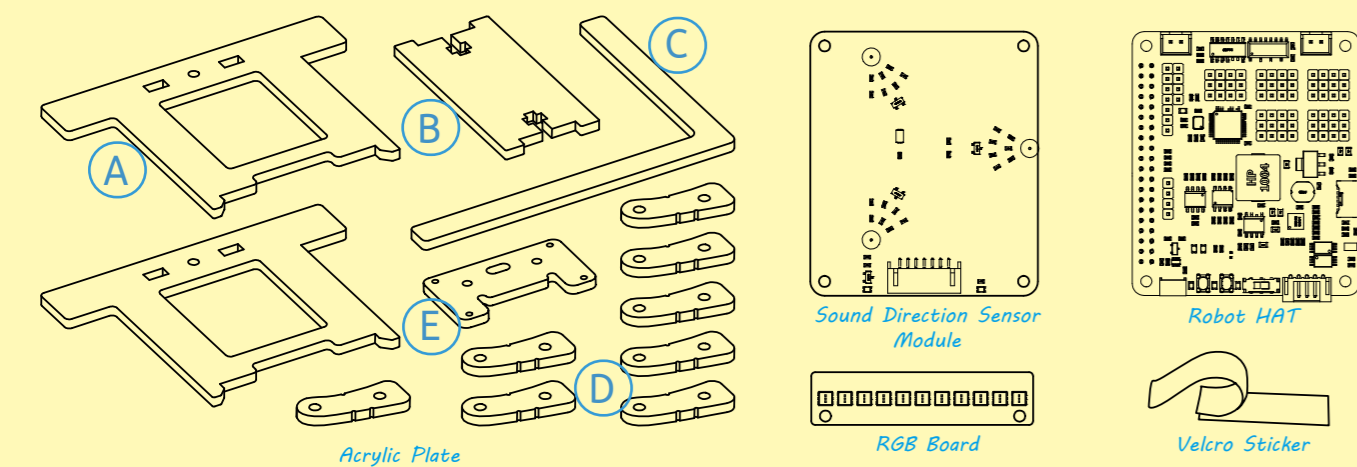
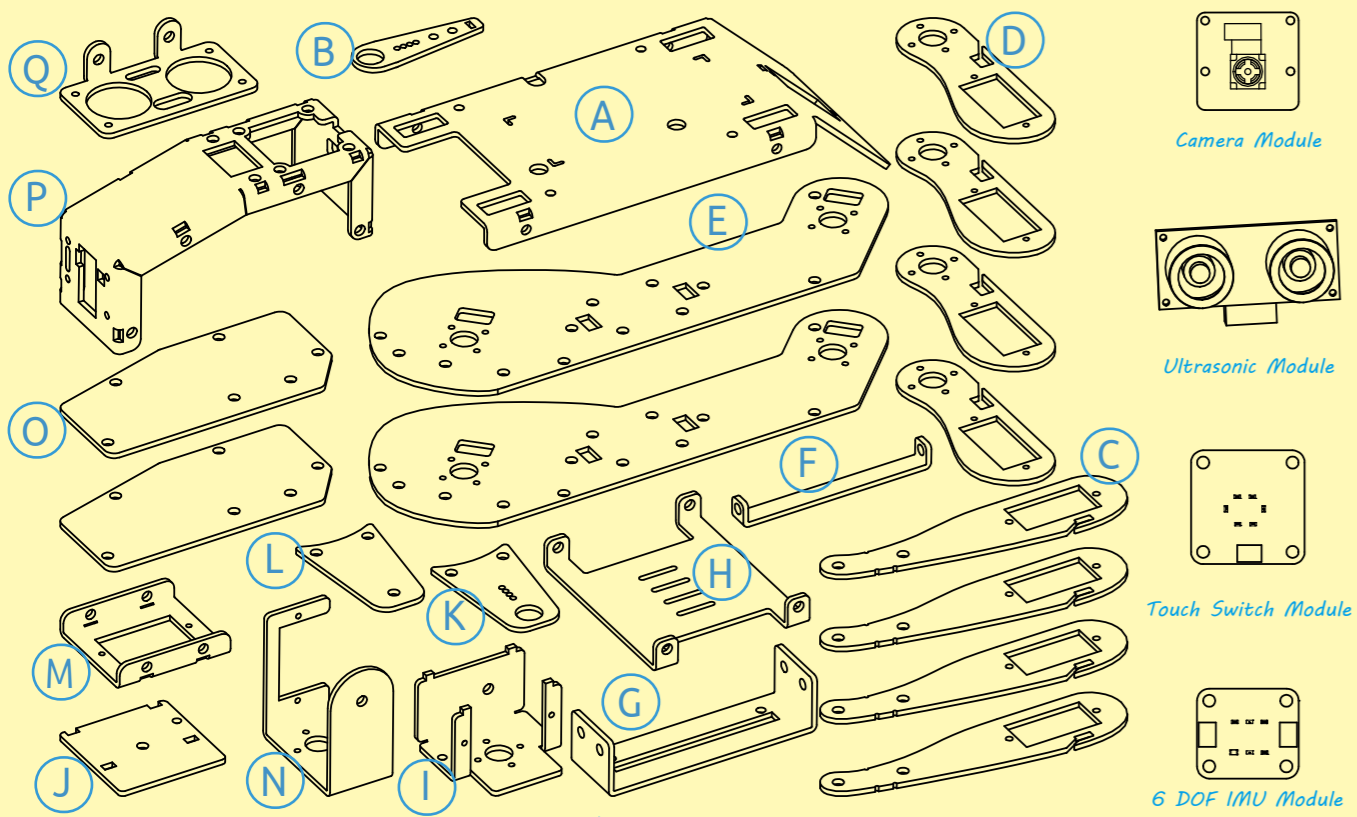


