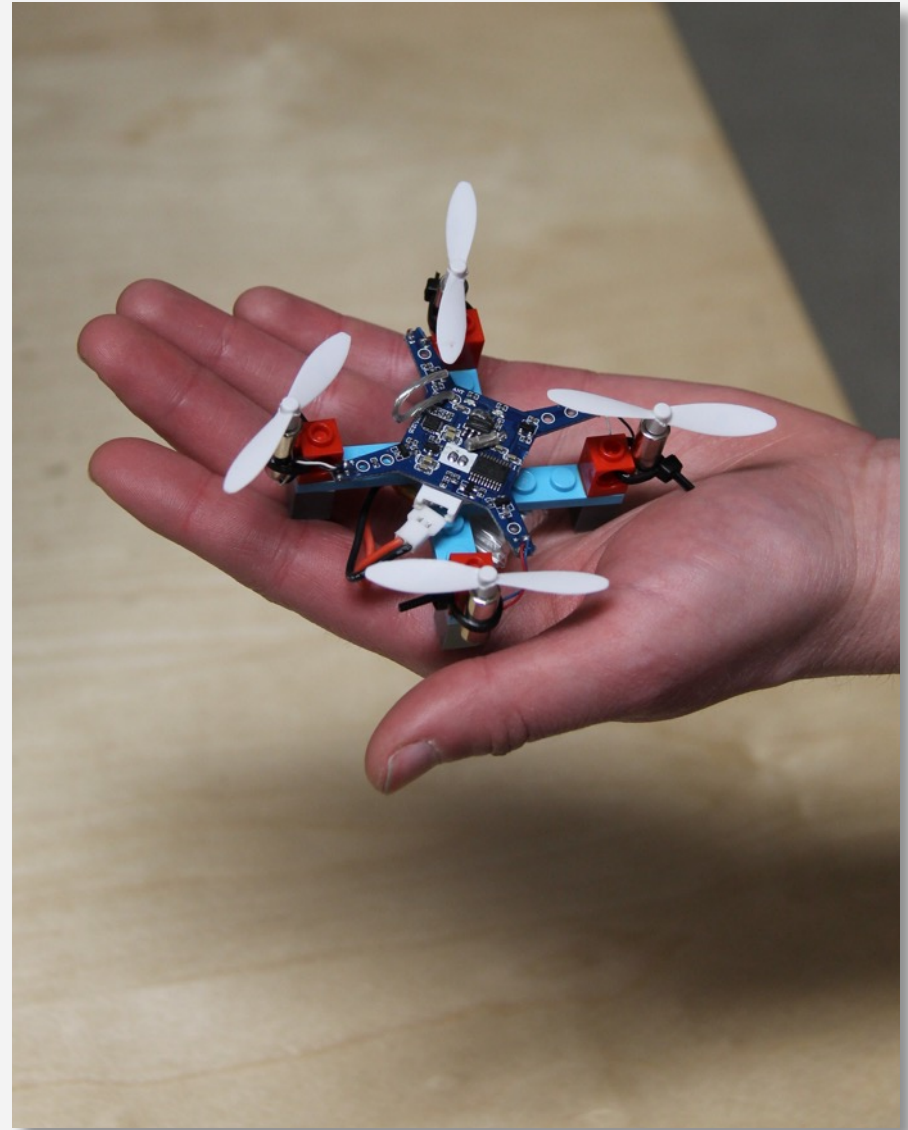


MINI LEGO DRONE

kit instructions



Mini Lego Drone Kit Instructions



Kit Includes:

- | | |
|-------------------|---------------------|
| (a) Transmitter | (f) Lego pack |
| (b) Receiver | (g) 3xAAA Batteries |
| (c) Motor Set | (h) Charging USB |
| (d) Propeller Set | (i) Zipties |
| (e) LiPo battery | (j) Rubberbands |



Getting Started

- 1) Check your parts list.
- 2) Read through the instructions.
- 3) Gather your tools.
- 4) Start charging your LiPo battery.
- 5) Build your Lego frame.
- 6) Solder motors to receiver.
- 7) Attach electronics to frame.
- 8) Attach charged battery.
- 9) Plug in, turn on and FLY!

Tools Needed:



