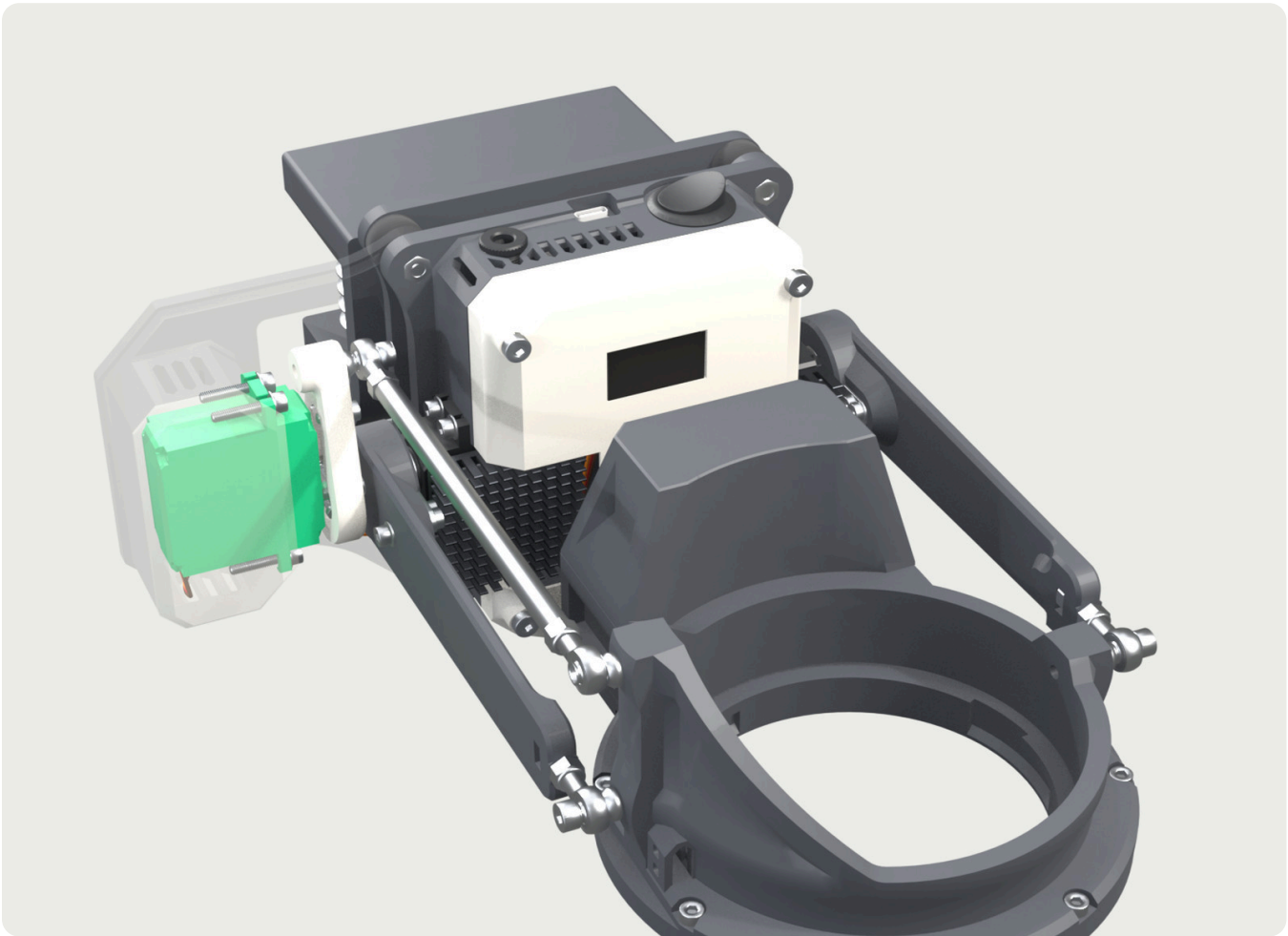


Replacing the pitch motor

OSR2 · VESPERA Edition



Before you start

- Switch the OSR2 off and unplug it.
- Hex keys for M4 and M3.
- A tray for the bolts and washers.

