

DIY MINI CRAFT DRONE

kit instructions



DIY Mini Drone Kit Instructions



Kit Includes:

- | | |
|-------------------|-----------------------|
| (a) Transmitter | (f) 3xAAA Batteries |
| (b) Receiver | (g) Charging USB |
| (c) Motor Set | (h) Soldering Iron |
| (d) Propeller Set | (i) Glue Gun |
| (e) LiPo battery | (j) Crafts and Things |



Getting Started

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

Tools Needed:

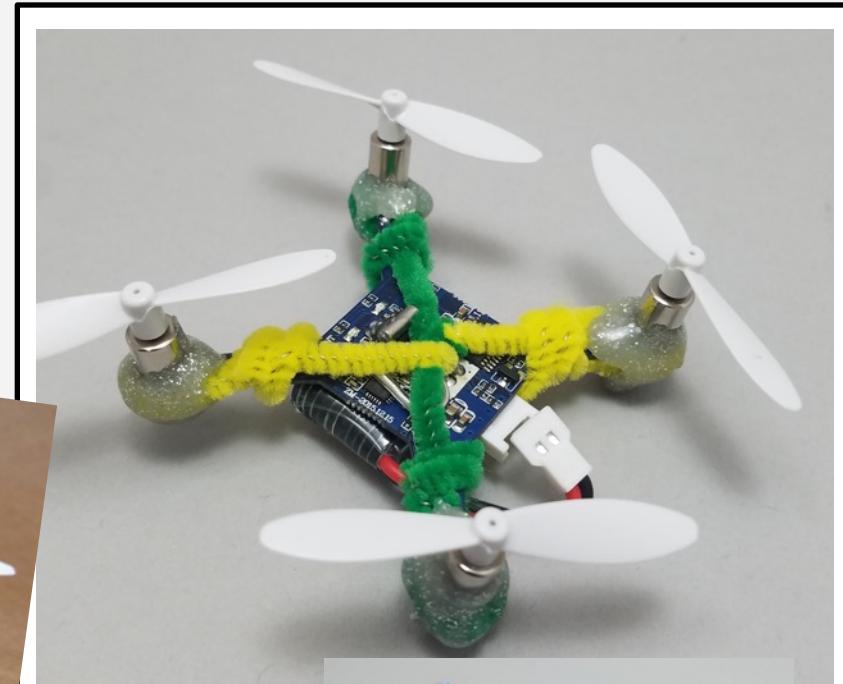
Helping Hand for
soldering

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Build A Frame

We've given you a variety of crafts and building materials to successfully make a quadcopter frame. We'll show you a few ideas to get you started.

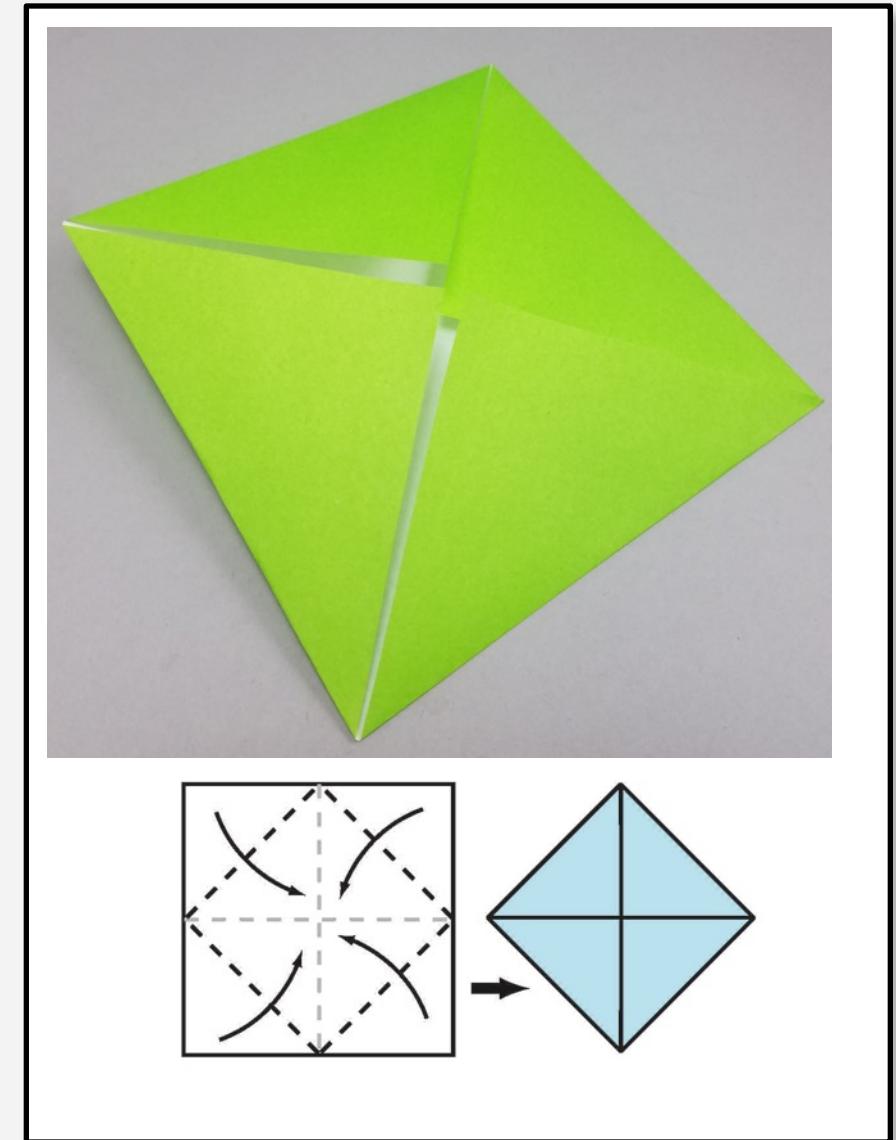
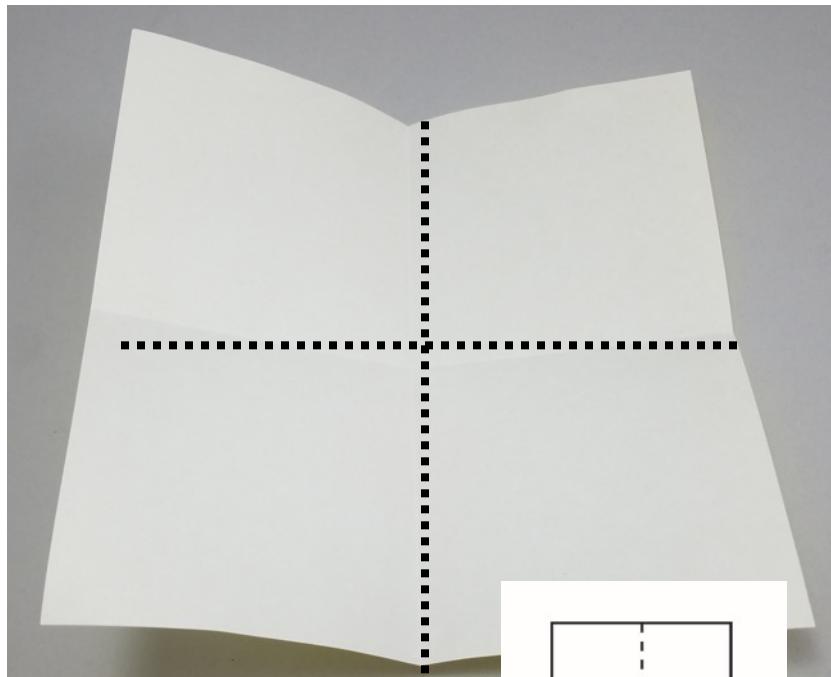


