Building a Swarmie

1 Table of Contents

2 Chassis Assembly

The following is needed for chassis construction.

Tools:

- Phillips screw driver. – M3x6mm screws
- 2mm hex key. – M3x4mm screws

Parts:

- 16 M3x6mm (black) screws. – Packaged with the chassis kit.
- 8 M3x4mm (black) screws.
- 2 pairs of black brackets. – Packaged with the chassis kit.
- 4 DC motors.
- Laser cut bottom plate.
- 3D printed battery base.
- 3D printed battery brace.
- 3D printed battery cross strap.

2.1 Brackets

Using eight M3x6mm screws, attach all four brackets together as seen below.

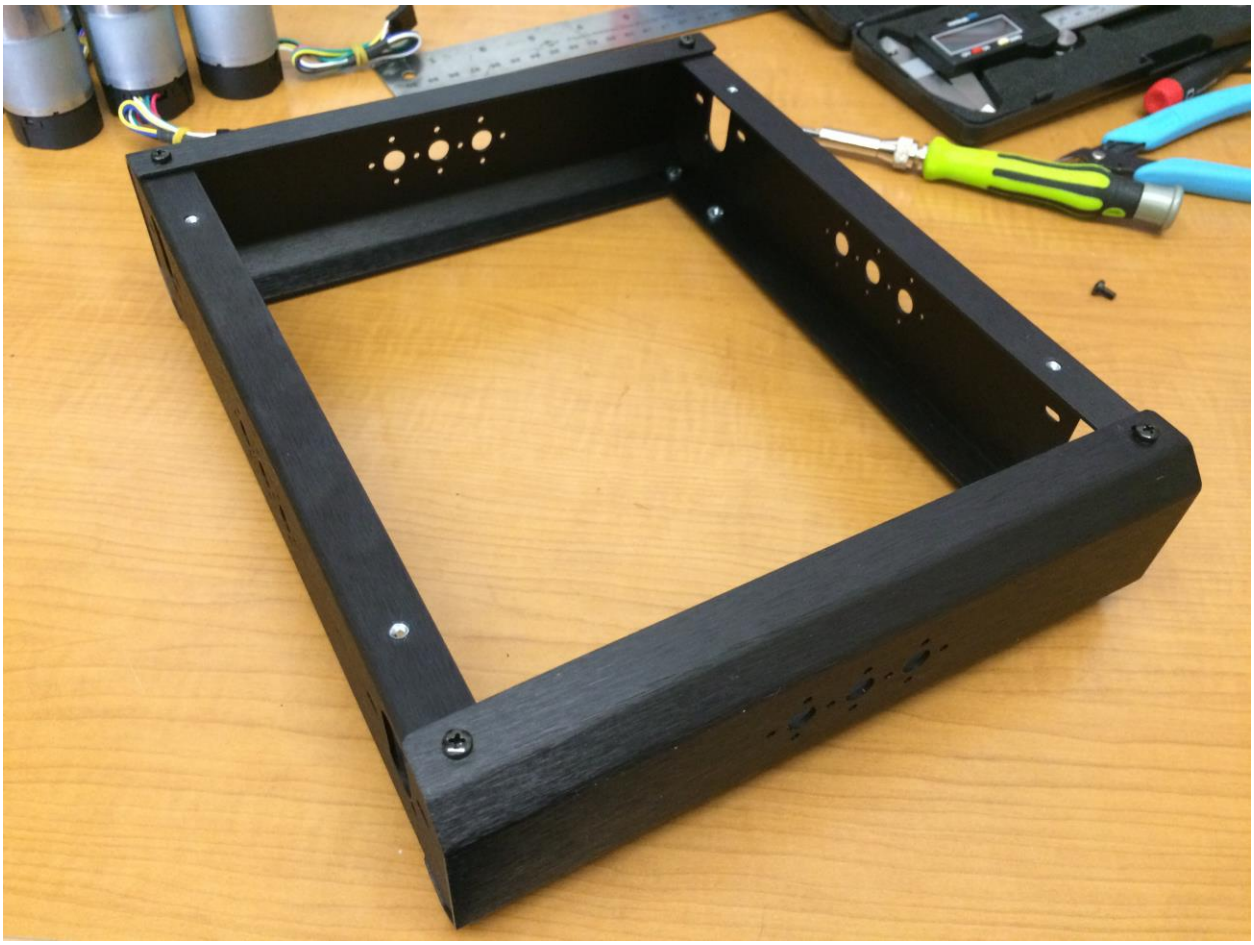

Figure 1: Chassis brackets fully attached

2.2 Motors

Attach motors to mounting holes using two M3x4mm screws per motor. The motor shaft should be towards the bottom of the chassis. See below for detail.

[Picture of close-up motor inside chassis]

[Picture of all four motors attached in chassis]

2.3 Wheel Assembly

[Adapt Lynxmotion instructions]

2.4 Bottom Plate

[Write about attaching battery base and battery]

[Waiting for newest version]

3 Top Plate Assembly

[Tools list]

[Parts list]

[This section includes instructions to attach all 3D printed parts to the top plate as well as electronics (ie. PCB, US, IMU, GPS, switch, buses, NUC, camera)]

[Waiting for newest version of the top plate]

3.1 3D Printed Parts

3.2 Ultrasounds, Camera, IMU, GPS

3.3 PCB, Switch, and Bus Connections

3.4 Cover Plate Assembly and Attachment

[Current version of the cover plate is in stock]

4 Fully Assembled

[Include information about and pictures of the fully assembled Swarmie]