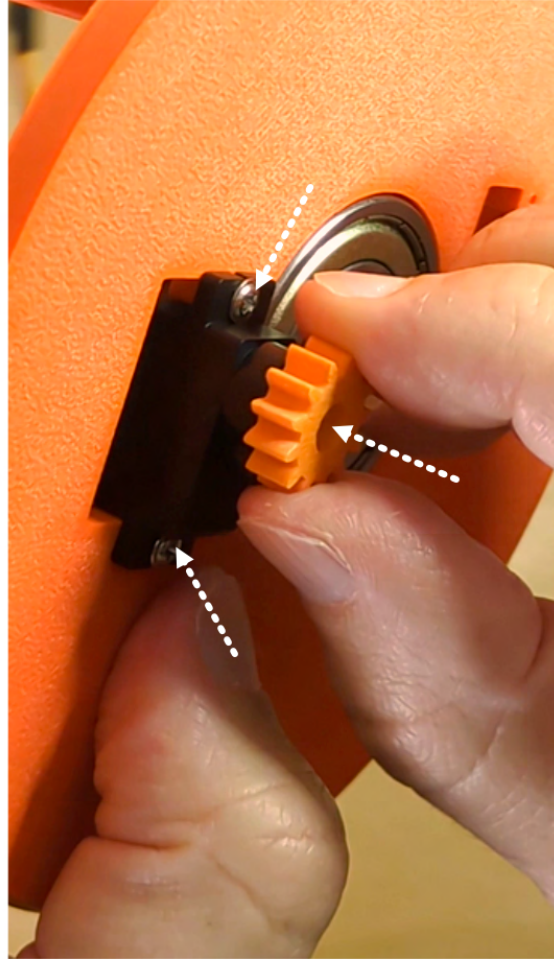
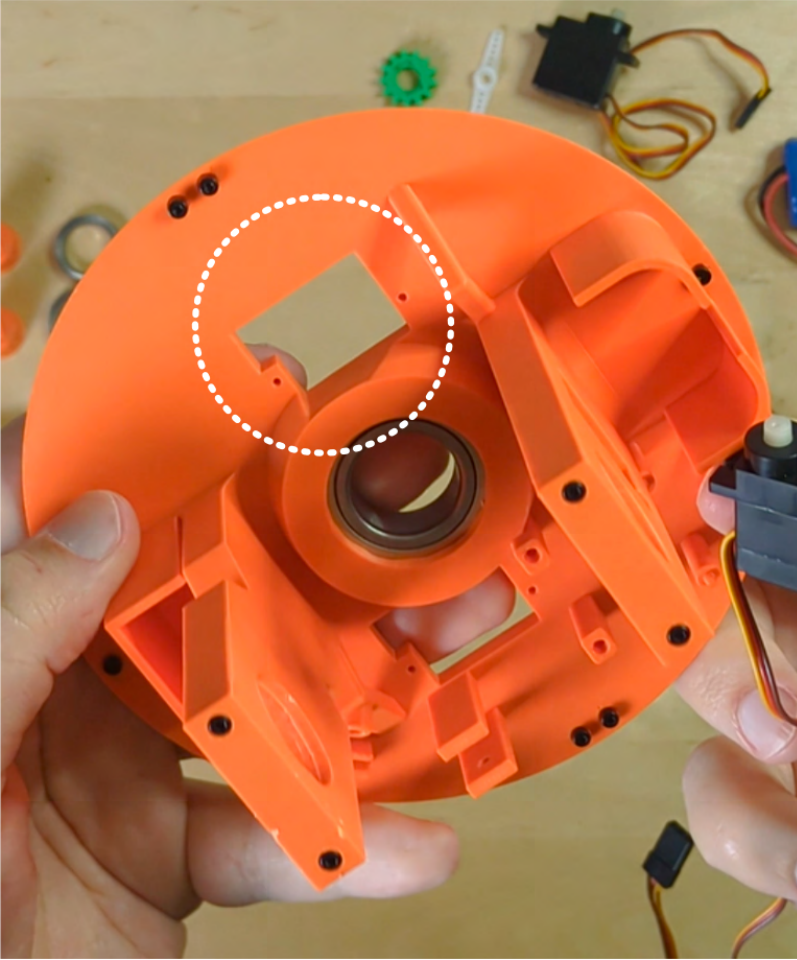
2

Fully insert four 2x6 screws into the top of the rotating base. Partially attach six 2x6 screws in the lower portion - you can screw them in fully later in the process.



3

Press the large bearing into the base.
This should be a snug and even fit.