Soldering iron and accessories



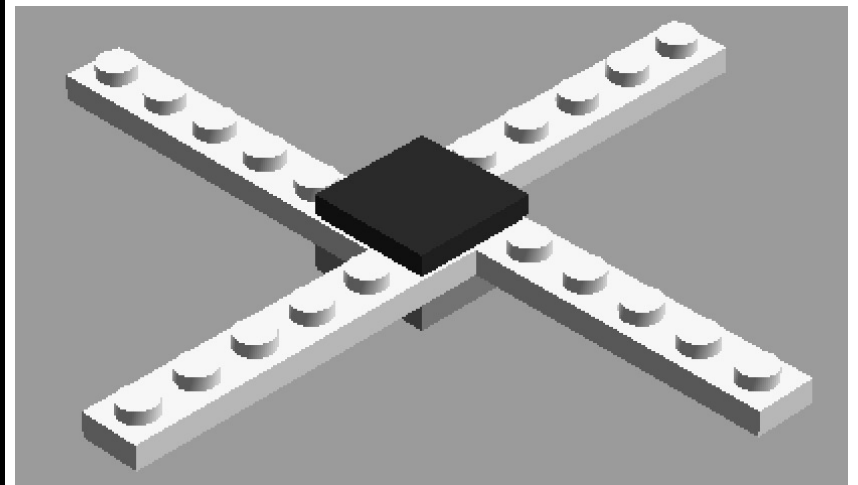
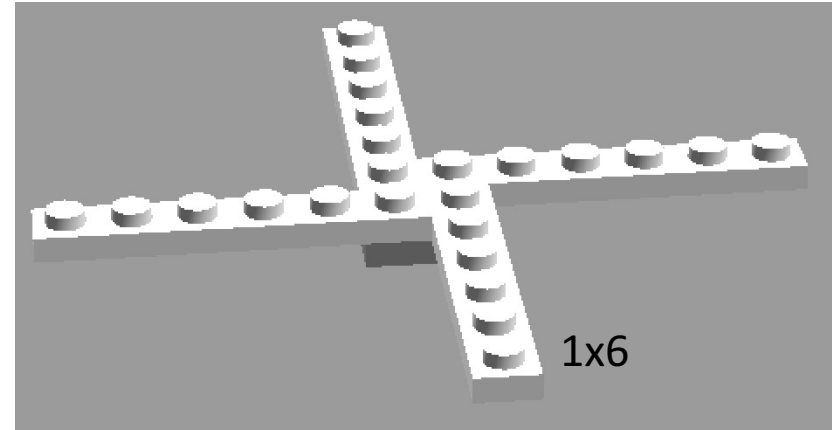
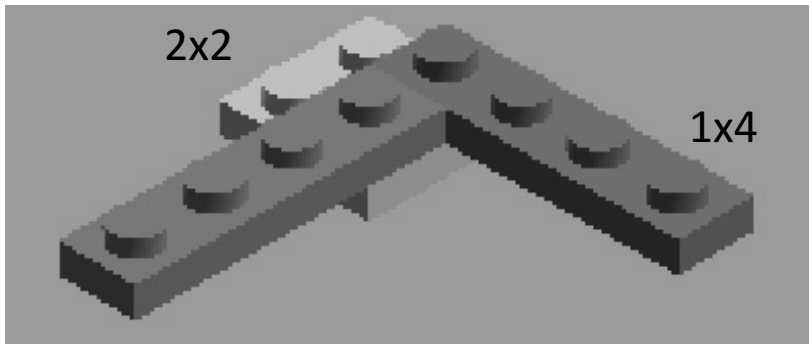
Scissors

Mini Lego Drone Kit Instructions

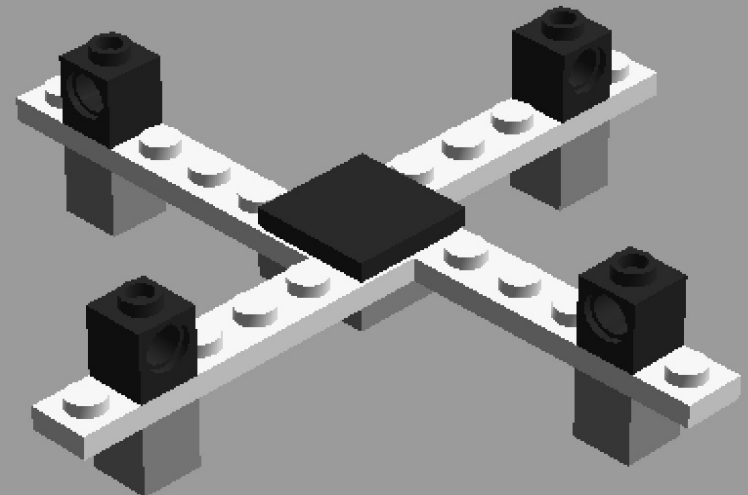
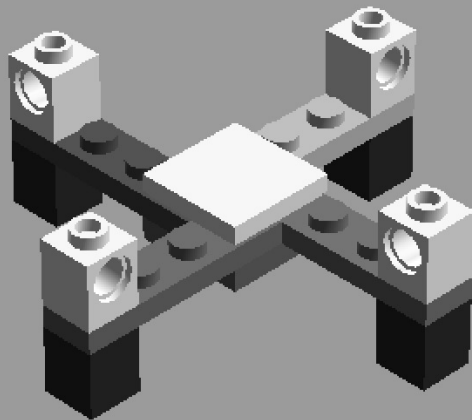
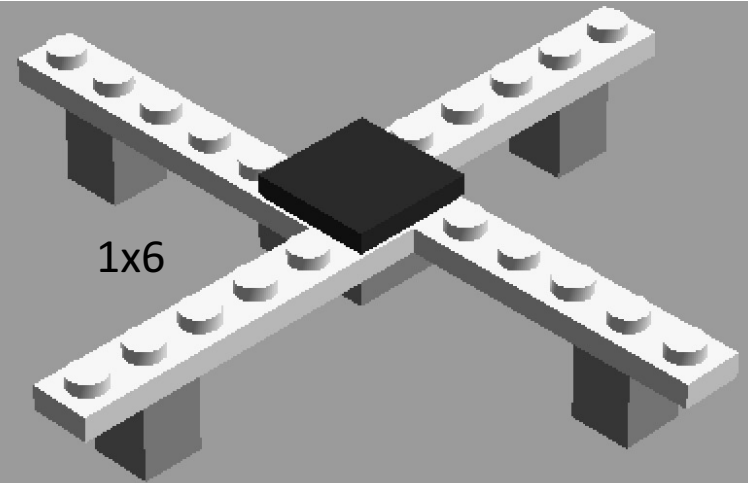
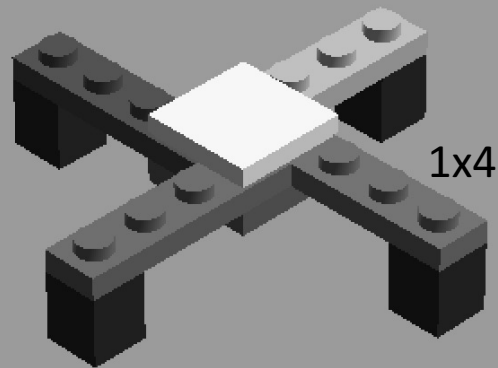


