

Battery Install on a Magic Dongle

Introduction

The Magic Dongle will run from an external USB source or an internal battery. Because of shipping restrictions on LiPo batteries the Magic Dongle may be supplied without a battery. The required battery is a single cell LiPo battery with a Molex Pico Blade connector with 1.25mm pin spacing. This format connector is common with some kinds of Free Flight Electronics and small R/C systems.

An off the shelf battery that fits is the Hyperion G5 50C Max 1S 180 mAh with Ultra Micro connector. The part number is HP-G550-0180S1UM. It is used in this document. It measures 31 x 20 x 5.0mm and will fit inside the casing.

Getting started

The first step is to remove the bottom of the Dongle casing. There are 2 Phillips head screws at one end.



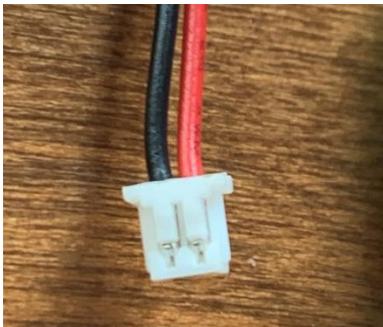
The next step is to take the circuit board out of the top casing. It is held on by two screws at the USB end



Once the board is out, look at the top of the board. You can see it here with the Hyperion 180 mAH battery. Note the battery socket to the left of the blue switch. This is a Molex Pico Blade connector. The negative is the pin close to the edge of the board.



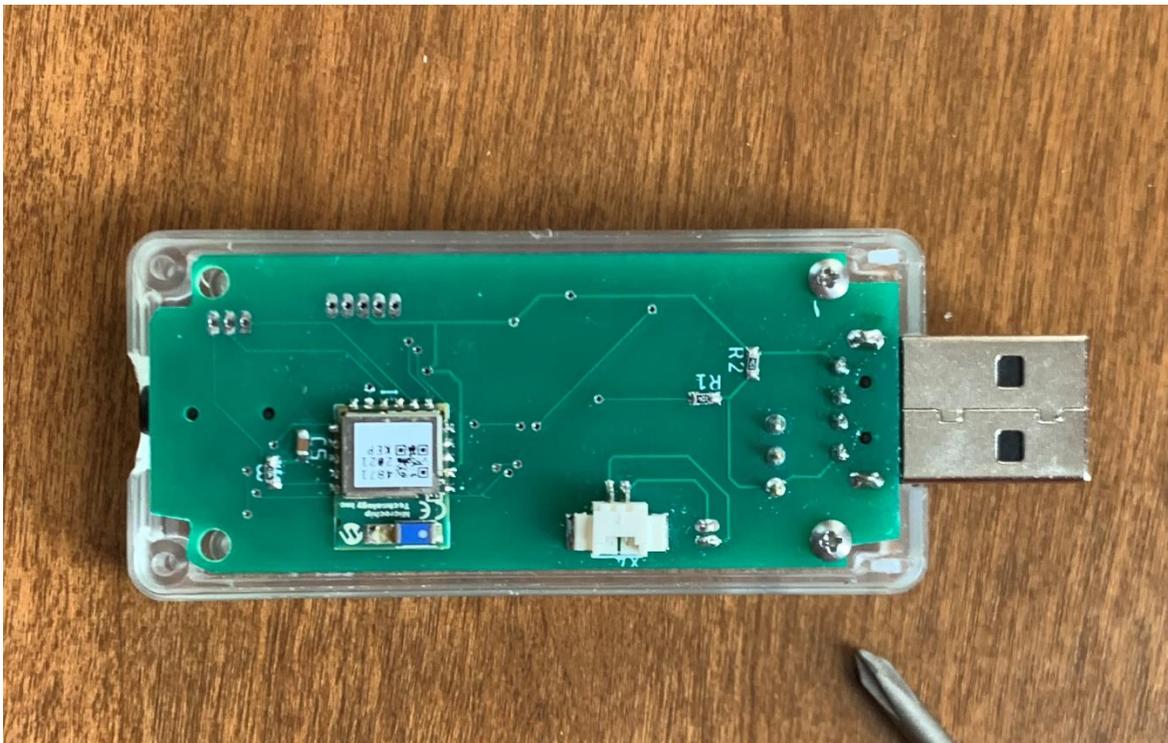
When you look at the connector you will see the black negative wire. The connector is polarized so that goes in with negative wire on the outside edge of the board. It is a locking connector that will snap in.



