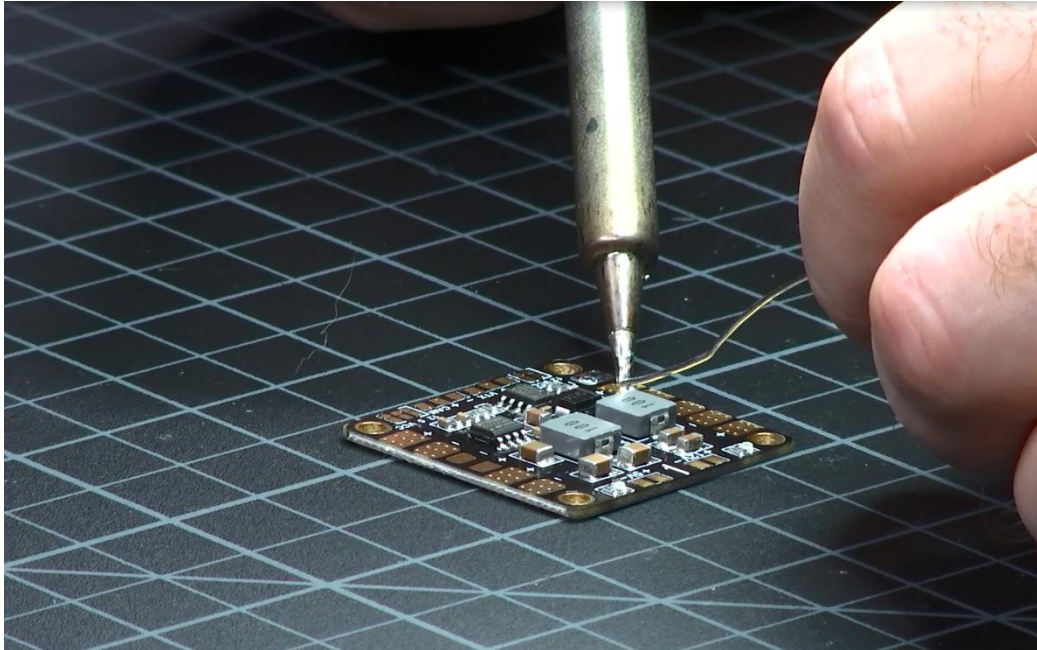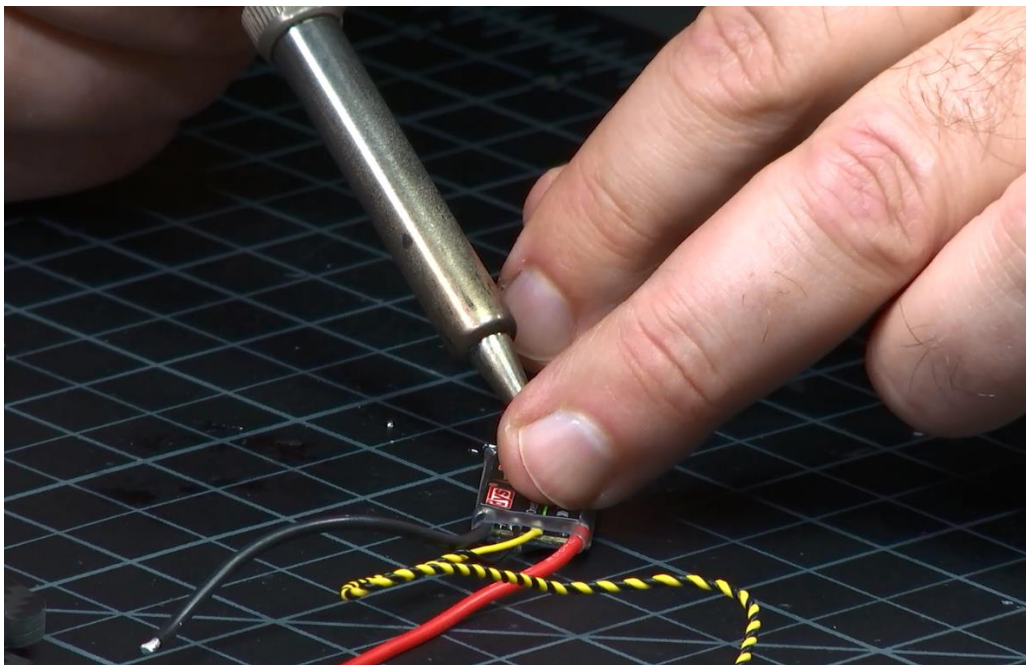# Building a Drone Lesson Summary

Motors, ESCs and PDB
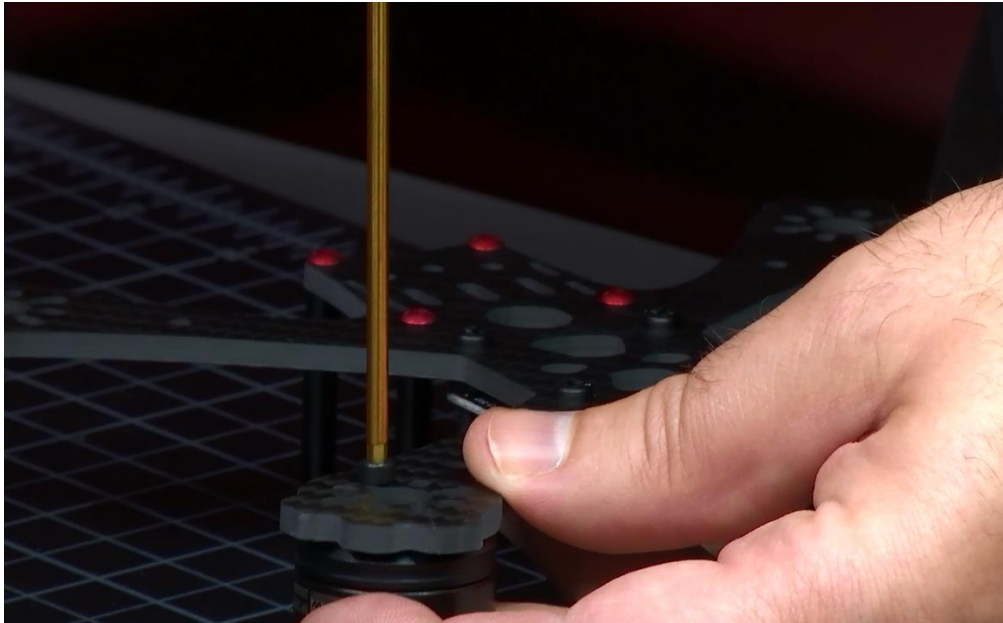
Preparing the pads on the power distribution board:

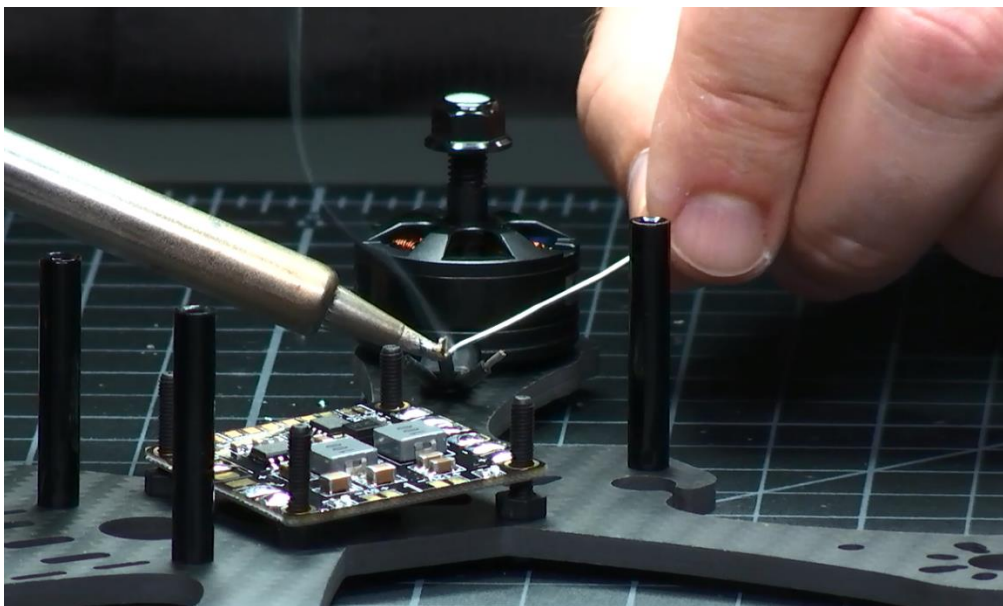Use a soldering iron add solder to each one of the pads.

Remove wires from the electronic speed controllers if there are any by using the soldering iron and melting the wire off.
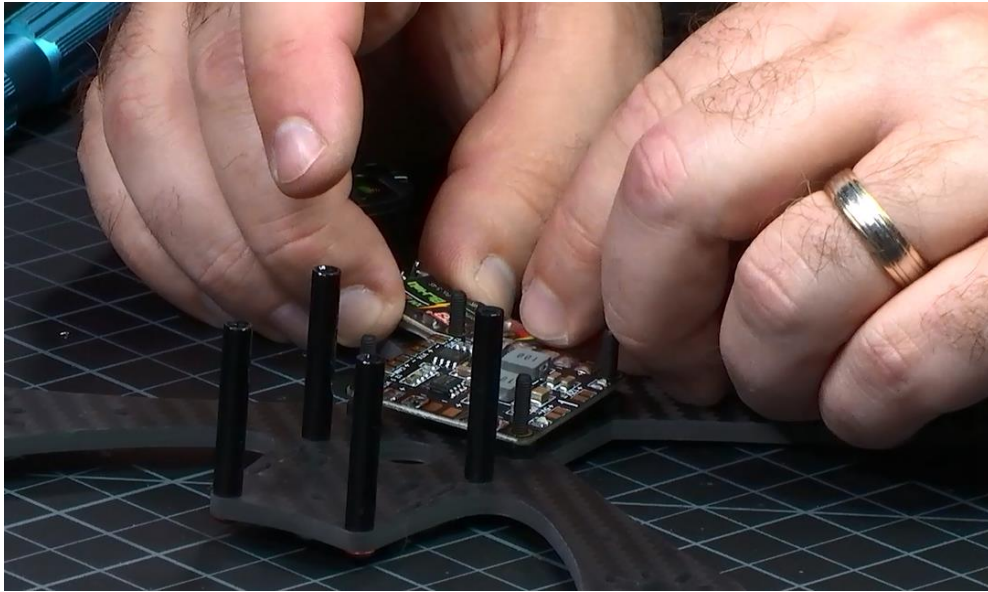
Mount the motor to the frame