Build Frame

Start by building the Lego frame. We've given you a few choices for the frame structure. Either using 1x4 or 1x6 plates. Lighter (1x4) will equal longer flying time, larger (1x6) will equal more stable flying.



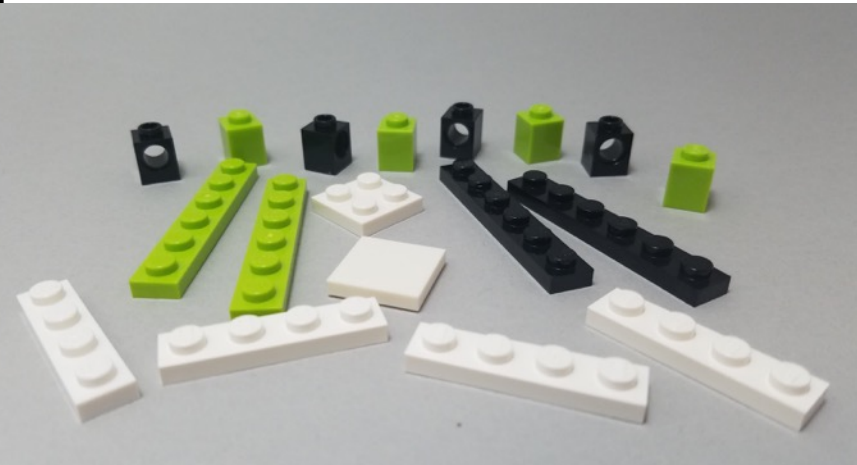
Mini Lego Drone Kit Instructions



Mini Lego Drone Kit Instructions

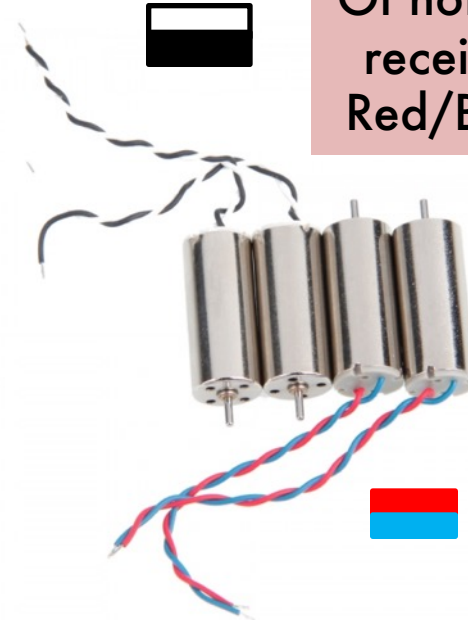


You'll find a variety of Lego colors in your pack. We've designed this drone frame to be light and simple! The lighter the drone, the longer it will fly! We recommend gluing the bricks of your frame to prevent breaks during rough landings.



Get Ready to Solder!

You will need to solder each of the 4 motors (c) to the receiver board (b). Motor location on the board matters because 1 set of motors spin in the clockwise (CW) direction and 1 set of motors spin in the counterclockwise (CCW) direction. You can tell the difference based on wire colors.



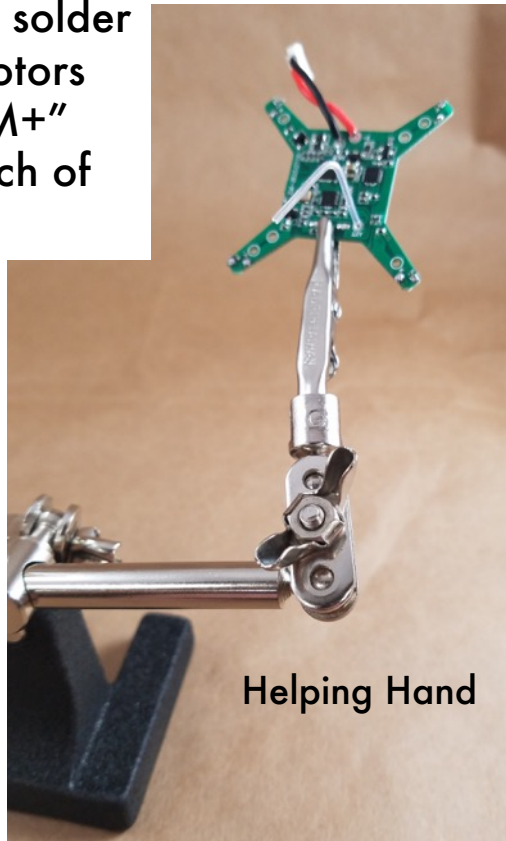
Of note, you may receive a set of Red/Black wires.