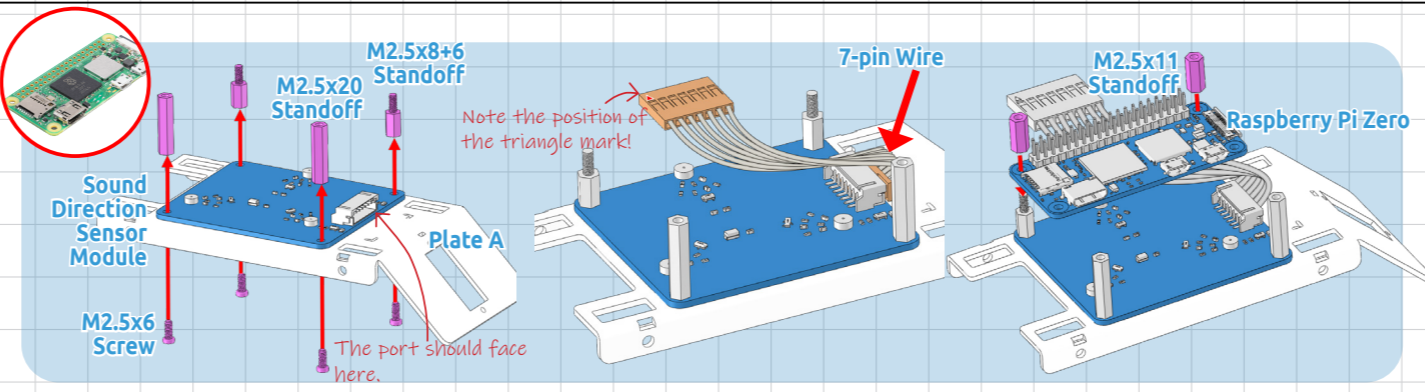
SUNFOUNDER PIDOG KIT

Get tutorial at: pidog.rtfid.io



- M1.5x3 Self-tapping Screw(46)
- M2x4 Screw(26)
- M2x8 Screw(6)
- M2.5x6 Screw(12)
- M3x6 Screw(18)
- M3x12 Screw(4)
- M3 Nut(4)
- Spring Washer(10)
- Metal Washer(4)
- R2048 Rivet(6)
- R2655 Rivet(4)
- R3055 Rivet(34)
- R3090 Rivet(10)
- M2.5x8+6 Standoff(6)
- M2.5x11 Standoff(6)
- M2.5x20 Standoff(5)
- M3x11 Copper Standoff(6)
- Servo(12)
- Screwdriver(2)
- Wrench
- Battery
- FPC / FFC
- 4-pin Wire
- 7-pin Wire
- Cable Warp
- Cable Tie(2)

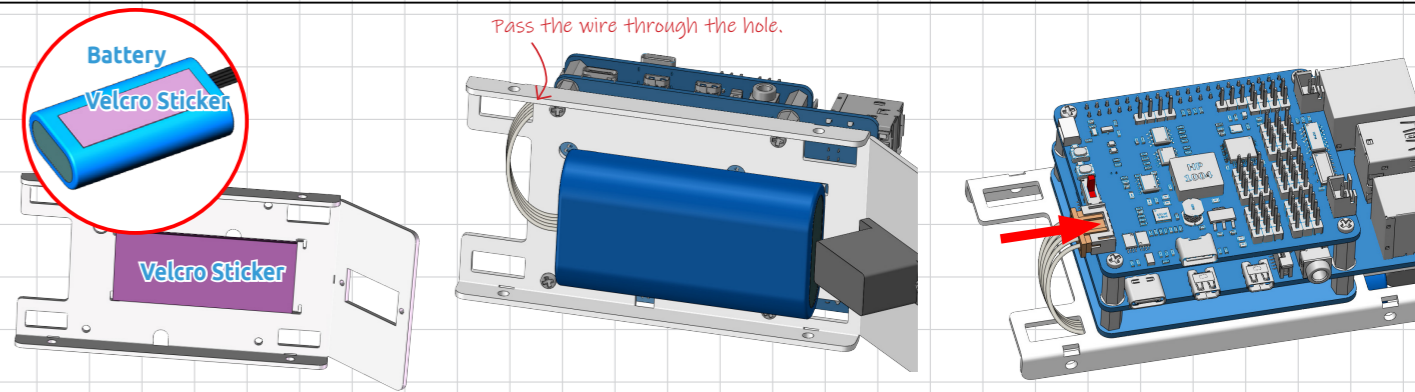
ASSEMBLE



Step 1 If you're using a **Raspberry Pi Zero**, start here. Mount the sound direction sensor module on top of Plate A.

Step 2 Insert a 7-pin wire to the module.

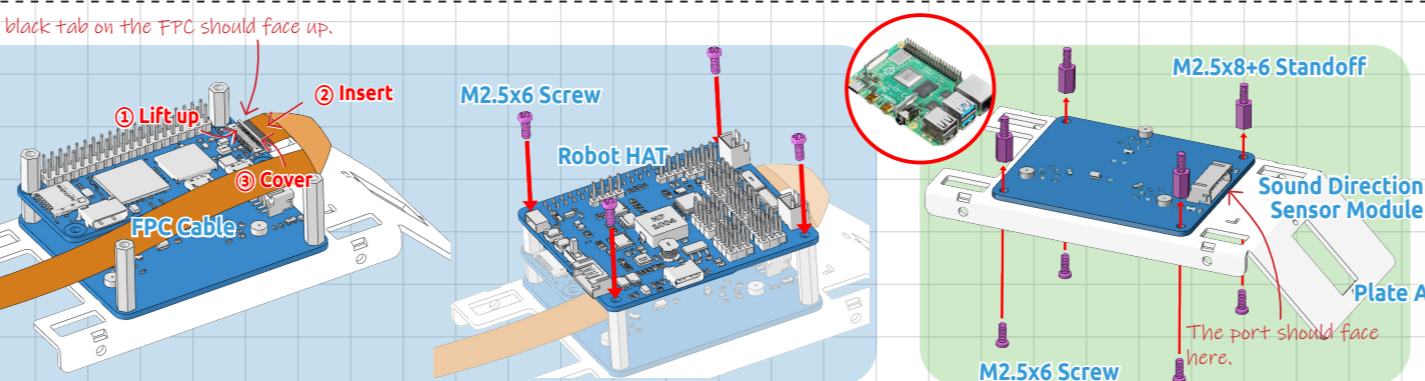
Step 3 Attach the Raspberry Pi Zero to the top of the sound direction sensor module.