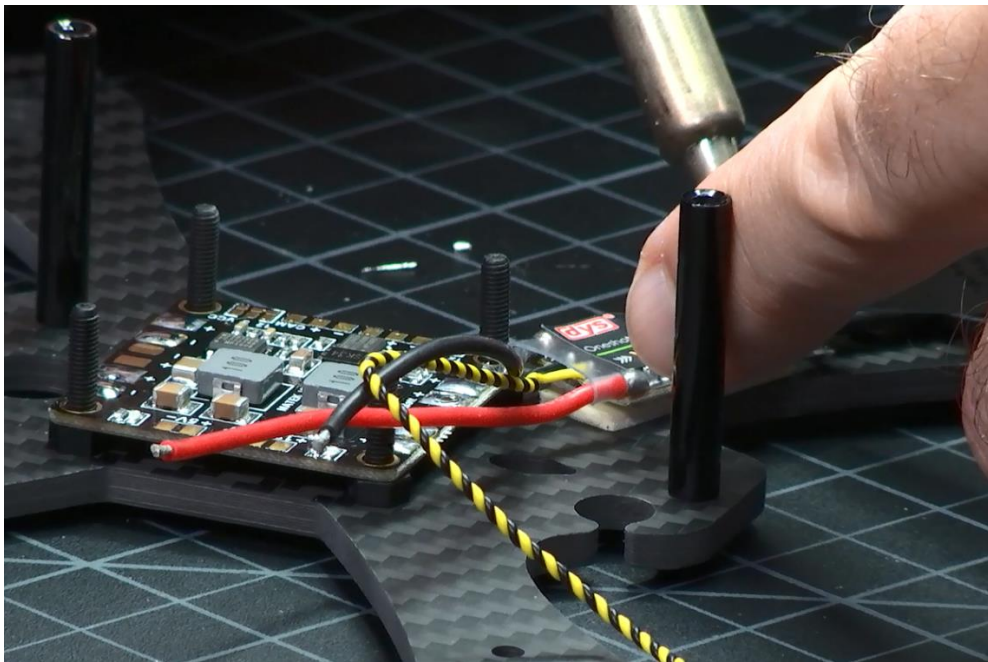Trim motor wires for attaching to the electronic speed controller.
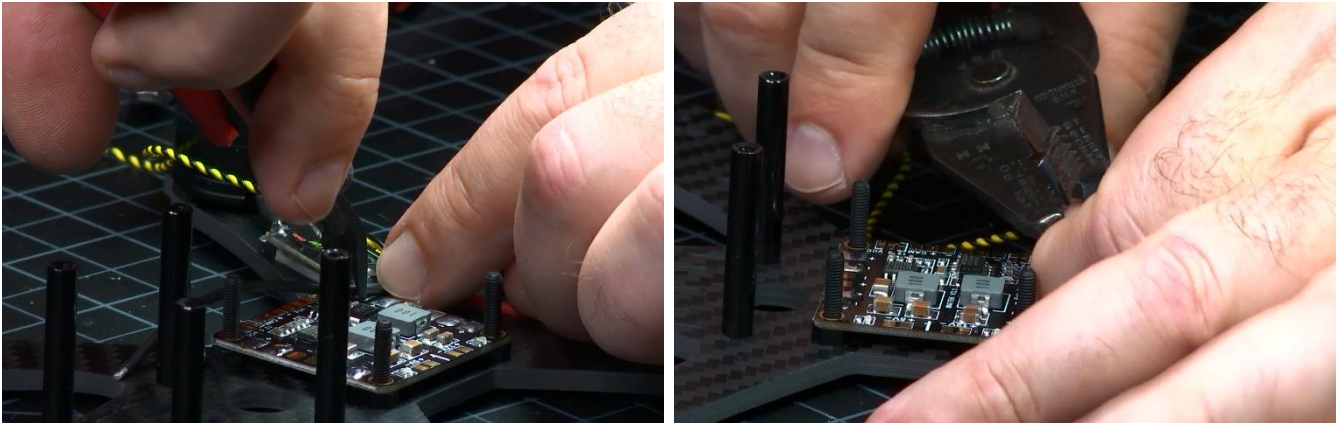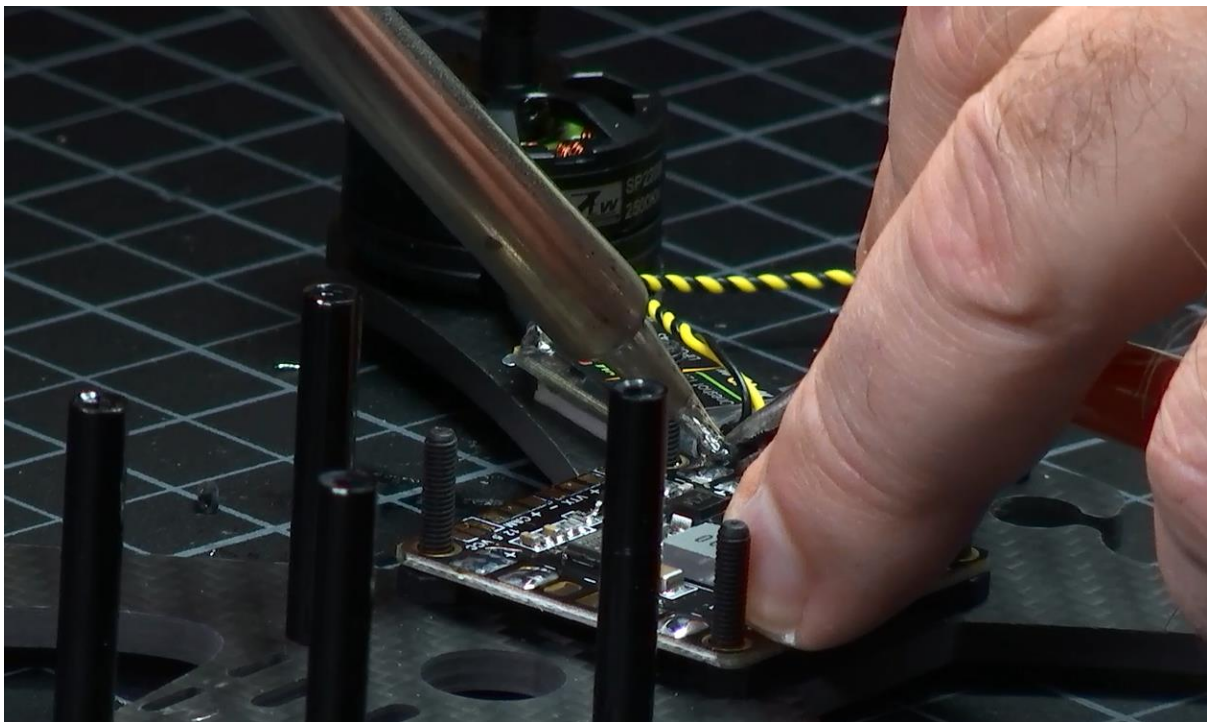

Add solder to the motor wires.

Stick electronic speed controller down with double sided tape.

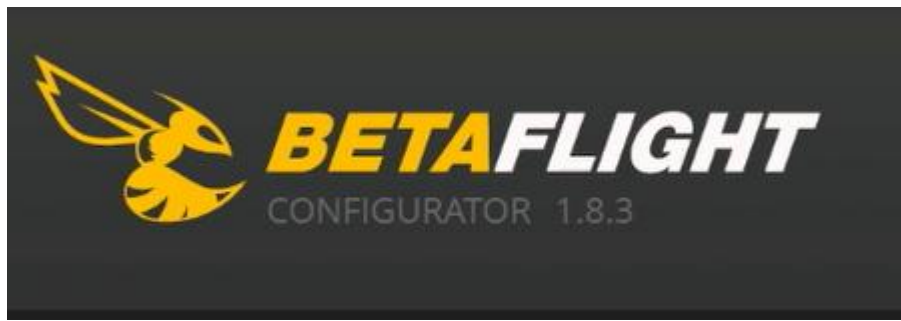Attach the wire to the pad using the soldering iron.

Trim electronic speed controller wire to attach to the power distribution board.

Attach wire to power distribution board using soldering iron.

Connecting Up Flight Controller

Update the flight computer/controller to the latest firmware by connecting it to a computer via USB and using **Betaflight** to update to the latest firmware.
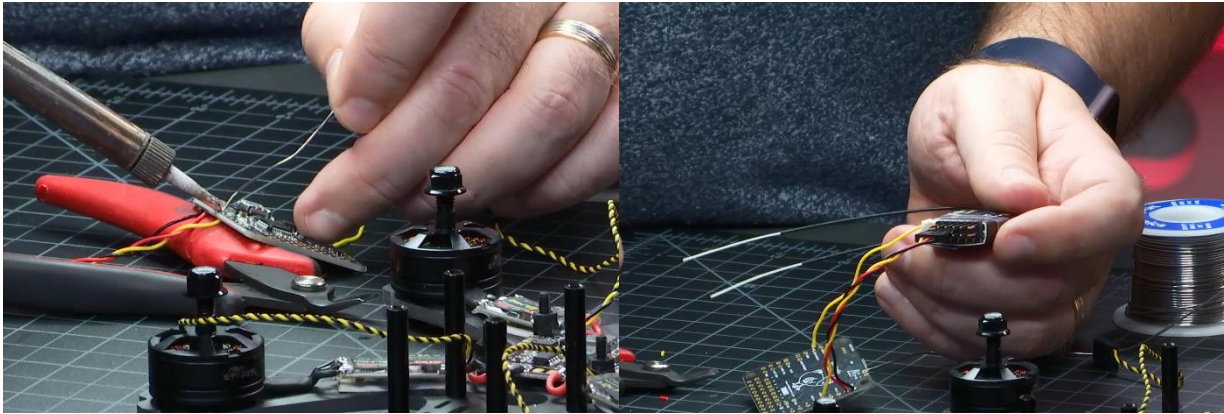

| Identifier	Data		Logging		Telemetry			RX		GPS	
UART1	☑ MSP	115200 ▾	☐ Blackbox	115200 ▾	Disabled ▾	AUTO ▾		☐ Serial RX		☐	57600 ▾
UART2	☐ MSP	115200 ▾	☐ Blackbox	115200 ▾	SmartPort ▾	AUTO ▾		☐ Serial RX		☐	57600 ▾
UART3	☐ MSP	115200 ▾	☐ Blackbox	115200 ▾	Disabled ▾	AUTO ▾		☑ Serial RX		☐	57600 ▾