Mini Lego Drone Kit Instructions

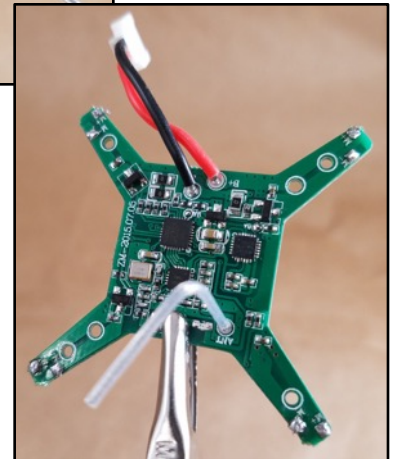
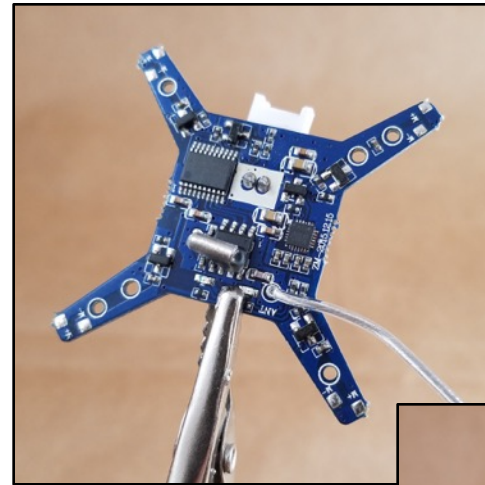


Use a helping hand to hold the receiver board while you solder. Start with the wire on the board facing away from you and the solder joints facing "up".

You can tell the solder joints for the motors as they read "M+" and "M-" in each of the corners.



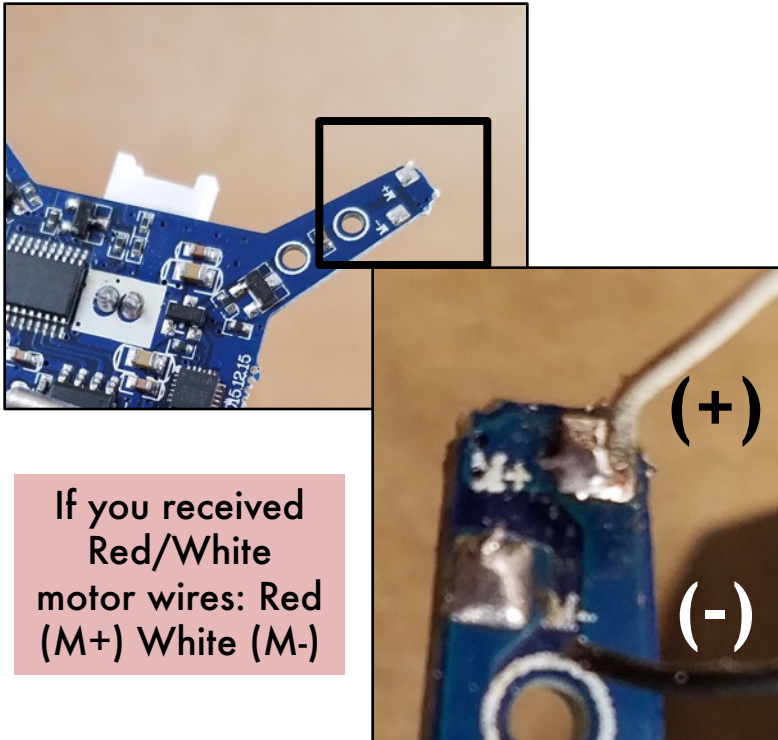
You may receive a blue or a green receiver board. They both pair with your controller and work with your motors. The green board has a longer battery wire.