Step 8 Put a velcro on the bottom of plate A. Attach the other side of the velcro to the battery.

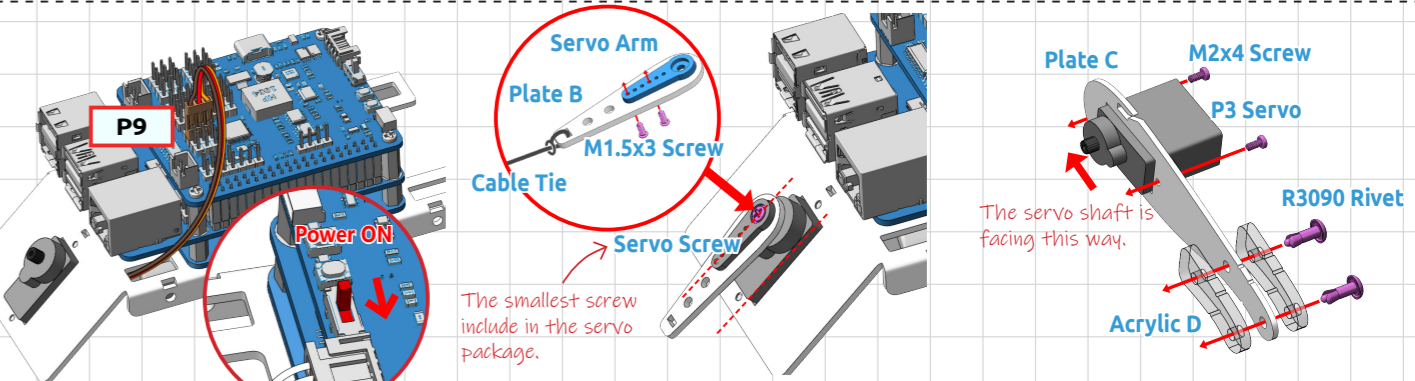
Step 9 Stick the battery to the bottom of Plate A.

Step 10 Plug the battery wire into the Robot HAT.



Step 4 An FPC is inserted into the Raspberry Pi to connect the camera module.

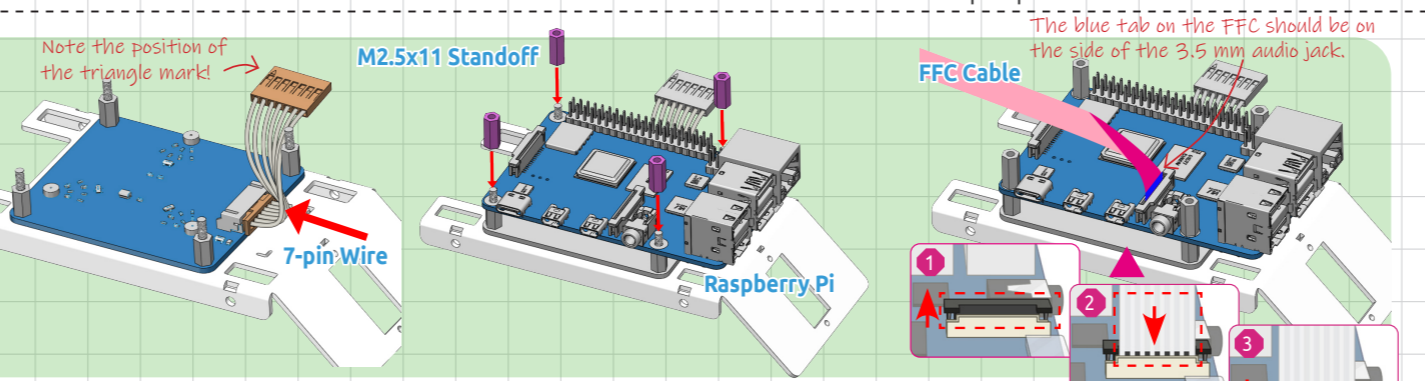
Step 5 Now insert and secure the Robot HAT.



Step 11 Plug the servo wire into "PWM 9" of the Robot HAT. On the Raspberry Pi run "servo_zeroing.py" to adjust the servo.

Step 12 Now to make a flexible tail for PiDog and secure it up.

Step 13 Assemble a lower leg.

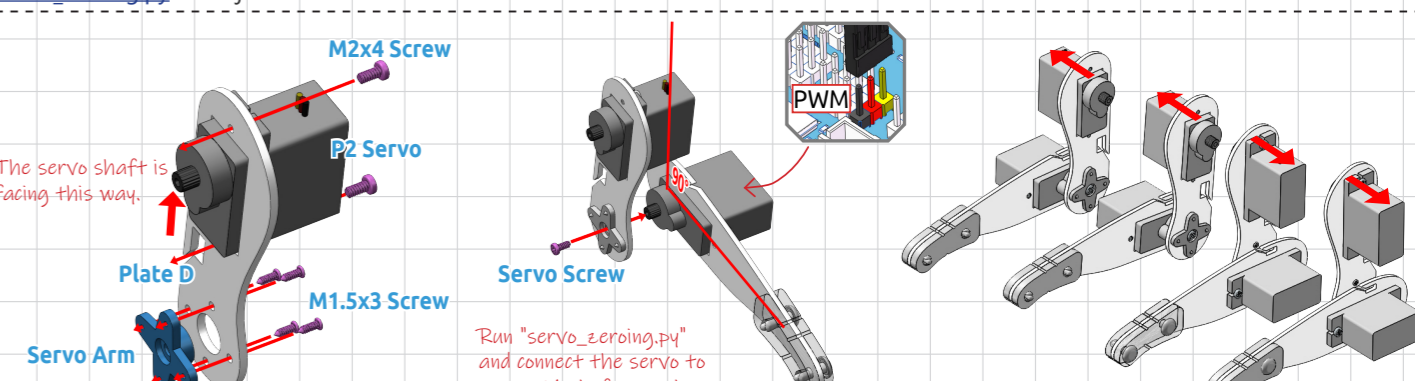


Step 1 If you're using a **Raspberry Pi**, start here. Mount the sound direction sensor module on top of plate A.