Wiring the transmitter to the dodo board/flight controller. The transmitter transmits signals to tell the flight controller what to do by using the receiver.
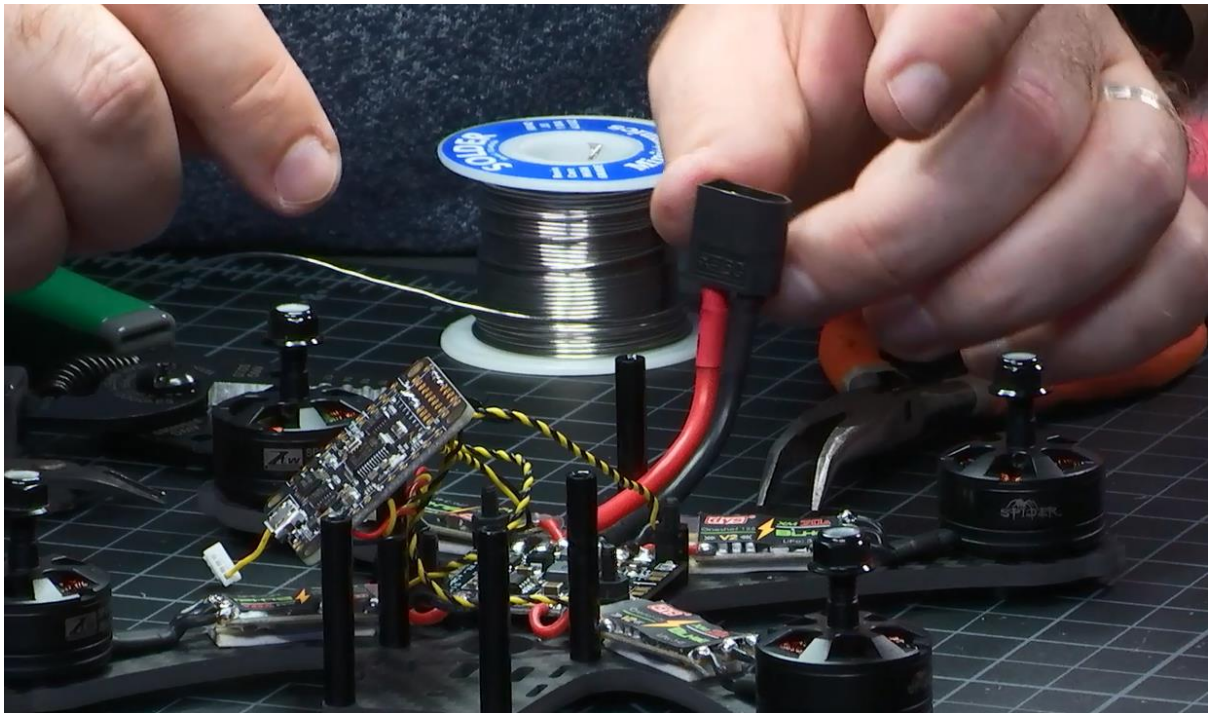
Configure the features you want on your copter using Betaflight. Set up the receiver.
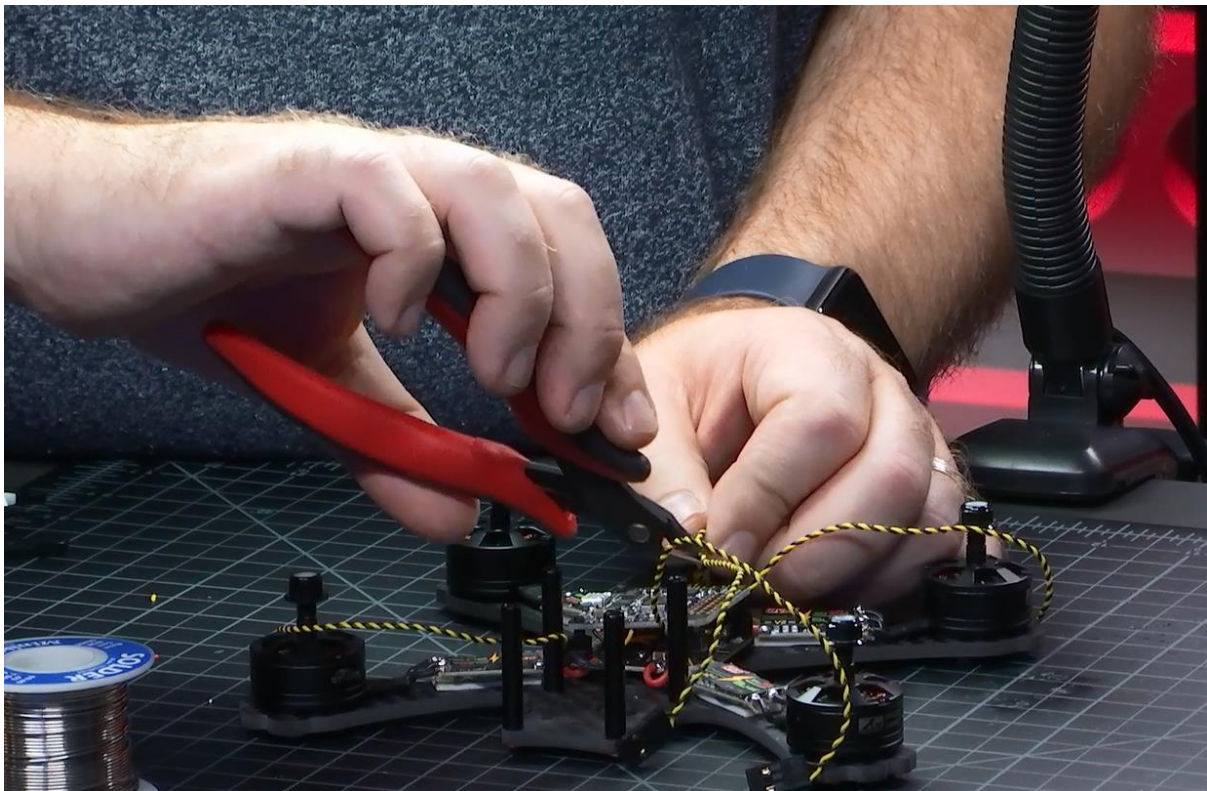
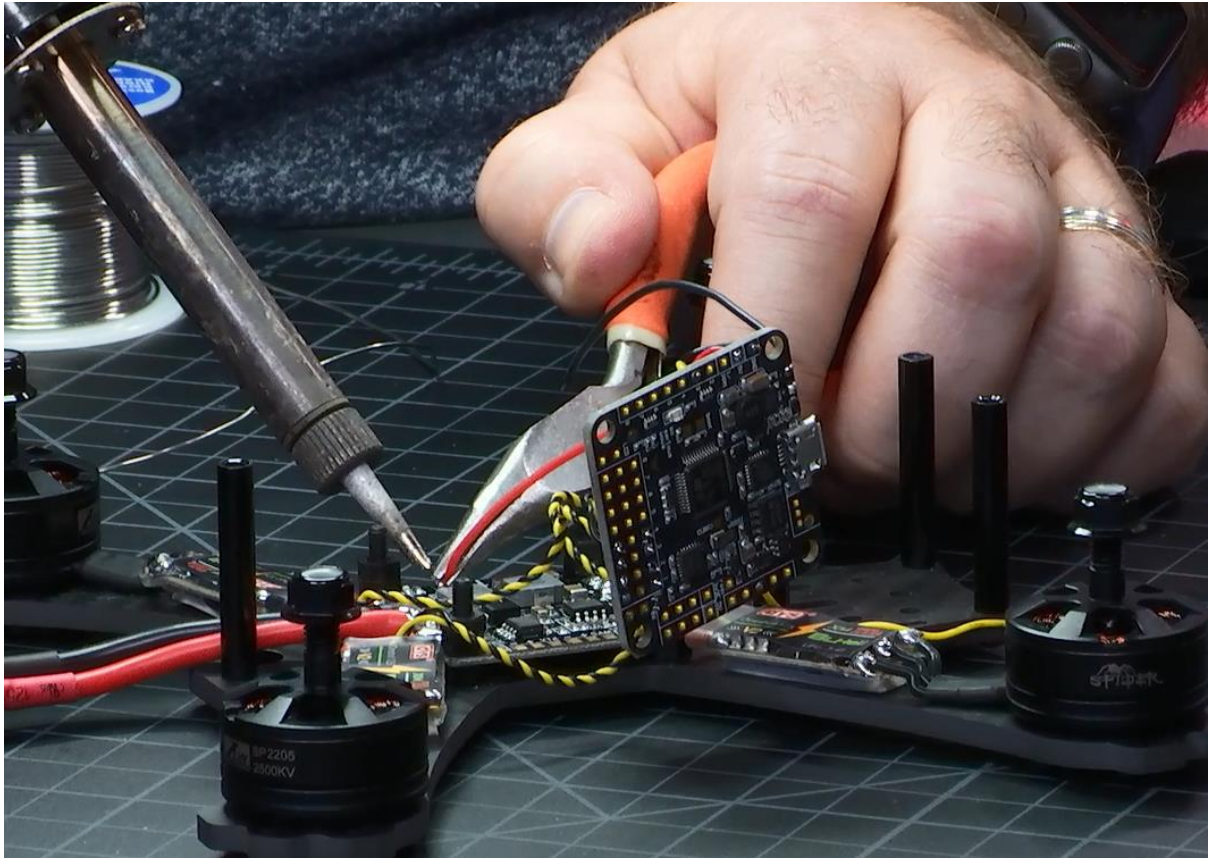Trim electronic speed controller wires.
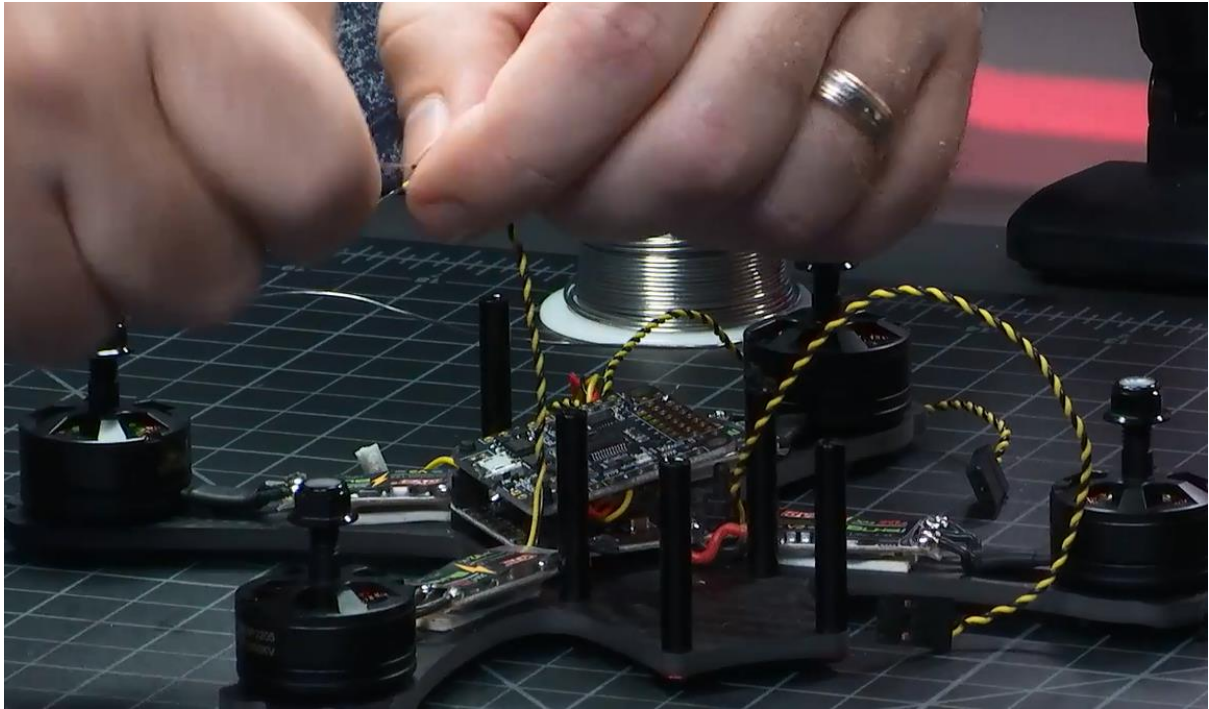
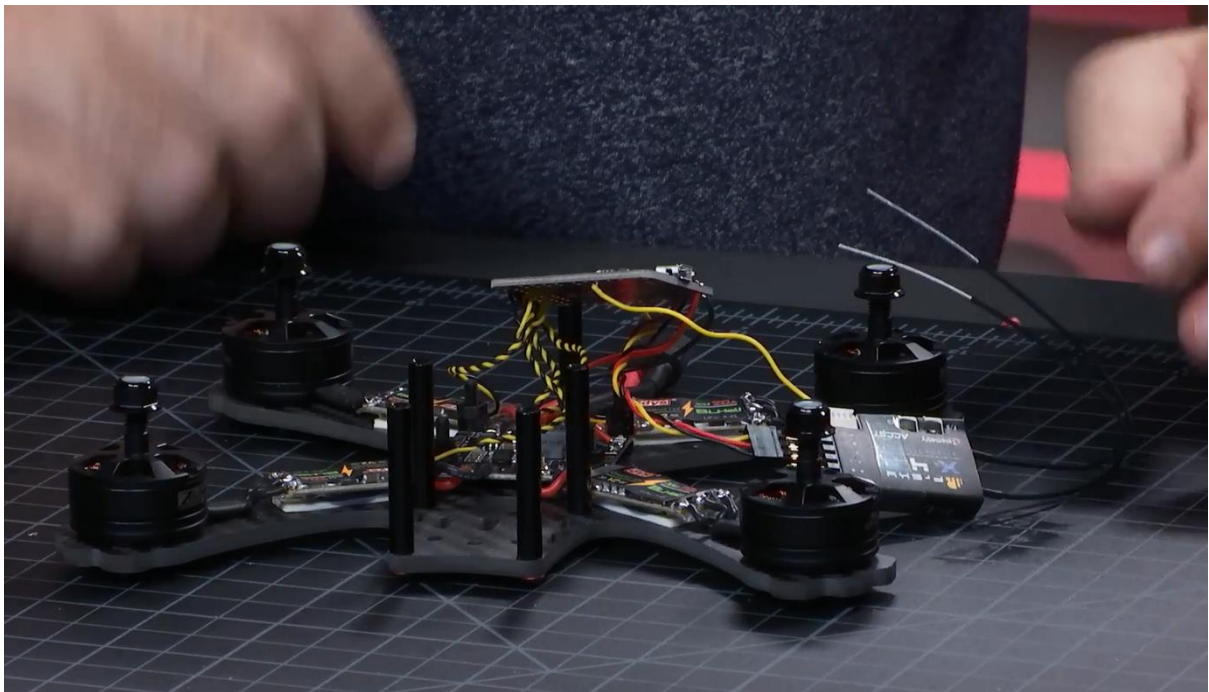Attach wires to the board from each electronic speed controller.

