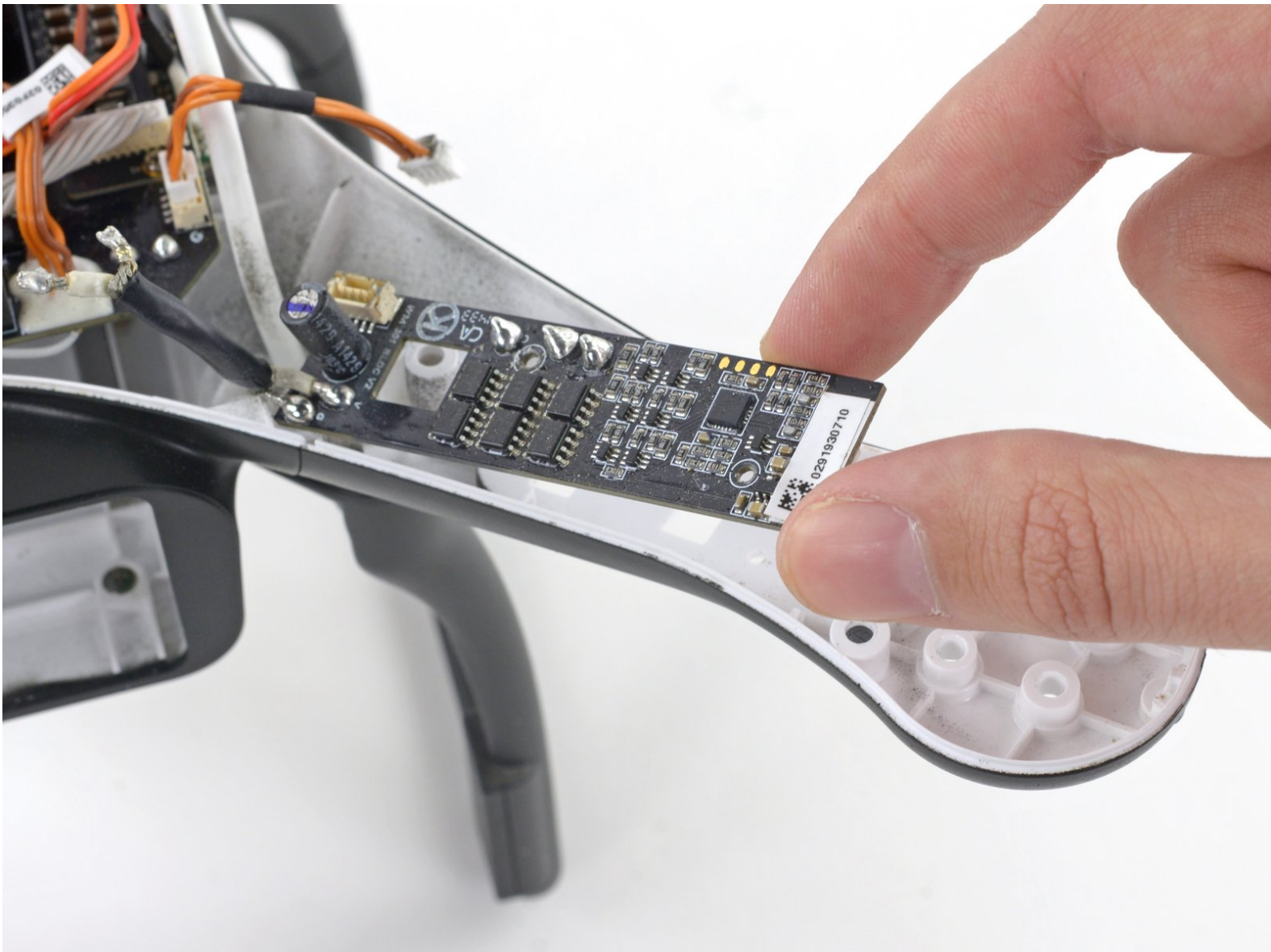# DJI Phantom 2 Vision+ ESC Removal

Follow this guide to remove an ESC from the DJI Phantom 2 Vision+

Written By: David Hoyt

INTRODUCTION

Use this guide to replace an Electronic Speed Controller (ESC) in your DJI Phantom Drone 2 Vision+. The ESC receives power from the central board, and a PWM control signal from the flight controller. There is one ESC for each motor, for a total of four. Removing an ESC requires soldering.