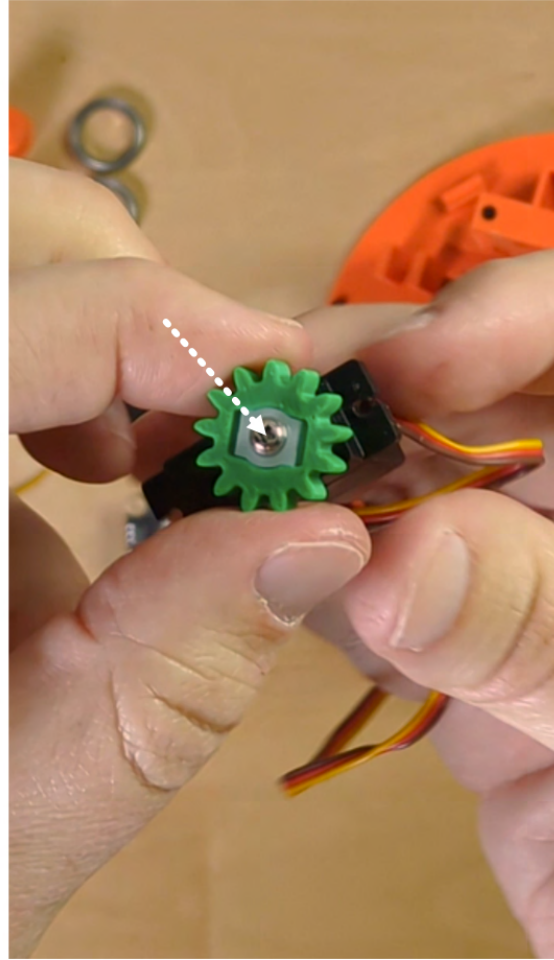


4

Attach the base rotation servo in the indicated slot and affix it with the two long screws that come in the servo package. Note the orientation and use the extended channel adjacent to the mount point to fit the servo cable through. Please reference the video to see this in detail.

Although the servos may look identical from the outside, it is important to be sure that you use the 360° Steering Engine (PG002) in this step.

Attach the base rotation gear by pressing it onto the white portion of the servo. You may need to flip the gear to find the side that is a snug fit. Use the small screw that came with the servo to attach the gear.



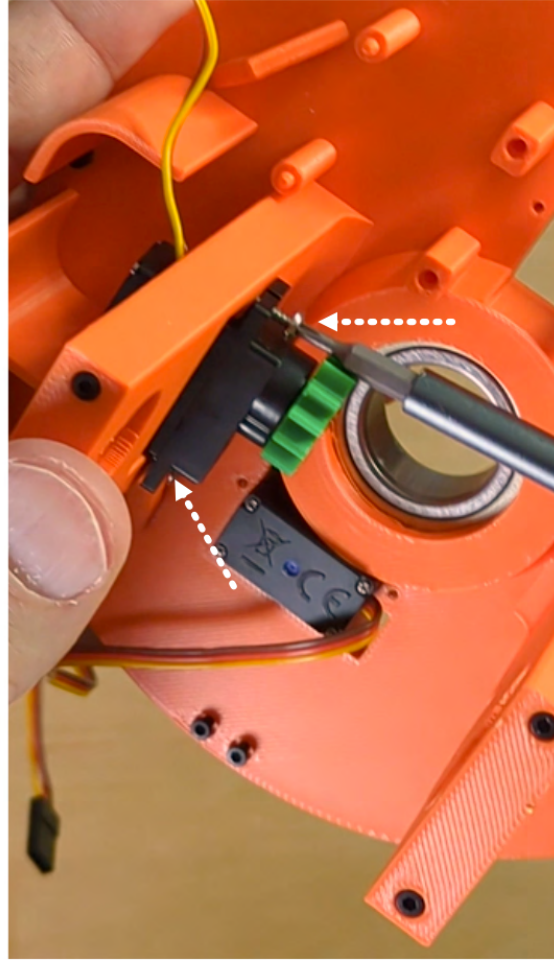
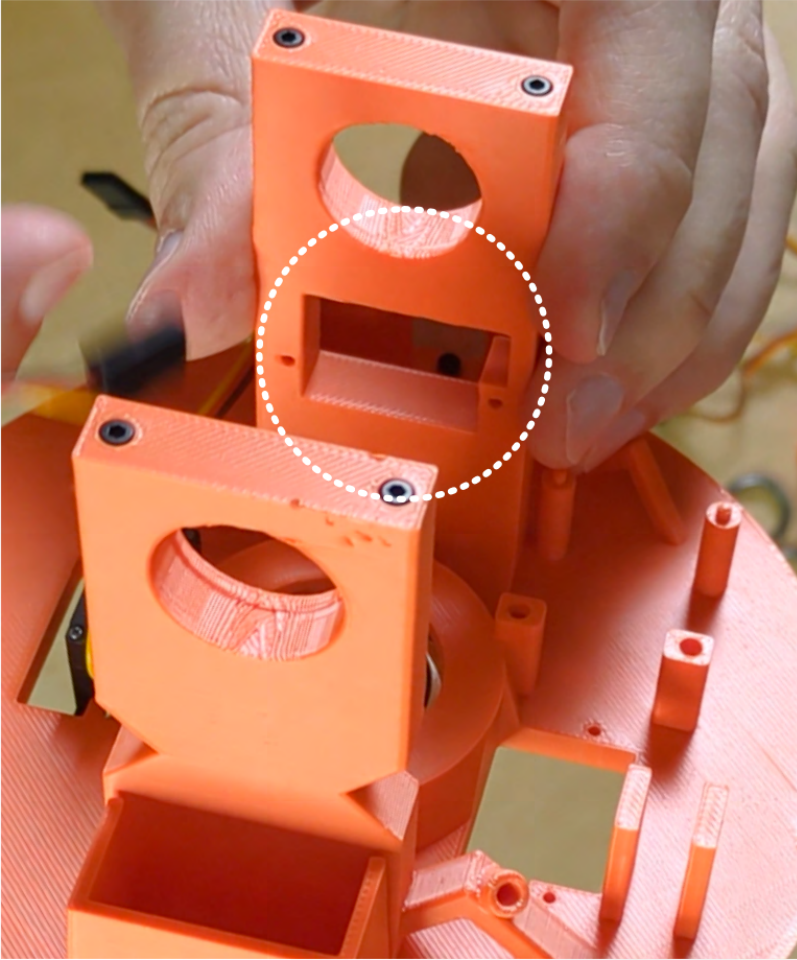
5

This step uses a 9g Servo Motor with Clutch Protection (PG001) - be sure to select this servo (both servo types look the same but operate differently).