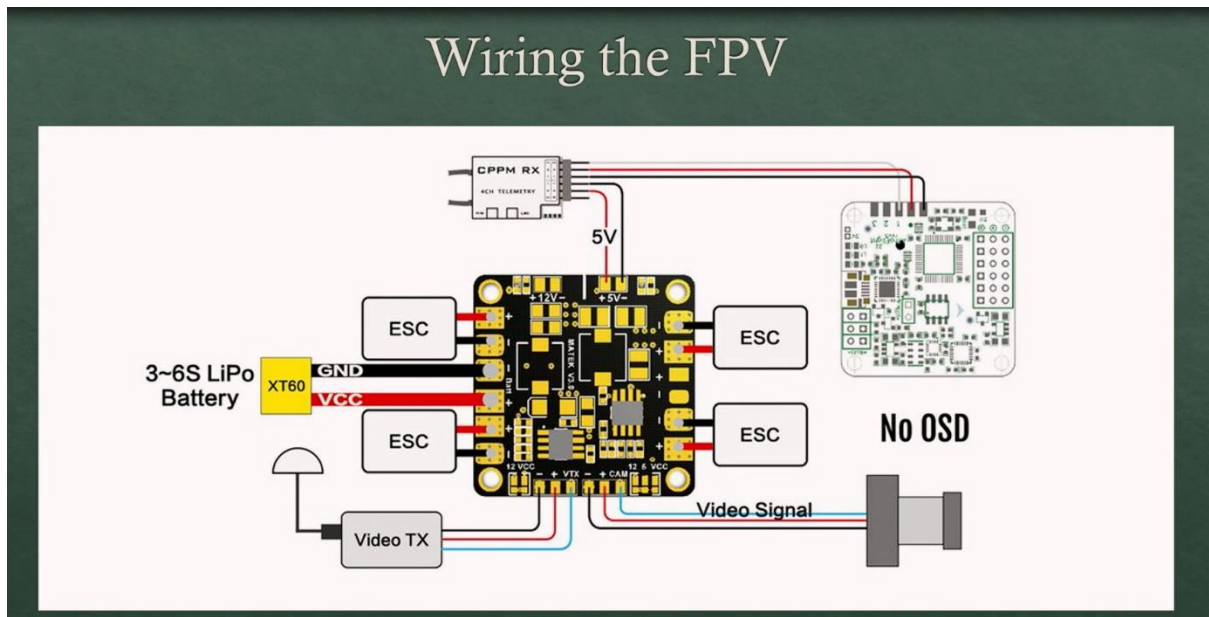Solder cable for power from battery to the power board.