Step 2 Insert a 7-pin wire to the module.

Step 3 Attach the Raspberry Pi to the top of the sound direction sensor module.

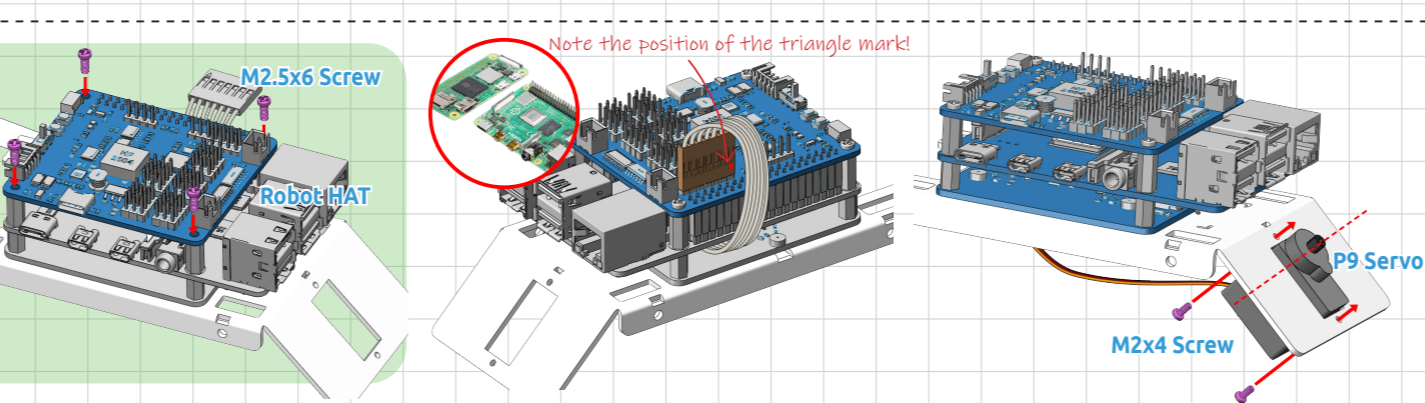
Step 4 An FFC is inserted into the Raspberry Pi to connect the camera module.



Step 14 And then assemble a upper leg.

Step 15 Now connect upper leg and lower leg together at a 90 degree angle.

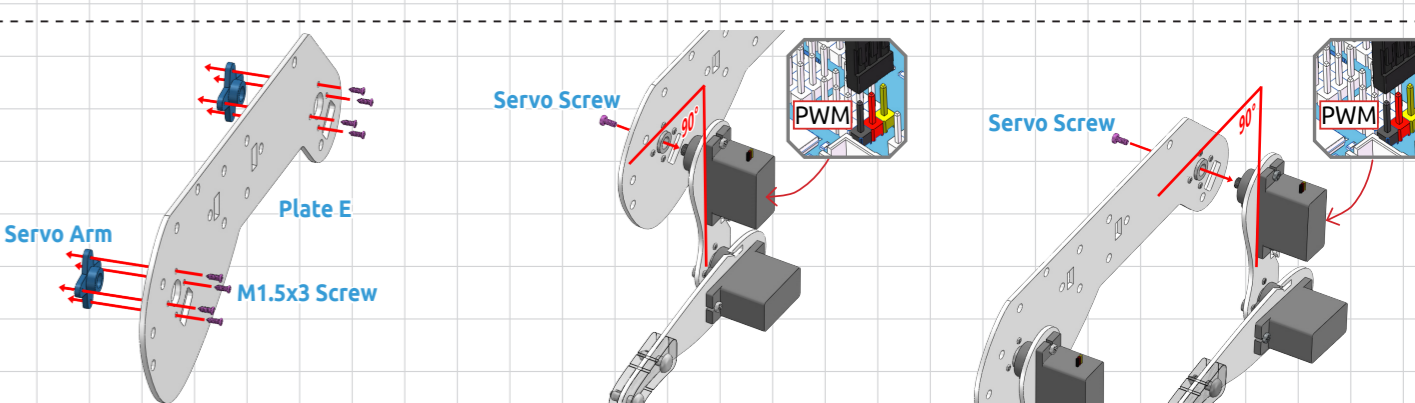
Step 16 Repeat steps 16~18 to make 4 legs. Note that there are 2 left and 2 right.



Step 5 Now insert and secure the Robot HAT.

Step 6 The next steps apply to both. Plug the 7-pin wire into the Robot HAT, noting the direction of the triangle mark.

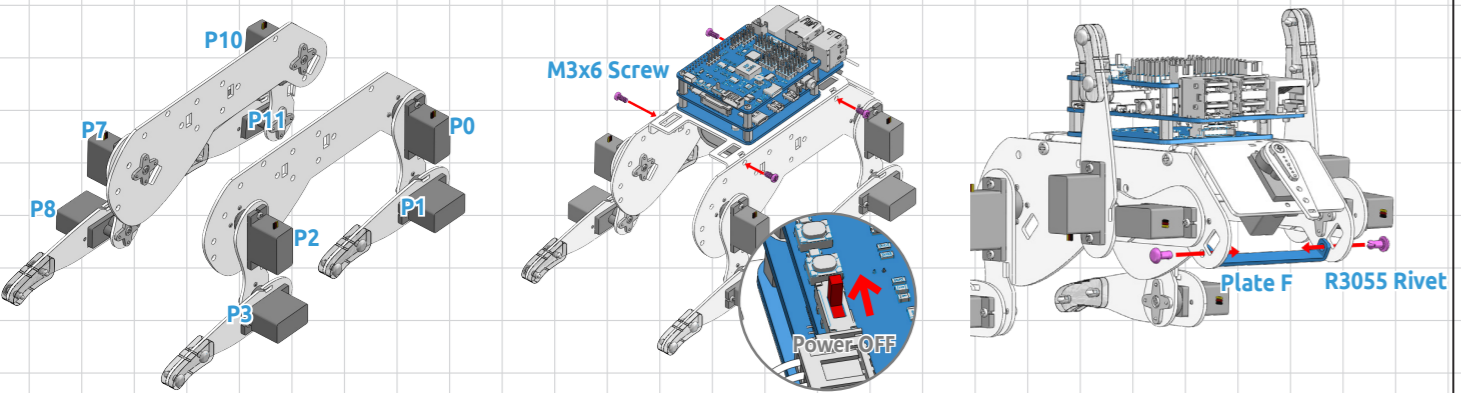
Step 7 Attaching a servo to plate A. P9 should be marked on the wire connector for easy differentiation, since it's also where the servo should be connected.