Now fit the battery. Notice that the Hyperion battery is covered with insulating shrink tube. Make sure that your battery has no exposed conduction parts. See that the battery fits between Black socket on the left of the picture and blue switch, socket and reset button on the right. In this example the battery goes by the side of the battery socket. The wires may cross the top of the reset button as long as they do not block it completely.



Put the board back in the top casing. Remember the two screws at the USB end



Put the bottom on and make sure it looks OK

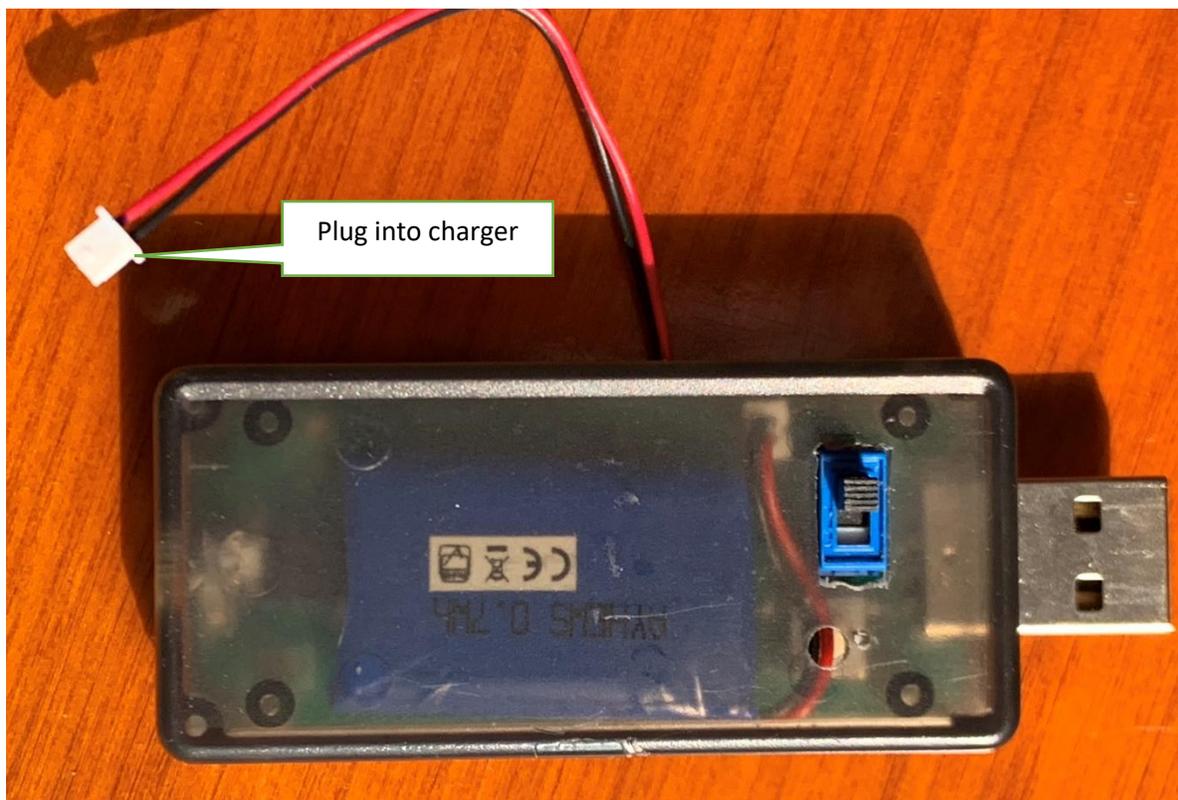
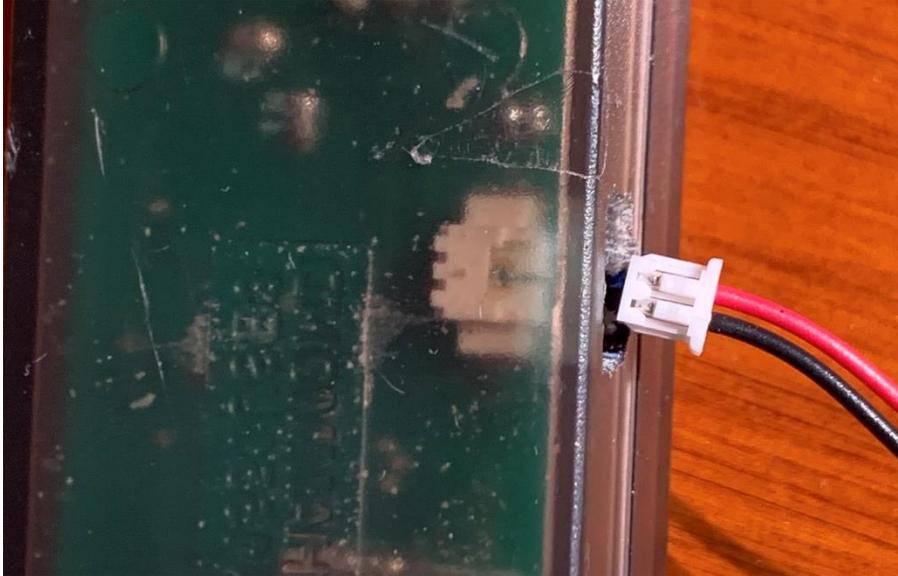