The servos come with several white servo arms - we will trim one of these so that we can firmly attach a gear to the servo.

Trim both sides of a servo arm using side cutters and press it into the gun rotation servo as shown - trim a straight edge close to the central core of the arm.

Use the trimmed arm to affix the gear to the servo using the small Phillips screw that came with the servo.



6

Attach the gun rotation servo to the rotating base and affix it with the two long screws that come in the servo package. Note the orientation and use the extended channel adjacent to the mount point to fit the servo cable through. Please reference the video to see this in detail.

It is important that the correct servo is used for this step - this should be a 180° servo (PG001)

7

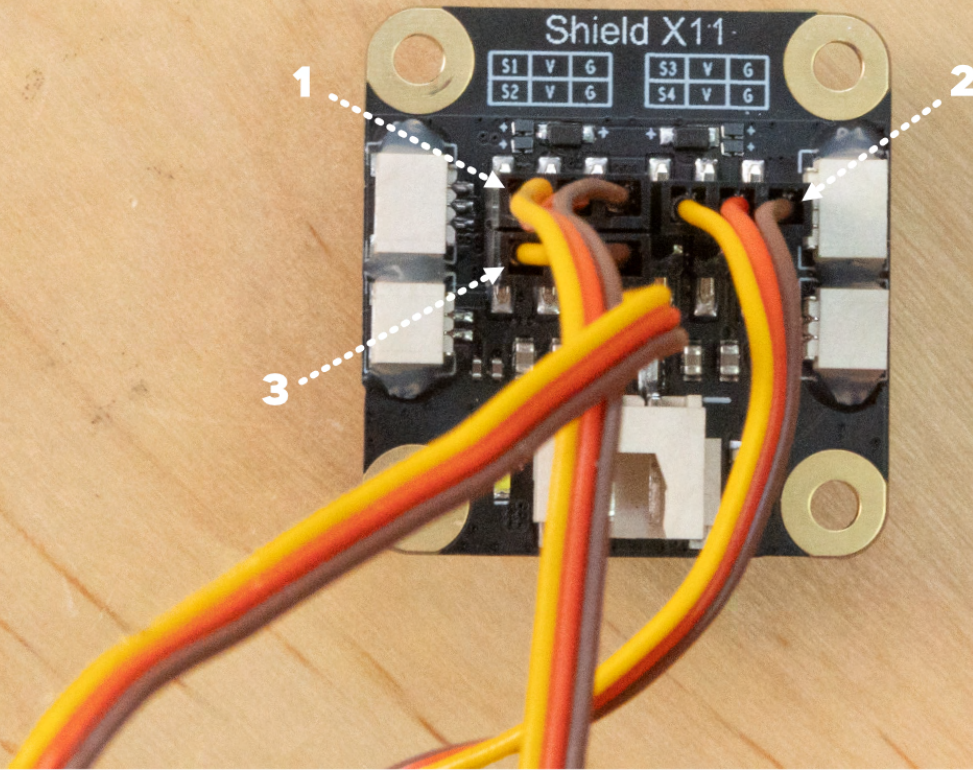
Attach the gun trigger servo and affix it with the two long screws that come in the package. Note the orientation and use the extended channel adjacent to the mount point to fit the servo cable through.