Step 17 Attach two cross servo arms to plate E.

Step 18 Secure the assembled leg to plate E at a 90 degree angle.

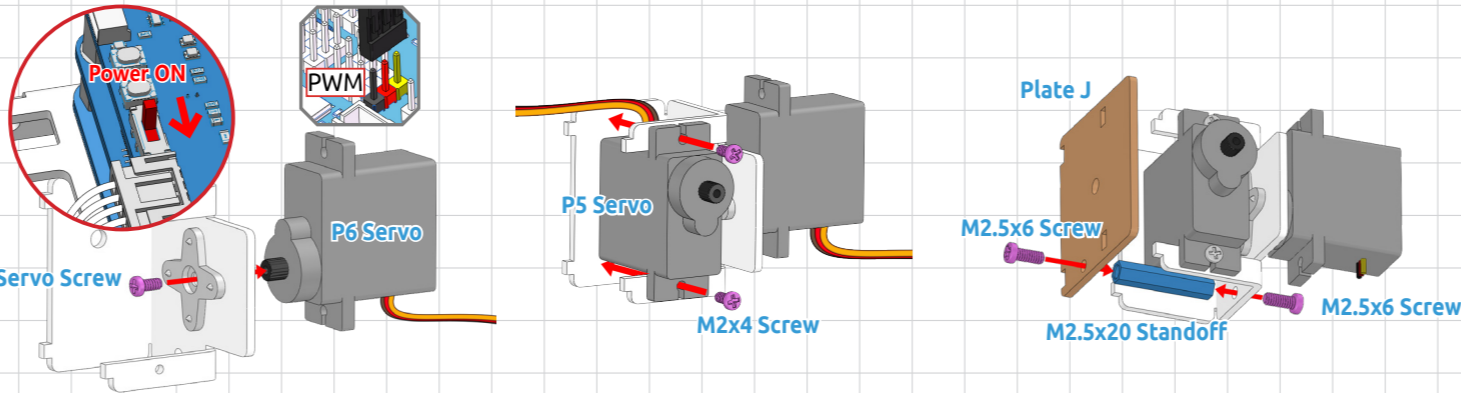
Step 19 Follow the previous steps to assemble the other leg and secure it to the plate E.



Step 20
Remember to zero each servo before assembling and make sure the legs on both sides are symmetrical. It is recommended to label all servo wire connectors as shown.

Step 21
Combine the body parts of PiDog. You can power off now.

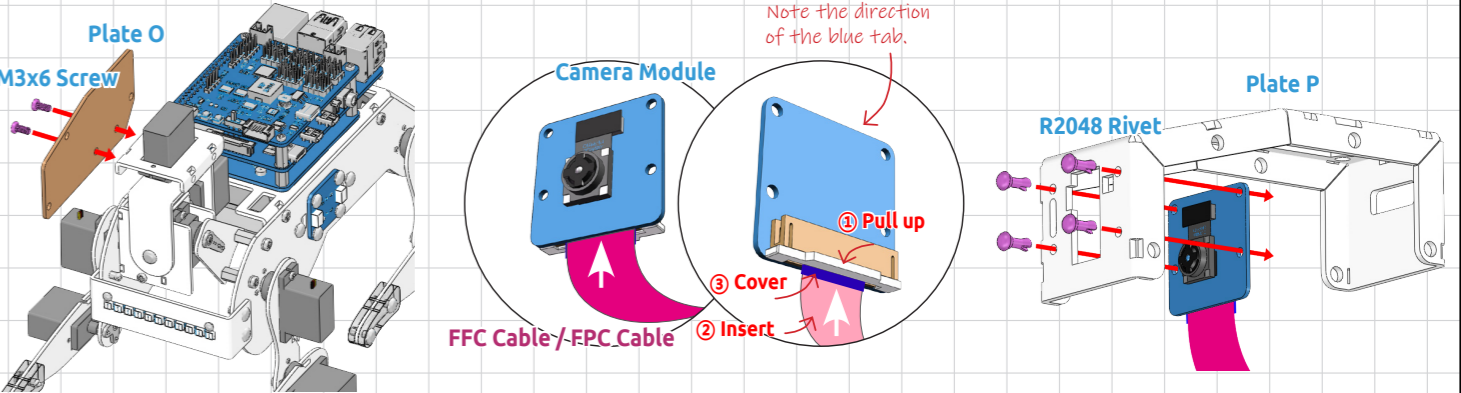
Step 22
Fasten plate F to the rear to make the whole body more stable.



Step 30
In plate I, assemble a servo and label it with P6. Pay attention to the servo's direction and zero it.

Step 31
Then fasten the other servo (label it with P5) in a specific direction.

