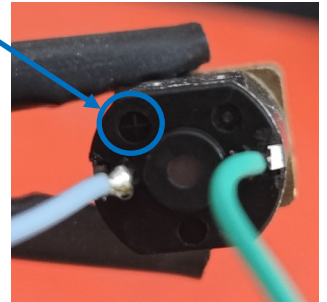
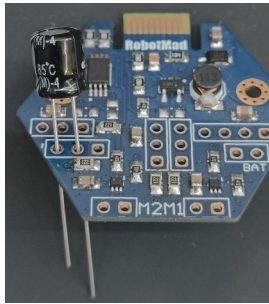


BadgeBot build instructions.

1. Solder wires to the motors. Notice the + mark on the back of the motor. Colour coded in these instructions for convenience as these do matter or your robot may go backward or in circles instead of forwards.



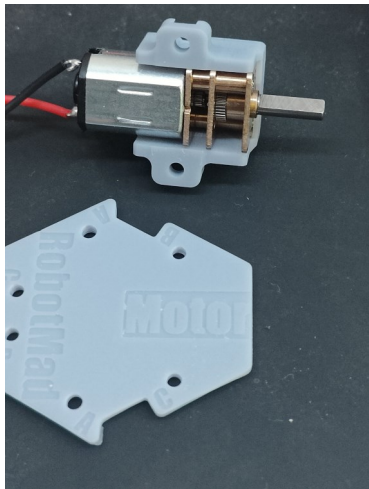
2. Solder the optional but recommended additional capacitor to one of the servo outputs. Note the polarity, grey line on cap and shorter leg go to the negative marked hole.



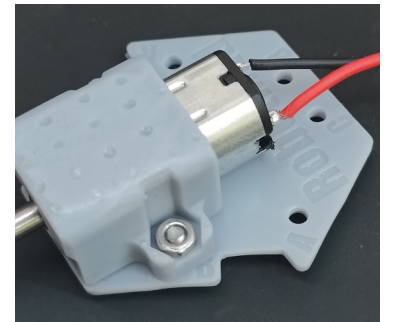
3. Insert the HexDrive hexpansion into the slot on the badge between the C and D buttons.



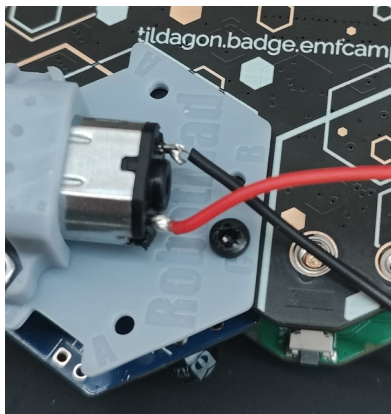
4. Insert the motors into the motor mounting pieces. Then place on the mounting bracket over the "Motor" text.



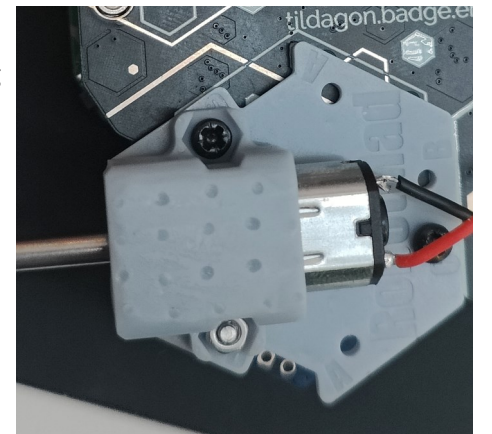
5. bolt the motor down using a small m2 bolt and nut, though the 'B' hole. Do not do the other side of the motor mount yet.



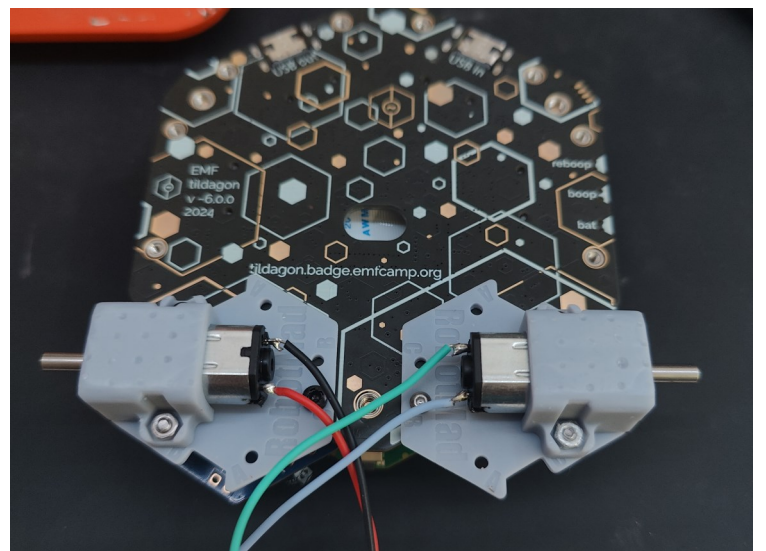
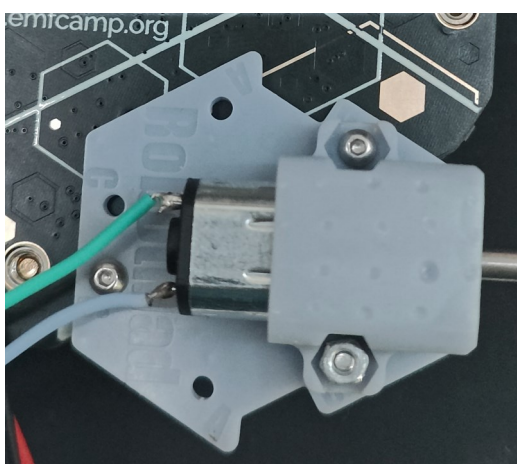
6. Place the motor bracket on the back of the badge, over the hex-drive, with motor axel pointing out to the side. Line up hole C with the hexpansion port threaded hole in the badge and bolt using a short m2 bolt.