Note: the drone used in this guide probably looks different from yours! It's just a custom paint job, otherwise it's completely stock.

TOOLS:

- Spudger (1)
- Flush Wire Cutters (1)
- 2 mm Hex Screwdriver (1)
- Tweezers (1)
- Phillips #0 Screwdriver (1)
- Soldering Iron (1)

PARTS:

- Zip Ties (1)
- DJI Phantom 2 ESC (1)

This document was generated on 2020-11-20 04:21:24 AM (MST).

www.iFixit.com

Step 1 — Remove the battery

- Pinch the top and bottom tabs of the battery case, pull the battery straight out to remove it.

- (i) The metal connectors form a stiff mechanical connection with the battery, you will need quite a bit of force to remove the battery. Hold the Phantom Vision+ with one hand and remove the battery with the other.

Step 2 — Propellers

- Determine if the propellor is clockwise or counter-clockwise rotating.

- (i) Each arm is labeled with a rotation icon that shows the direction of propellor rotation.

- If this icon is missing or you can't read it, you can determine the direction of rotation by examining the propellor.

  - (i) A clockwise rotating propellor pushes air down while rotating clockwise, and the opposite is true for a counter-clockwise rotating propellor, and the propellor blade slopes up in the direction of rotation.

Step 3 — Removing clockwise rotating propellers

- Loosen a clockwise rotating propeller by holding the motor with one hand and spinning the propellor clockwise.

- Remove the propellor.

This document was generated on 2020-11-20 04:21:24 AM (MST).

Step 4 — Removing counter-clockwise rotating propellers

- Loosen a counter-clockwise rotating propeller by holding the motor with one hand and spinning the propellor counter-clockwise.

- Remove the propellor.

Step 5 — Case Top Shell

- Remove the following screws from the underside of the Phantom:

  - Twelve 2.0 mm hex bolts

  - Four Phillips #00 screws

Step 6
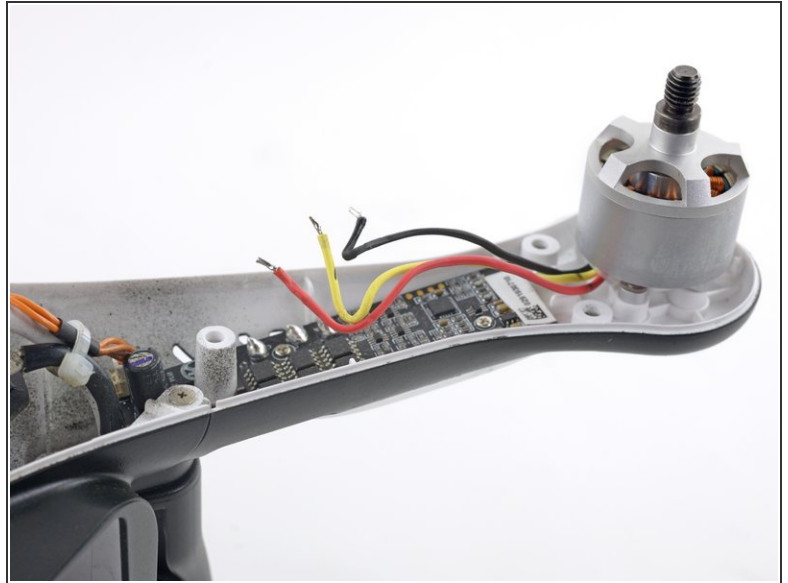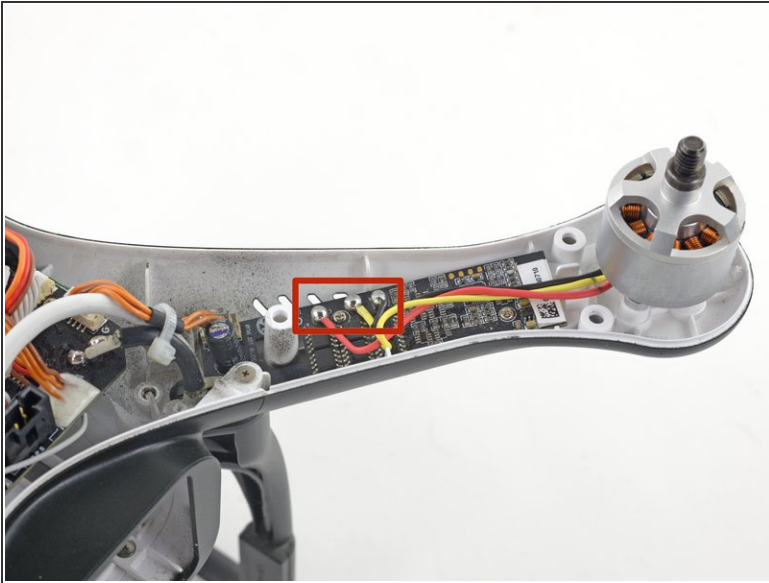

