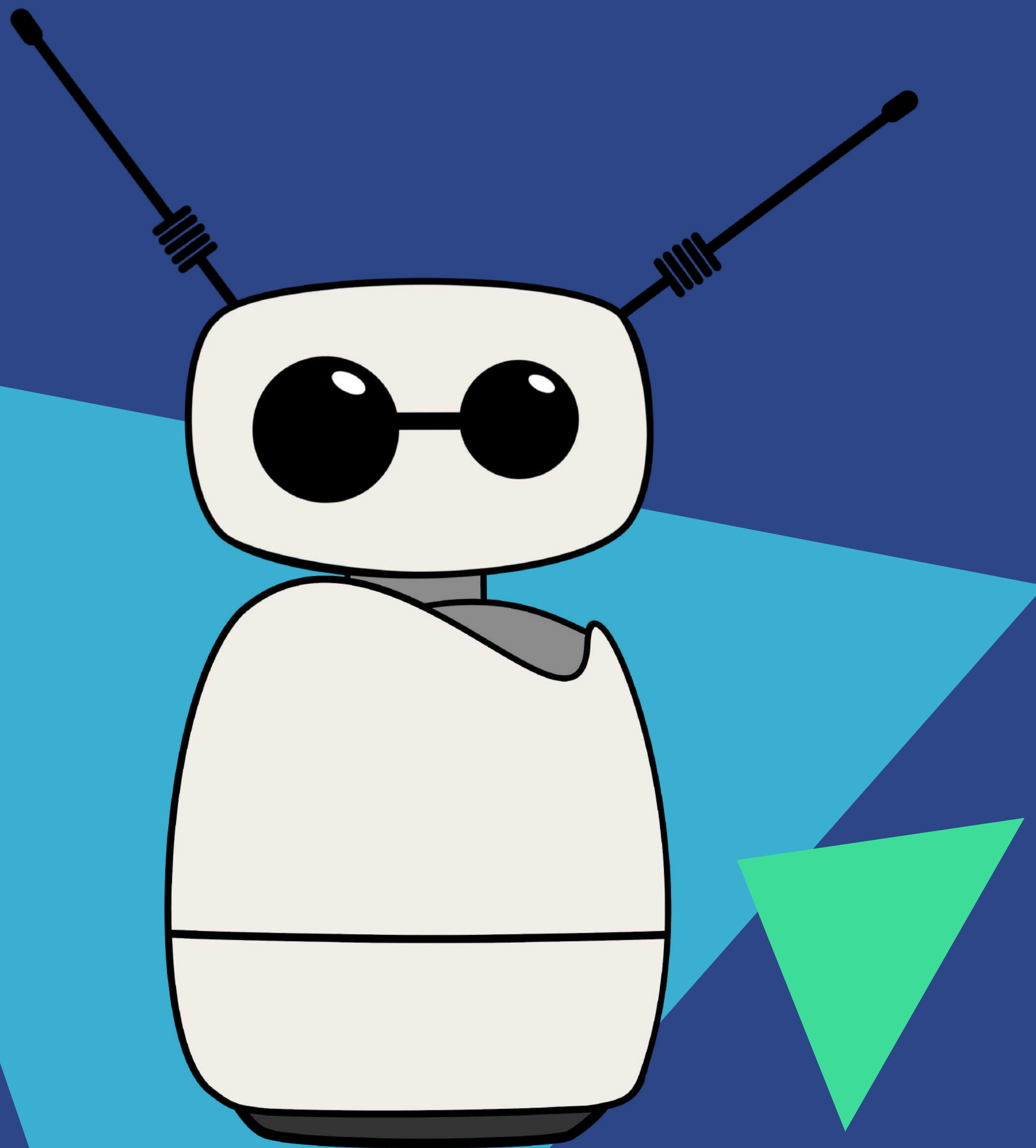




Getting Started!

Beta version v2

Dear Reachy Mini Explorer,

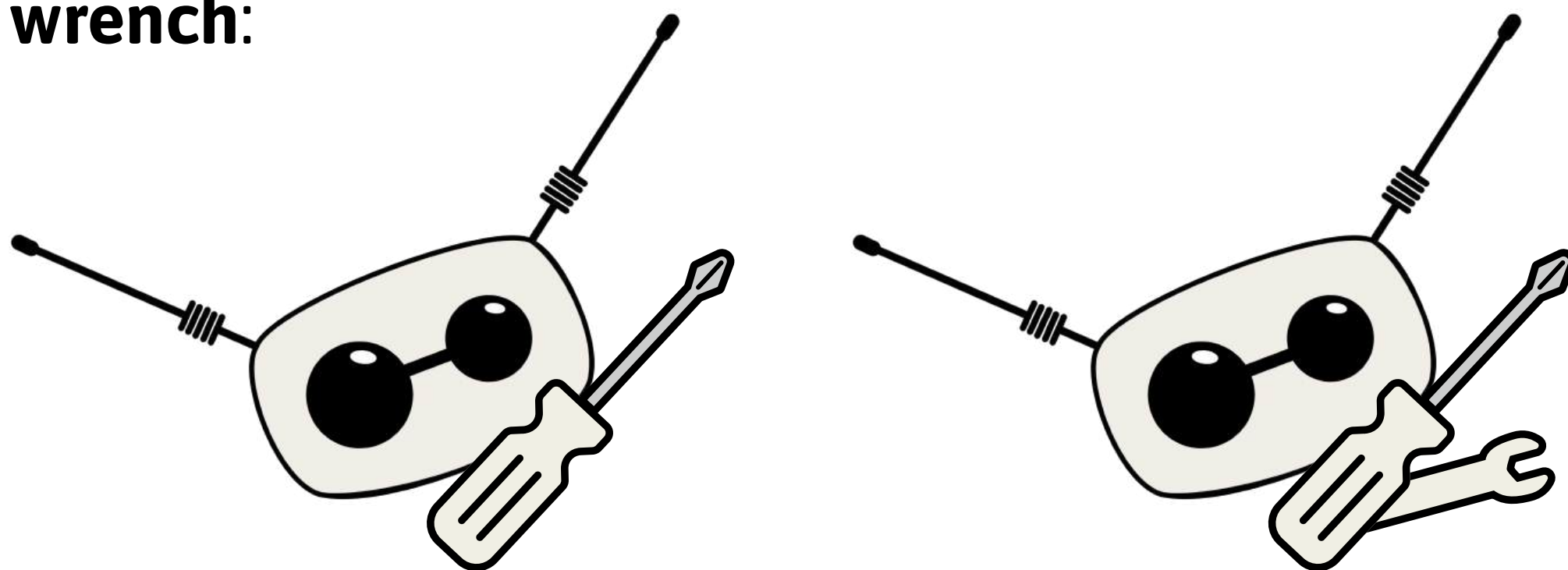
Thank you for joining us on this adventure! By ordering Reachy Mini, you are helping make open-source robotics and AI accessible to more people around the world. Reachy Mini was designed to be cute, affordable, and easy to use, but also powerful (and fun) enough to inspire new kinds of research, AI exploration, and creative applications.

We'd love for you to share your journey with the community from first steps to advanced projects. Join us on **Discord**, **Hugging Face Hub**, or share your builds on **YouTube** or **LinkedIn**. We're incredibly excited to see what you will build.

The Pollen Robotics × 🤗 Hugging Face Team

What you'll need

It takes approximately **3 hours** to assemble your Reachy. When you see these symbols, it means you will need a **cross-head screwdriver** or/and a **wrench**:

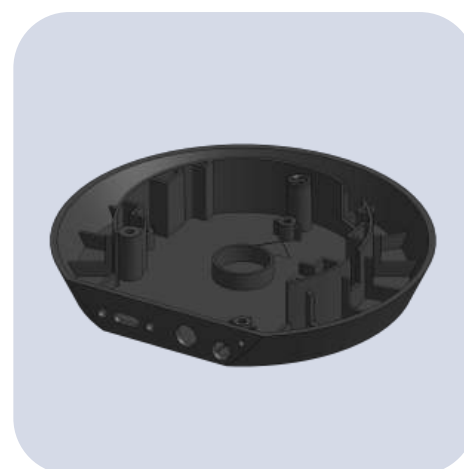


▶ Scan to view the assembly video

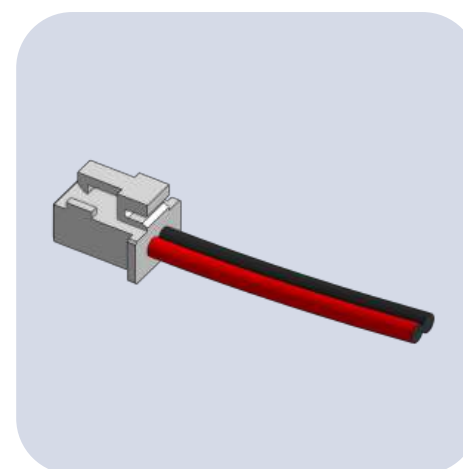


github.com/pollen-robotics/reachy_mini

Foot



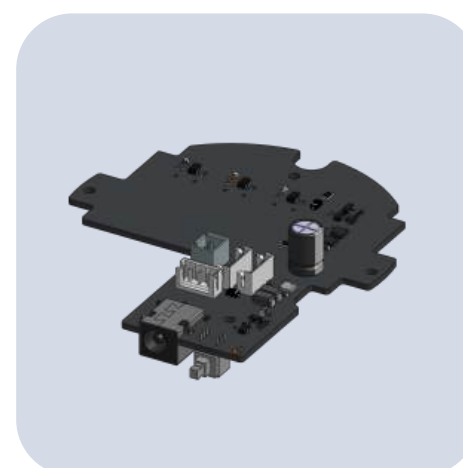
x1
Body Foot



x1
Power Cable



x1
USB
Extension
Cable

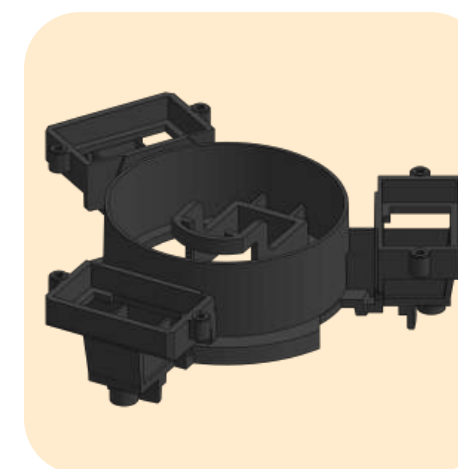


x1
Body PCB

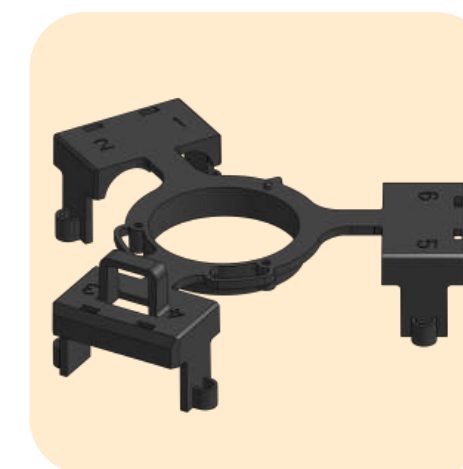


x5
Foot Pad

Body



x1
Stewart Main
Plate



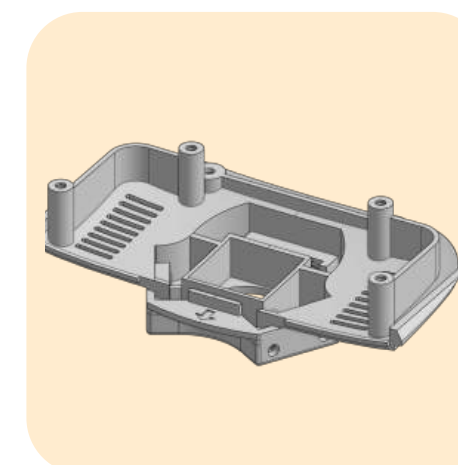
x1
Tricap



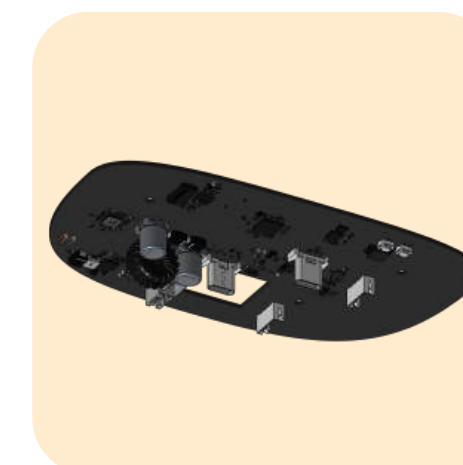
x6
Stewart
Motors



x1
Speaker



x1
Bottom Head



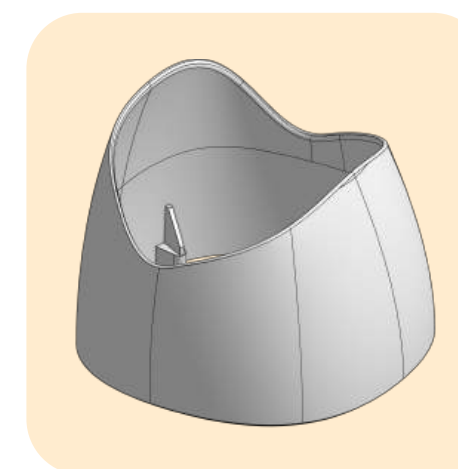
x1
Head PCB



x6
M3 Nut

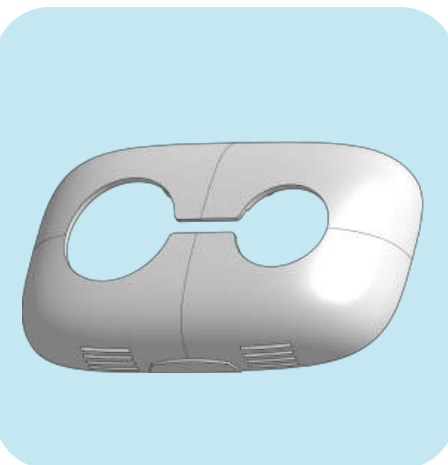


x6
Link Rods



x1
Top Shell

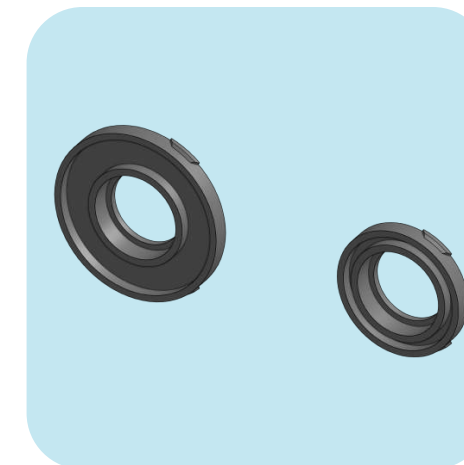
Head



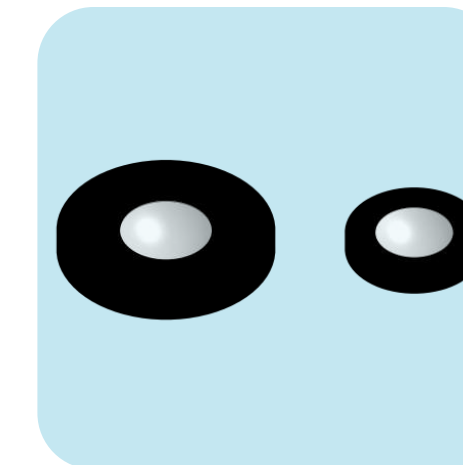
x1
Front Head
Shell



x1
Glasses
Holder



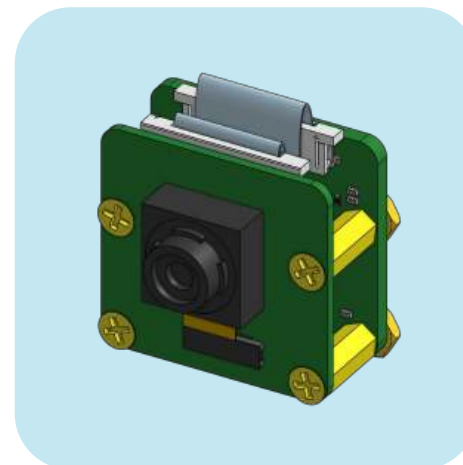
x1
Big and Small
Lens Cap



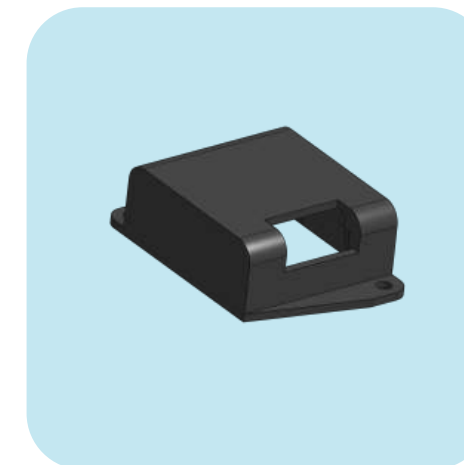
x1
Big and Small
Lens



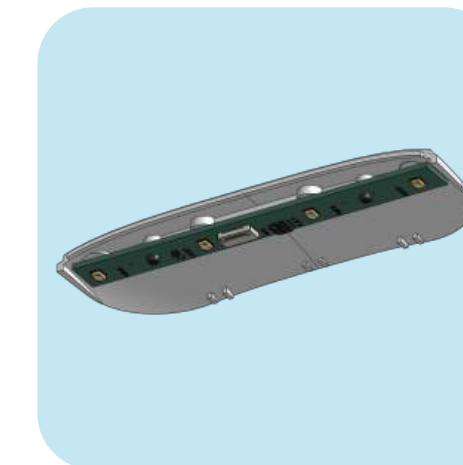
x2
Fisheye Lens



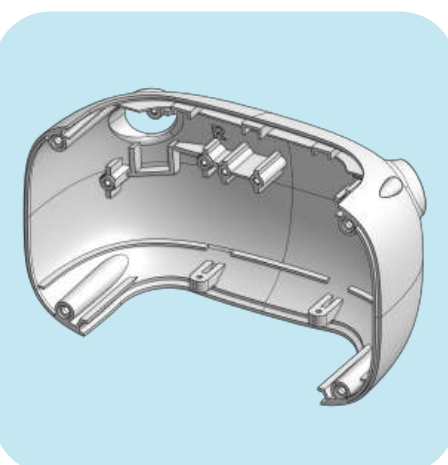
x1
Arducam
Camera



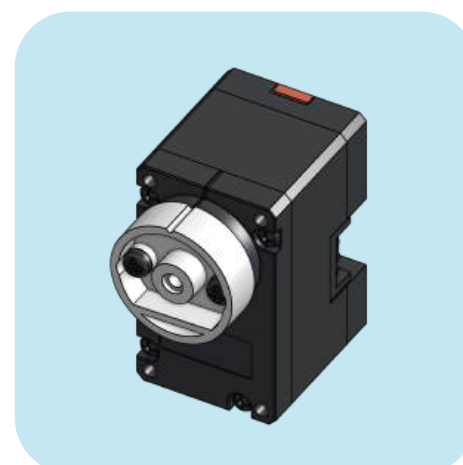
x1
Arducam
Case



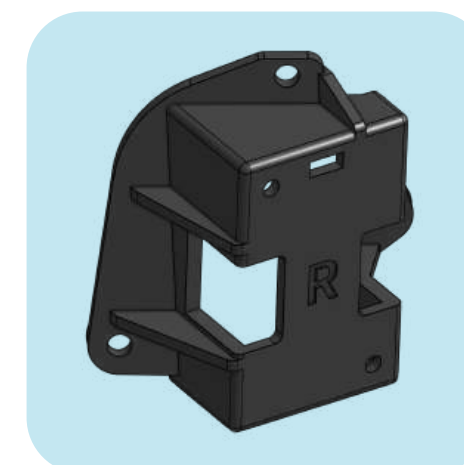
x1
Top Head



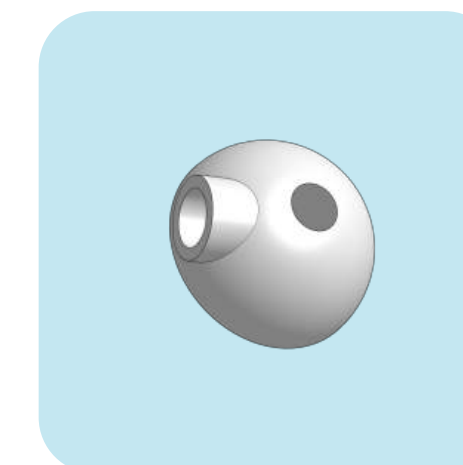
x1
Back Head
Shell



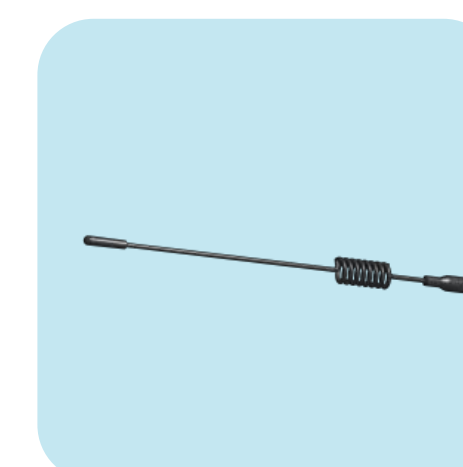
x2
Antena Motor



x2
Motor Case



x2
Antenna
Body



x2
Antenna

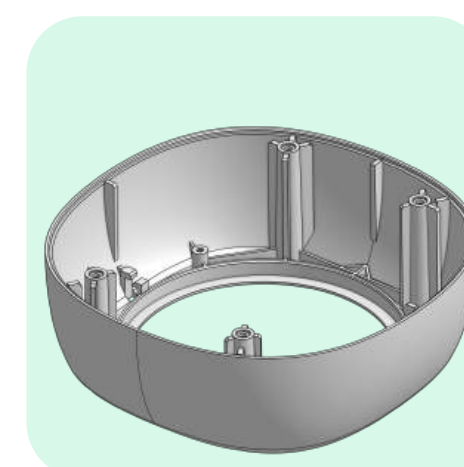
Body Down



x1
Ball Bearing



x1
Base Foot
Motor



x1
Body Down



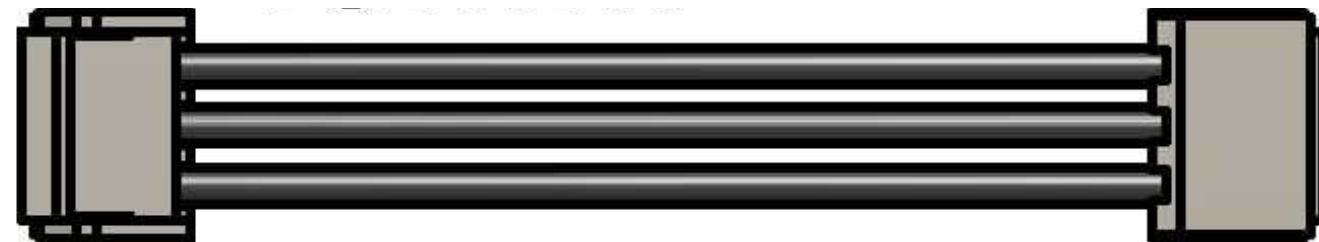
x1
Body
Turning

Motor Cable Lengths:

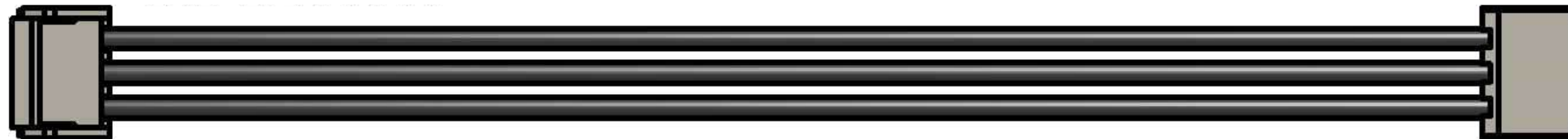
x1 300mm Cable



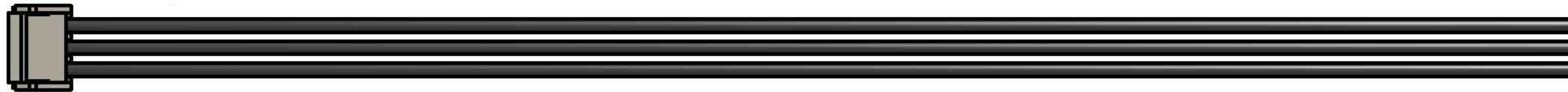
x2 40mm Cable



x2 100mm Cable

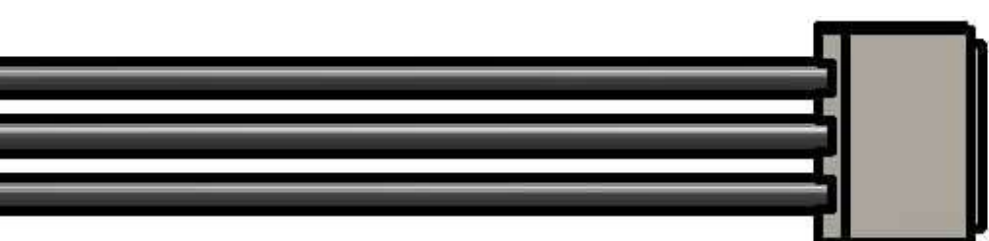
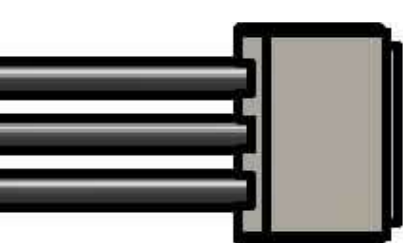
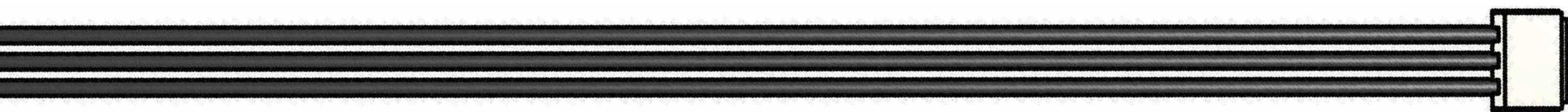


x1 170mm Cable



x4 200mm Cable





Also in your kit:



x1
Cross
Screwdriver



x1
Wrench



x1
USB-C
USB-A Cable



x1
Power Cable



x2
Twist Tie



x2
40mm
Cable



x2
100mm
Cable



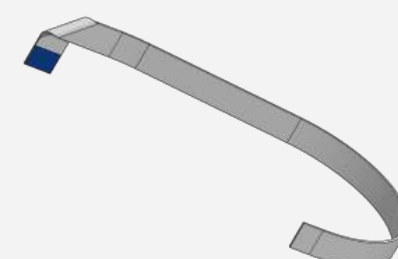
x1
170mm
Cable



x4
200mm
Cable



x1
300mm
Cable



x1
Flexible
Printed Cable



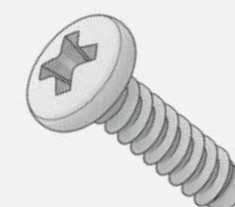
x1
USB-C



x12
M3x18mm
Screw



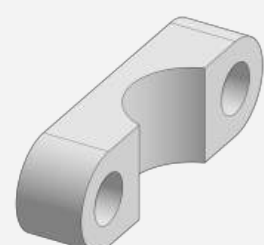
x4
2x6mm
Screw



x46
2.5x8mm
Screw

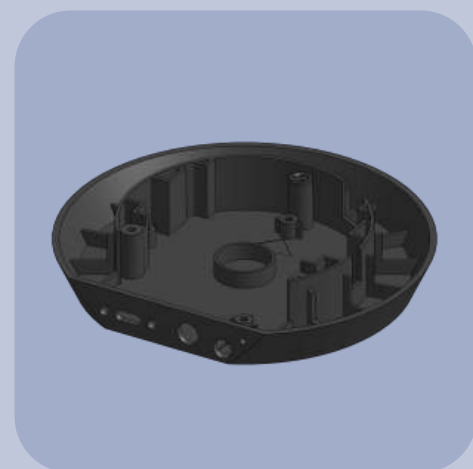


x2
M3x8mm
Screw



x1
Cable Holder

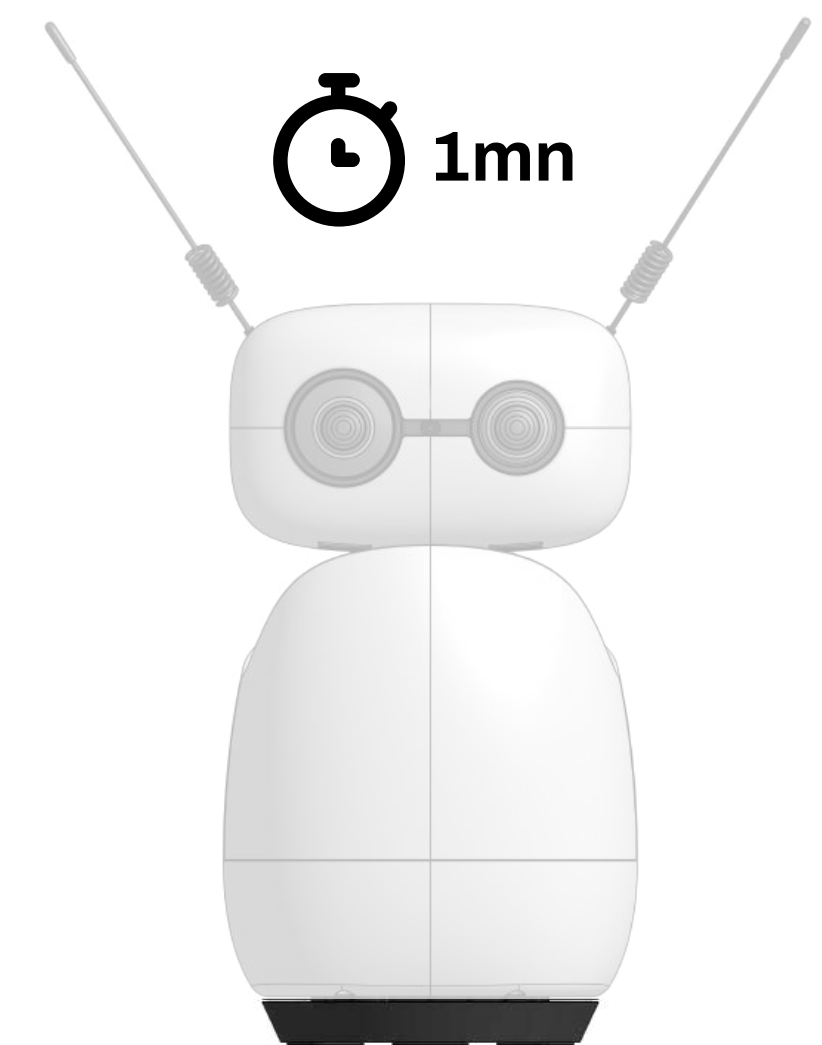
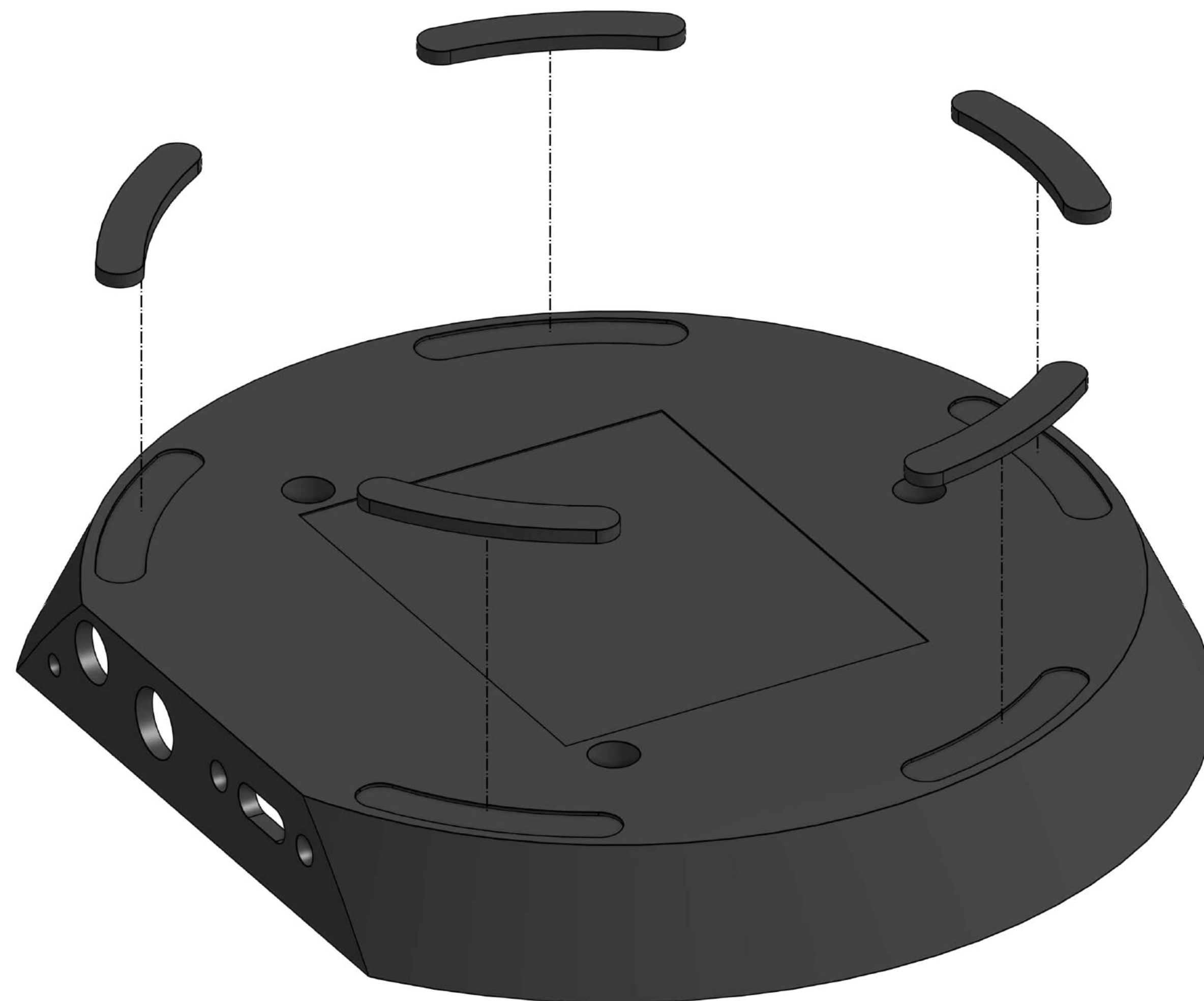
1/51 Foot



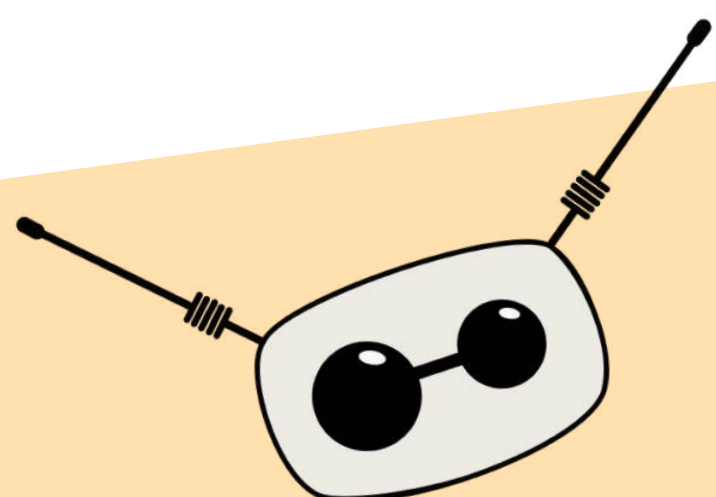
x1
Body Foot



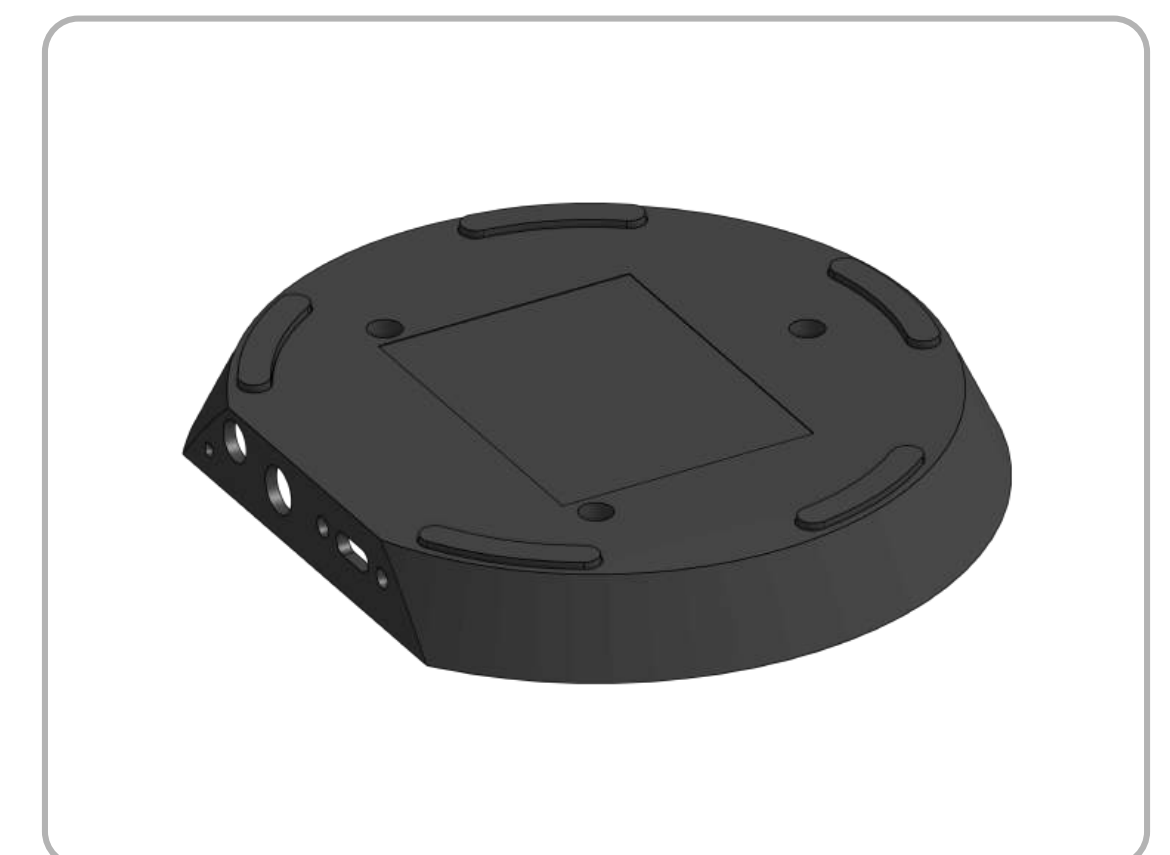
x5
Foot Pad



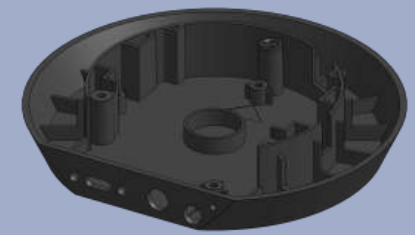
1mn



Stick the foot pads to the underside of the body foot.



2/51 Foot



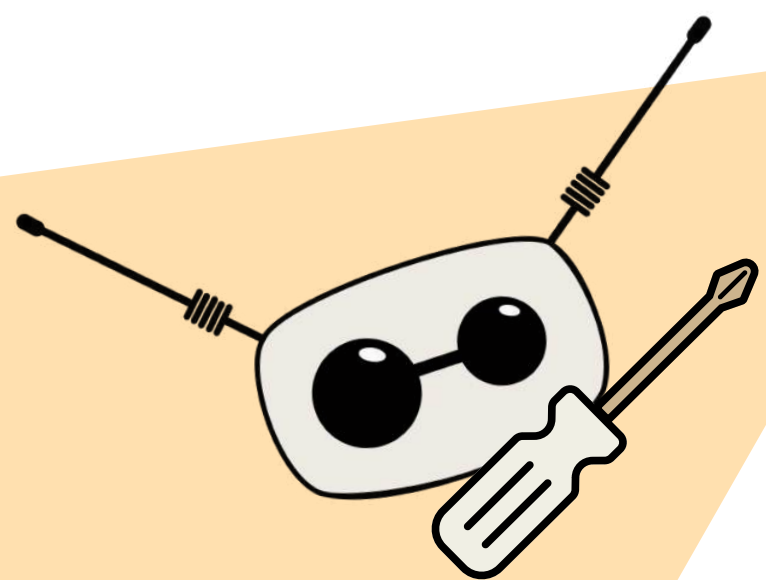
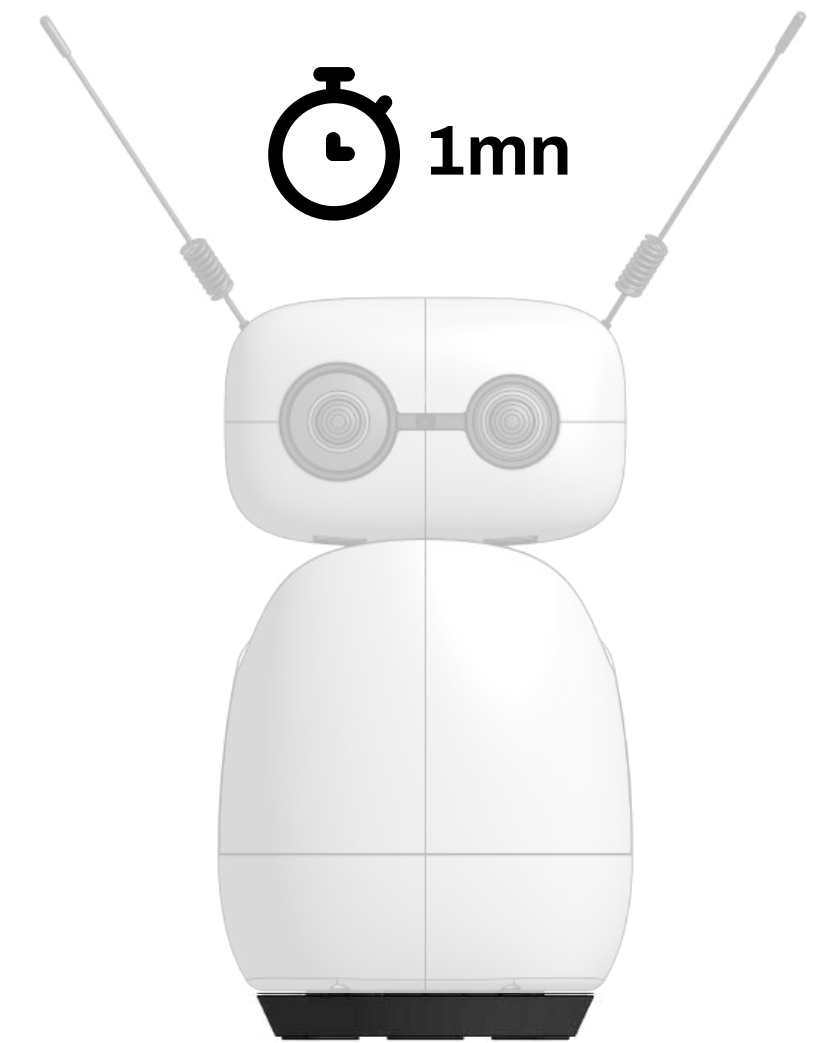
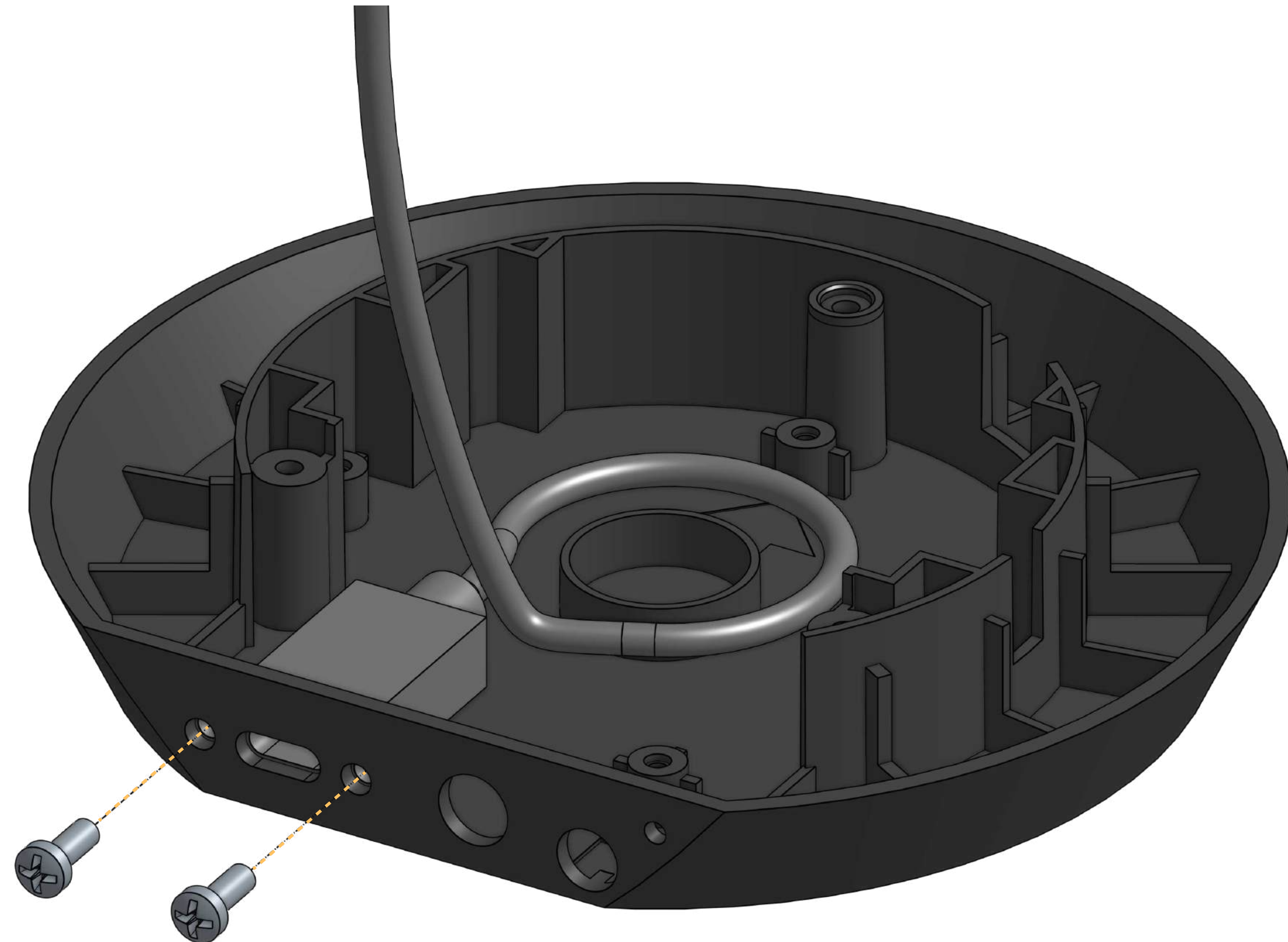
x1
Body Foot



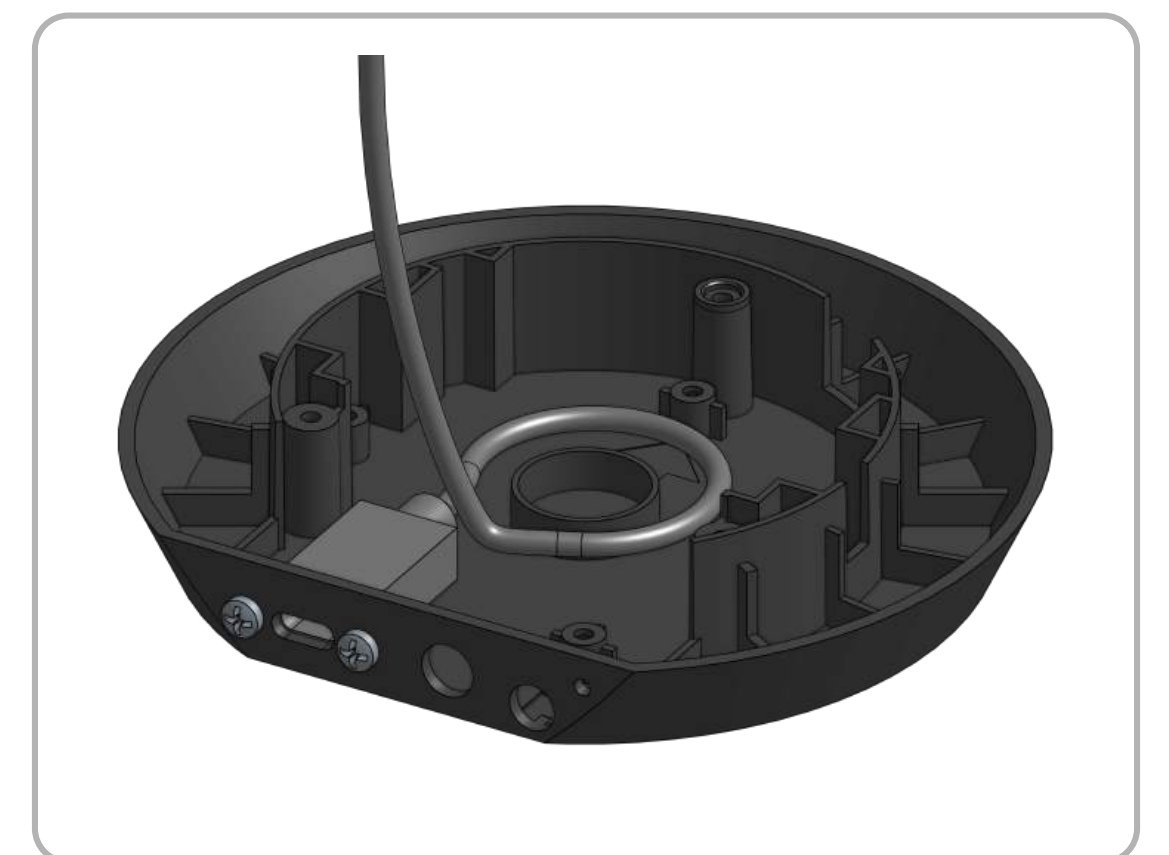
x1
USB
Extension
Cable



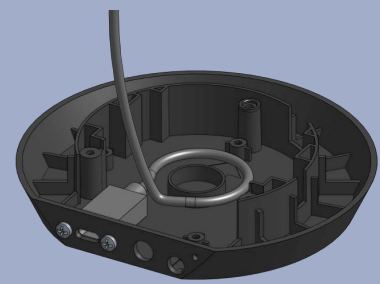
x2
M3x8mm
Screw



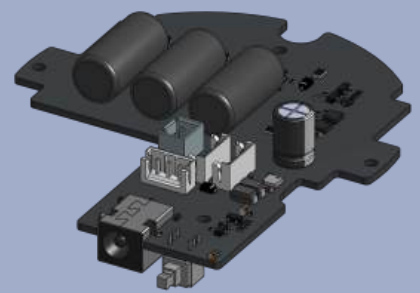
Properly position the cable around the circle and have it come out as shown in the photo.



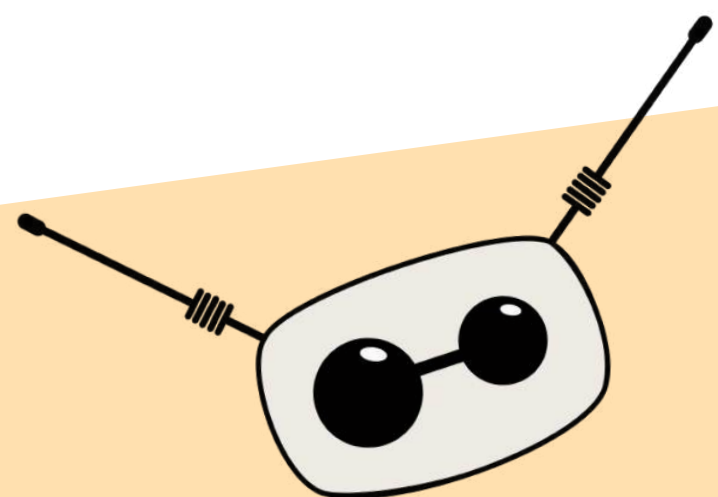
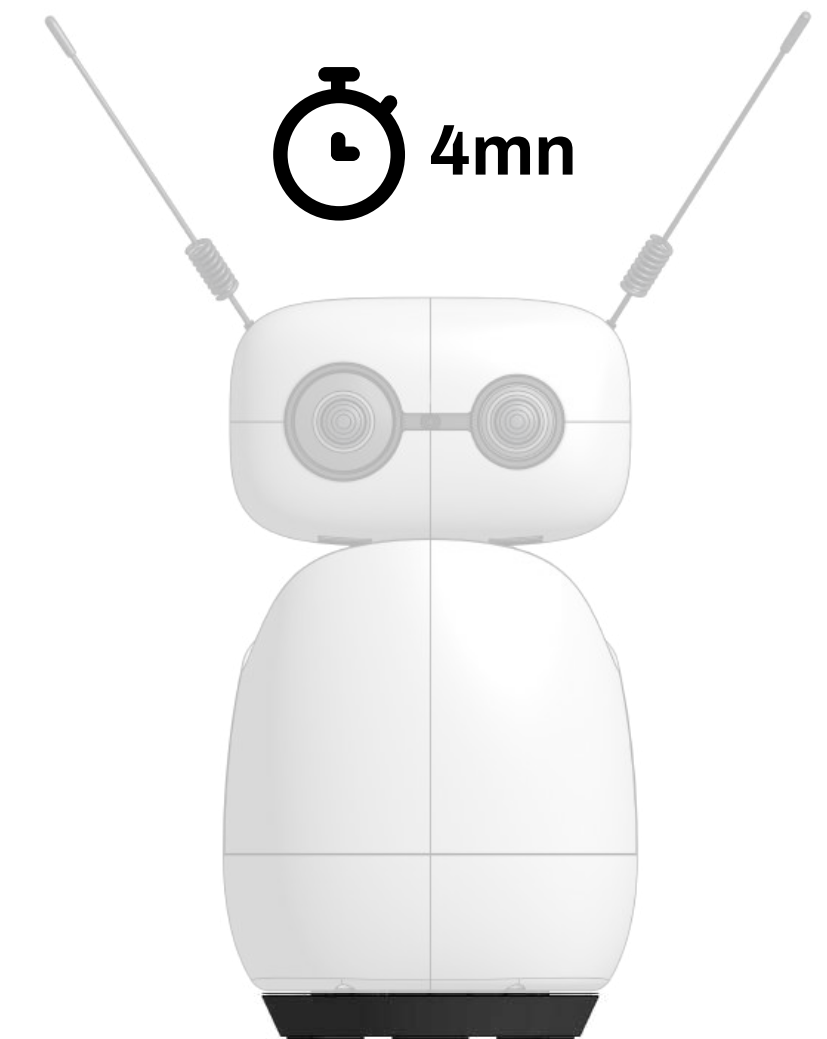
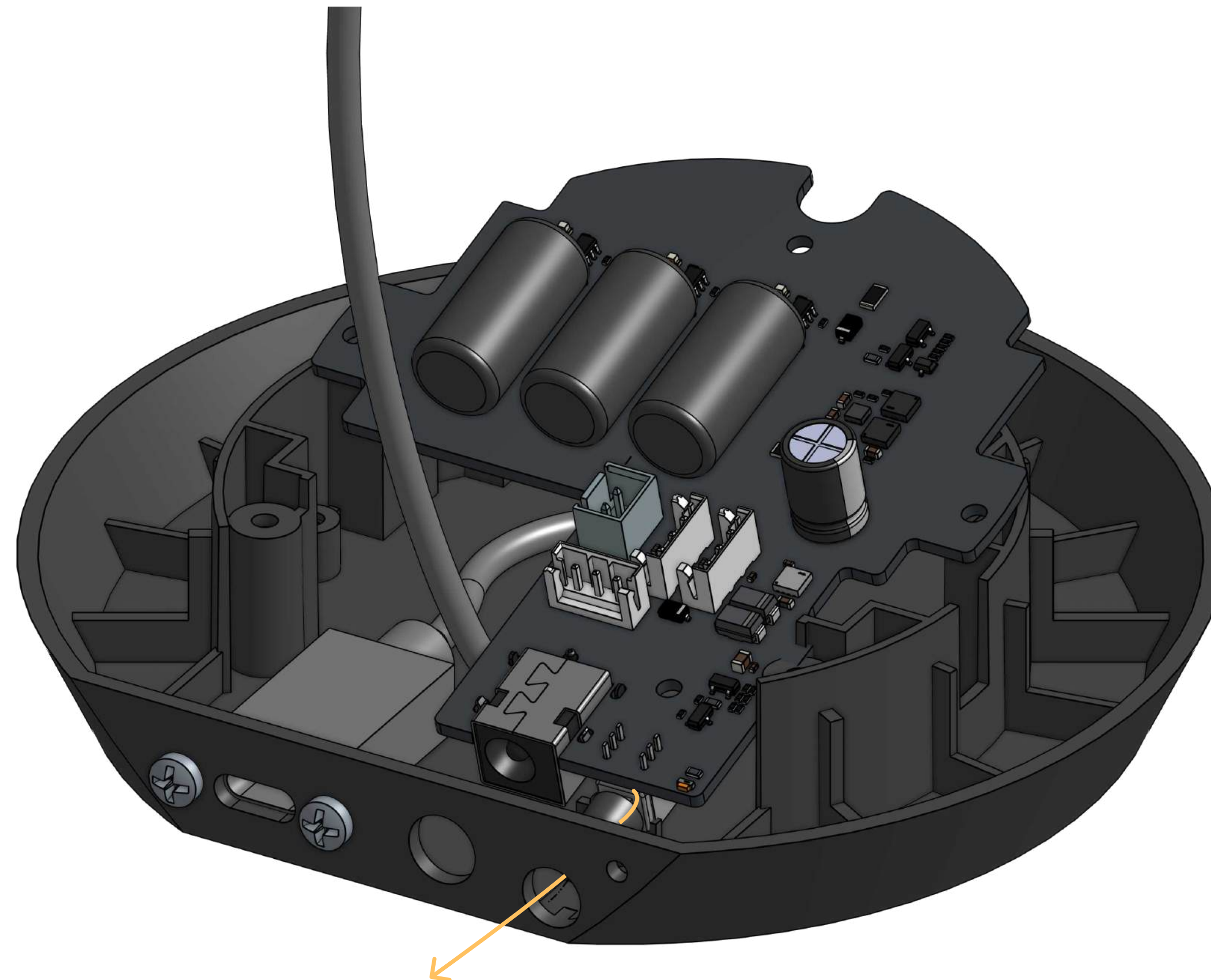
3/51 Foot



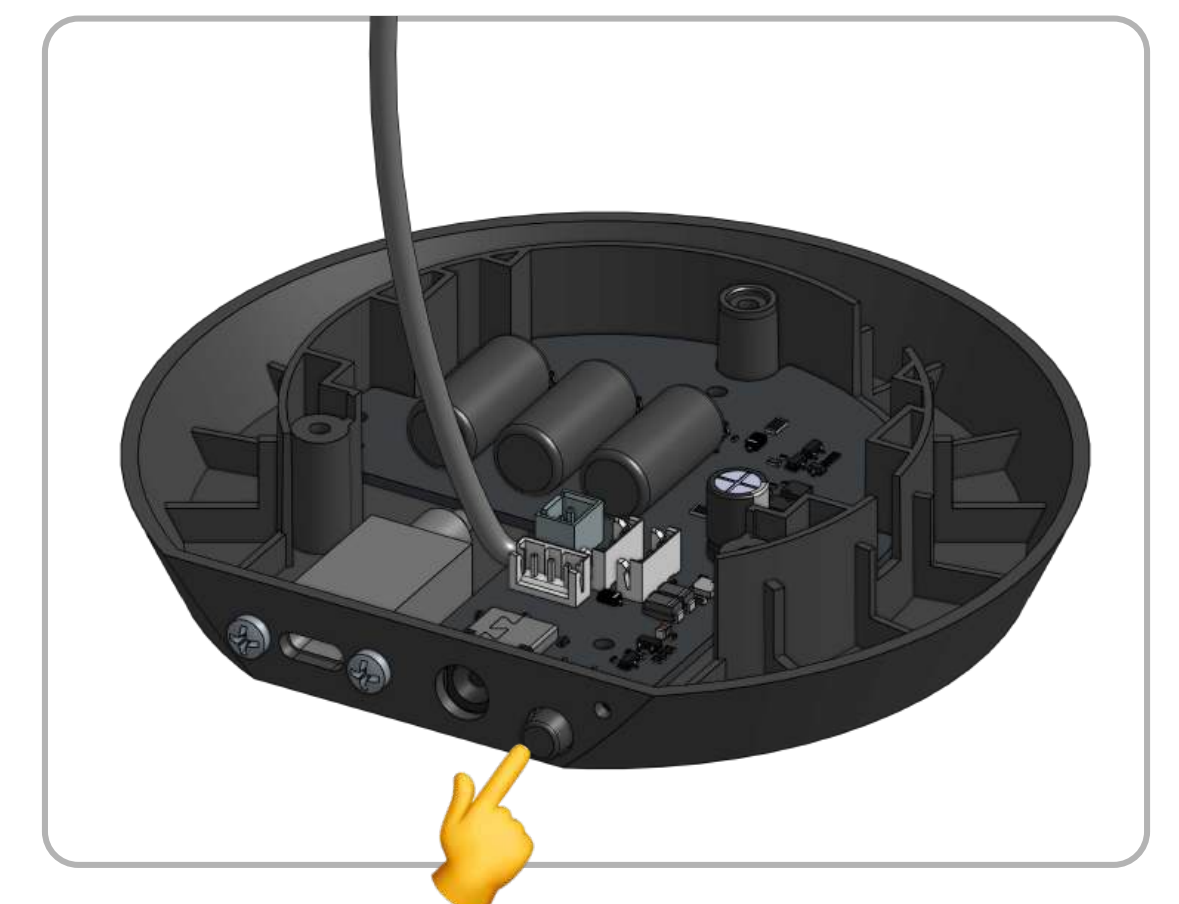
x1
Body Foot
Assembly



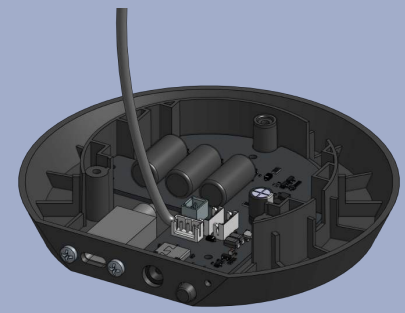
x1
Body PCB



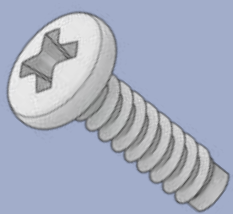
Orient the Body PCB (Printed Circuit Board) correctly (longest tab on the right), then insert the Body PCB into the body foot so the push button protrudes through the casing.