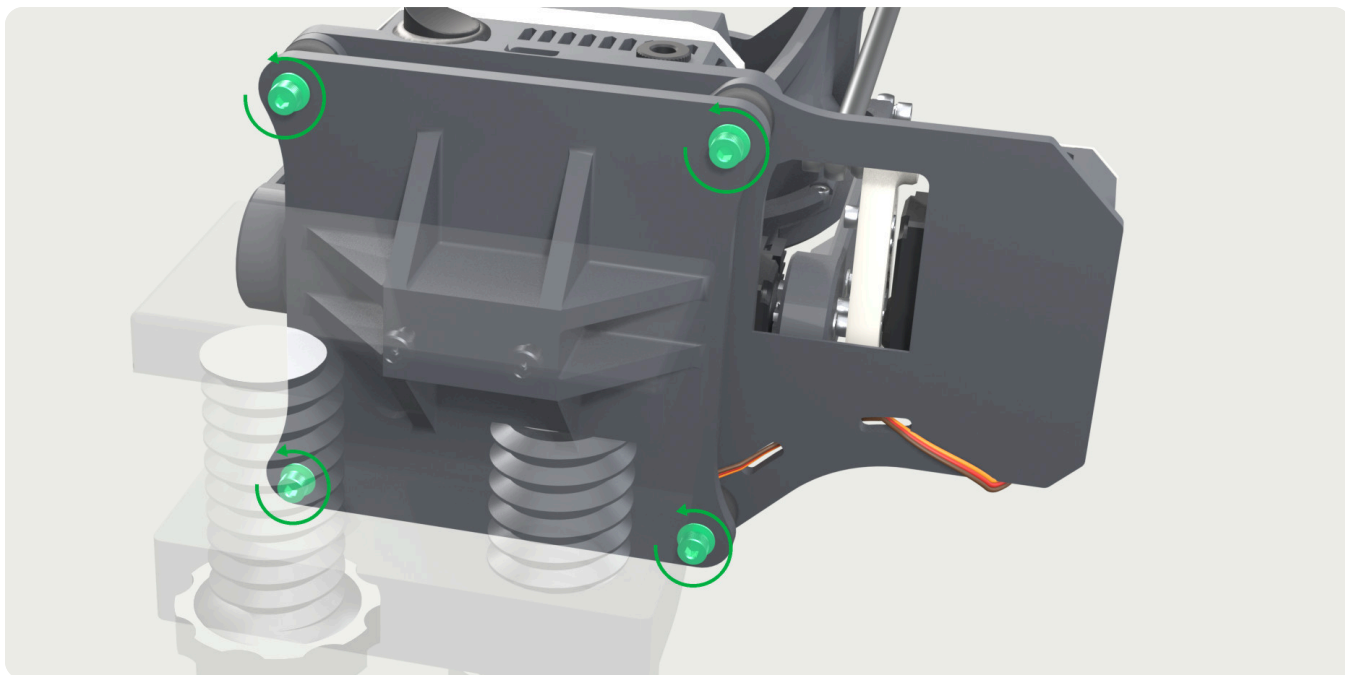
What comes out

1	Desk mount	4× M4×12
2	Pitch mounts	2× M4 rubber mounts
4	Rose joint	1× M4×20 + 3D-printed washer
5	Front lid	4× M3×20
8	Pitch arm	2× M3
9	Motor	4× M3×16

Washers come off with their bolts.