Get power to the dodo board by soldering wires from it to the flight controller.
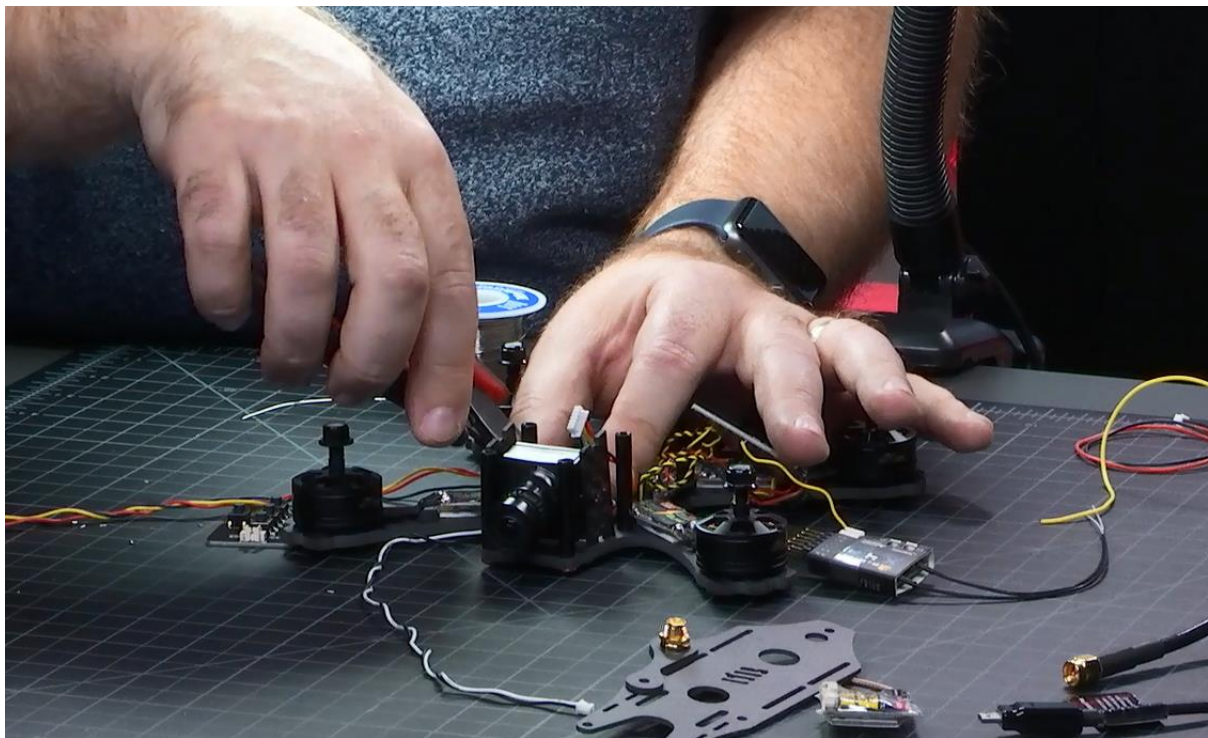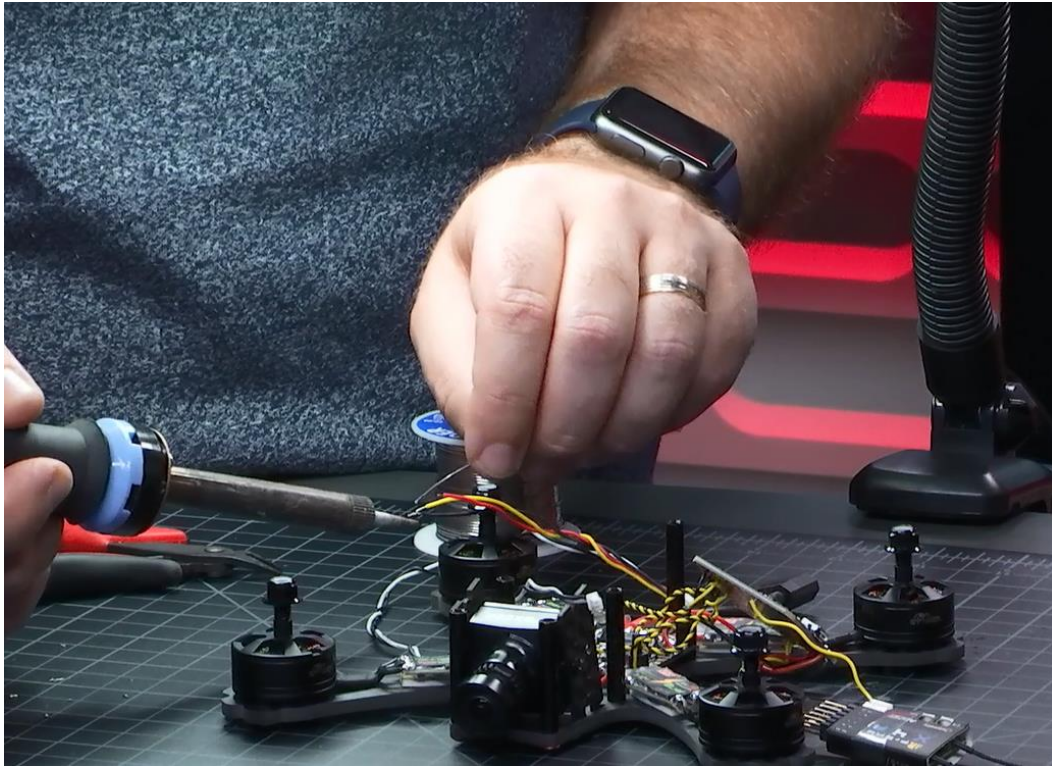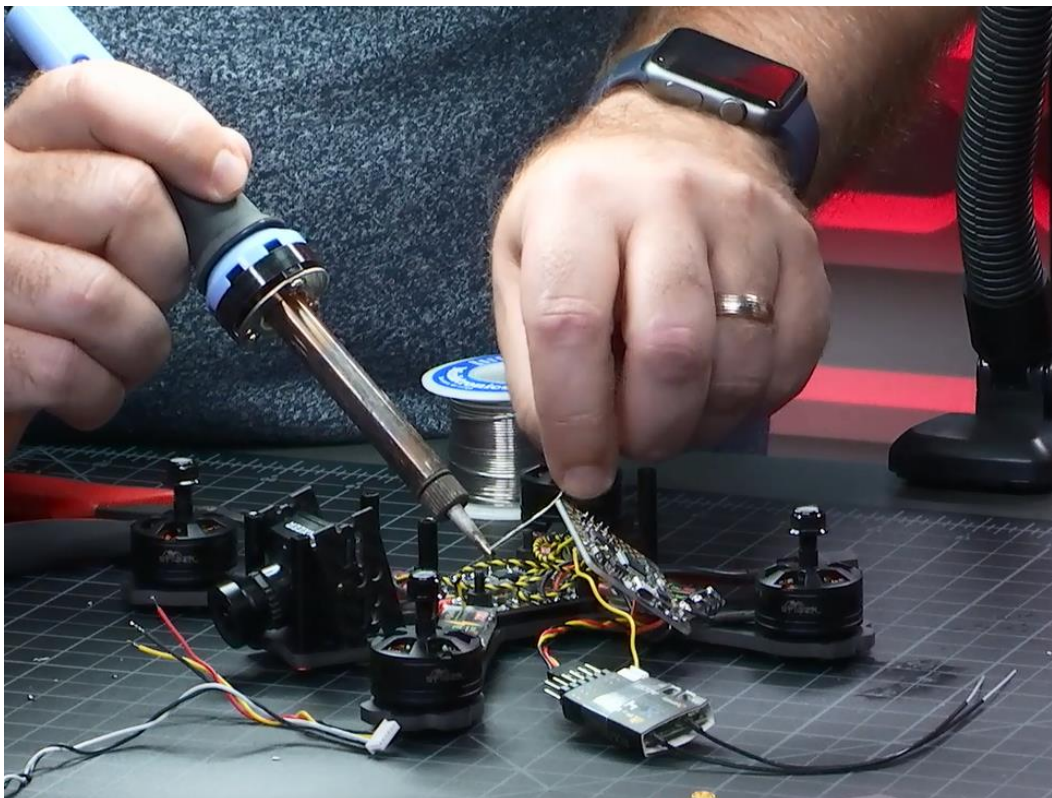

Attach the receiver.

FPV Gear and Final Assembly

You get to select what voltage you want going to the camera and what voltage you want going to the transmitter. You put solder between two pads. Whichever two you select is the voltage that device is going to get.
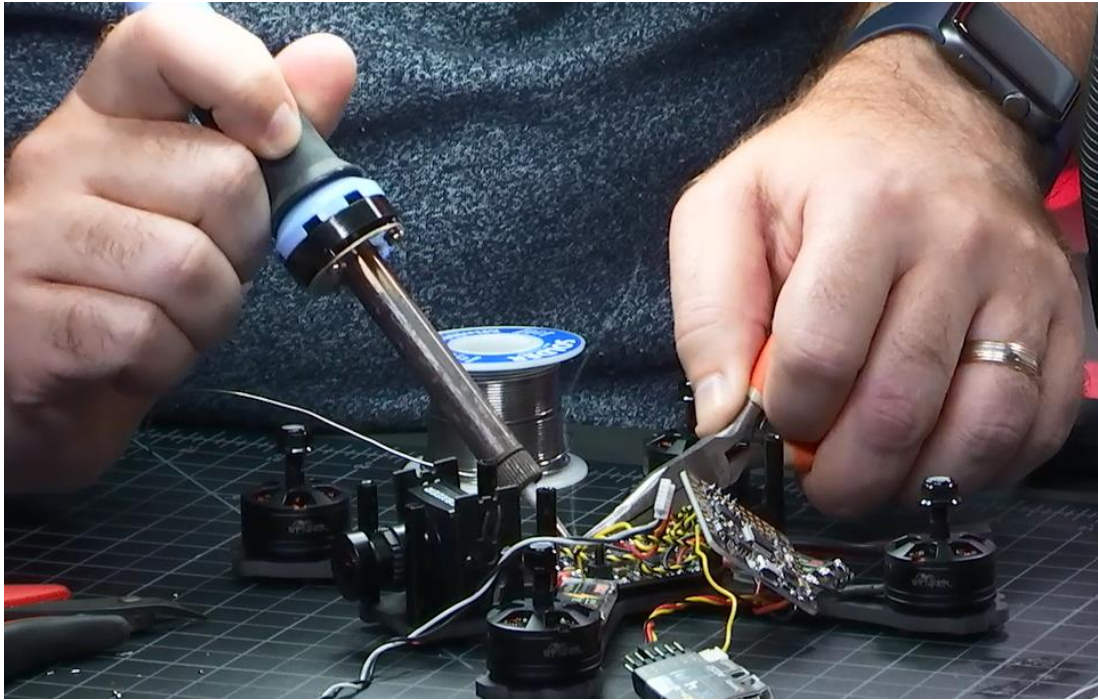

Cut the three wires and strip them.