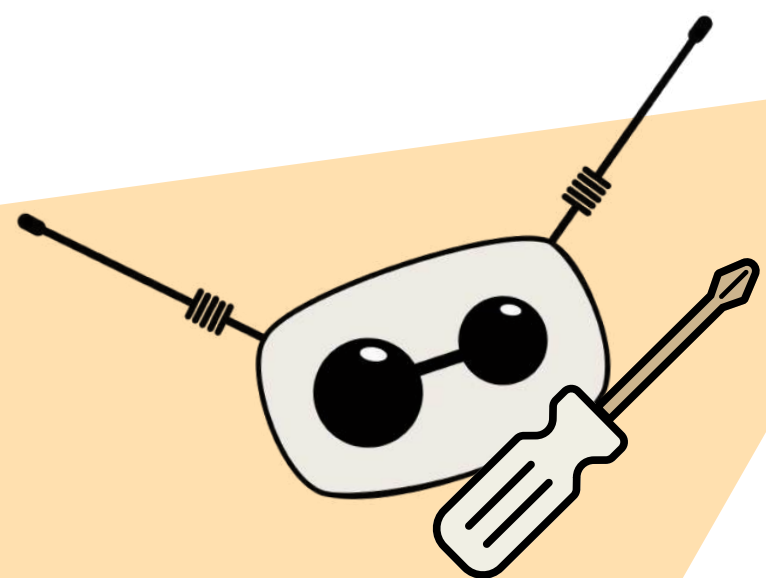
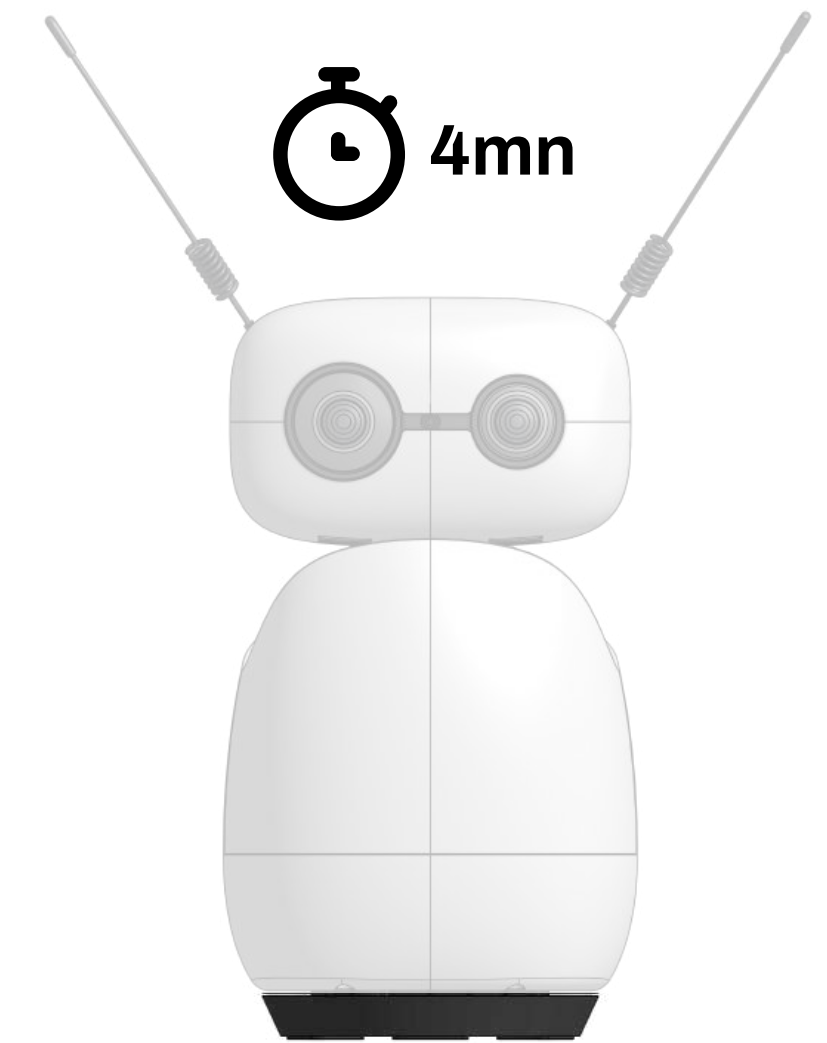
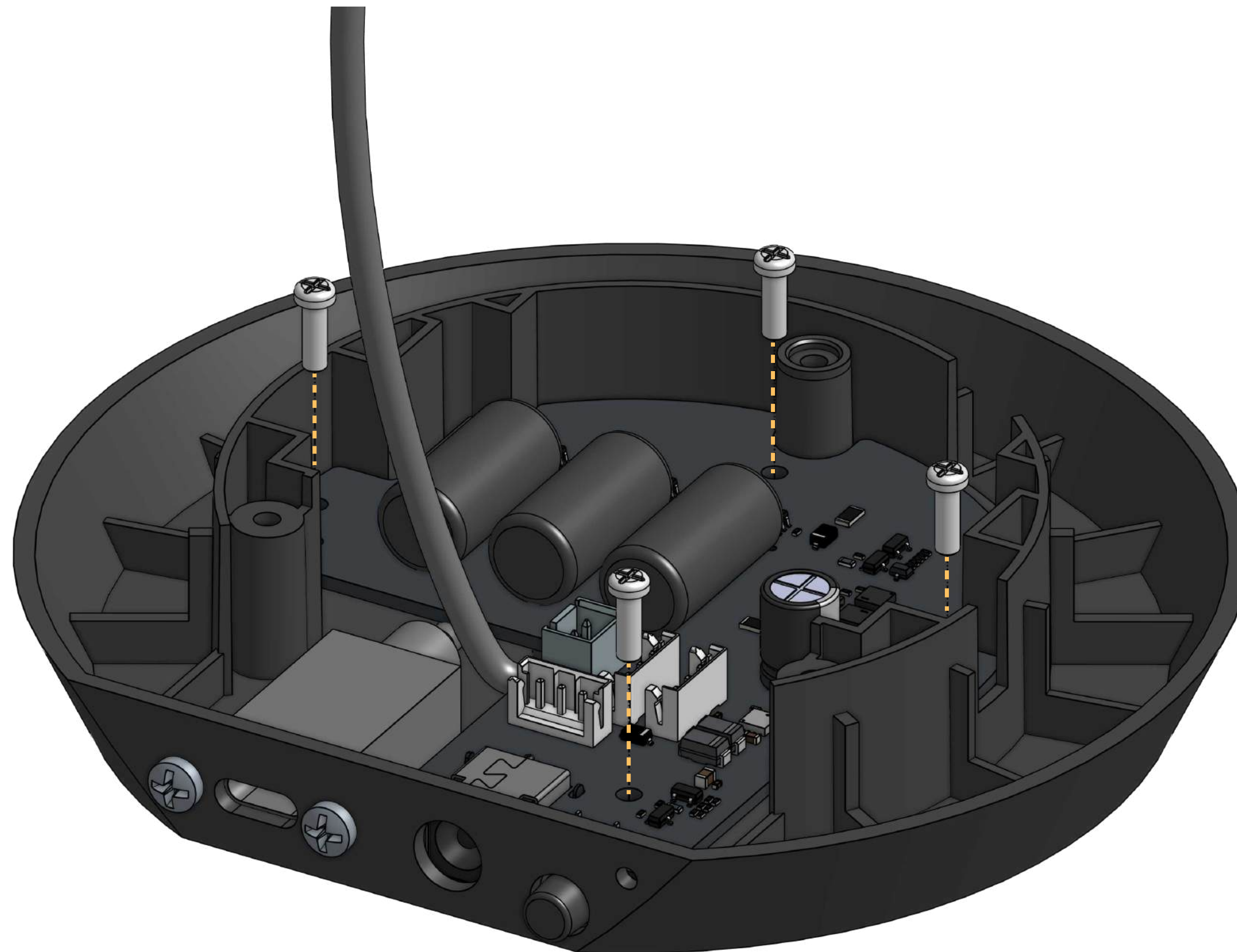
3/51 Foot



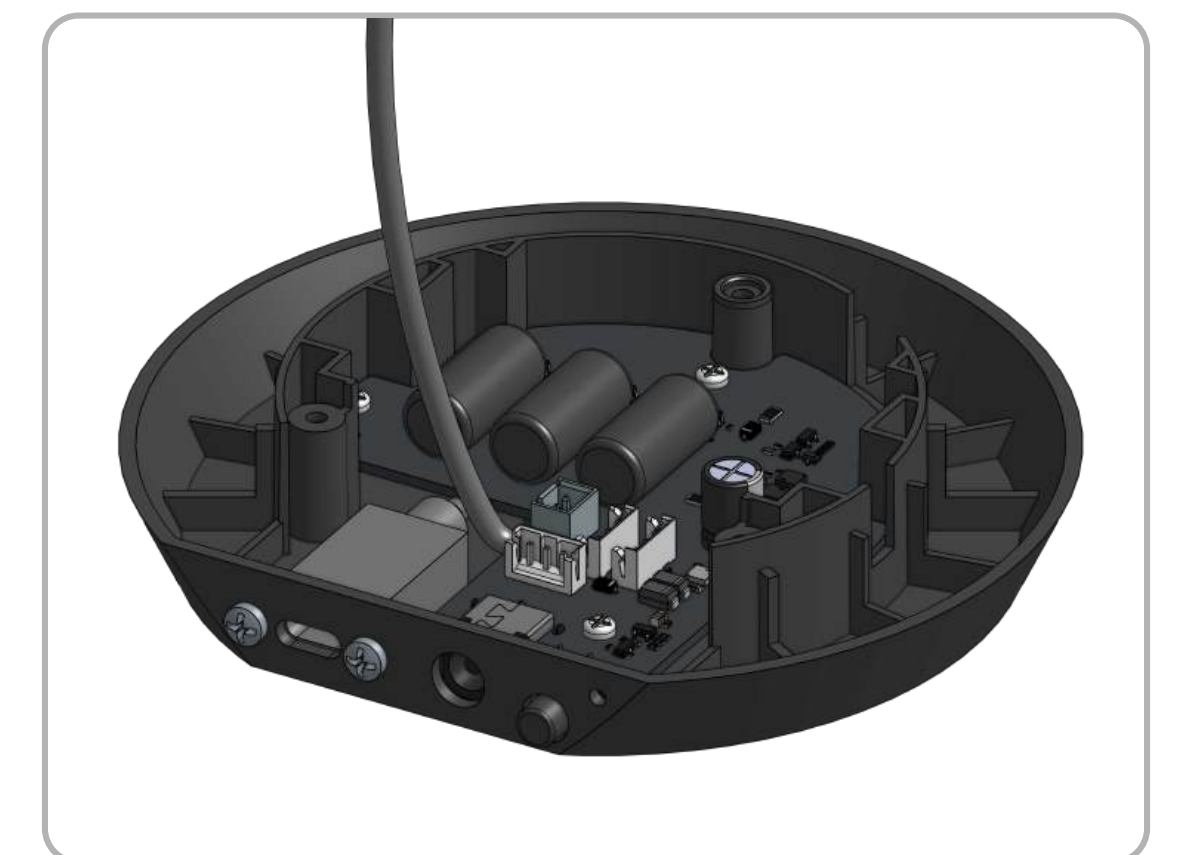
x1
Body Foot
Assembly



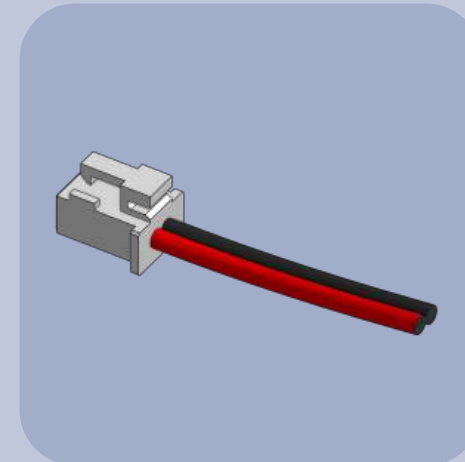
x4
2.5x8mm
Screw



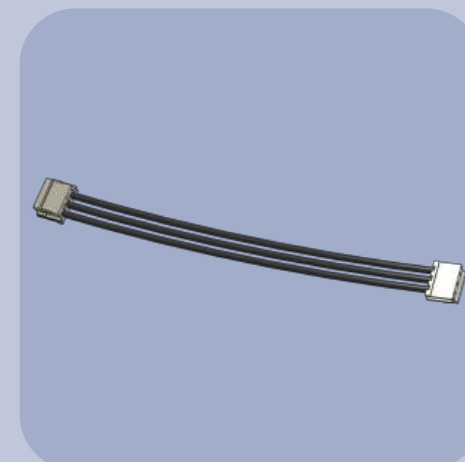
Attach the Body PCB to the Body Foot using four **2.5x8mm** screws.



4/51 Foot



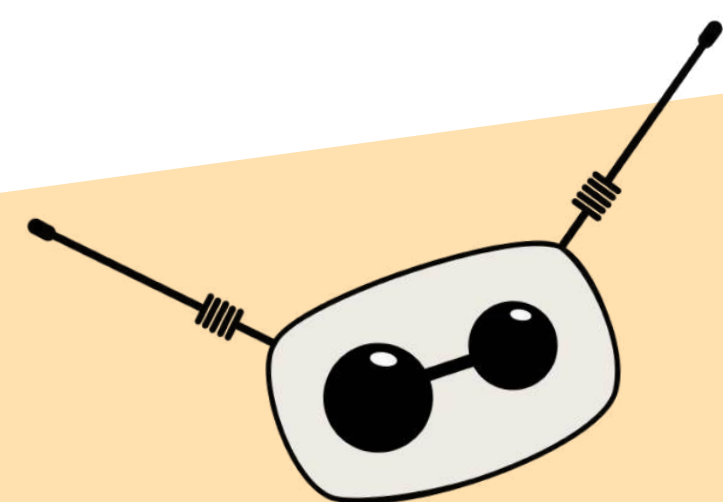
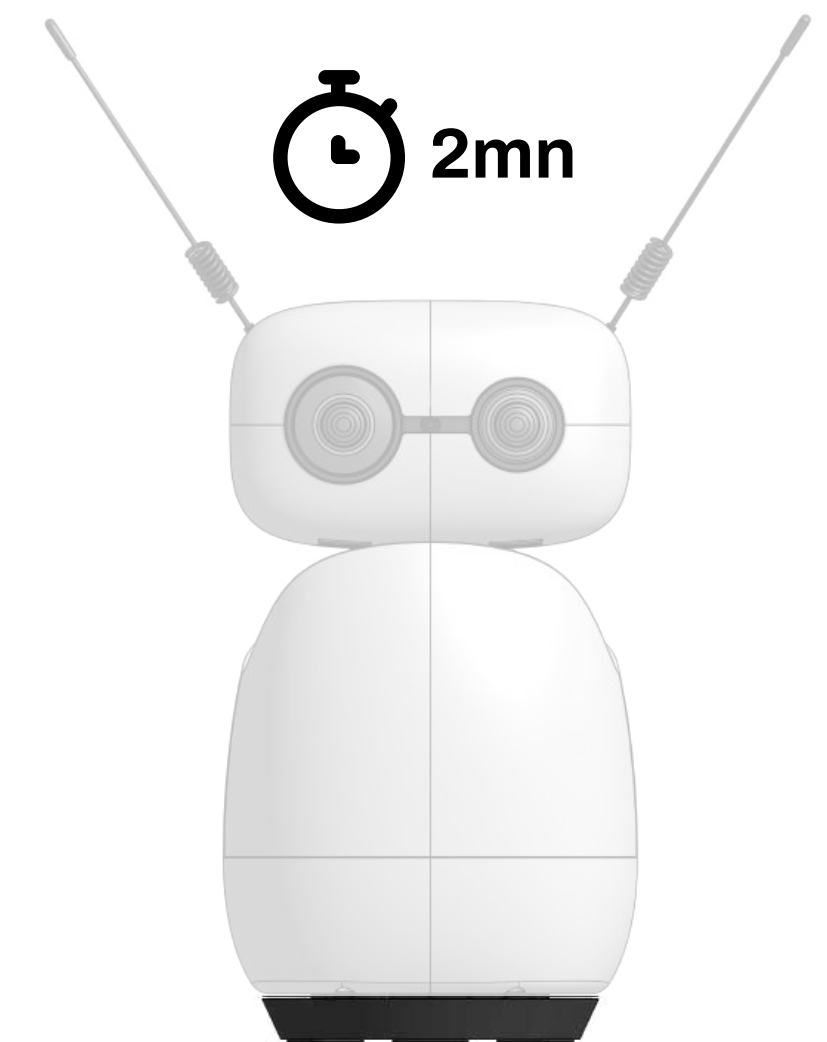
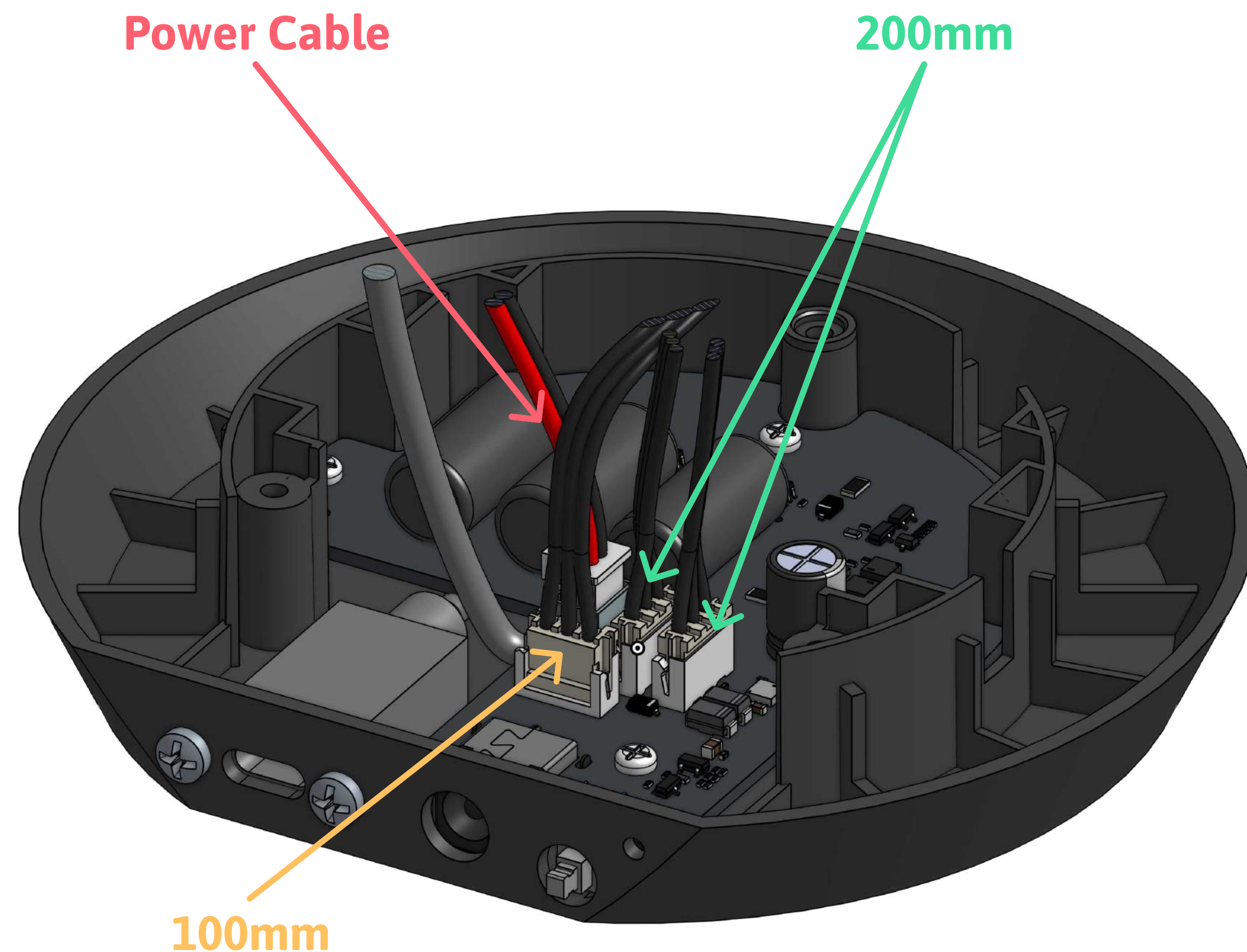
x1
Power Cable



x1
100mm
Cable



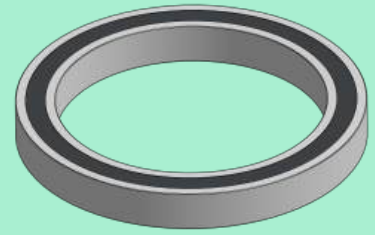
x2
200mm
Cable



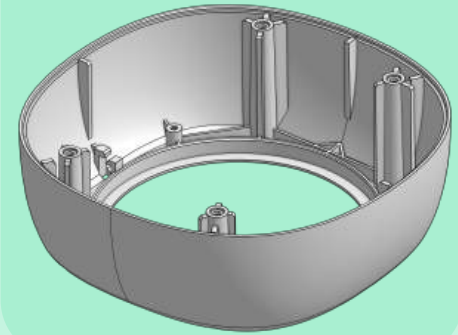
Connect the **Power Cable** to port A on the Body PCB.
Connect the **200mm motor cables** to ports B and C, and the **100mm motor cable** to port D.

5/51

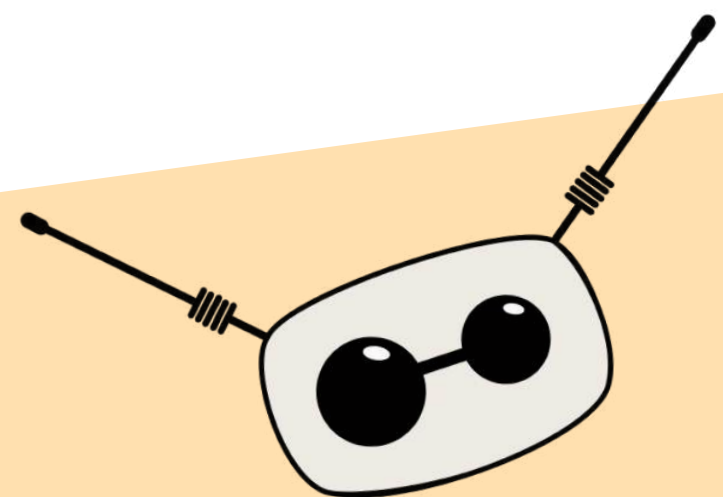
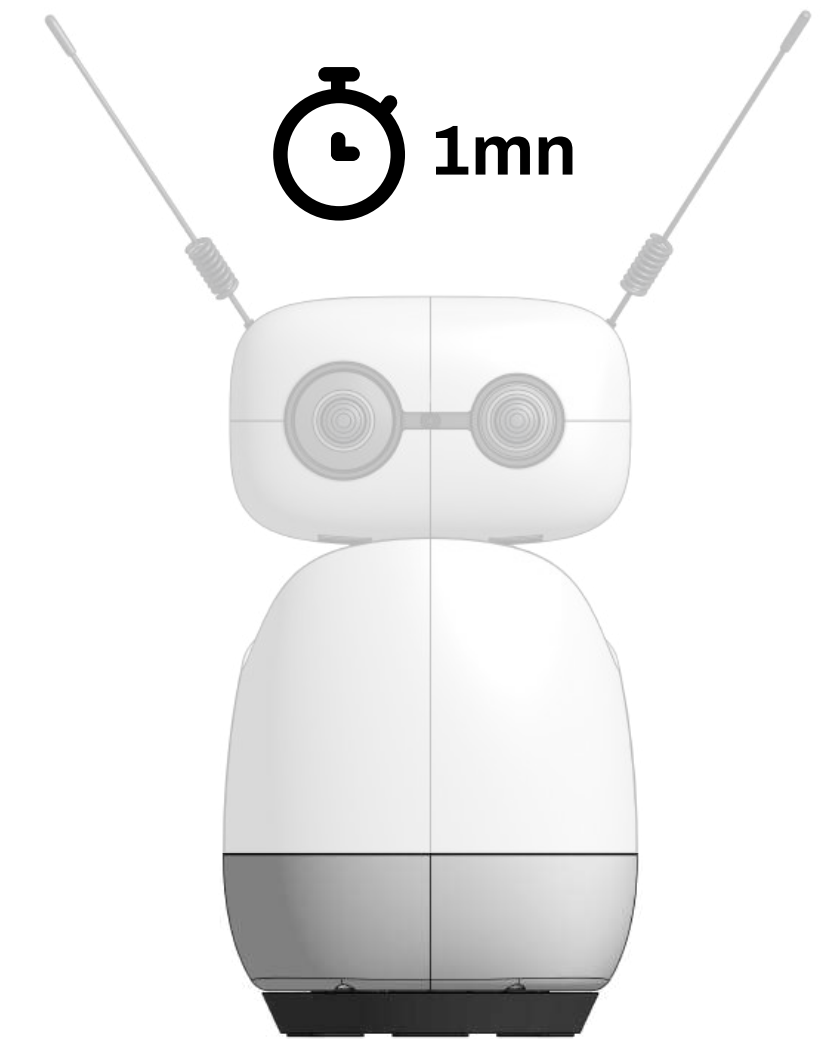
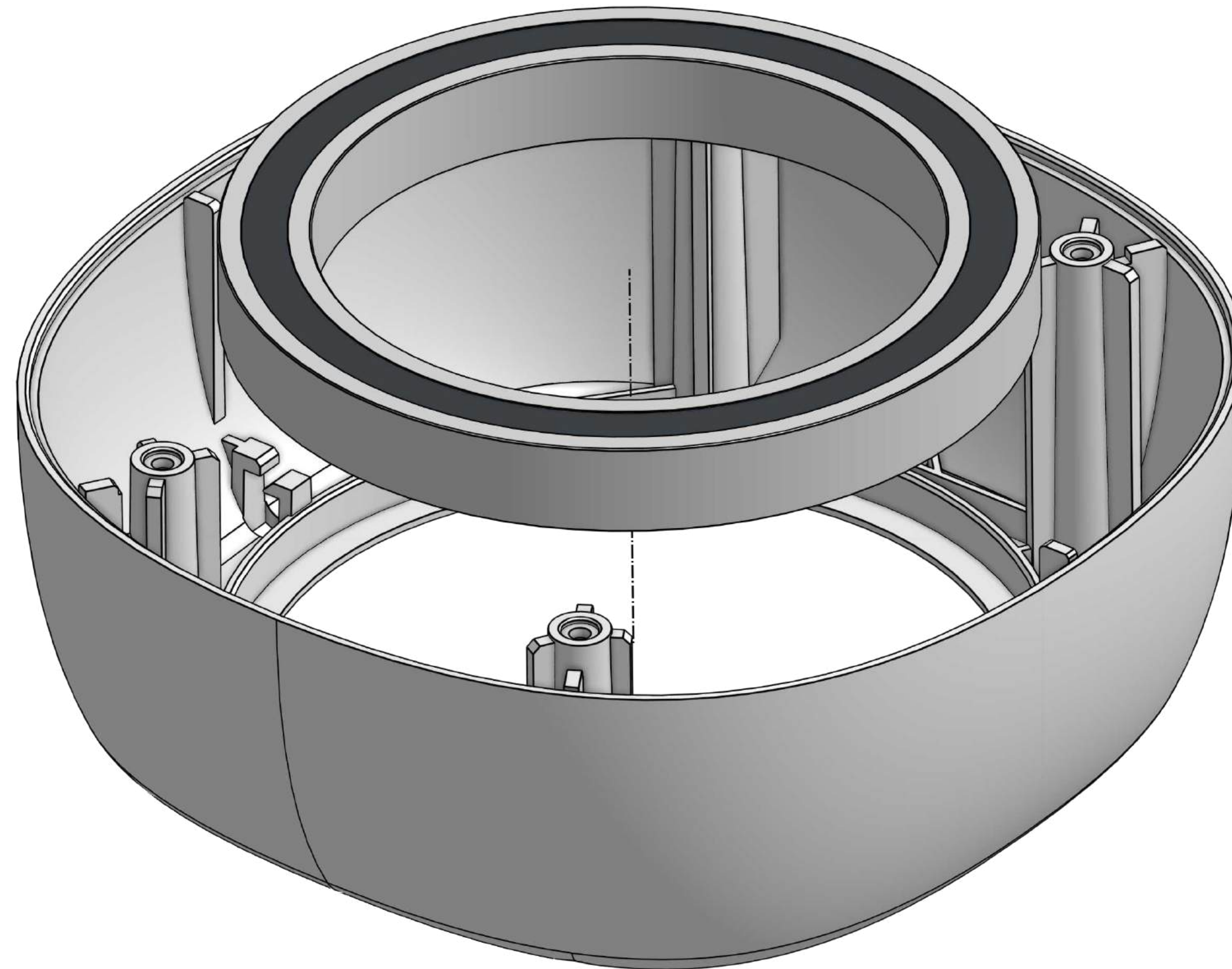
Body Down



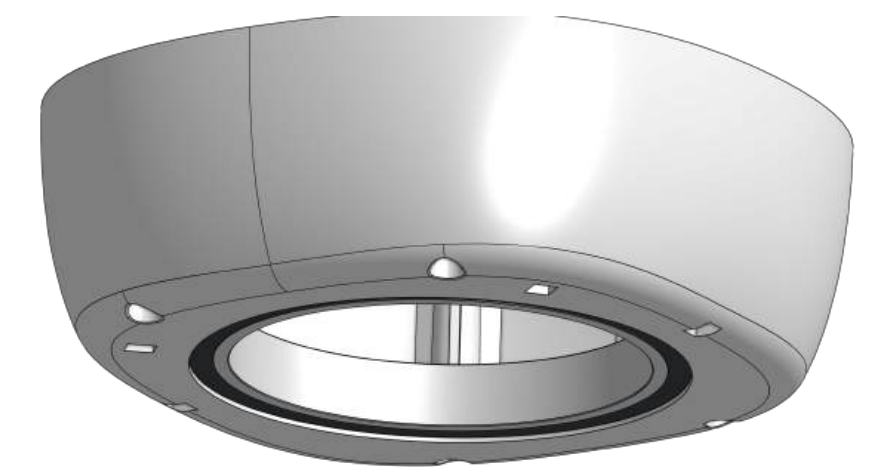
x1
Ball Bearing



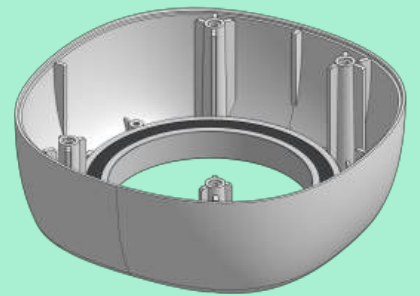
x1
Body Down



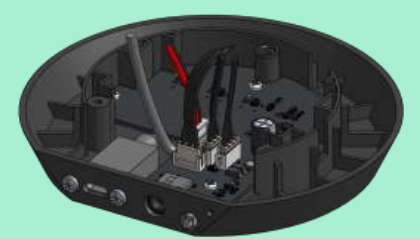
Place the Ball Bearing into the Body Down, pressing firmly to ensure proper seating and full contact.



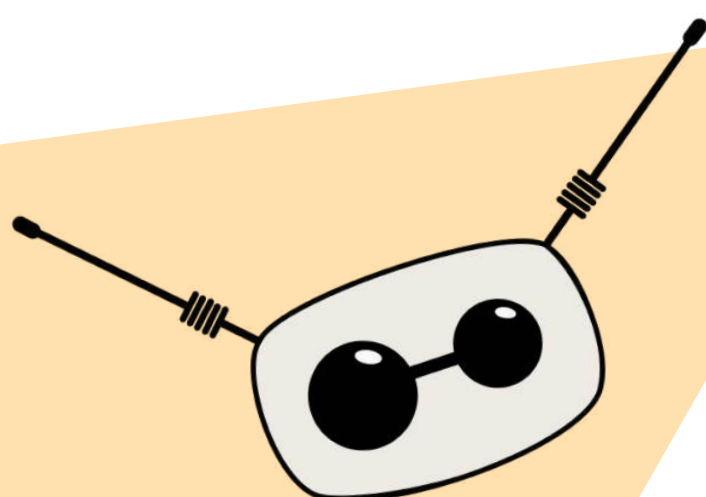
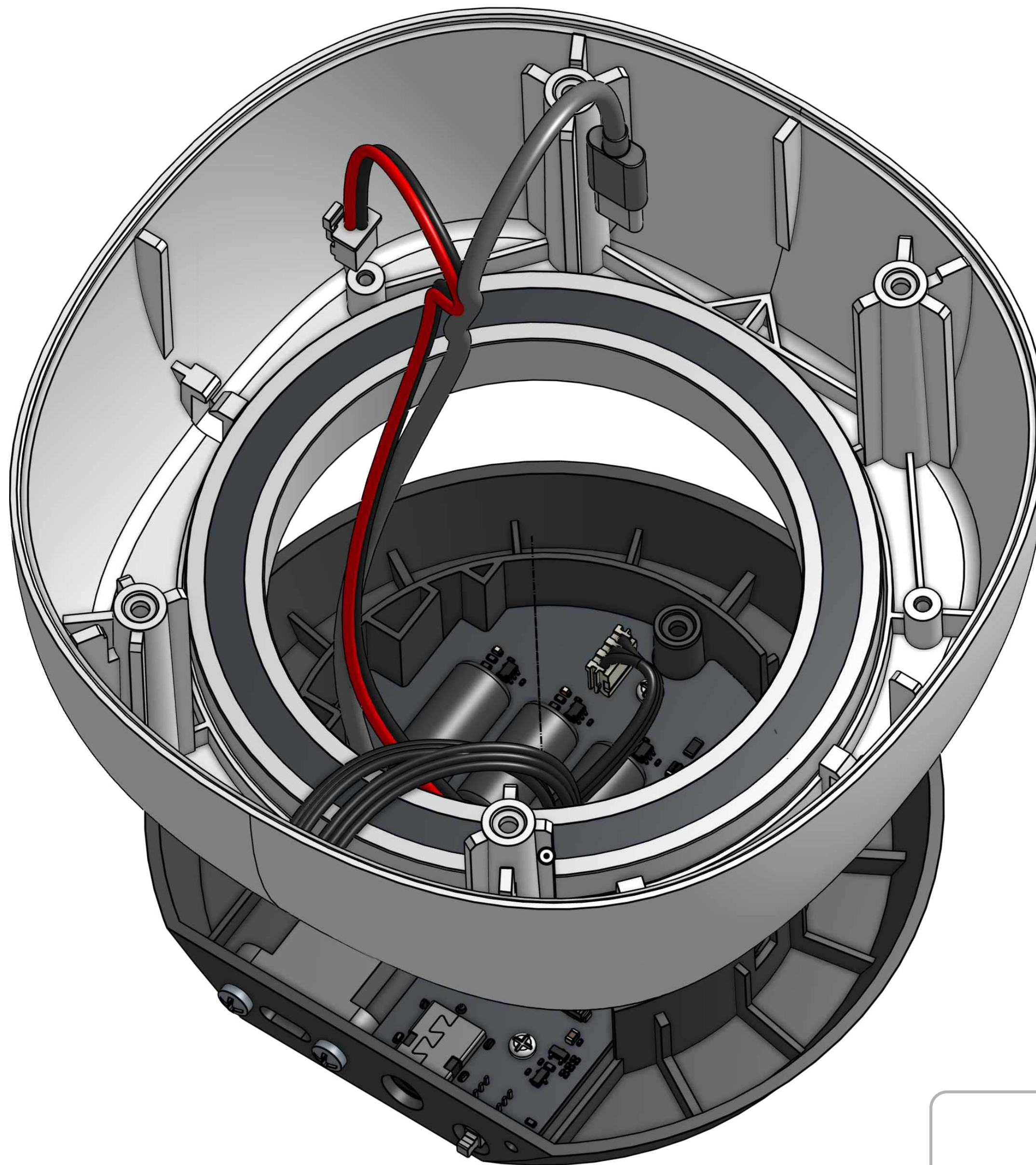
6/51 Body Down



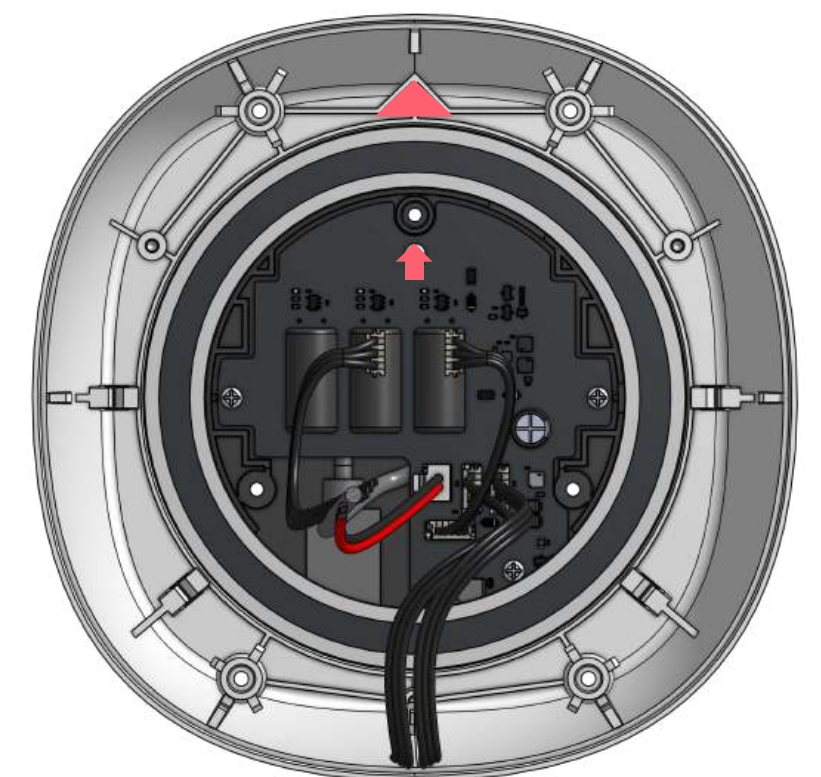
x1
Body Down
Assembly



x1
Foot
Assembly



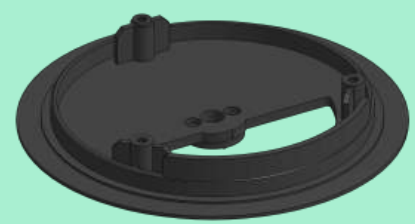
Fit the Body Down Assembly onto the Body Foot Assembly. Make sure to **align the arrows** and carefully route all cables through the hole



7/51 Body Down



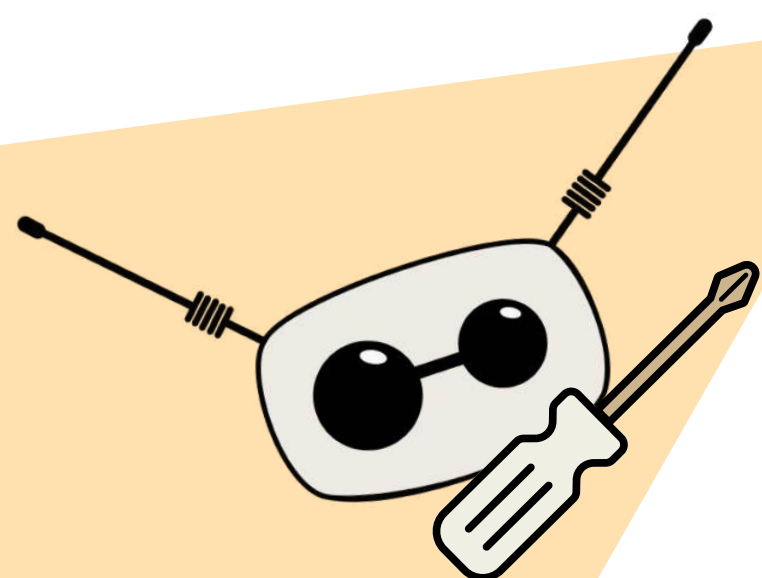
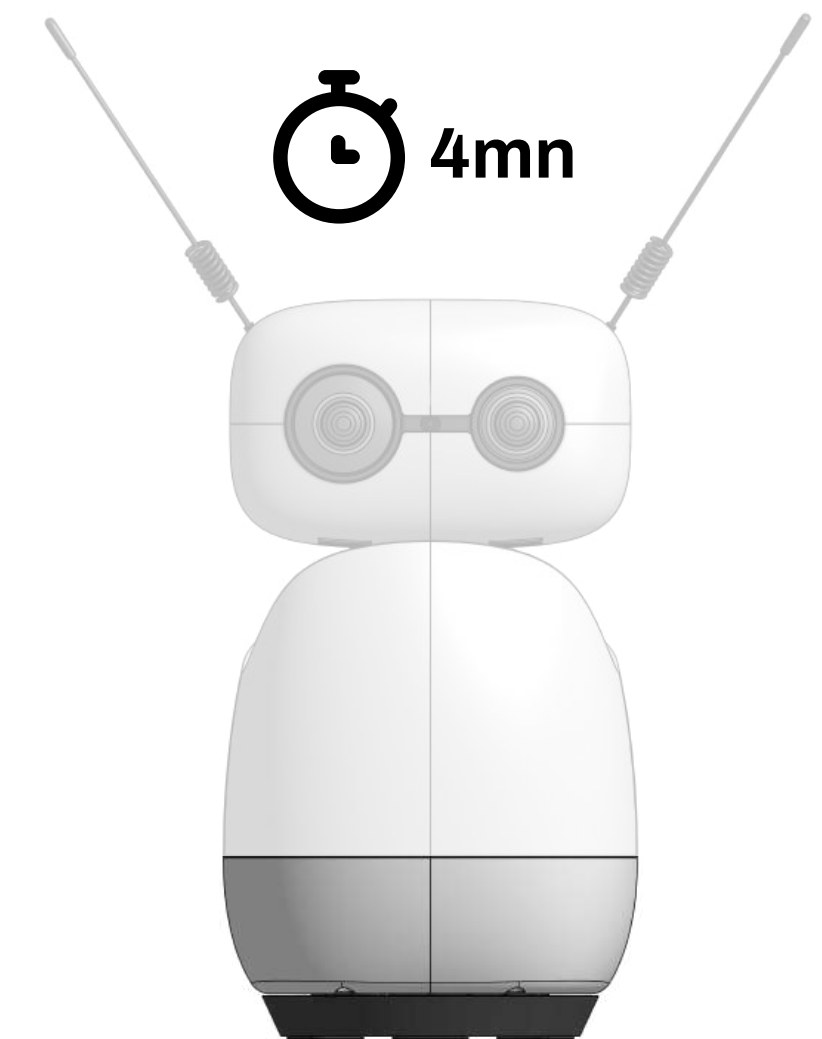
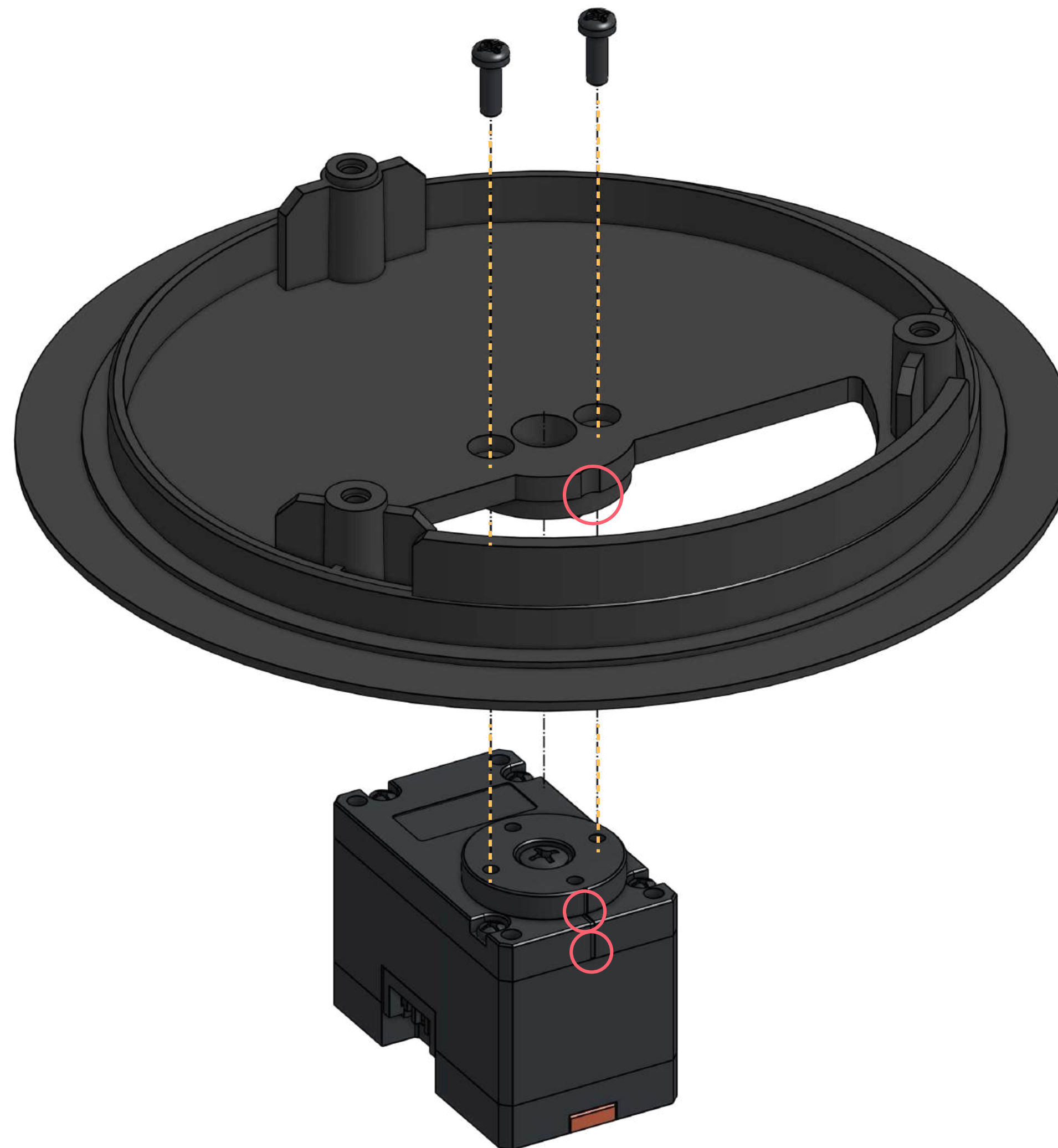
x1
Base Foot
Motor



x1
Body
Turning



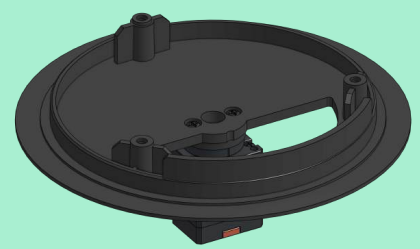
x2
2x6mm
Screw



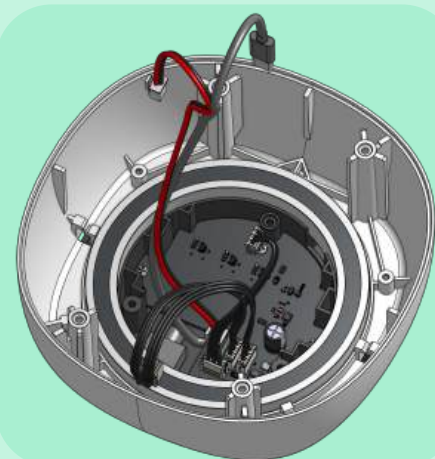
Attach Base Foot motor to the Body Turning using two **2x6mm** screws. Make sure to align the three notches properly (red on the schema).



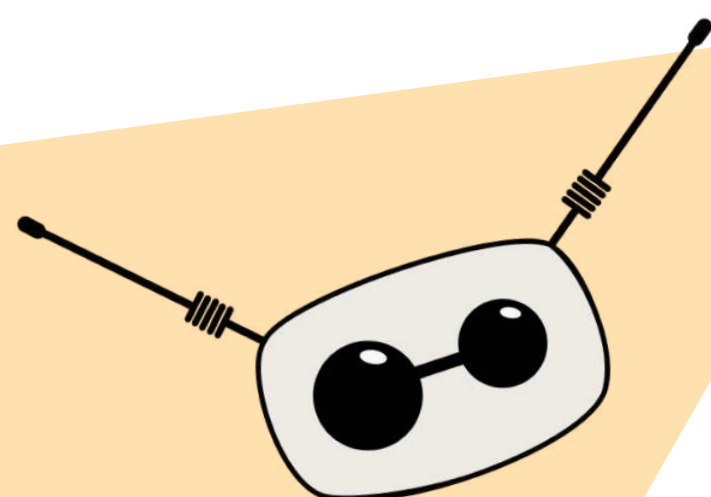
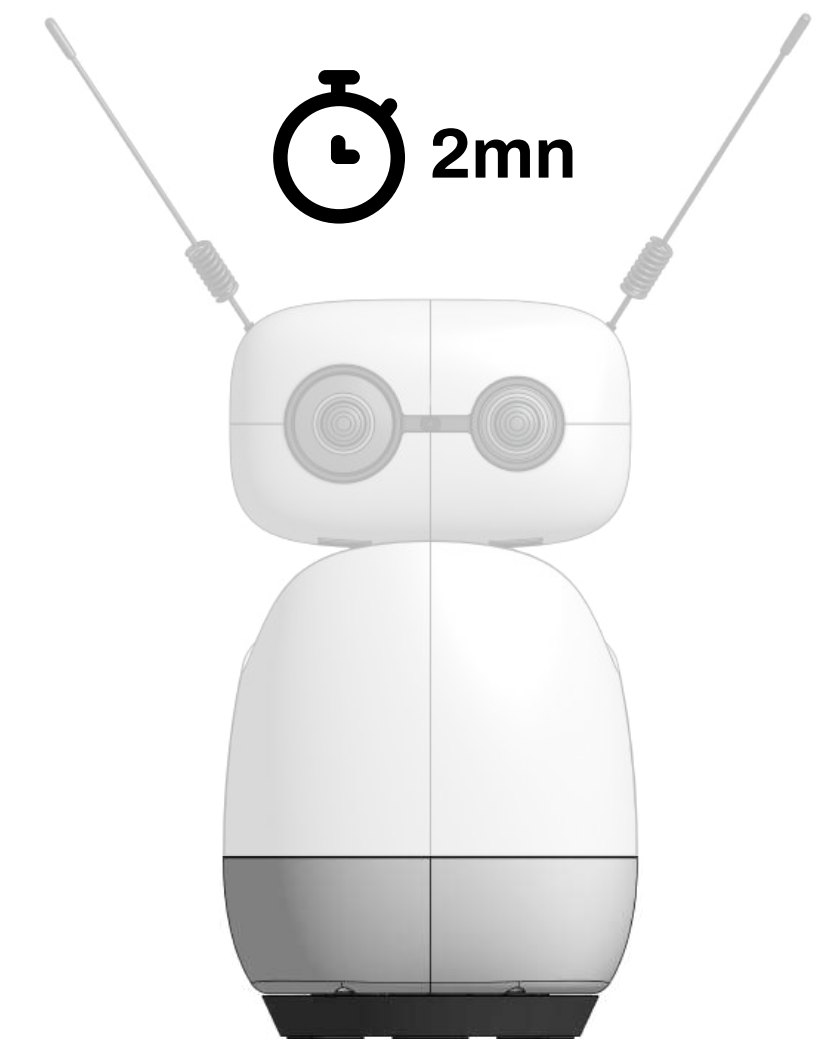
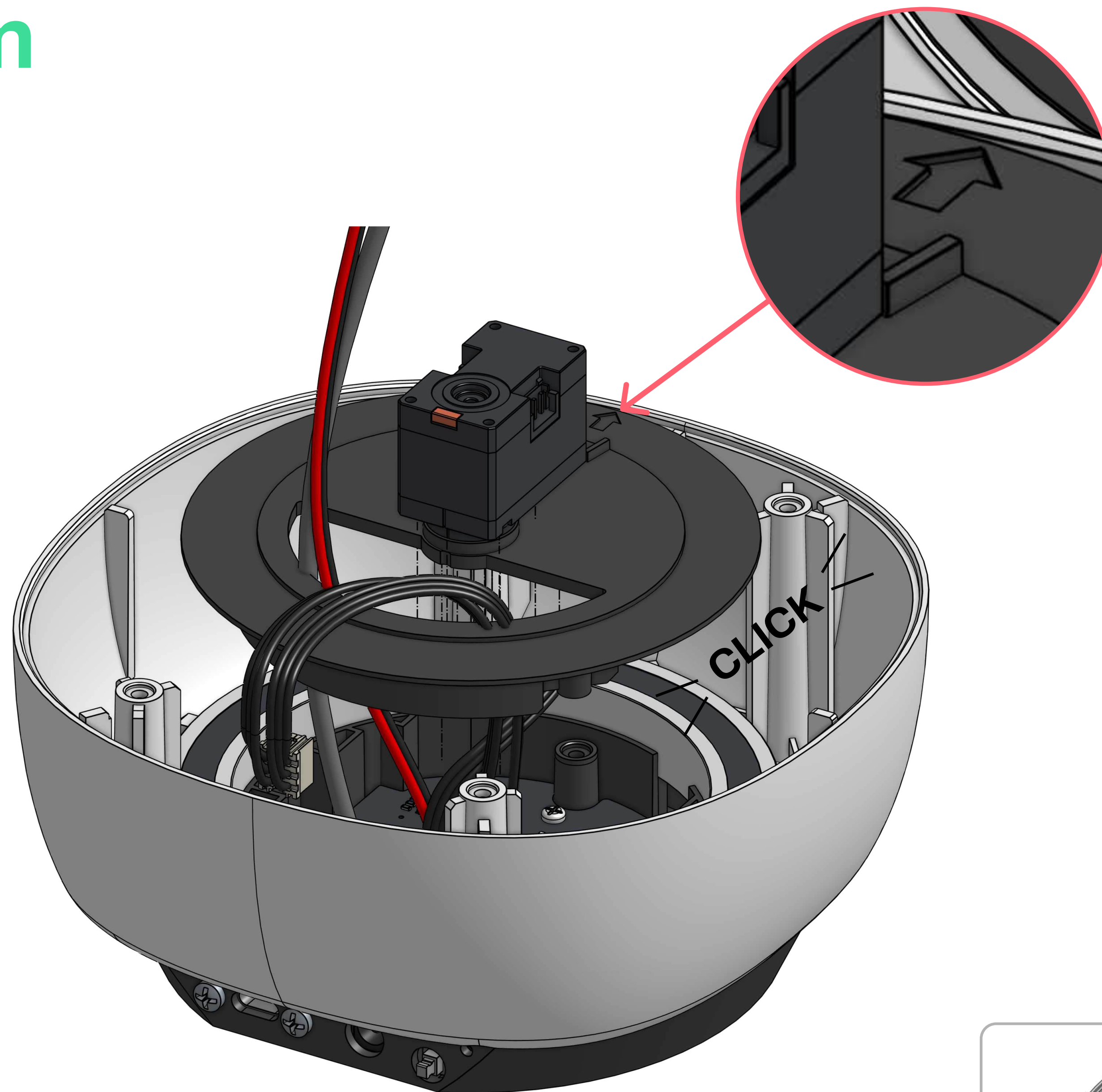
8/51 Body Down



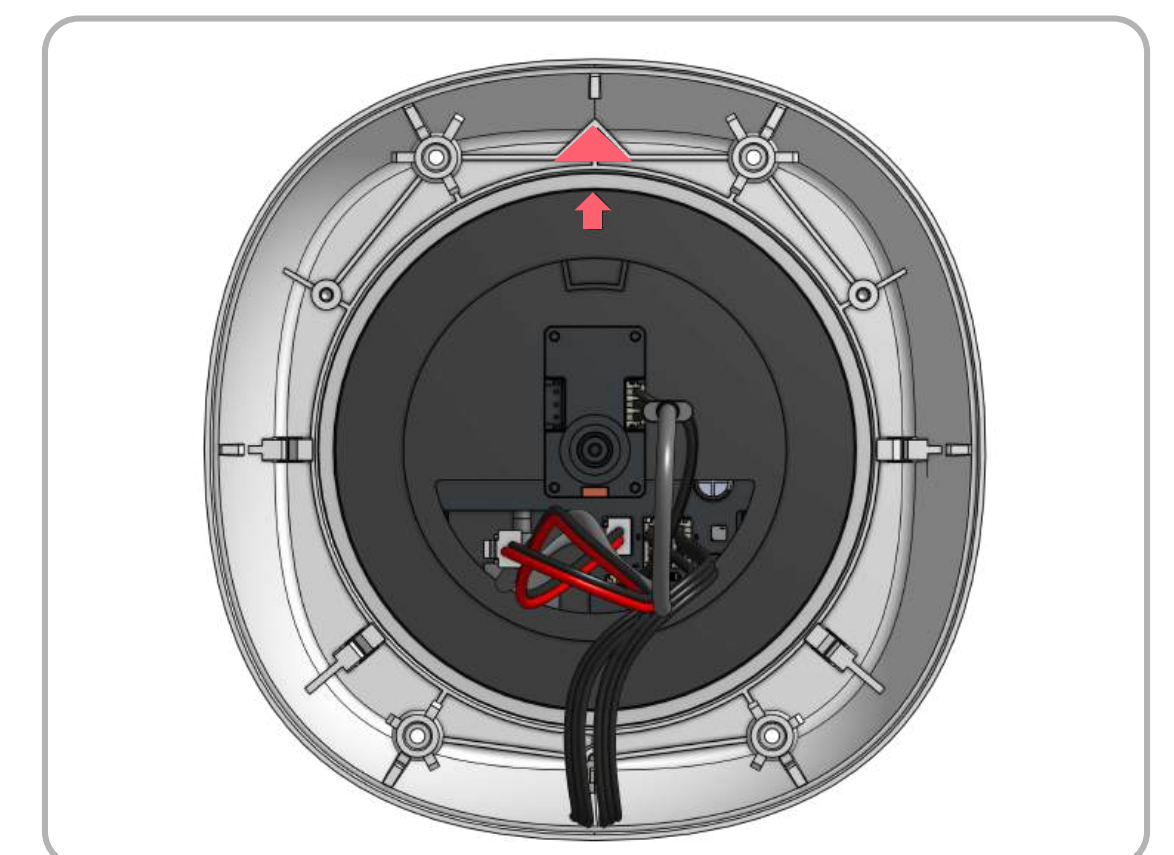
x1
Body Turning
Assembly



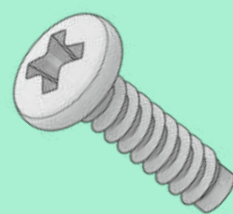
x1
Body Down
Assembly



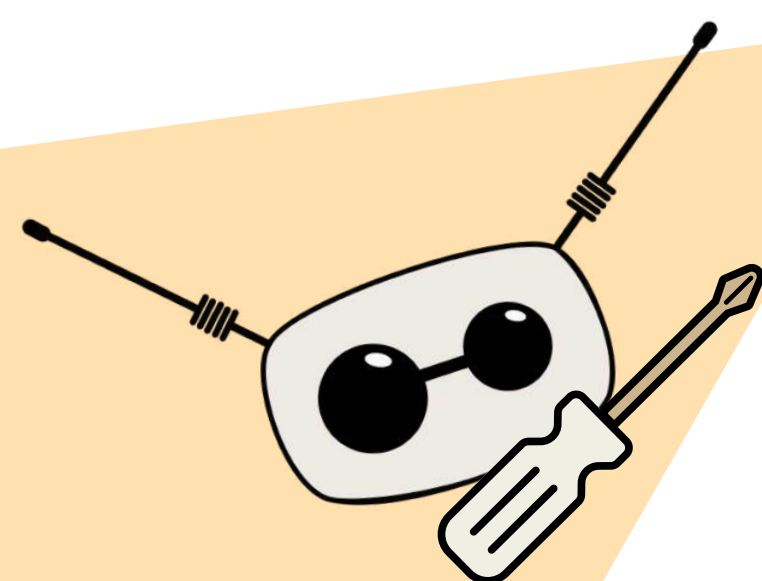
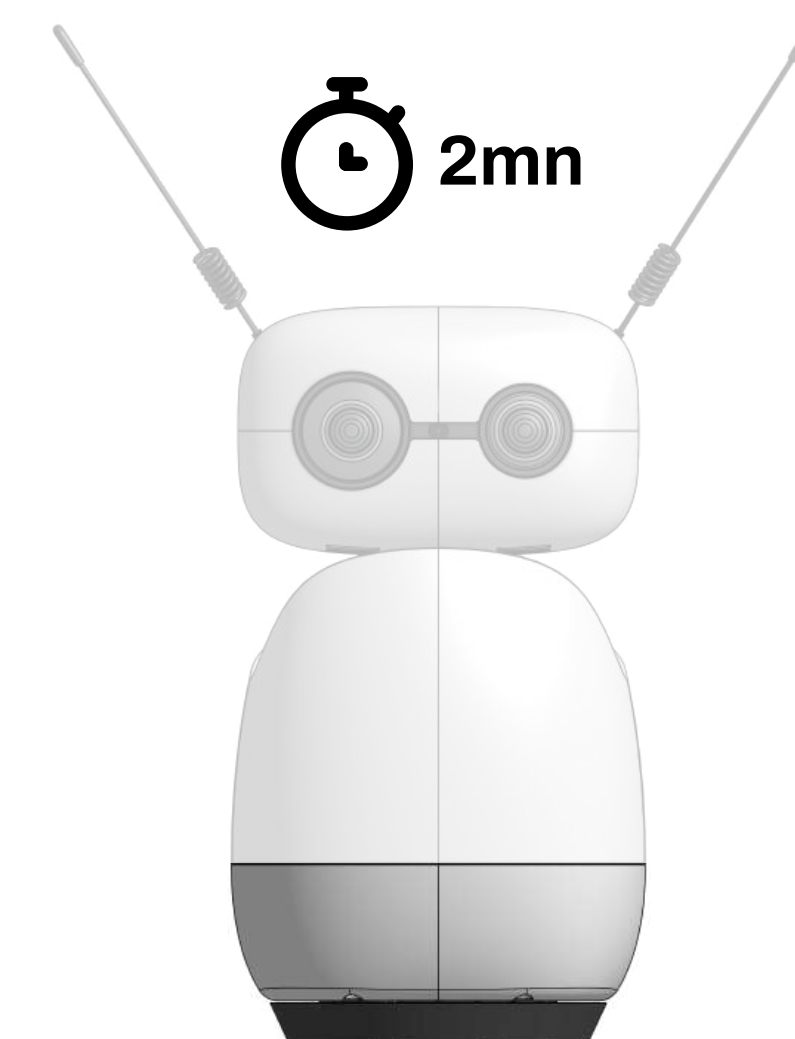
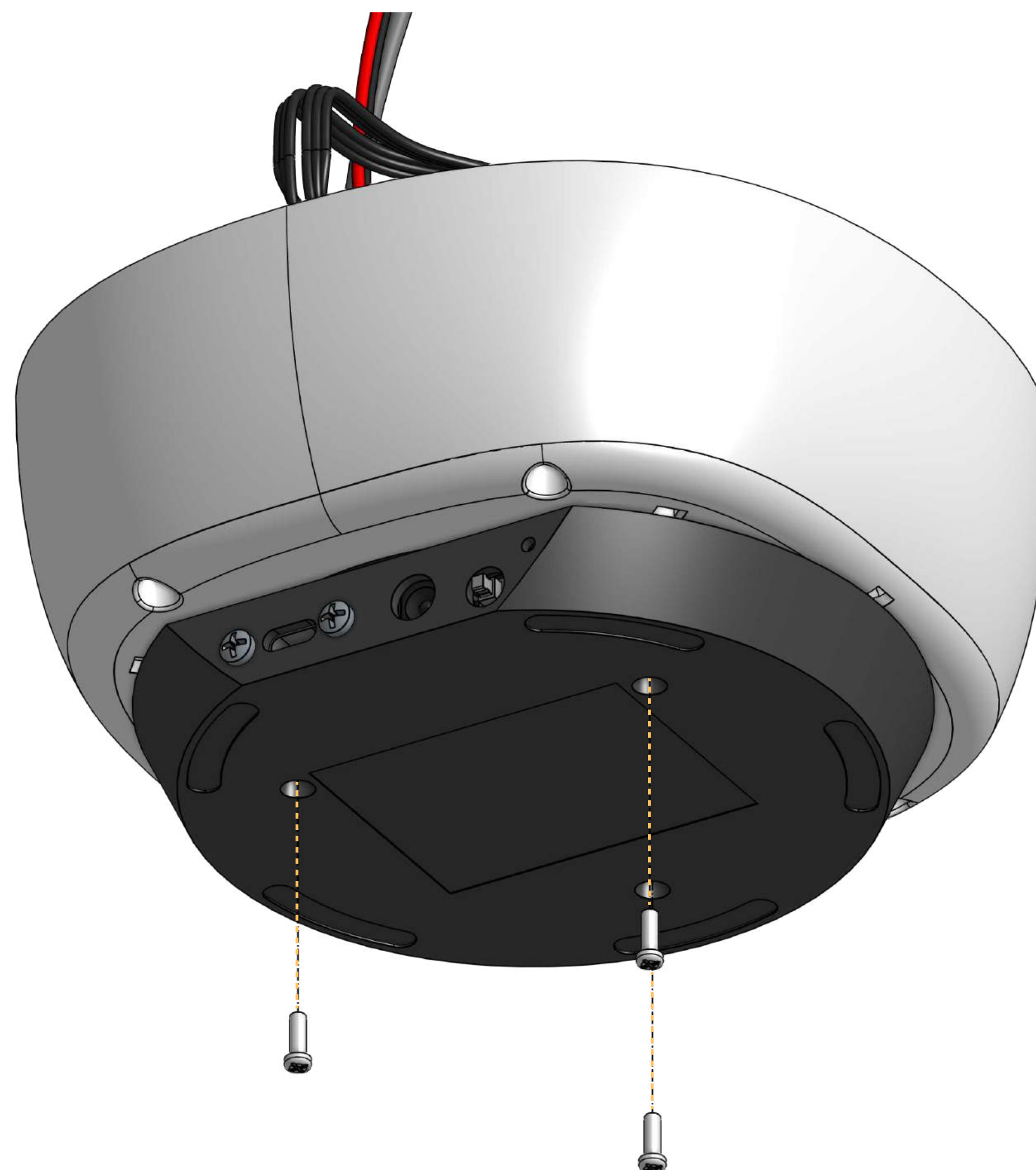
Position the Body Turning Assembly onto the Body Down Assembly, ensuring the **arrows are aligned** and that all cables pass through the hole.