1 Desk mount

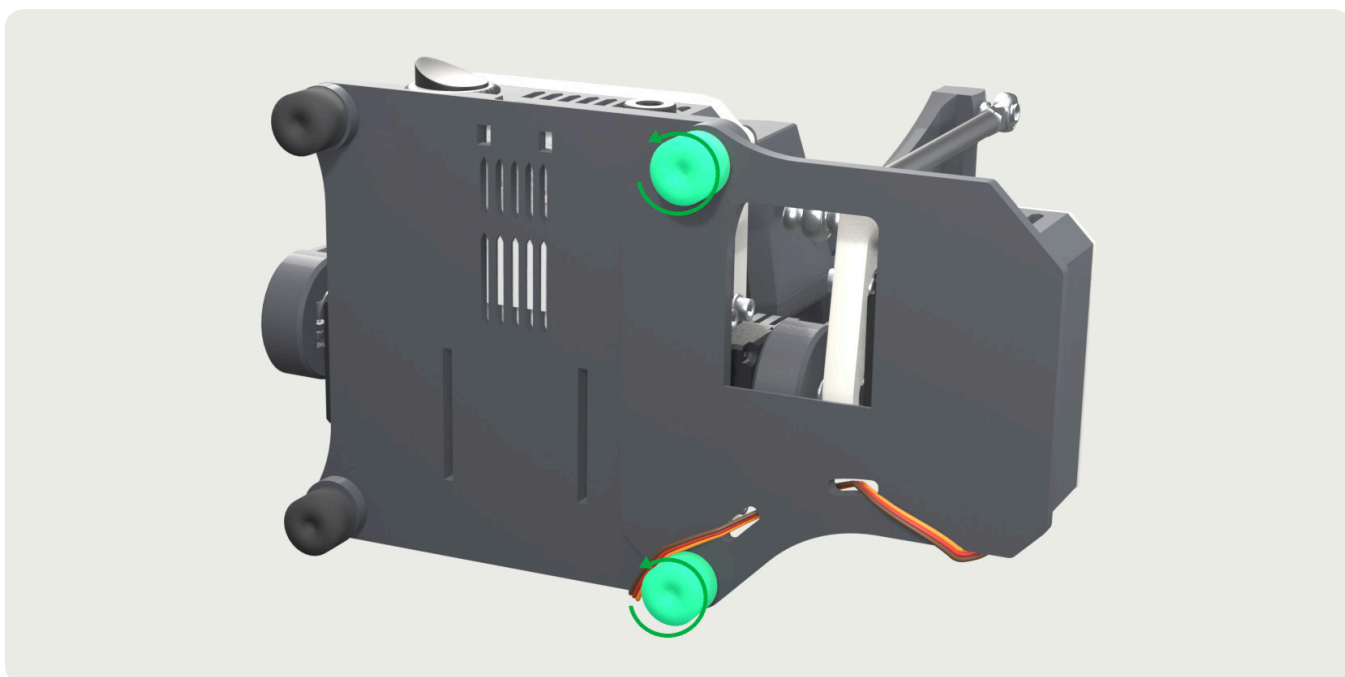
4× M4×12



Washers come off with the bolts, then the desk mount comes away.

2 Pitch mounts

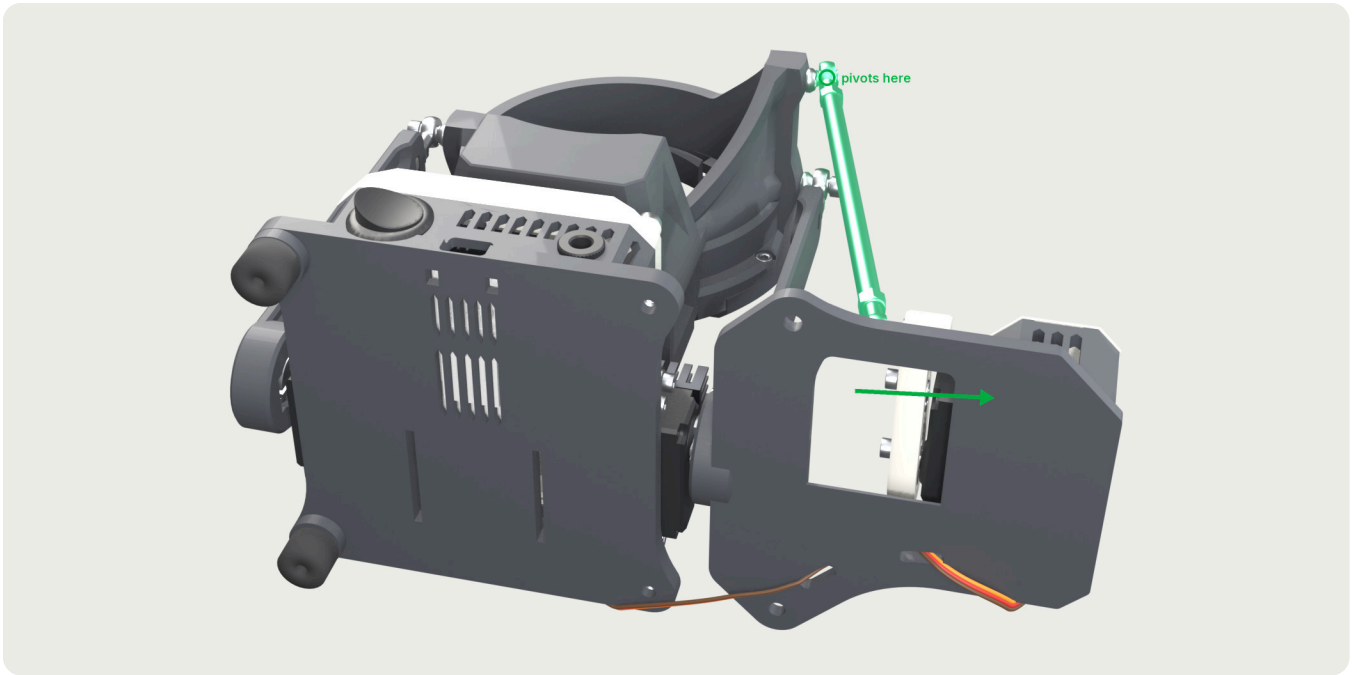
2× M4 rubber mounts



The nuts stay in the body.

