Qoobo Teardown

Teardown of "Qoobo - Robot Pillow with a Tail" by Yukai Engineering

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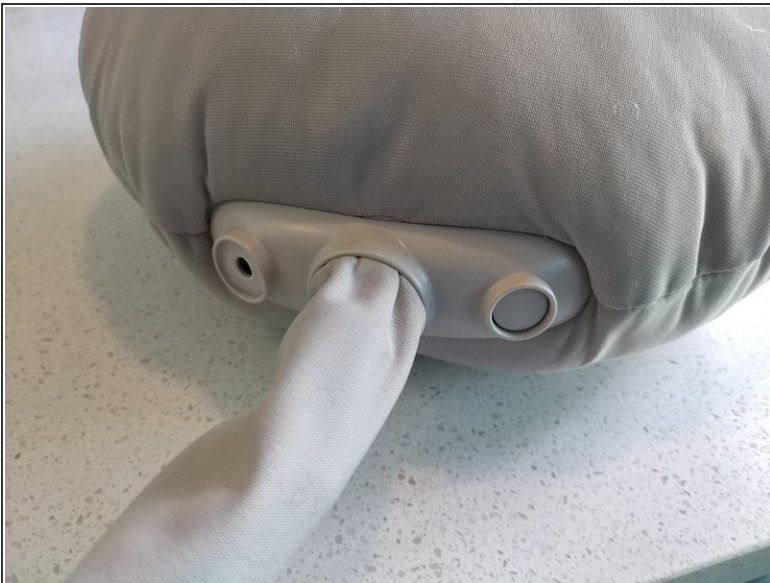## TOOLS:

- Phillips #0 Screwdriver (1)
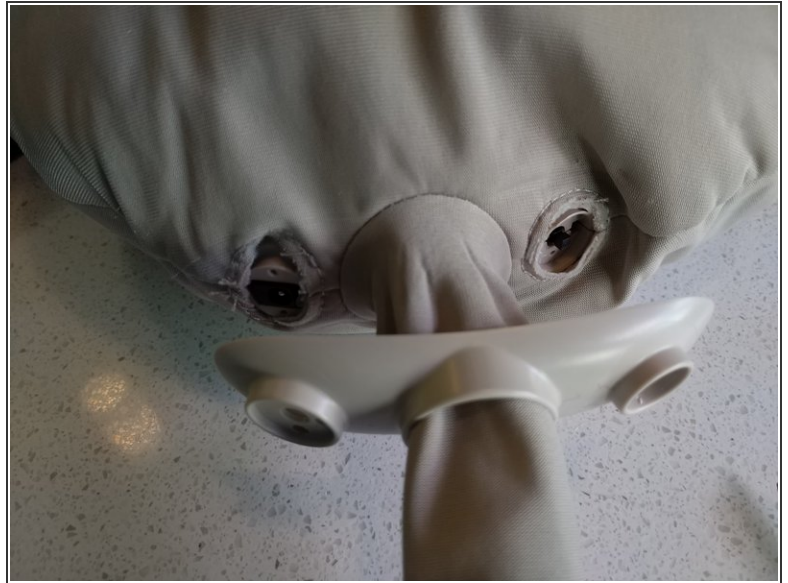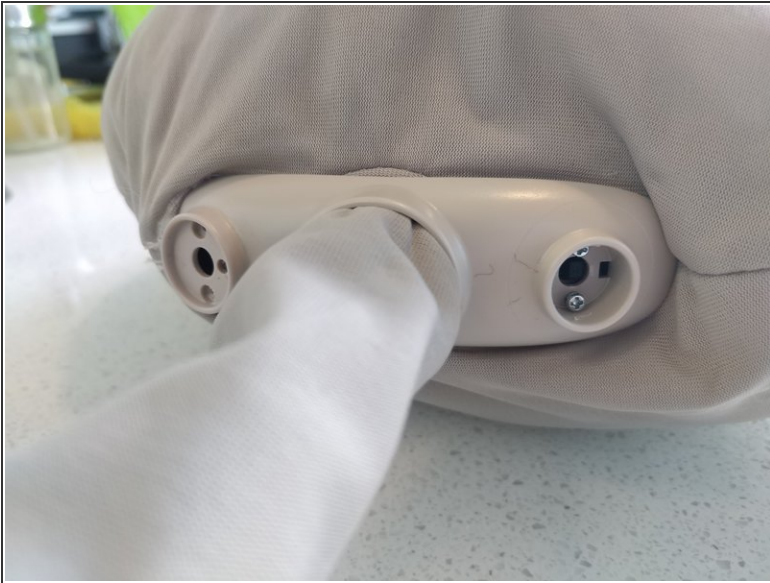
Step 1 — Remove outer cover

- Unzip, and remove.

Step 2 — Remove screws near charging port

- Remove the circular sticker around the charging port. This reveals two screws, which should also be removed.