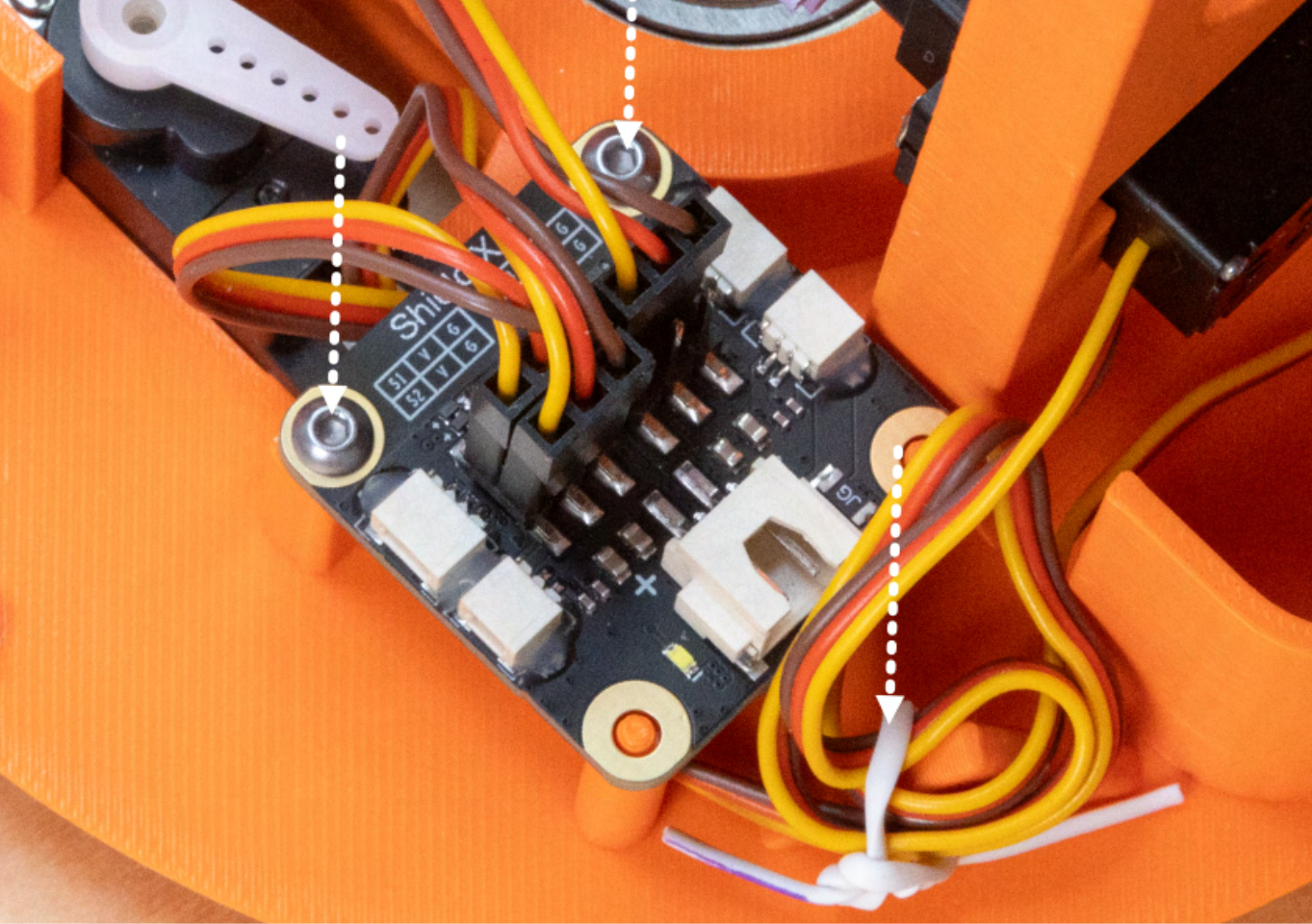
It is important that the correct servo is used for this step - this should be a 180° servo (PG001)

8

Attach the servo wires to the receiver as shown with the metal portion on the plugs oriented away from the power port.