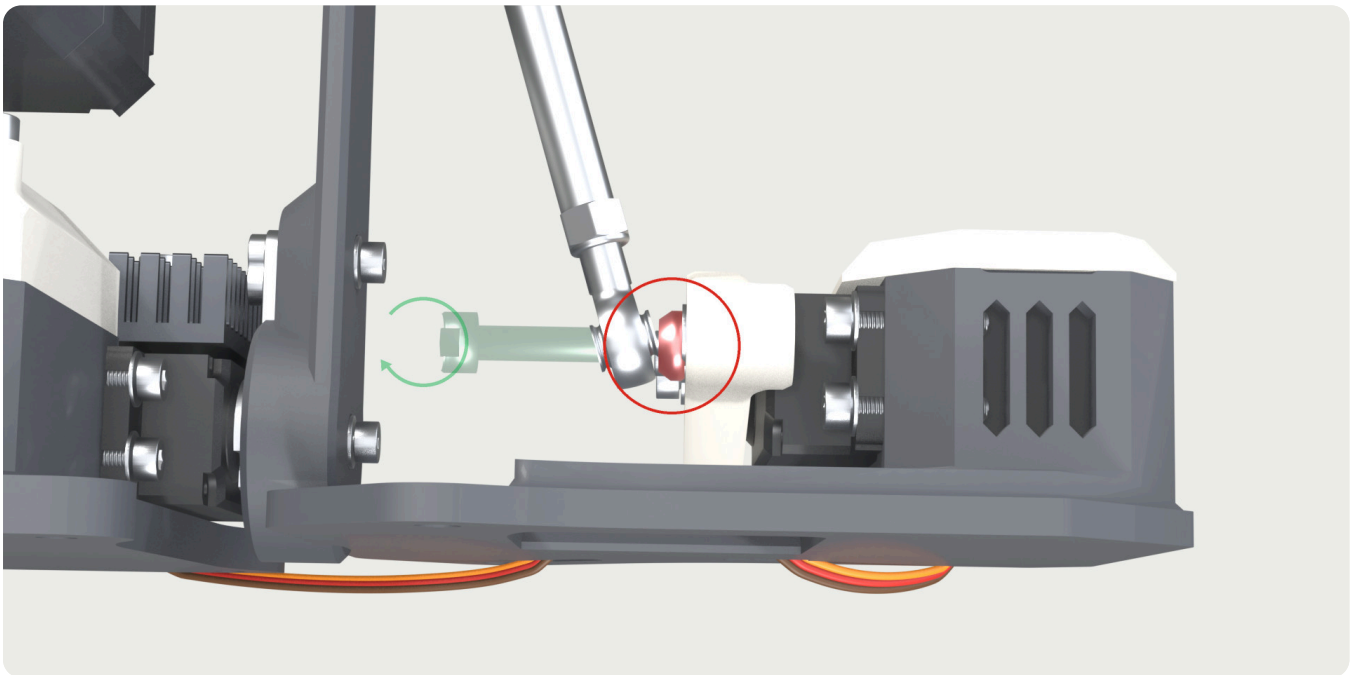
3 Swing the pitch module out

the metal arm pivots at the receiver



4 Rose joint off the pitch arm

1× M4×20

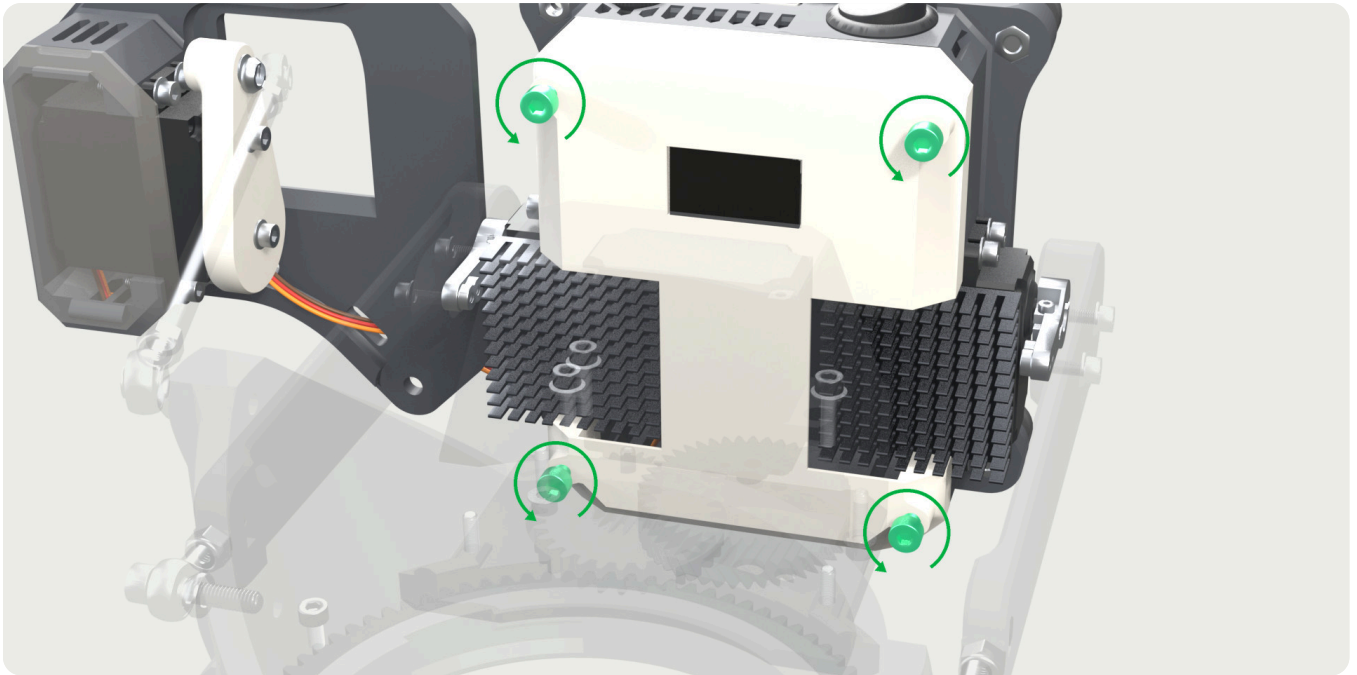


Only the bolt comes out.

○ **3D-printed washer.** Keep this safe, don't lose it.