9/51 Body Down



x3
2.5x8mm
Screw

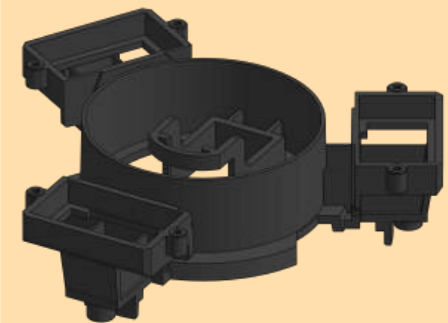


Flip the assembly over and screw it from underneath using three **2.5x8mm** screws. Then rotate the body to **check that the foot moves smoothly** without rubbing, if it does, the bearing is not fully seated.

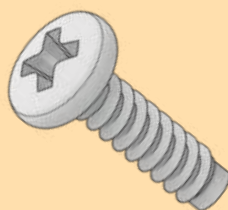


10/51

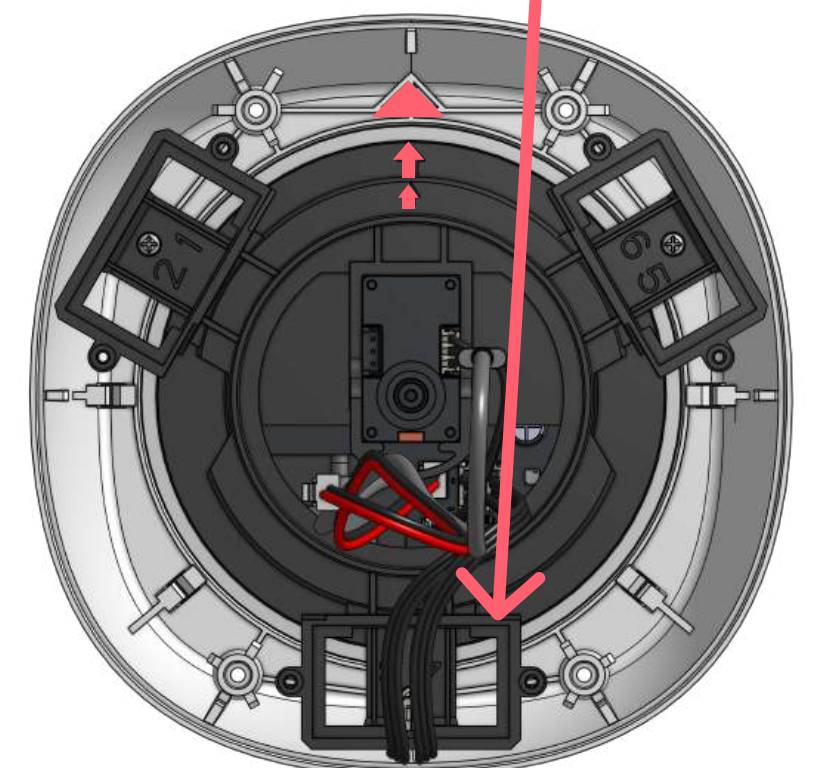
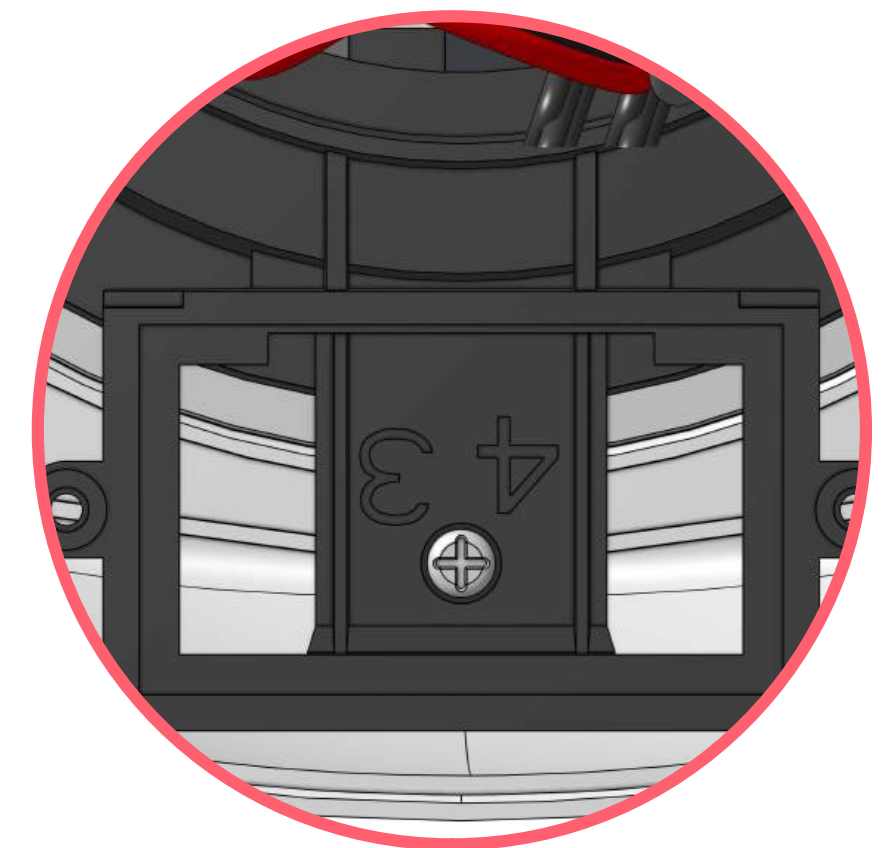
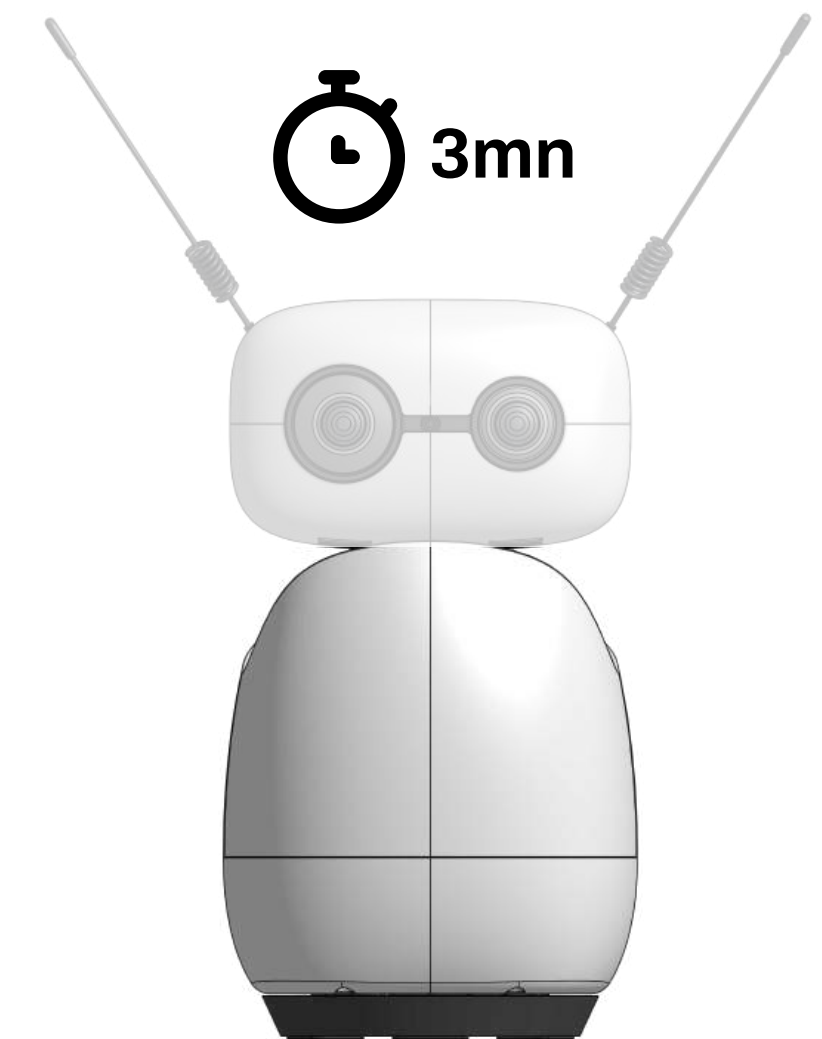
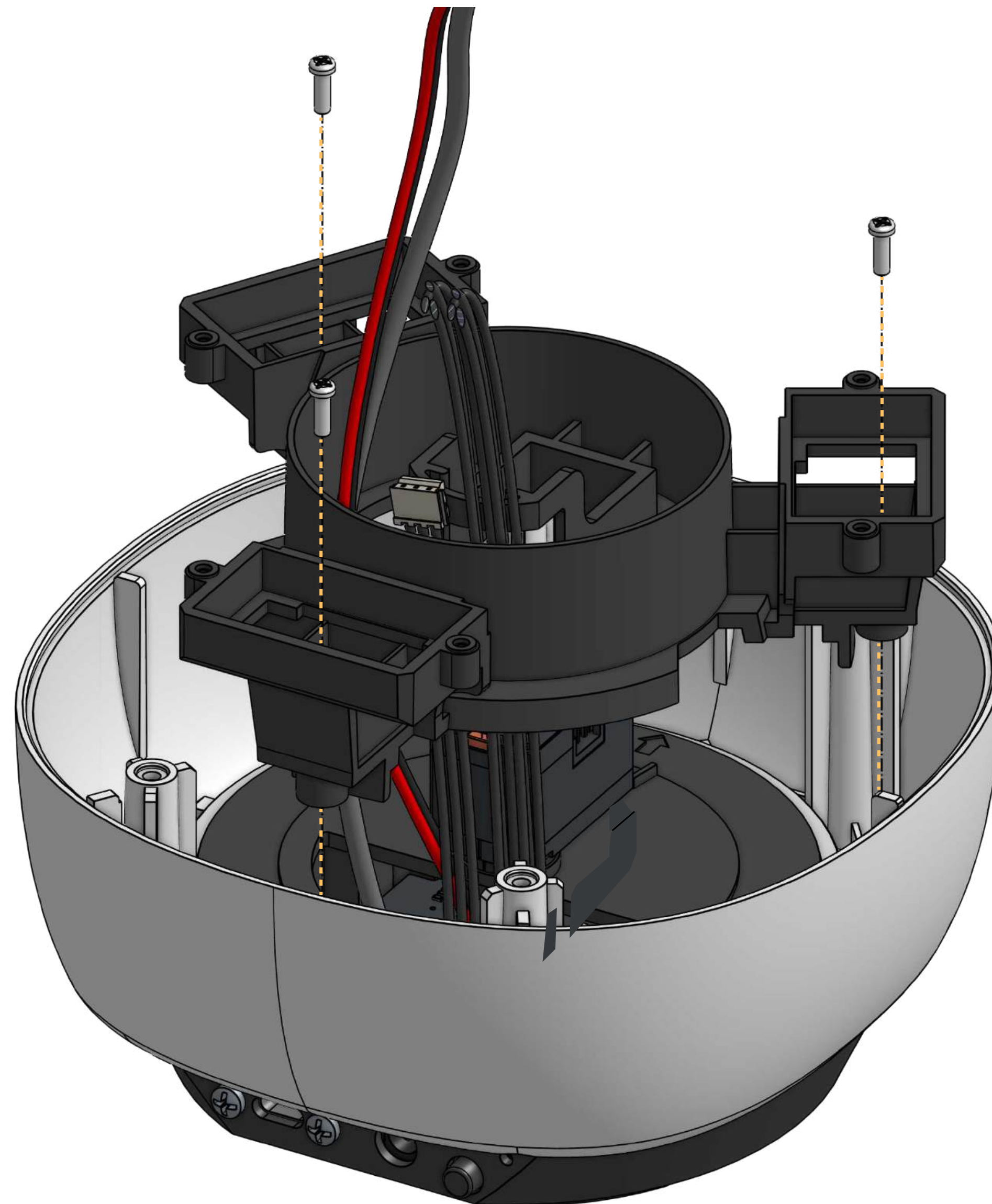
Body



x1
Stewart Main
Plate

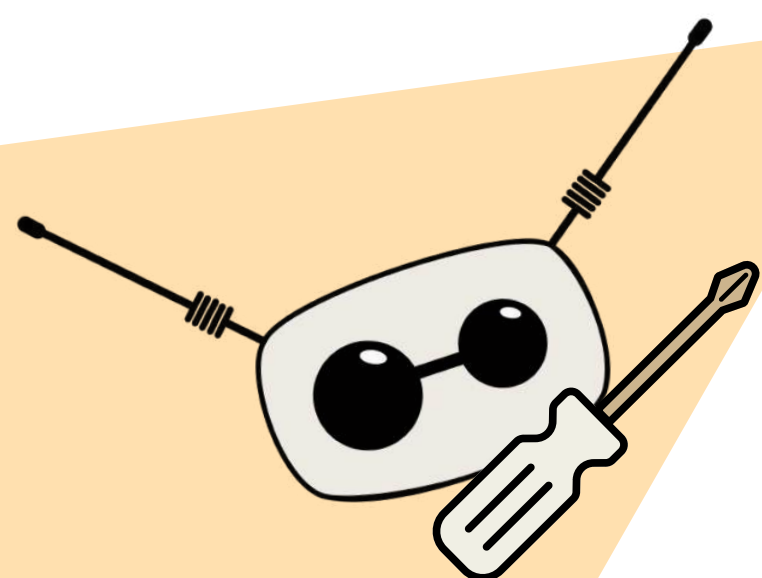


x3
2.5x8mm
Screw



Cover motor Base Foot with the Stewart Main Plate, making sure to **align the arrows** and pass all the cables through the hole. Fasten with **2.5x8mm** screws.

⚠ Double **Check that the foot moves smoothly** without rubbing, if it does, the screws aren't tightened enough.



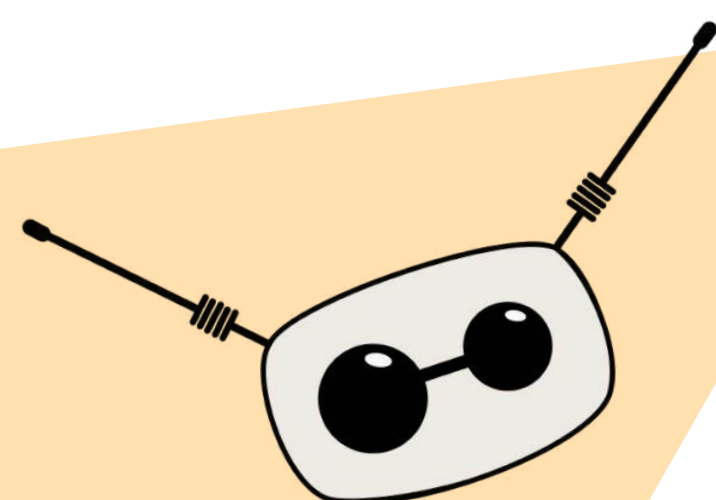
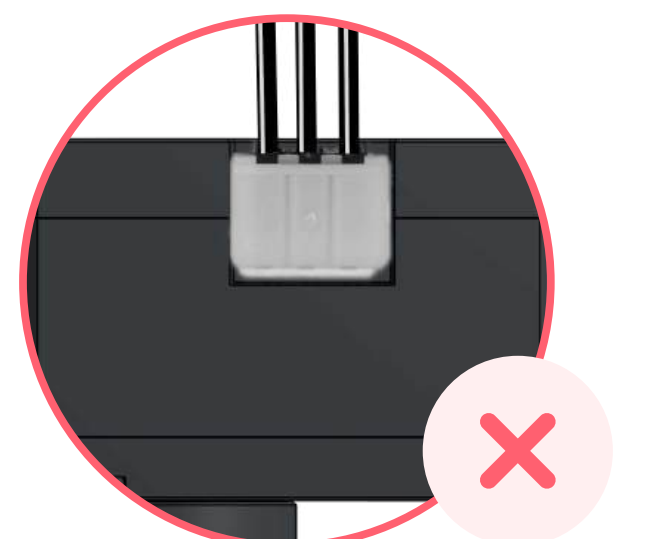
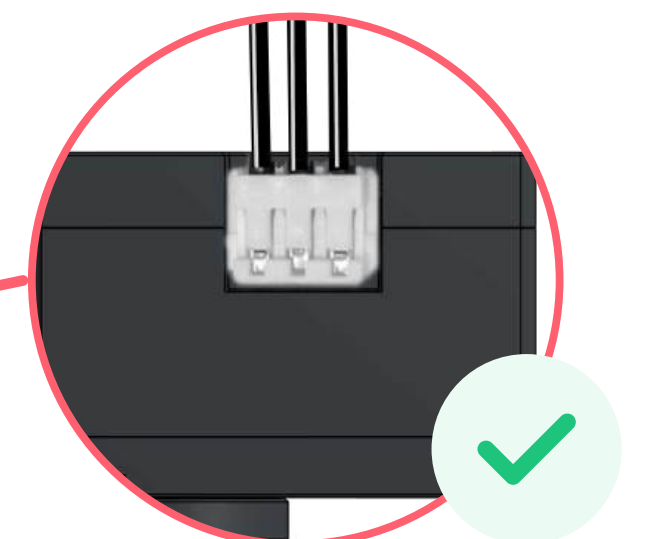
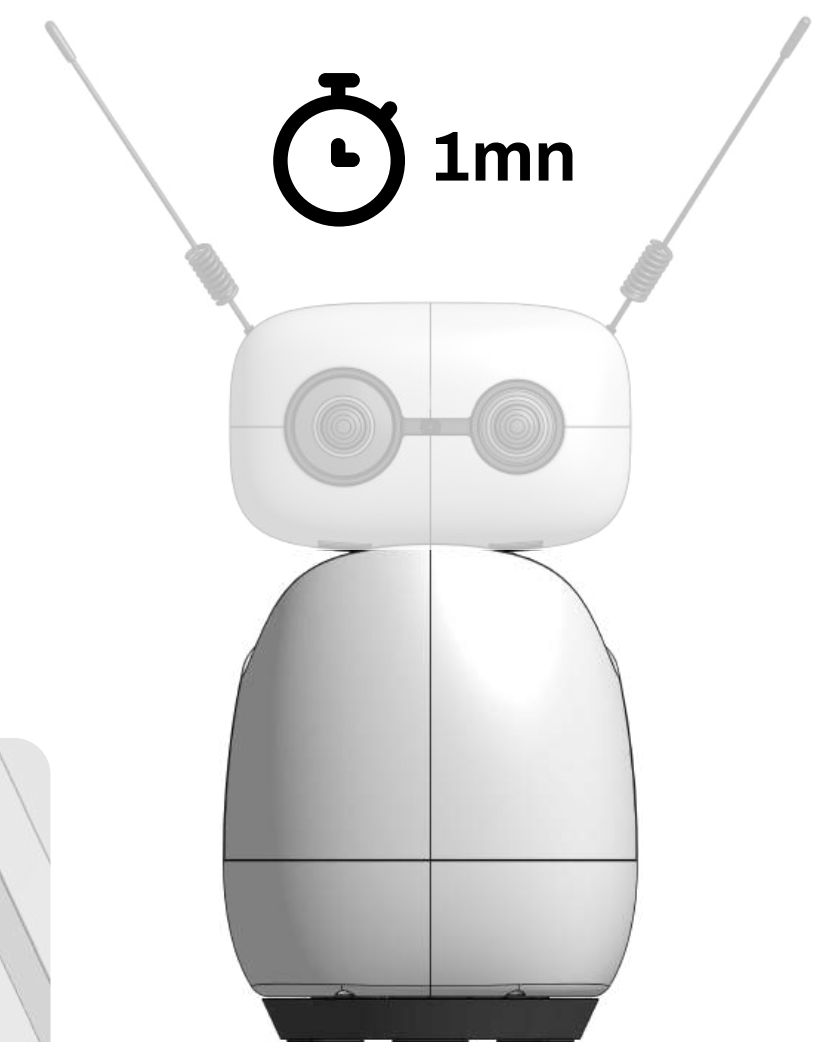
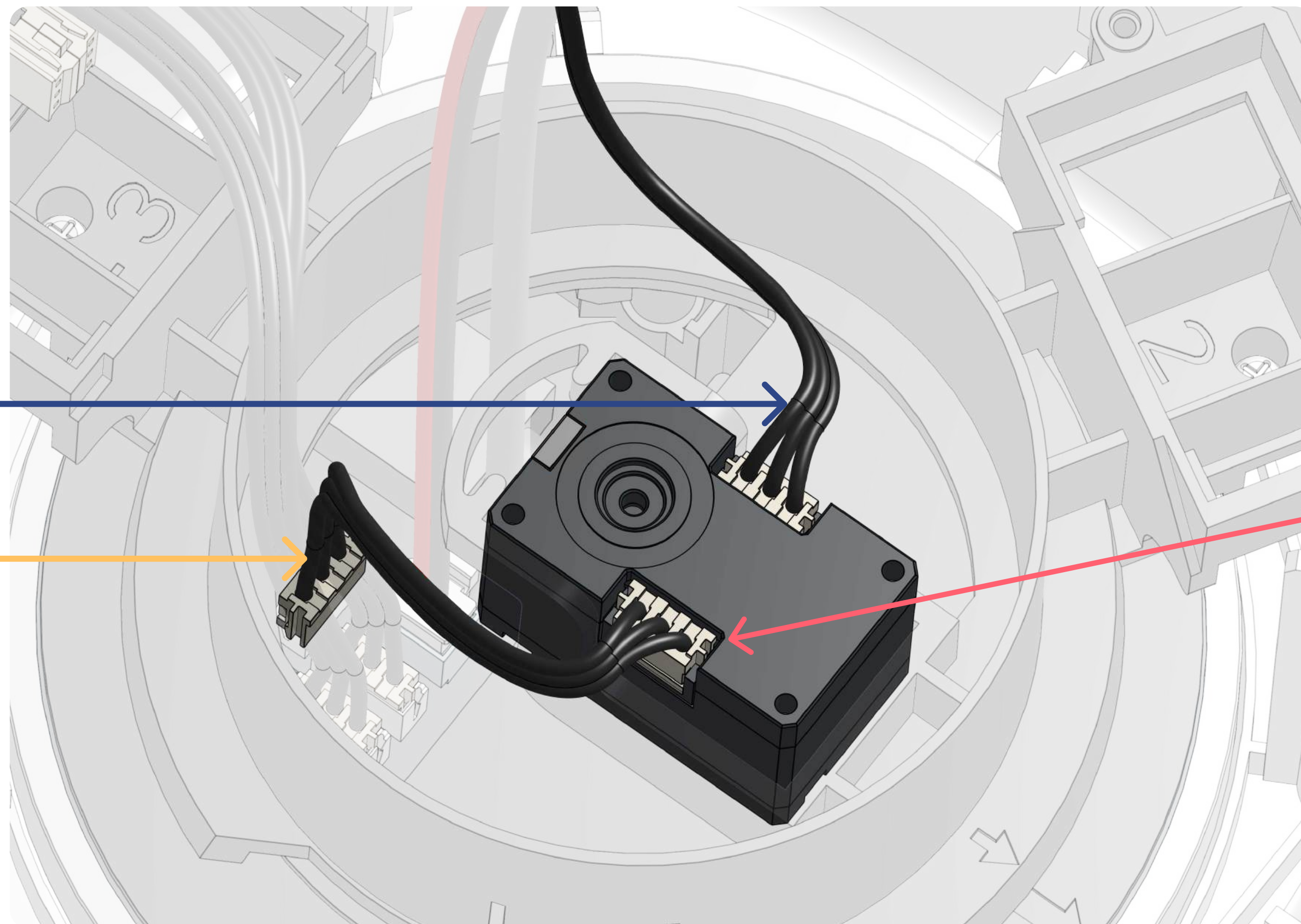
11/51 Body



x1
300mm
Cable

300mm Cable

100mm Cable
Coming from
Body PCB



Connect the 100mm cable from the Body PCB to the Base Foot motor.
Connect a 300mm cable to the Base Foot motor.

12/51 Body



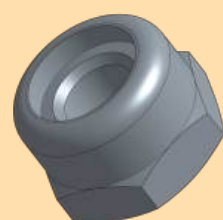
x6
Link Rods



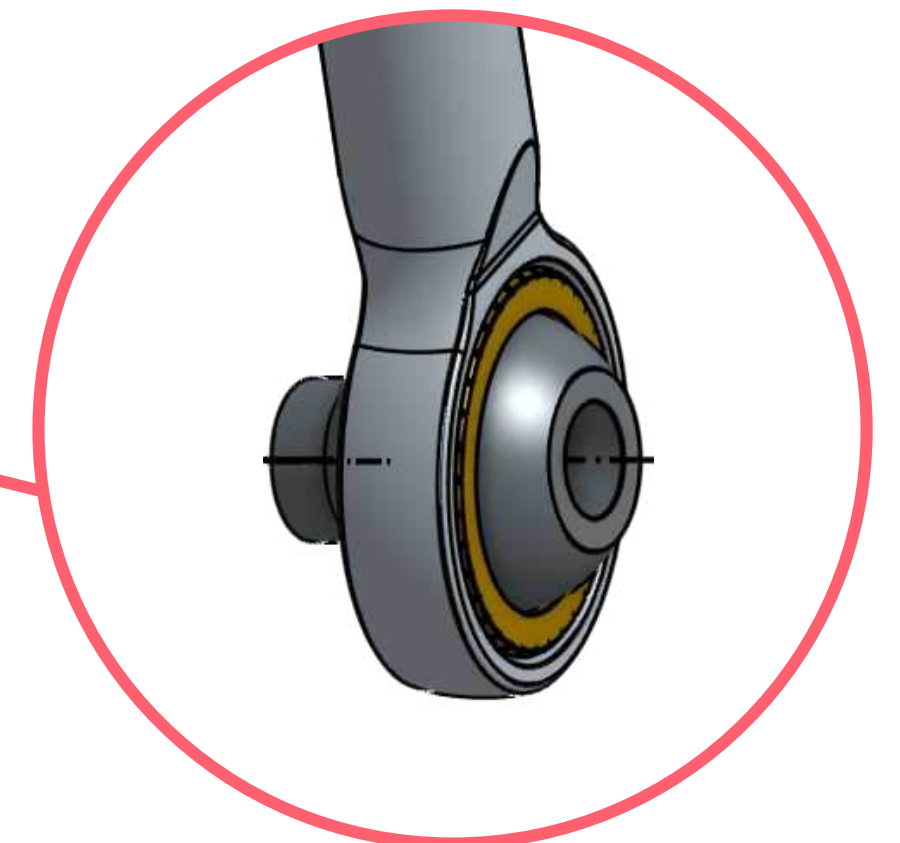
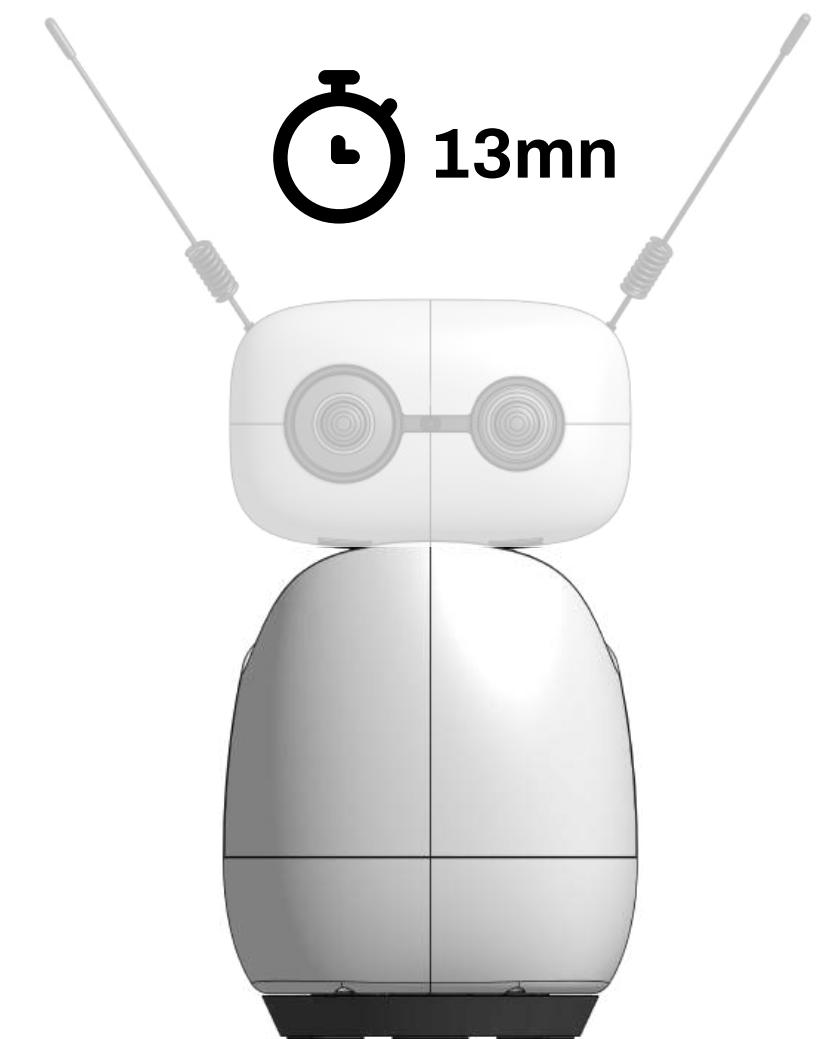
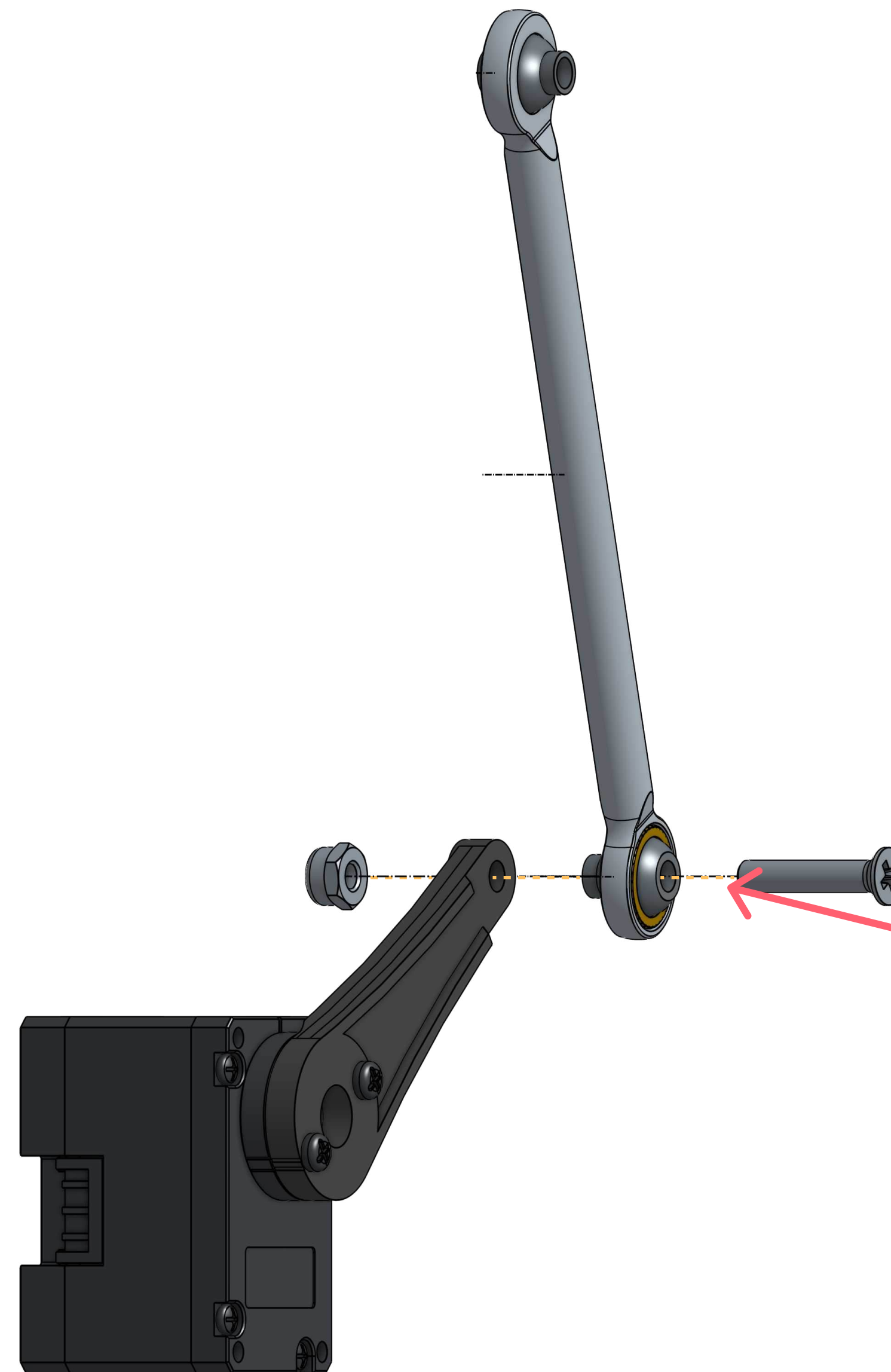
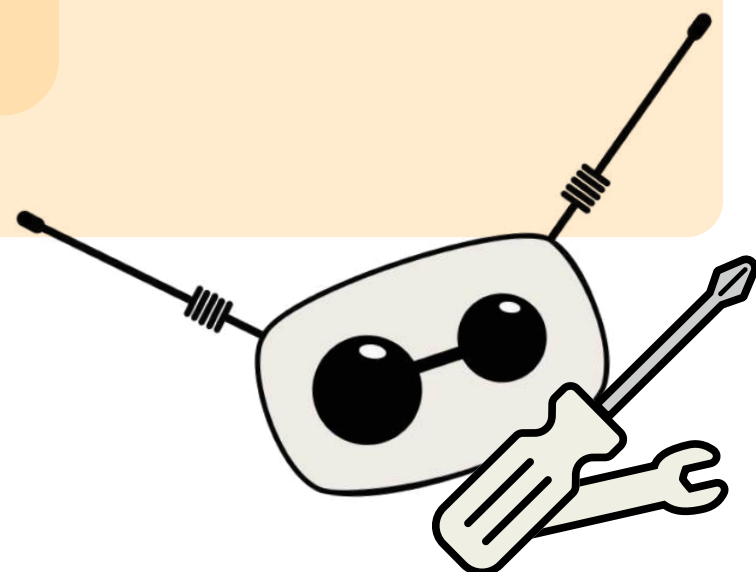
x6
Stewart
Motors



x6
M3x18mm
Screw



x6
M3 Nut

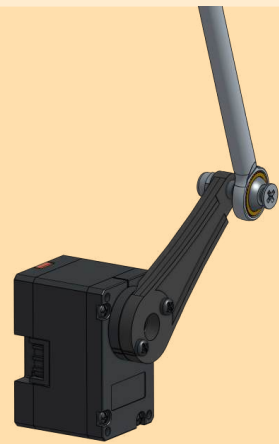


Screw the 6 link rods onto the arms of motors 1, 2, 3, 4, 5, and 6, and tighten them using the provided nut and wrench.

! Be careful to insert the screw through the spherical side of the link rods.



13/51 Body



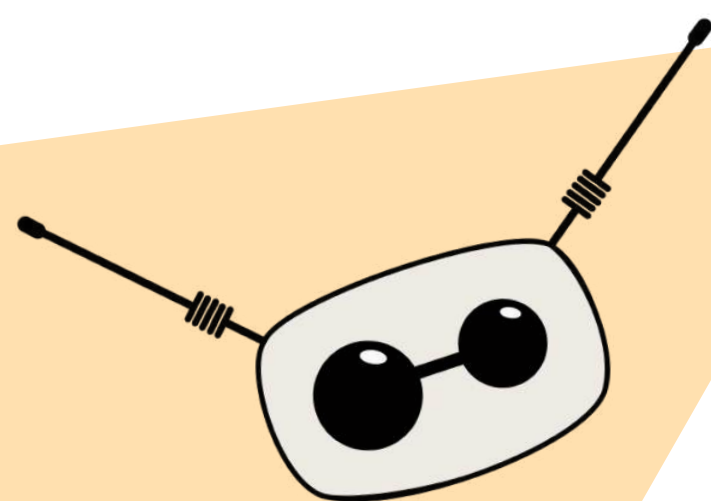
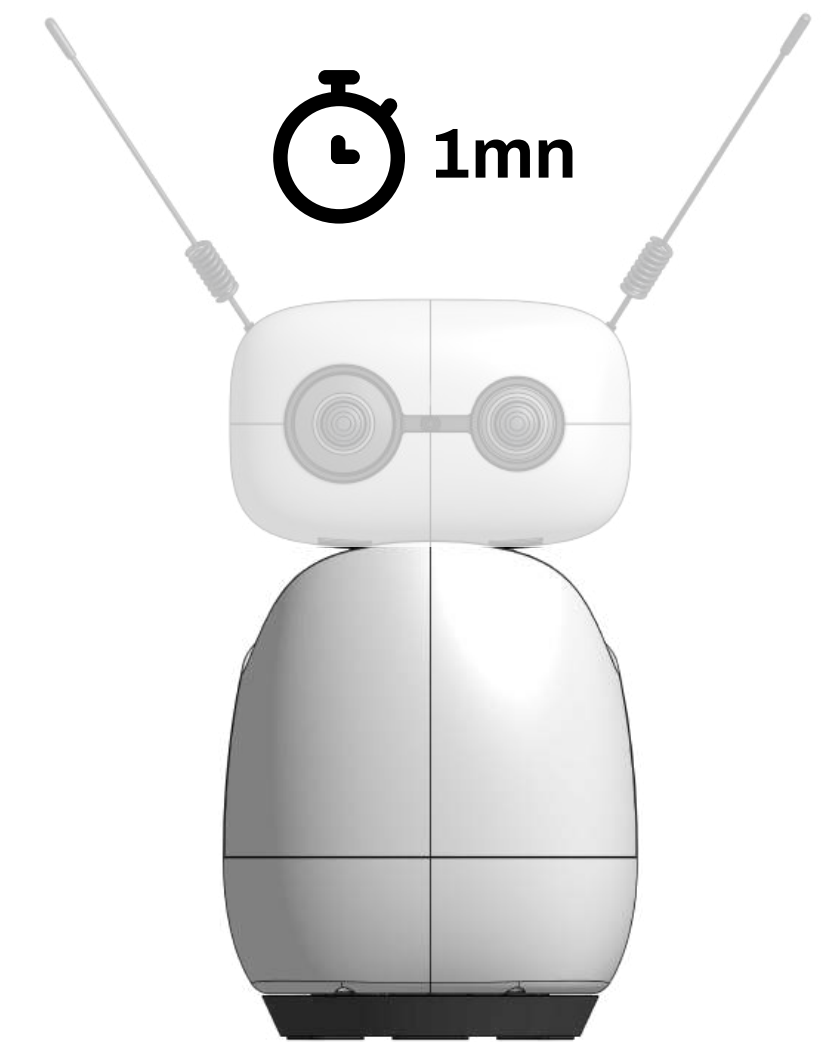
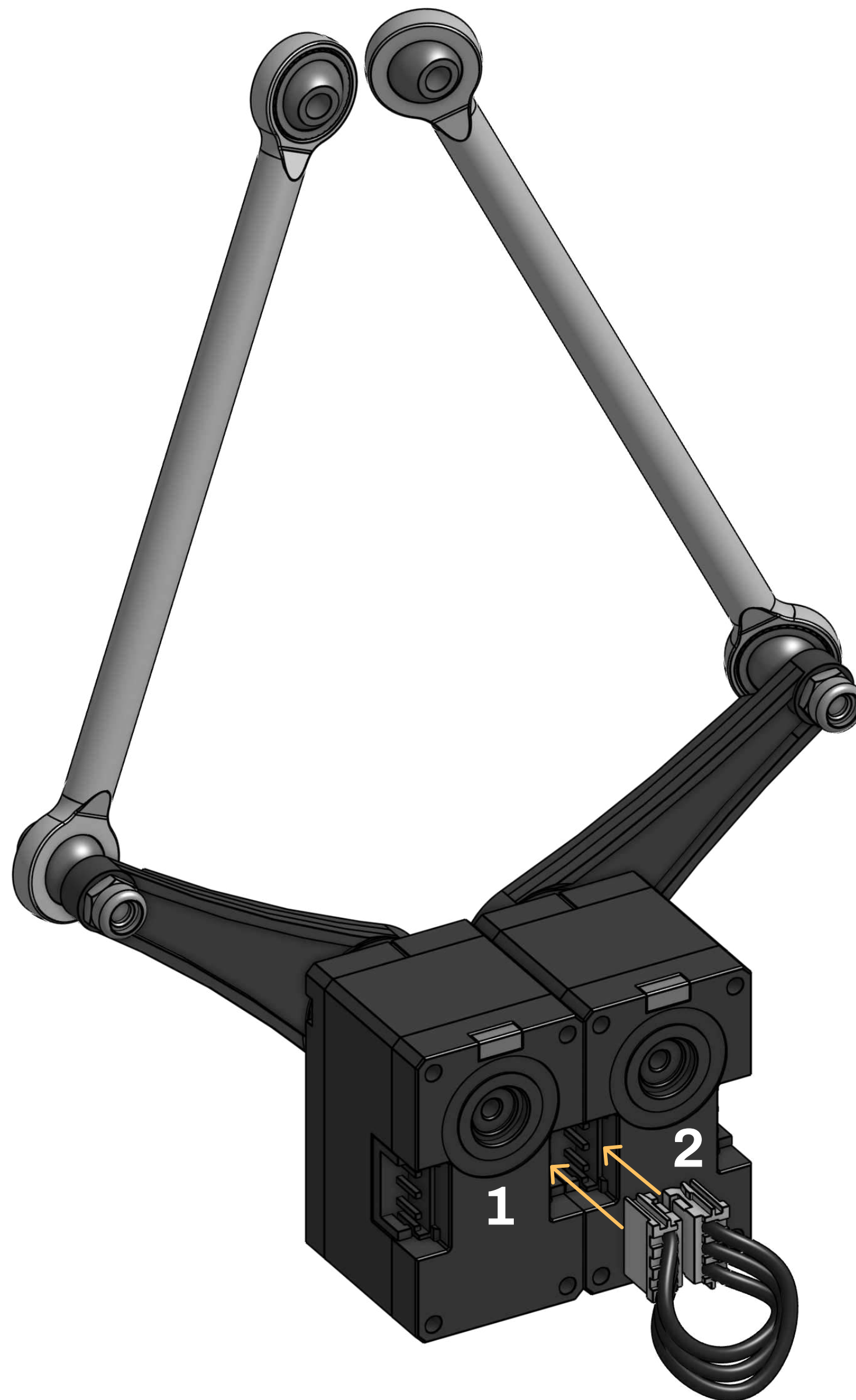
x1
Motor 1



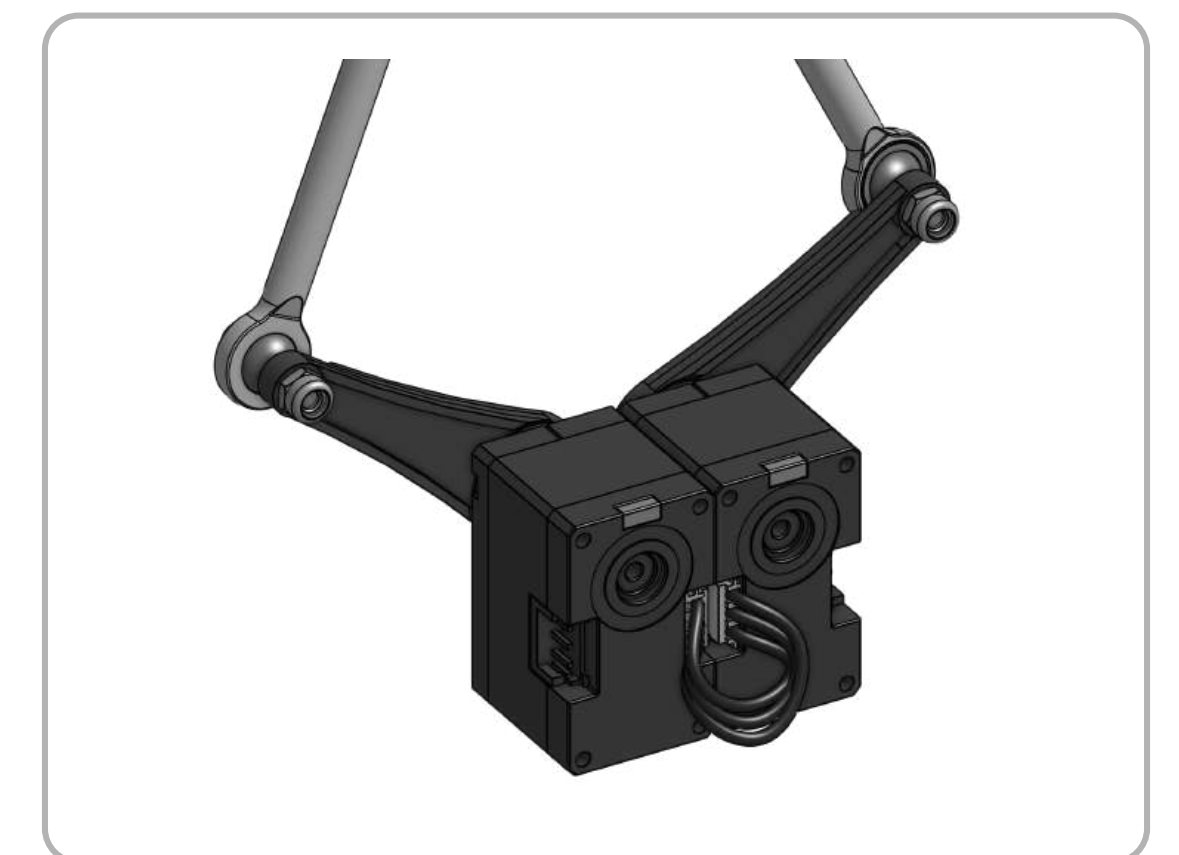
x1
Motor 2



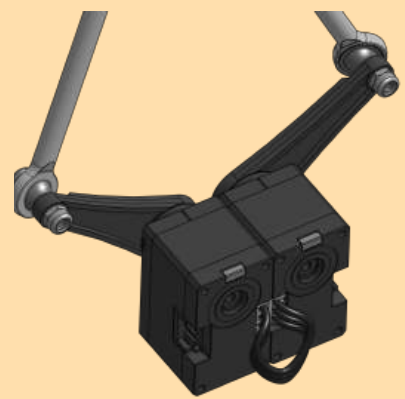
x1
40mm Cable



Connect motor 1 and 2 together with a 40 mm motor cable.



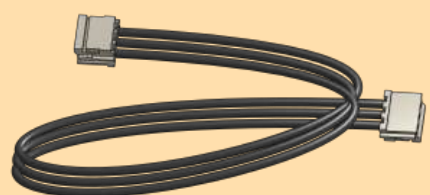
14/51 Body



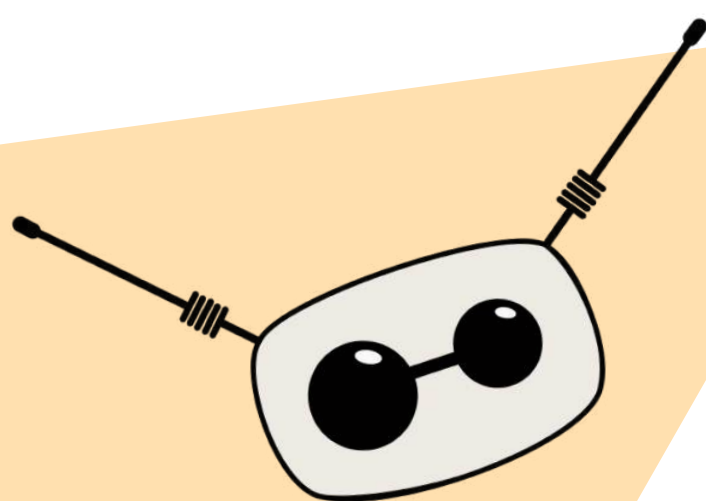
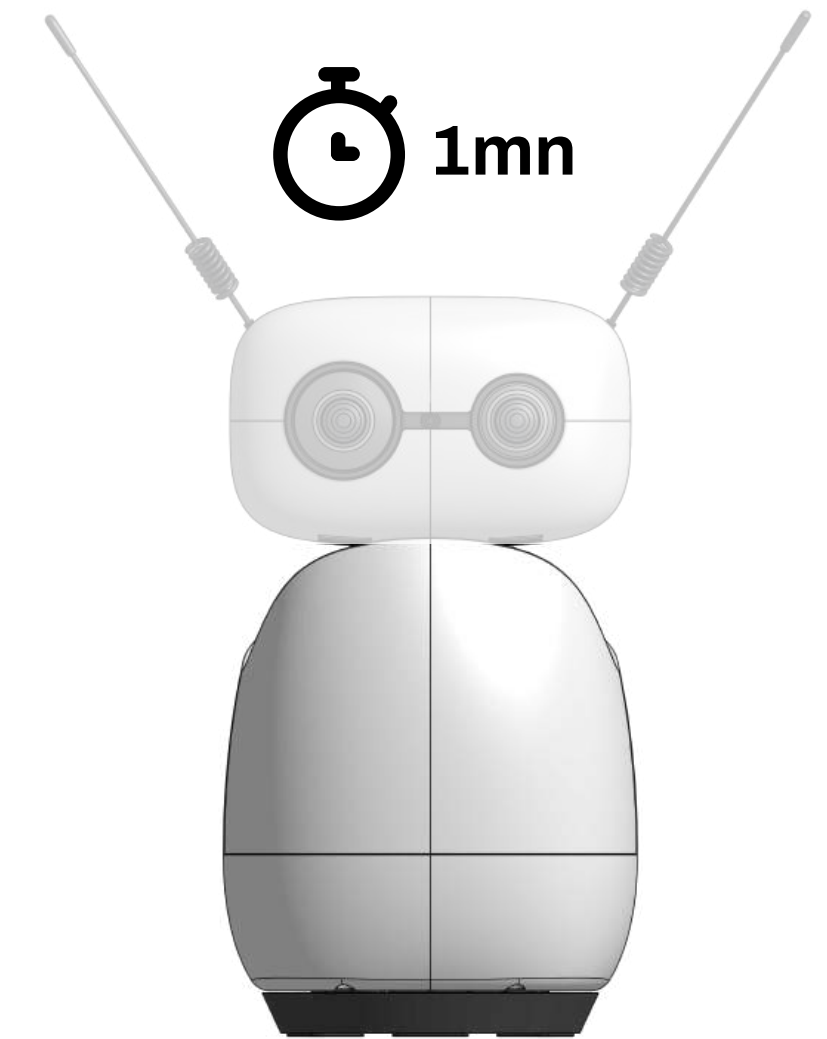
x1
Motor 1 and 2



x1
Motor 3



x1
200mm
Cable



Connect motor 2 and 3 together with a 200 mm motor cable.

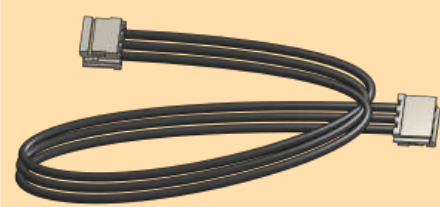
15/51 Body



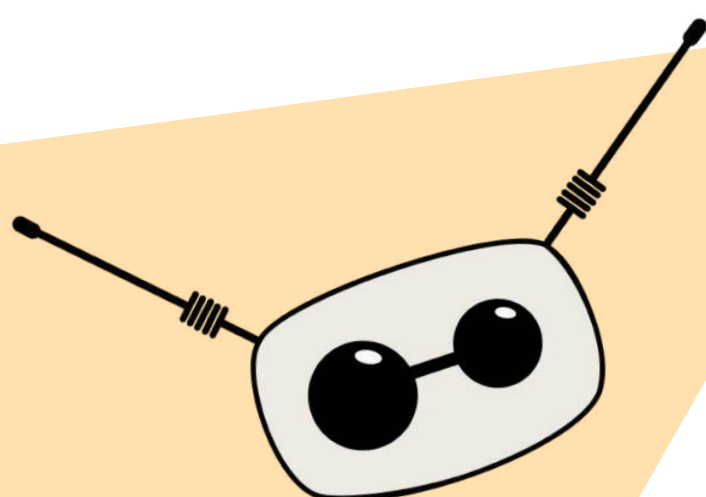
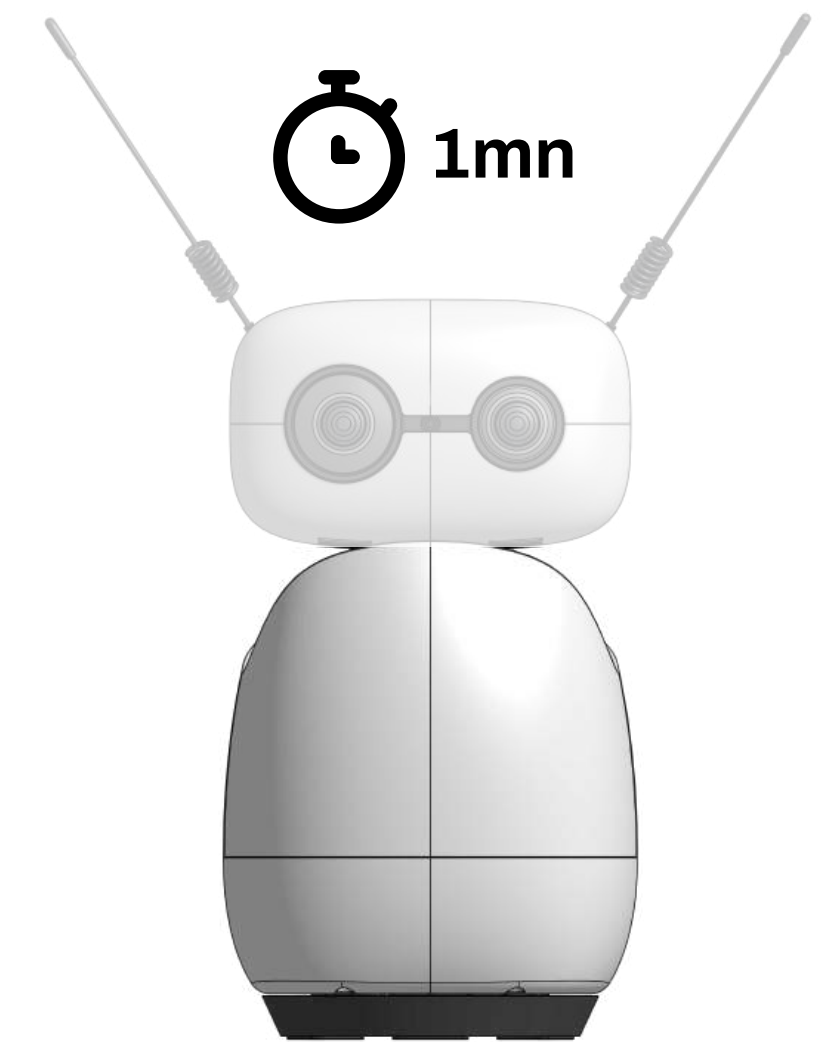
x1
Motor 1, 2
and 3



x2
Motor 4 and 5



x1
200mm
Cable



Connect motor 4 and 5 together with a 200 mm motor cable.
⚠ It's normal not to connect motors 3 and 4.

16/51 Body



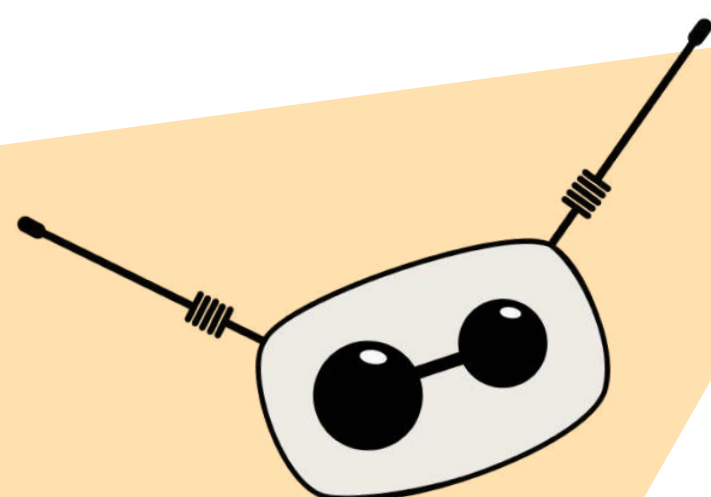
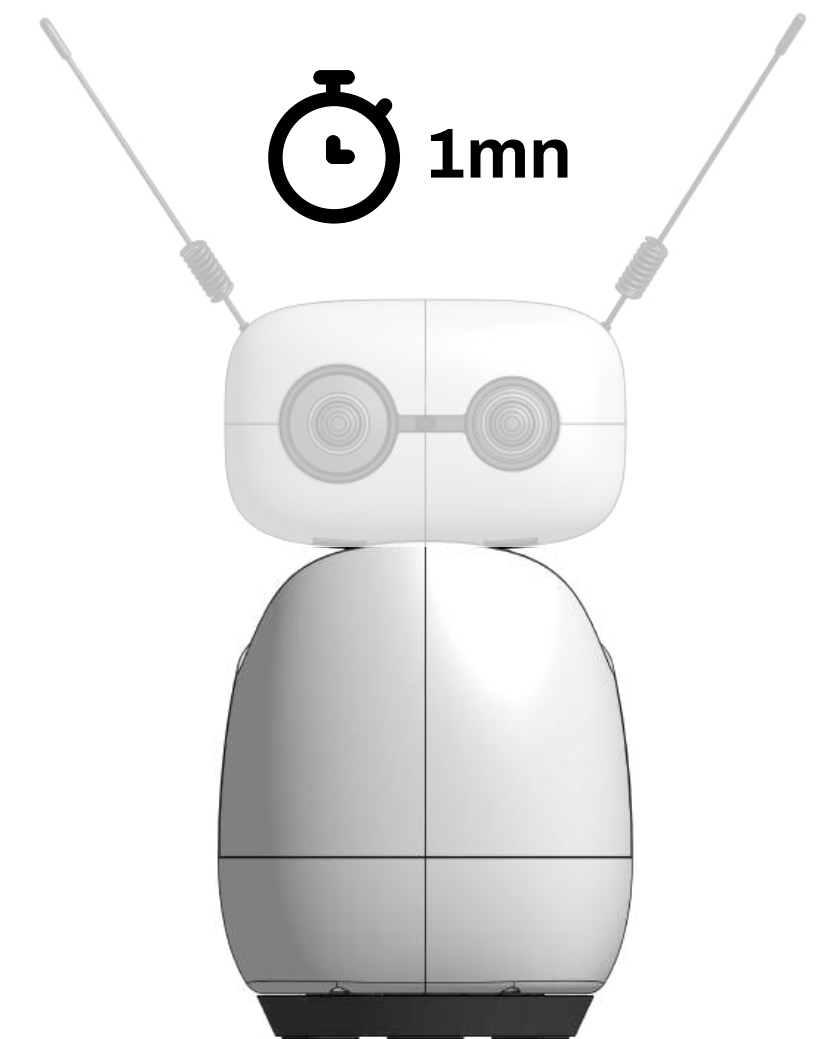
x1
Motor 1, 2, 3,
4 and 5



x1
Motor 6



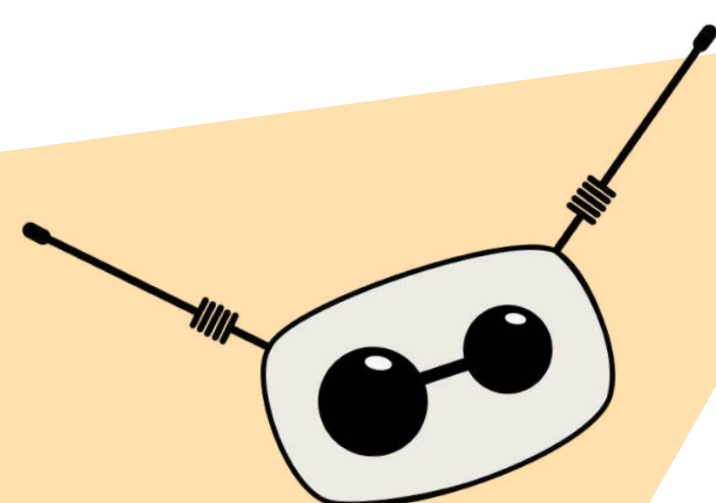
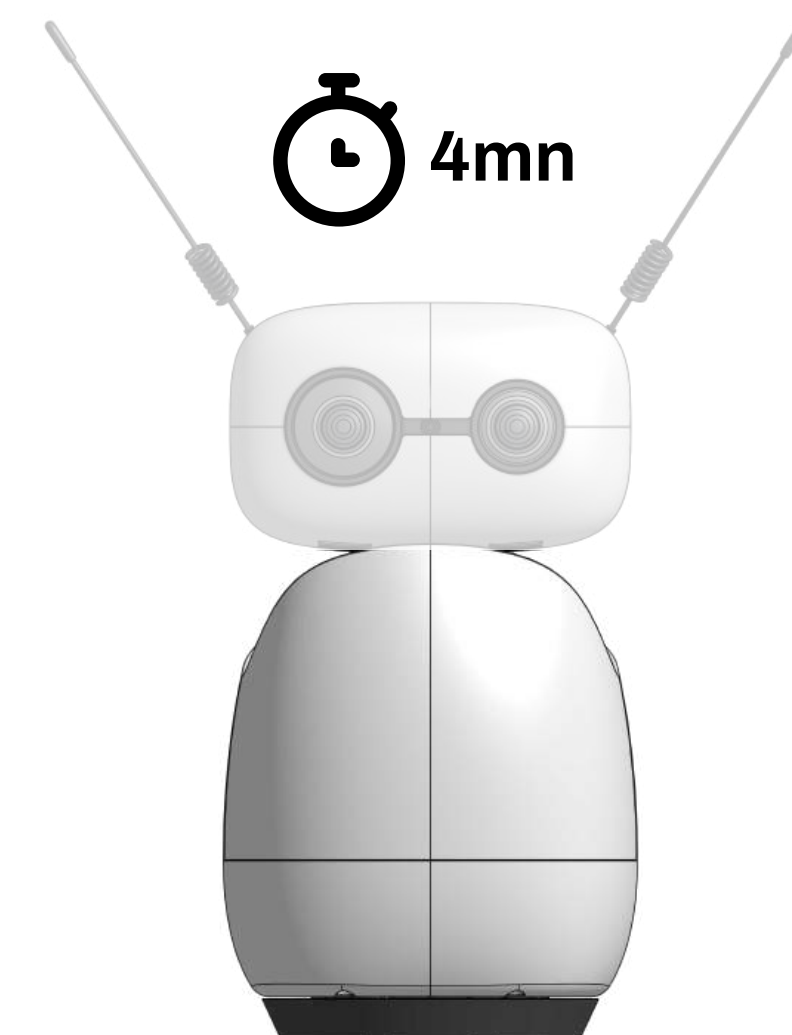
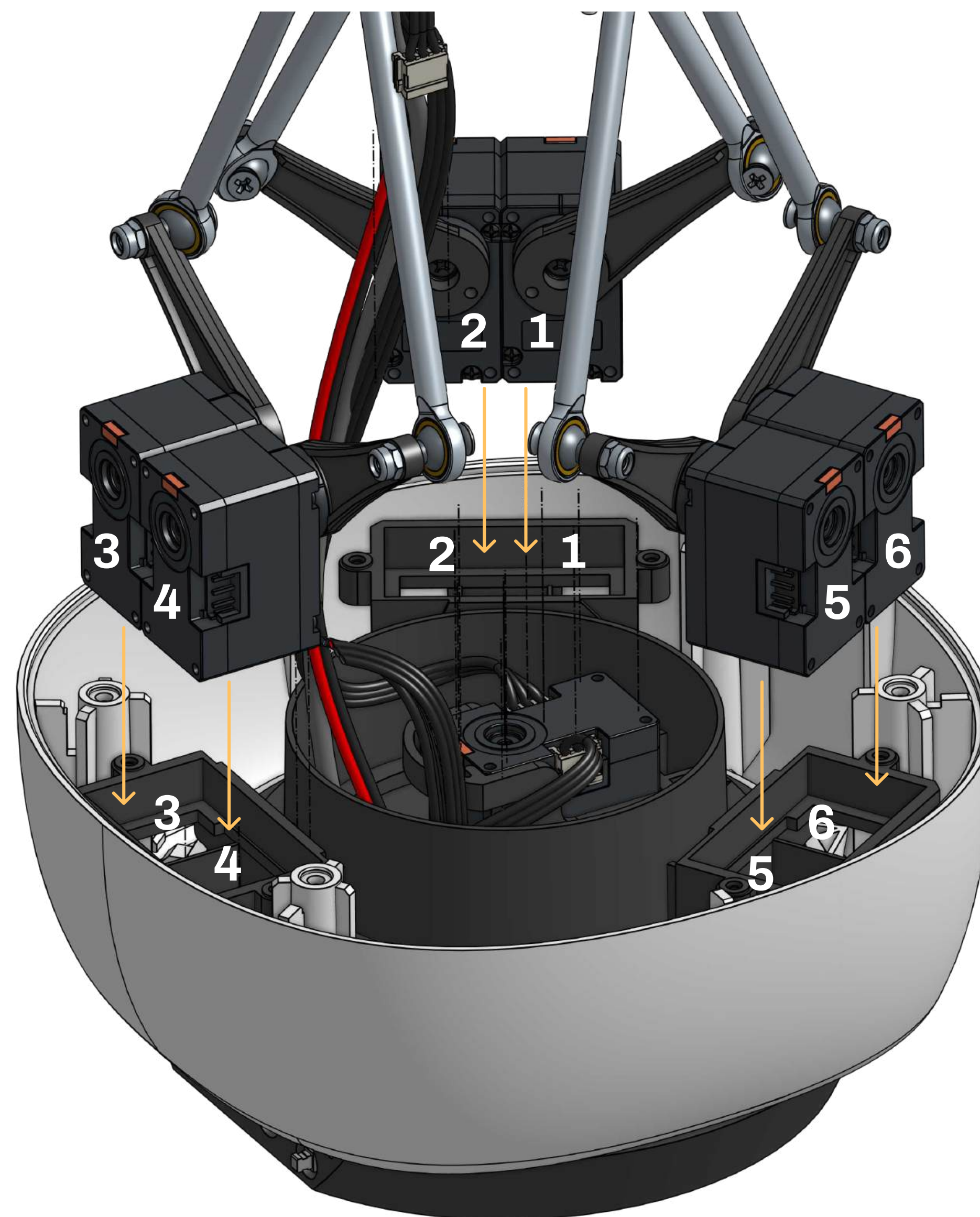
x1
40mm Cable



Connect motor 5 and 6 together with a 40 mm motor cable.