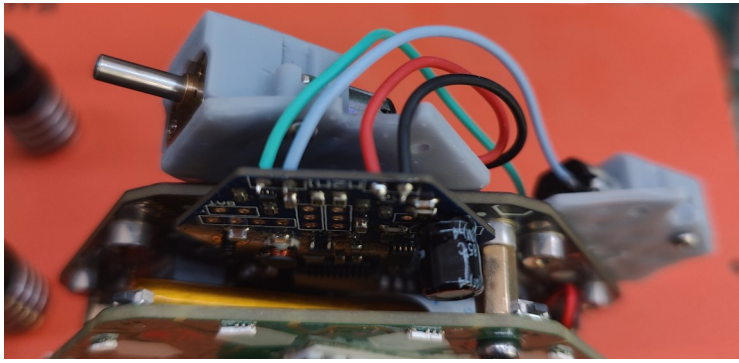


7. Now thread in the longer m2 bolt to the other motor mount hole, all the way though into the threaded hole of the badge. Double check the hexpansion is all the way into its slot or the bolt may hit it.

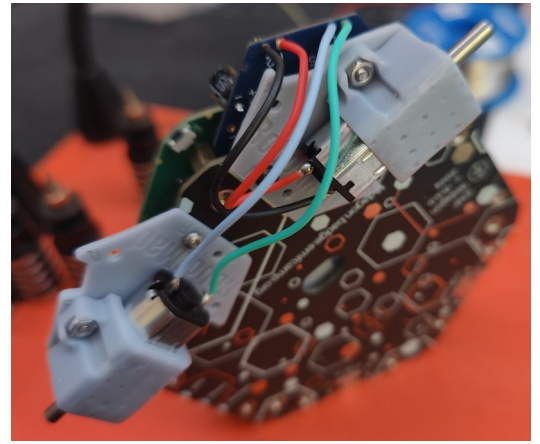


8. Repeat steps 4 to 7. mounting the second motor across from the first. Using the other holes, so C instead of B and B instead of C.





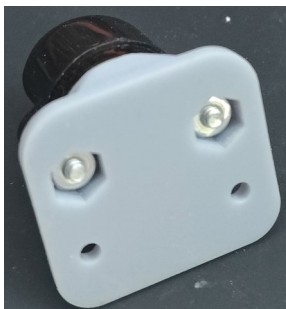
9. Solder the motor wires to the HexDrive by inserting through the holes marked M1 and M2, from the under side then solder on the top side.



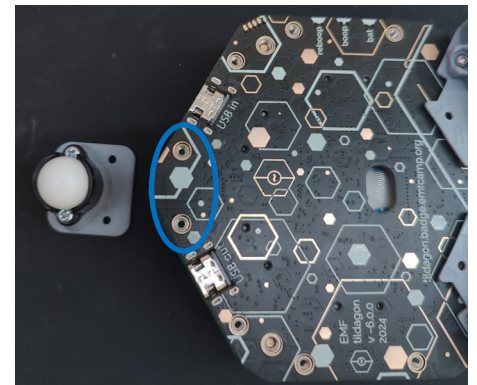
Please follow the wiring shown in the pictures or your BadgeBot may go in the wrong direction or only spin in circles. The wires are colour coded in these instruction but yours do not need to be.



10. The ball caster comes with 2 spacers and 2 bolts and nuts (Not the same as M2). Mount the ball caster to the ball caster mount with the ticker of the 2 spacers, and the included bolts and nuts.



11. Bolt the ball caster mount to the badge on the corner between the 2 USB ports. Using threaded mounting holes from the hexpan- sion ports either side. Using 2 short m2 bolts.



12. Work the tyres onto the wheels, then put the wheels onto the motor shafts.

The wheel hub as a side that sticks out, this side goes towards the motor.

Watch for the flat side of the shaft to match up, it can take quite a bit of force so brace against the back of the motor to avoid braking the mounts.