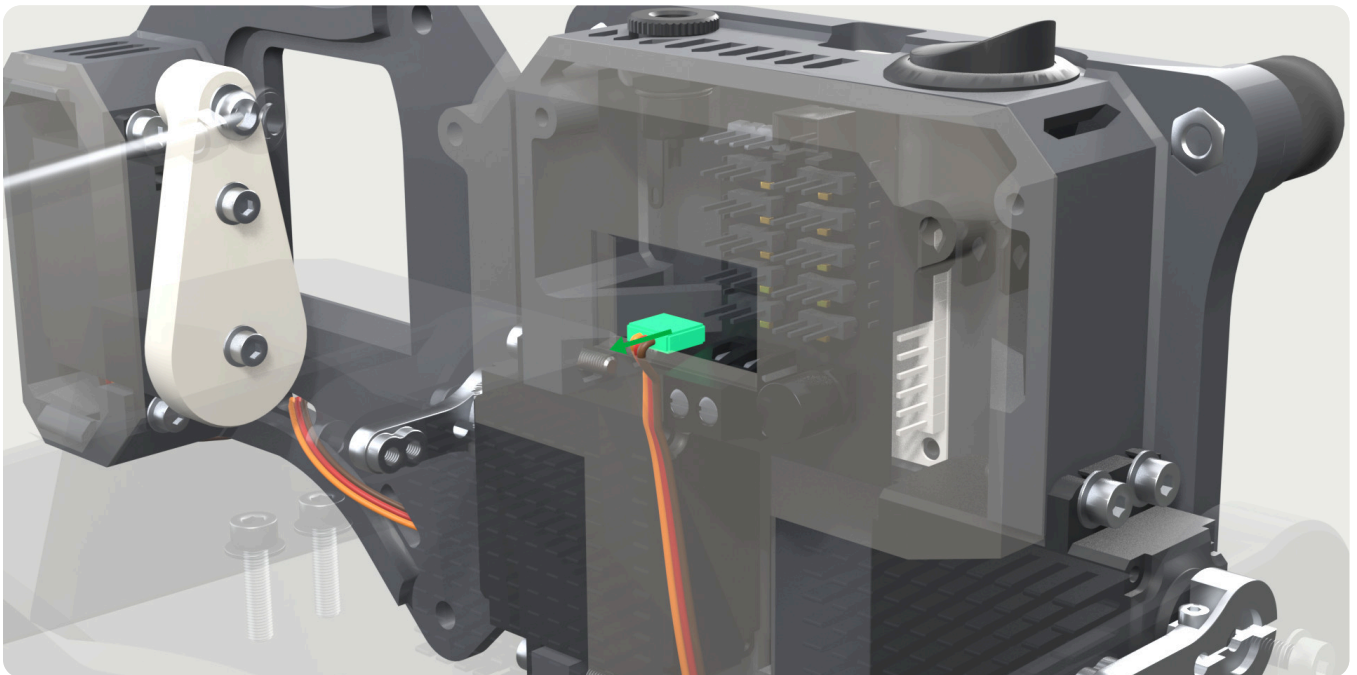
5 Front lid

4× M3×20



6 Unplug from the vESP Power Board

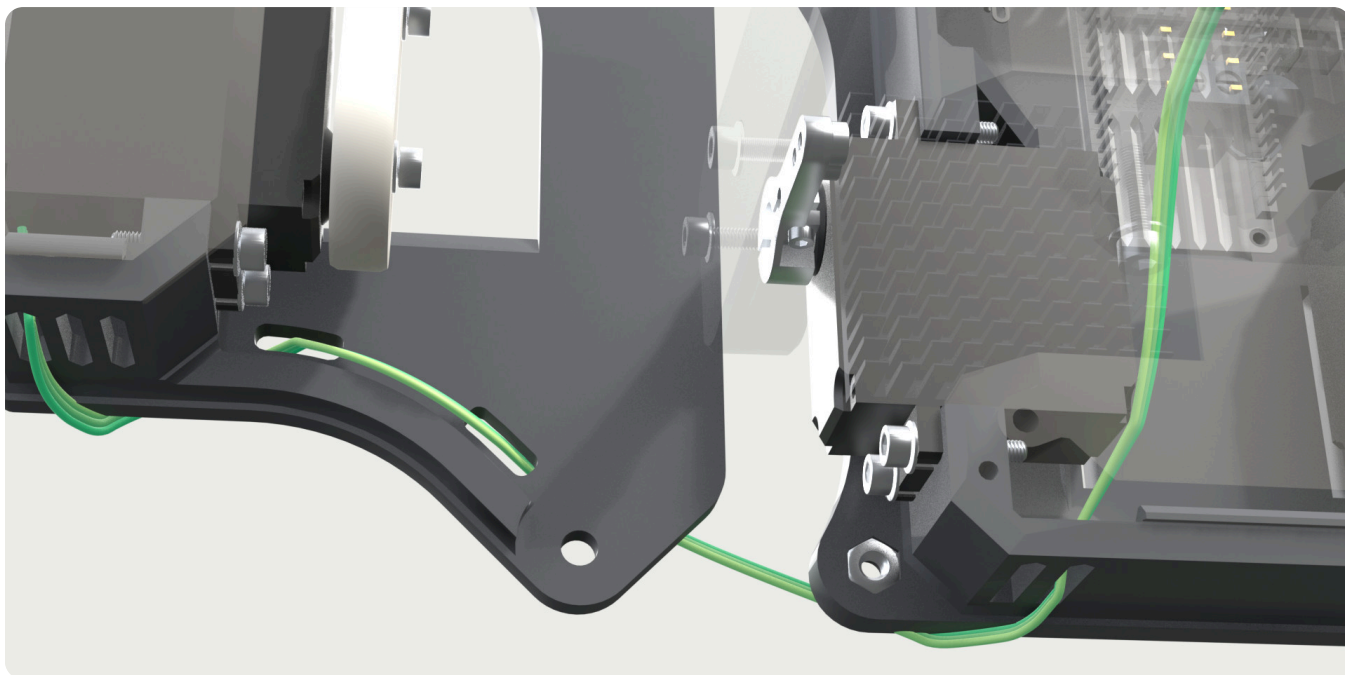
3-pin Dupont



Left side, the first 3-pin Dupont, right above the power terminal. The yellow signal wire is on the outside.