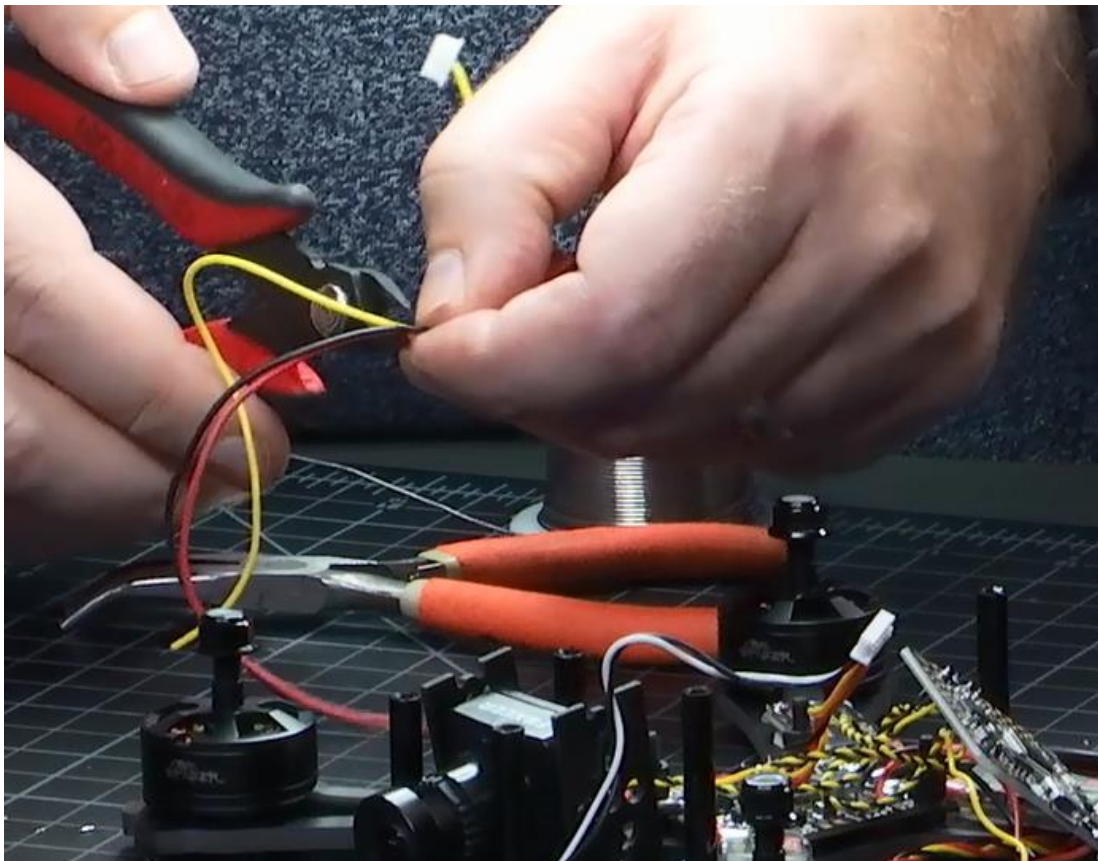Put solder on all the wires.

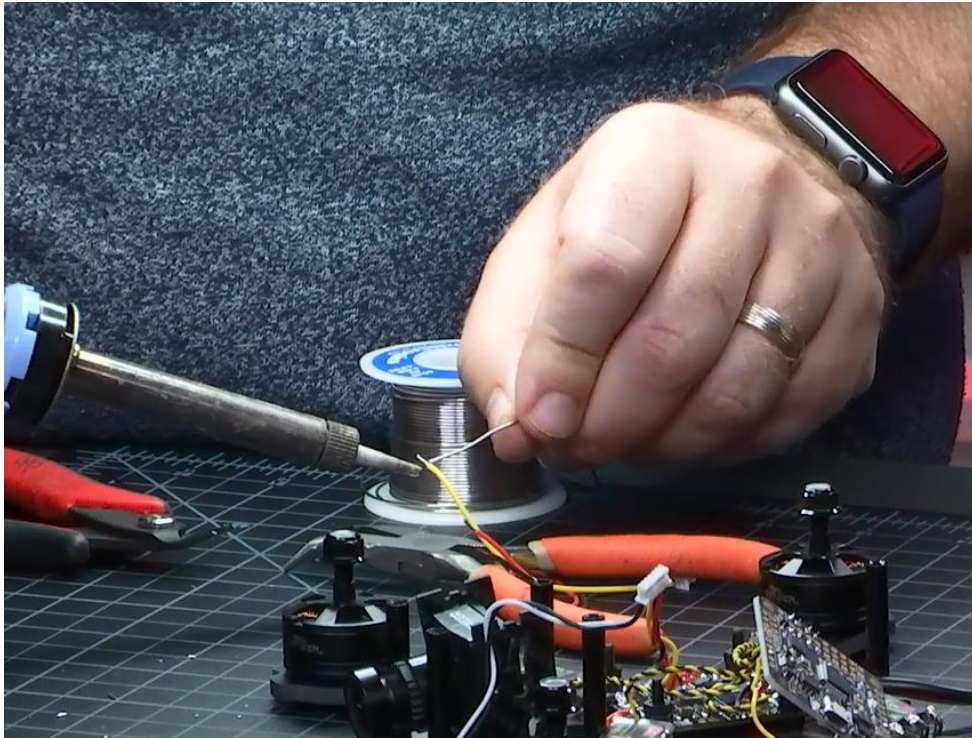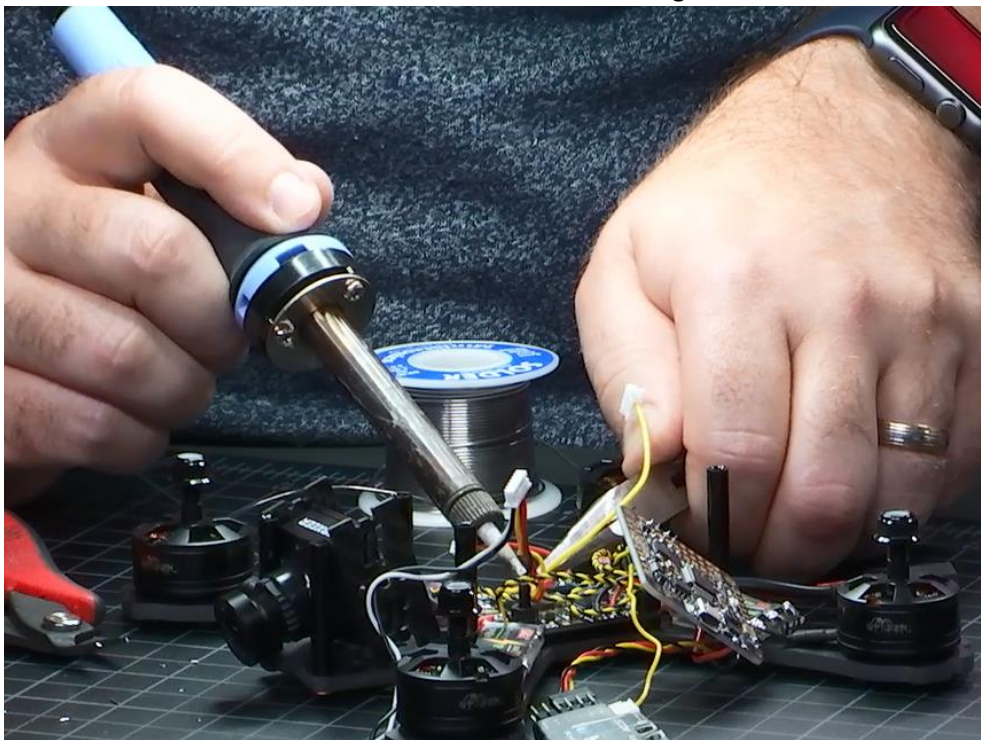Add solder to the correct pads.

Attach the wires using solder.

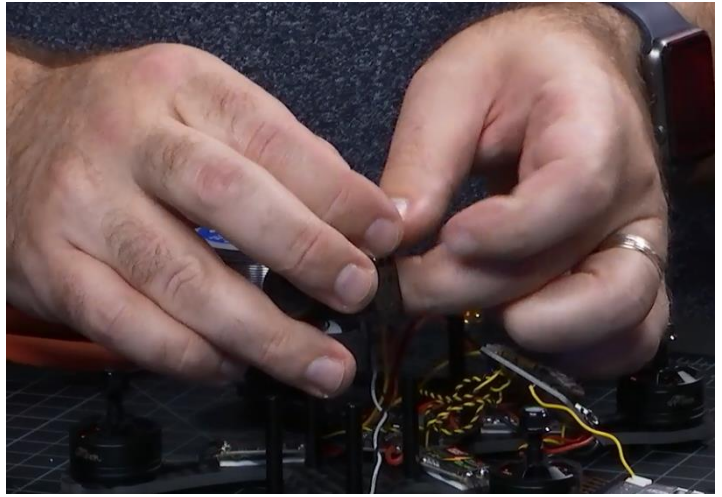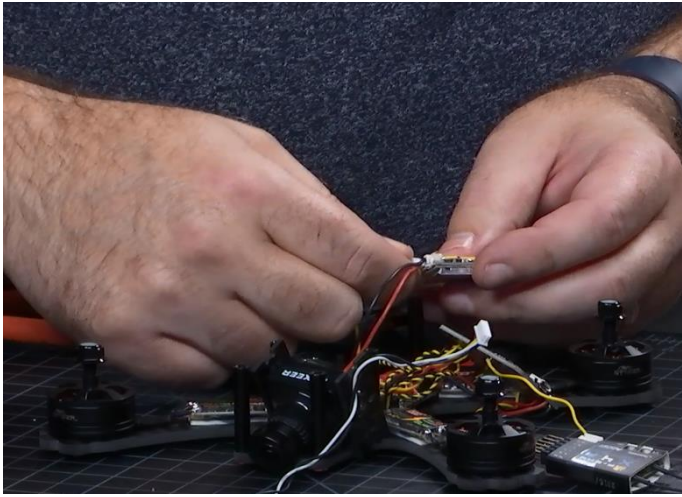Cut the wires for the video transmitter and strip them.