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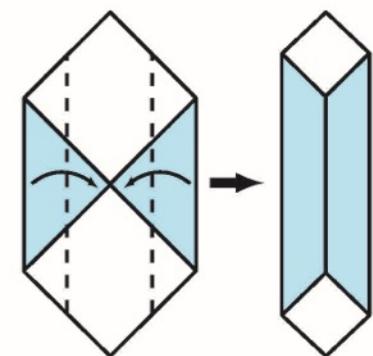
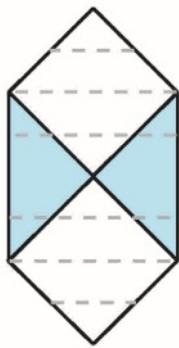
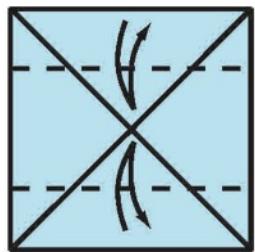


Origami Box Frame

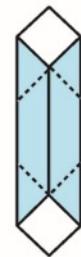
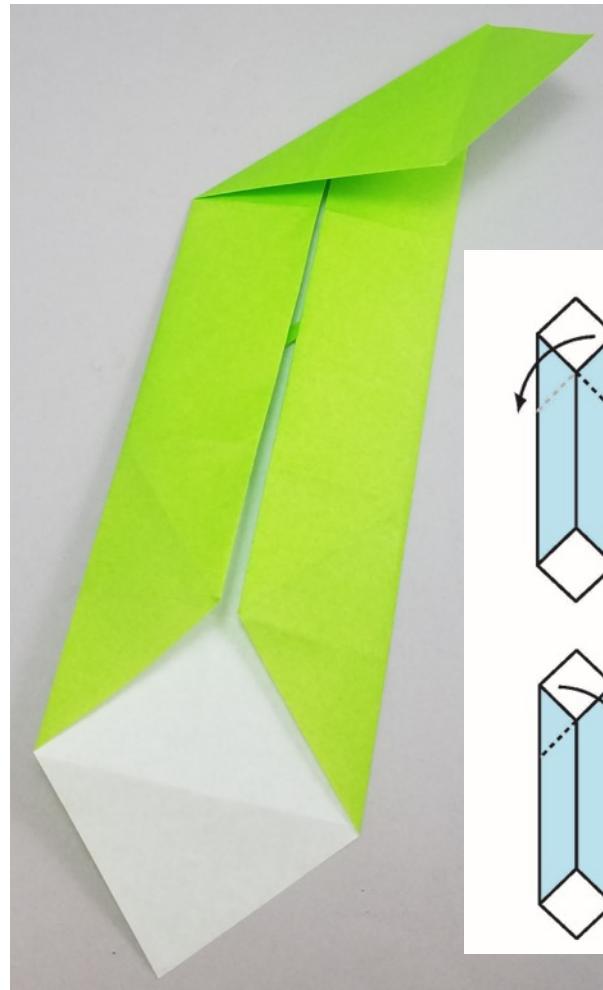
The following will show a basic origami box in pictures and with typical folding instructions.