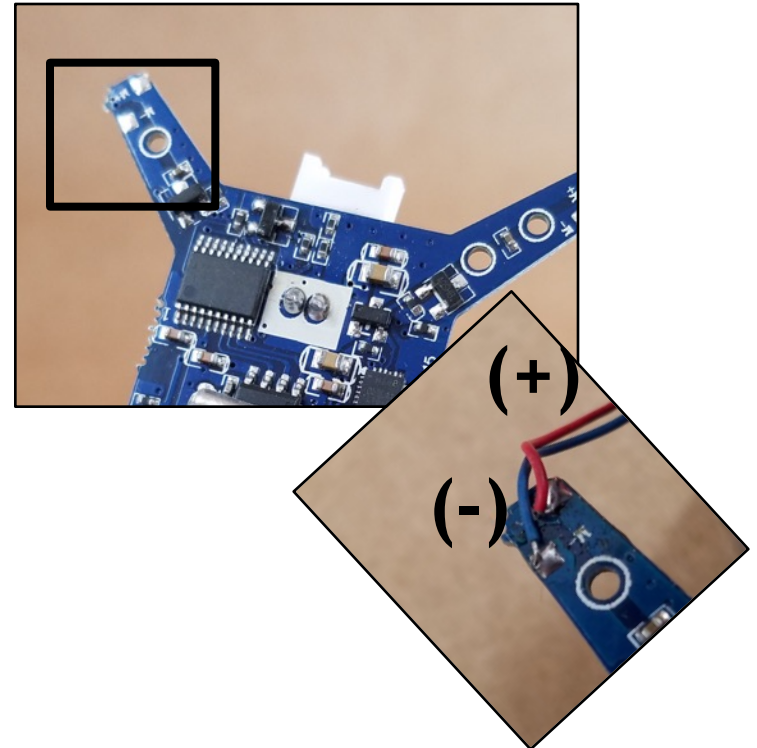
Mini Lego Drone Kit Instructions



Solder one motor (black and white wires) to the **upper right** motor location on the board. You will see a positive (M+) and negative (M-) terminal. Solder the **BLACK** wire to the (M-) terminal and the **WHITE** wire to the (M+) terminal as shown. Repeat this step for the bottom left motor arm.

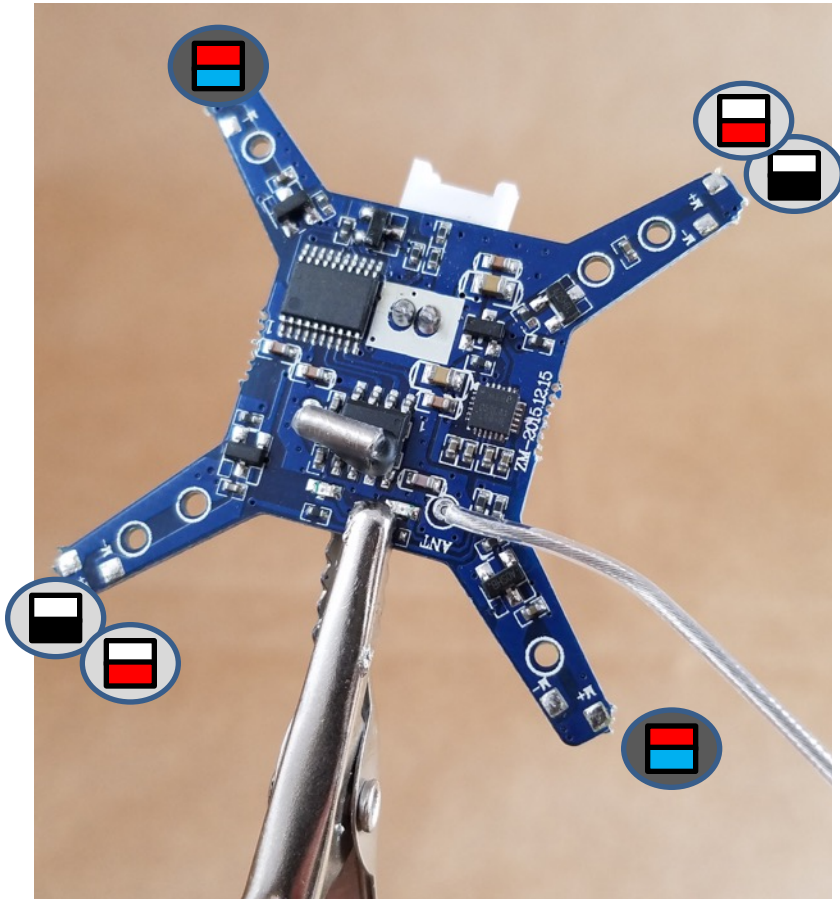


Solder another motor (blue and red wires) to the **upper left** location on the board. You will see a positive (M+) and negative (M-) terminal. Solder the **BLUE** wire to the (M-) terminal and the **RED** wire to the (M+) terminal as shown. Repeat this step for the bottom right motor arm.

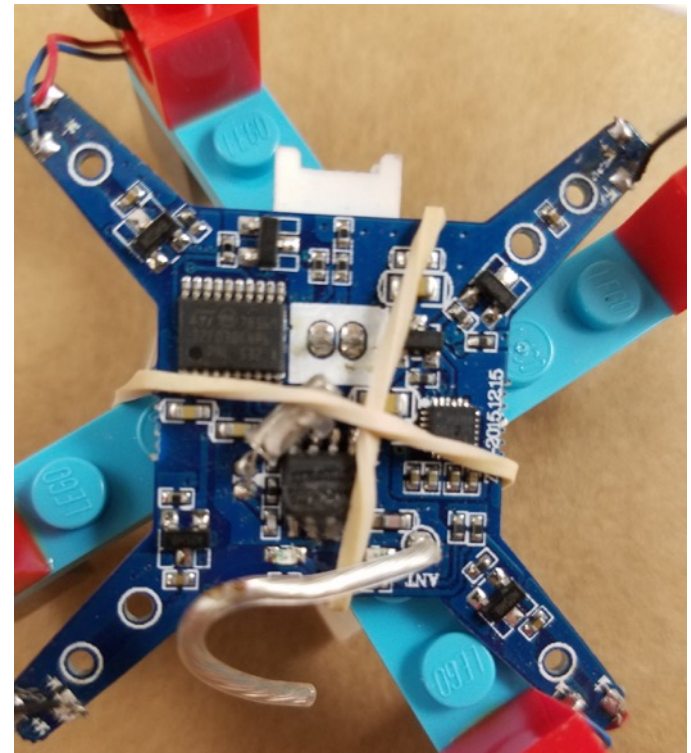


Wiring Diagram

Here is the complete wiring diagram for the motor locations. The same pattern fits both the blue or green receiver board.