1. Base rotation servo
2. Trigger servo
3. Gun rotation servo



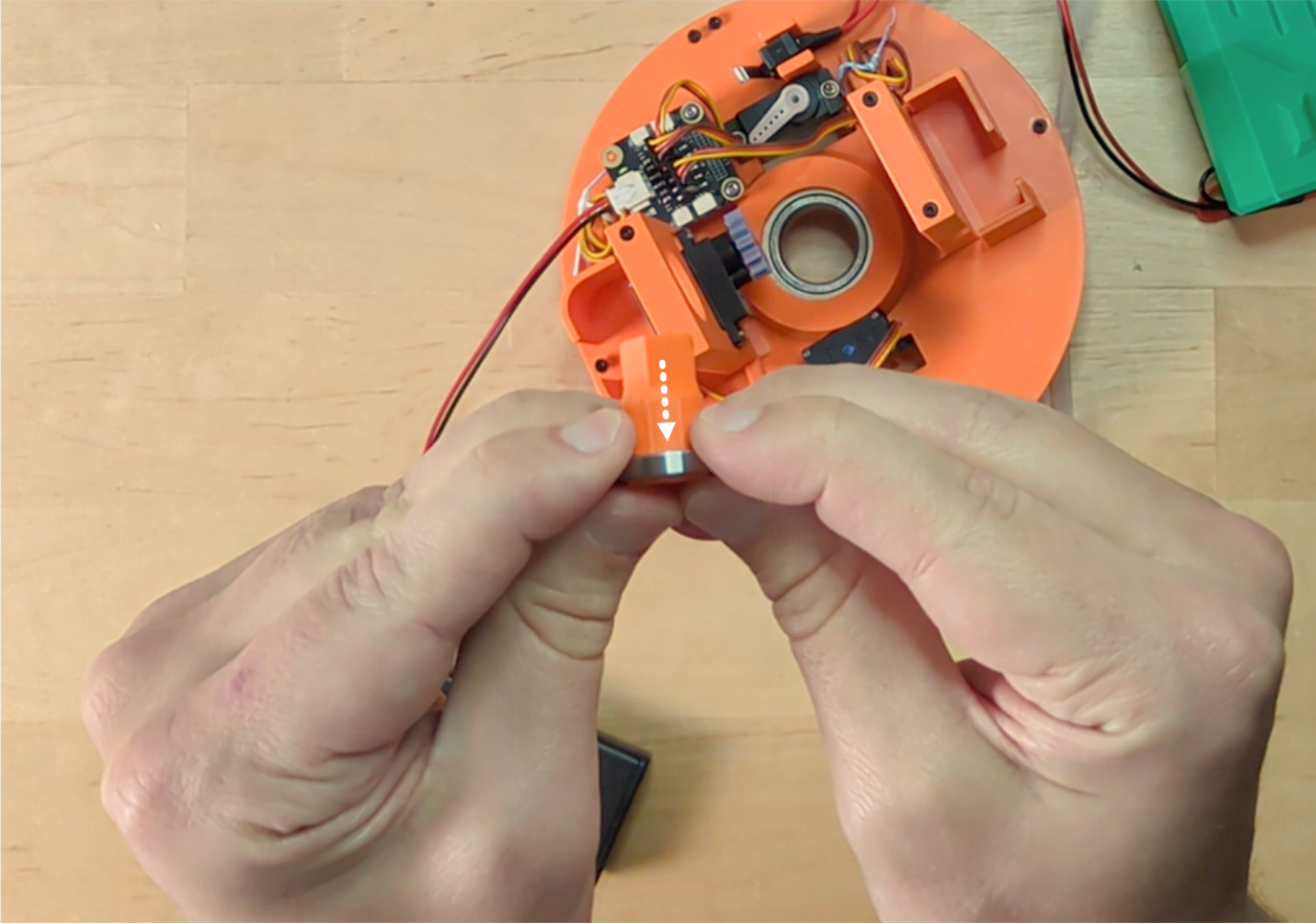


9

Before attaching the receiver board to the base (using two of the screws that came with the CyberBrick kit) check the positioning of the wires. Use twist ties and the 'gates' built into the base to ensure that the wires are compact and contained. It may be best to run the servo wires under the receiver board as shown so that they do not bump into the turret sides in a later step. Please reference the video for an example of this process.

10

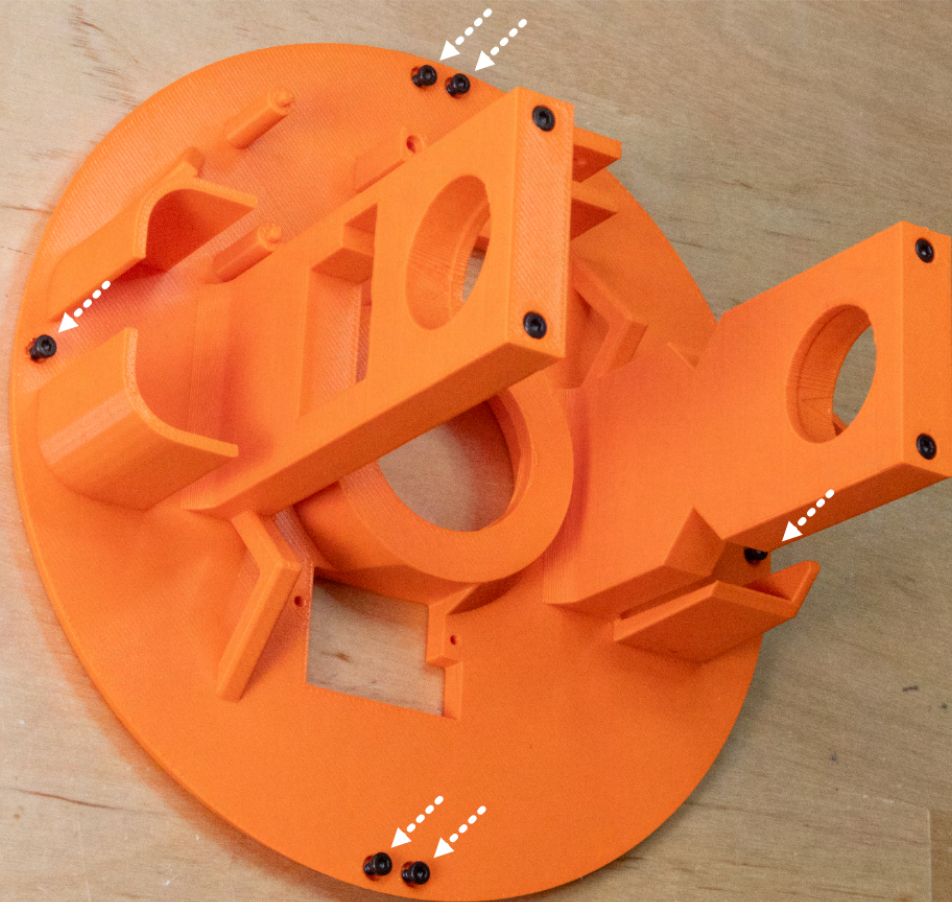
Place the 6702zz bearings over the pegs and press them down to the base of the pegs.



11

Finish screwing in the six 2x6 screws around the base.

(Shown here before the previous installation steps for clarity)