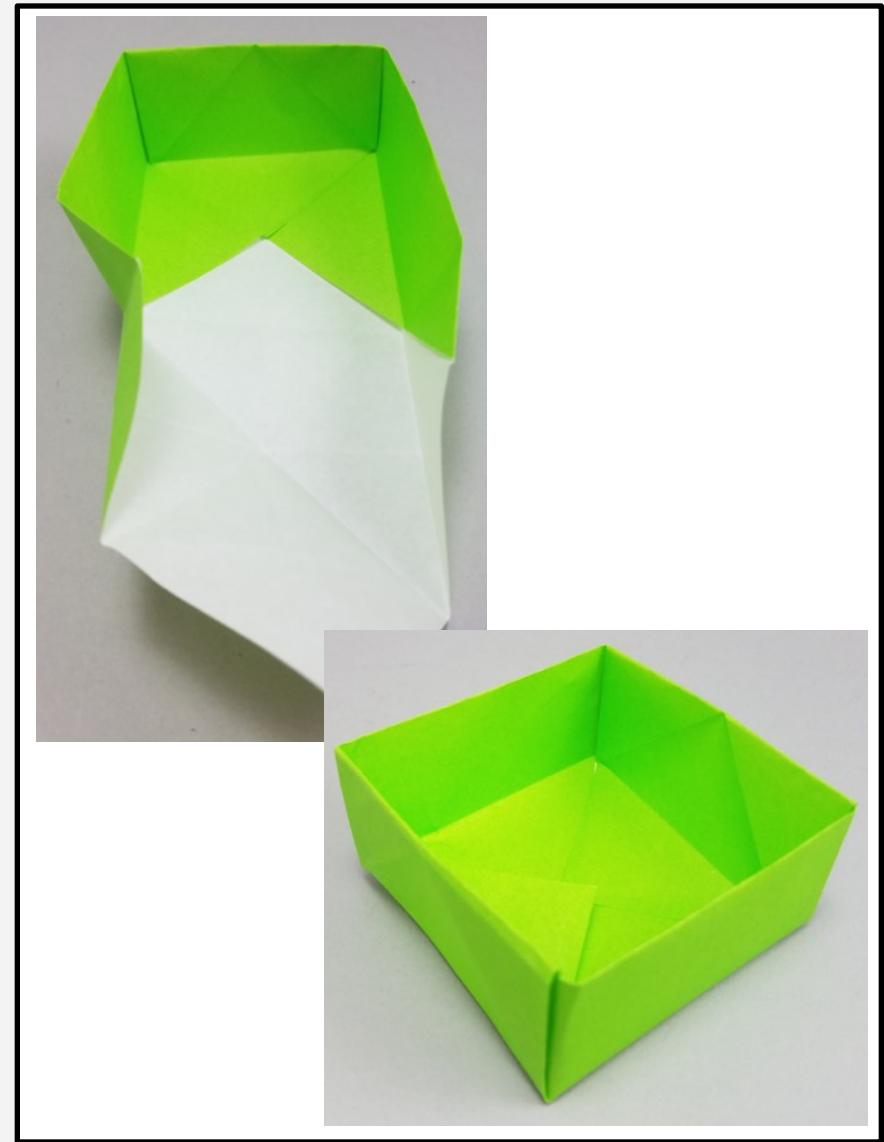
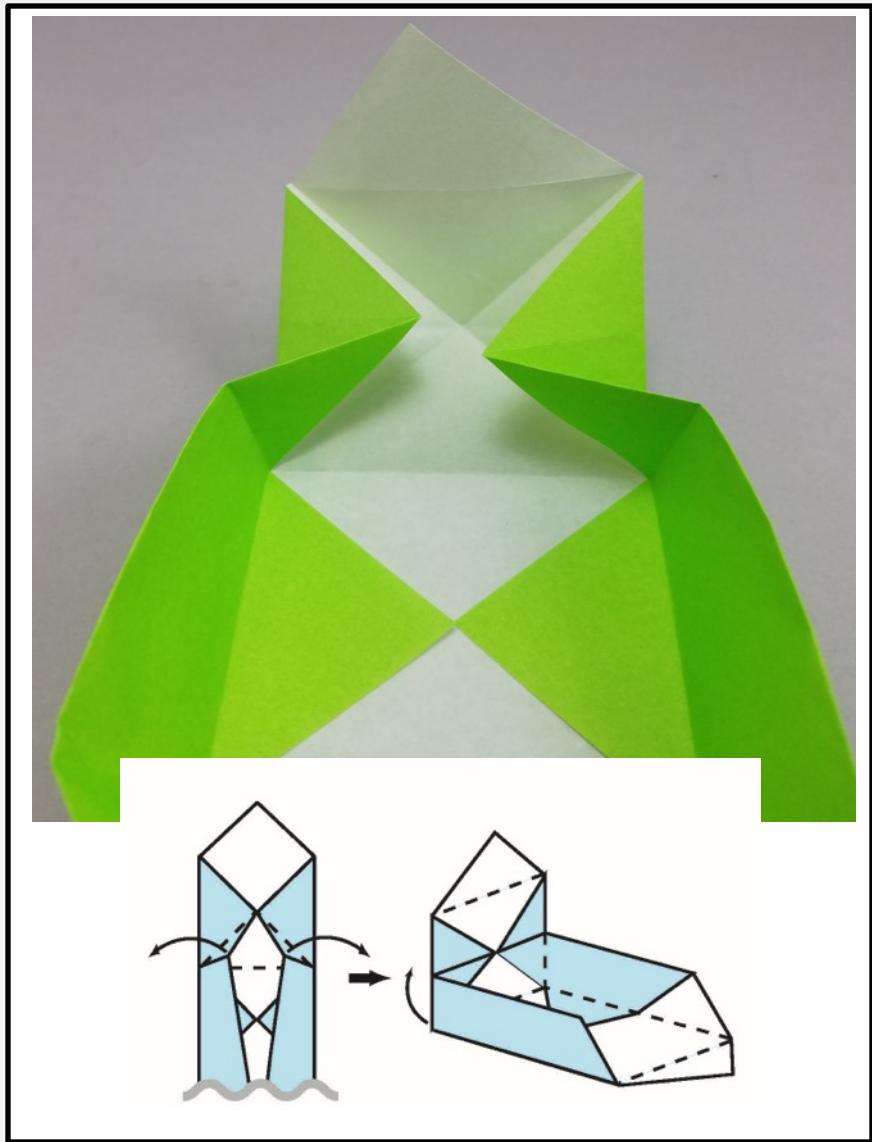
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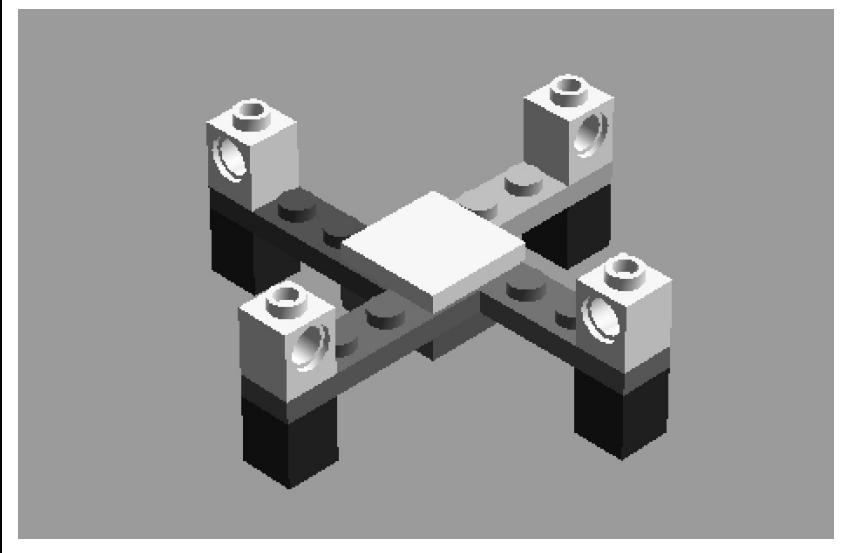