Secure receiver board (b) to top of Lego frame with 2 rubber bands (or some double-sided adhesive). Angle it so motors point along each arm. The board components should be on "top" as shown.



Mini Lego Drone Kit Instructions

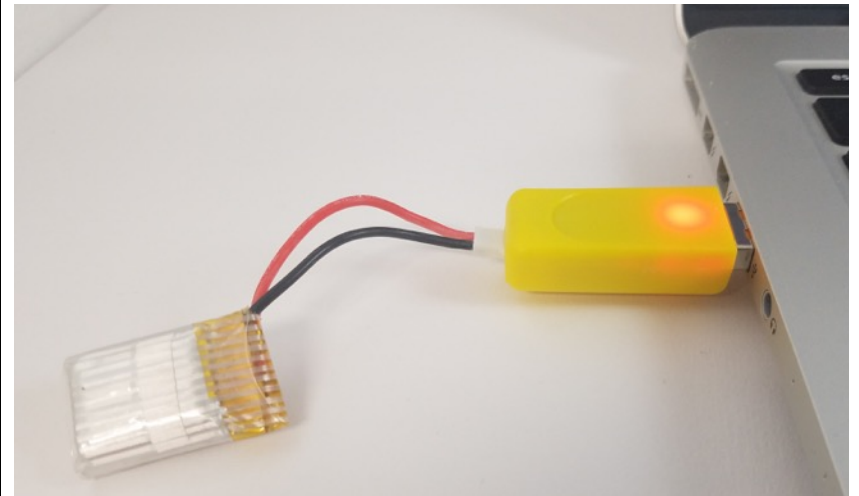


Secure the battery to the bottom of the Lego frame with rubber bands (or some double-sided adhesive) used for the board



Charging Battery

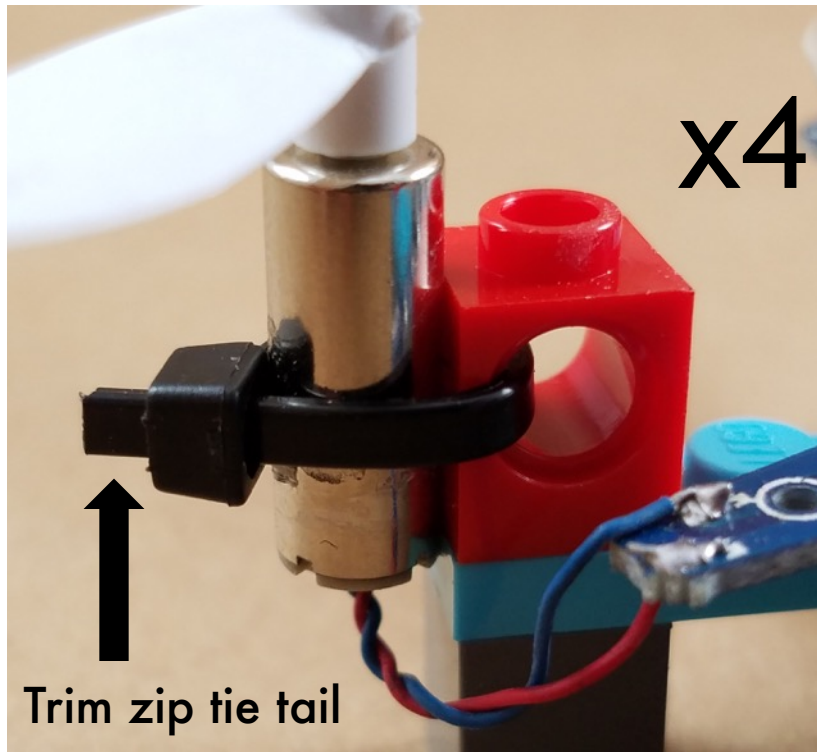
Charge battery by plugging JST connector from Lipo battery to JST/USB cable (of note, your USB charger may not have a "cable" just a USB to JST as pictured with the computer below). We recommend charging the battery prior to your first flight. You can charge the battery while it's attached to the drone as well.