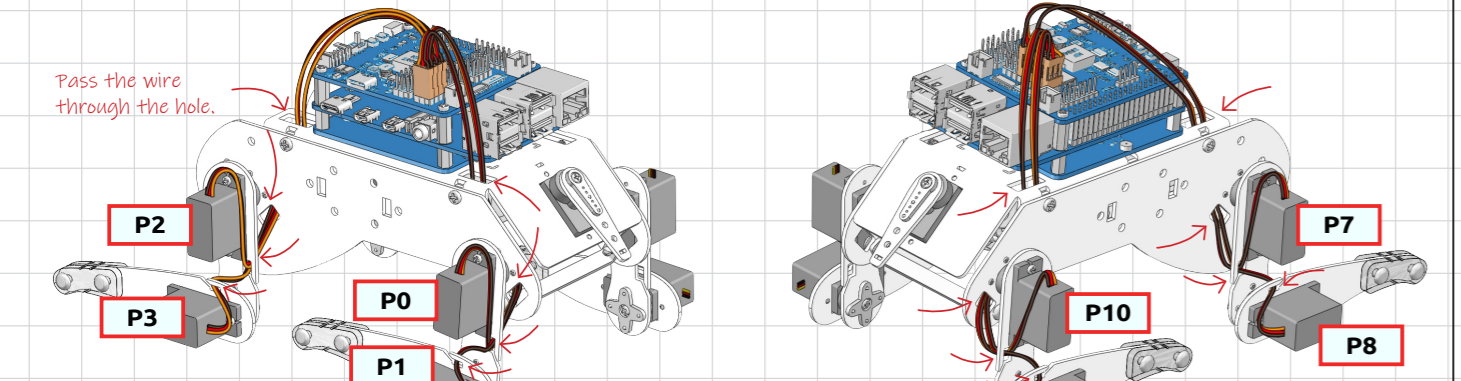
Step 32
Insert plate J on the side plate I.



Step 42
Attach a plate O to the top of the neck.

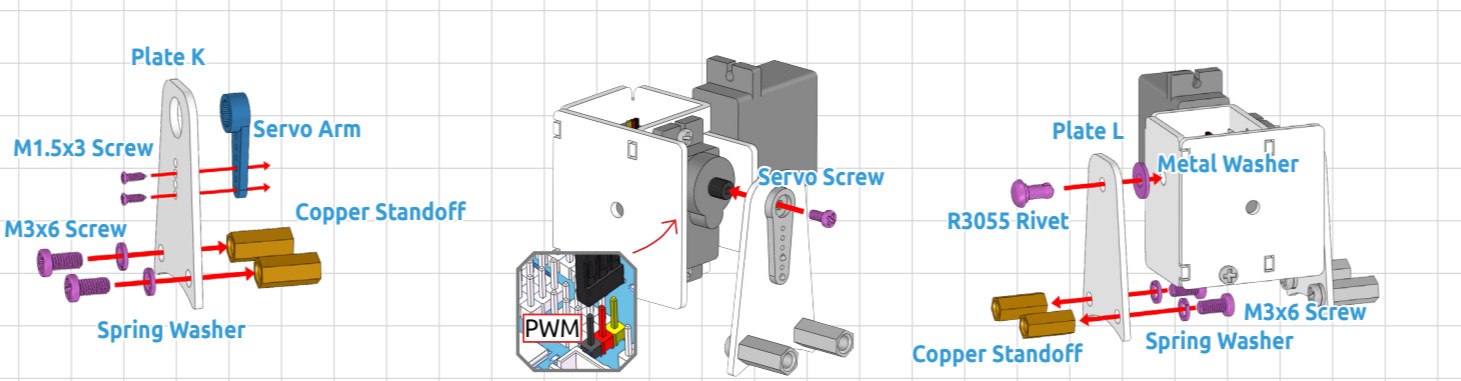
Step 43
Secure the other end of the FFC or FPC cable to the camera module.

Step 44
The camera module is then fixed to the plate P.



Step 23
To make the PiDog look good, route the 8 servo wires through the wire holes and into the corresponding pins. Alternatively, you can simply plug them in.

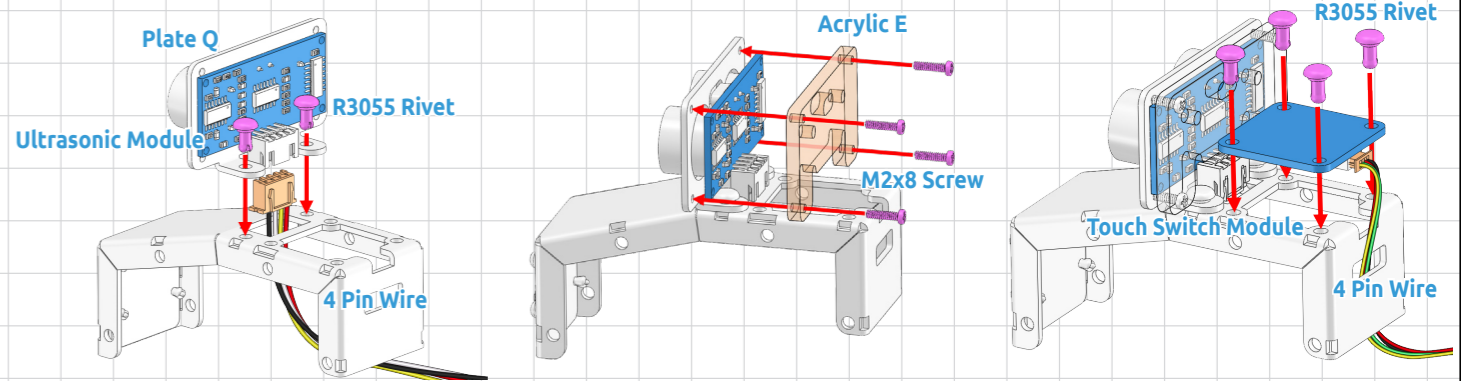
Step 24
Connect the 4-pin wire to the 6 DOF IMU module through the wire hole and secure the module to the left side of the PiDog.



Step 33
Fasten two sets of copper standoffs and a single servo arm for plate K.

Step 34
Attach plate K to the P5 servo and remember to zero the servo.