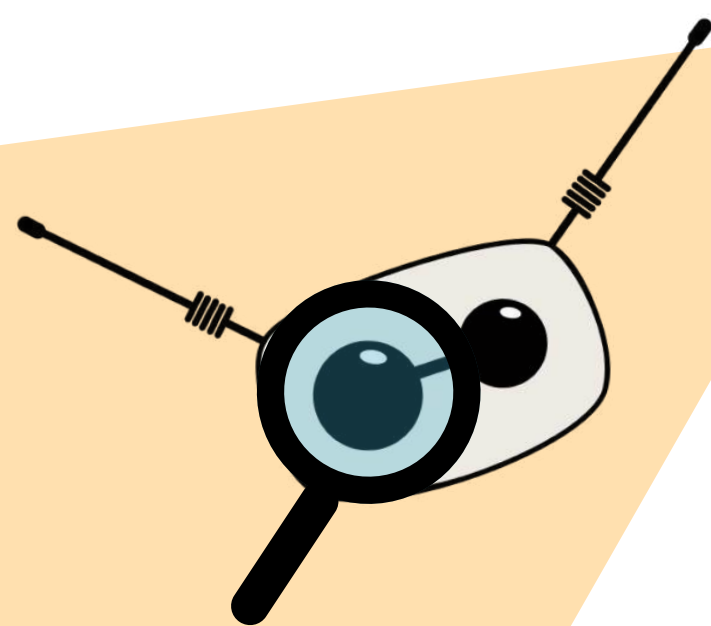
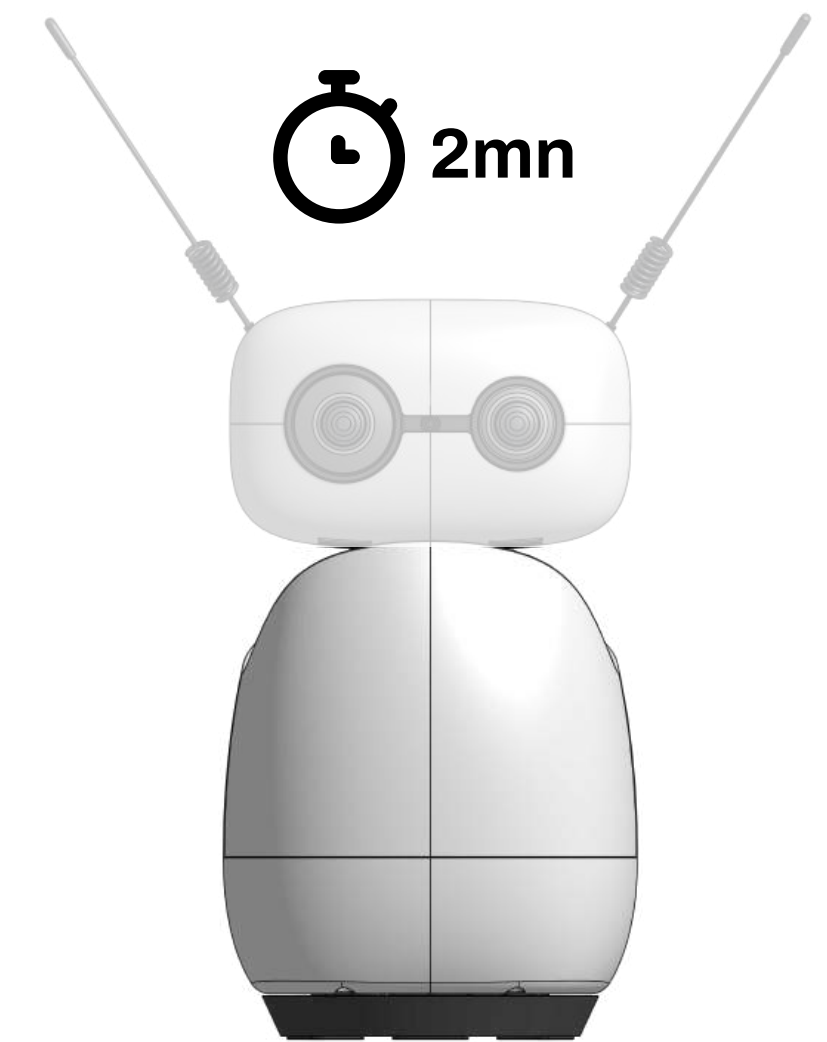
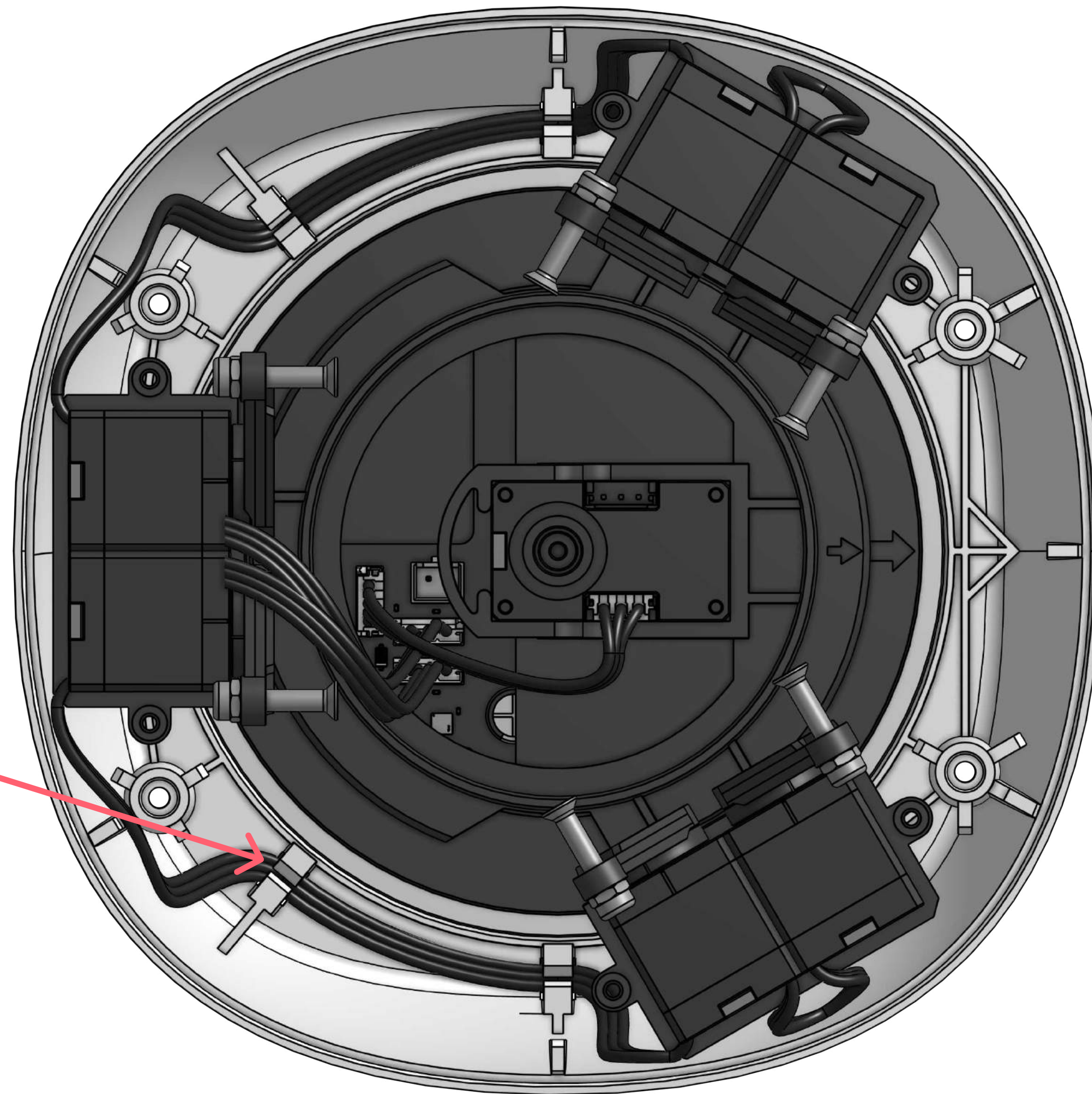
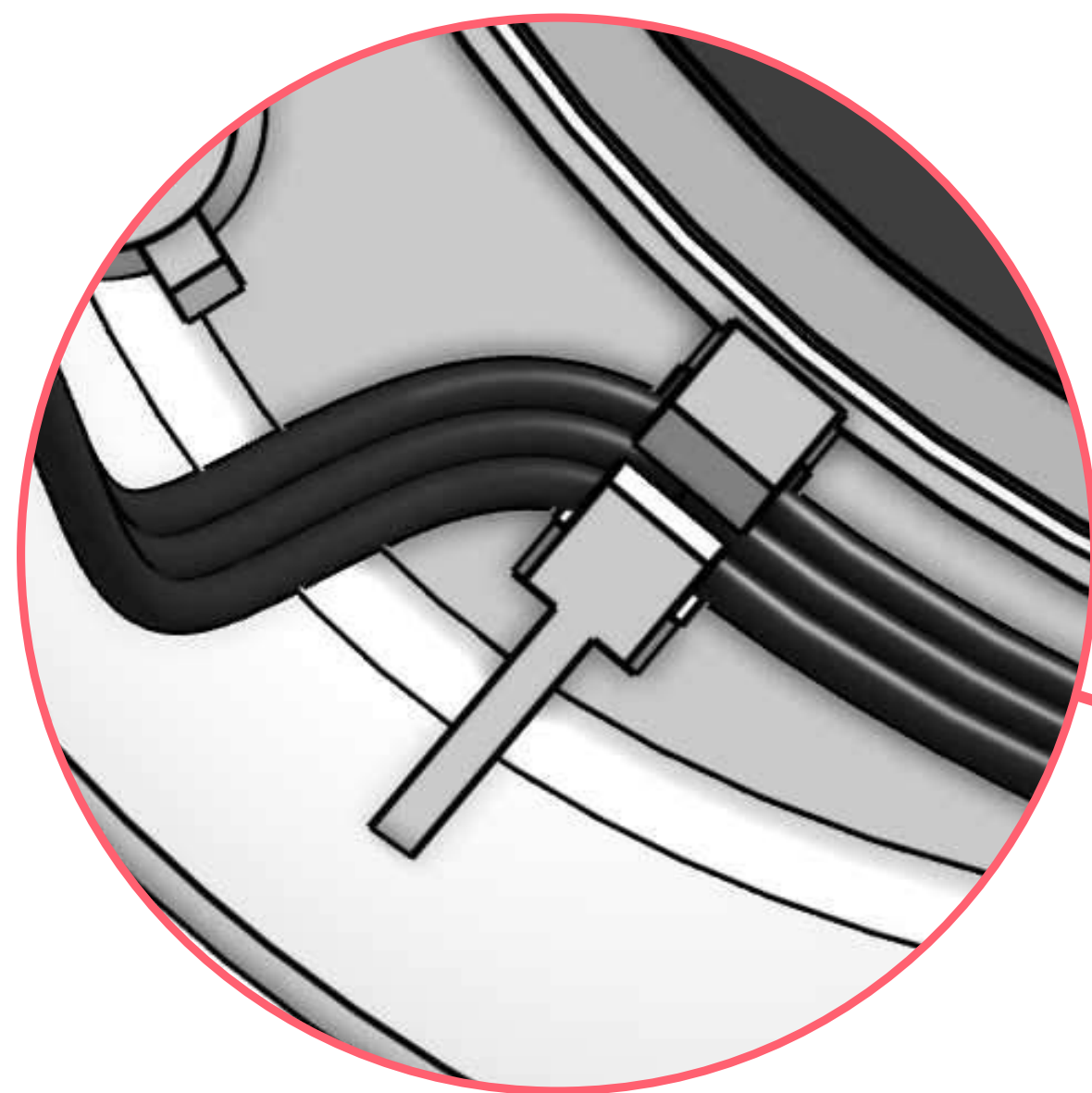
17/51 Body



Insert all the motors into the Stewart Main Plate, making sure to place the correct numbers in the right positions.



18/51 Body

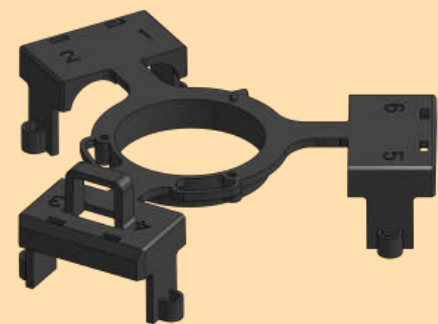


Clip the motors' cables in the Body Down section.

19/51 Body



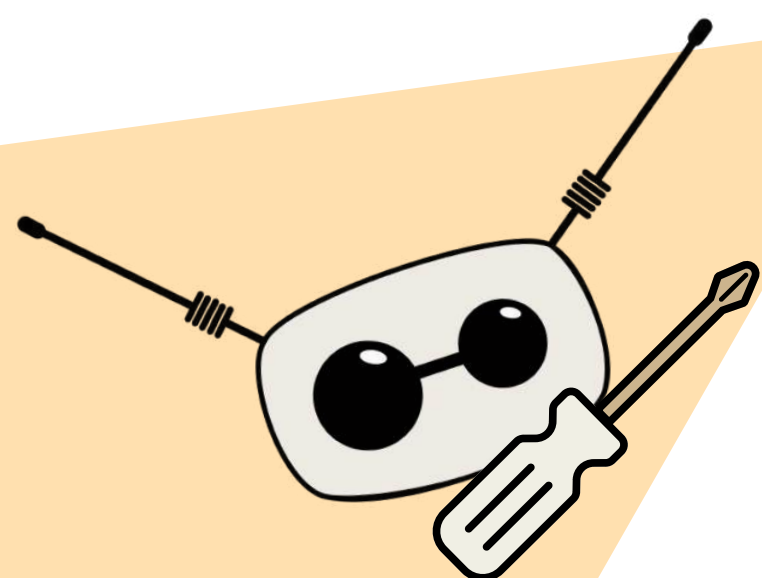
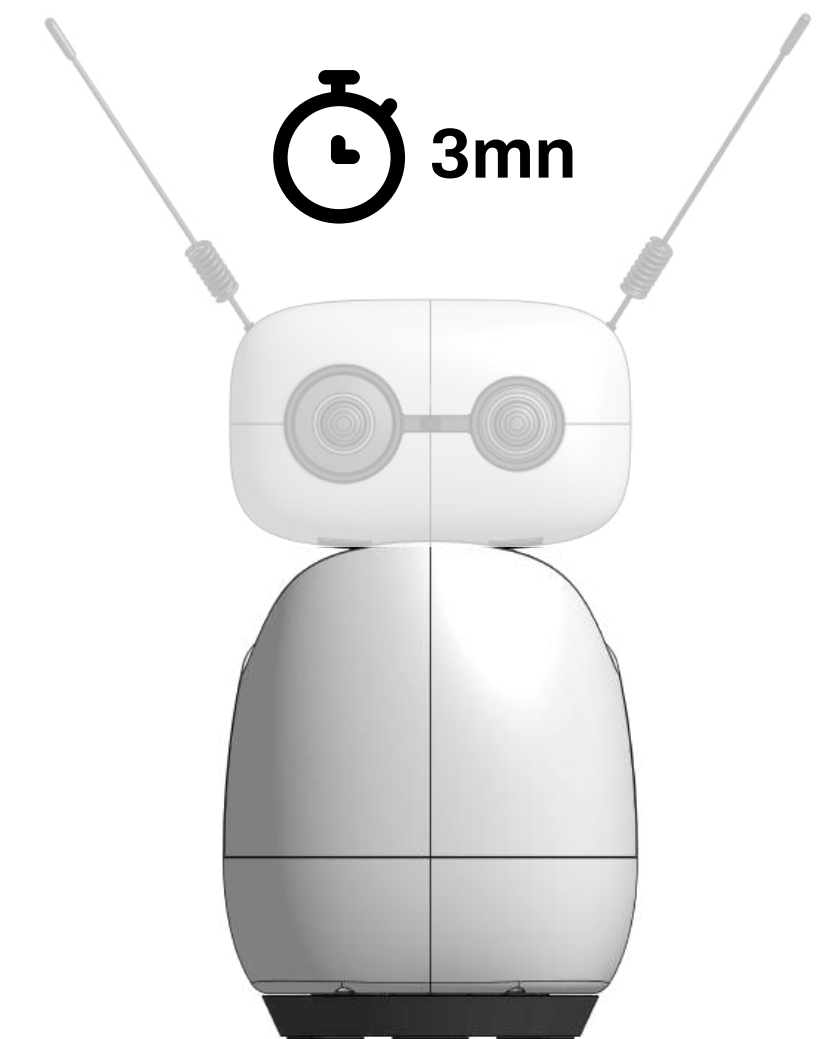
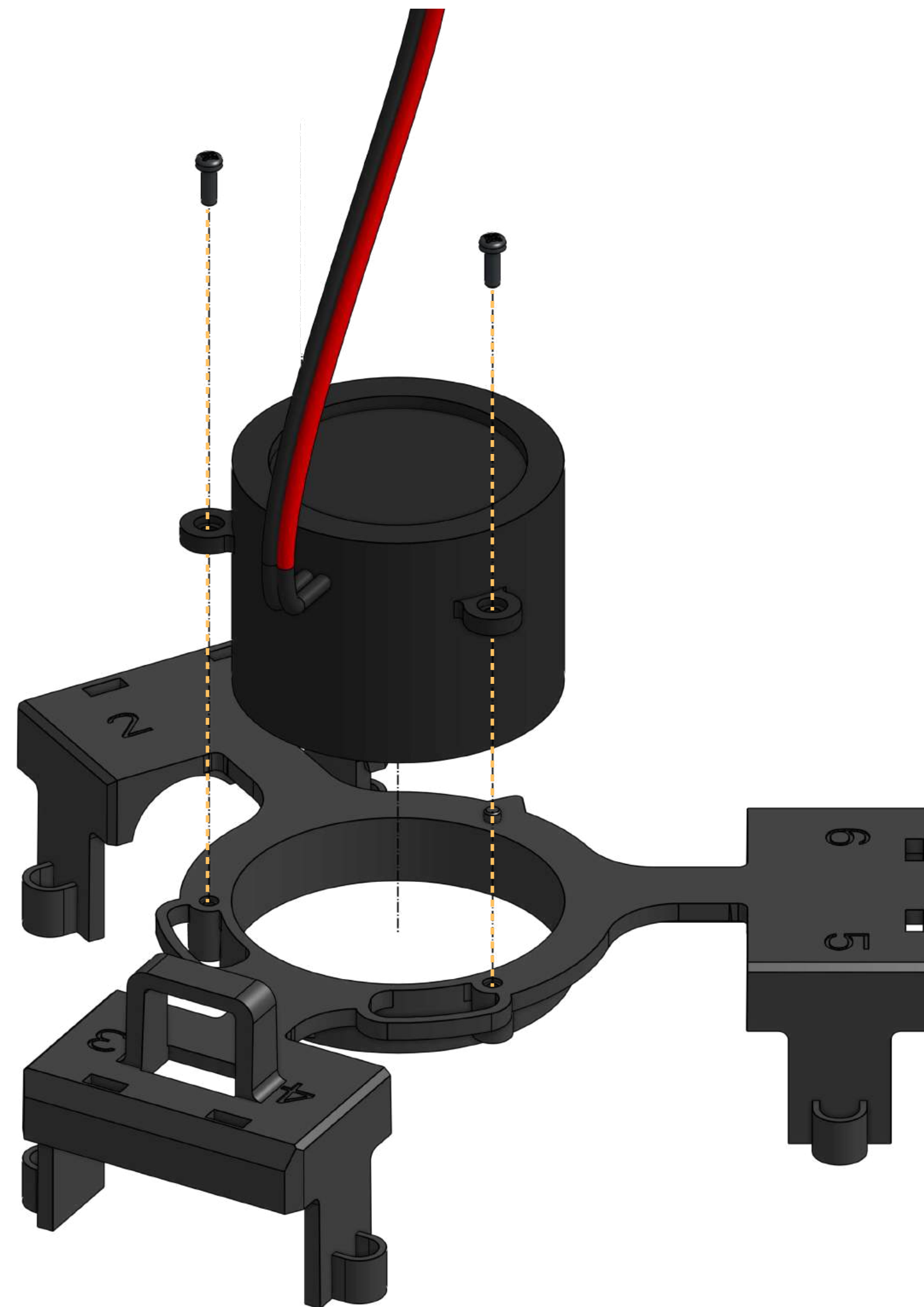
x1
Speaker



x1
Tricap

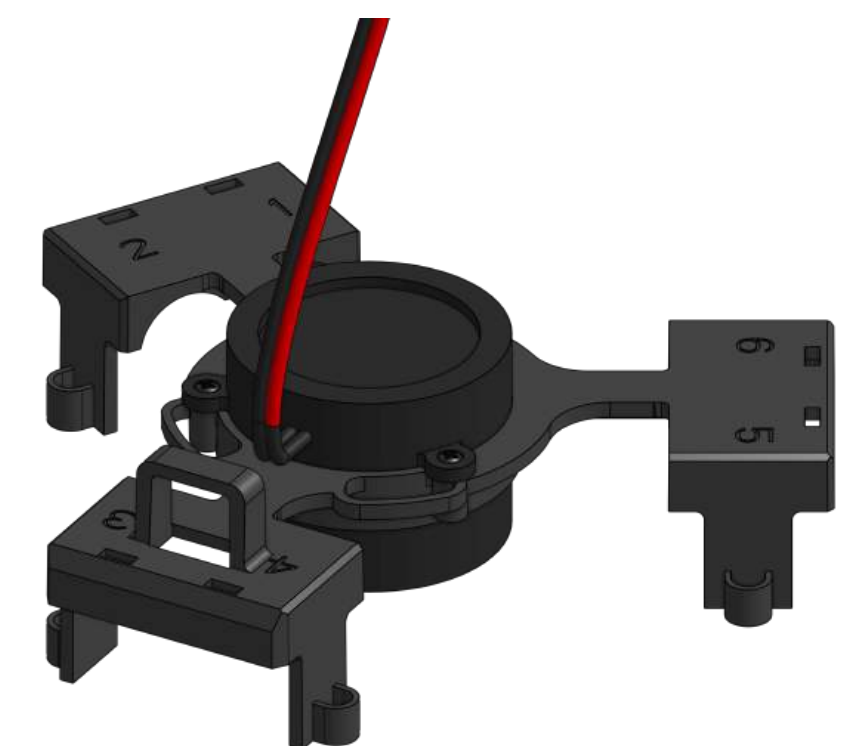


x2
2x6mm
Screw

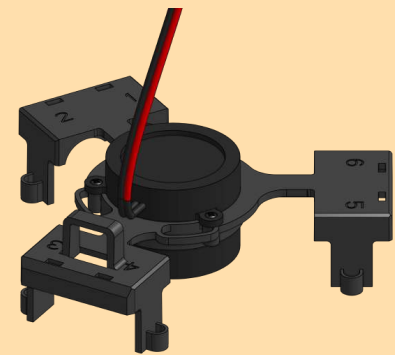


Add and screw the speaker into the round slot of the Tricap making sure not to pinch any wires.

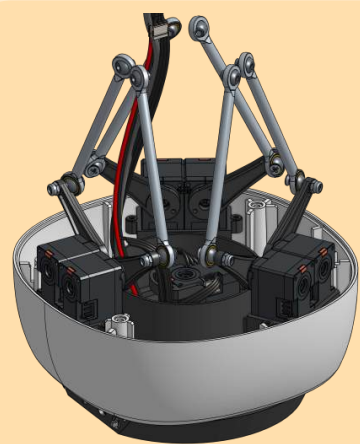
⚠ Do not touch the speaker cone. Handle by the frame only; the cone is fragile.



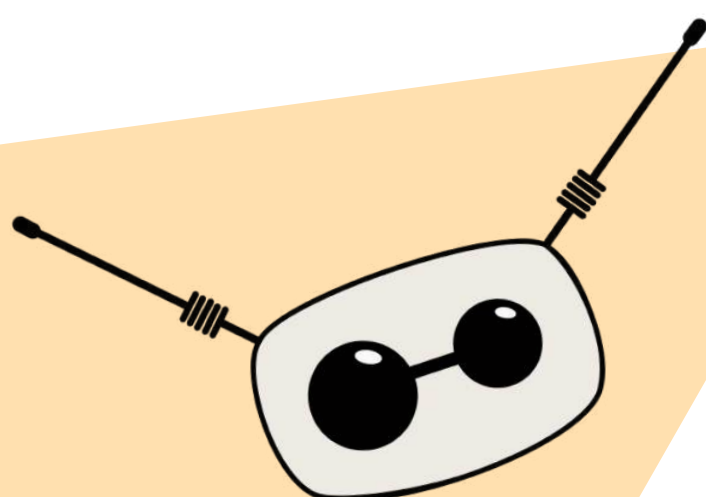
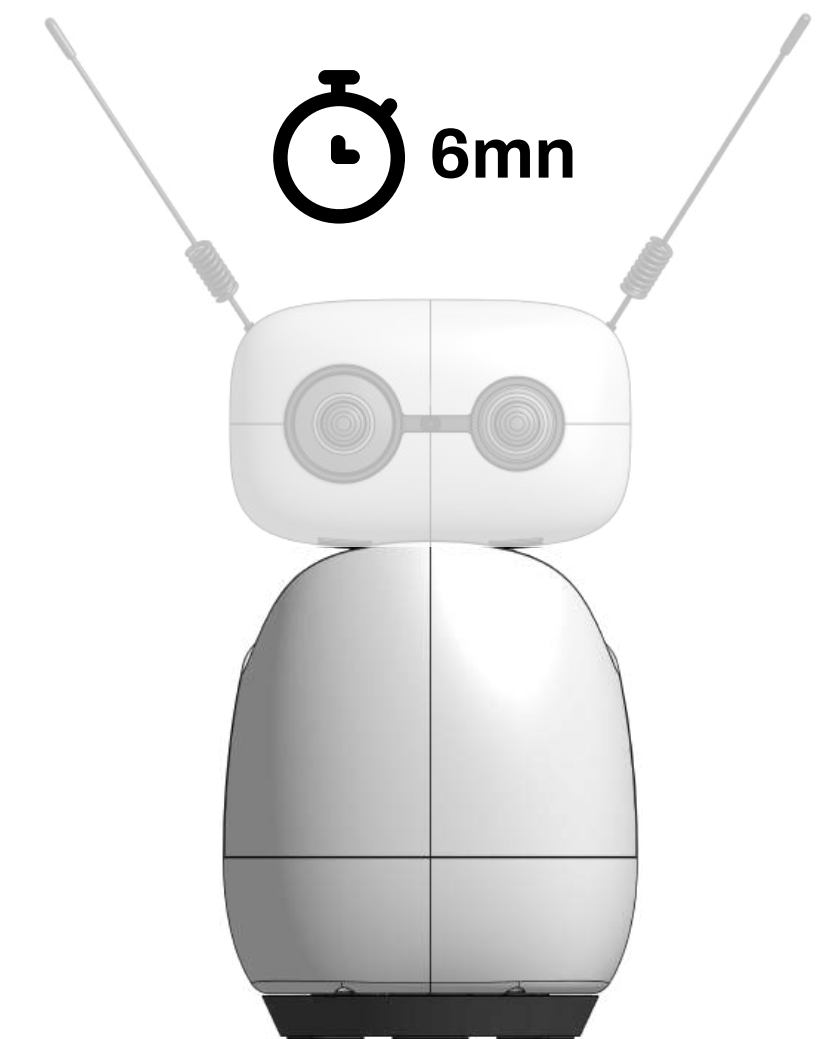
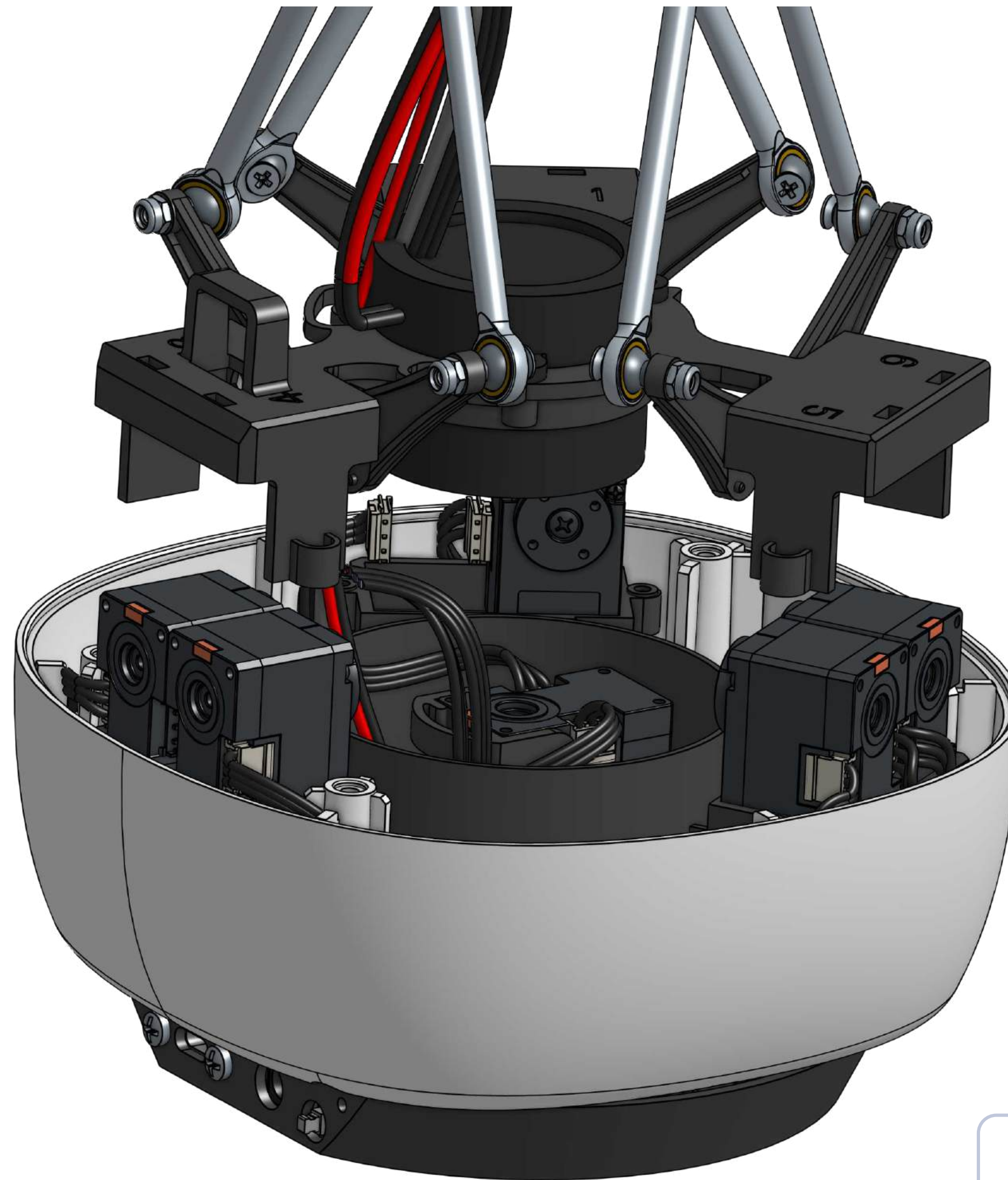
20/51 Body



x1
Tricap
Assembly

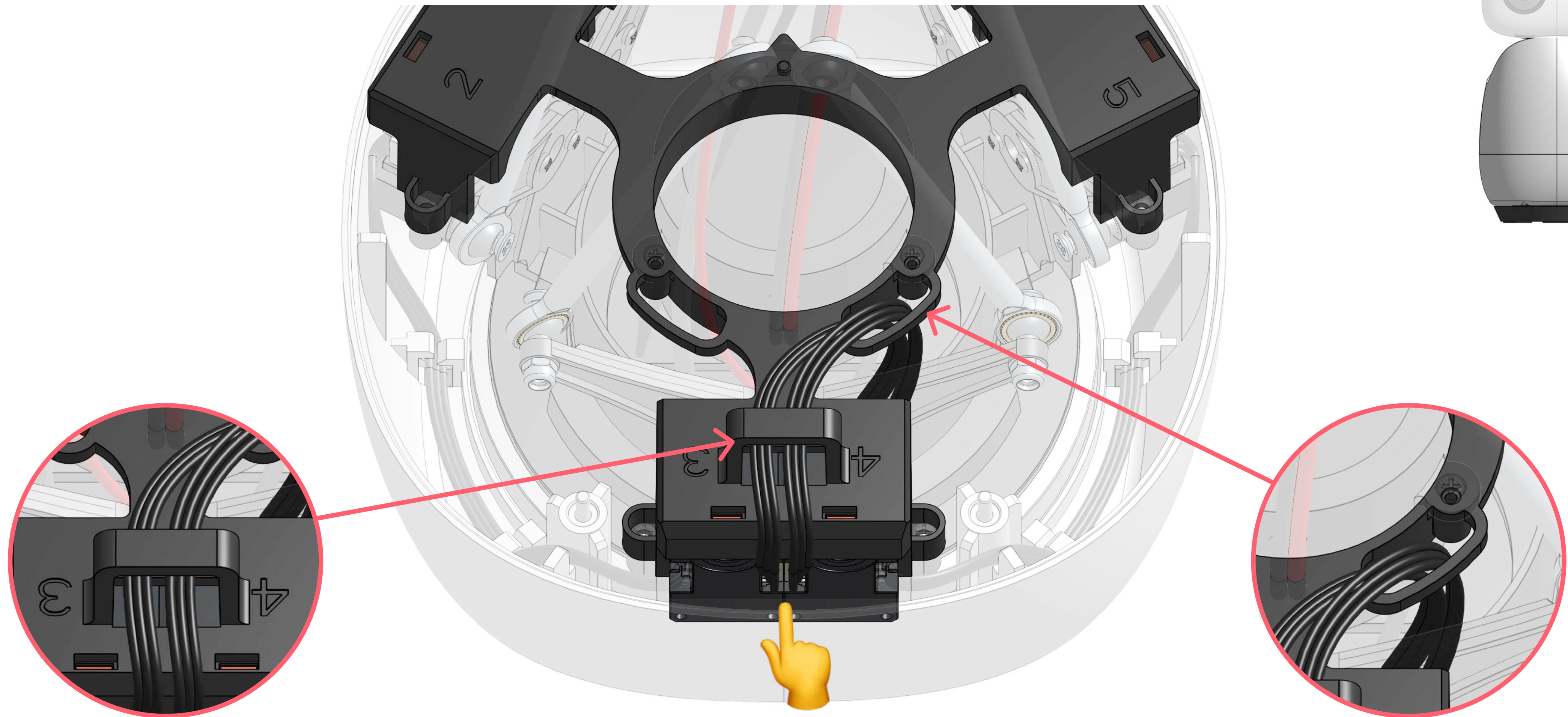
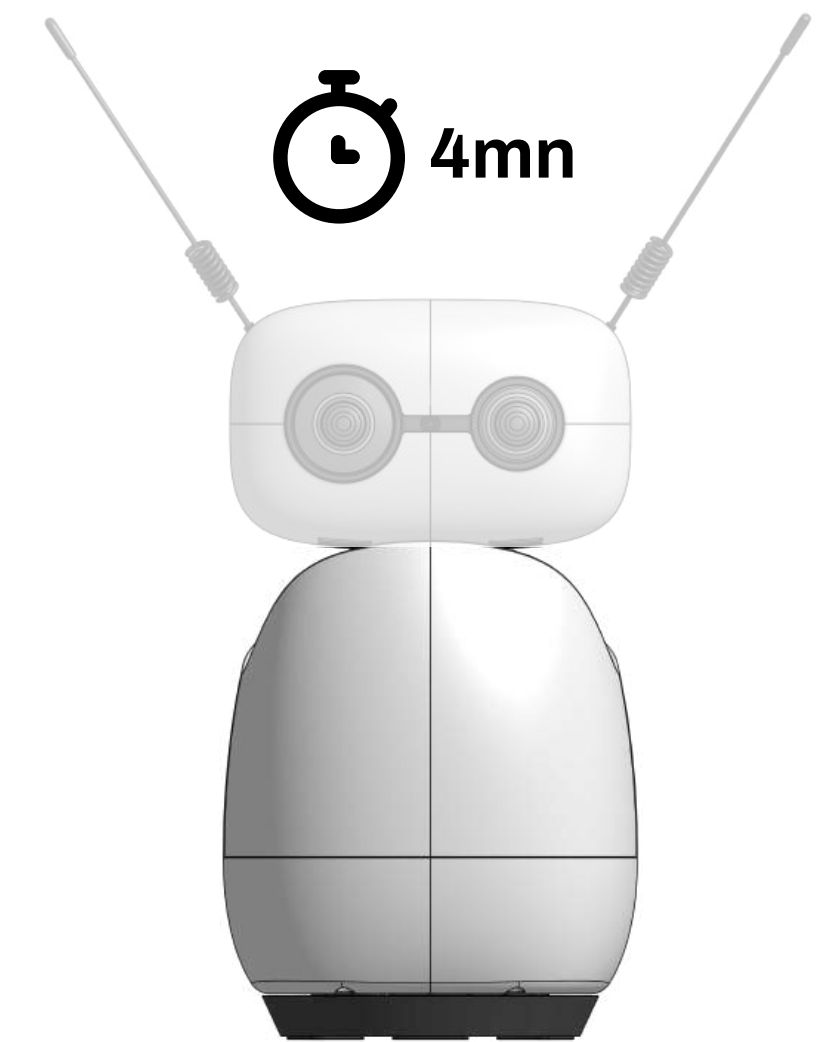


x1
Body
Assembly



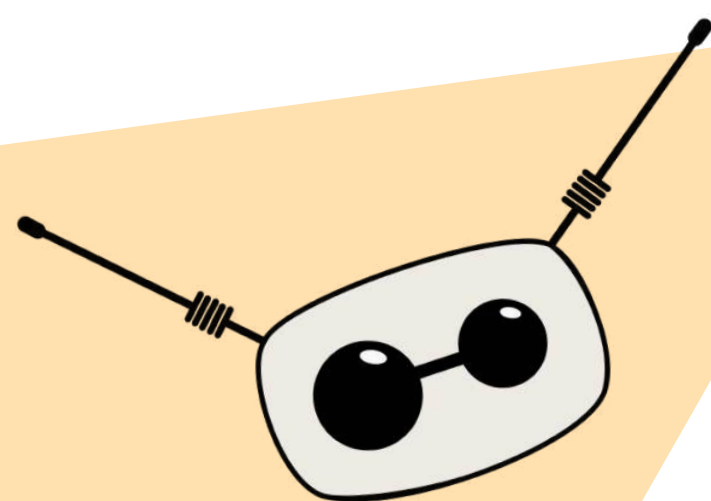
Position (do not screw yet, to adjust the cables) the Tricap with the speaker onto the motors. **Make sure the numbering is correct.** Cable routing will be done later.

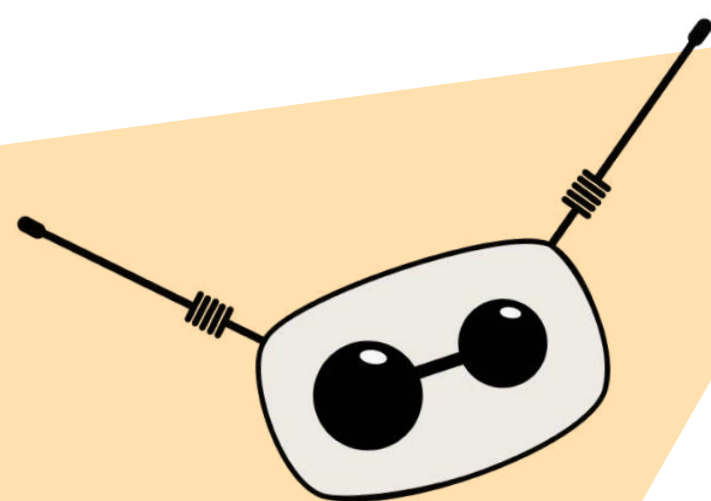
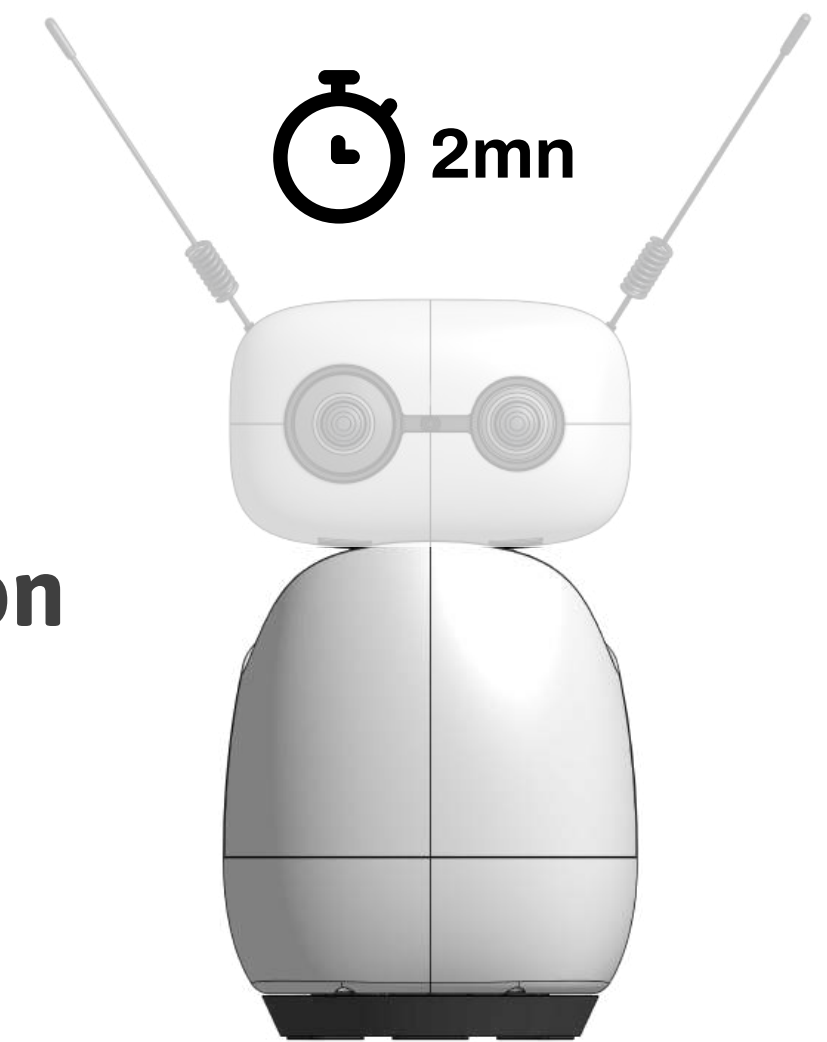
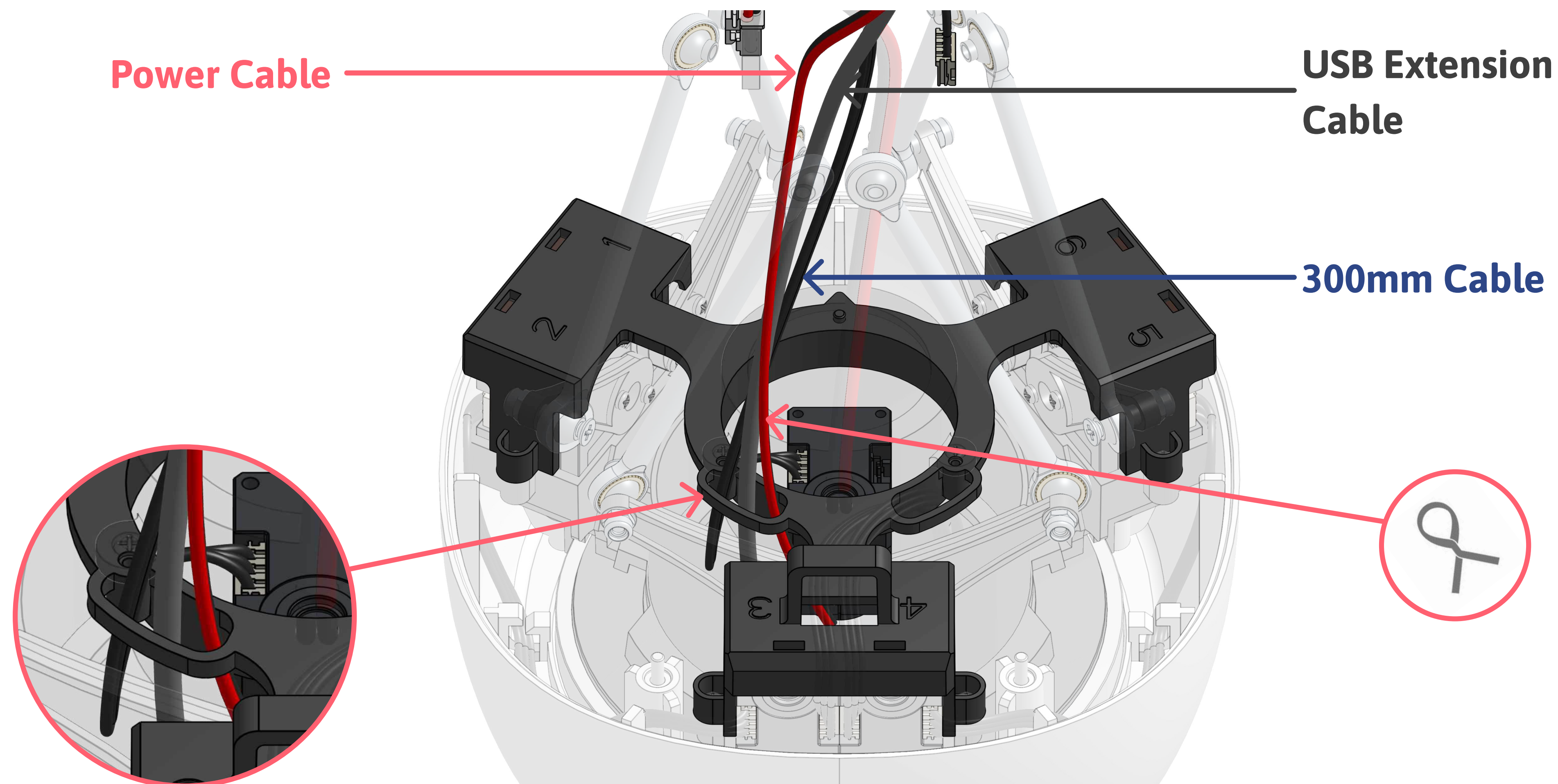




Route the **200mm cables** coming from the Body PCB through the holes on the Tricap.
Connect the cables to the motors 3 and 4.

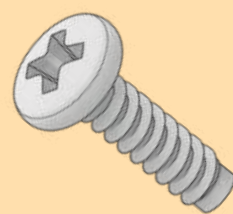
You can slightly lift the motors to make the connections easier.



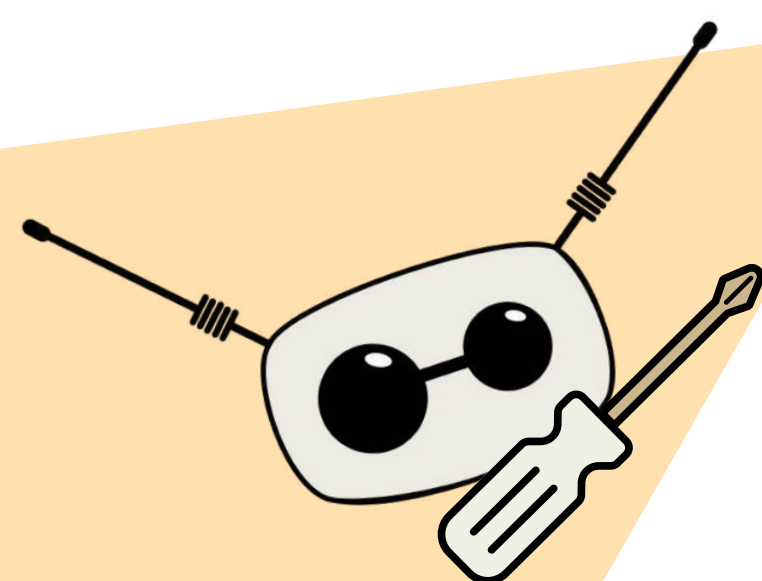
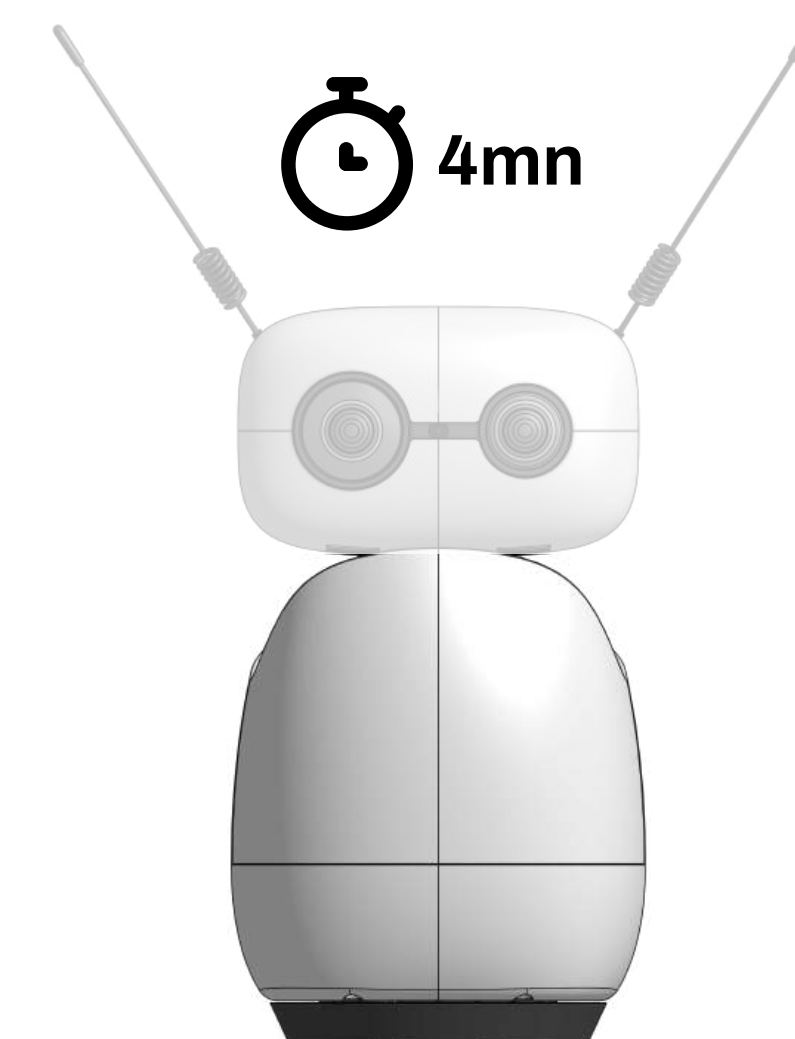
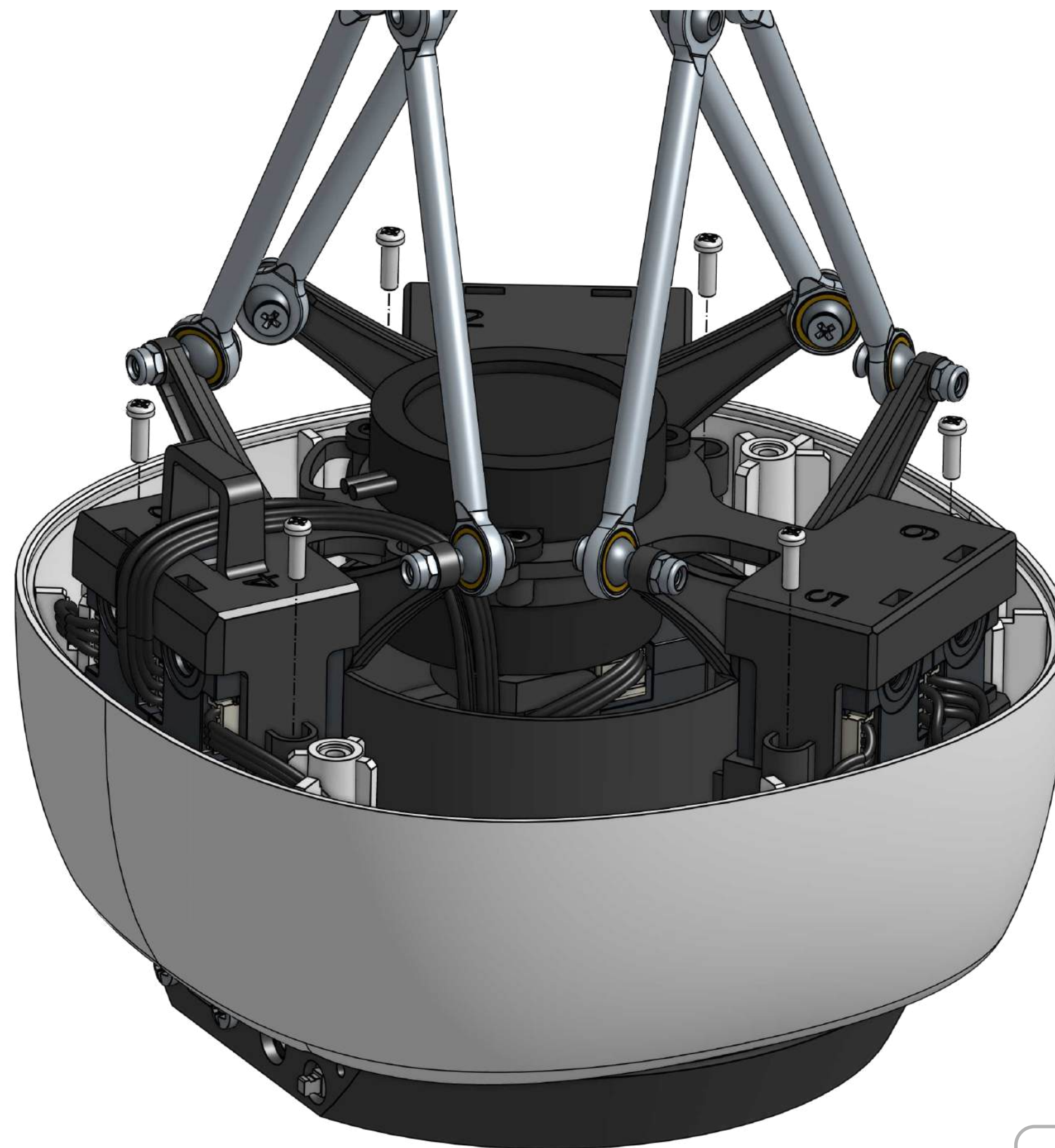


Route the USB, Power and 300mm cables through the designated hole on the Tricap. Try to bundle the wires together with a small twist tie to hold them in place.

23/51 Body



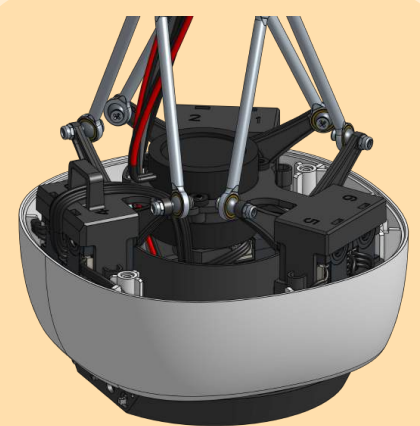
x6
2.5x8mm
Screw



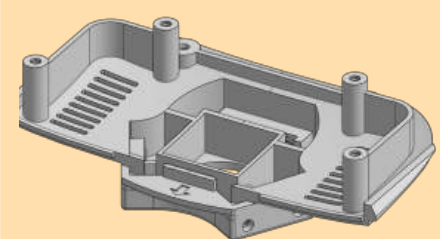
Screw the Tricap using six **2.5x8mm** screws.