7 Thread the lead out

3-pin Dupont

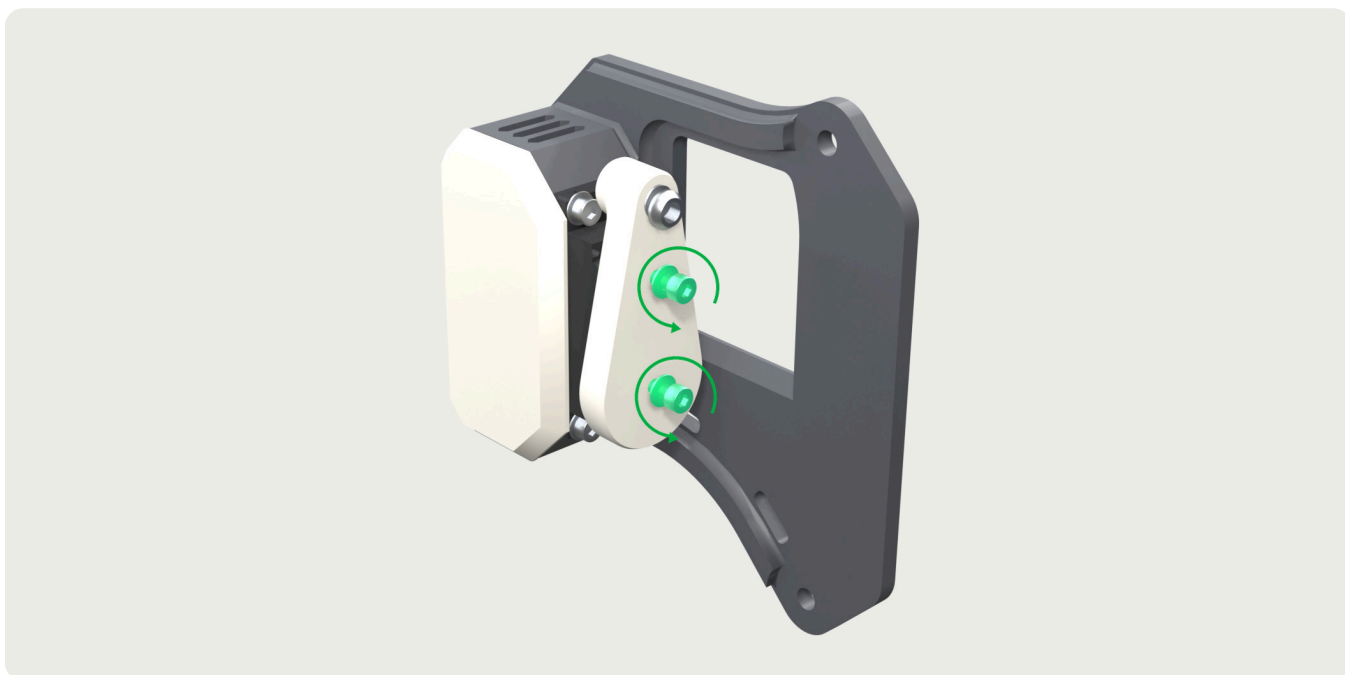


The lead runs from the notch at the bottom, behind the rubber mount and through the 2 slots in the pitch chassis. Bring the plug back out that way; the rest comes out with the motor in step 11.

 Careful when threading the Dupont through the gaps: wiggle rather than force, to avoid breakage.