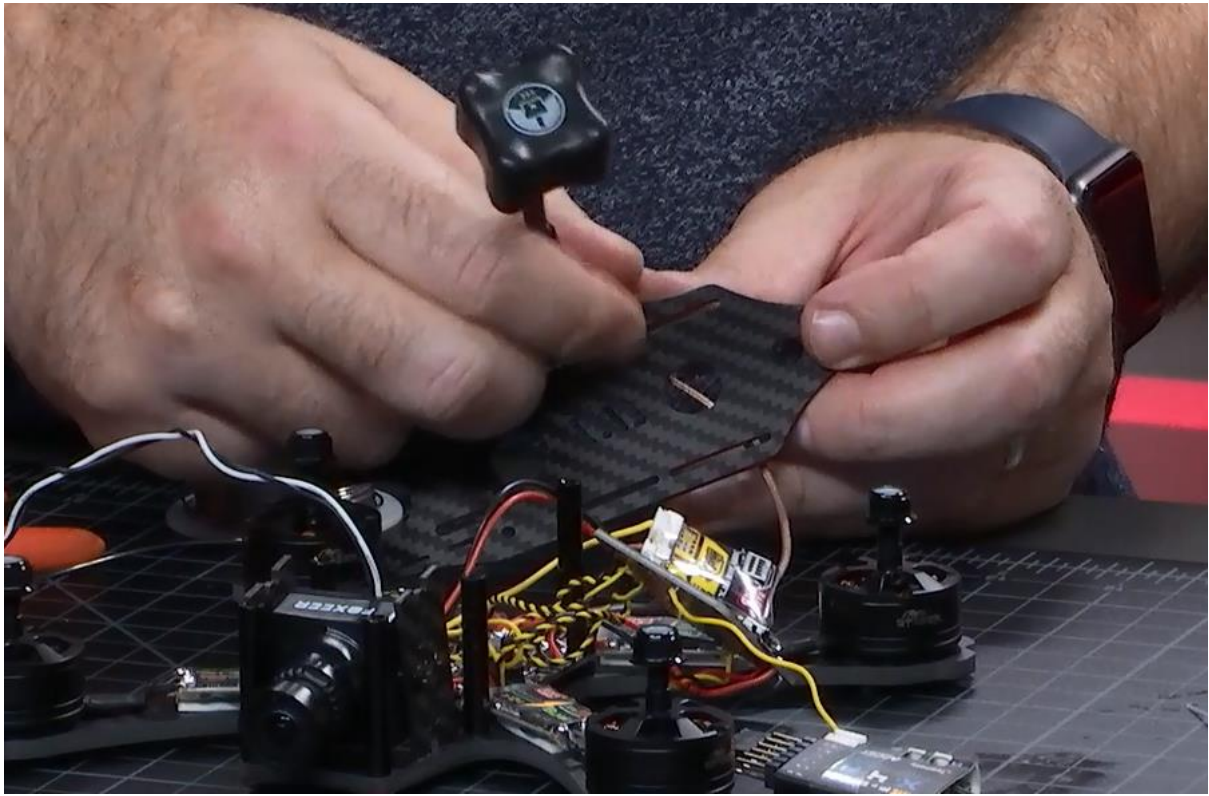Put solder on the ends of the wires. This is called "tinning".
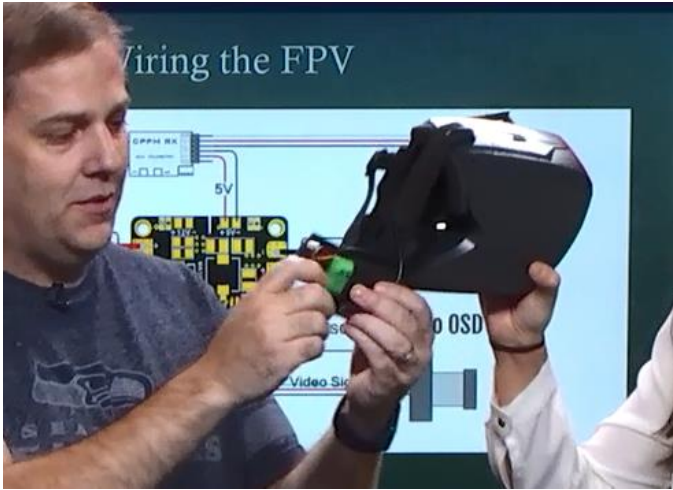

Attach wires using solder.

Hook up everything for testing.

Attach antenna to top plate.

Switch on the goggles and power everything on.

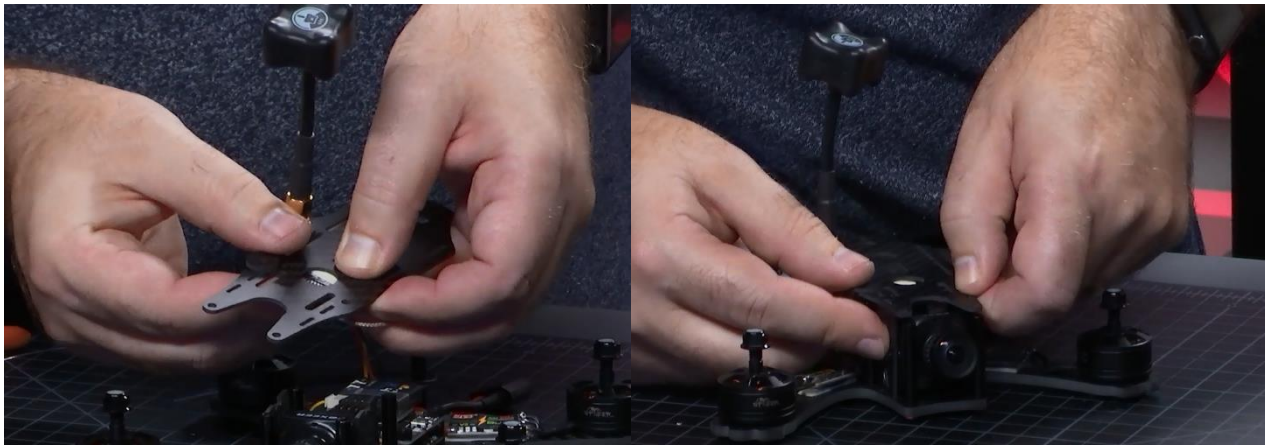Hit scan button on the goggles and wait until it shows the camera view.

Screw parts together.

Use double sided tape to stick down the transmitters receiver.

Stick video transmitter under the top plate using double sided tape, and line everything up.

Screw in the top plate. You have finished putting together the main parts of the drone.

BLHeli is a program used to program the firmware for the electronic speed converters. The electronic speed converters have their own firmware.

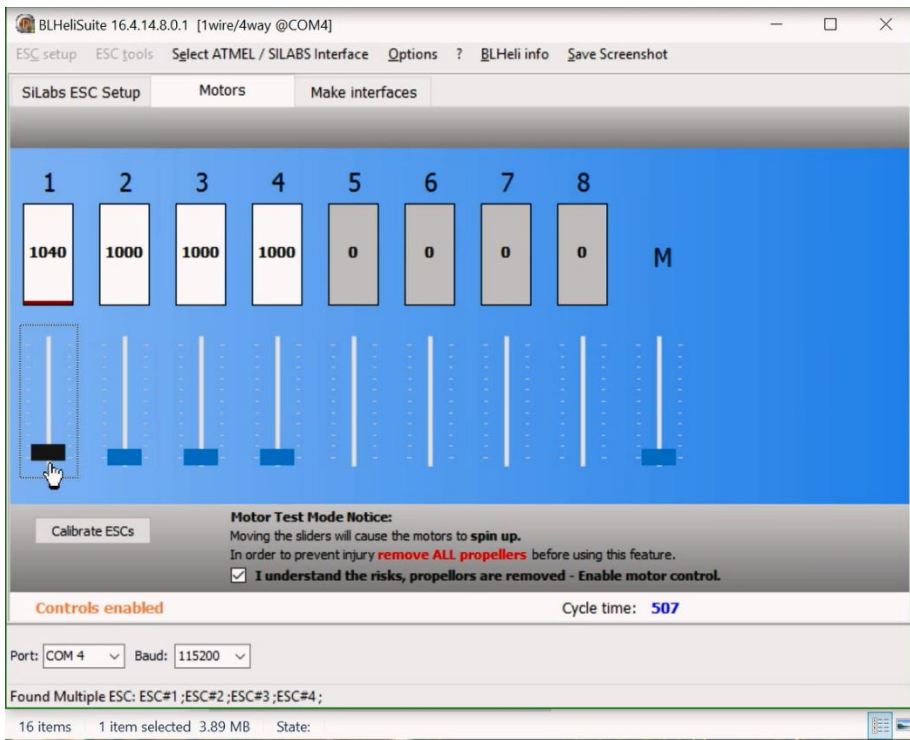You need to check to see if the motors are spinning in the correct direction.
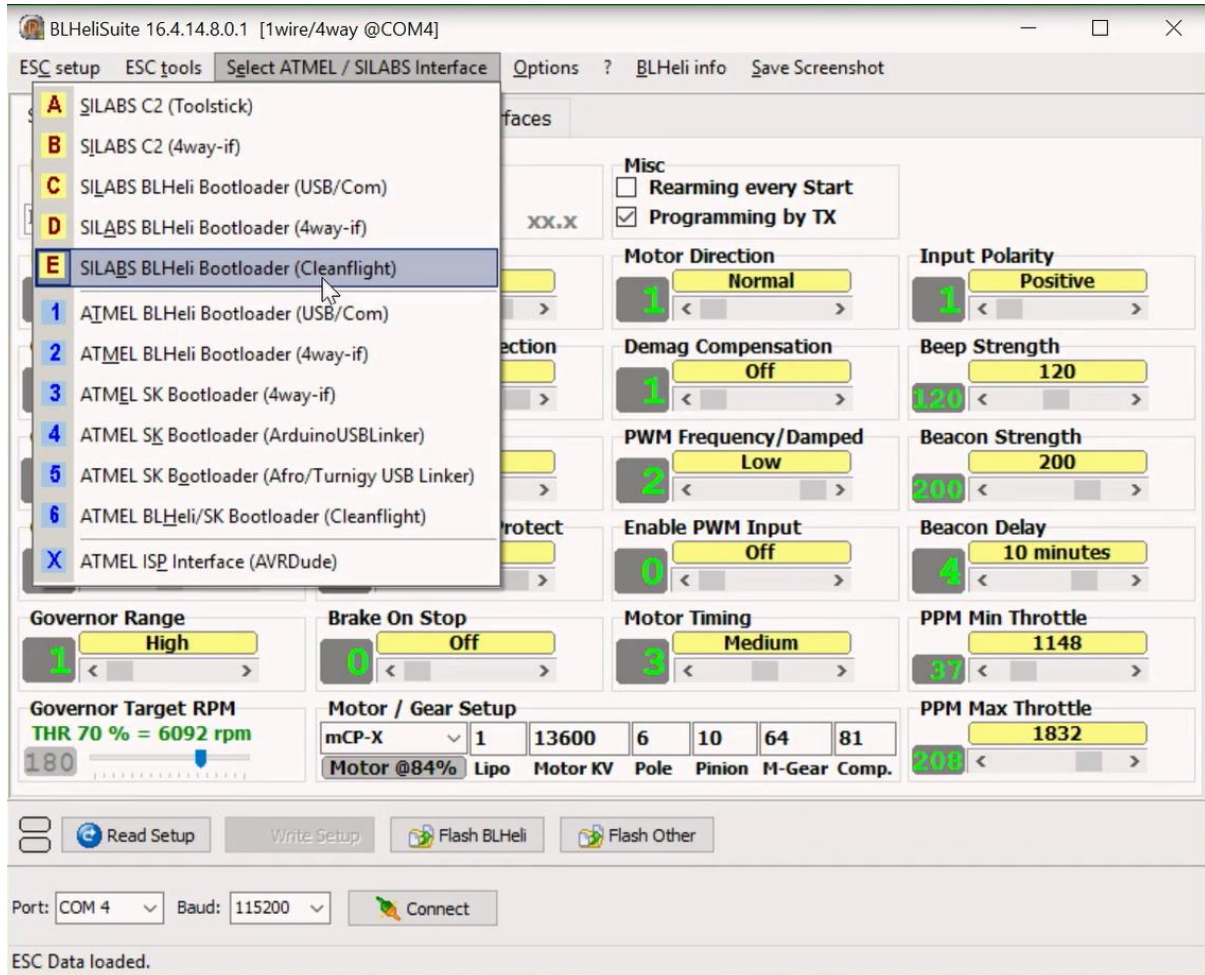
Using a USB use BLHeli Connect to the drone through Cleanflight.
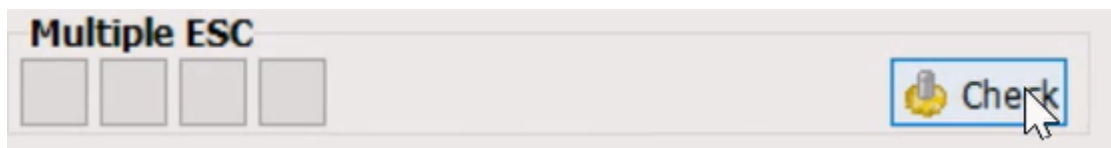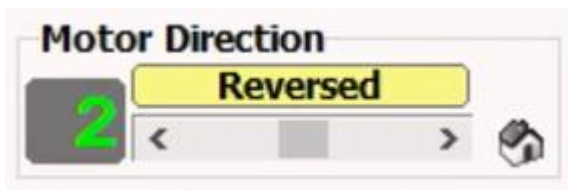
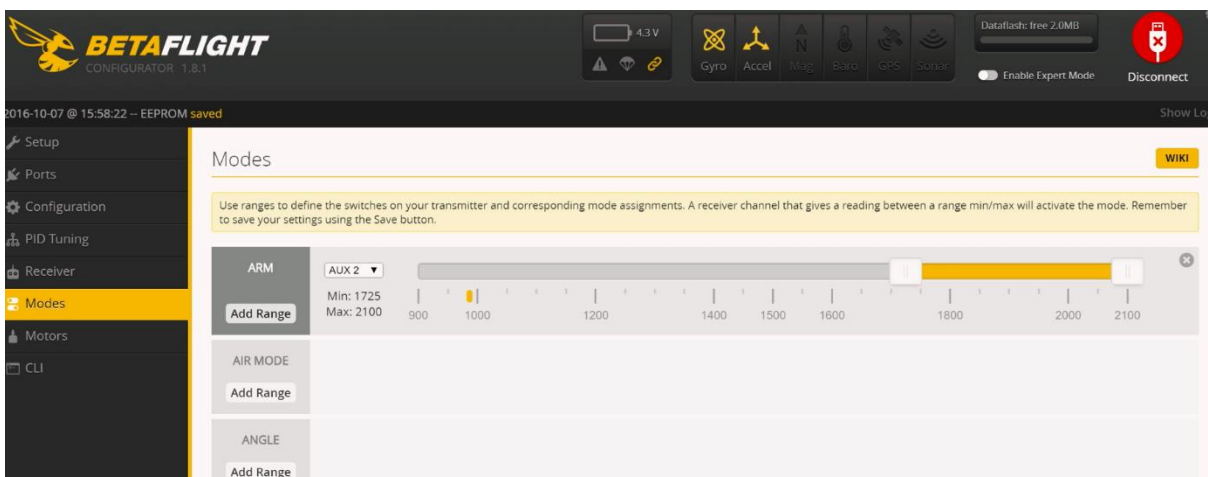