24/51 Body



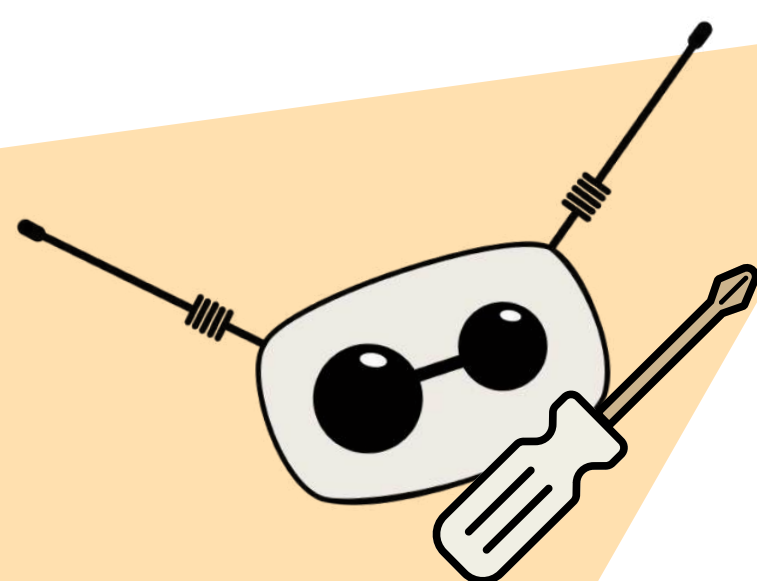
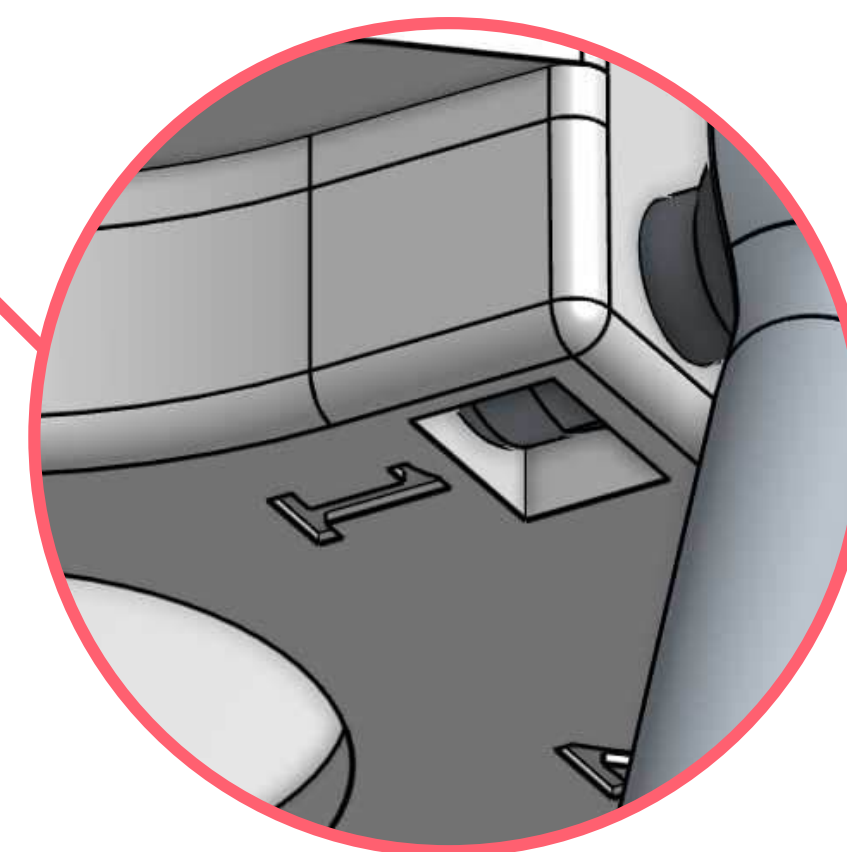
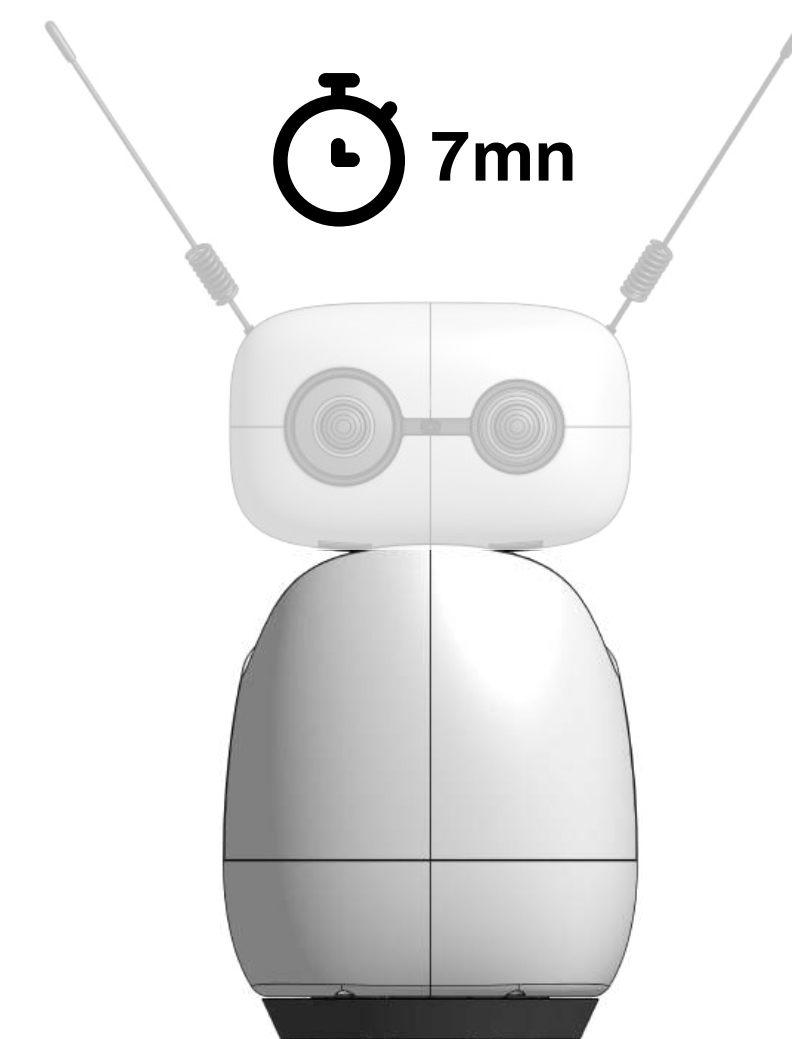
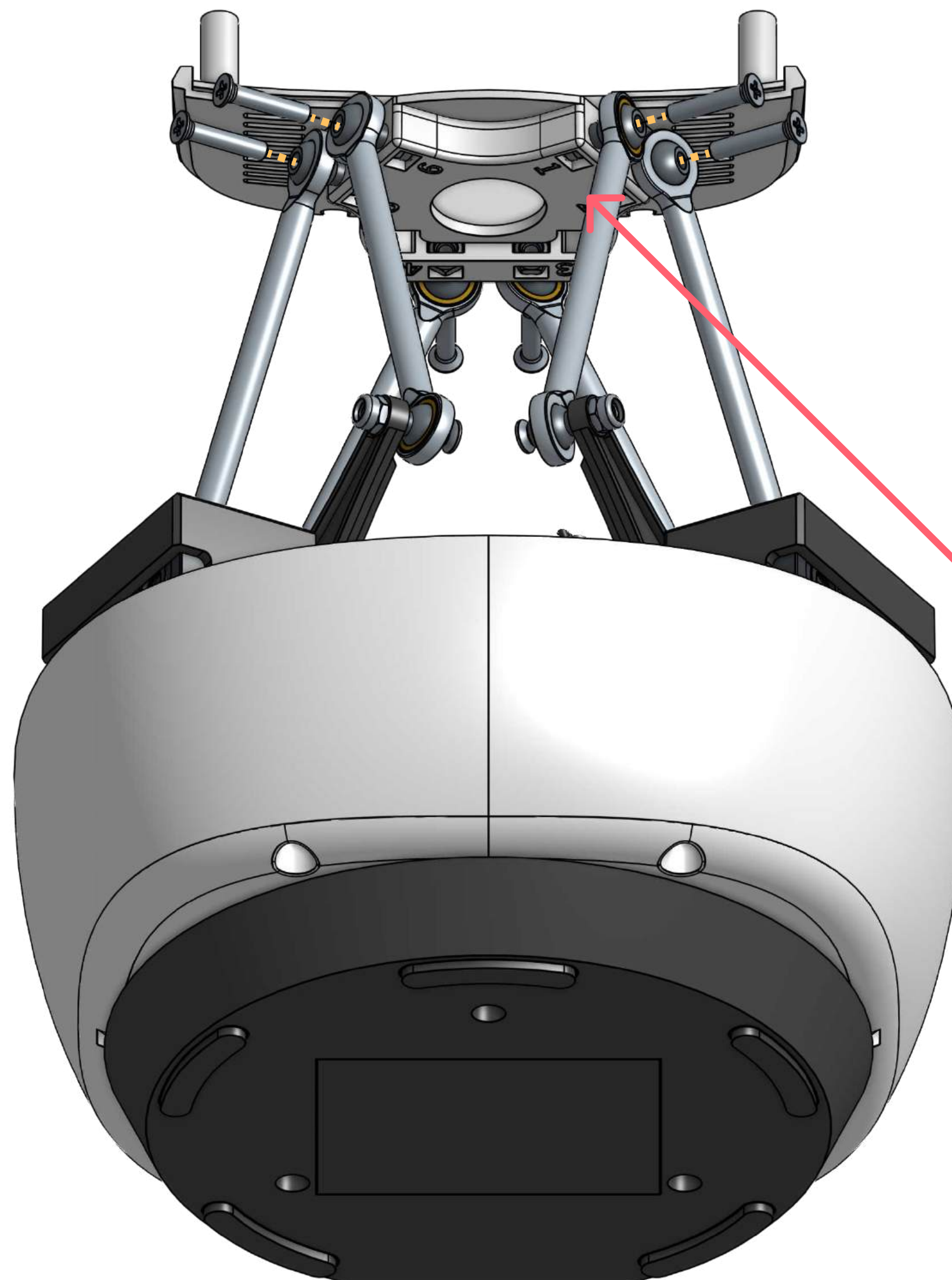
x1
Body
Assembly



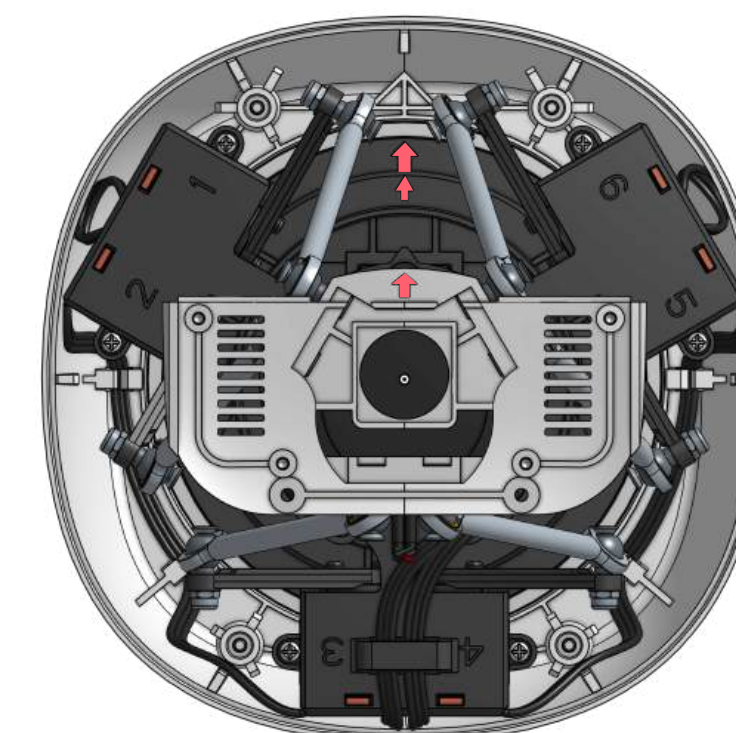
x1
Bottom Head

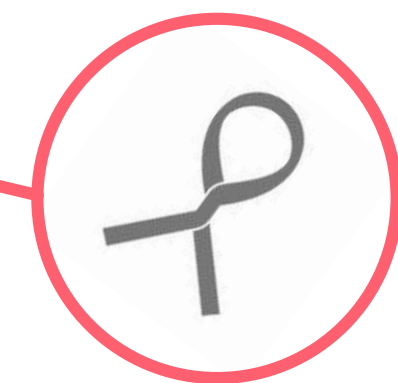
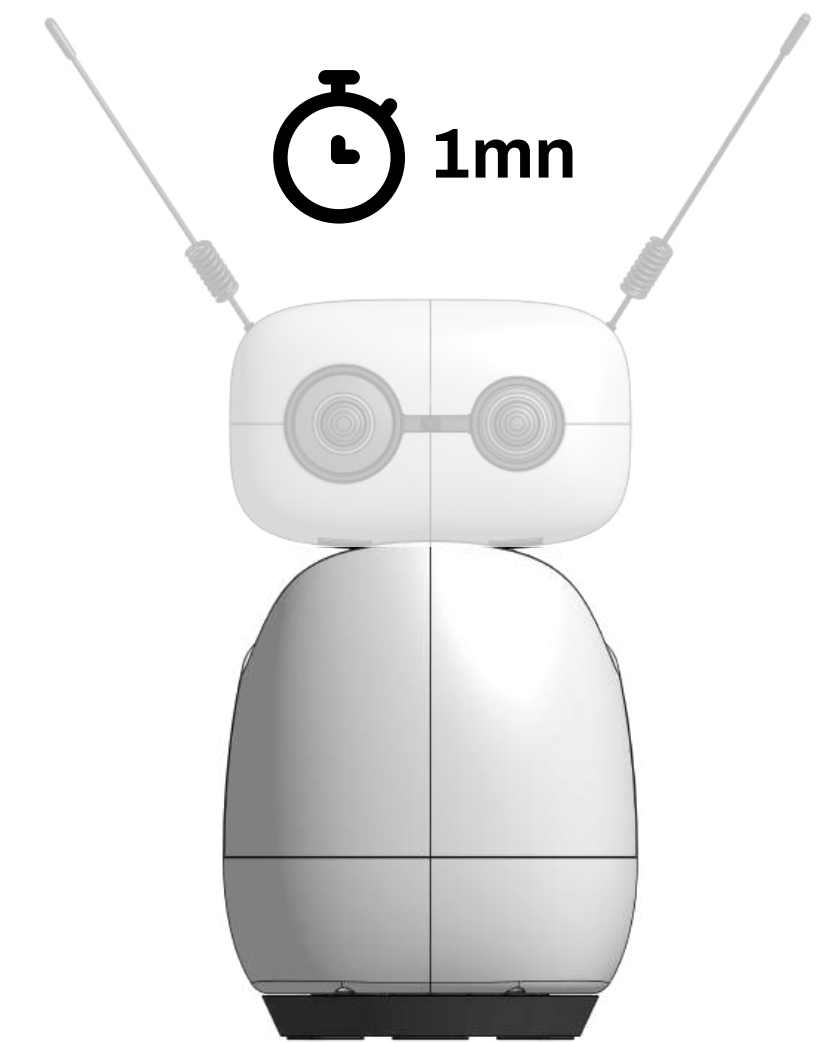
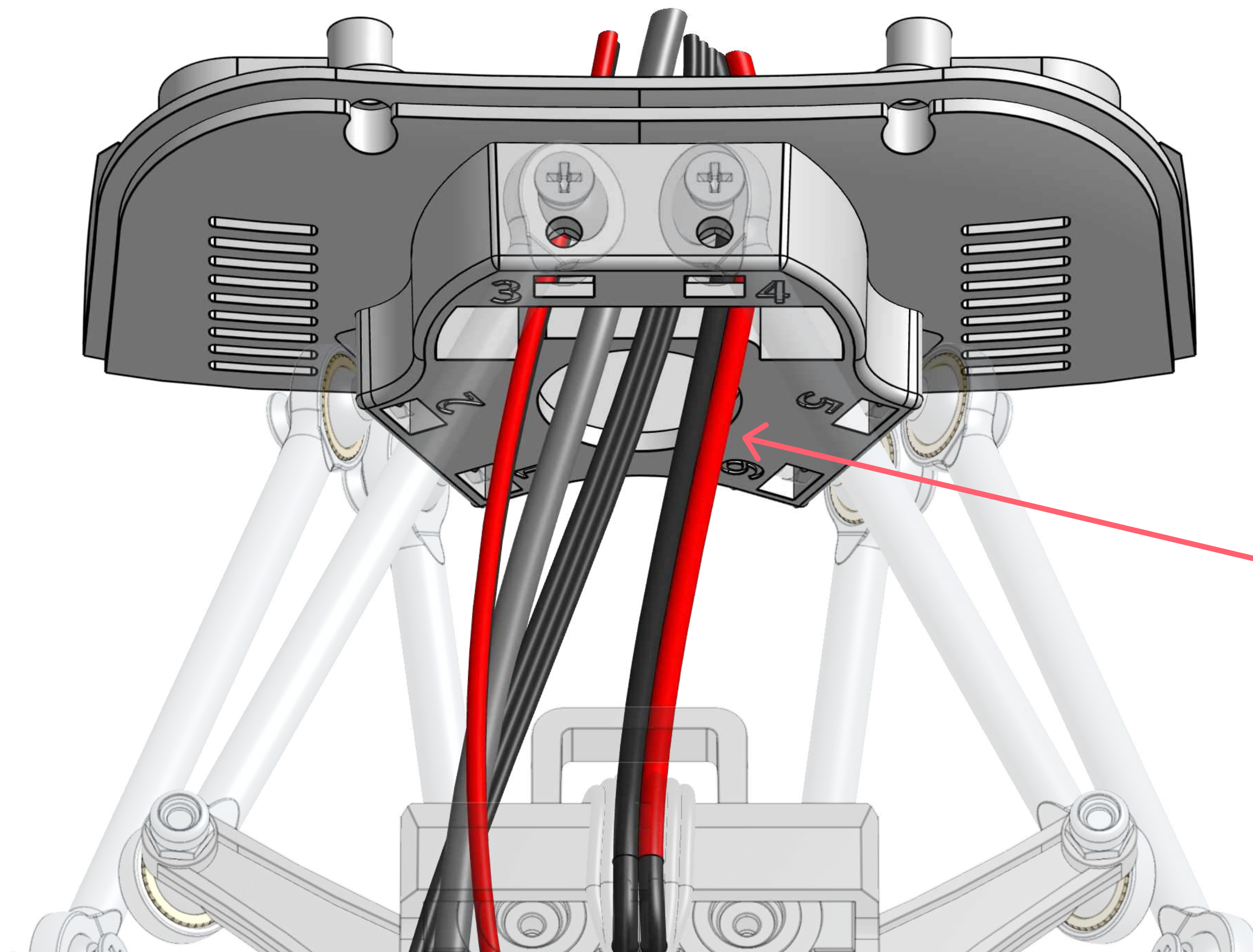


x6
M3x18mm
Screw



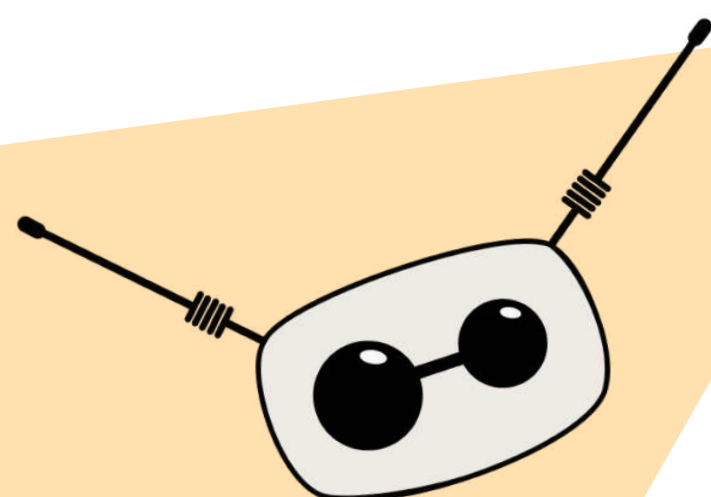
Position the Bottom Head Assembly on the Body Down Assembly. Make sure to align the arrows.
Screw the Bottom Head Assembly onto the link rods using six **M3x18mm** screws.





Route the USB, Power, speaker and 300mm cables through the hole on the Bottom Head.

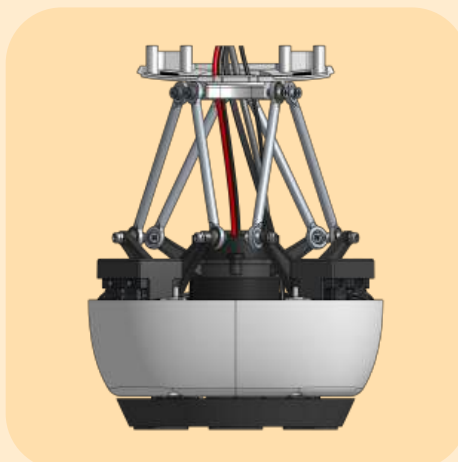
💡 You can bundle them together with a twist tie.



26/51 Body



x1
Head PCB



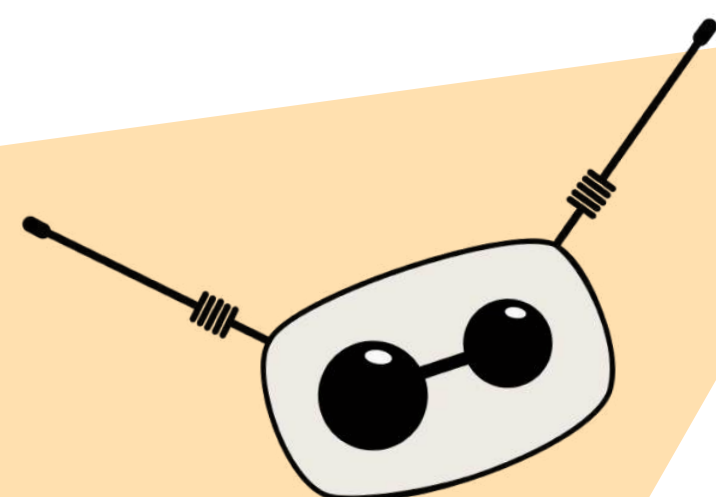
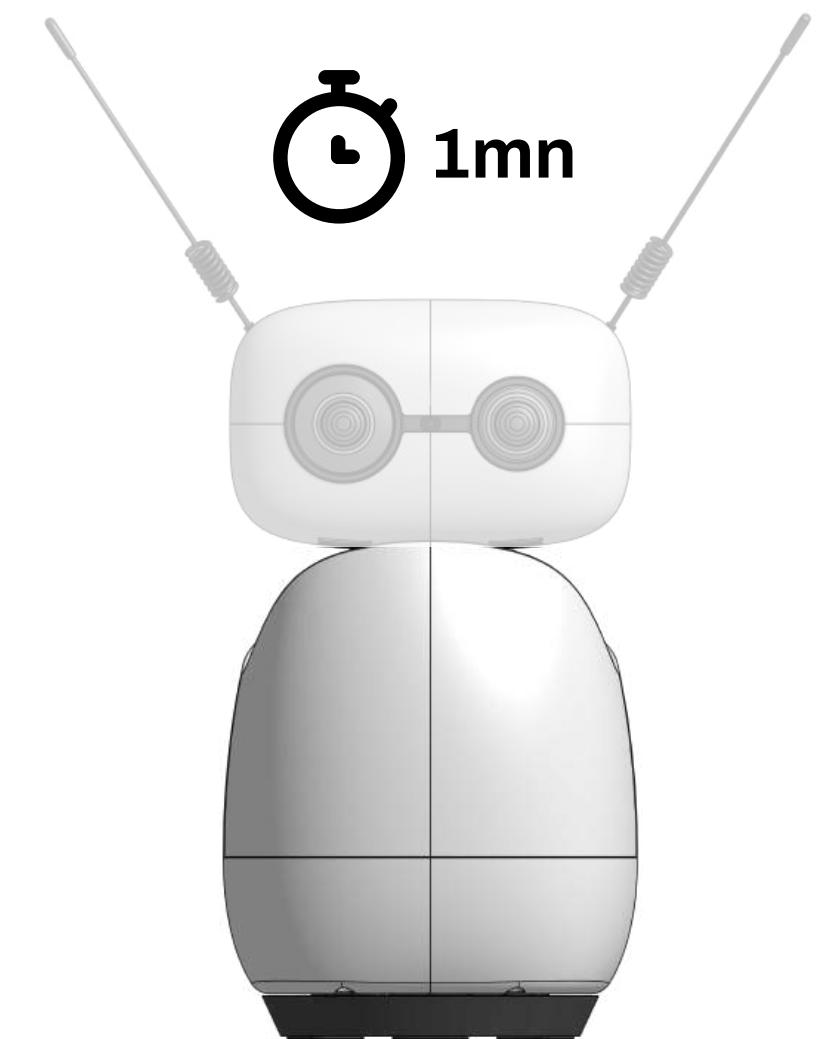
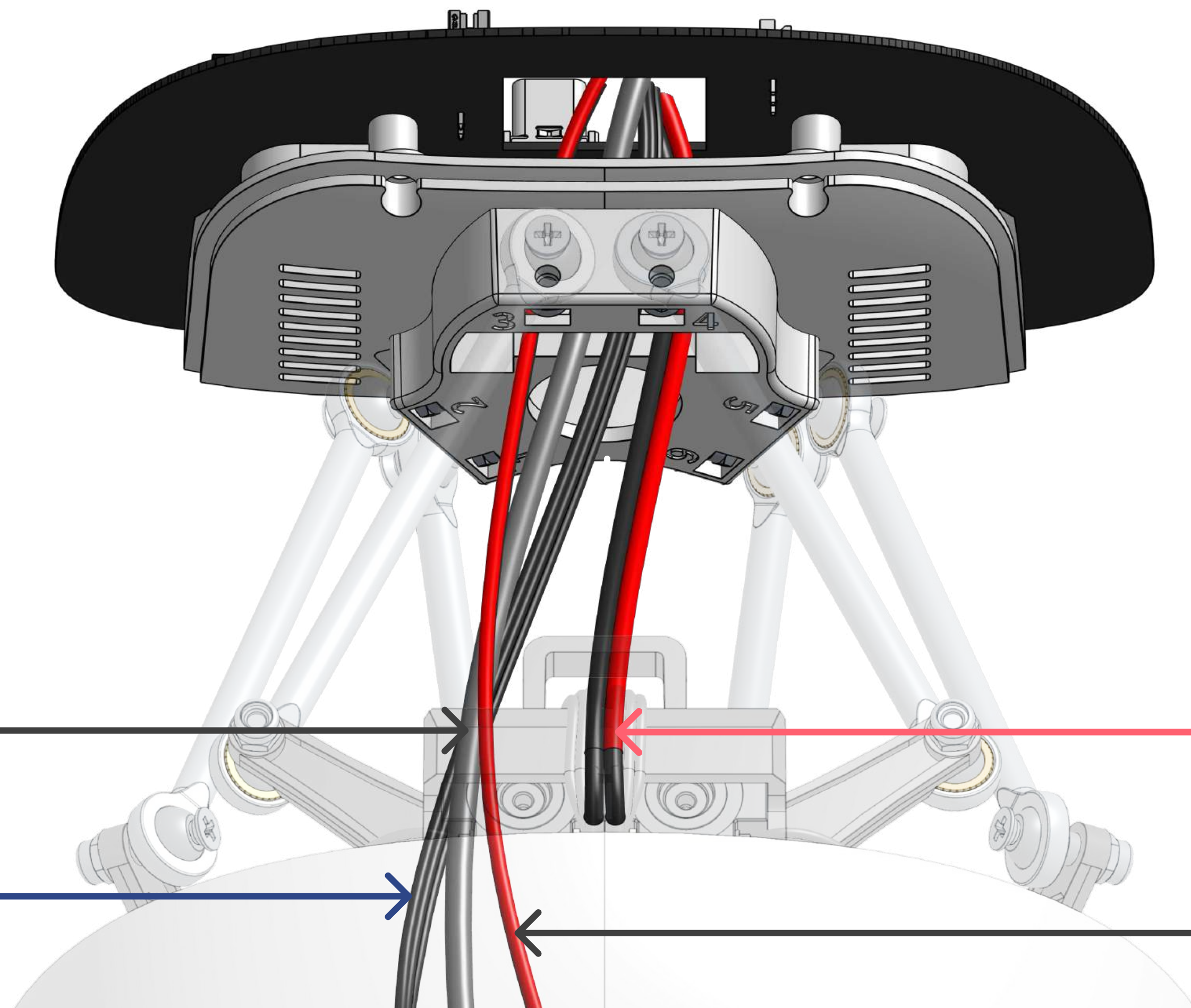
x1
Bottom
Assembly

USB Extension
Cable

300mm Cable

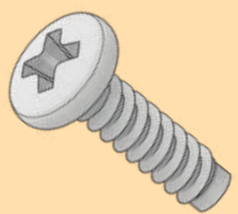
Power Cable

Speaker

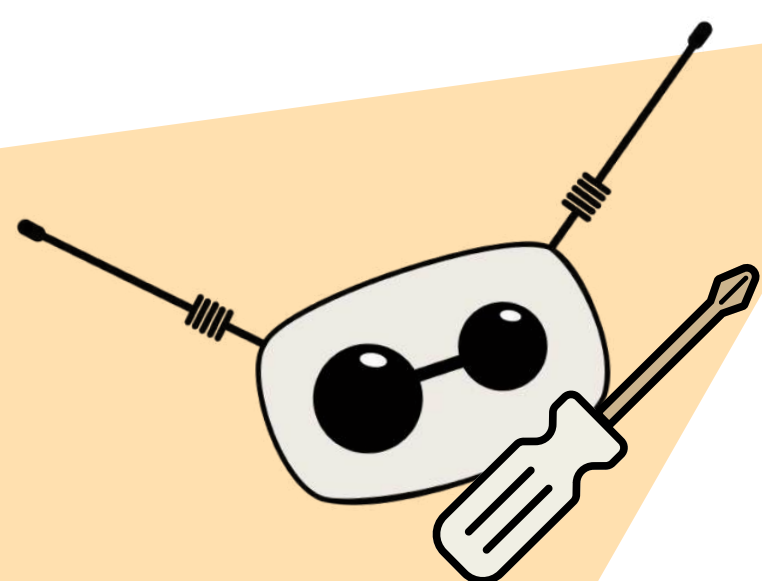
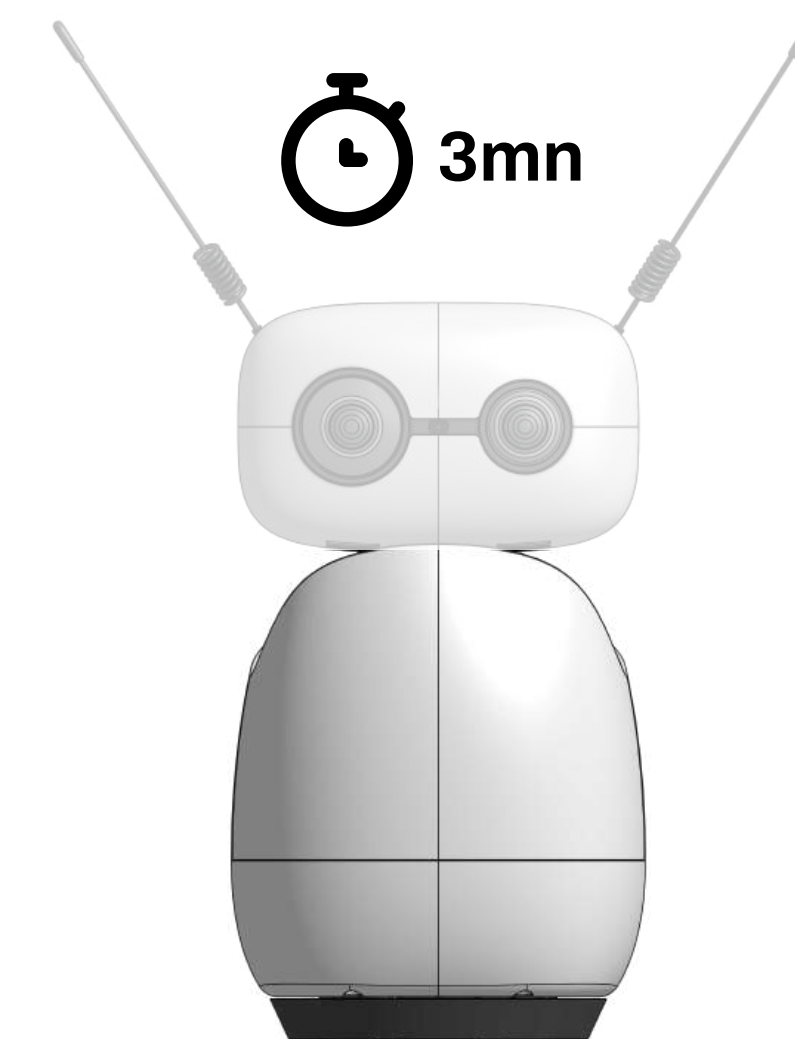
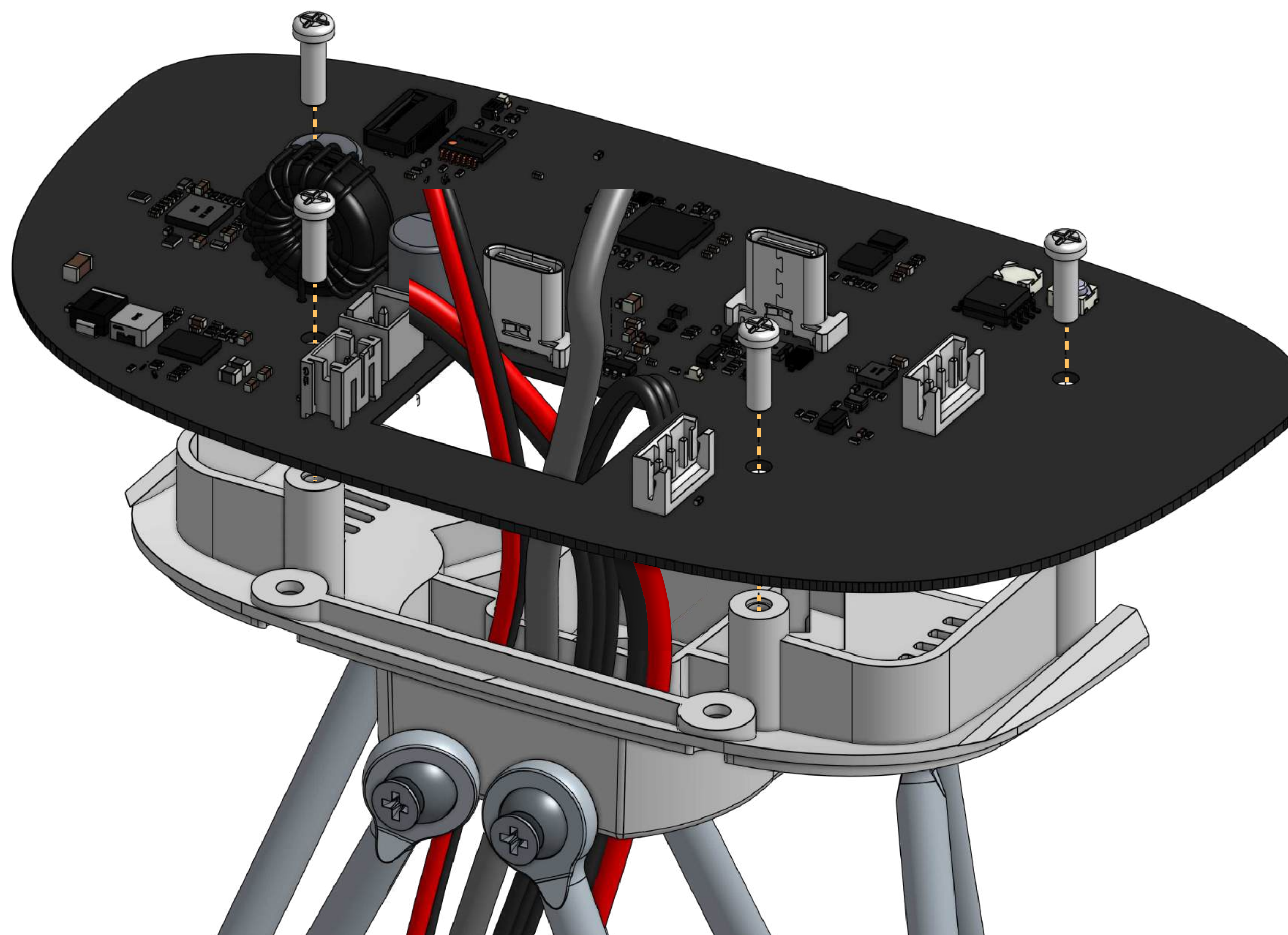


Route all the cables through the hole on the Head PCB.

27/51 Body



x4
2.5x8mm
Screw



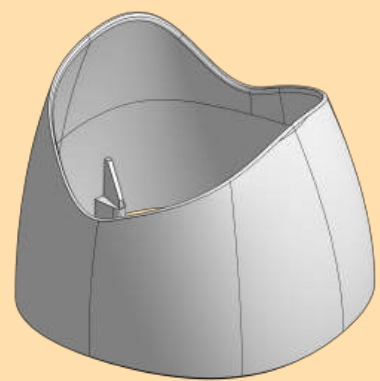
Screw the Head PCB onto the Bottom Head using four **2.5x8mm** screws.



28/51 Body



x1
Body
Assembly

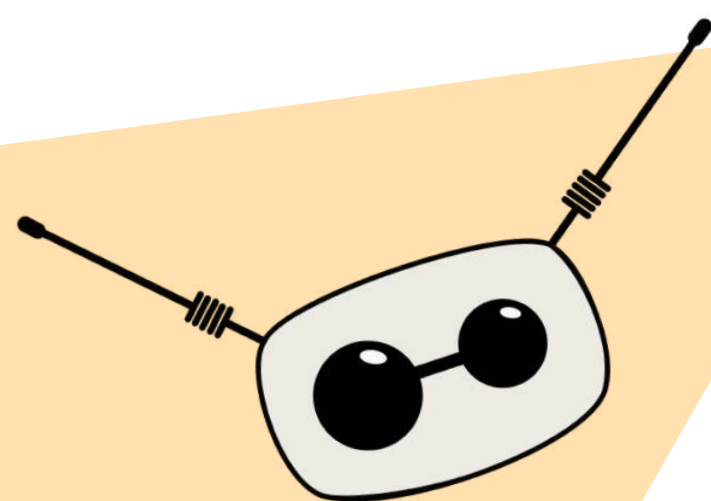
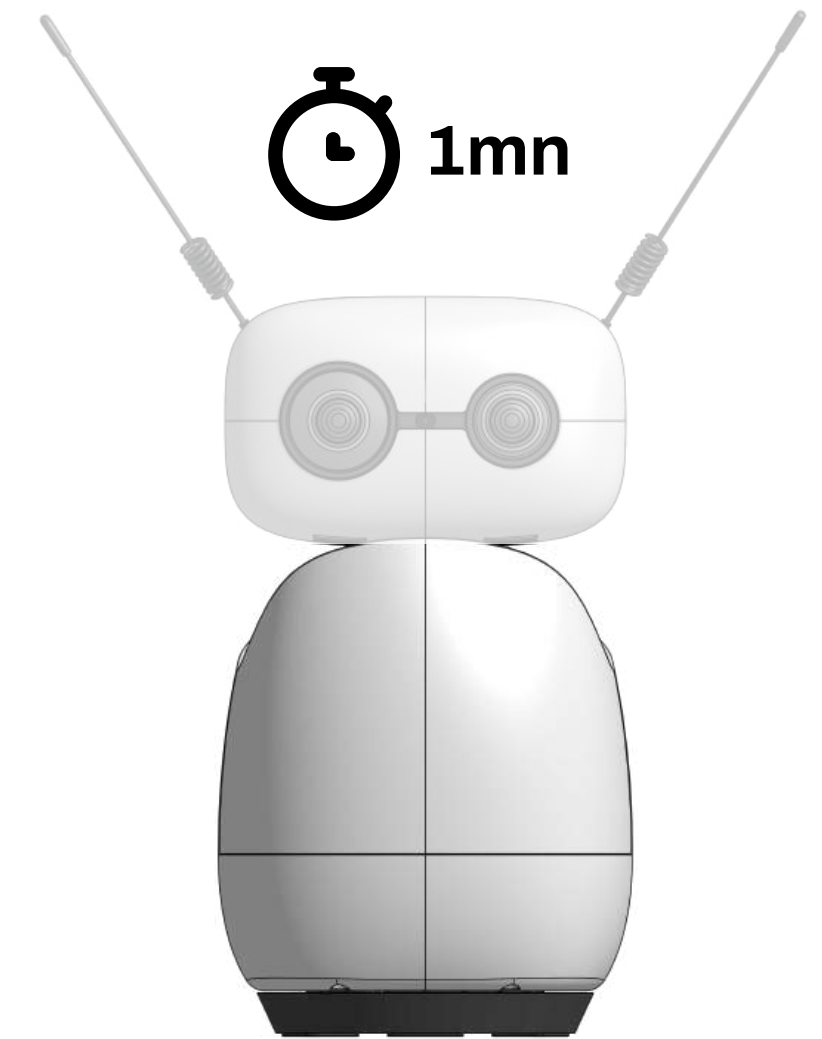


x1
Top Shell

Front



Back



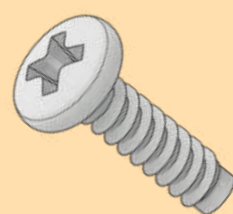
Position the Top Shell onto the Body Down Assembly. The back of the shell should be aligned to the Motors 3 and 4.



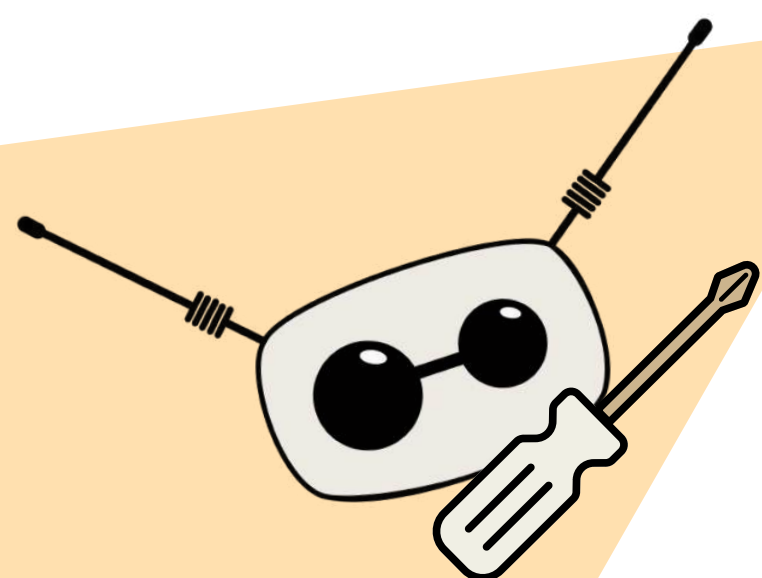
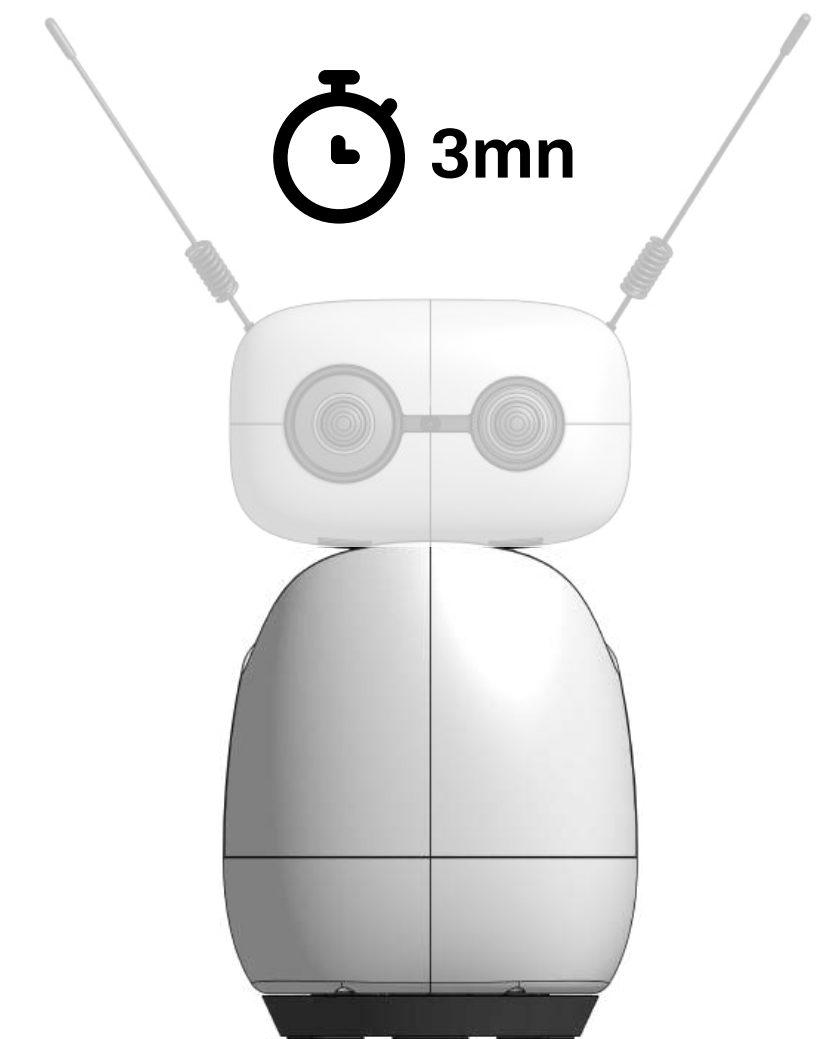
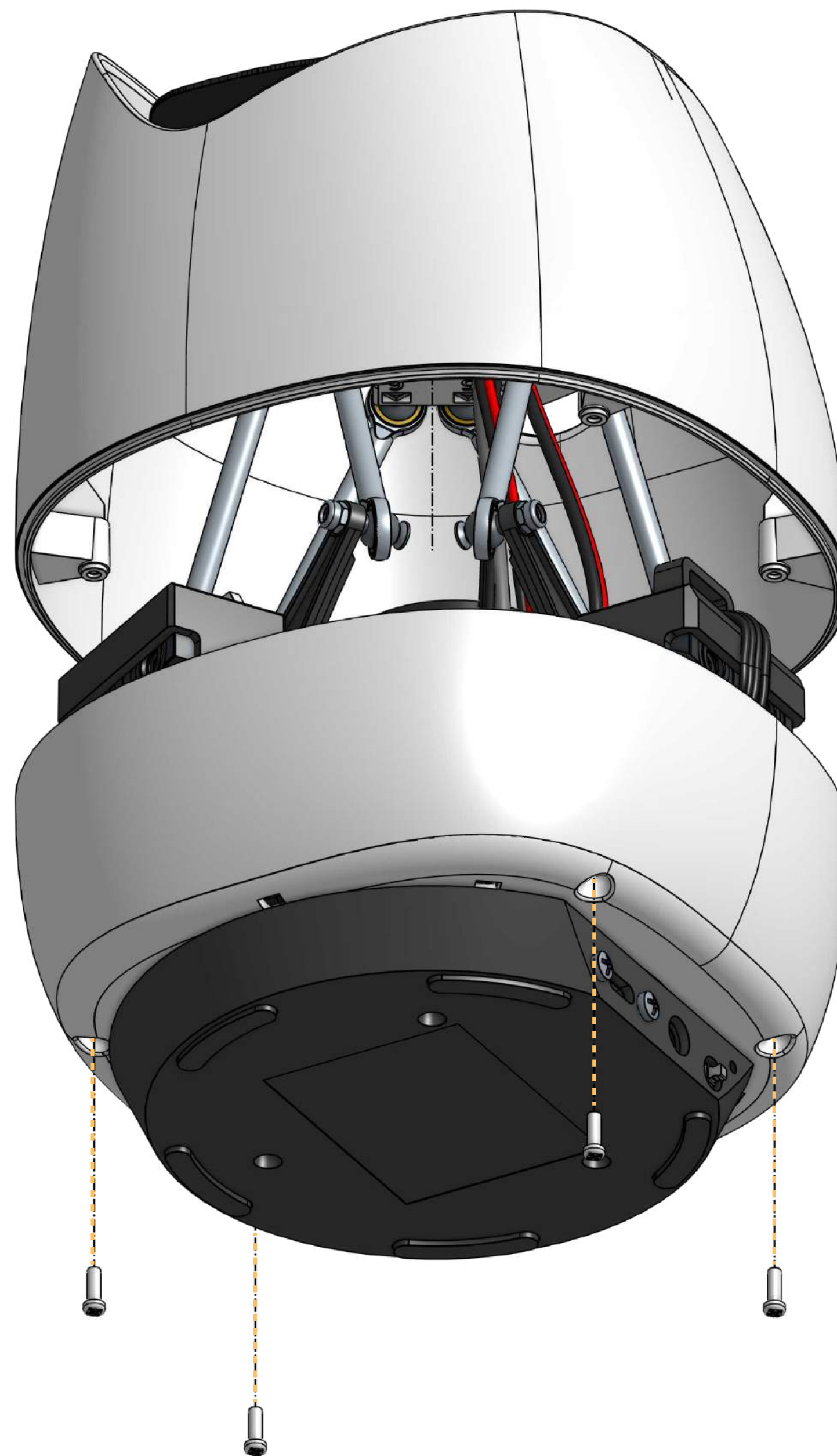
29/51 Body



x1
Body
Assembly



x4
2.5x8mm
Screw



Flip the Body and fasten it from below using **2.5x8mm** screws.

⚠ Be careful not to pinch any cables.

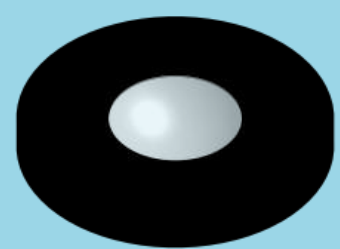


30/51

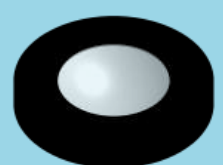
Head



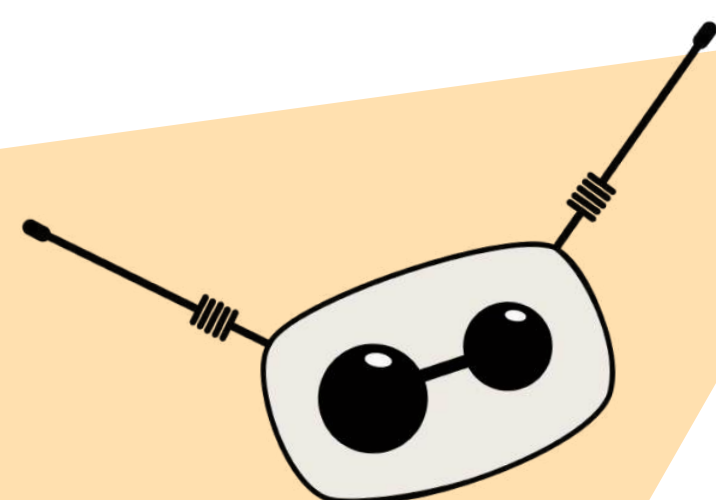
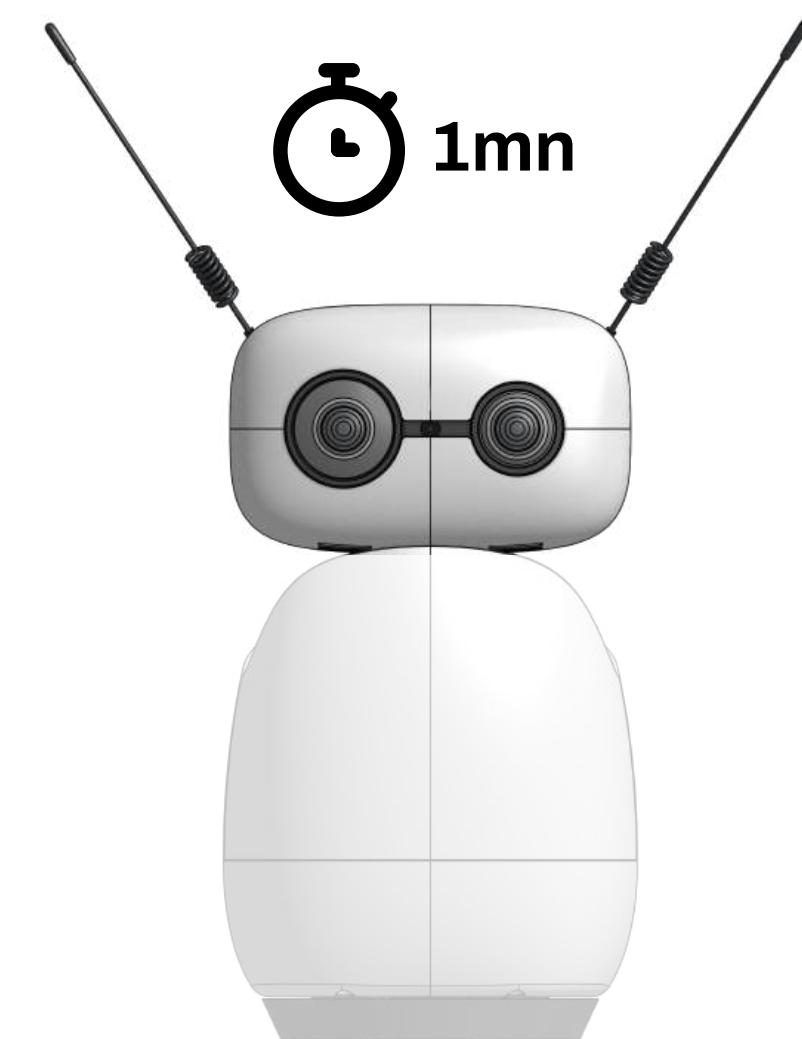
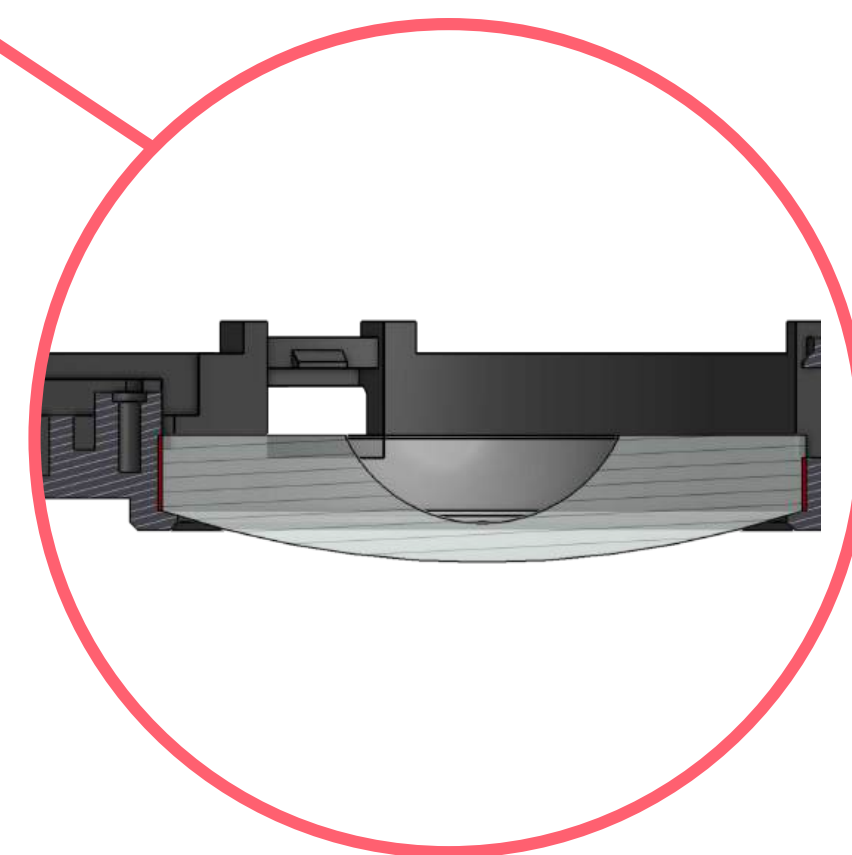
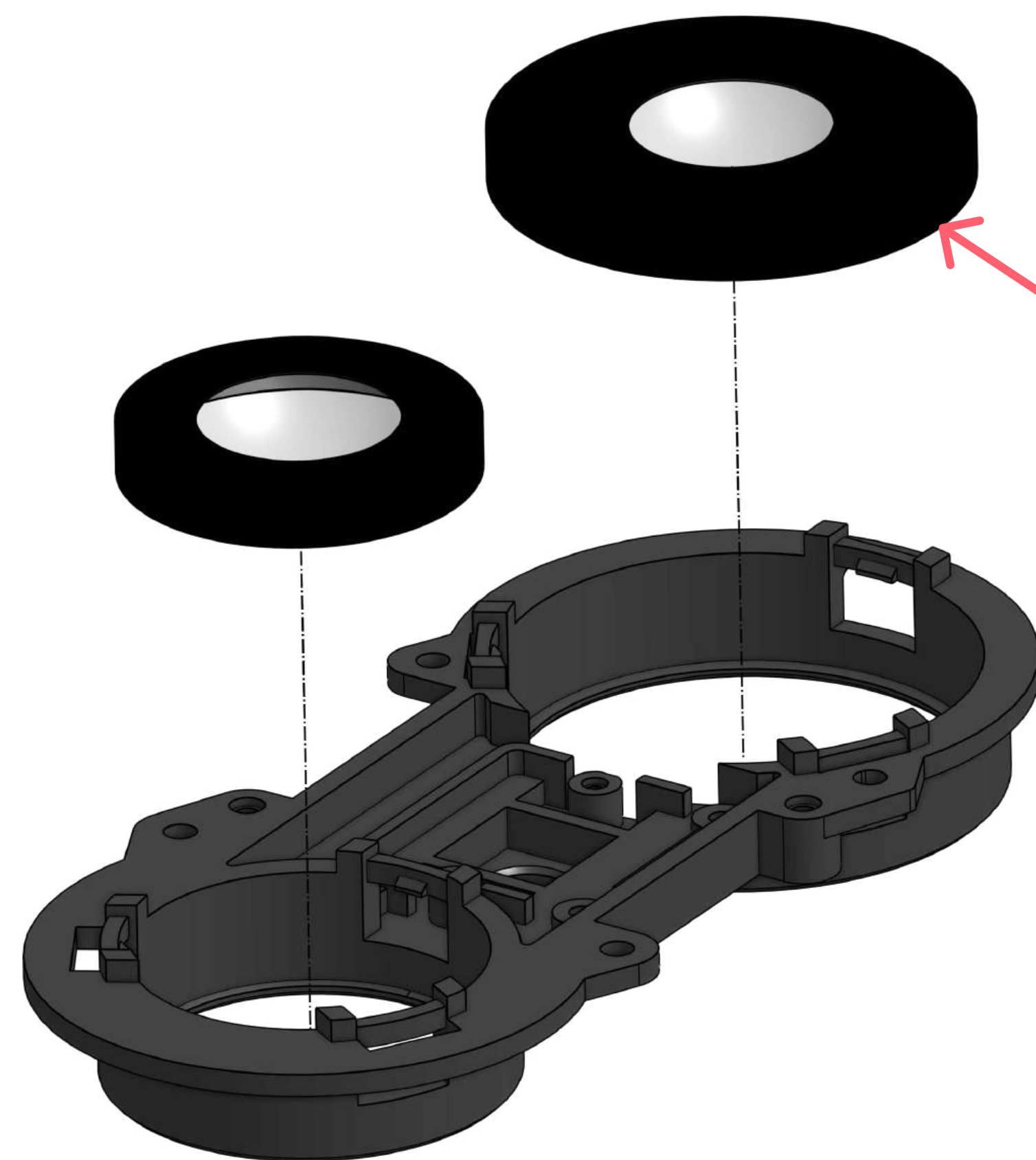
x1
Glasses
Holder



x1
Big Lens



x1
Small Lens



Place the lenses in the Glasses Holder with the convex side facing down.

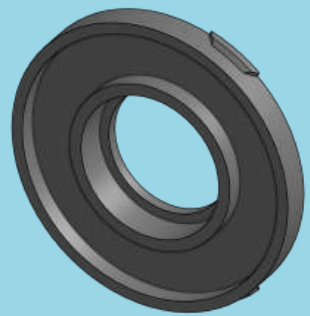


31/51

Head



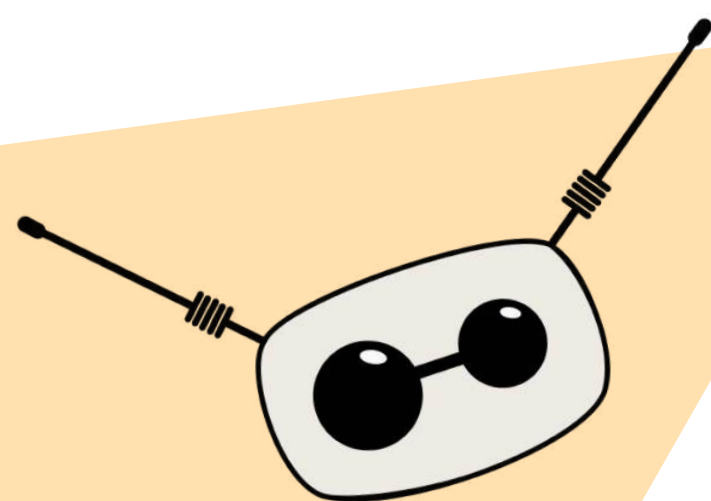
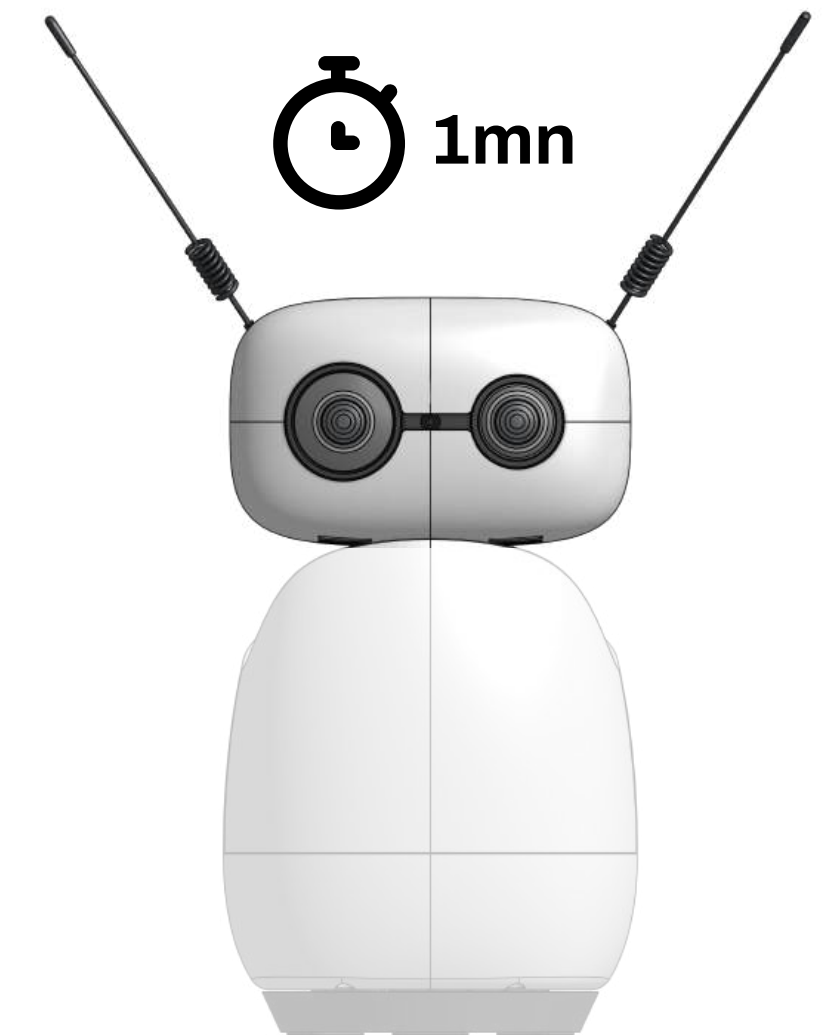
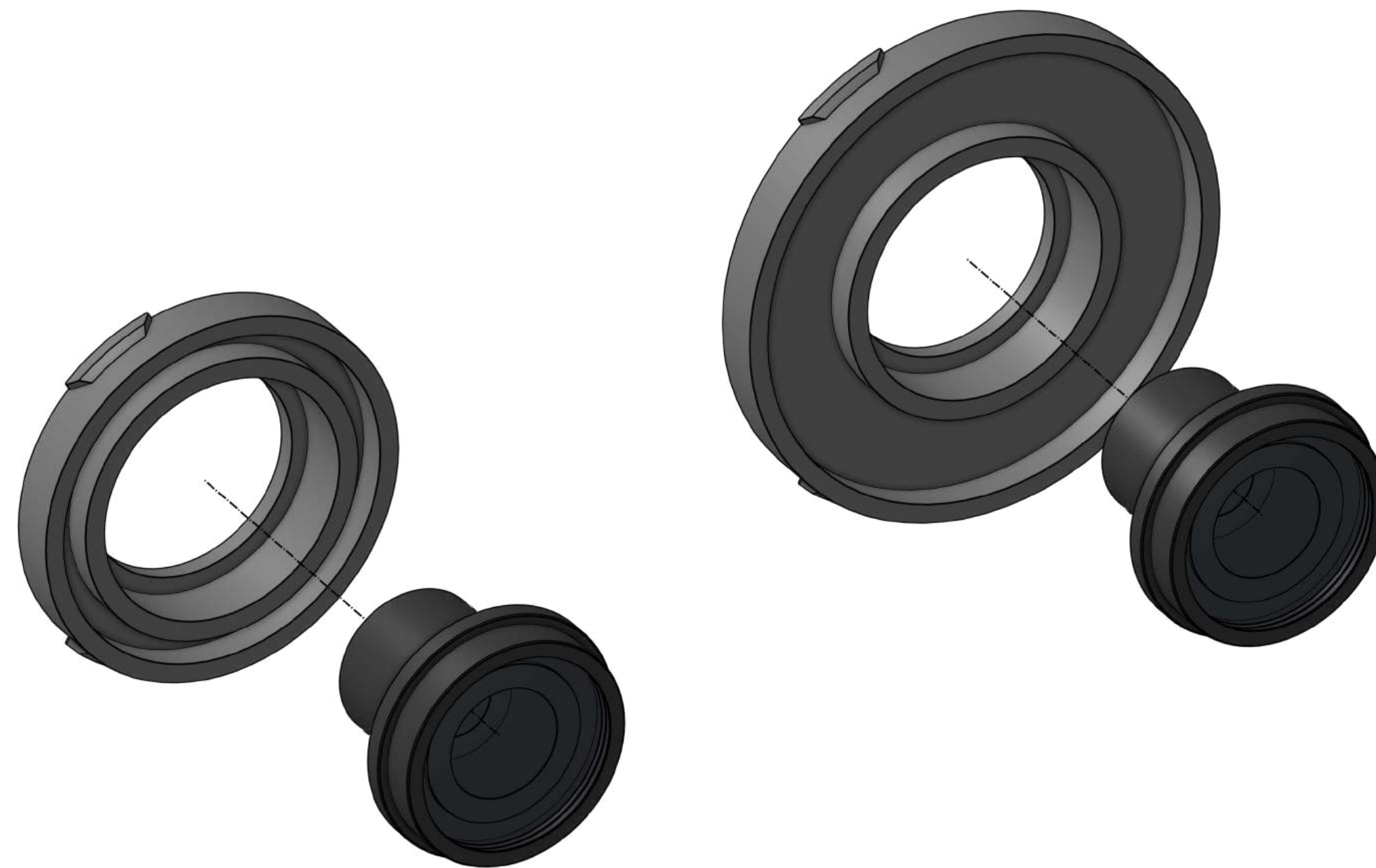
x1
Small Lens
Cap



x1
Big Lens Cap



x2
Fisheye Lens



Insert the lens from the hollow side, then snap the assembly together.