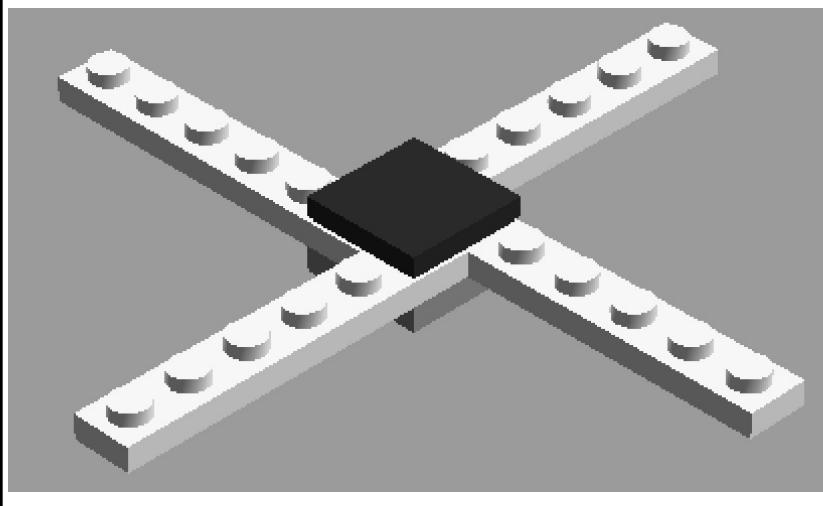
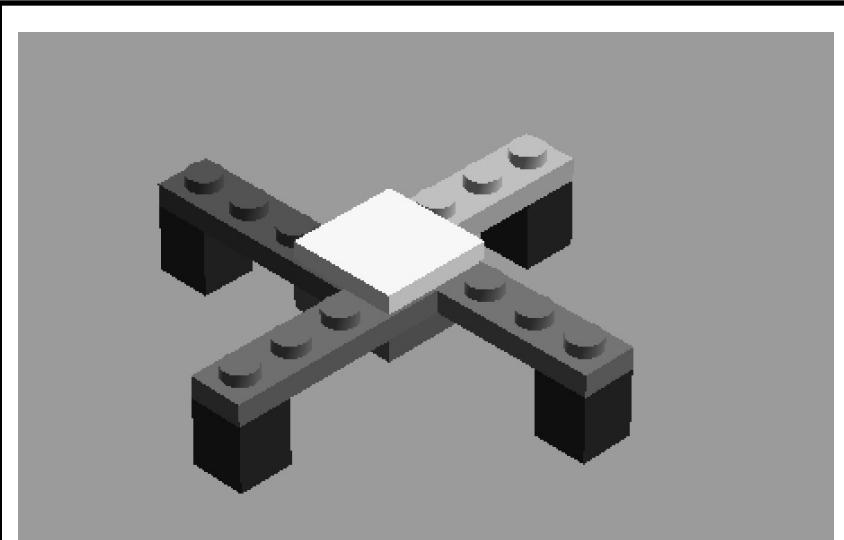
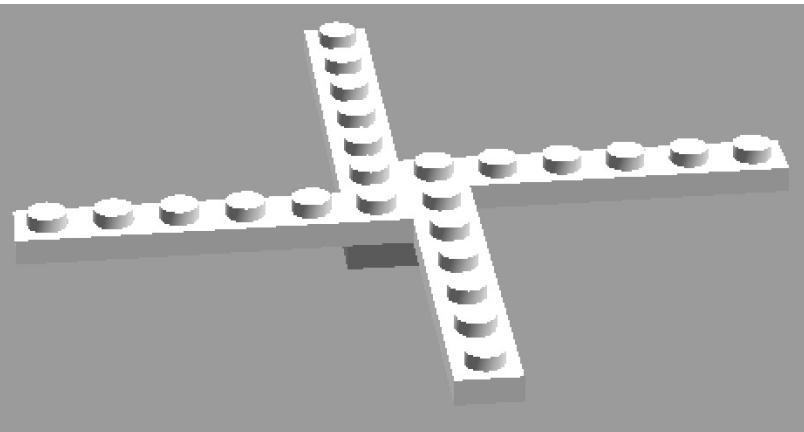
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Mini Lego Frame