- Gently lift up the top shell case.

⚠️ **Do not** attempt to fully remove the top shell. The GPS cable is still attached to the mainboard, avoid lifting the case too high or you may damage this connection.

Step 7 — Unplug GPS connector and remove case

- The GPS cable molex connector is located on the backside of the mainboard, near the battery opening.

- Pull the GPS connector straight up out of its socket.

- Lift the top shell case up and remove it from the body of the Phantom.

This document was generated on 2020-11-20 04:21:24 AM (MST).

© iFixit — CC BY-NC-SA   www.iFixit.com   Page 6 of 10

Step 8 — Desolder motor wires

- Desolder all three motor wires.

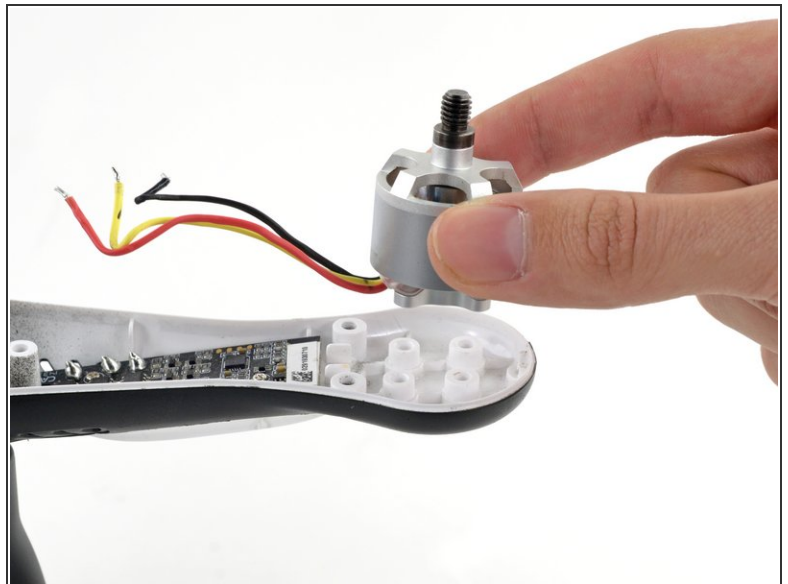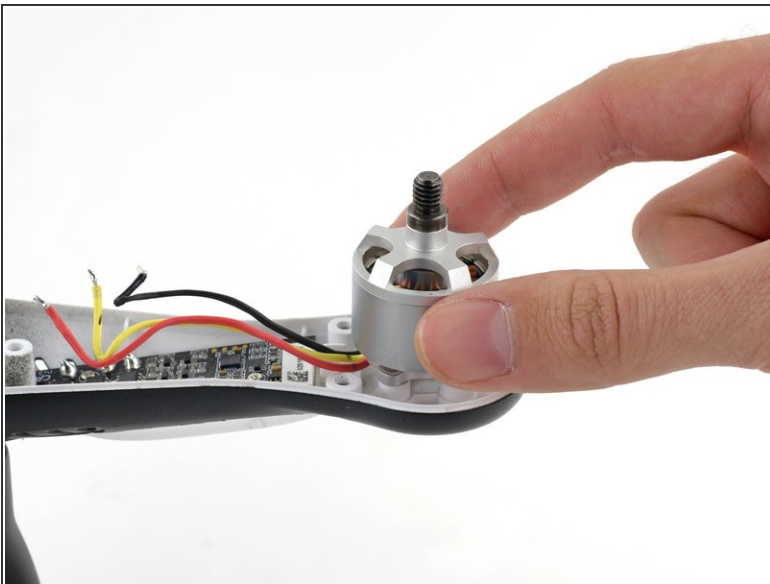- When replacing a motor, be sure to solder the new motor in following the same wire color order as when you removed it.