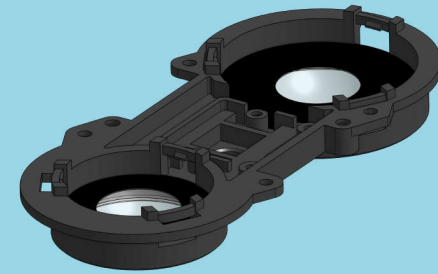


32/51

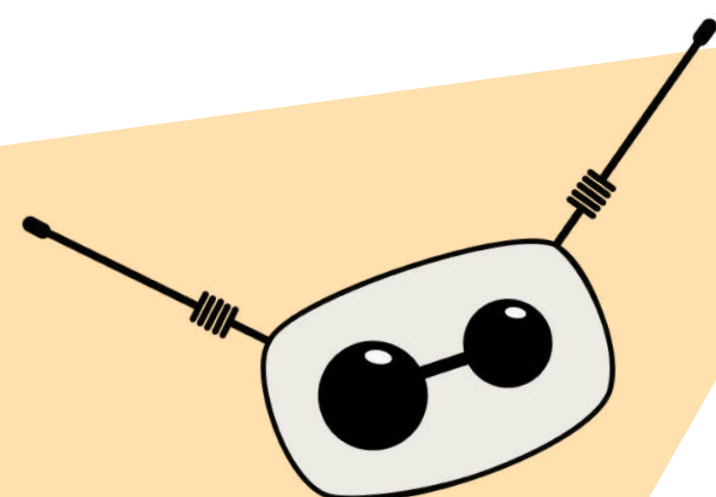
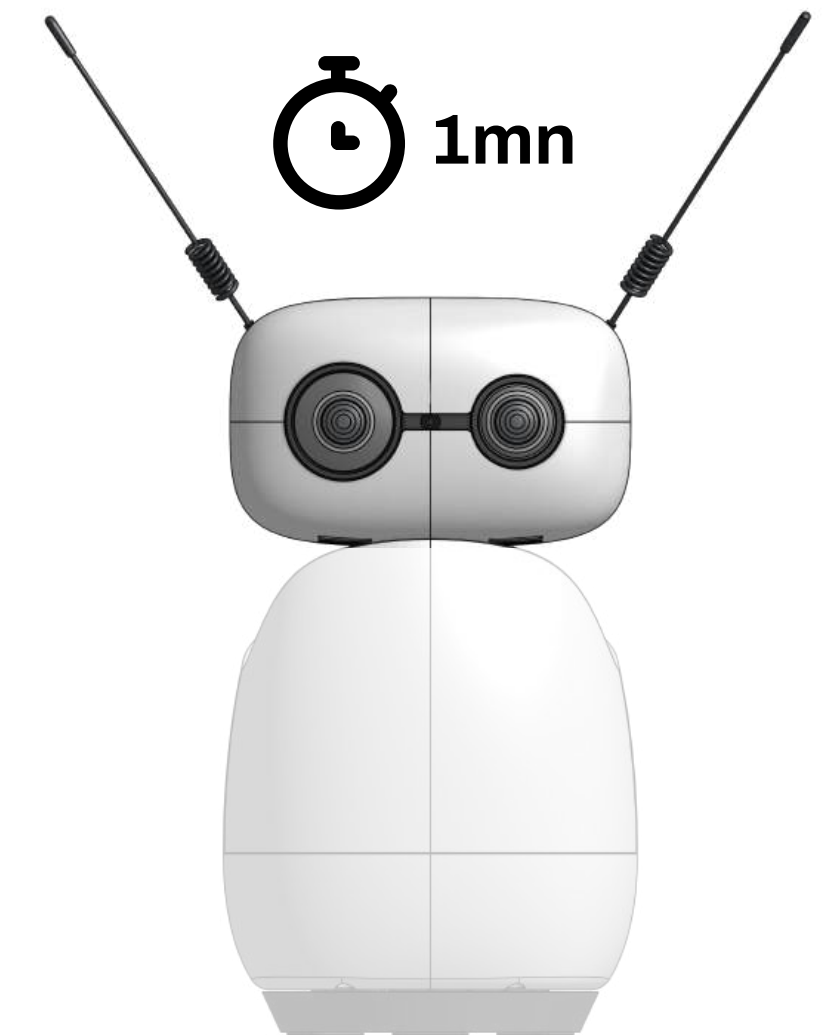
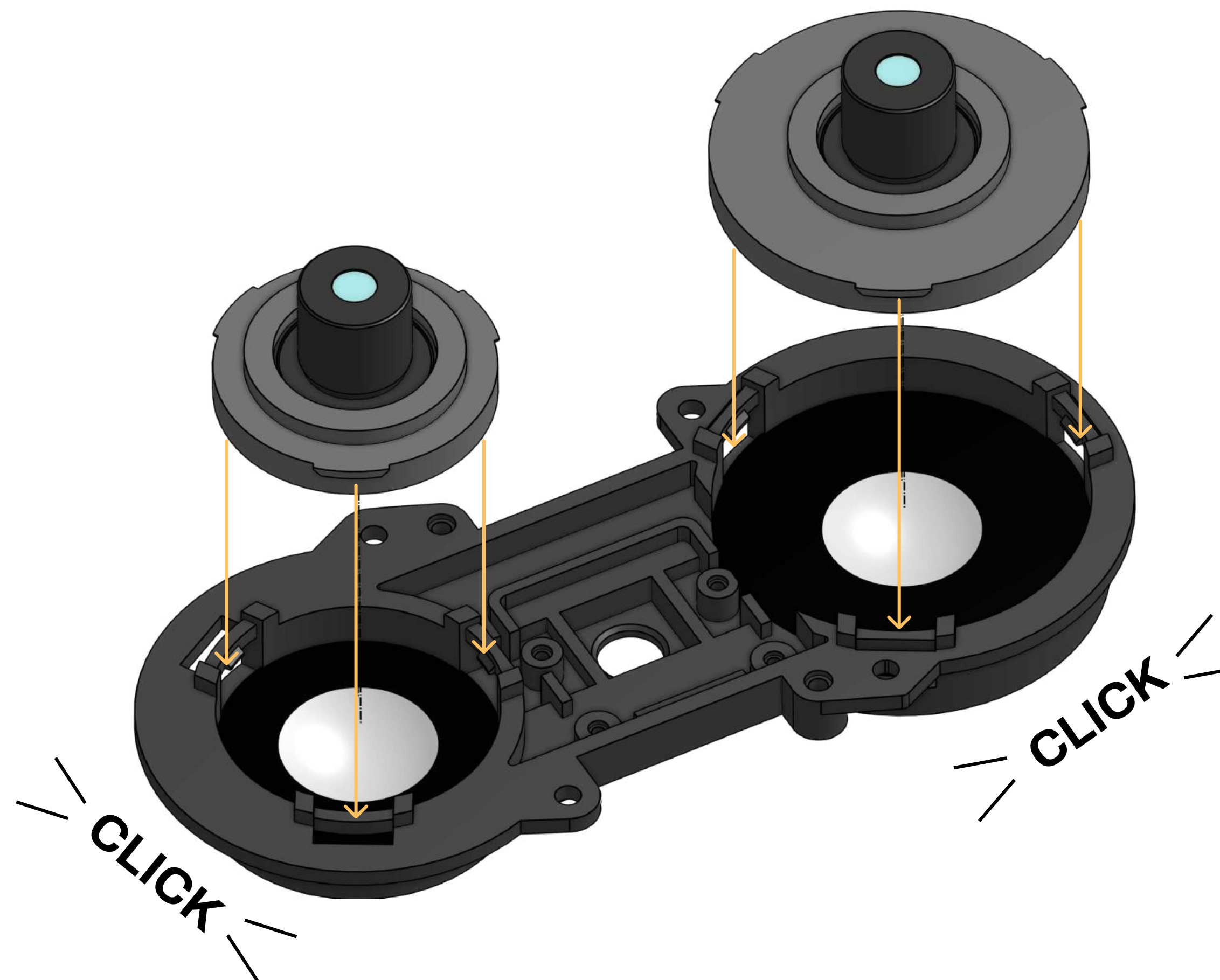
Head



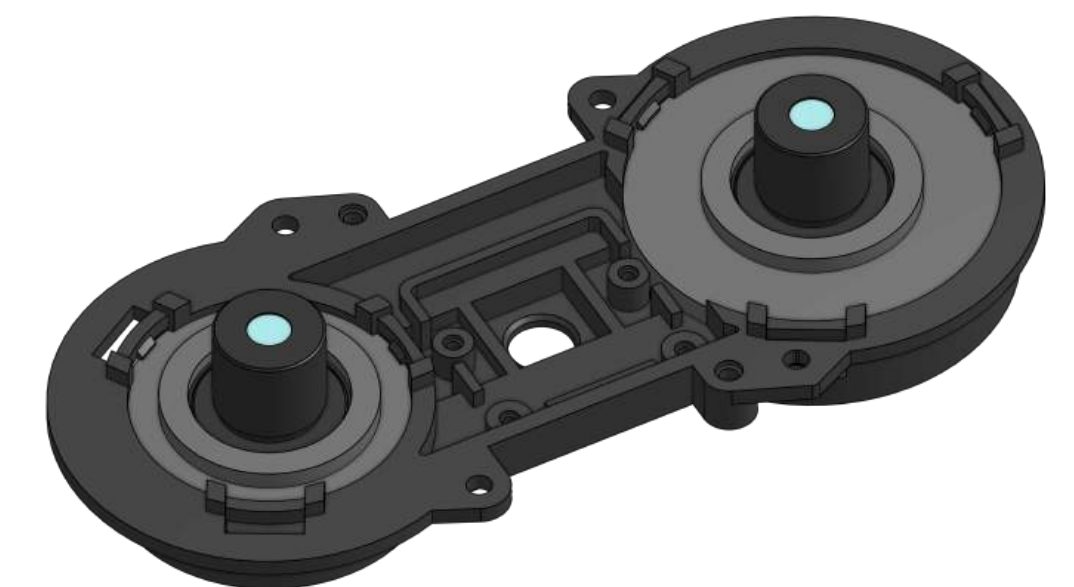
x2
Fisheye
Assembly

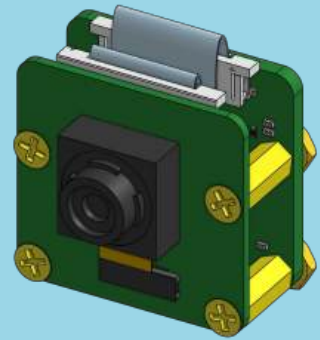


x1
Glasses
Assembly

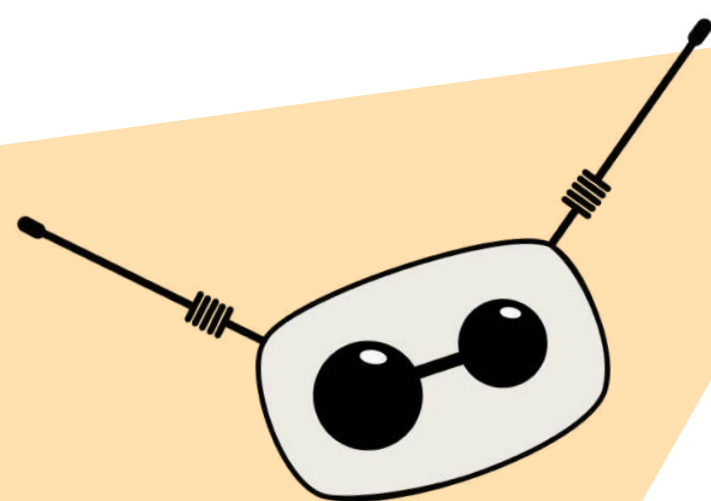
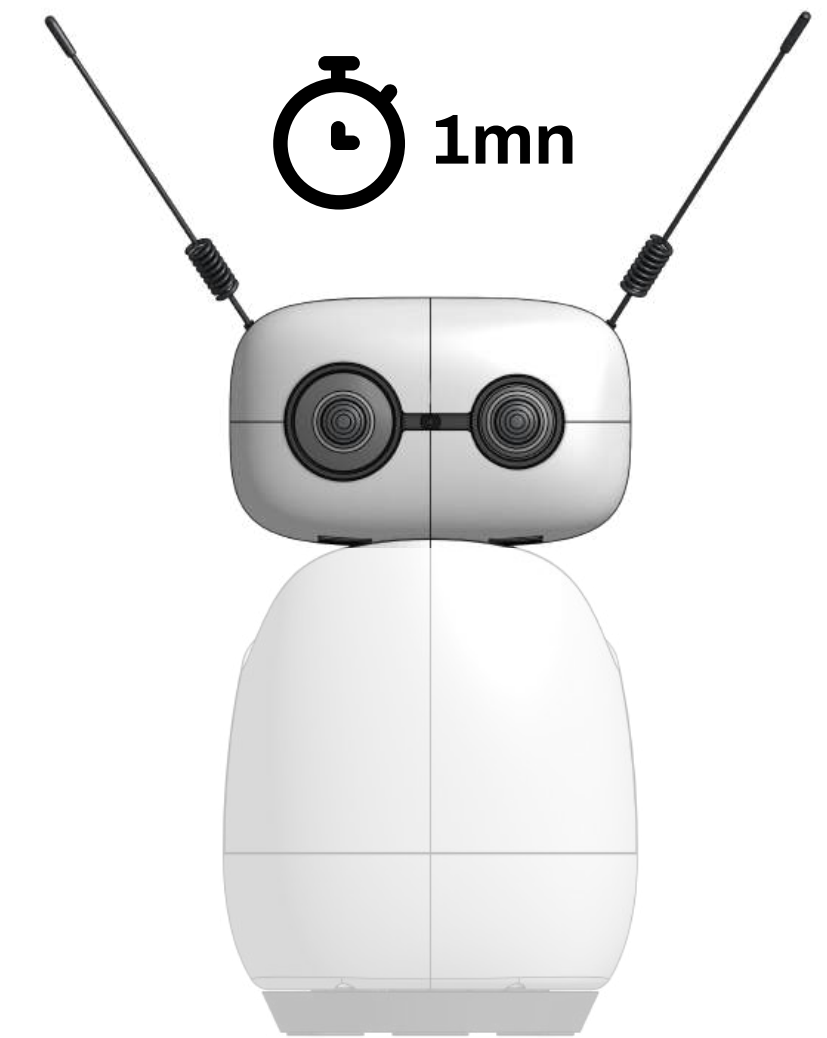
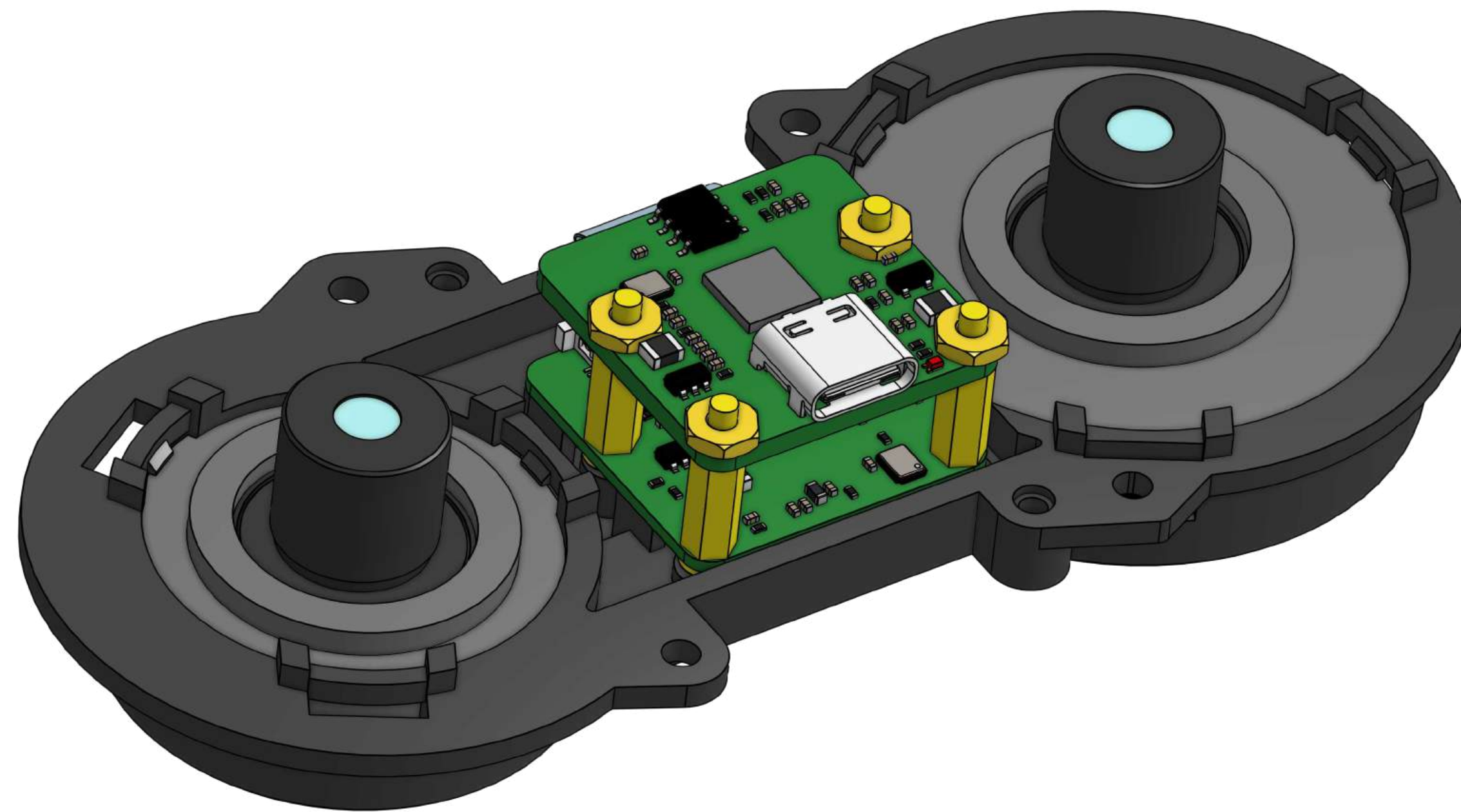


Snap the Fisheye lenses into the glasses holder until you hear a 'click'. Make sure to align the three small rectangles that secure the clips.





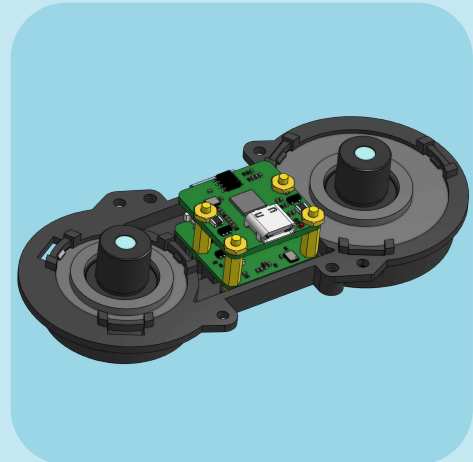
x1
Arducam
Camera



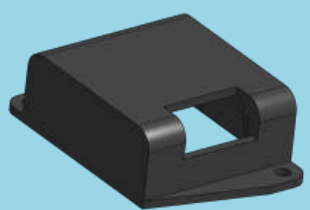
Remove the protective cap from the camera lens, and position the Arducam camera onto the glasses.

⚠ It's not secured yet, so it may move.

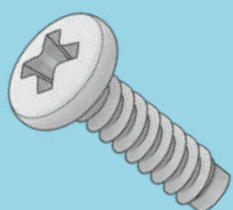
34/51 Head



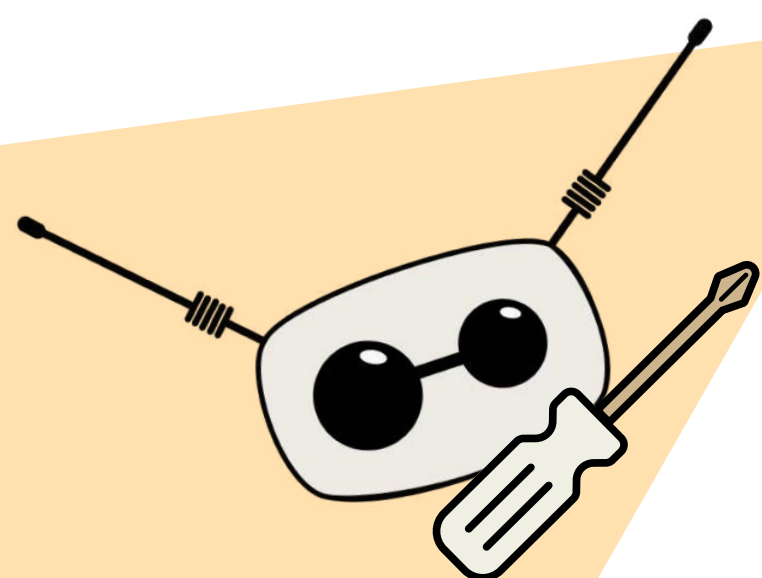
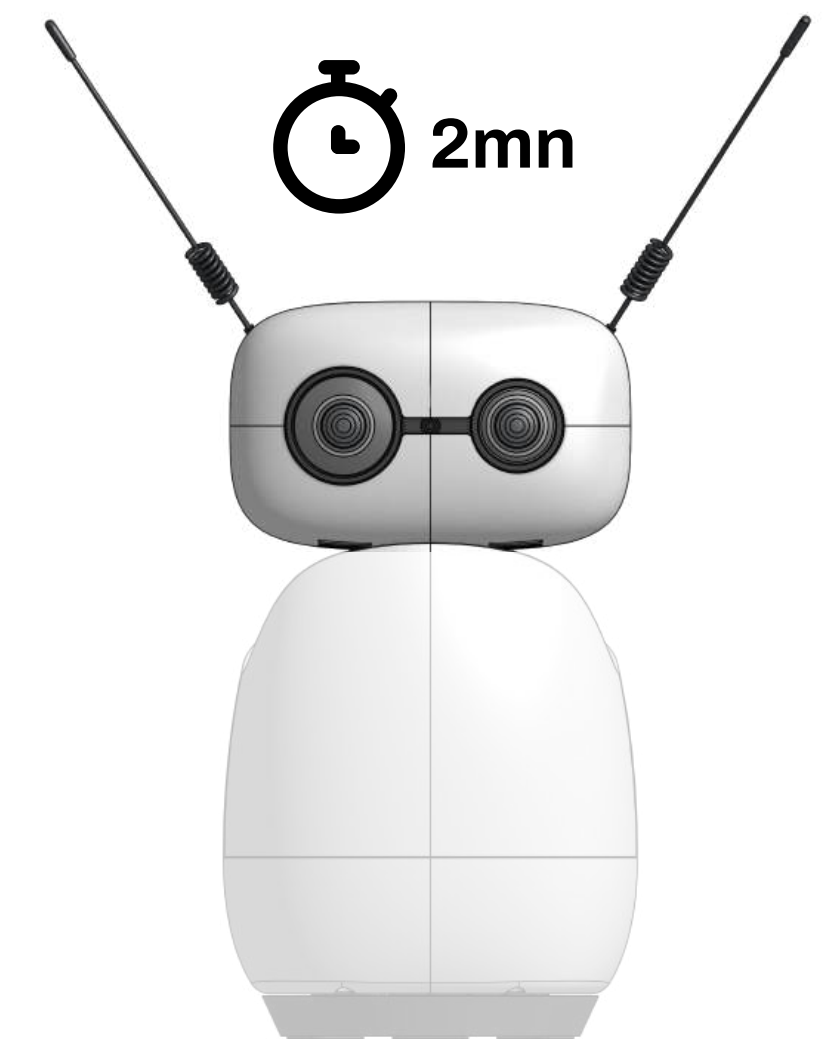
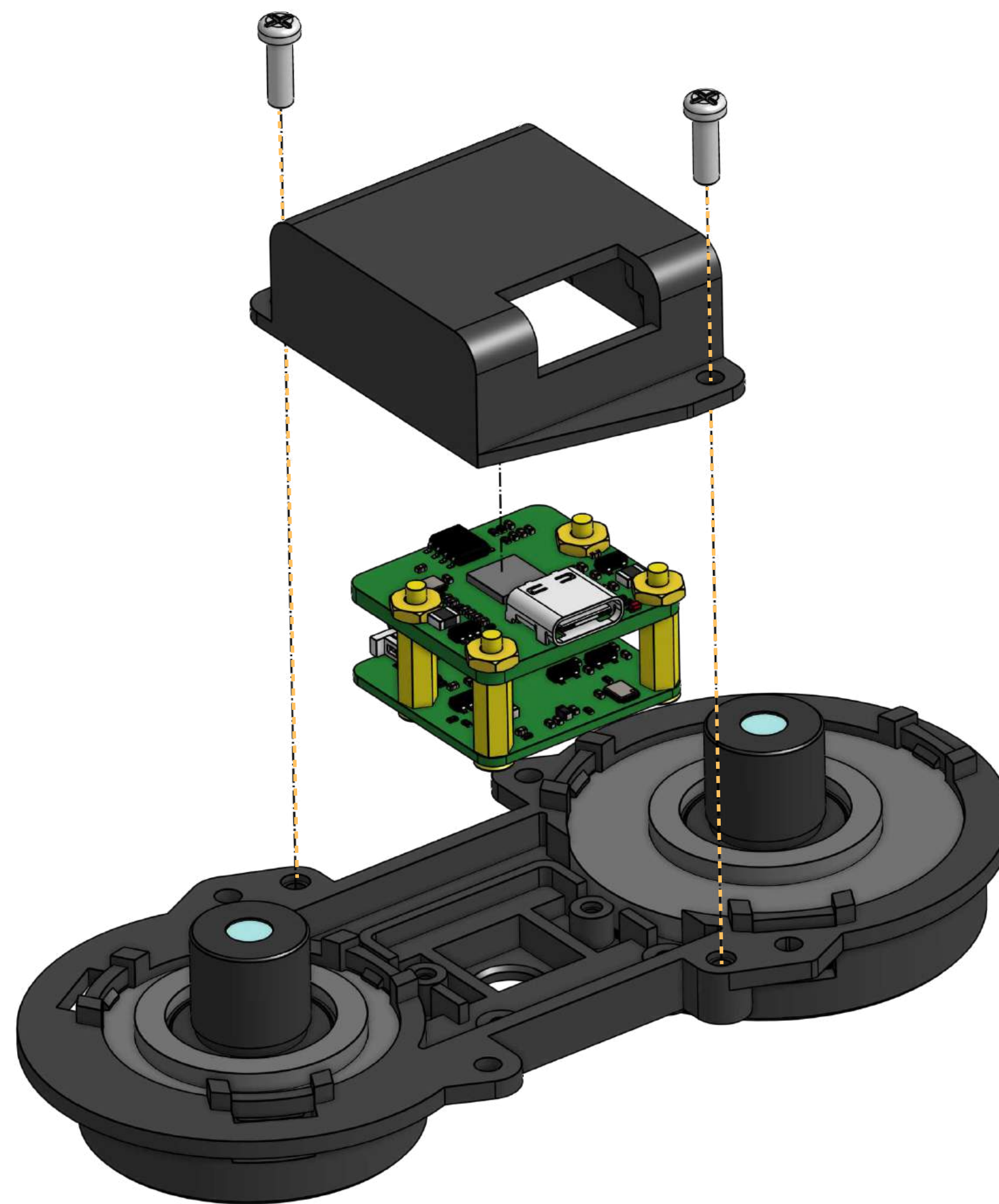
x1
Glasses
Assembly



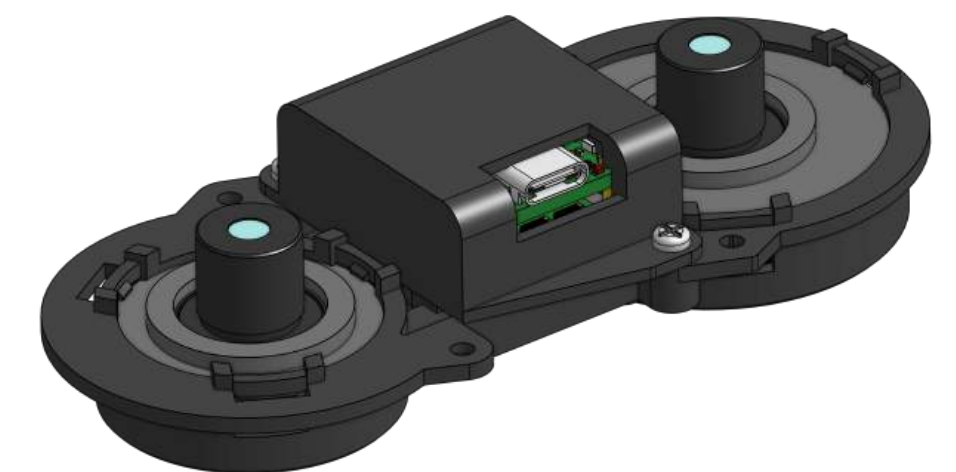
x1
Arducam
Case



x2
2.5x8mm
Screw

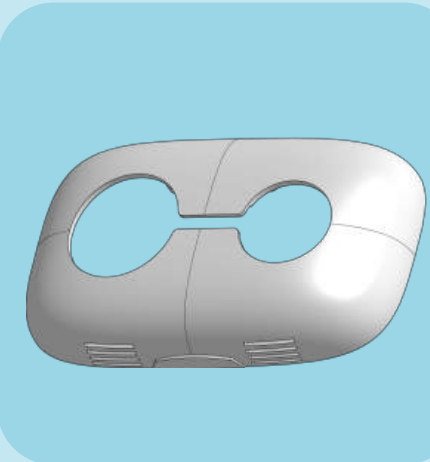


Screw the Arducam Camera onto the glasses with **2.5x8mm** screws.

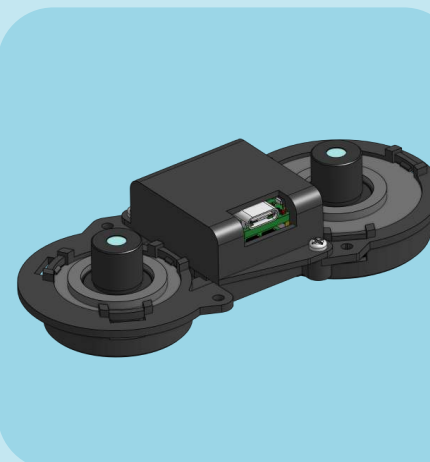


35/51

Head



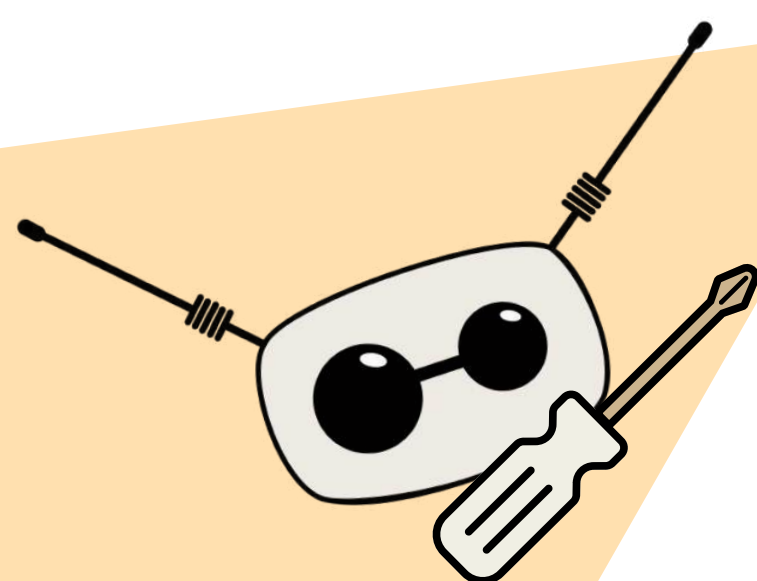
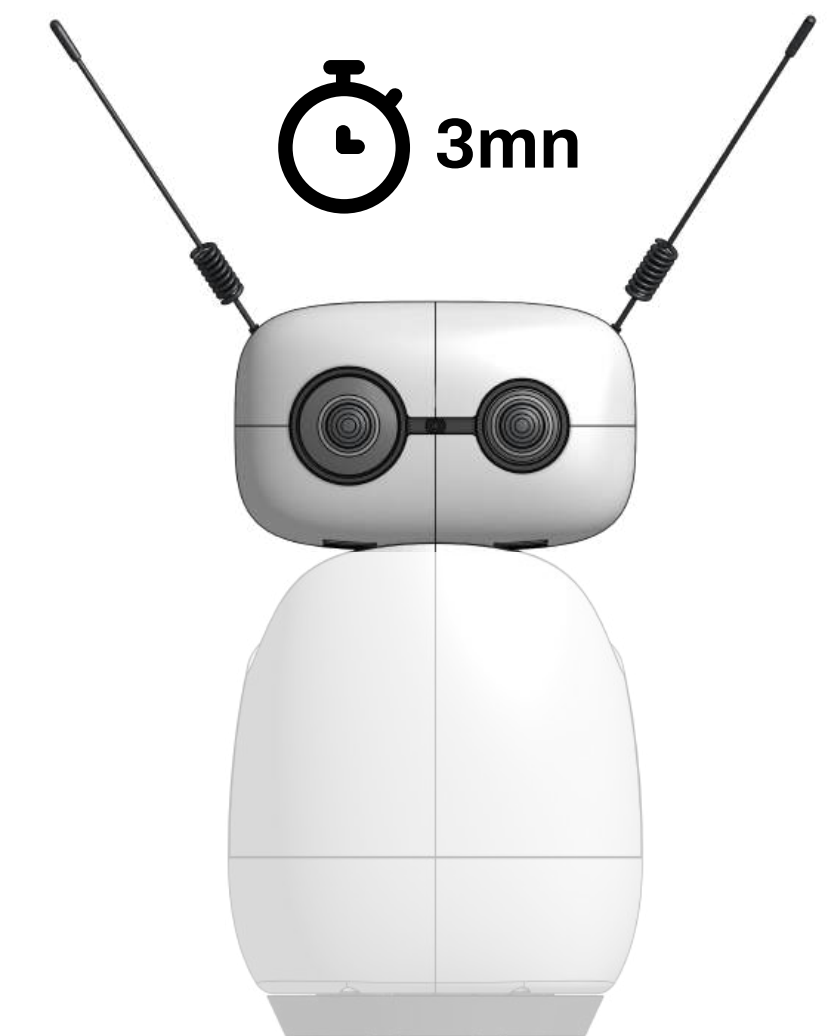
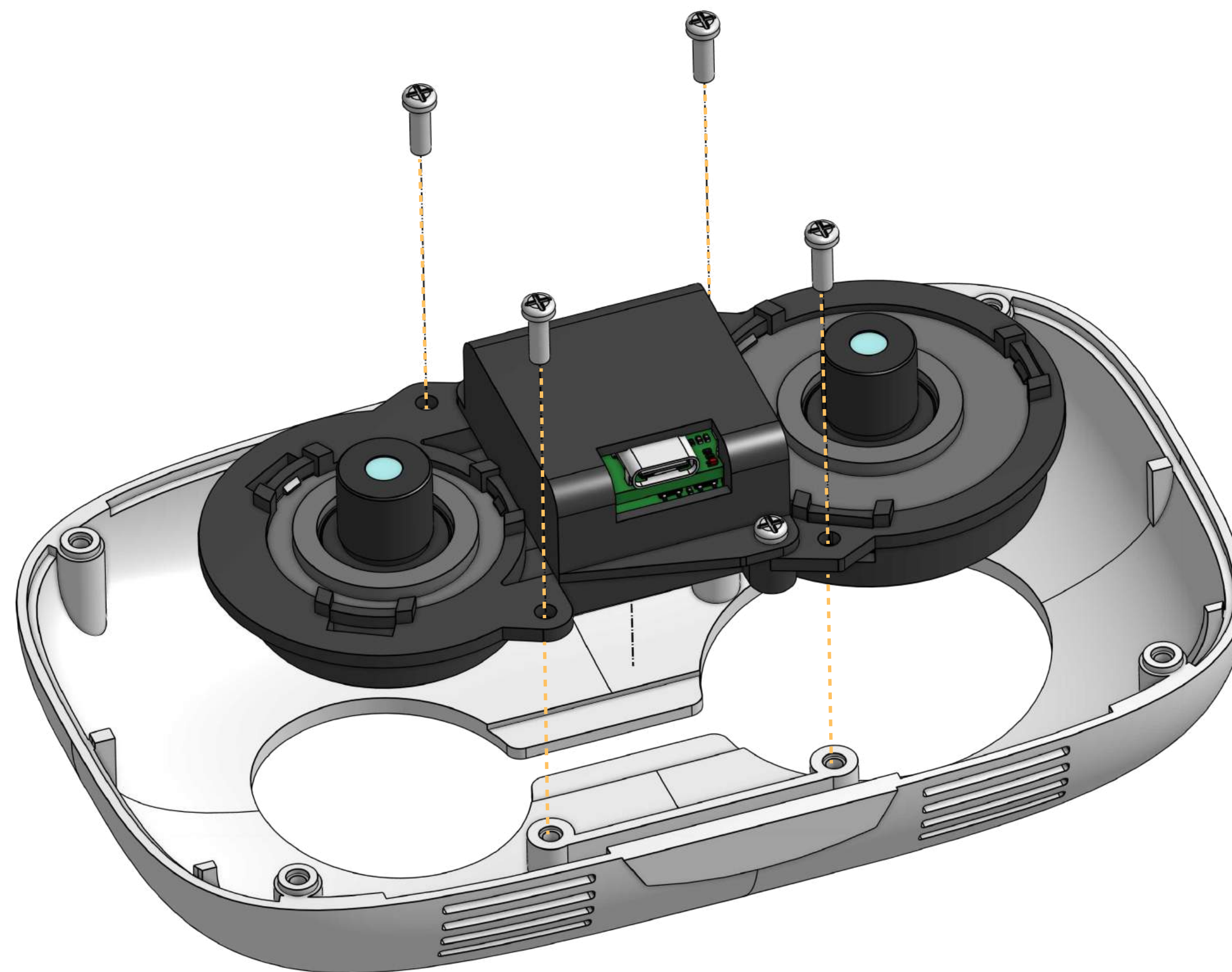
x1
Front Head
Shell



x1
Glasses
Assembly



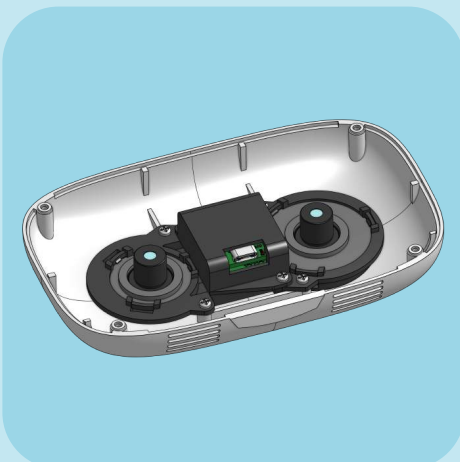
x4
2.5x8mm
Screw



Screw the Glasses Assembly onto the Front Head Shell with **2.5x8mm** screws.



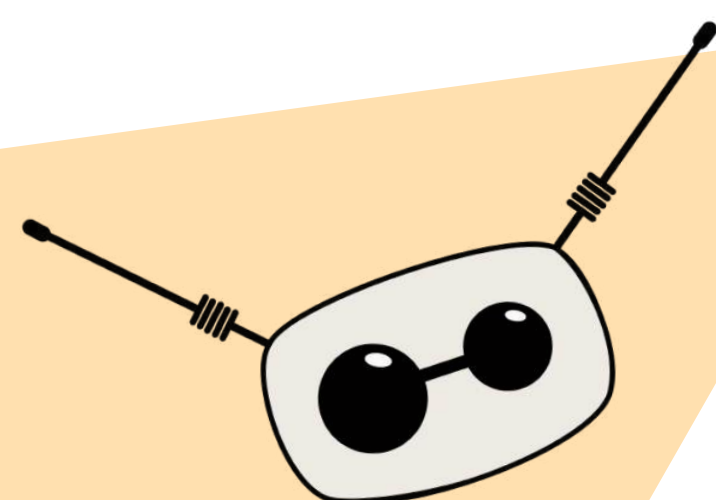
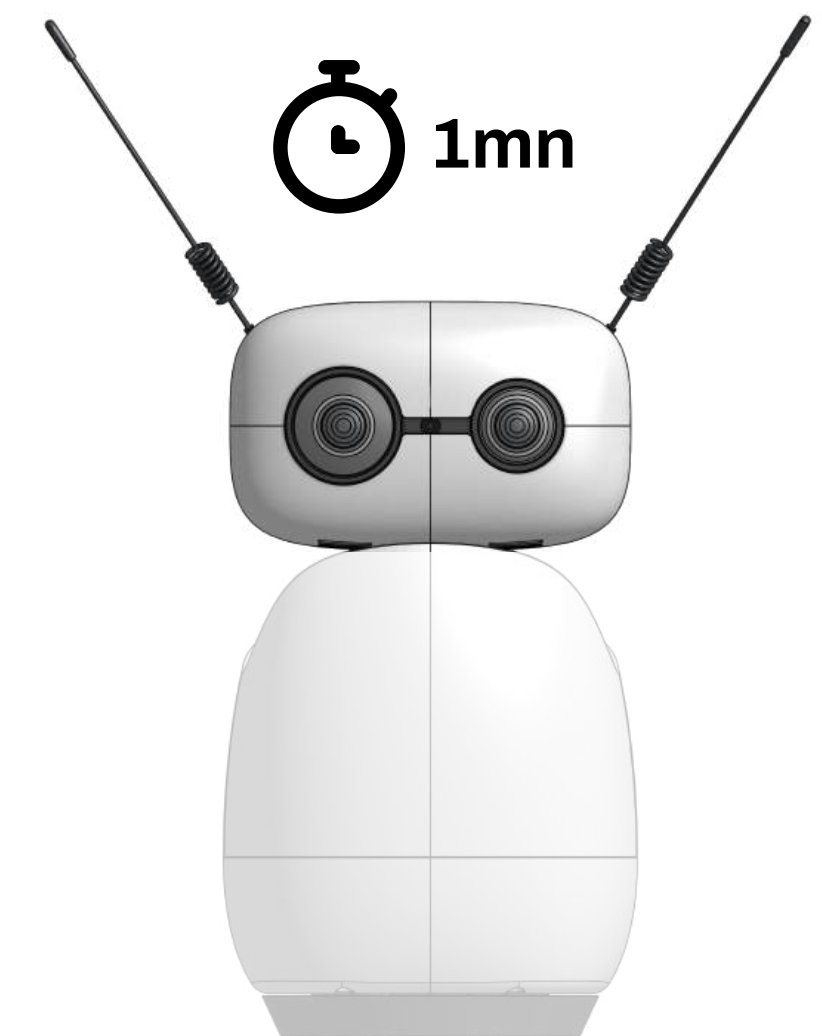
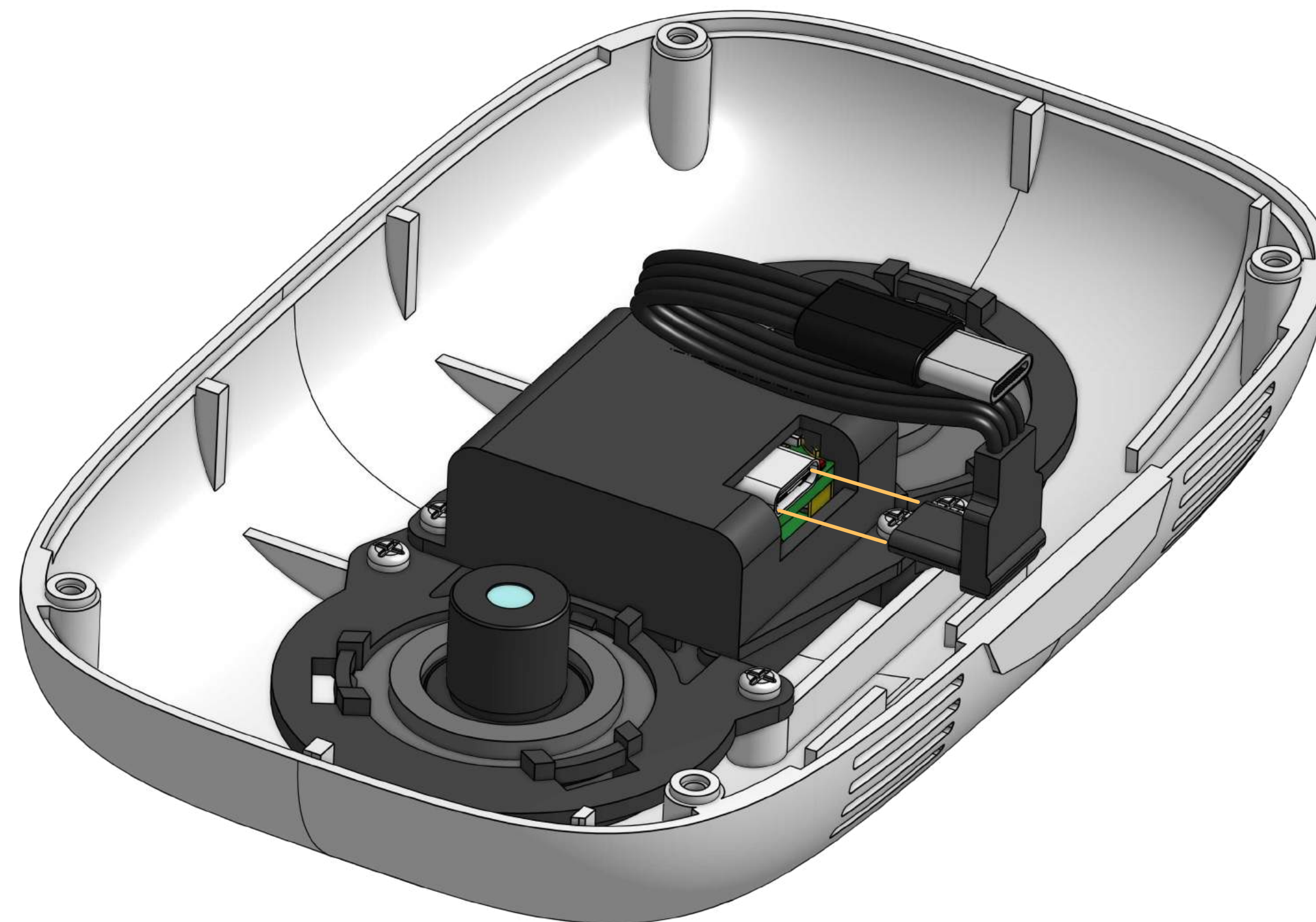
36/51 Head



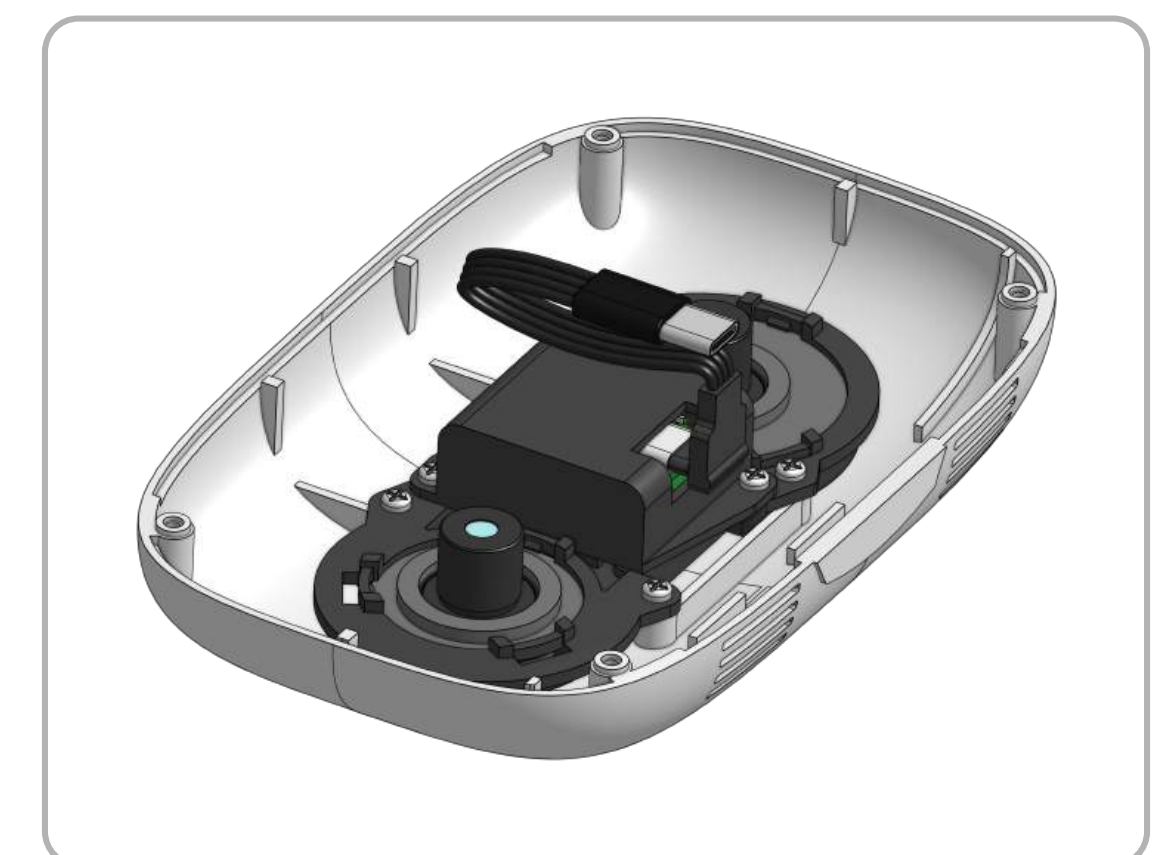
x1
Front Head
Assembly



x1
USB-C

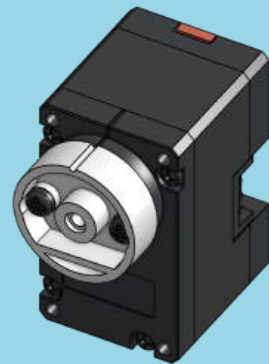


Plug the angled end of the USB-C cable into the Arducam camera.

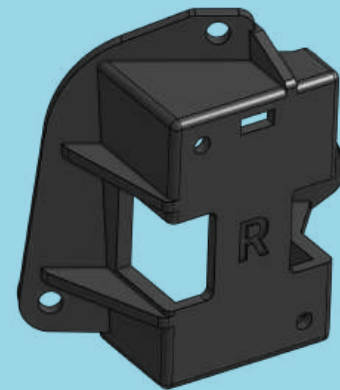


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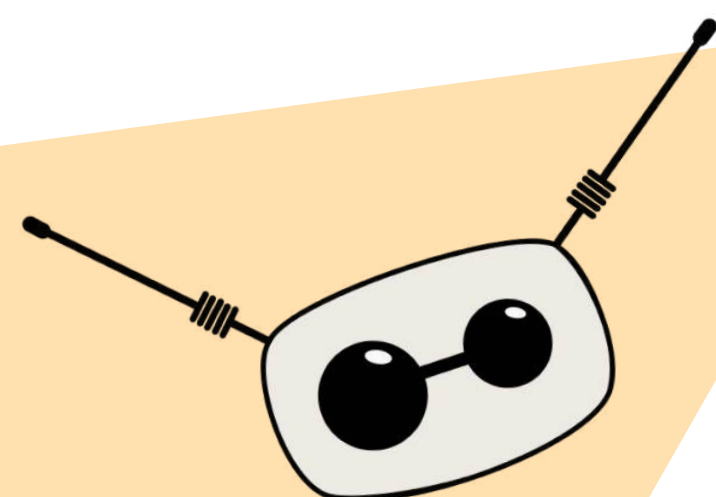
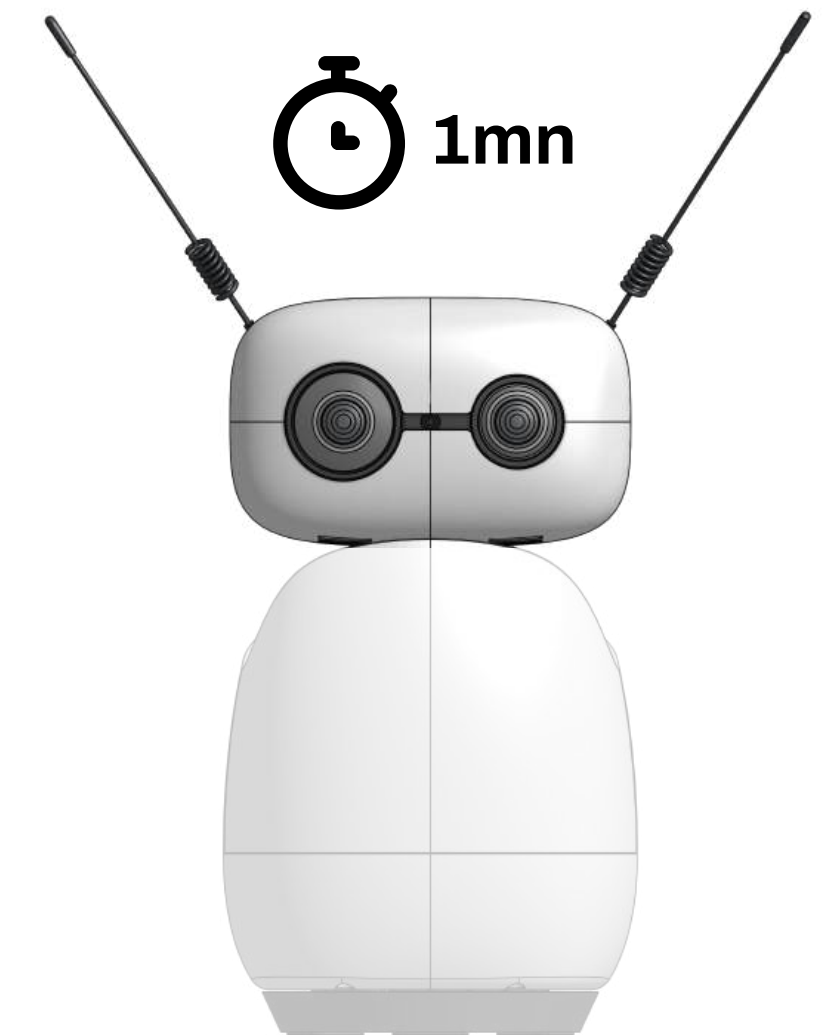
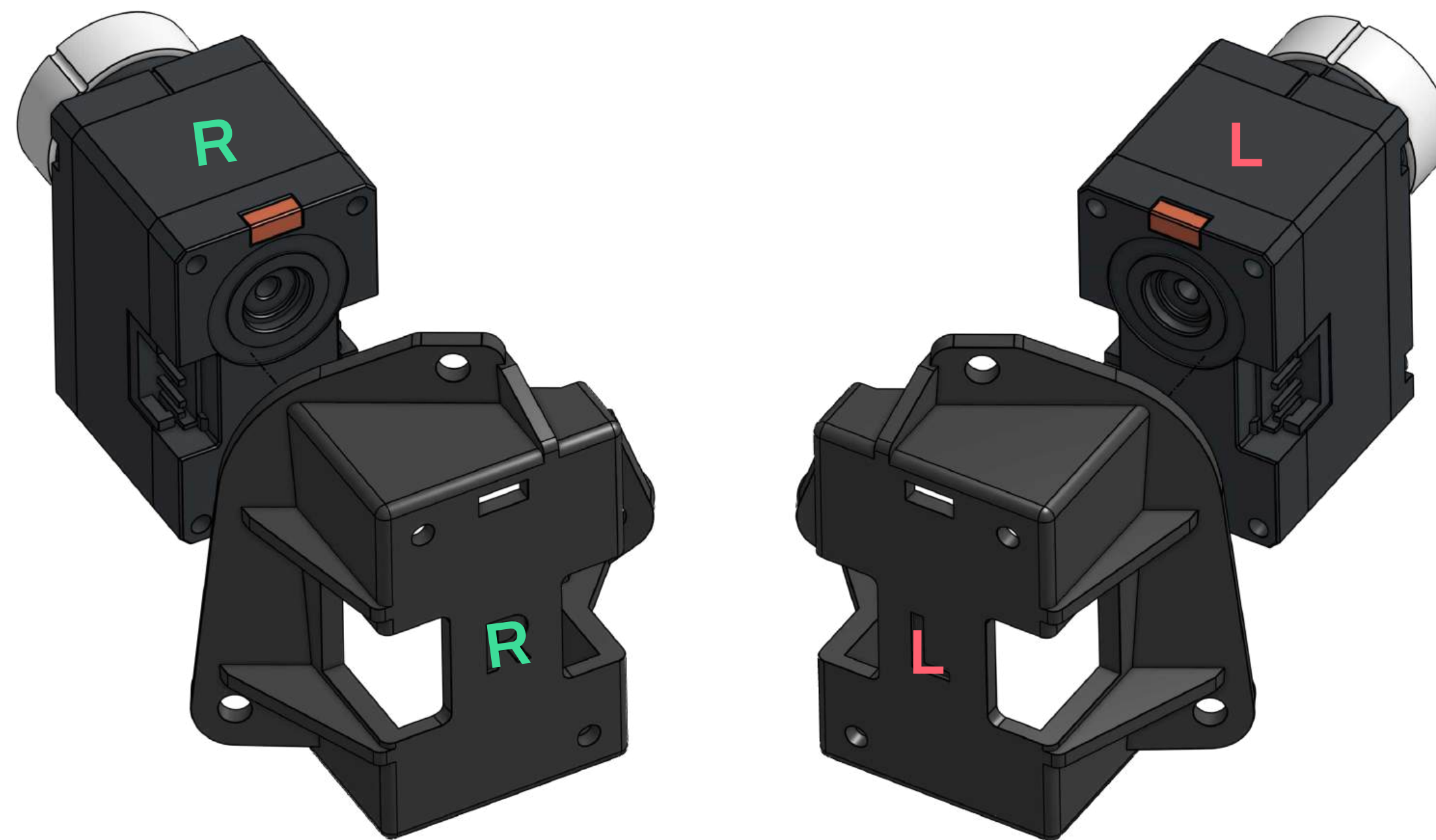
Head



x2
Antenna
Motor



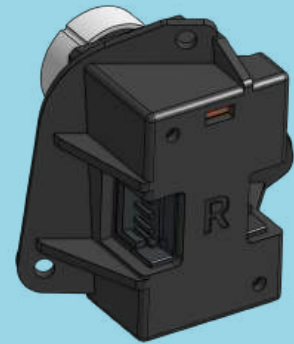
x2
Motor Case



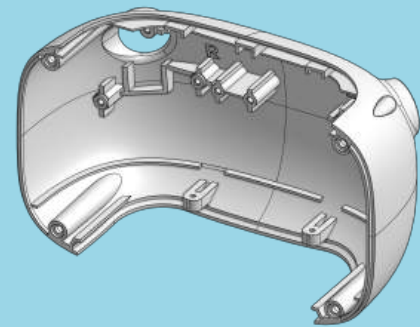
Attach the cases to each motor, making sure R aligns with R and L with L. Also, align the circular mark.



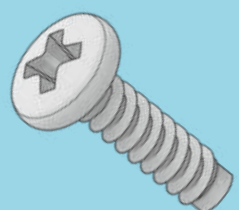
38/51 Head



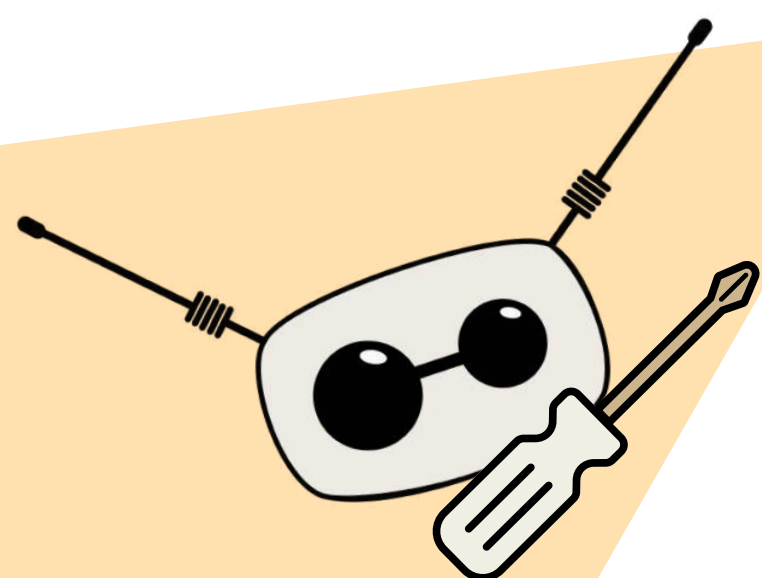
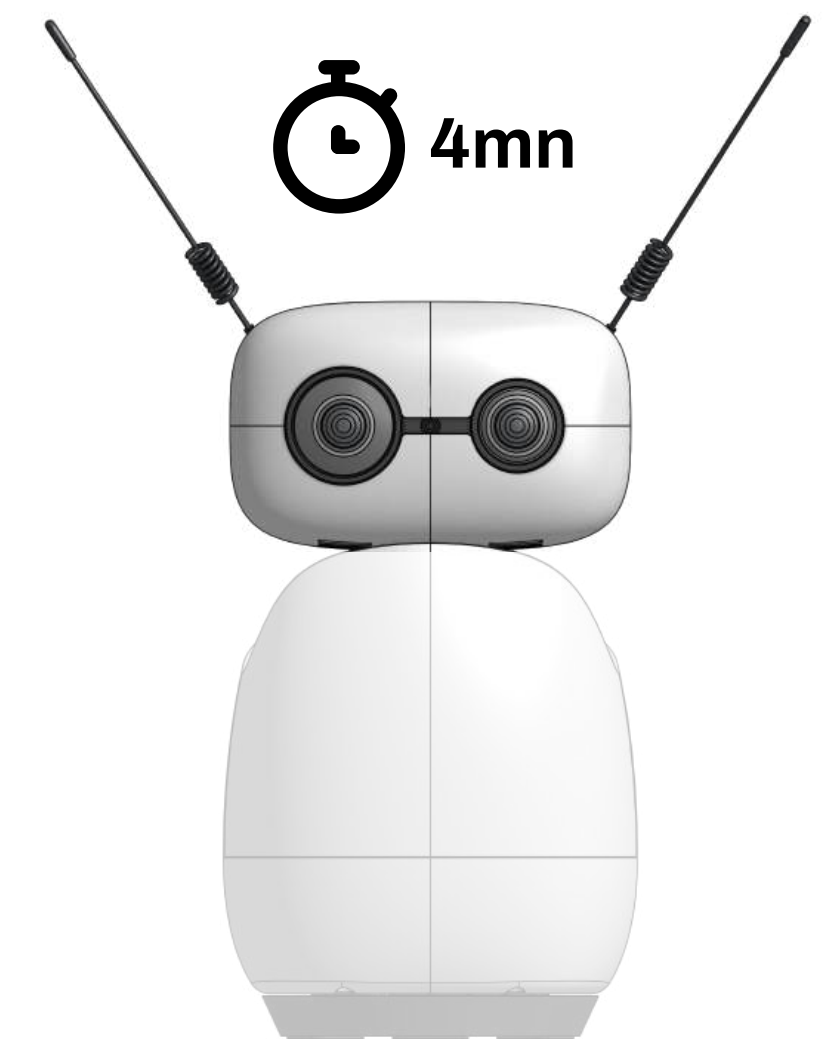
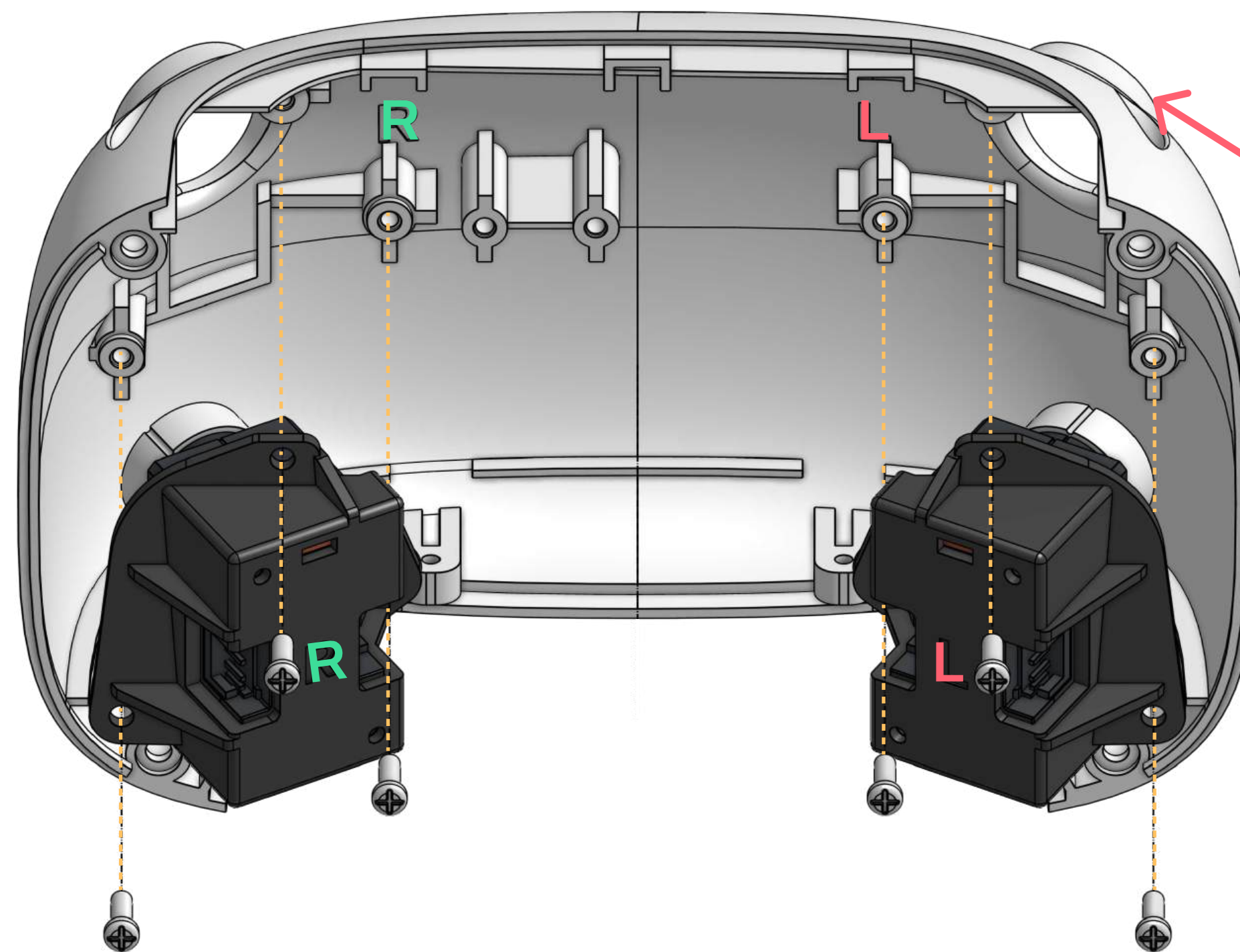
x2
Antenna
Assembly



x1
Back Head
Shell



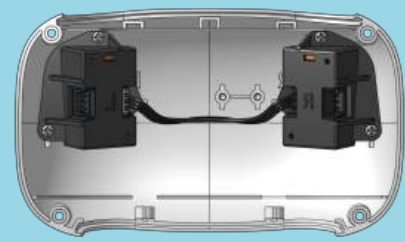
x6
2.5x8mm
Screw



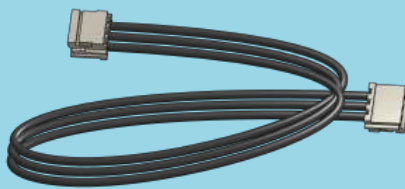
Screw the Motors' Assembly to the Back Head Shell with **2.5x8mm** screws.