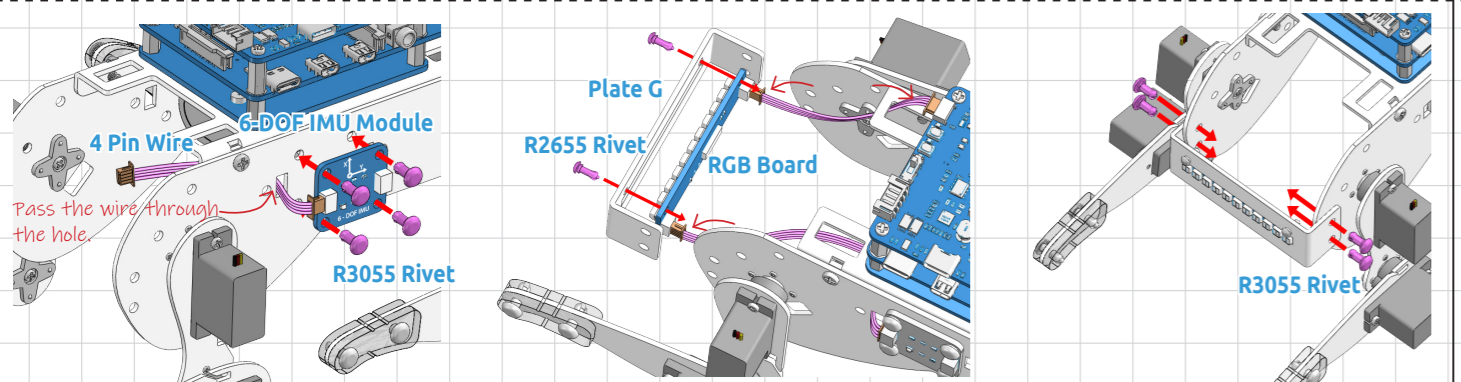
Step 35
Fasten 2 sets of copper standoffs on plate L and attach it to plate I.



Step 48
Mounting the ultrasonic module on the plate Q. Insert the 4-pin WIRE into the ultrasonic module and mount plate Q on plate P.

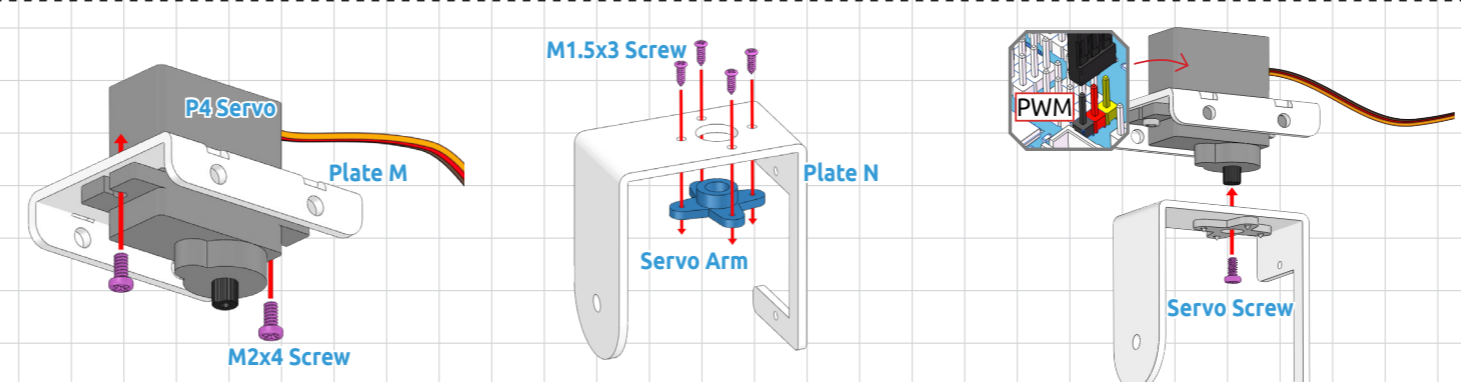
Step 49
Assemble the acrylic E to hold the ultrasonic module.

Step 50
Connect a 4-pin wire to the touch switch module and attach it to plate P.



Step 25
Attach an RGB board to plate G and connect two 4-pin wires as shown.

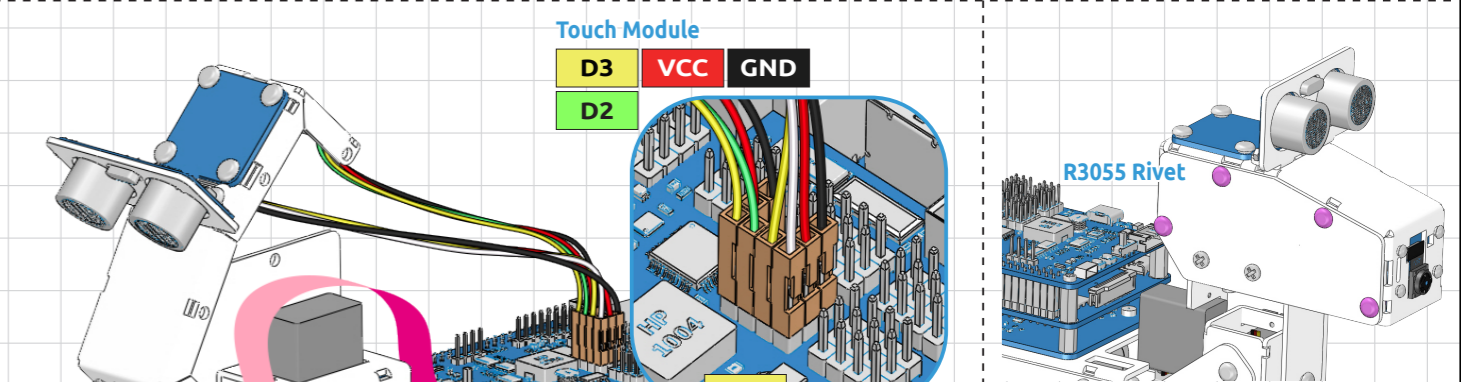
Step 26
Attach plate G to the front of PiDog.



Step 36
Attach a servo to plate M and label the servo P4.