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Craft Supplies

You can make a quad frame out of a variety of materials. We've tried popsicle sticks, glue and pip cleaners. You'll want a way to attach 4 motors (not so close they propellers hit each other). And have a place to put the board and battery.



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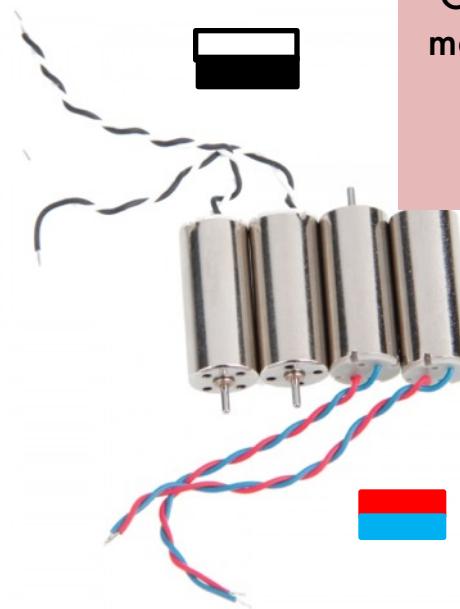


Try out different frame designs. A tip:
Beware of gluing the motors permanently
on to a frame, you could break the wires
or burn out the motor in some way.



Get Ready to Solder!

You will need to solder each of the 4 motors to the receiver board. 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.

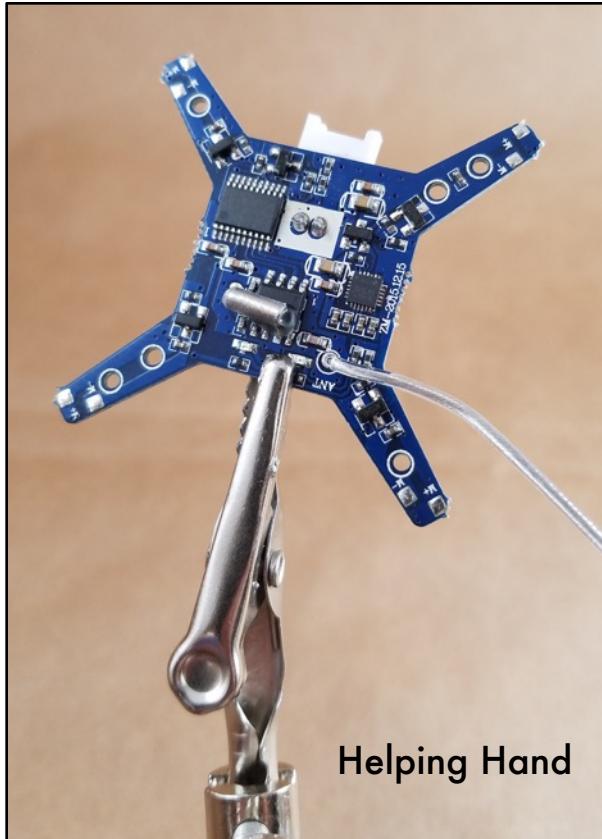


Of note, you
may receive a
set of
Red/Black
wires.

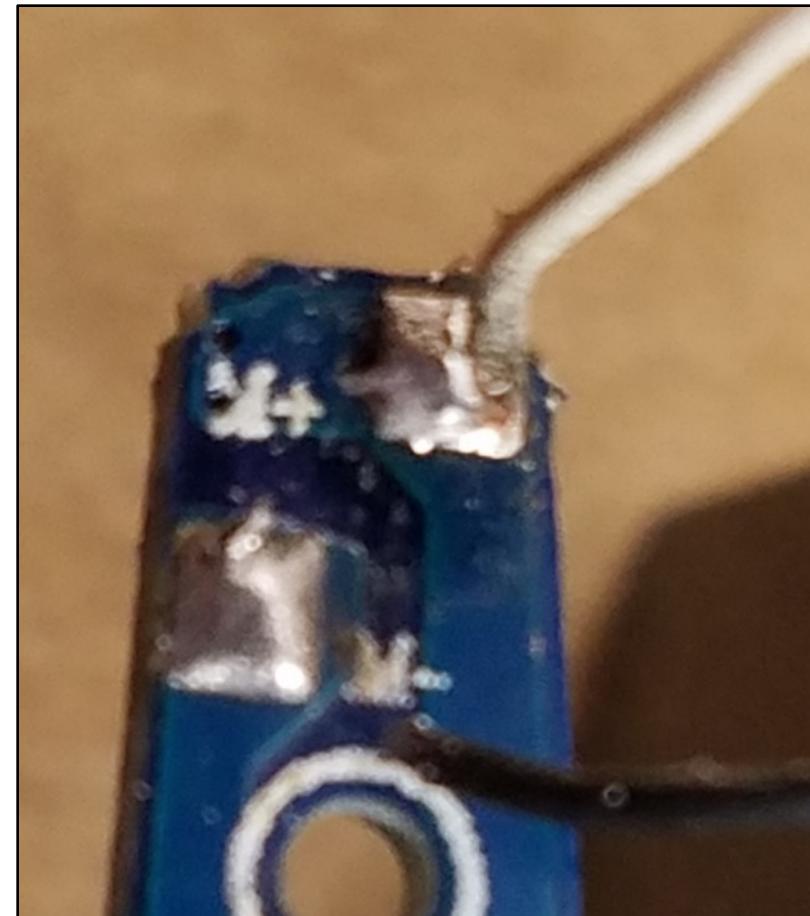
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Use a helping hand to hold the receiver board while you solder. Start with the wire on the board facing away from you and the solder joints facing "up".