  - The motor spin direction is dependent on the order of the wires, and may not match this image exactly. If you forgot the order, check the arm directly opposite for reference.
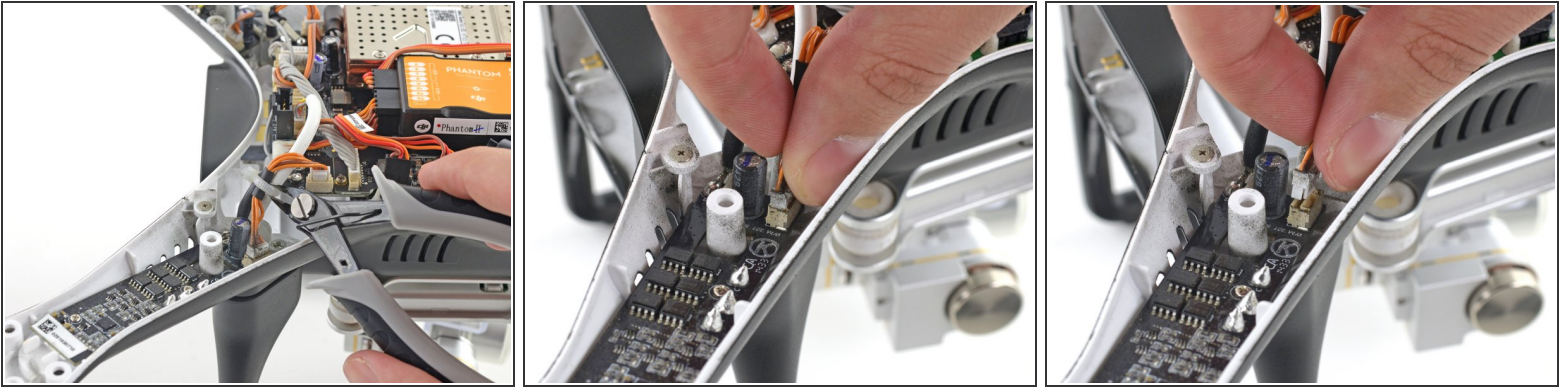
Step 9

- Remove the four 2mm hex motor bolts.
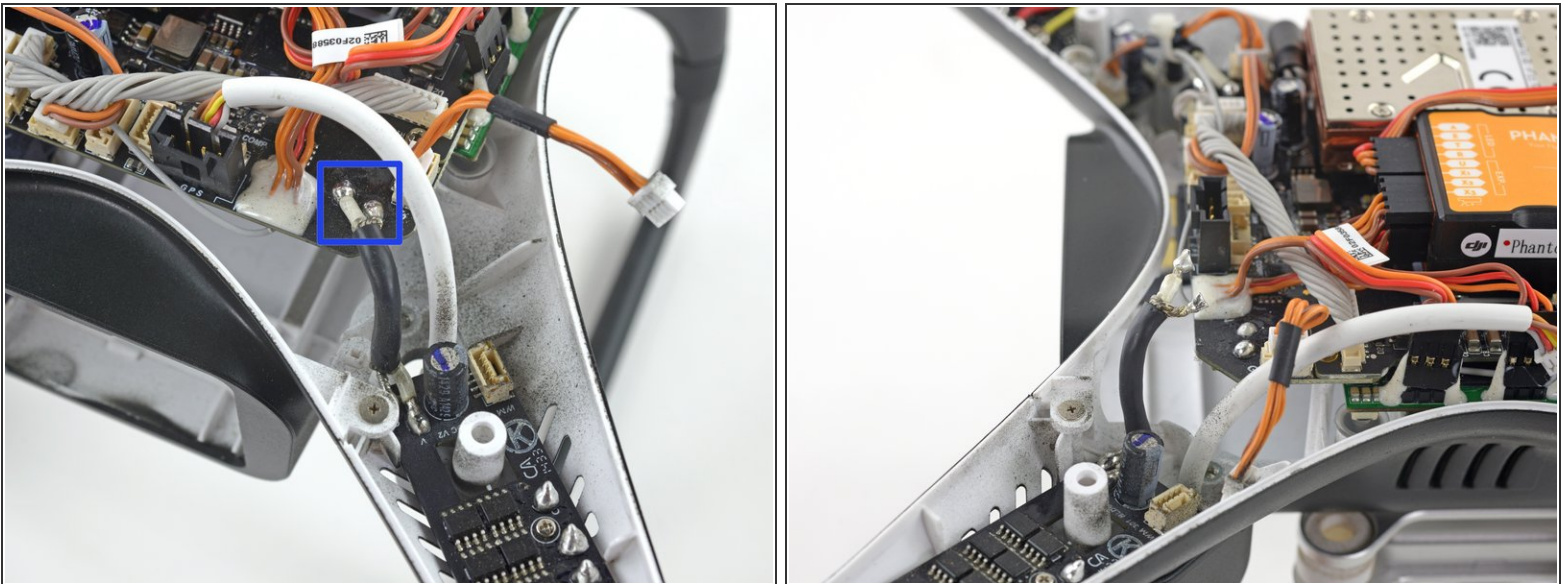
Step 10