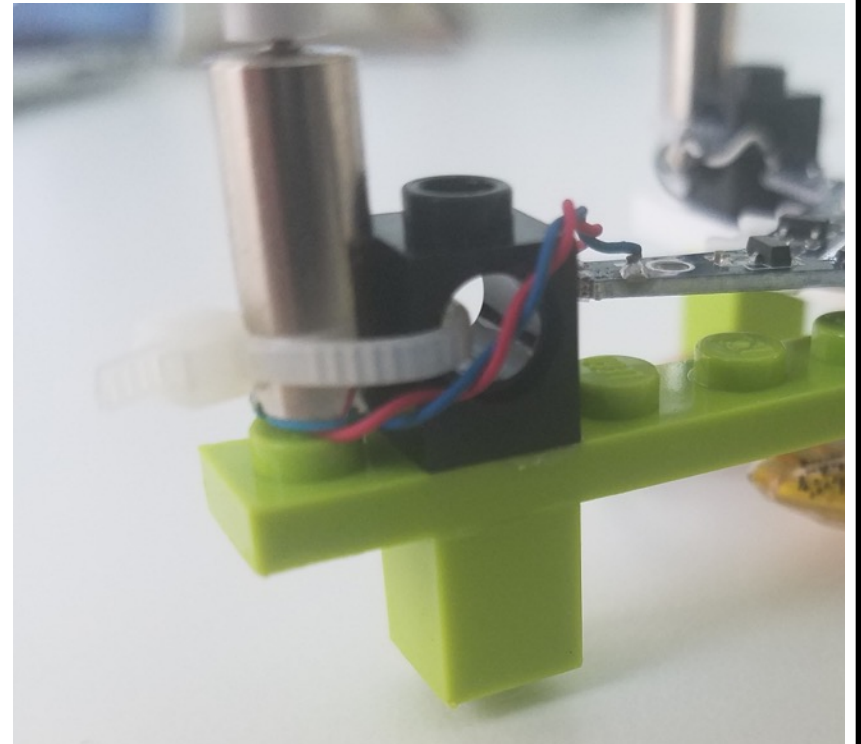
Mini Lego Drone Kit Instructions



Secure each motor to the Lego frame arm with a zip tie as shown. Do this 4 times for each motor on each arm.



1x4 frame

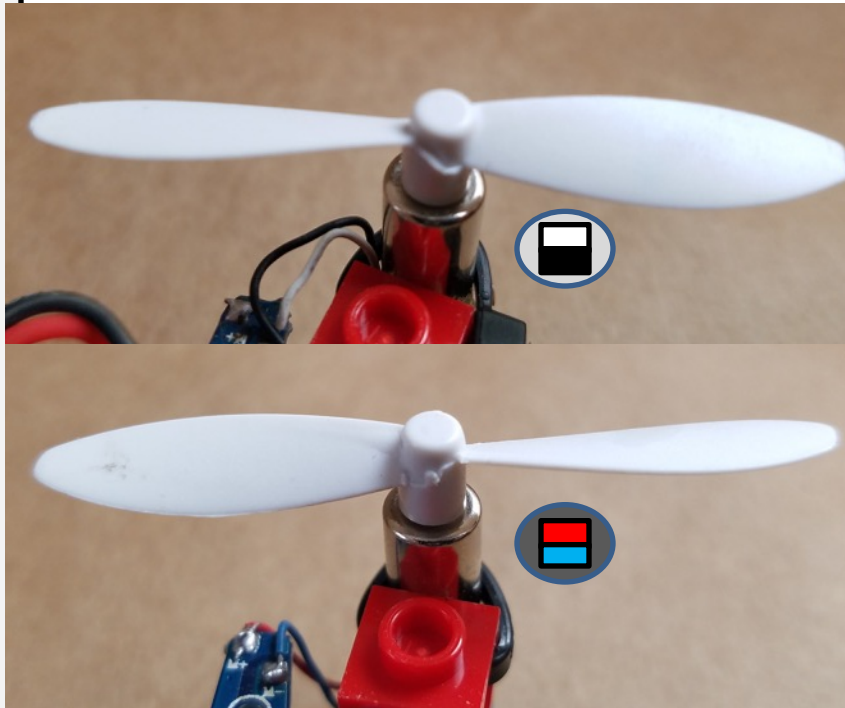


1x6 frame

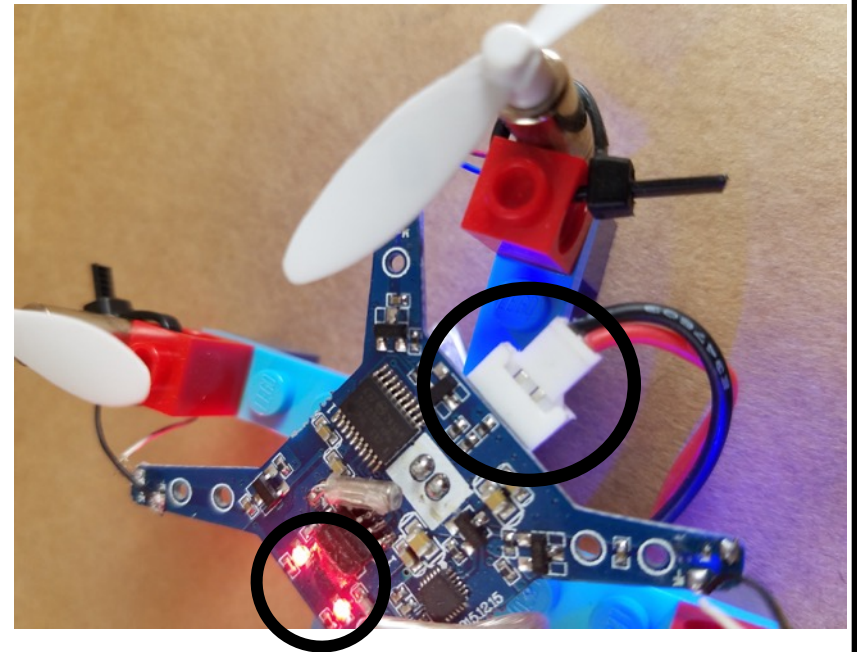
Mini Lego Drone Kit Instructions



Firmly press propeller down on to motor spike. It should sit snugly against the motor. There are two different propeller blade directions and they are **DIFFICULT** to tell apart! One set will go on the **black/white** motors and the other set on the **blue/red** motors.