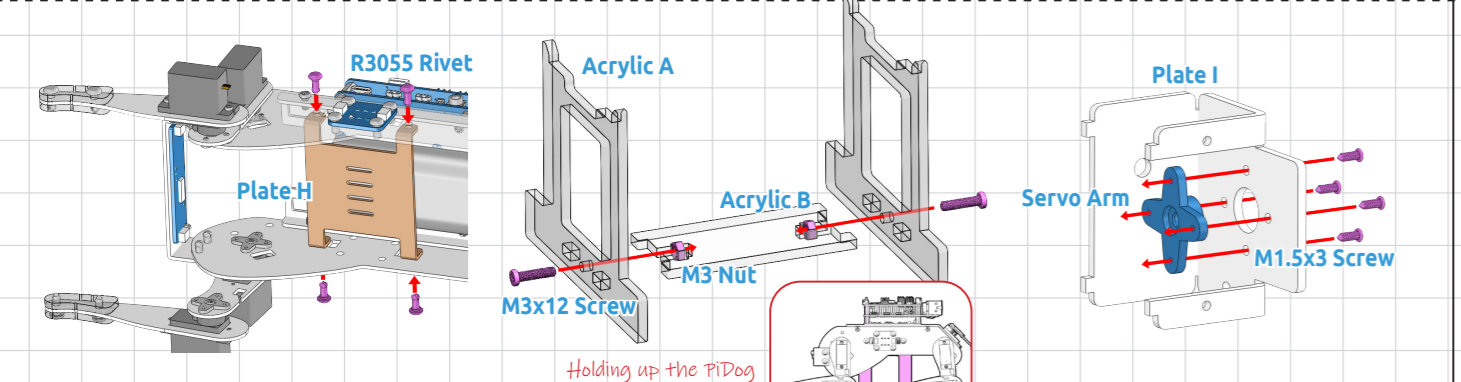
Step 37
Fastening a servo arm for plate N.

Step 38
Remember to zero the servo before attaching plate N to it.



Step 51
Connect the wires from both modules to the Robot HAT in order.

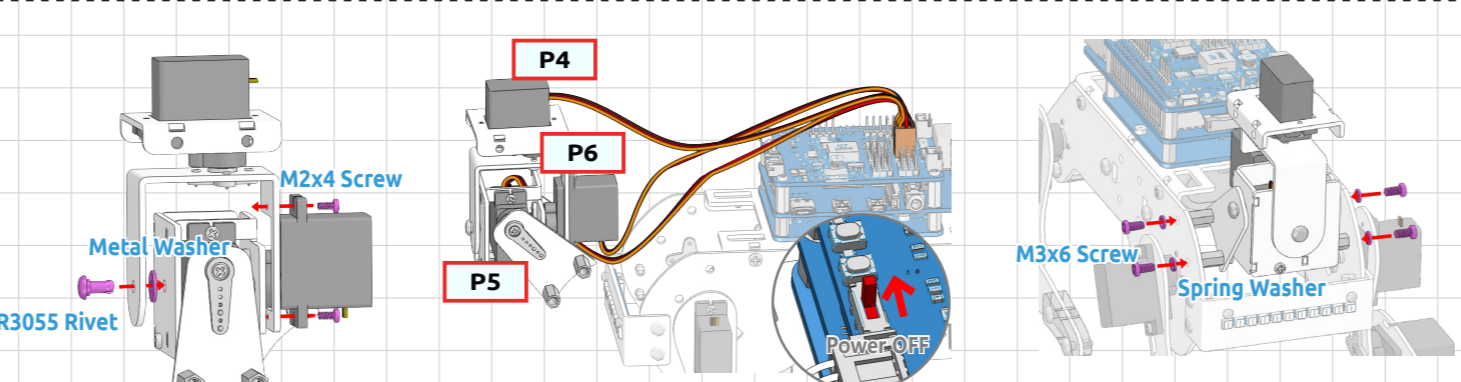
Step 52
Attach plate P to plate O.



Step 27
Secure the plate H at the bottom of the PiDog.

Step 28
Build a support base for holding up the PiDog during assembly and debugging.

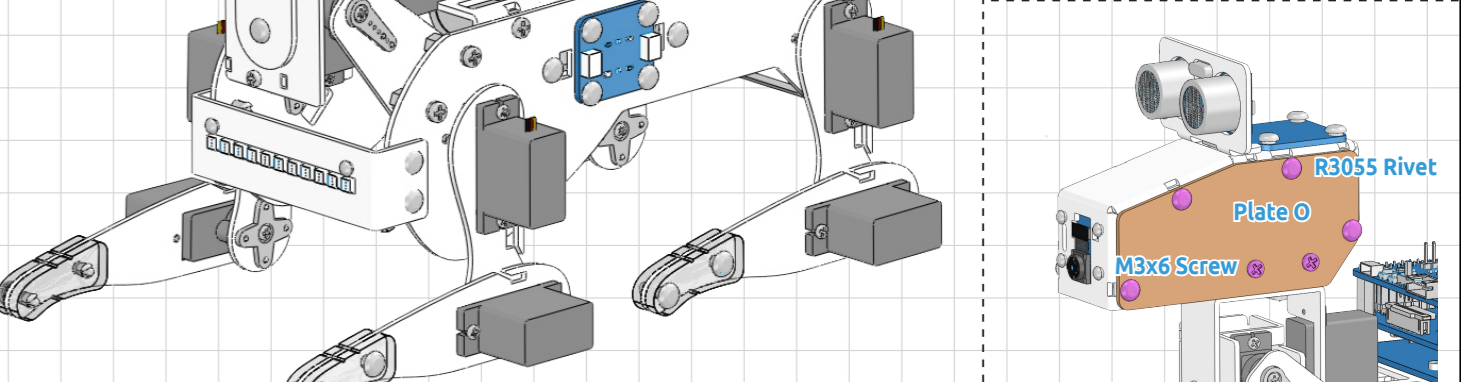
Step 29
Attach a cross servo arm to plate I.



Step 39
Now complete the final connection of the neck part.

Step 40
Connect the three servos of the neck part to Robot HAT, then you can turn off the power.

Step 41
Attaching the neck part to the PiDog.



Step 53
Now PiDog's head only needs another piece of plate O to be secured and it's done.