Make sure to position the motor properly in the center of the designated holes.

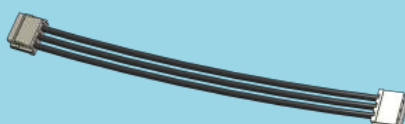




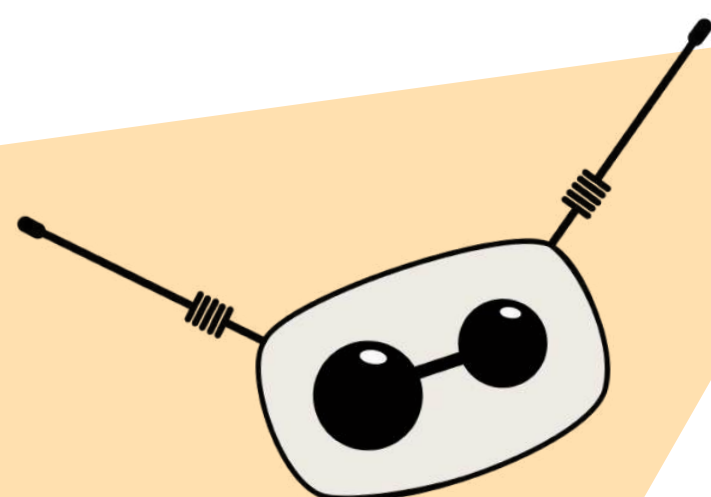
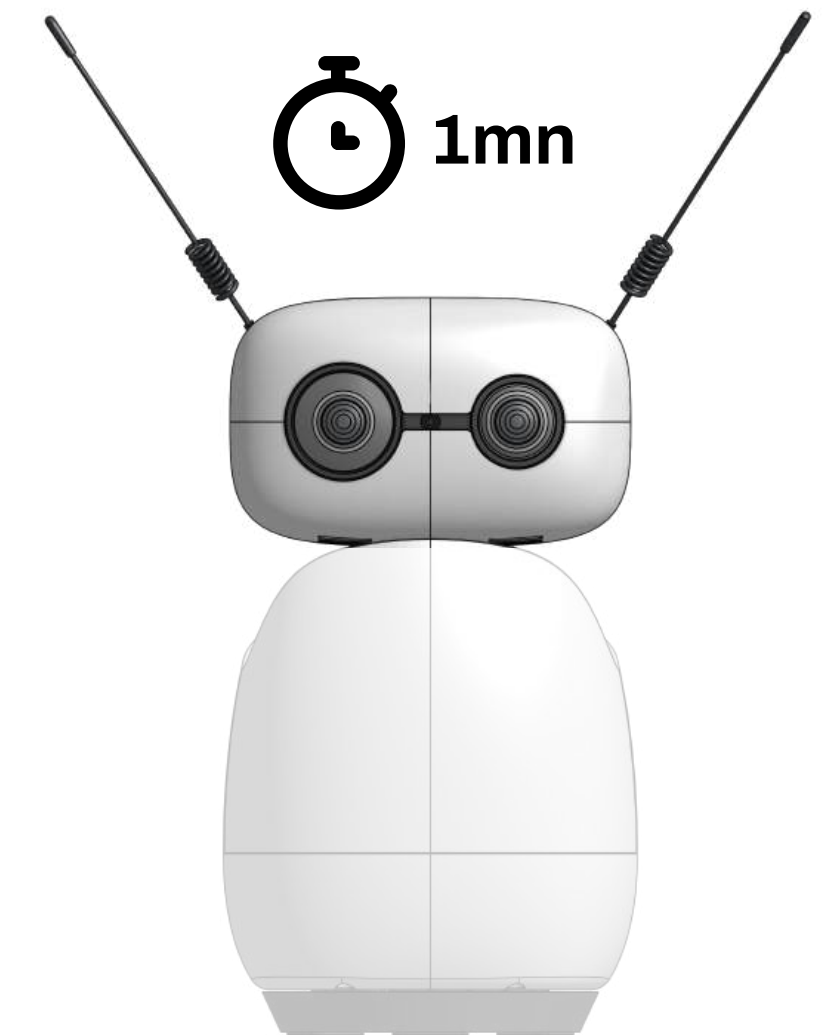
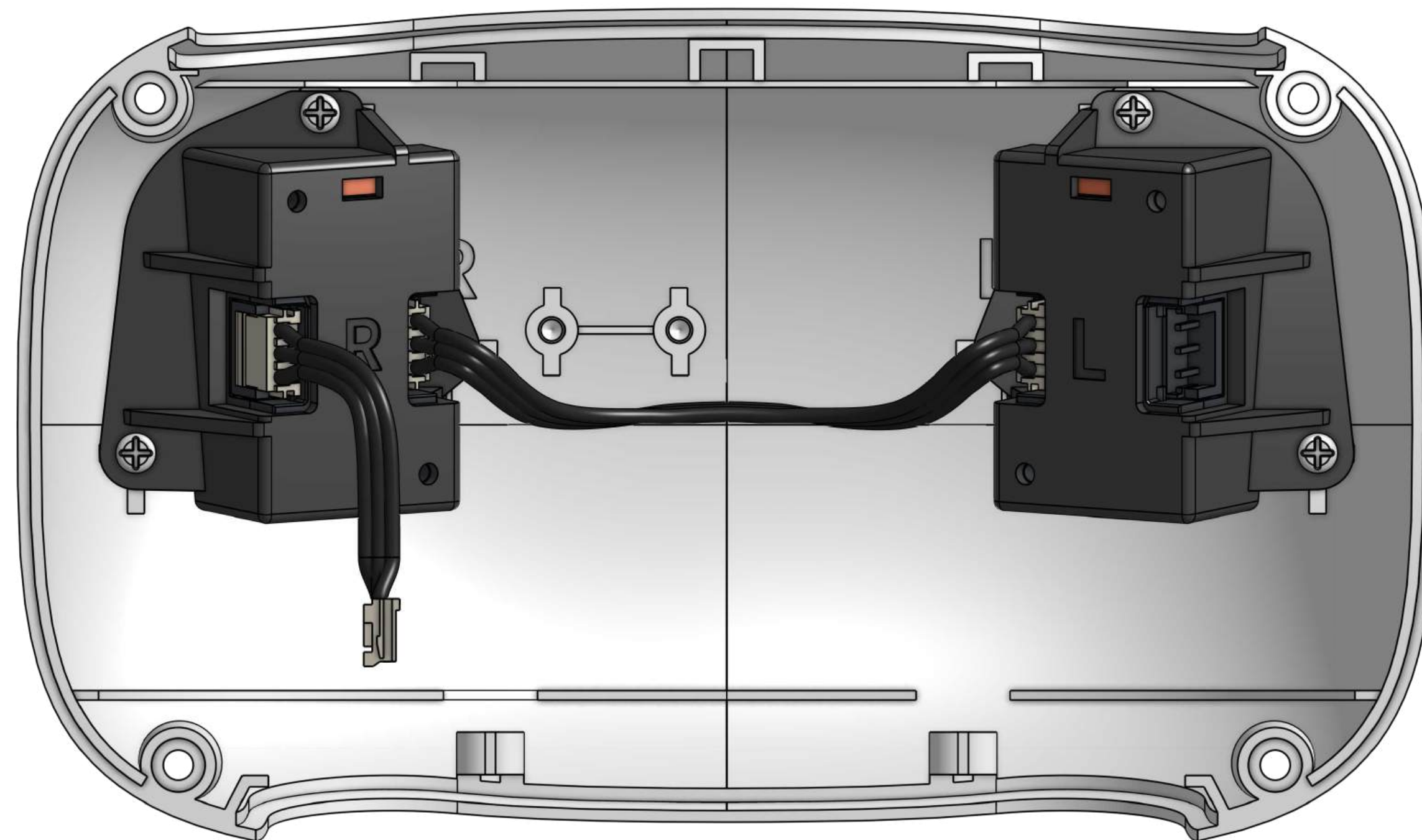
x1
Back Head
Assembly



x1
170mm
Cable



x1
100mm
Cable



Clip a **170mm motor cable** between the Right and Left motors.
Clip a **100mm motor cable** on the Right motor.

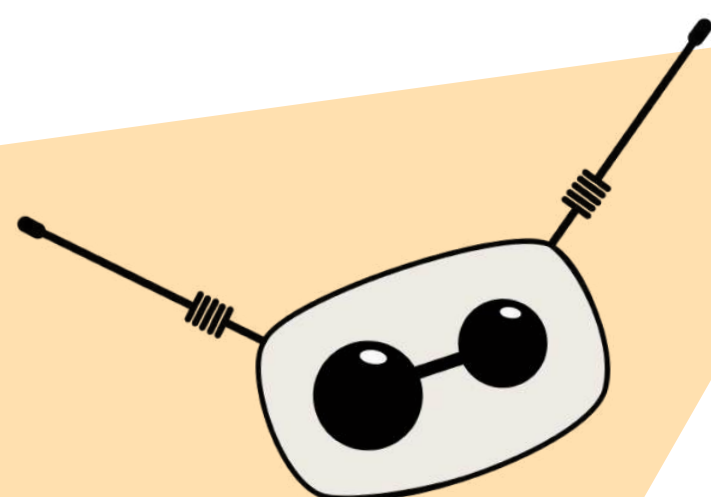
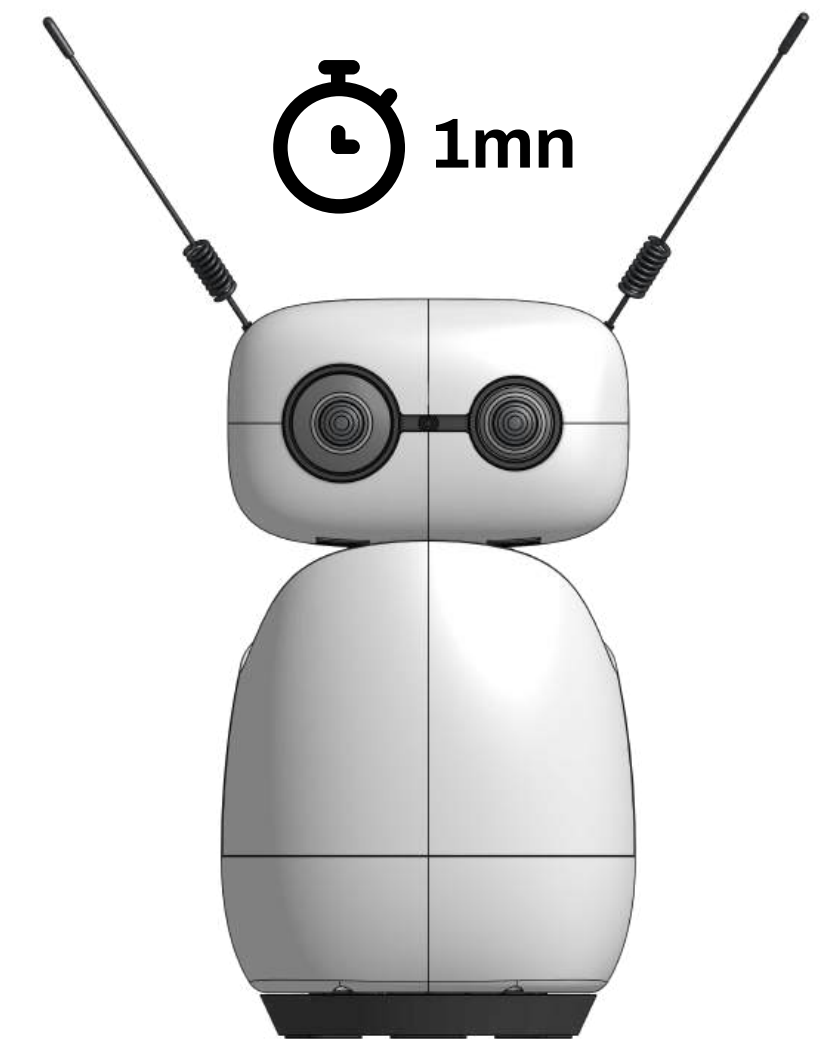
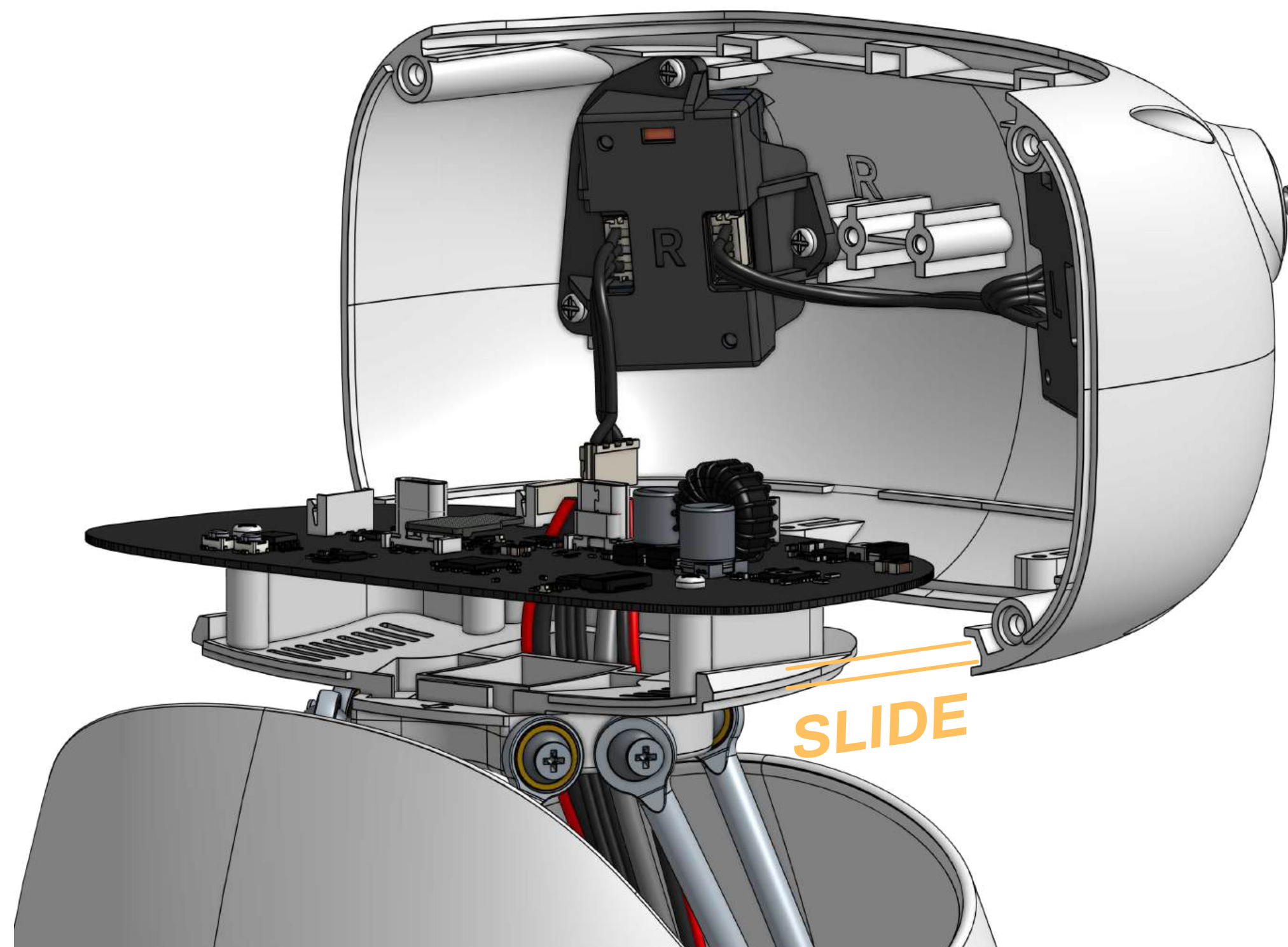
40/51 Head



x1
Body
Assembly



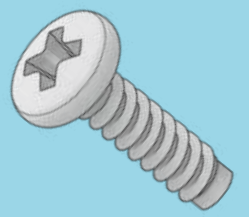
x1
Back Head
Assembly



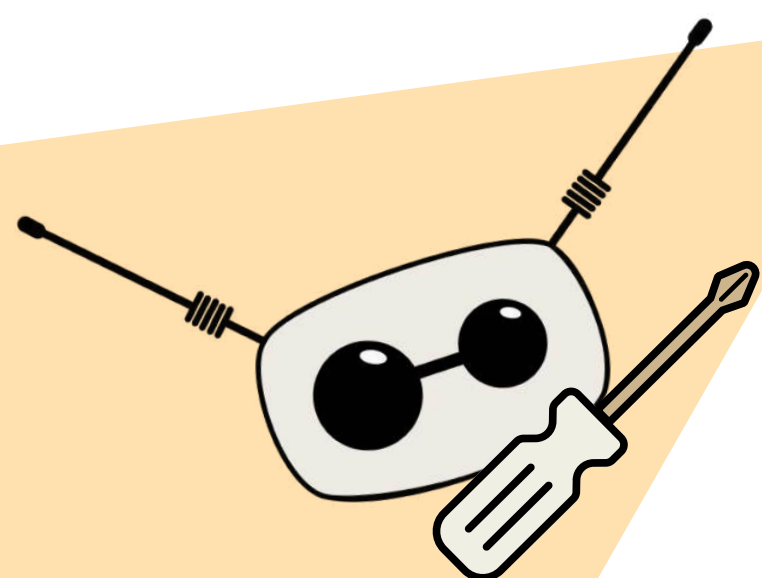
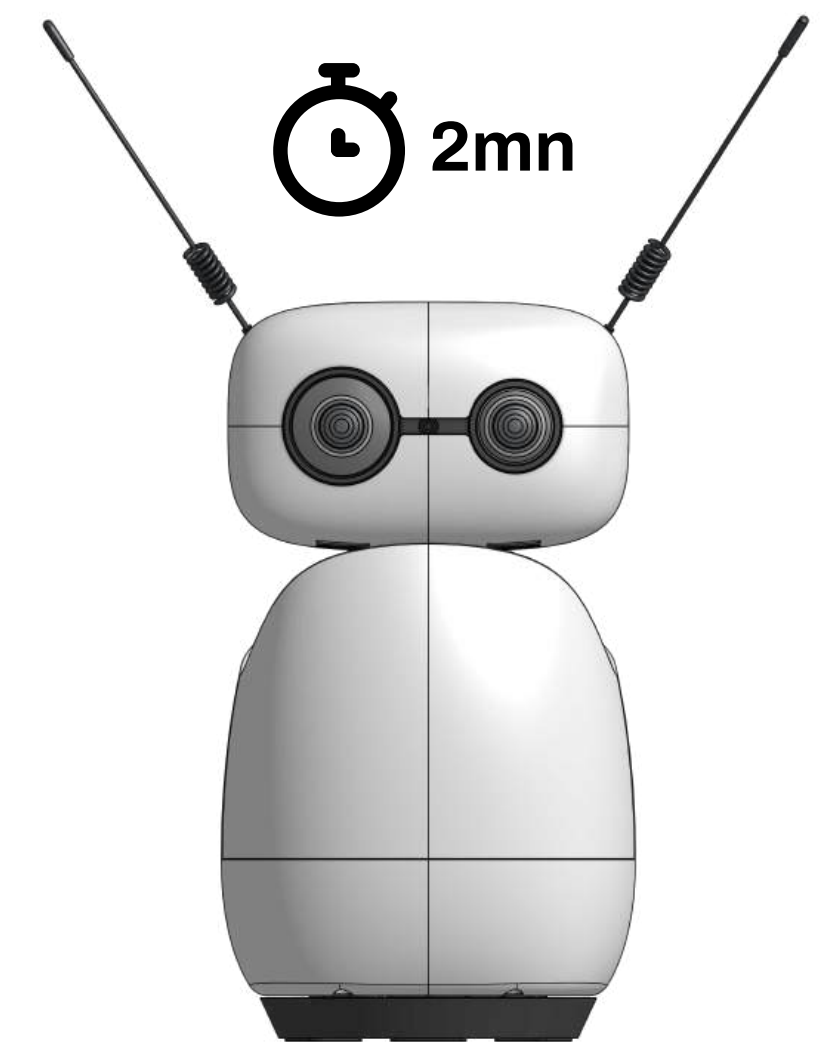
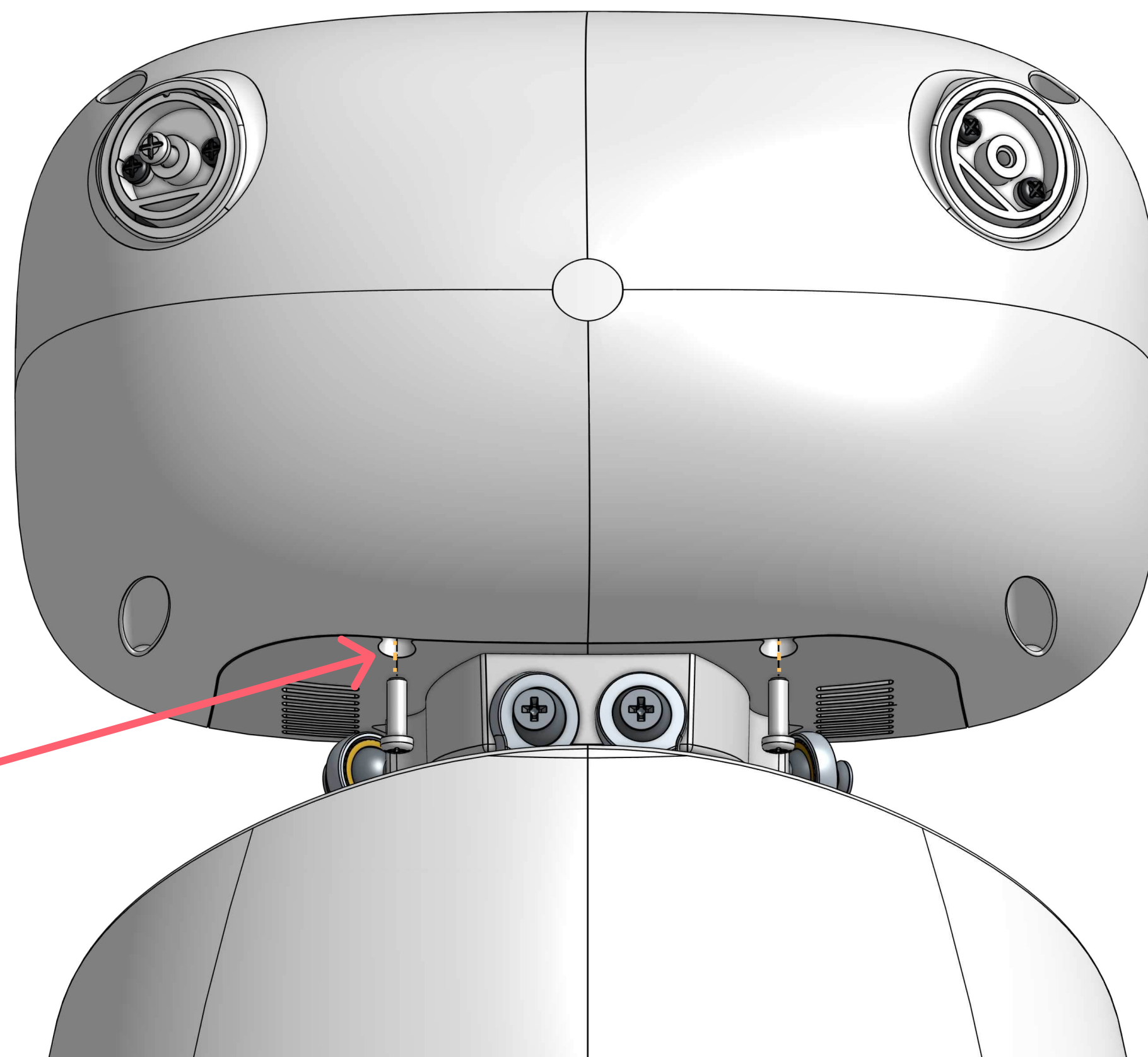
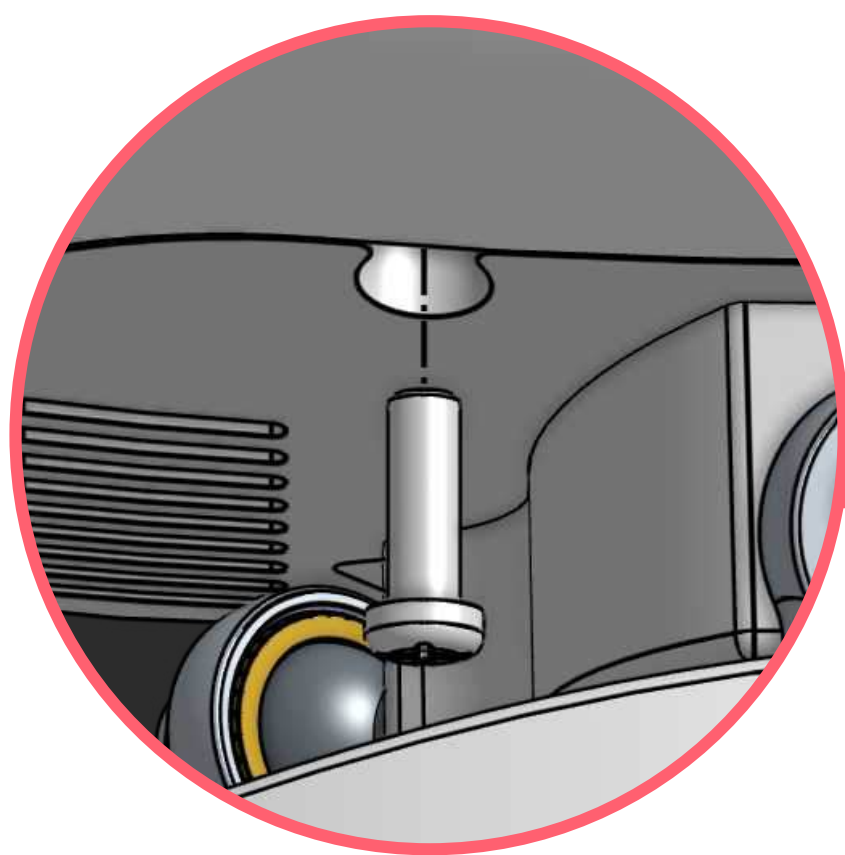
Slide the Back Head assembly onto the Reachy Mini body.



41/51 Head

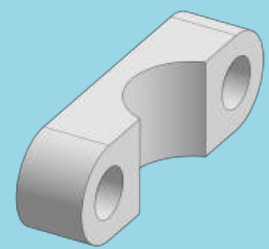


x2
2.5x8mm
Screw

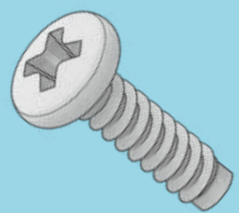


Screw the Back Head with two **2.5x8mm** screws.

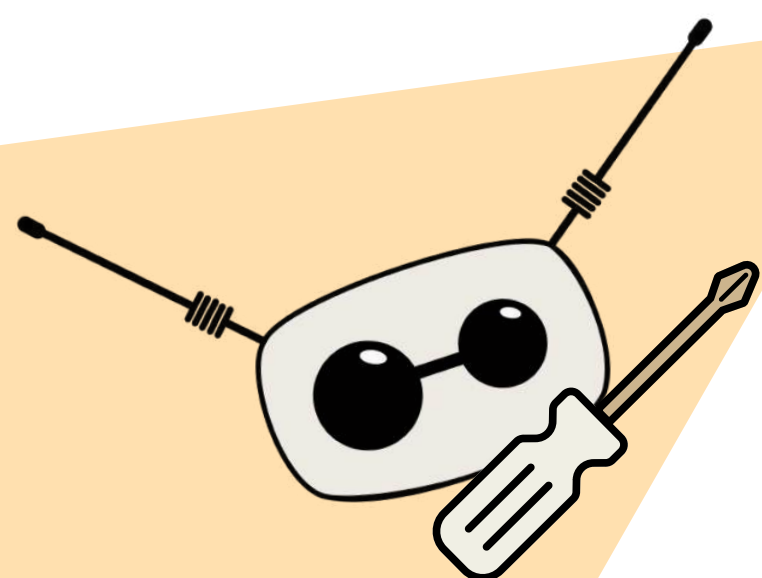
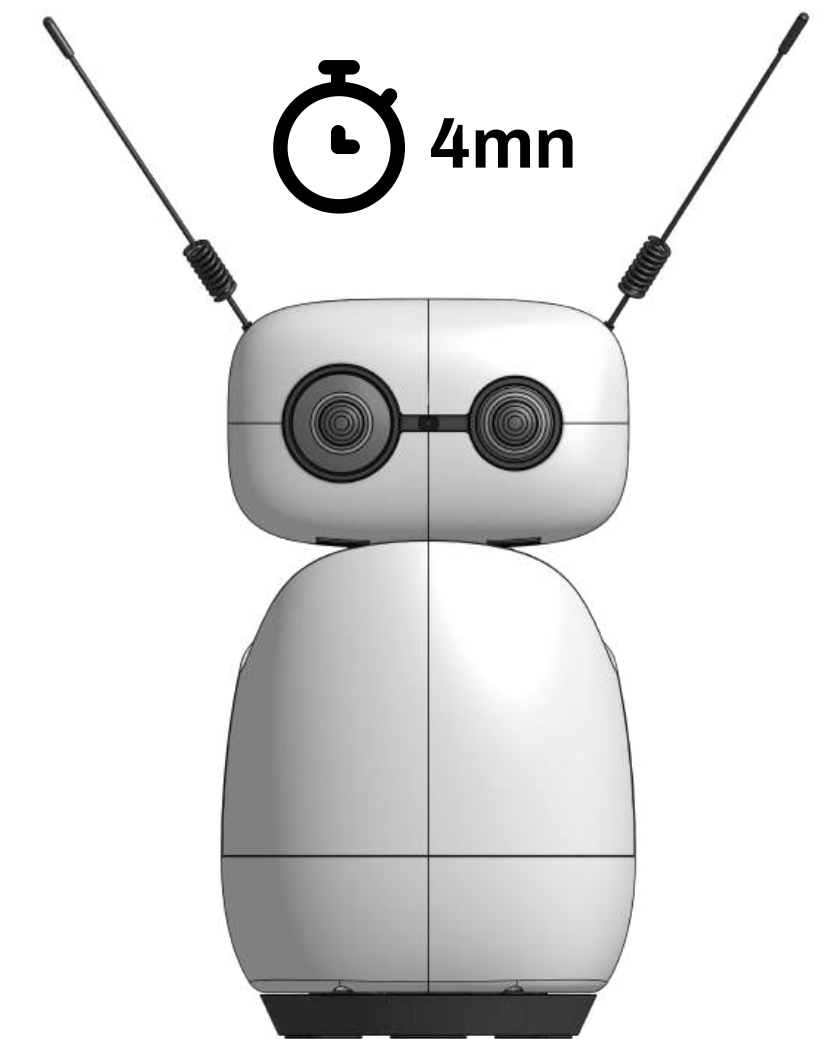
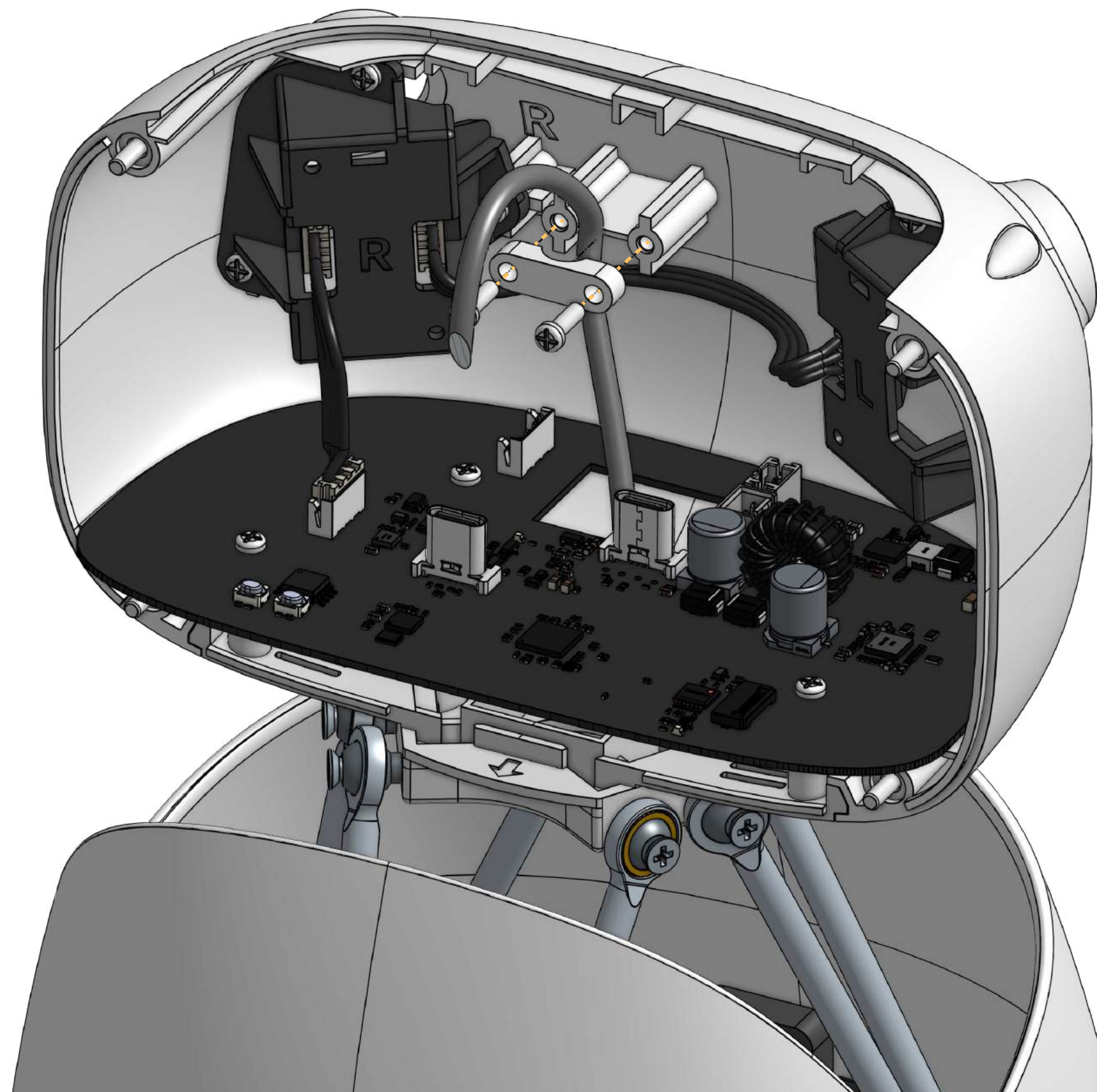
42/51 Head



x1
Cable Holder

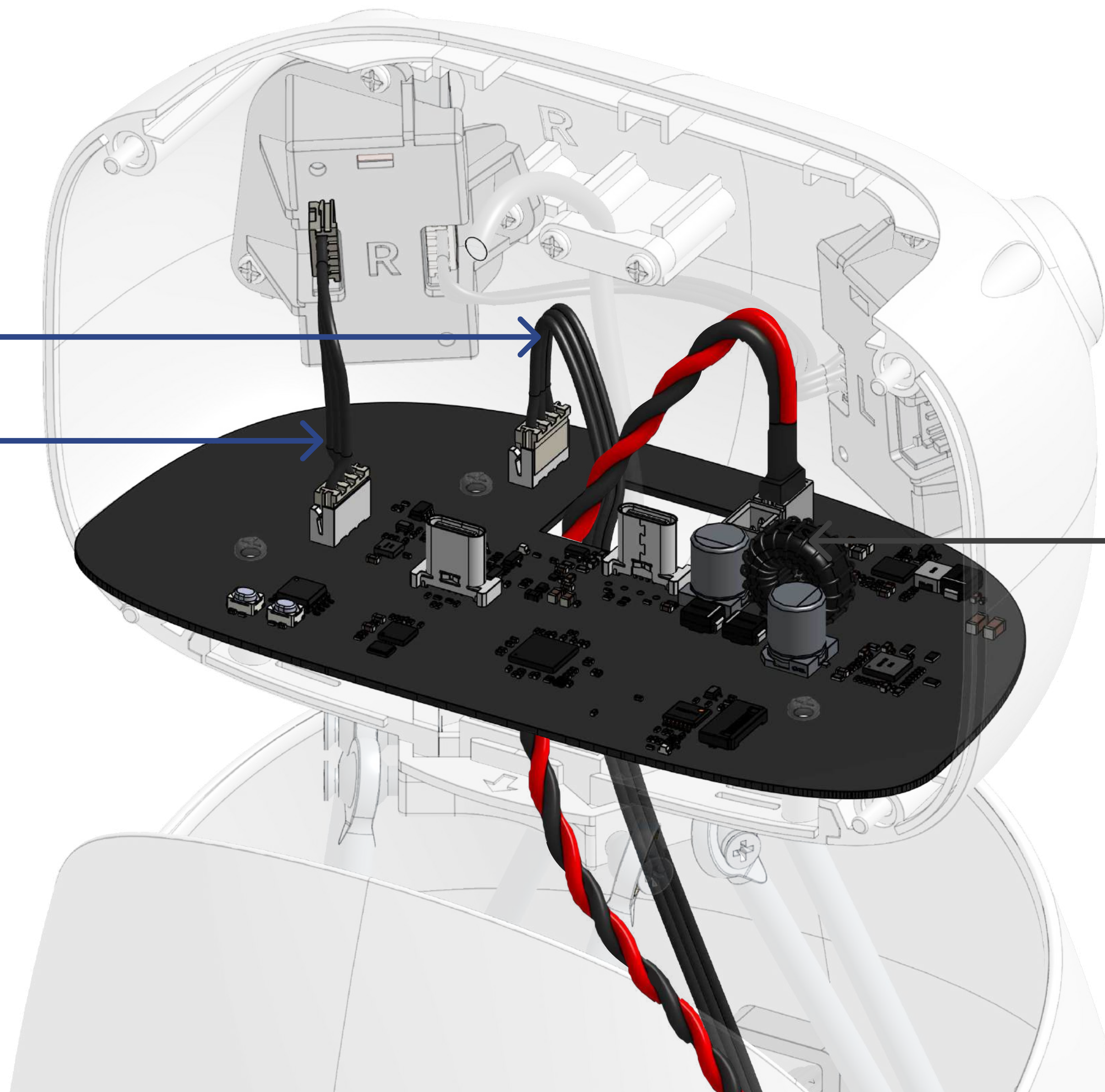


x2
2.5x8mm
Screw

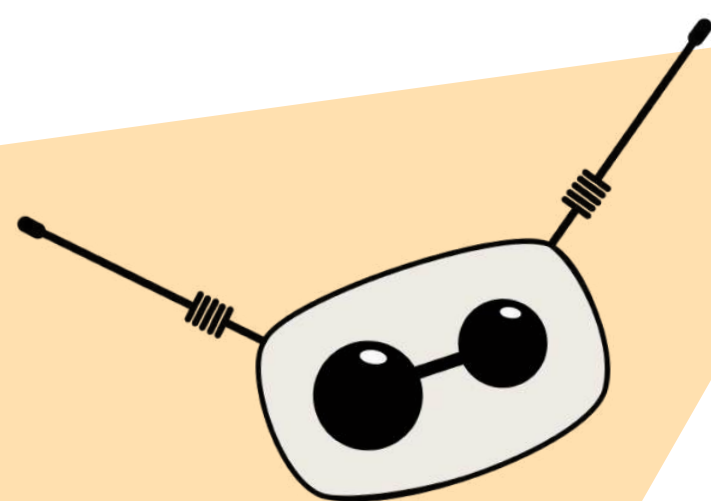
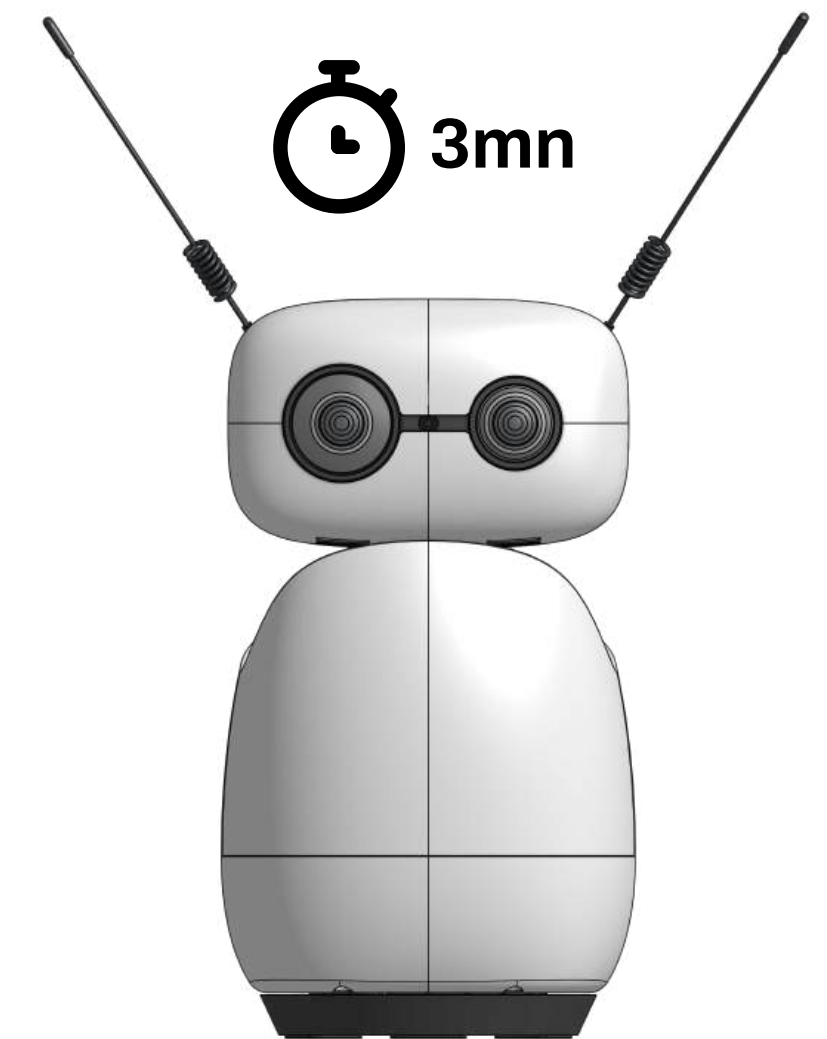


Pass the USB cable through the Cable Holder, and secure it with **2.5x8mm** screws.



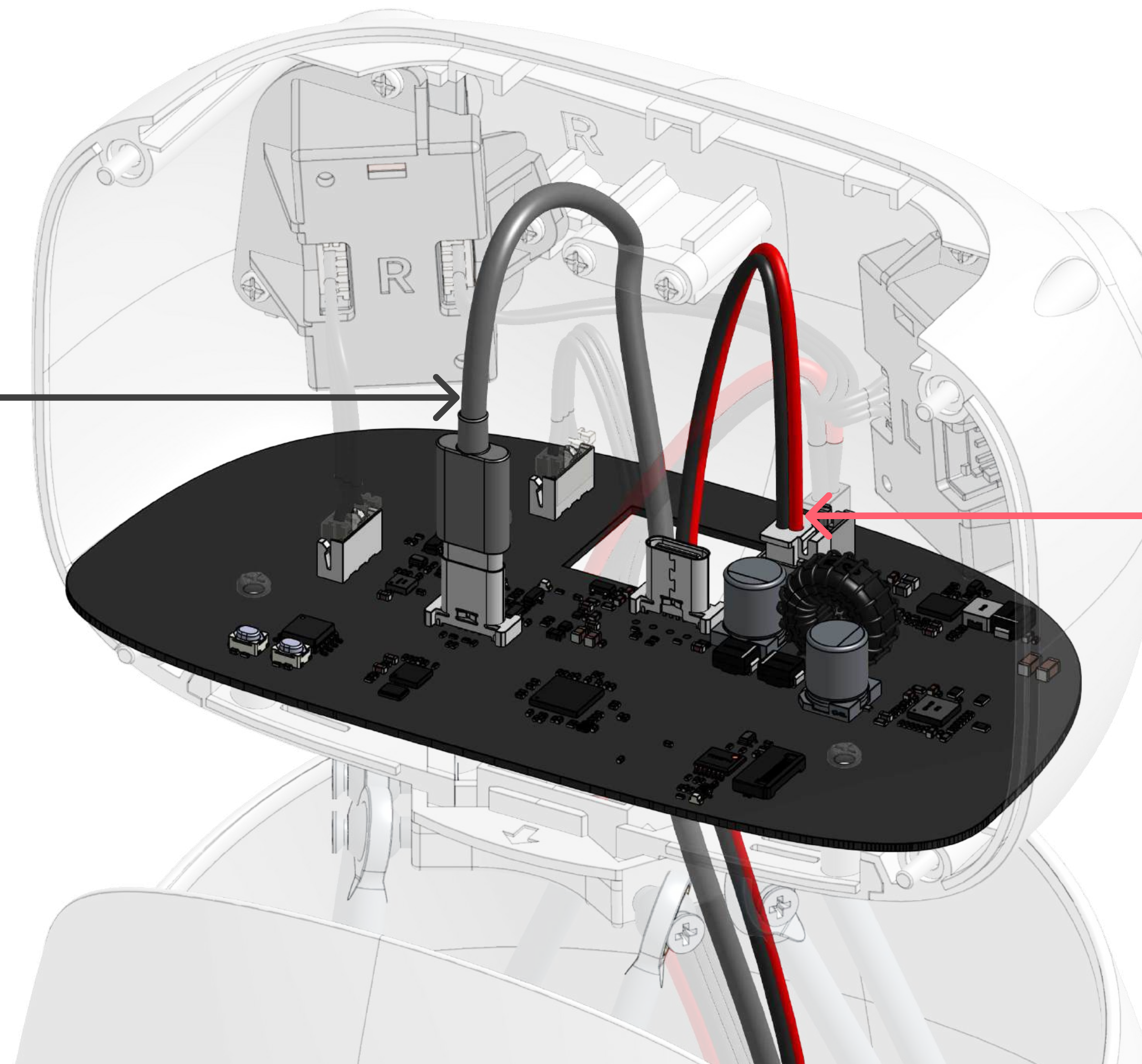


– **Speaker**

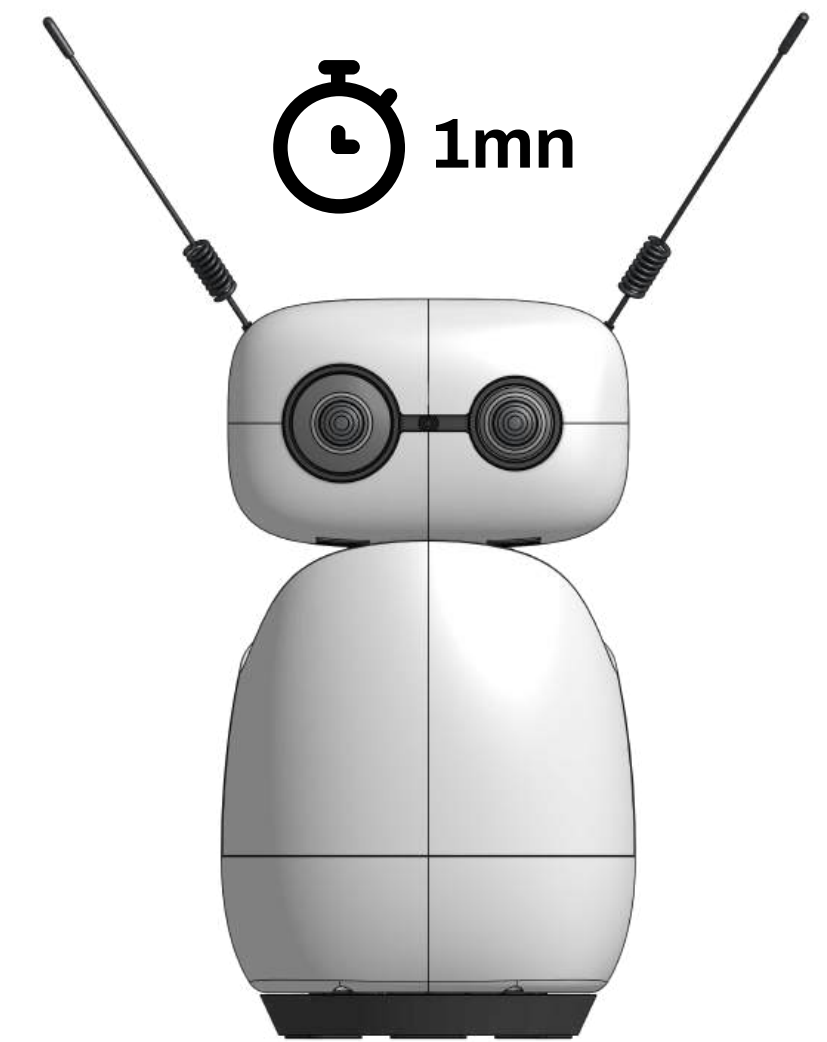


Connect the **Speaker Cable** to the Head PCB. Connect the **100mm motor cable** coming from the motor antenna to the head PCB and the **300mm motor cable** coming from the base.

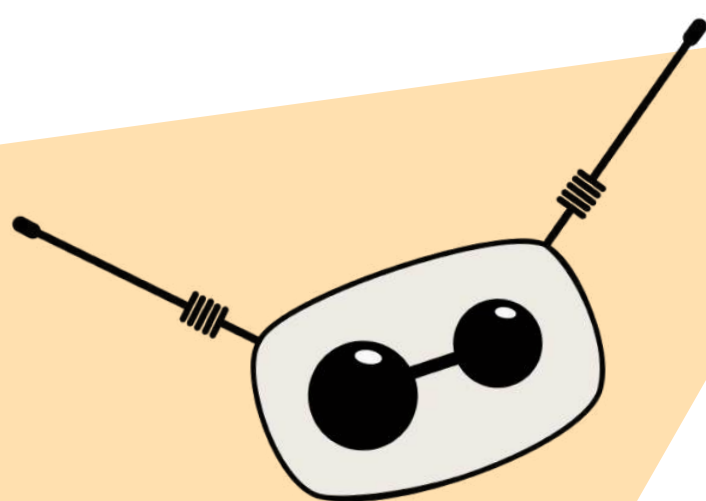
USB Extension
Cable



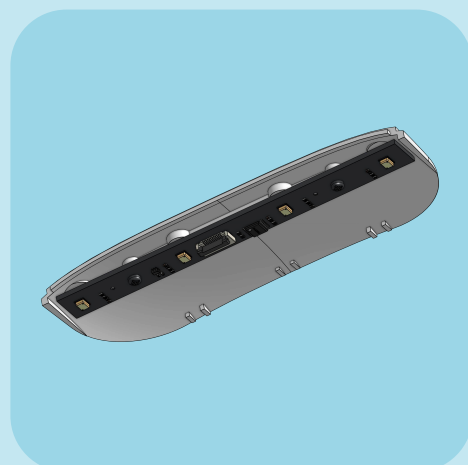
Power Cable



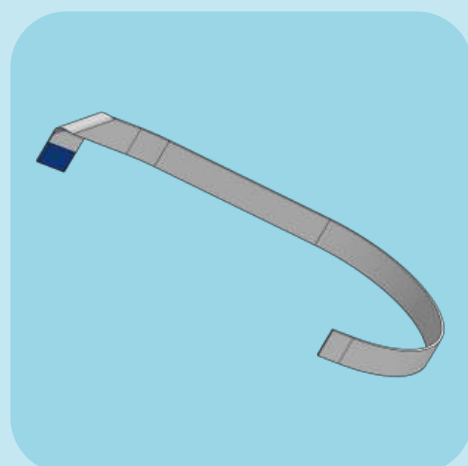
Connect the **Power Cable** to the Head PCB, and the **USB Extension cable** to the 'H' port.



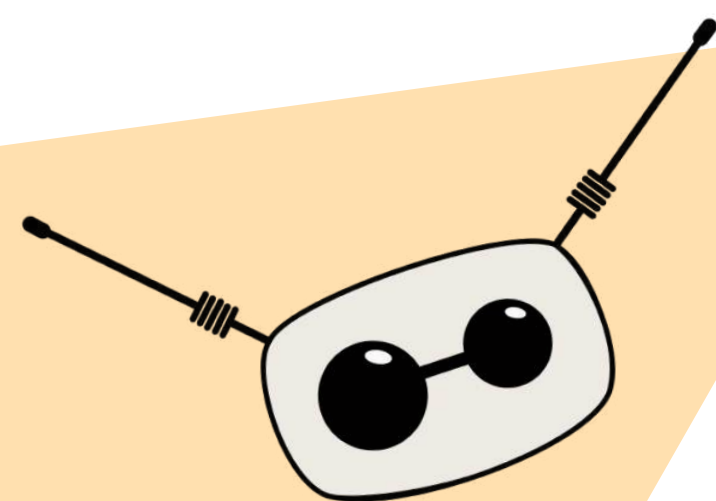
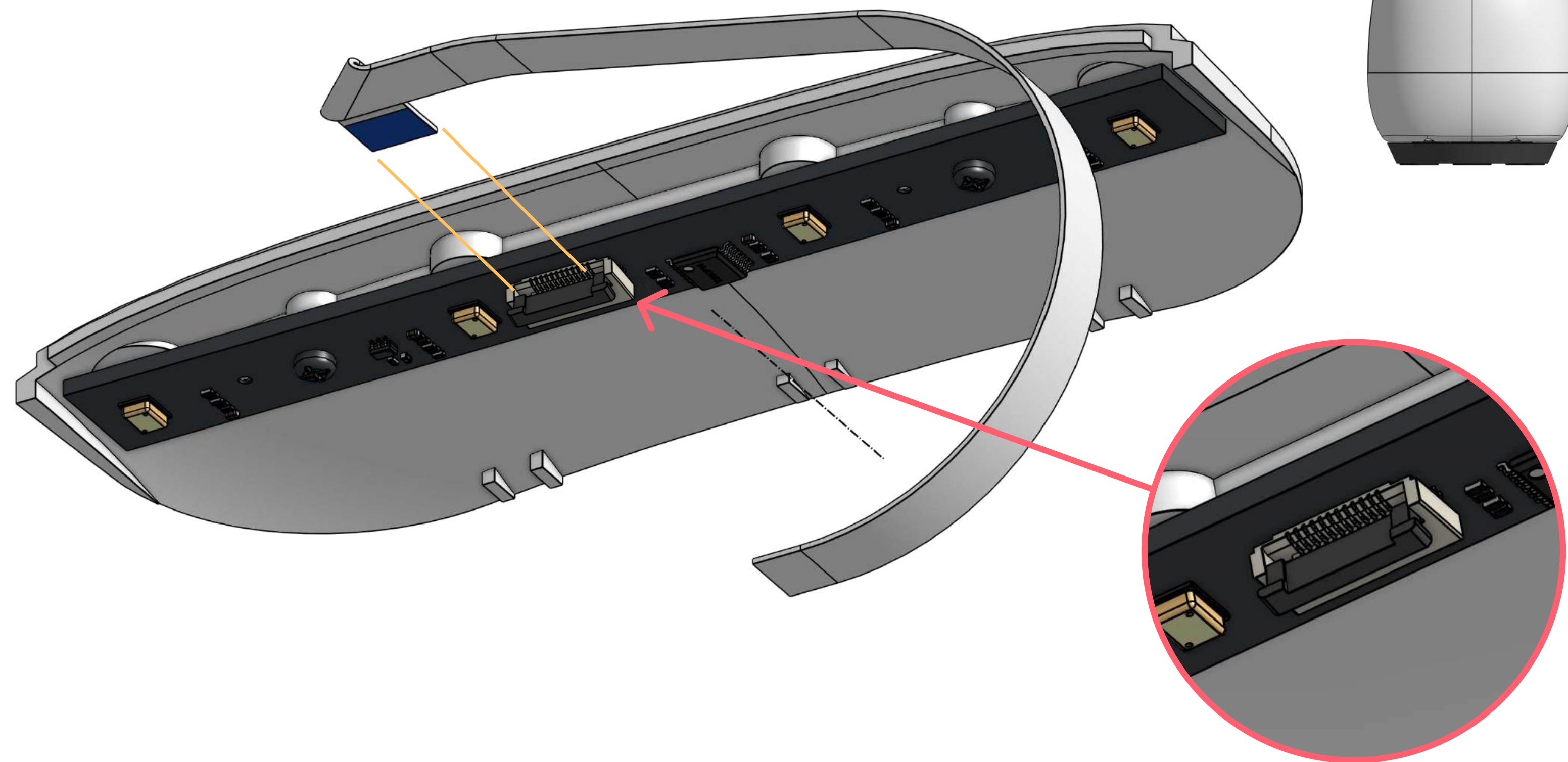
45/51 Head



x1
Top Head



x1
Flexible
Printed Cable



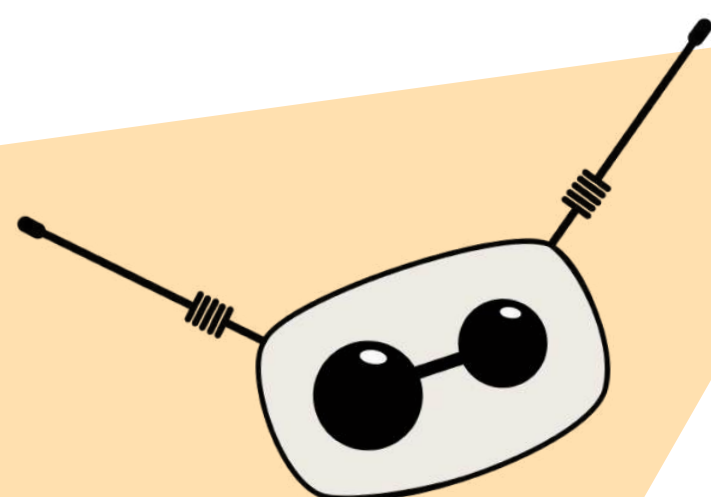
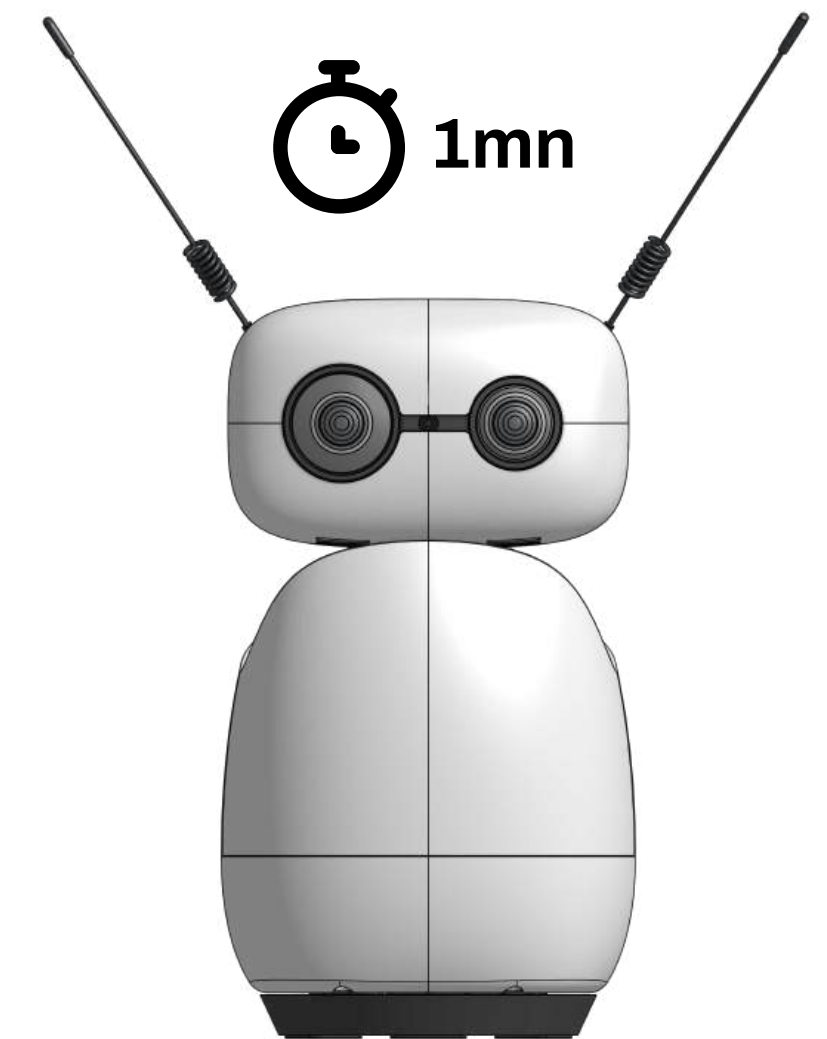
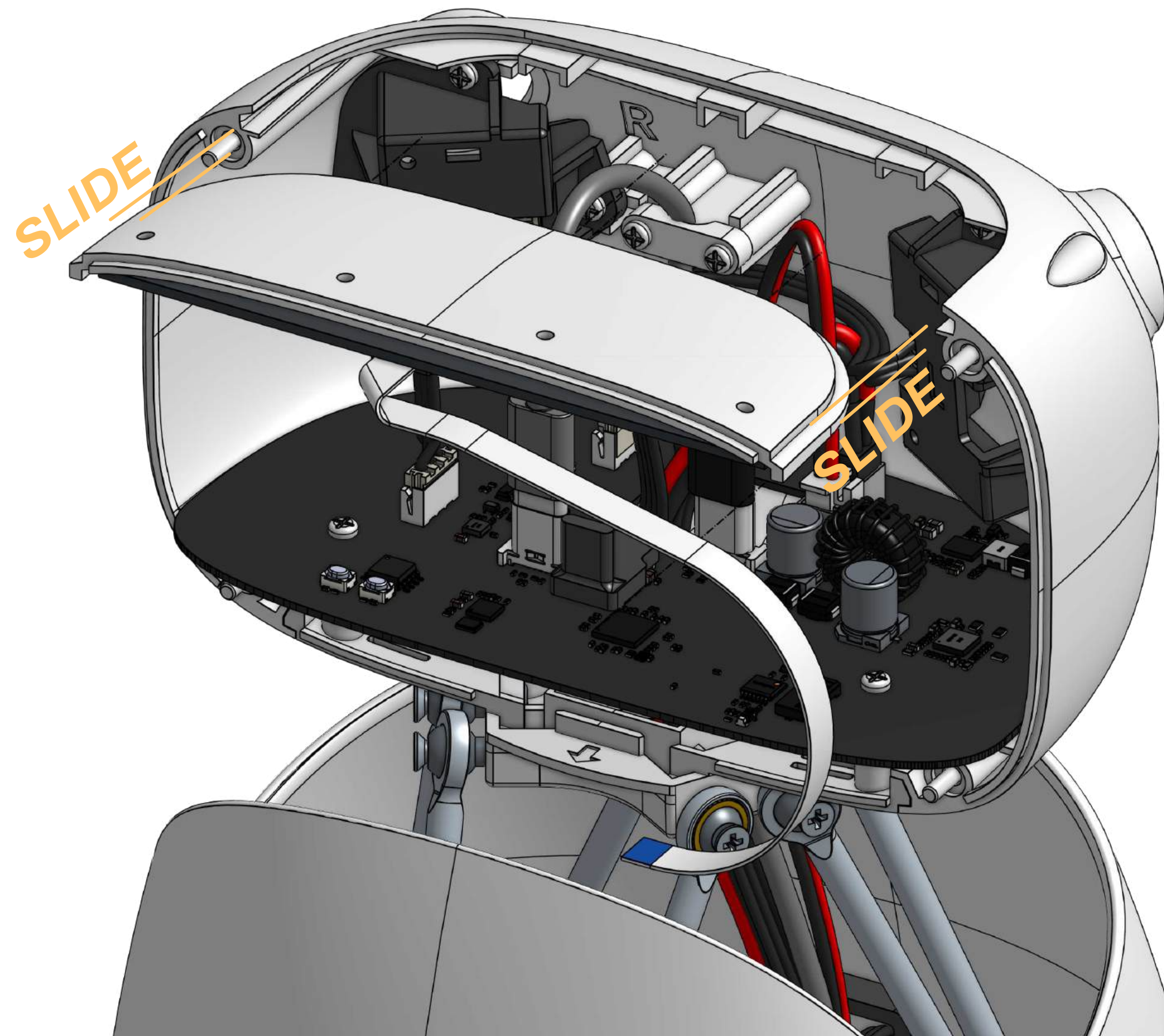
⚠ Gently lift the connector latch on the Top Head PCB, insert the Flexible Printed Cable (FPC), then close the latch to secure it.