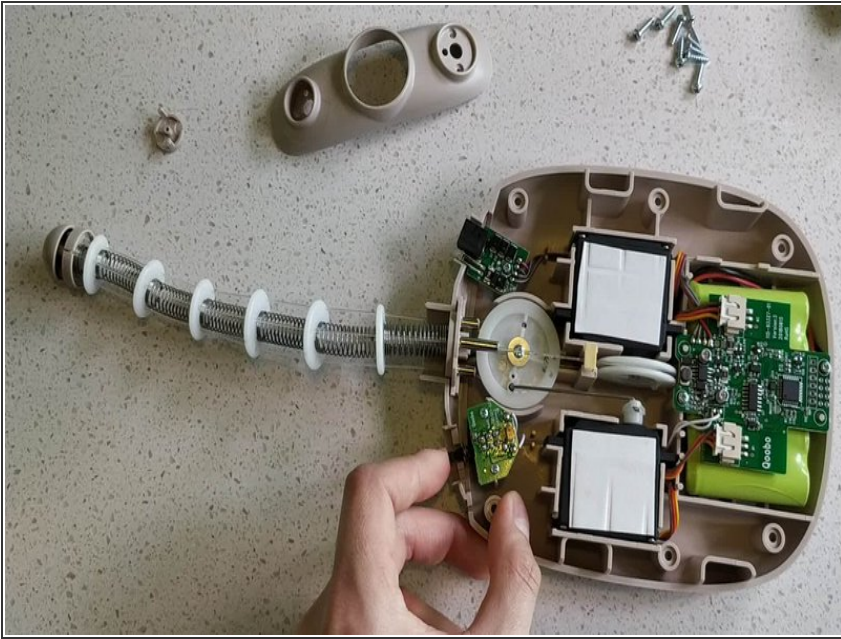## Step 3 — Remove screws under power button

- The power button can be dislodged with a small knife, revealing another 2 screws.

- Once these screws are removed, the plastic plate should come loose and can be removed.
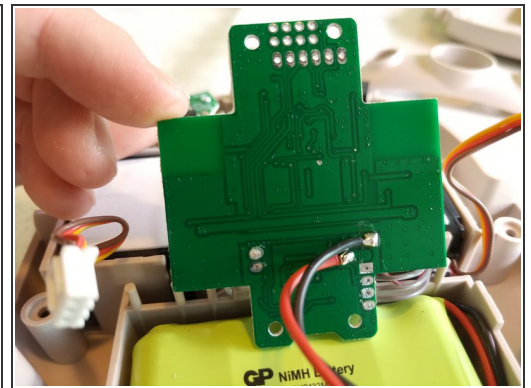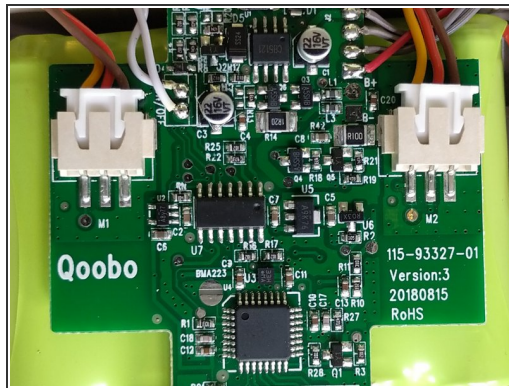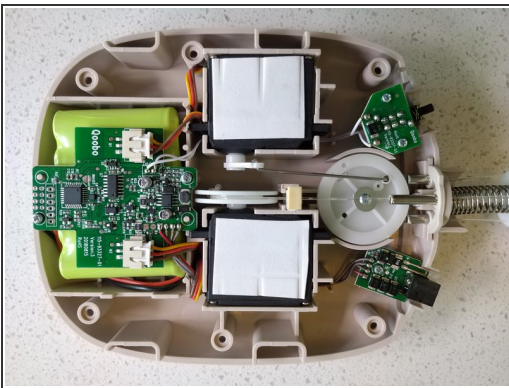
Step 4 — Remove the inner cushion shell

- Unzip the inner fabric shell, and remove the plastic "heart" of the device.

Step 5 — Robot tail mechanism

- The tail has 2 degrees of freedom. One servo is used for the X axis, another for the Y axis. The tail itself is made up of springs, with stretchable cables acting as "tendons"

Step 6 — Close ups of the main board

- U1: reads "CB5121". Probably a PMIC

- U4: Unmarked 32 pin IC is almost certainly the main microcontroller.

- U3: BMA223 Accelerometer (used for detecting motion, for when the pillow should wag its tail)

- U7: Unmarked 14 pin IC.

- There is an unpopulated 6 pin header that looks like a serial port (UART)

- There is an unpopulated 8 pin header that is probably for debug / flashing

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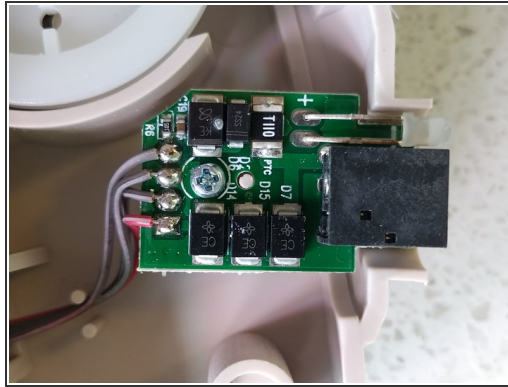
Step 7 — Other boards

- Simple board for the power switch.

- Another board has the charging port and LED

- Ni-MH battery rated at 6.0V and 1300mAh

Step 8

- Servos are unmarked, but appear to be standard hobby-grade servos.