The end of the battery has a male JST type connector that fits with the female JST type connector on the receiver board. They fit together as shown. When you plug the battery into the receiver board, 2 LEDs located on the board will light up.



Mini Lego Drone Kit Instructions



Turning On

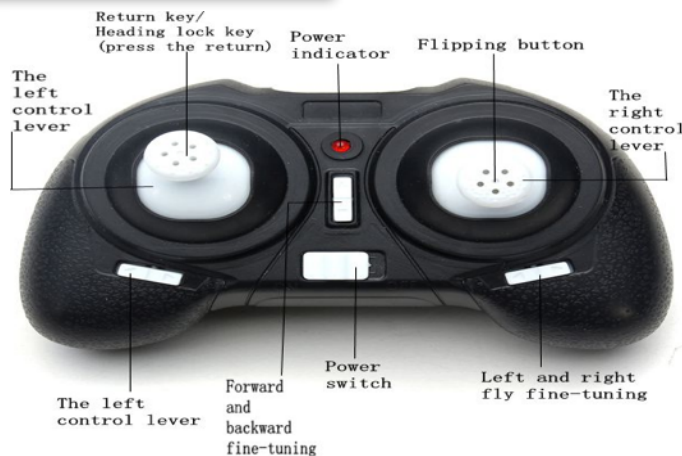
1. Plug in your battery (e) to your receiver board (b).
2. Set on a level surface to ensure internal accelerometer is level.
3. Turn on controller. You will hear a "beep" when the controller and receiver are paired.
4. Test joysticks to make each propeller rotate.
5. Slowly engage all 4 motors and work on controlling movement and lift.
6. FLY!
7. Watch out for fast spinning propeller blades, they're sharp!



Mini Drone Kit Instructions



Remote Control

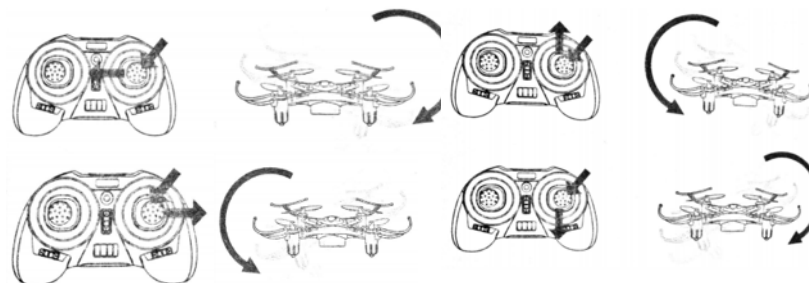


Sensitivity

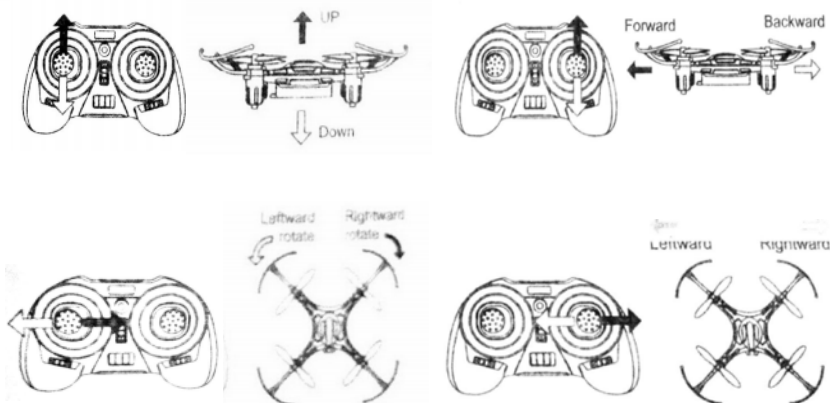
2 Modes: Low (40%), High (100%)

- Press power supply indicators until you hear a "di" = low mode
- Press power supply until you hear a "di, di" = high mode

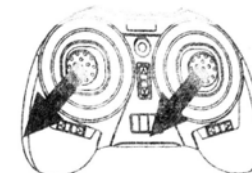
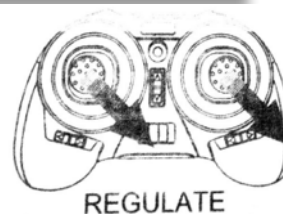
Rolling



Operation



Calibrate



Reset the direction (The light flashes slowly when you reset the direction, and it will be normally after resetting.)

Mini Drone Kit Instructions



You have now completed a Kitables Kit! If you have questions, check out our FAQ at [Kitables.co](https://kitables.co) or email us at info@kitables.co