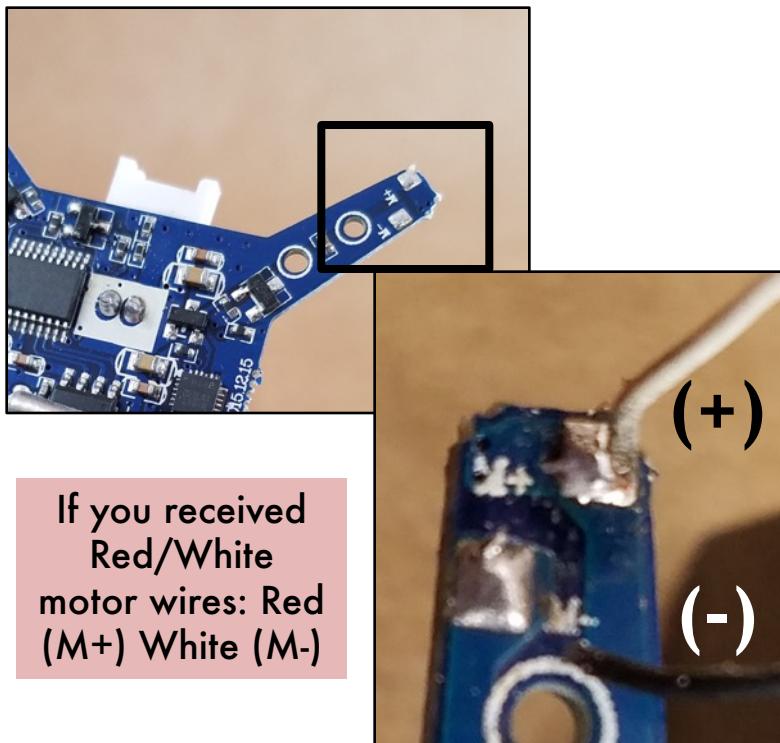
You can tell the solder joints for the motors as they read "M+" and "M-" in each of the corners.



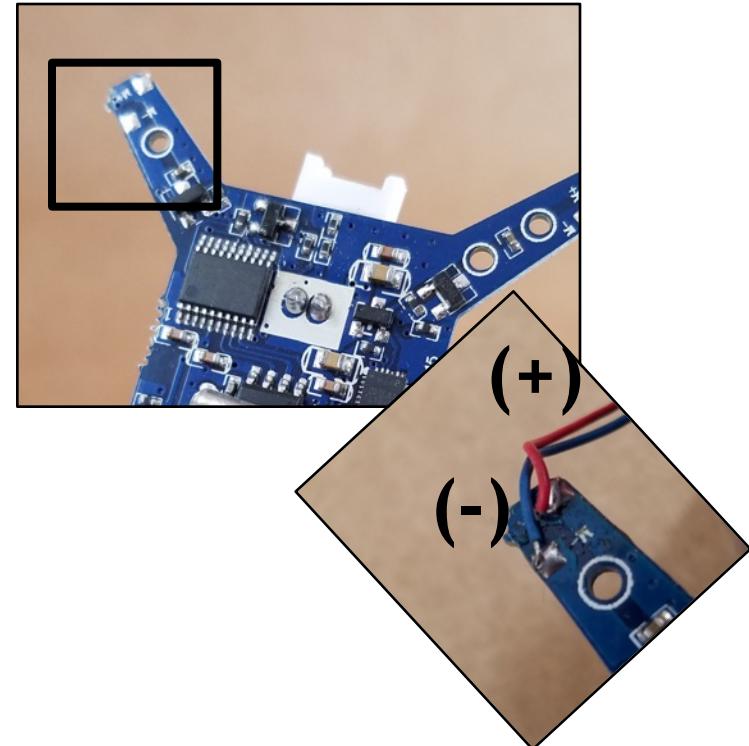
DIY Mini Drone Kit Instructions



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.