8 Pitch arm off

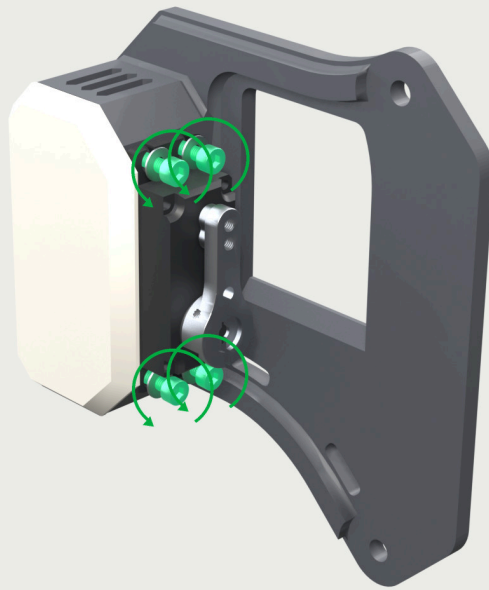
2× M3



9

Motor screws

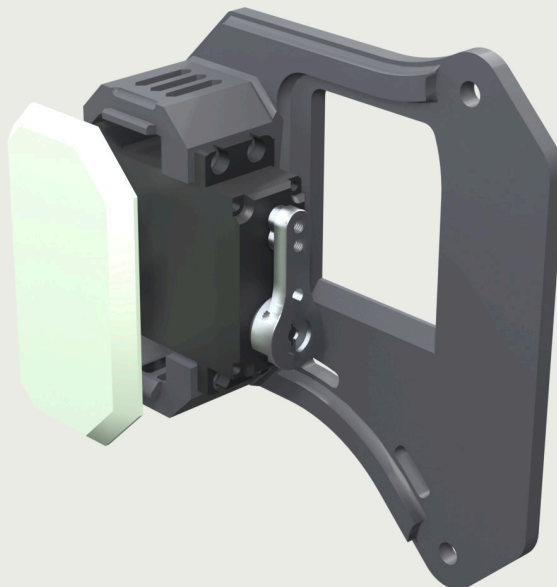
4× M3×16

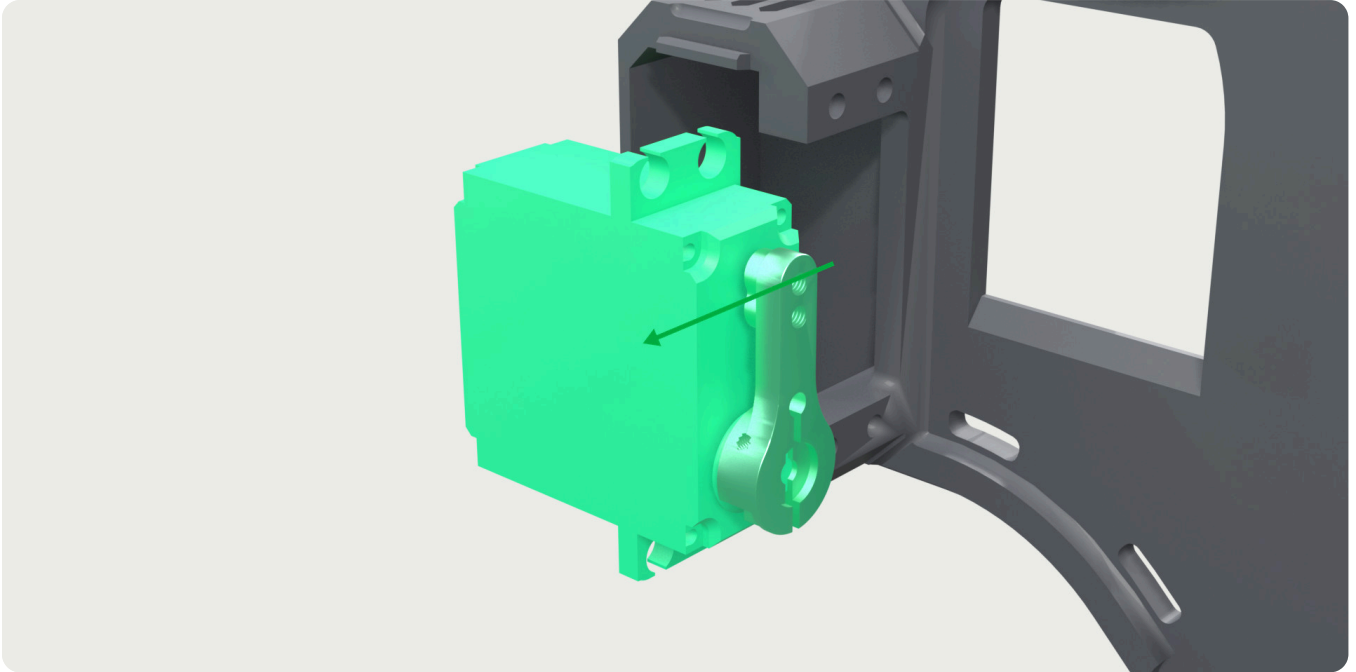


The nut stays where it is.

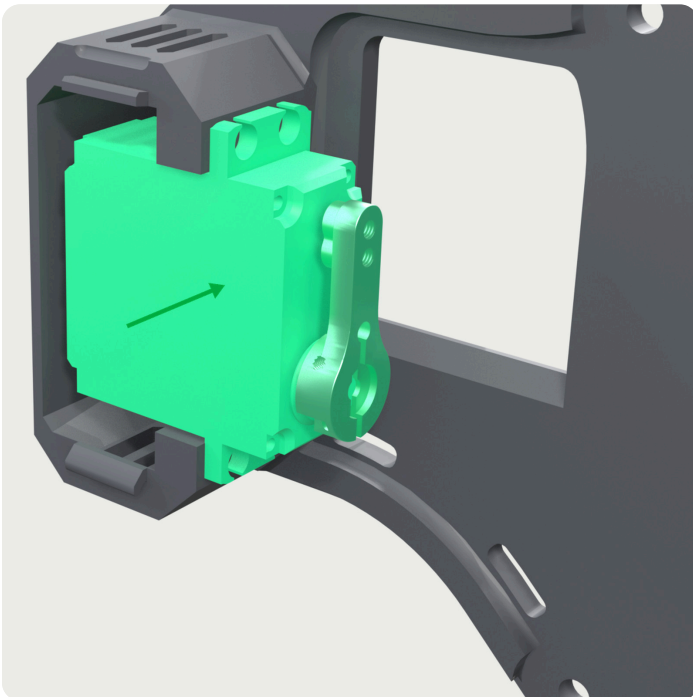
10

Pitch lid off





It comes out upward, not sideways.



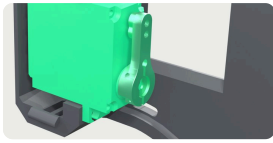
NEW MOTOR

Make sure the servo horn is centered at its 1500

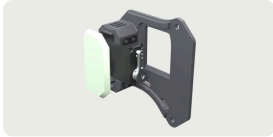
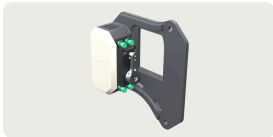
Plug it back and boot device (on/off) before re-assembly to re-home the centre horn so it aligns.

Thread the cable in first, it's impossible to do it otherwise: put the cable through the pitch notch, then screw it in.

Work back in reverse

**11 New motor in**

Cable through the pitch notch first.

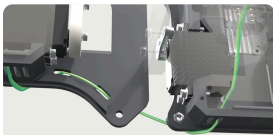
**10 Pitch lid on****9 Motor screws**

4× M3×16

**8 Pitch arm on**

Servo horn centered at its 1500 first.

2× M3

**7 Thread the lead back**

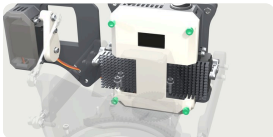
⚠ Through the 2 slots in the pitch chassis, behind the rubber mount, in at the notch at the bottom. Wiggle rather than force.

3-pin Dupont

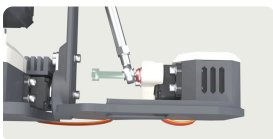
**6 Plug into the vESP Power Board**

Left side, the first 3-pin Dupont, right above the power terminal. Yellow signal wire on the outside.

3-pin Dupont

**5 Front lid**

4× M3×20

**4 Rose joint on the pitch arm**

○ With the 3D-printed washer.

1× M4×20

**3 Swing the pitch module back in****2 Pitch mounts**

2× M4 rubber mounts

**1 Desk mount**

With the washers.

4× M4×12