12

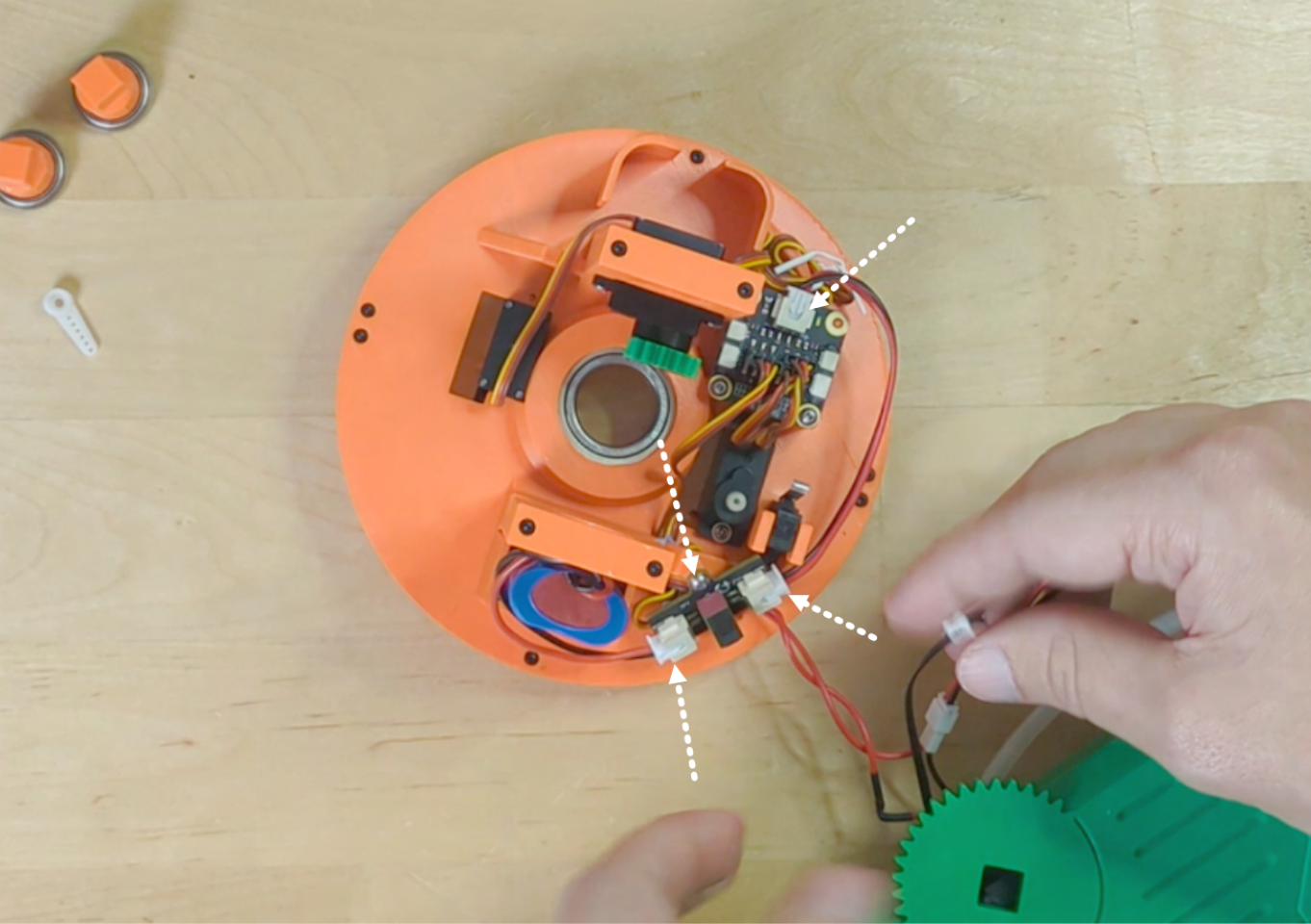
Attach the water gun trigger using two 2x10 screws. The sides of the trigger don't align with the two columns that hold it - check the position of the holes within the trigger before inserting the screws to prevent damage.

13

Attach the power switch as shown using one of the screws that came with the Cyber Brick kit.

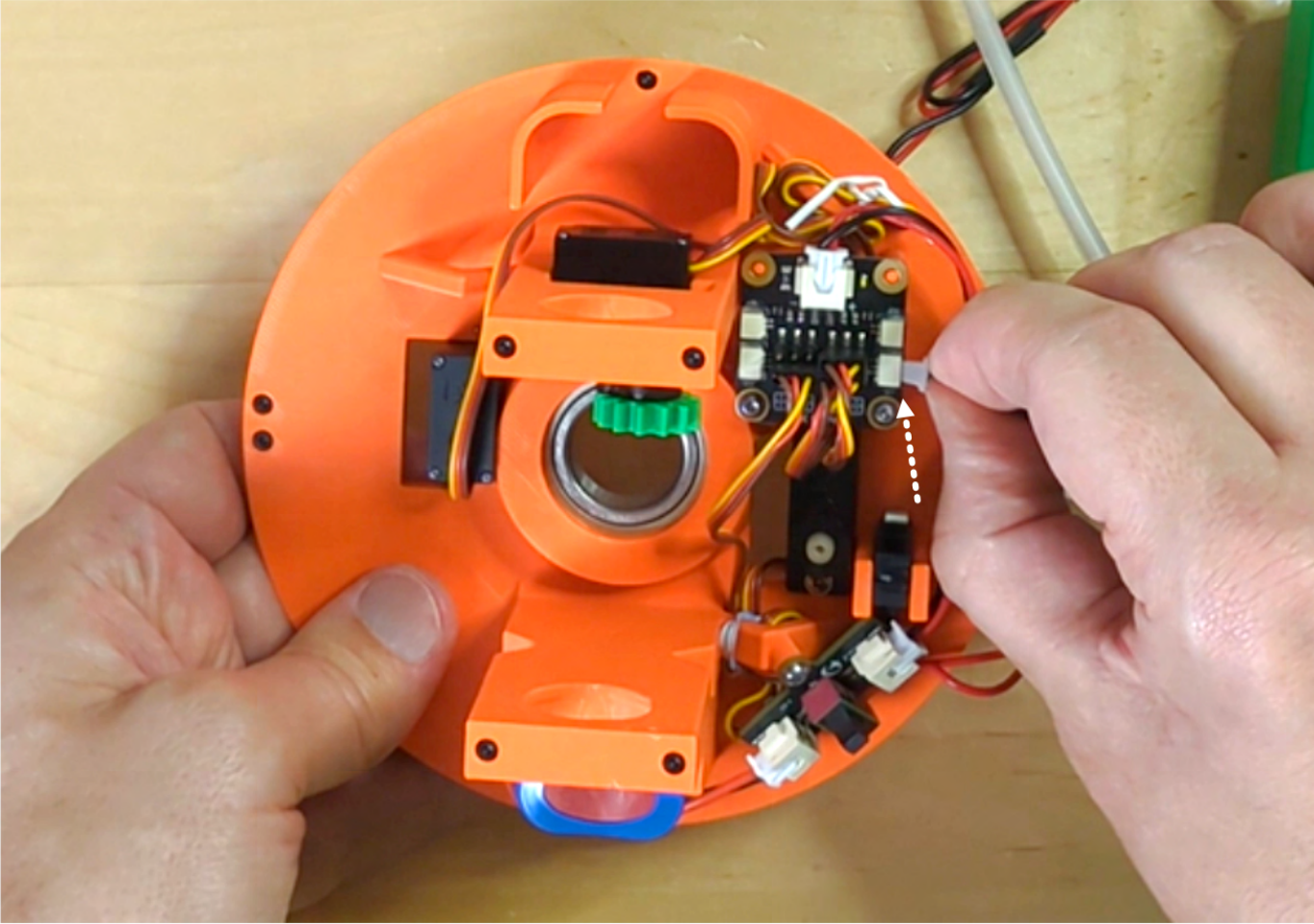
Attach the battery to the left side of the power switch and use the included cable to attach the right side to the power-in port on the receiver.