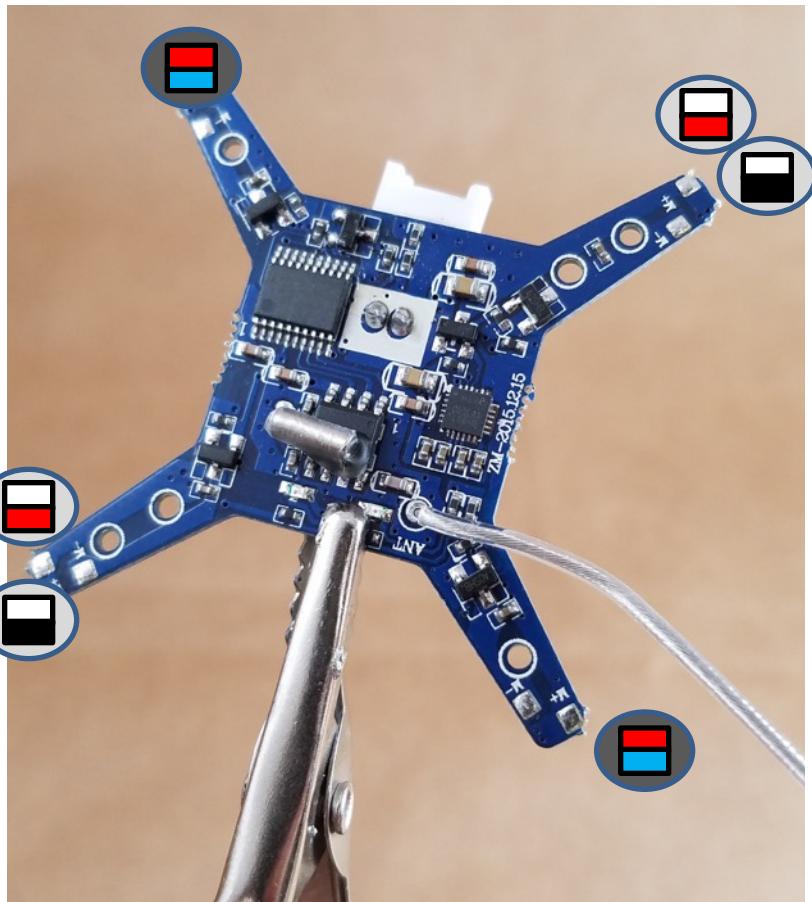


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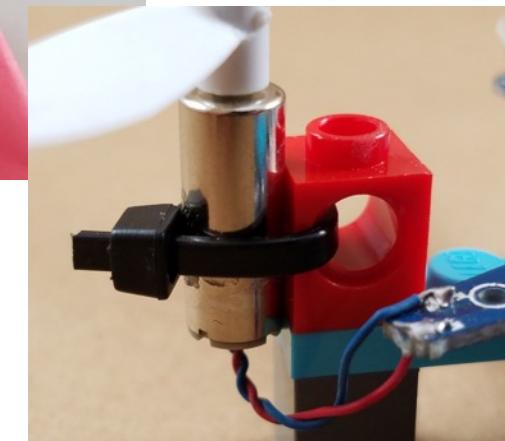
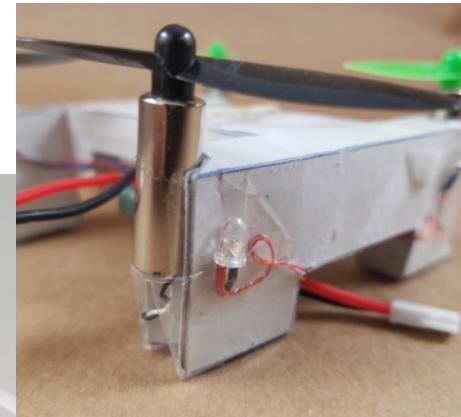


Wiring Diagram

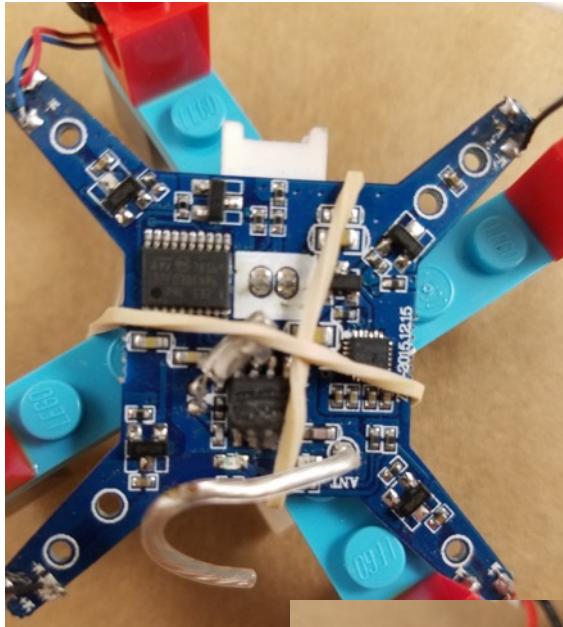
Here is the complete wiring diagram for the motor locations. The same pattern fits both the blue or green receiver board.



Once soldered, you need to secure the board, motors and the battery to the frame with adhesive or rubber bands.