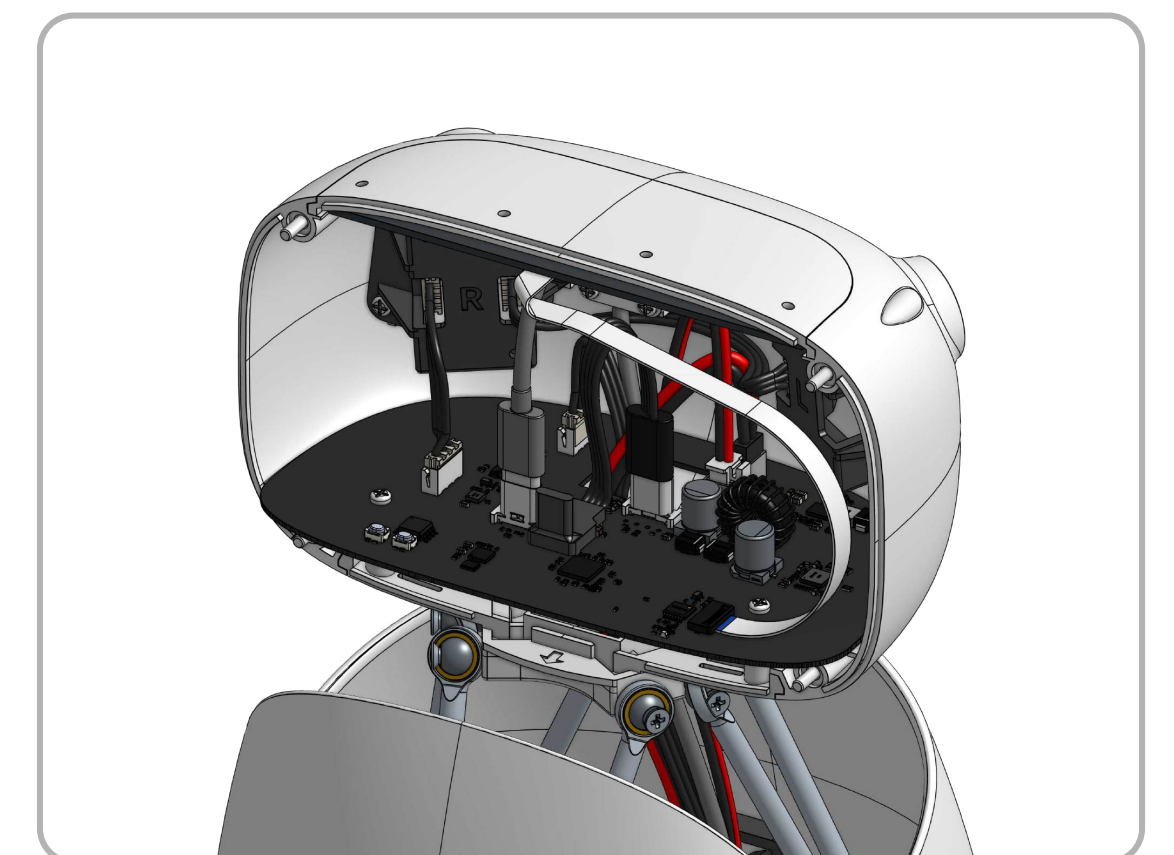
46/51 Head

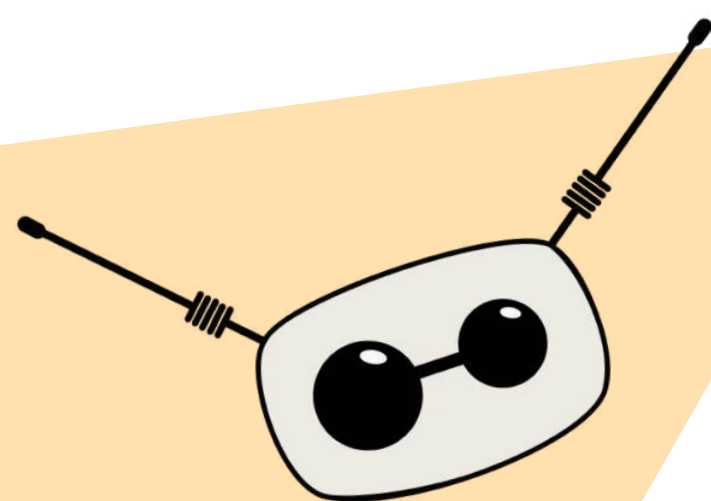
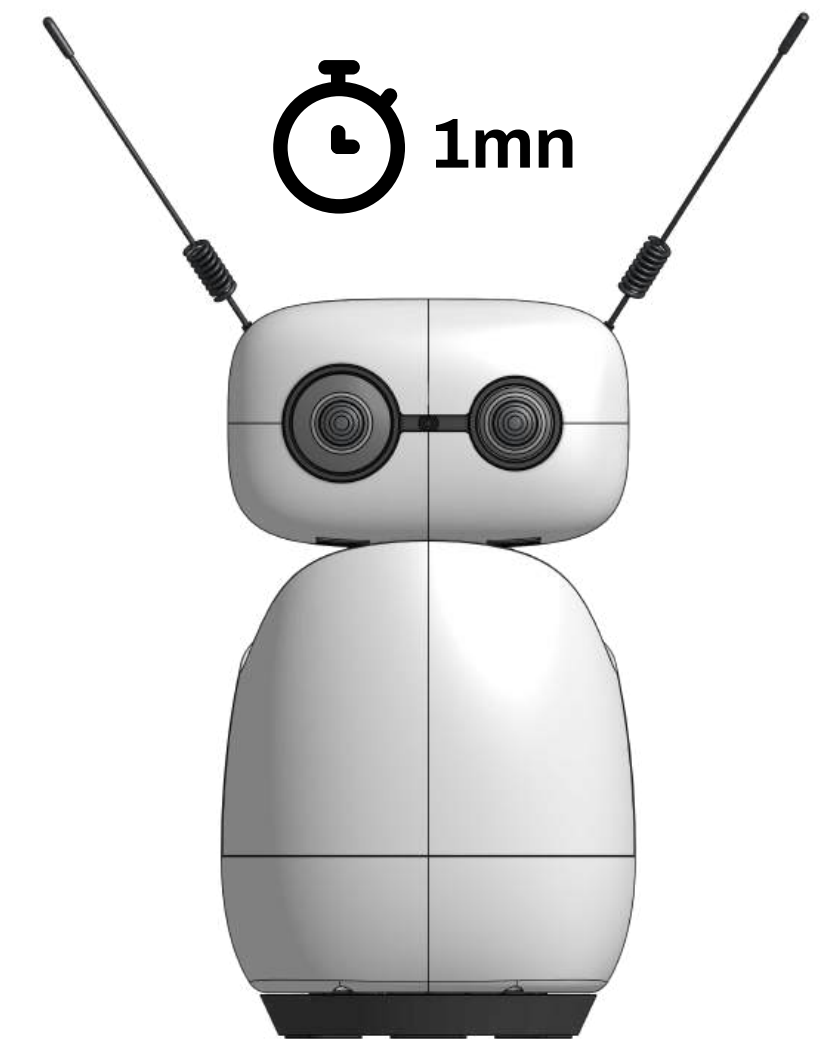
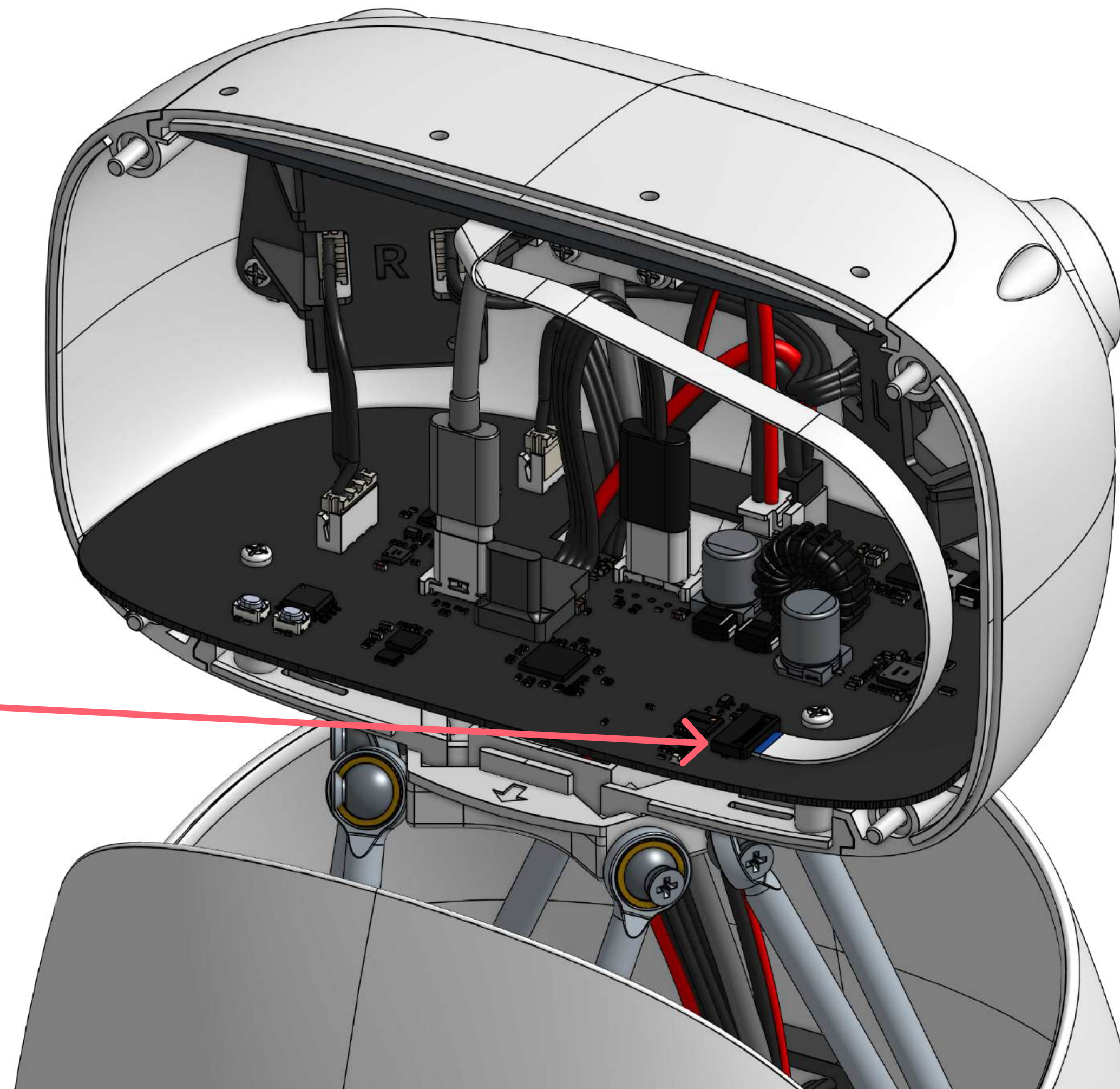
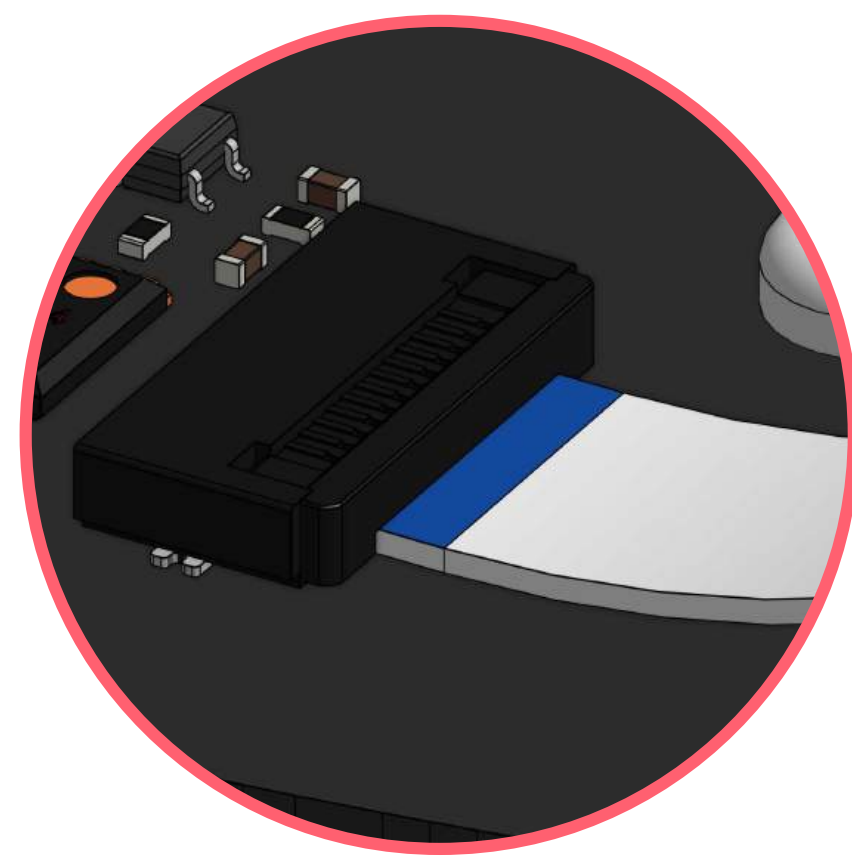


x1
Top Head
Assembly



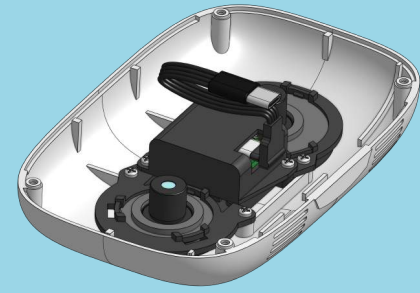
Slide the Top Head Assembly to the Back Head.



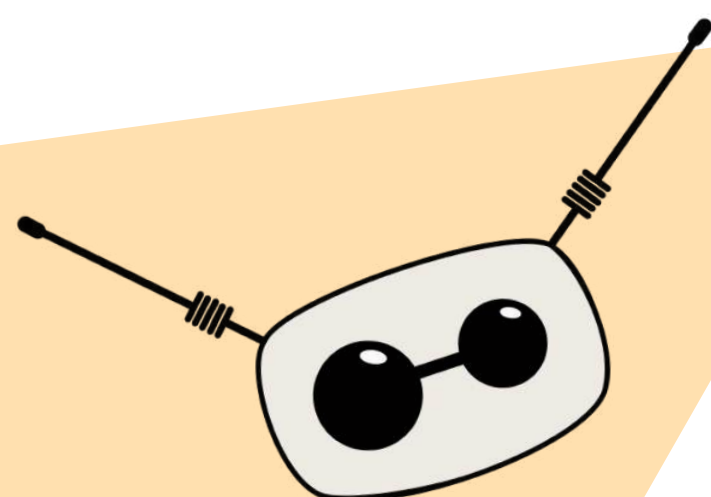
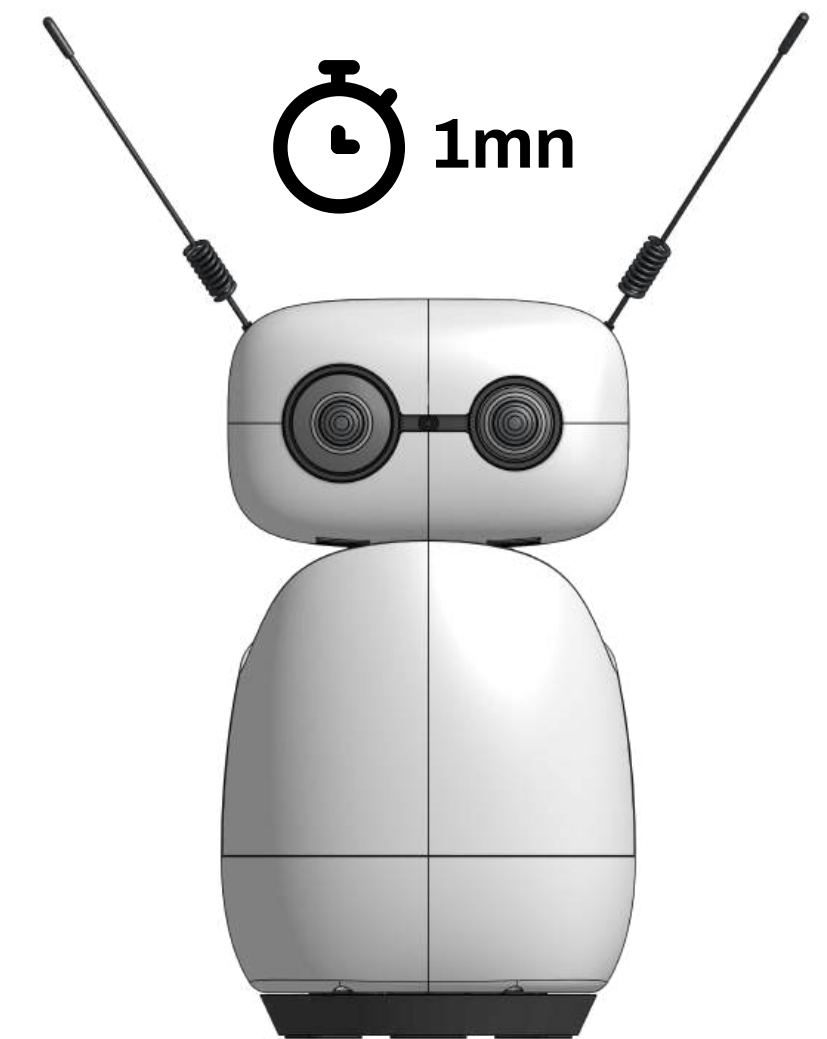
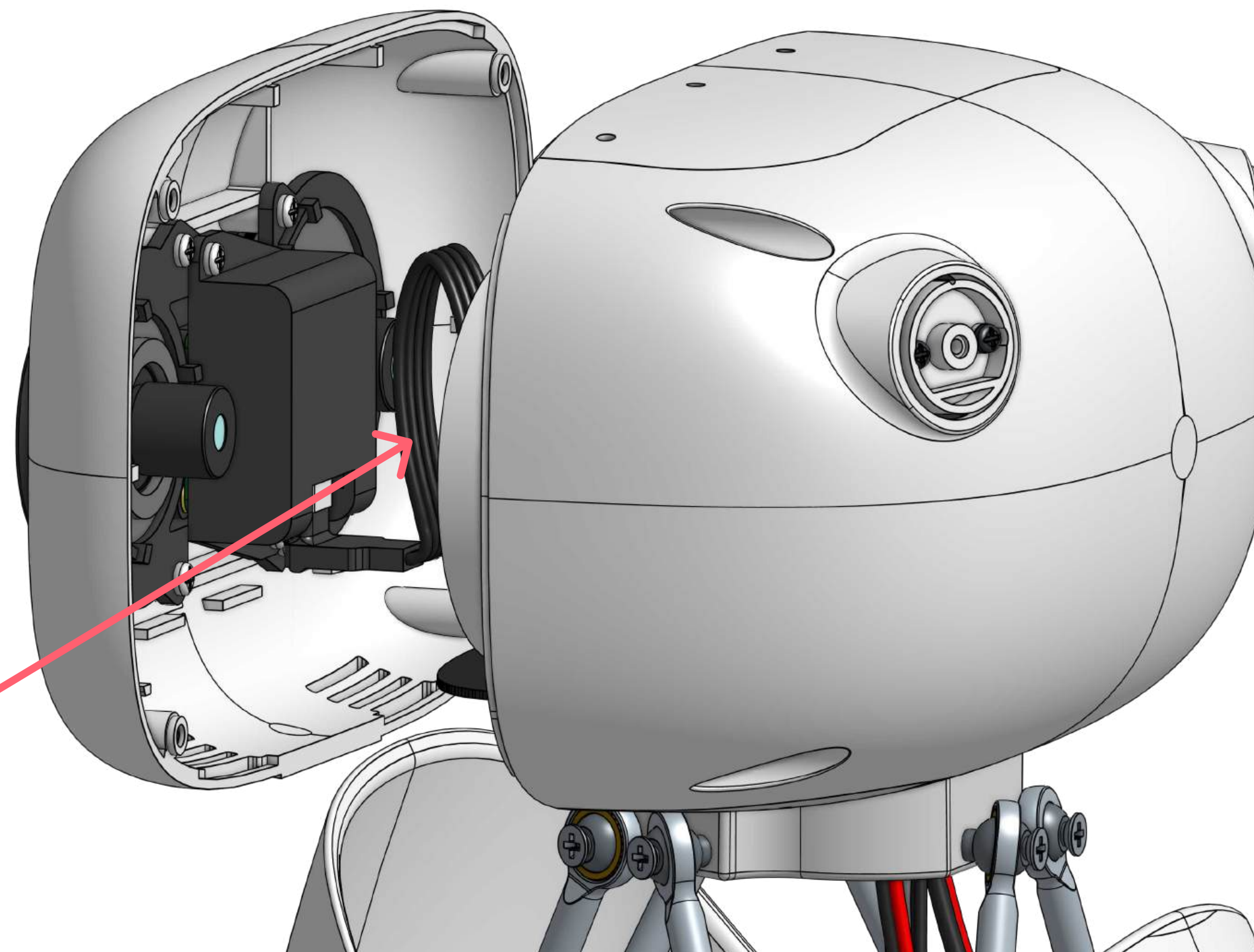
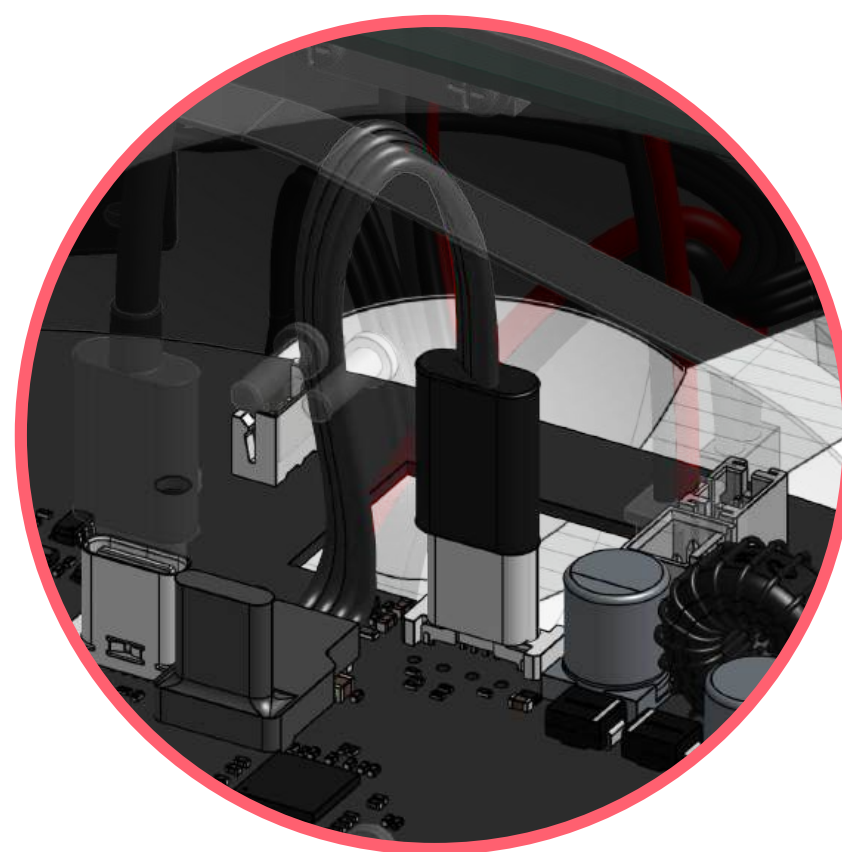


⚠ Gently lift the connector latch on the Head PCB, insert the Flexible Printed Cable (FPC), then close the latch to secure it.

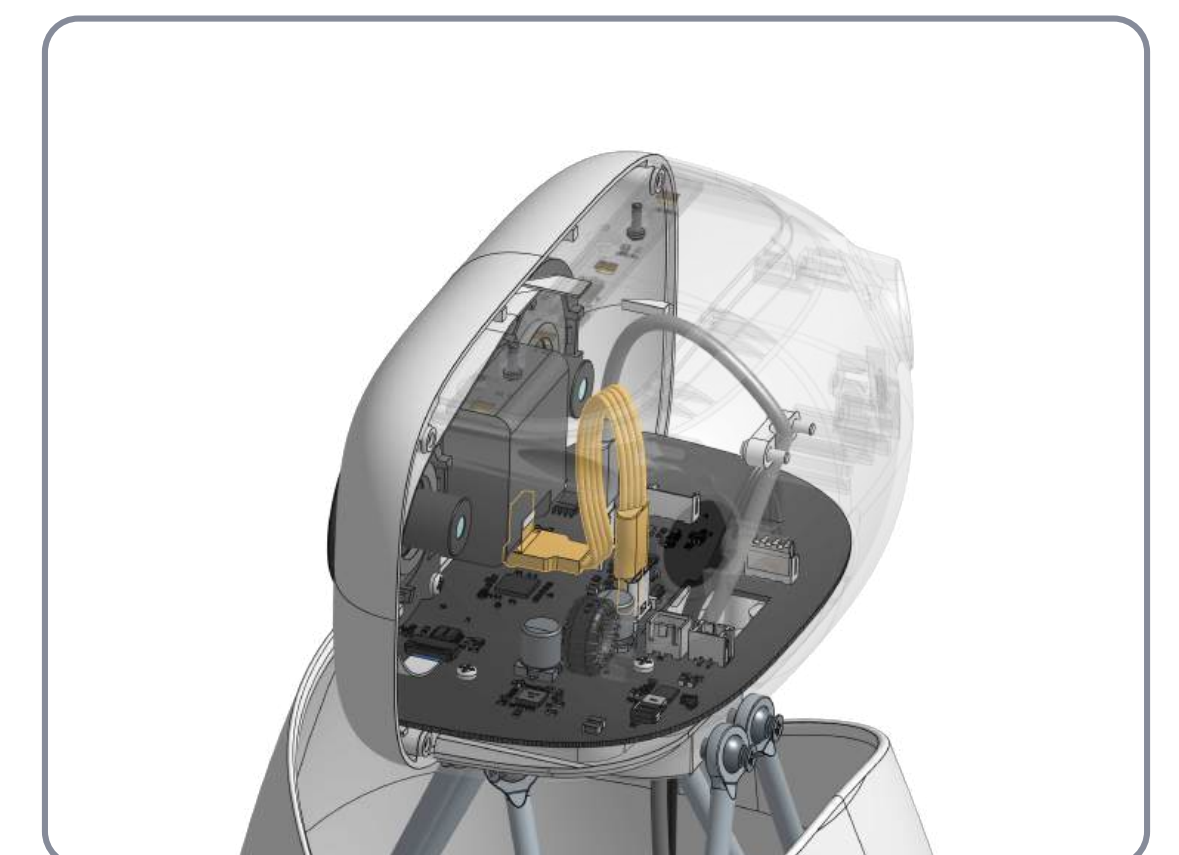
48/51 Head



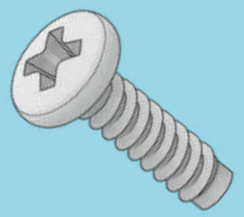
x1
Front Head
Assembly



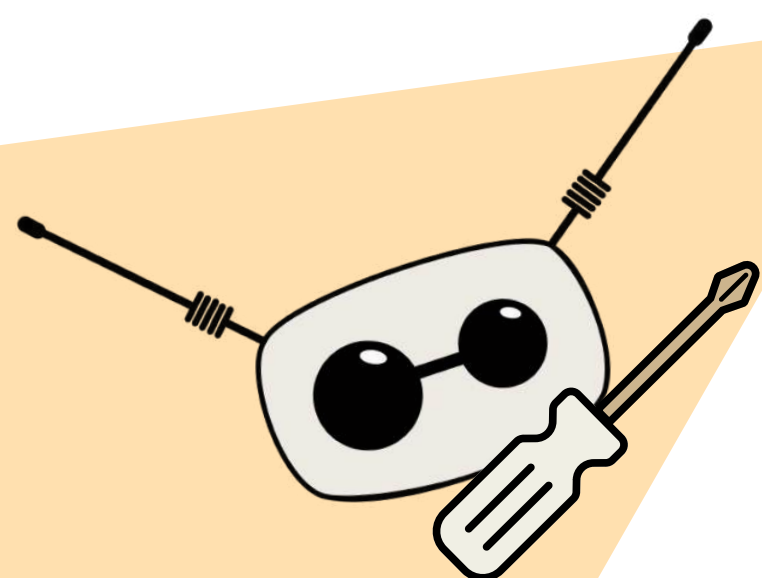
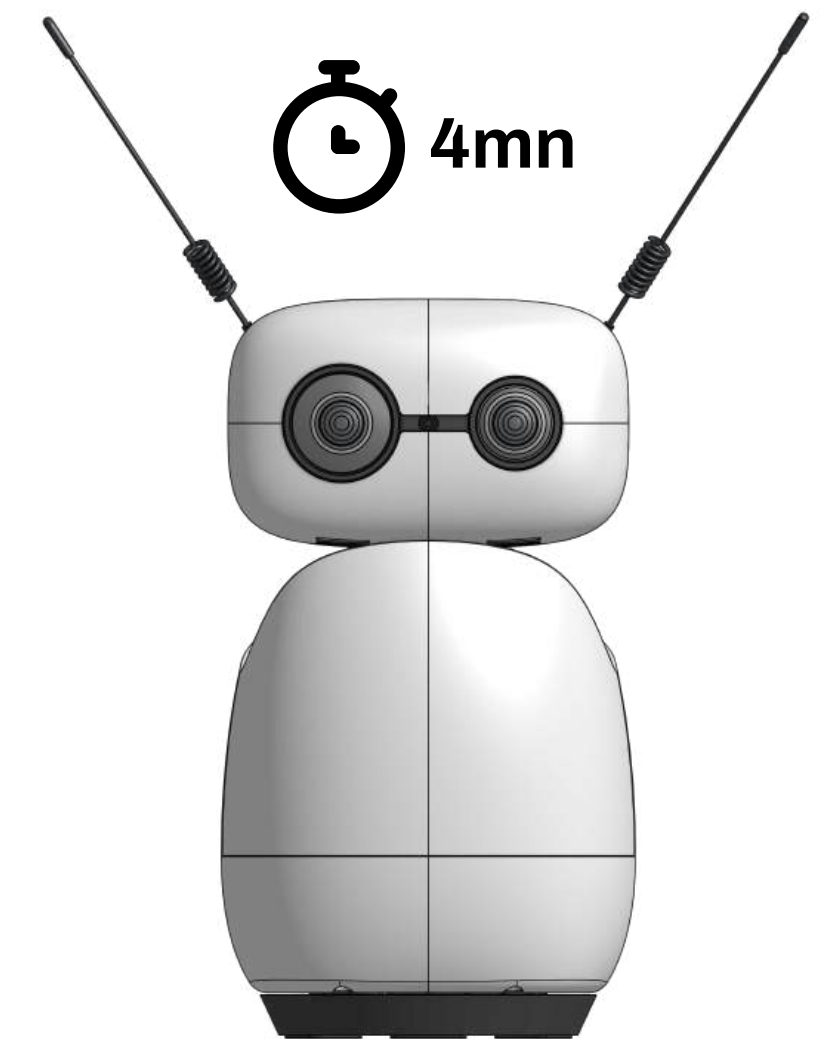
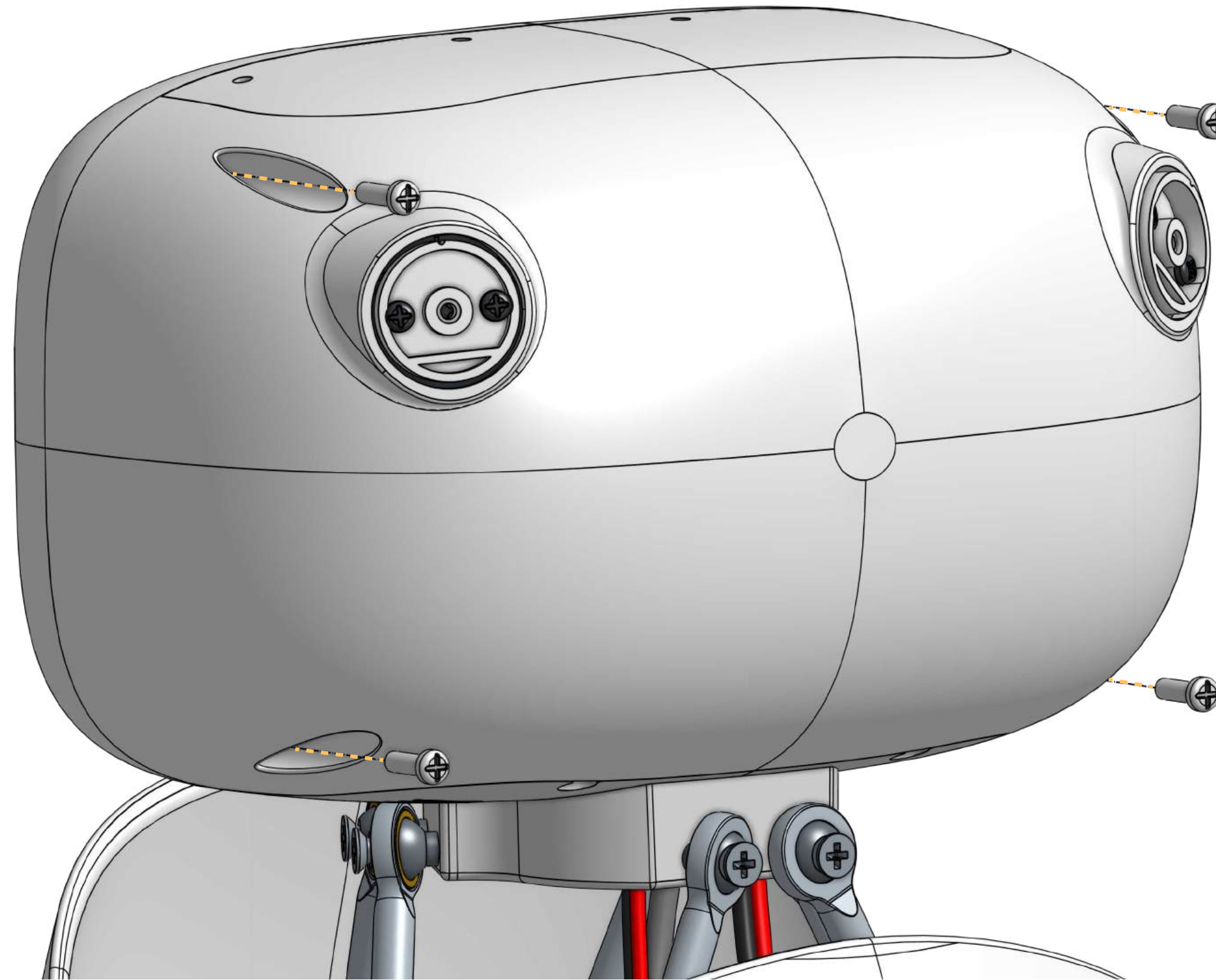
Bring the Front Head Assembly close and plug the highlighted Arducam USB cable into the CAM port on the Head PCB. Then clip the Front Head onto the Bottom Head.



49/51 Head



x4
2.5x8mm
Screw



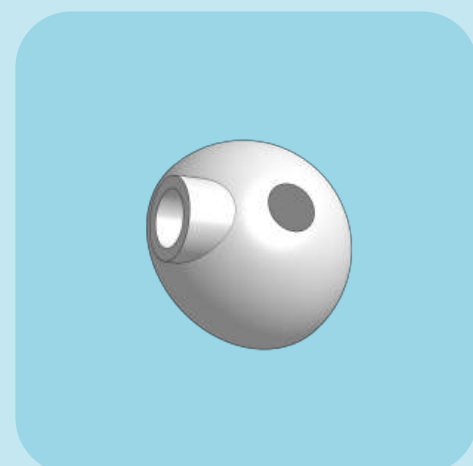
Screw the Front Head with four **2.5x8mm** Screws.



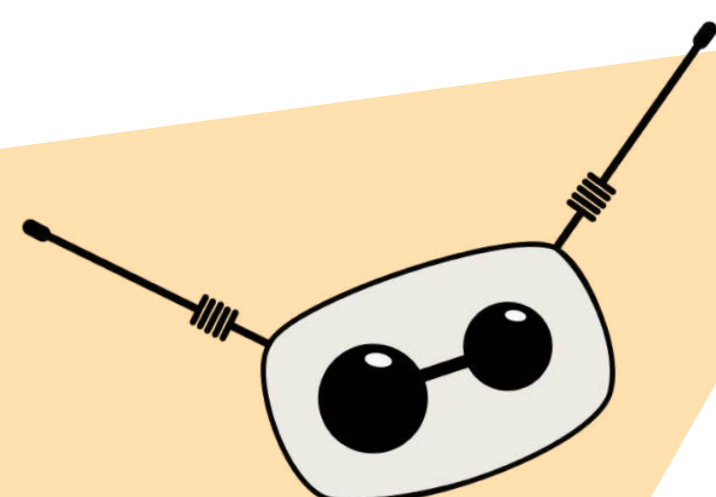
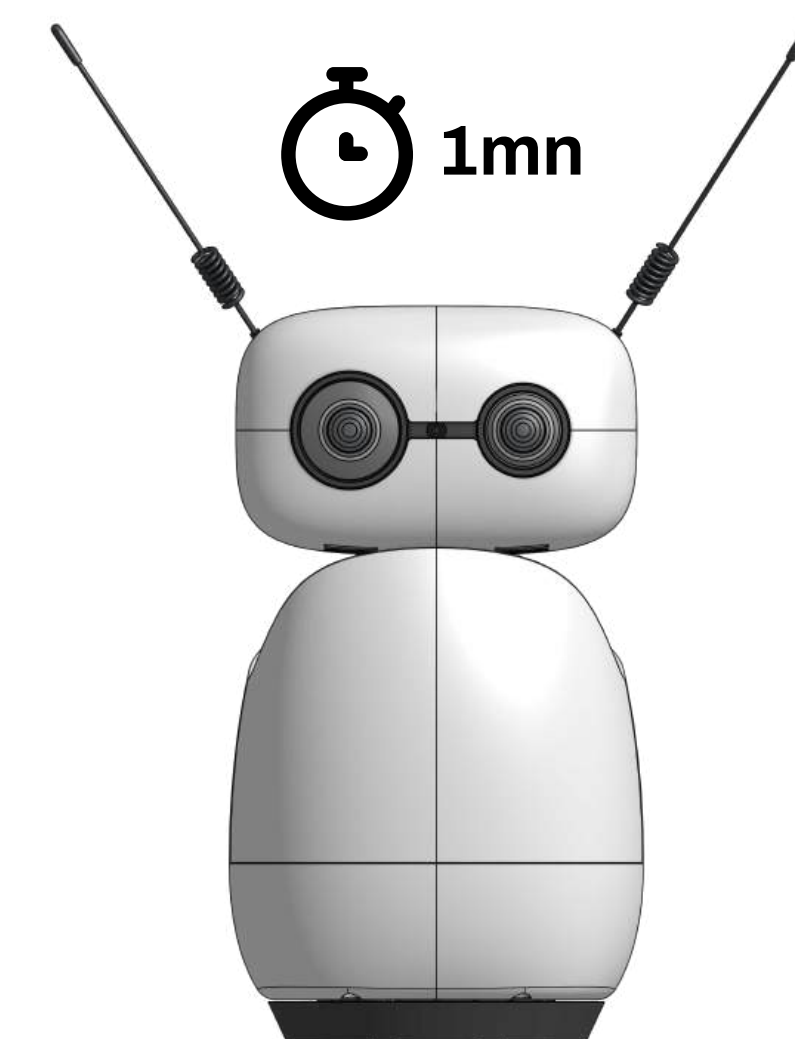
50/51 Head



x2
Antenna



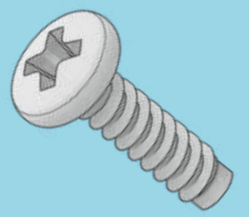
x2
Antenna
Body



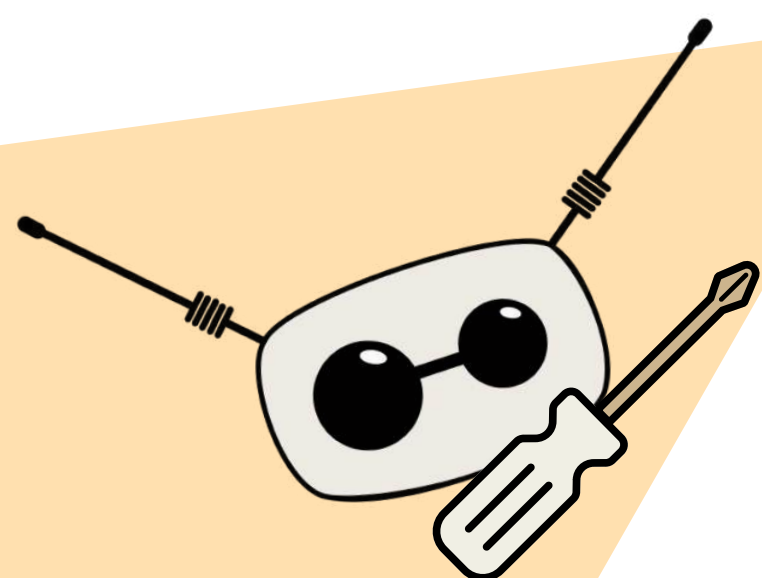
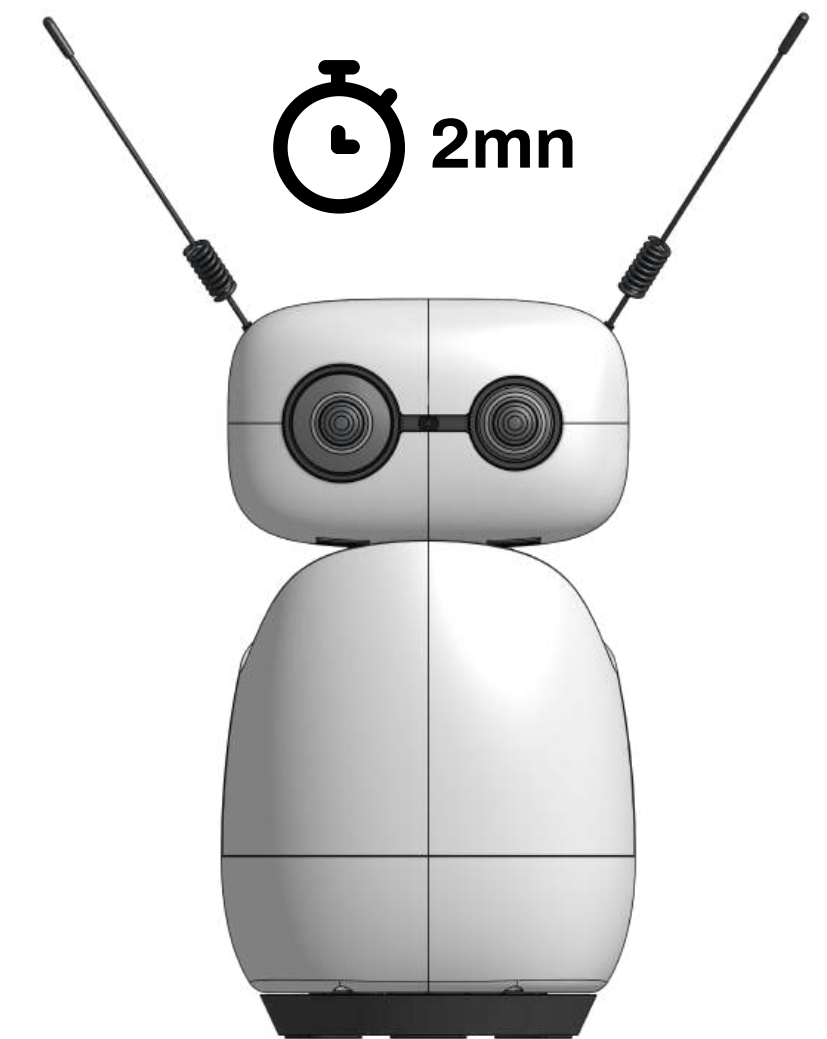
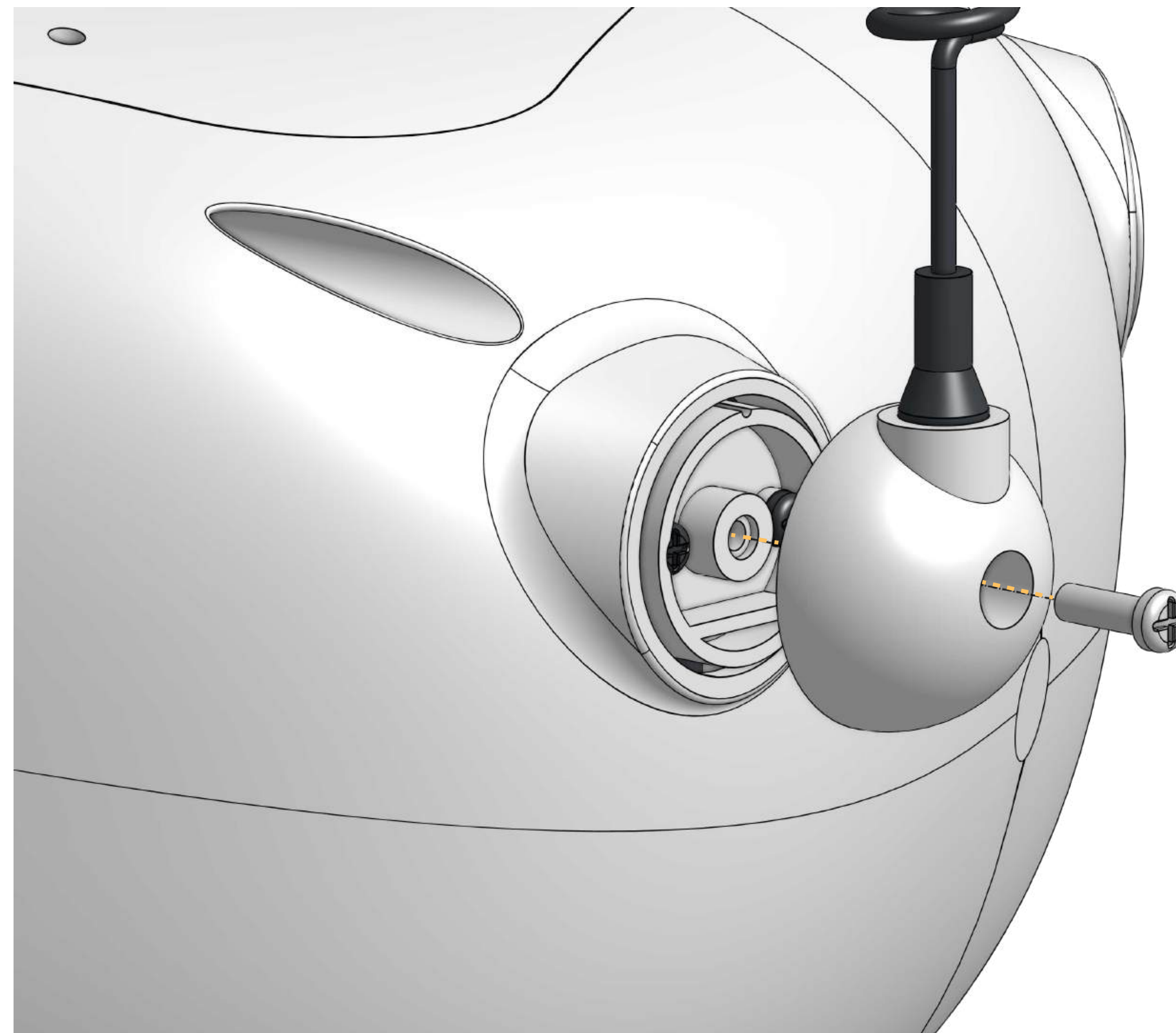
Put the Antenna into the Antenna Body and repeat to the other.



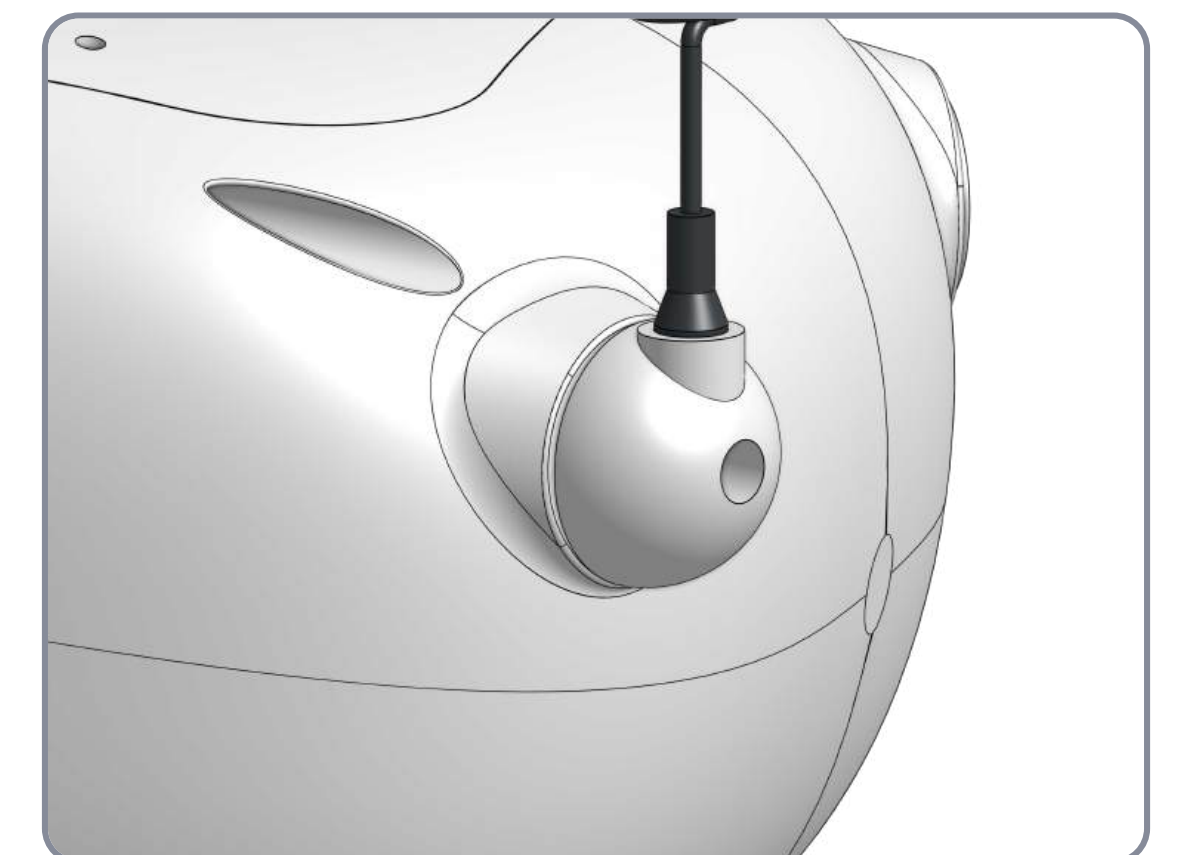
51/51 Head



x2
2.5x8mm
Screw



Fix Antennas with **2.5x8mm** screws.



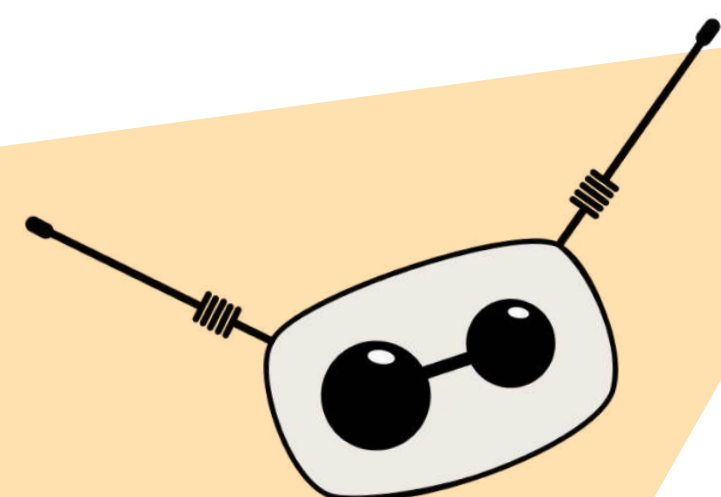
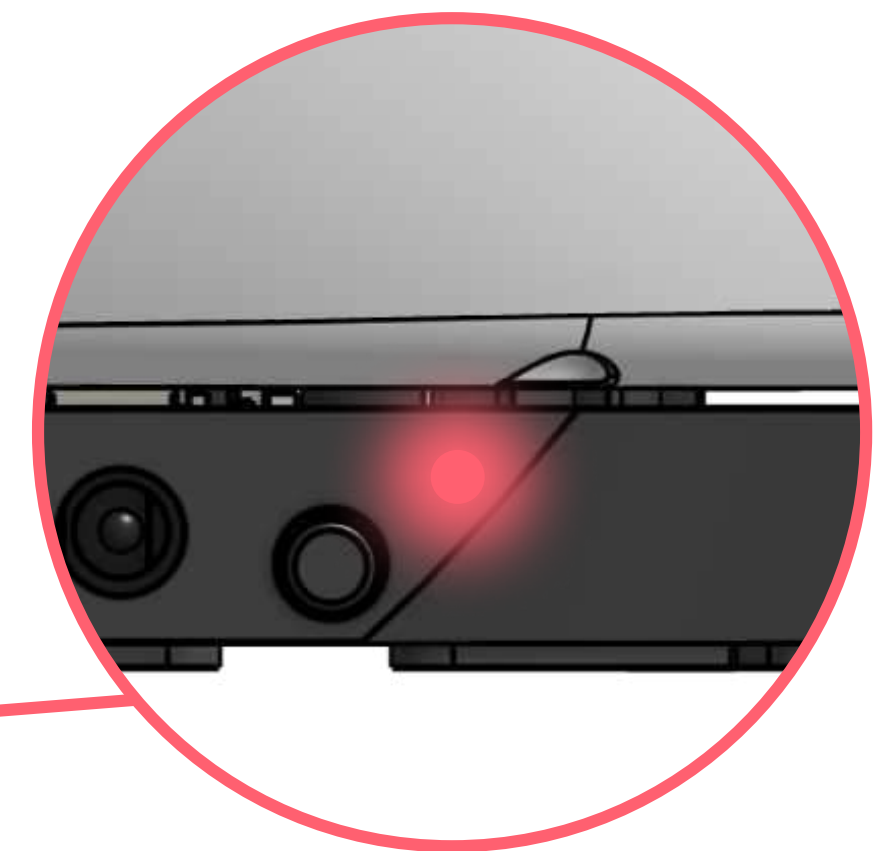
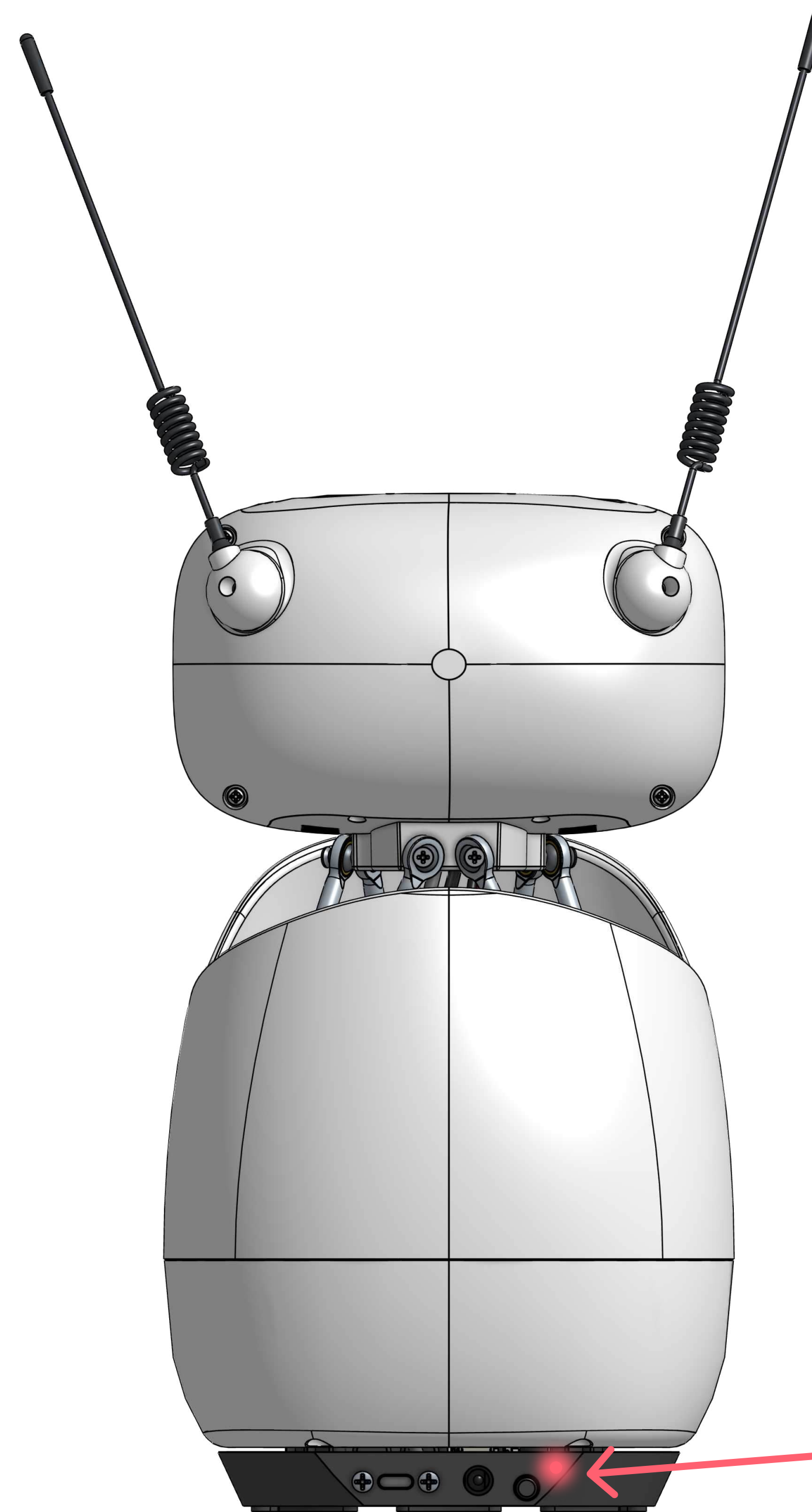
It's time to turn it on!



Connect Reachy Mini to the **Power Cable**



Turn on Reachy Mini



When power is supplied correctly, the LED lights up red.

Get started and enjoy!

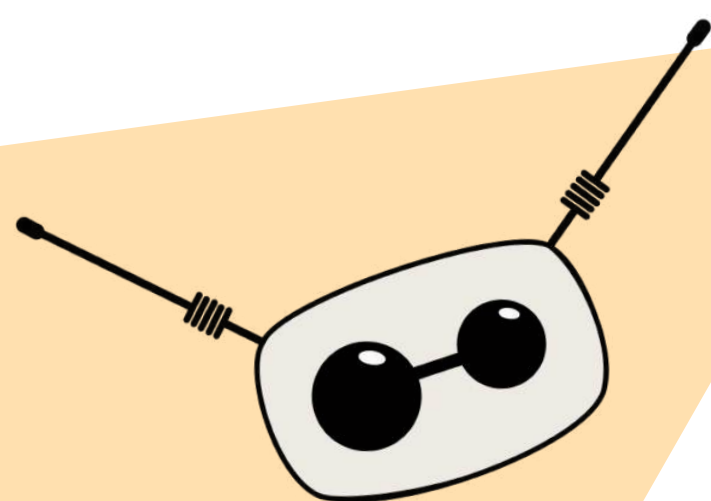
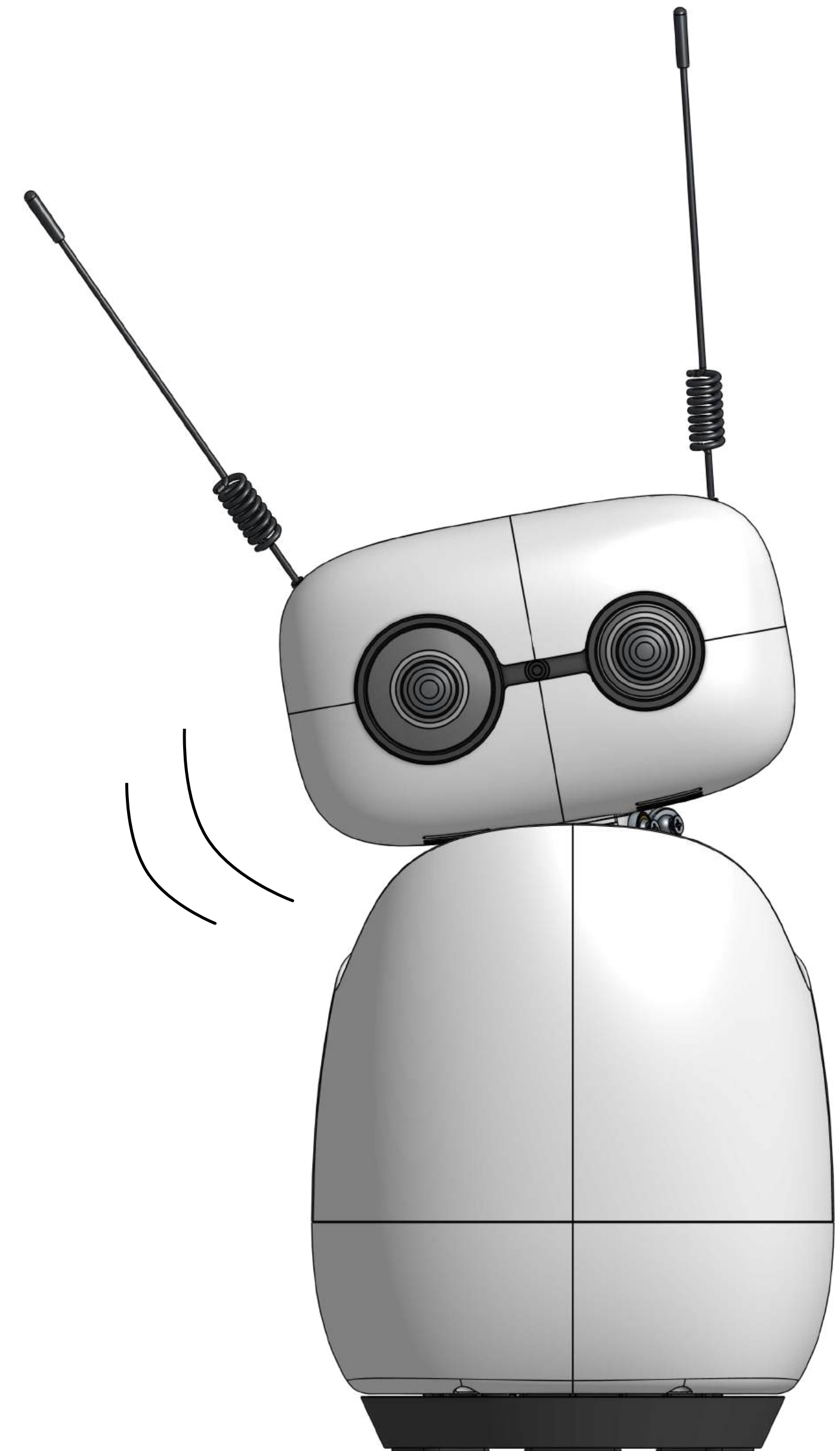


Connect Reachy Mini to your computer using the provided **USB cable**



To get started visit:

github.com/pollen-robotics/reachy_mini





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ROBOTICS

X



Hugging Face

Pollen Robotics SAS, 2 place Jean Jaurès 33000 Bordeaux, France