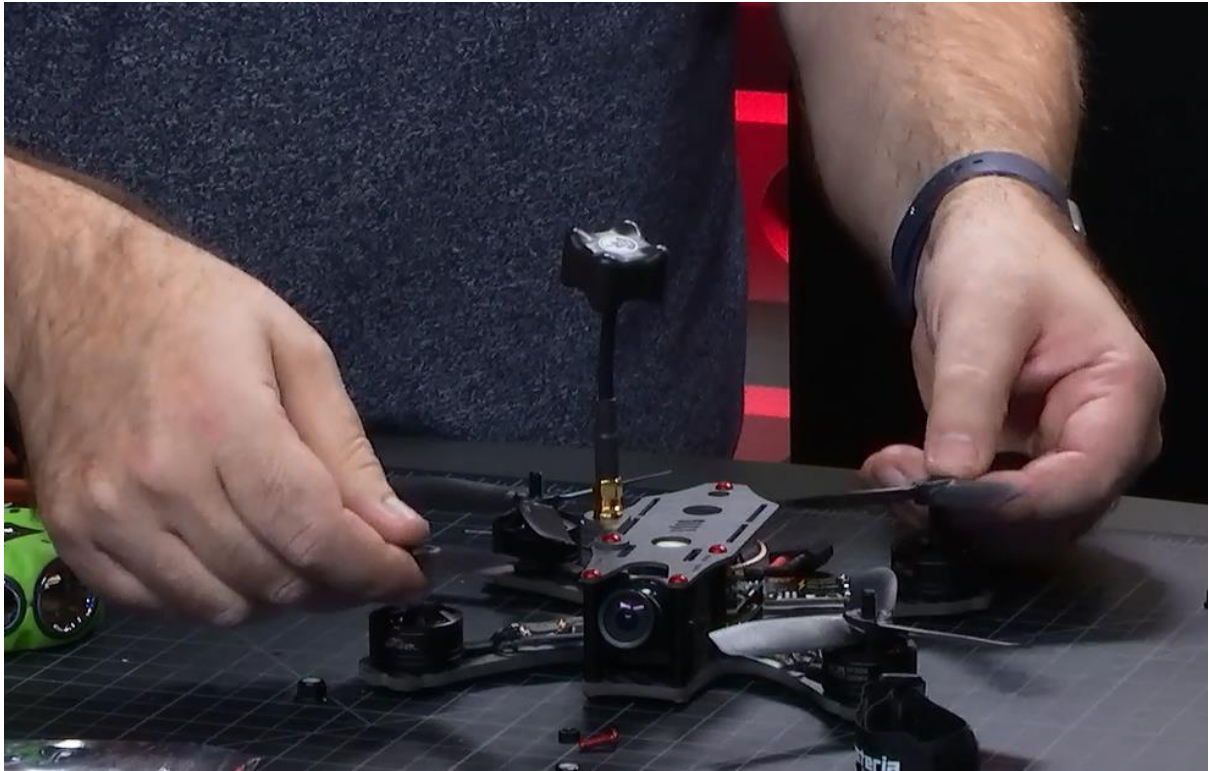Check the electronic speed controllers on the drone.

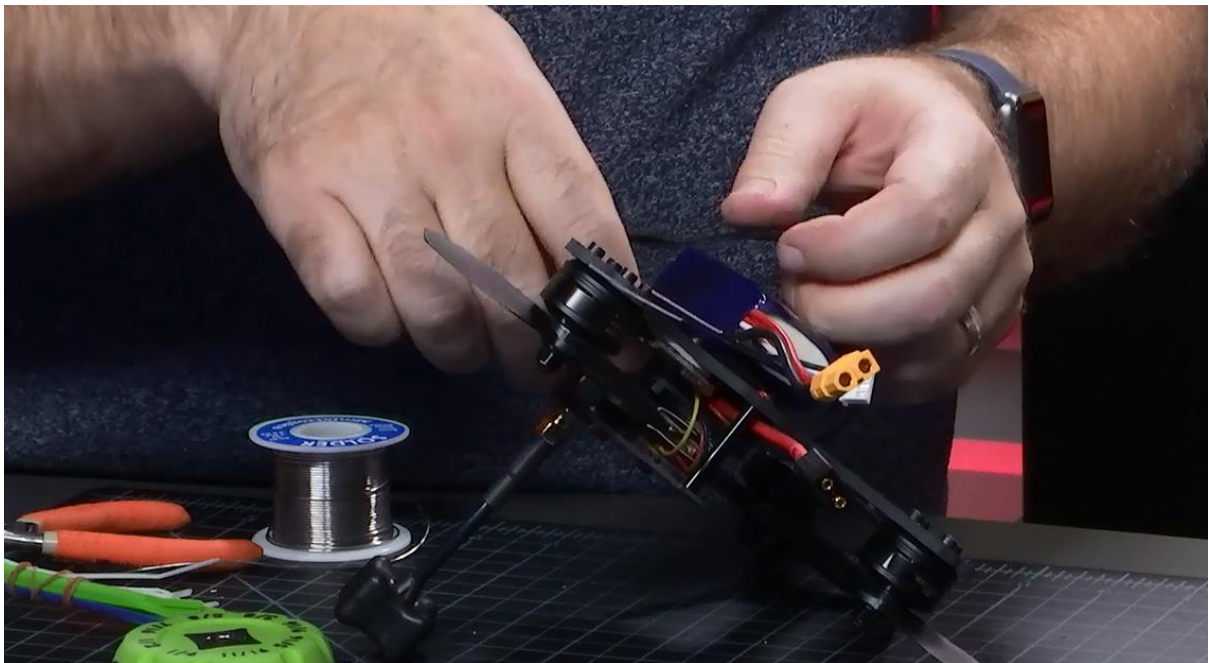Spin the motors to see which direction they are going.

Change Motor Direction to "Reversed" on the motors that need to be changed.

Using Betaflight arm the drone in Modes.

Attach the propellers.

Attach the battery using a battery strap.