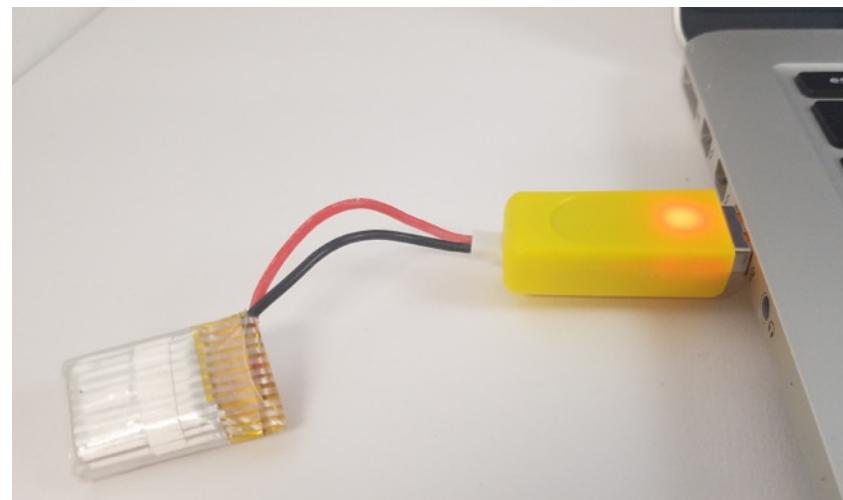


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Charging Battery

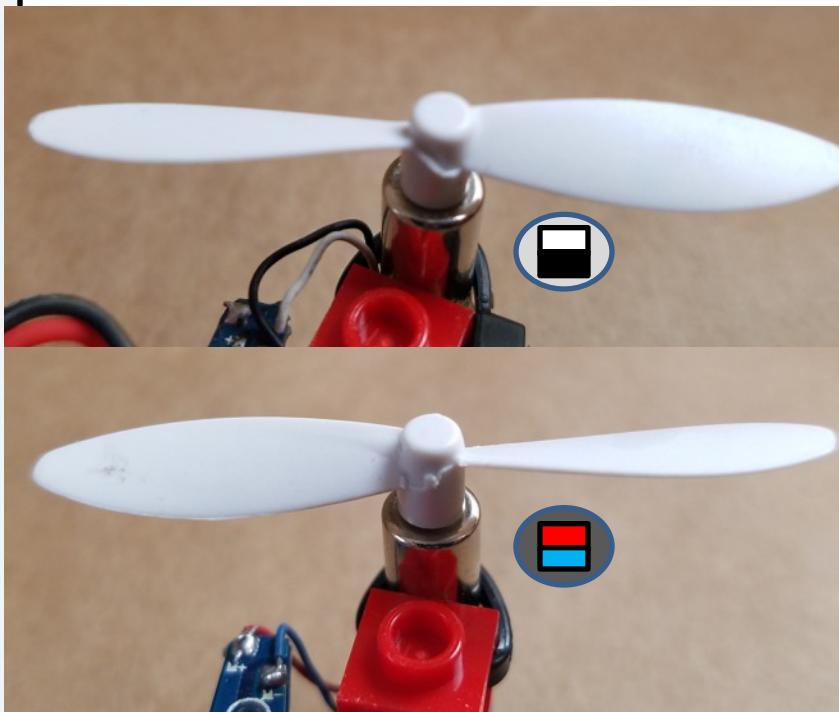
Charge battery by plugging JST connector from Lipo battery to JST/USB cable (of note, your USB charger may not have a "cable" just a USB to JST as pictured with the computer below). We recommend charging the battery prior to your first flight. You can charge the battery while it's attached to the drone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



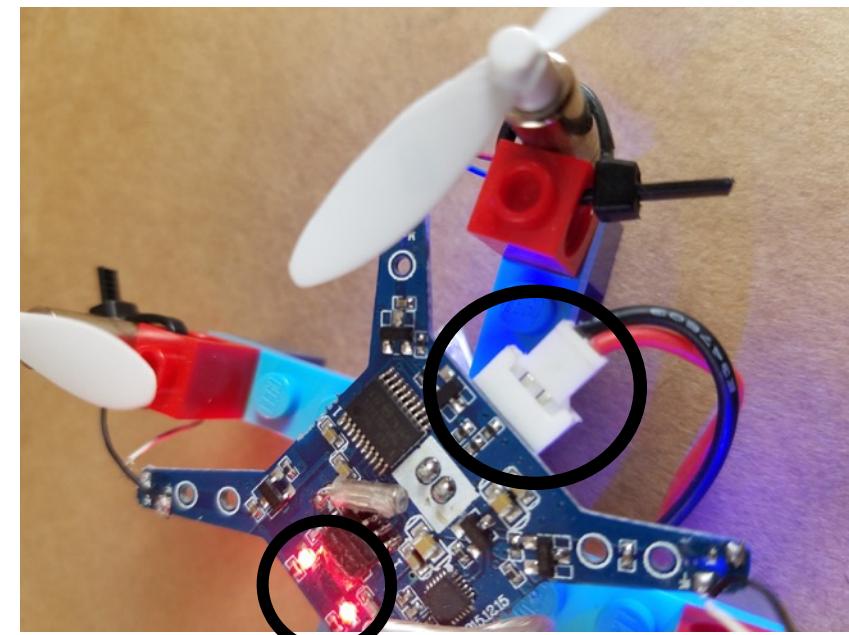
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Firmly press propeller down on to motor spike. It should sit snugly against the motor. There are two different propeller blade directions and they are **DIFFICULT** to tell apart! One set will go on the **black/white** motors and the other set on the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



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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!



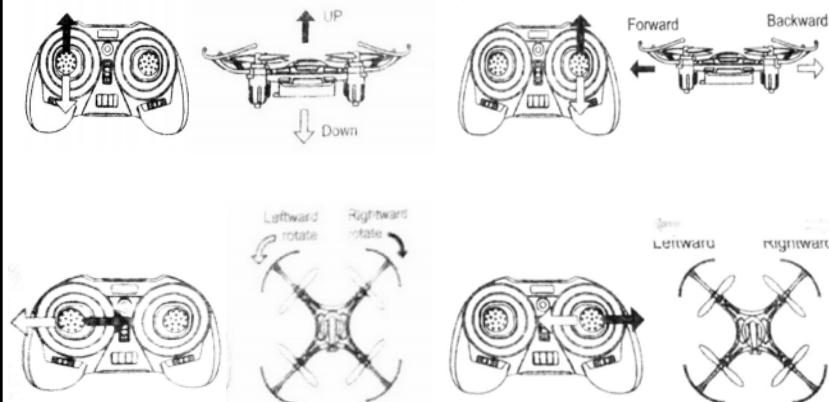
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Remote Control



Operation

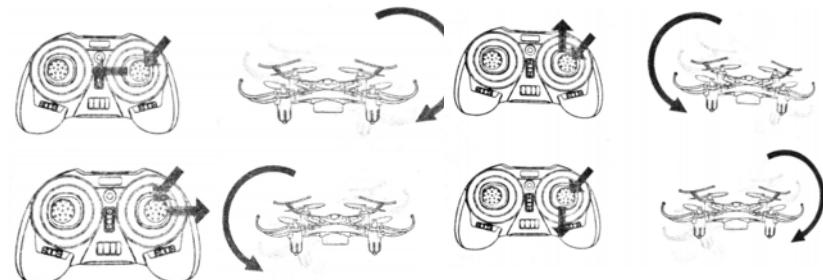


Sensitivity

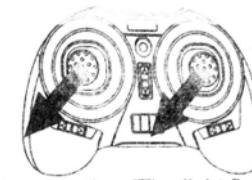
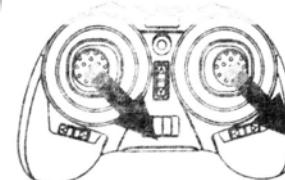
2 Modes: Low (40%), High (100%)

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

Rolling



Calibrate



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

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You have now completed a
Kitables Kit! If you have
questions, check out our FAQ at
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info@kitables.co