Power it up by moving the 3 position Blue Switch towards the center of the Dongle

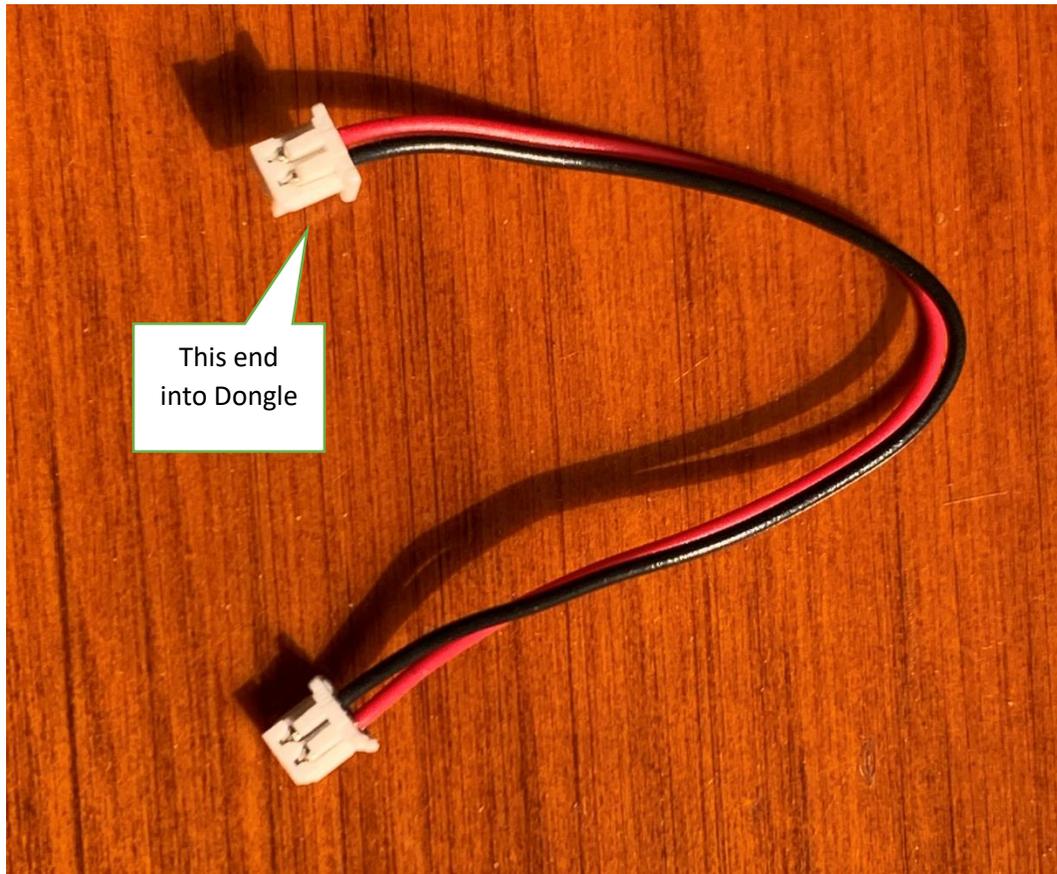


Battery Charging

You charge battery by plugging the charge cable in the side.



ATTENTION



Note that the Charge cable has a Molex Pico Blade connector on each end. One end is to go in the charger and the other in the Dongle. This assumes that you are using a small LiPo charger that has Molex Pico Blade sockets intended for small R/C models. On the cable supplied by Magic Timers the end that goes in the Dongle has a little label with the word Charge on it. This end of the cable is the one that goes in the Dongle. The wires are in the opposite direction to the sample with the battery above. If your charger does not accept Molex Pico Blade connectors – Change the other end NOT this end to suit the charger.