Tuck the battery into the slot & try to place the cord behind it so that it is contained.



14

Attach the LED cable to the receiver board.



15

To ensure that the arm is properly placed to trigger the water gun:

1. Power on the turret and the controller.
2. Press the 'fire' button on the controller and keep it held in.
3. Install the servo arm so that it is pressing the trigger.
4. Release the trigger
5. Use a small screw to attach the servo arm.

Please reference the video to see this in detail.

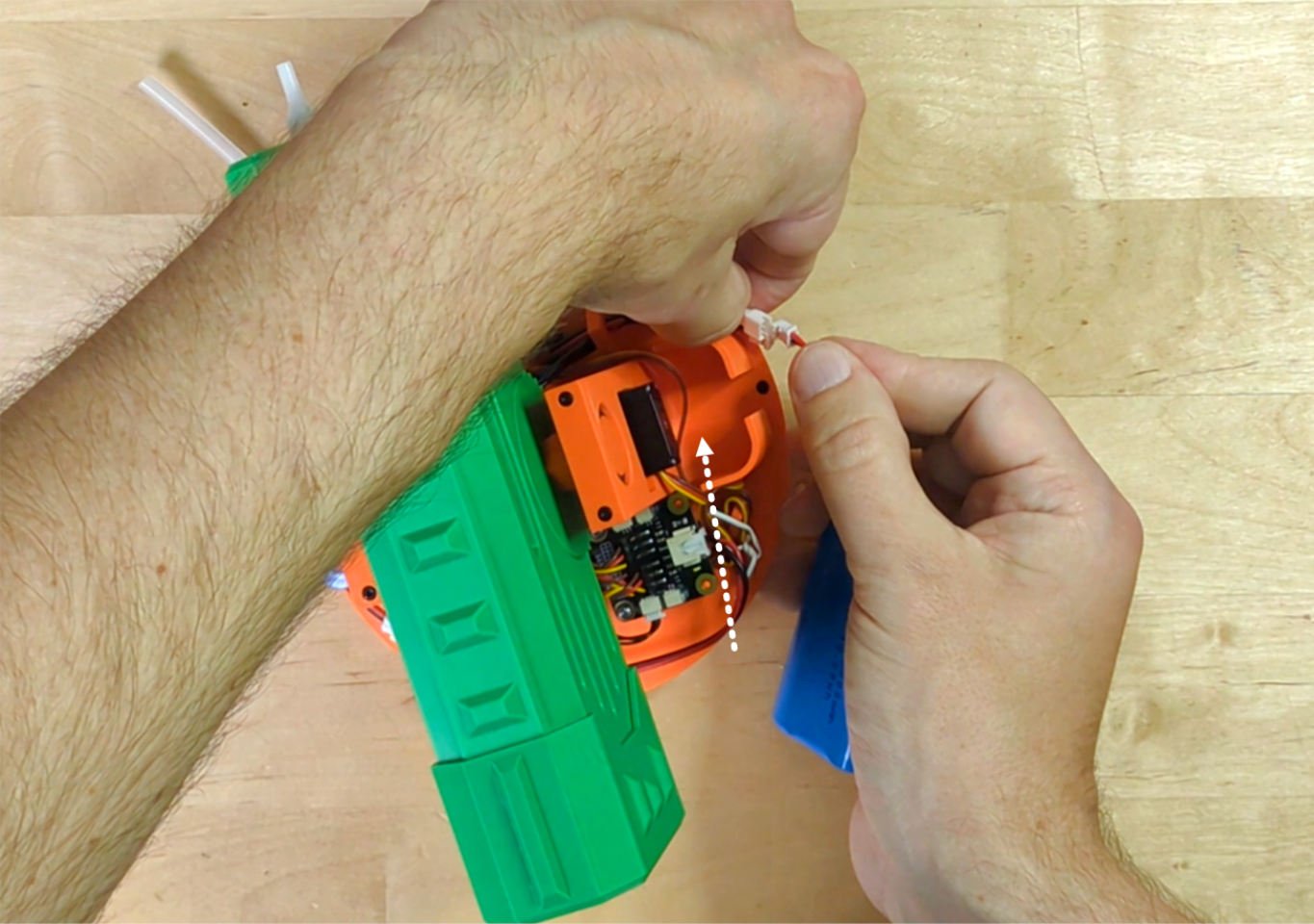
16

Remove the battery pack.