- Remove the motor from the motor mount.

Step 11 — Prepare ESC for removal

- Cut the zip-tie securing the signal and power cables.

- Unplug the ESC signal cable molex connector from the ESC.

Step 12 — Desolder the ESC

- Desolder the ESC ground and voltage wires from the mainboard.

⚠ Be careful not to melt the plastic case bottom shell with your soldering iron or damage any electronic components.

ⓘ You can remove in-the-way cables by unplugging them and moving them aside. This will protect them from the warning above.

  - Be sure to plug these cables back in before reassembling your Phantom 2.
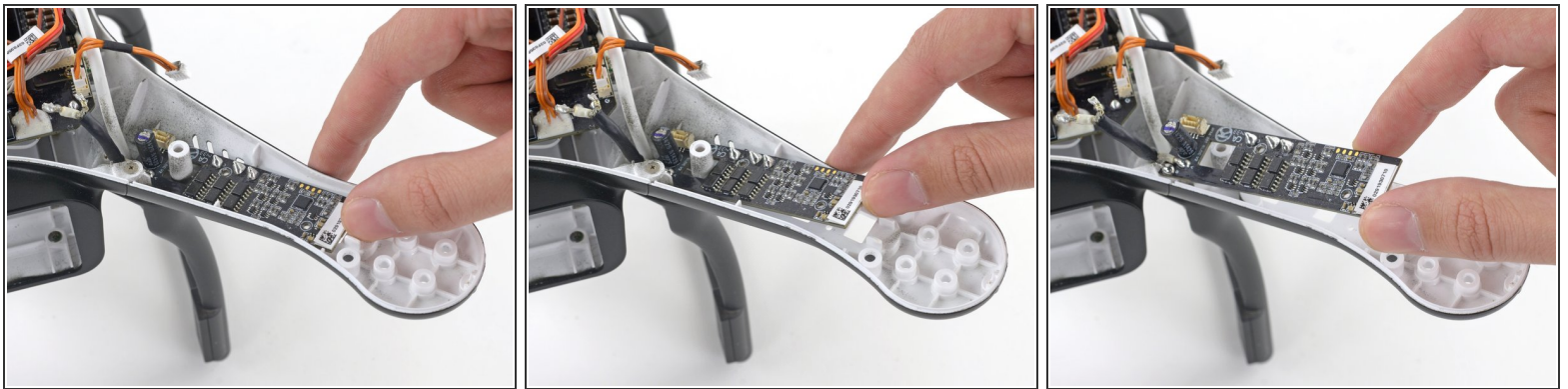
This document was generated on 2020-11-20 04:21:24 AM (MST).

Step 13 — Unsecuring the ESC

- Remove the two ESC securing screws.

- The clear plastic LED cover will either drop from the underside or need to be loosened with a plastic spudger.

Step 14 — Removing the ESC

- With the ESC no longer secured to the airframe, lift it up and remove it.

To reassemble your device, follow these instructions in reverse order.

This document was generated on 2020-11-20 04:21:24 AM (MST).

© iFixit — CC BY-NC-SA   www.iFixit.com   Page 10 of 10