Orient the water gun over the rotating base with the back of the gun pointing towards the electronics and trigger. Insert the two pegs (and bearings) through the holes in the base pillars and into the gun. You will need to adjust these so that the gun is centered and the pegs feel secure.

Ensure that the gun is level horizontally when installing while leaving the servo at the default position. Because the servo will default to 'centered' when powering on, you may want to briefly power the system on and off to confirm that the gun is level at 'rest' before continuing.

Replace the battery pack.



17

Attach the water gun battery and place it in the indicated slot. Attach the AAA battery back to the receiver board and then place it in the indicated slot.

18

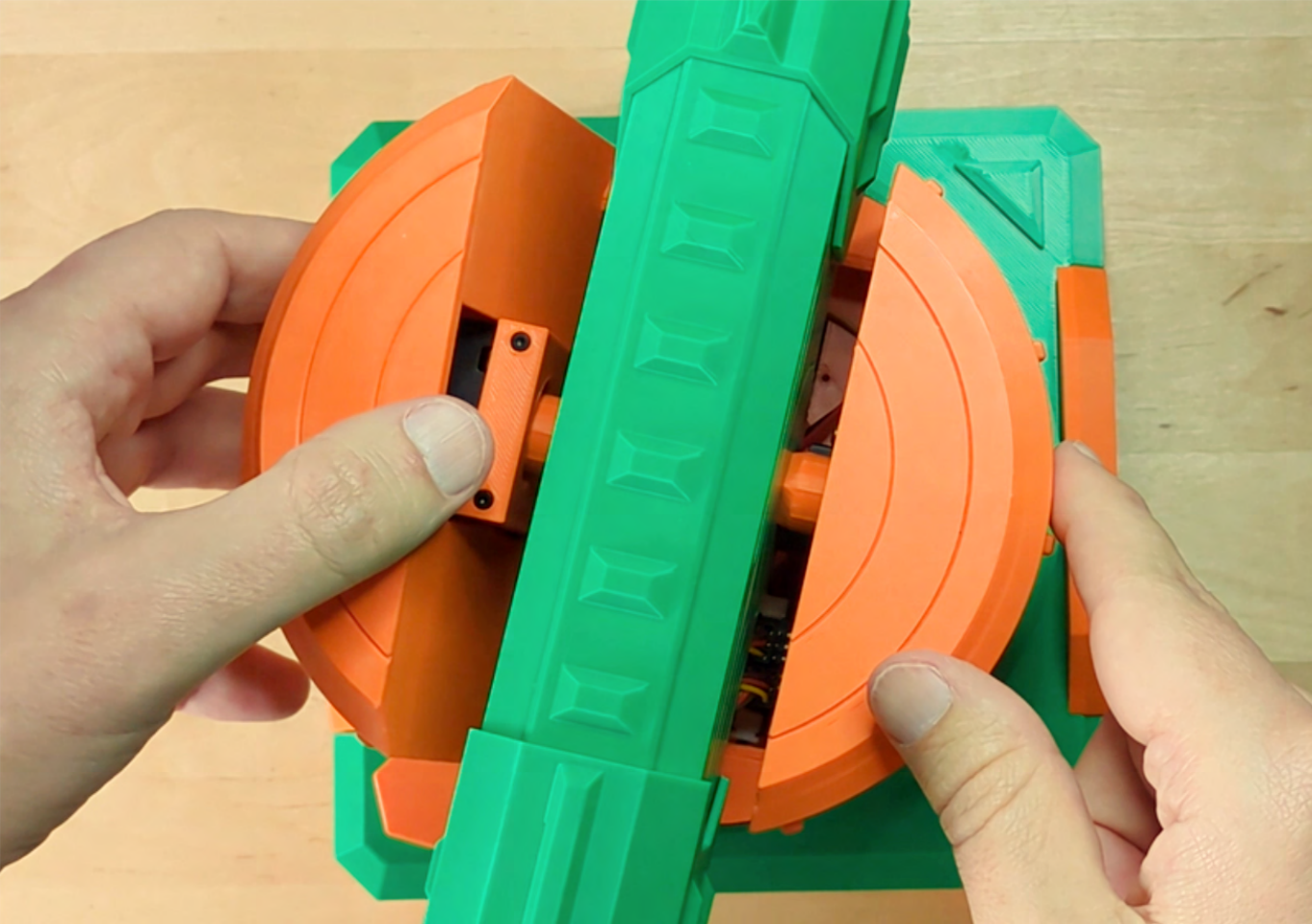
Press the rotating base evenly down onto the water tank, feeding the silicon tube through the large bearing and into the tank as you go. Before pressing down fully, check the length of the silicon tube - it should not feel as though it is striking the bottom of the water tank. Be careful to align the gear under the rotating base to the one on the water tank.



19

Glue 5 magnets to each of the turret sides in the slots within the print. Check the fit before applying glue - you may need to use some pliers to gently widen the gap.





20

After the glue is dry, place the sides onto the turret. You may need to adjust wires to ensure that they don't prevent the sides from staying in place. Use twist ties or the tie-downs in the base base as needed.

Place the barrel onto the the front of the gun. Glue can be used if needed but ensure that you don't accidentally glue the two sides of the gun together. This will be a tight fit.