



How to find Lipo Battery Maximum Constant Amp Draw

We have been getting several questions about power systems and batteries. So we thought we would first do a “How to” guide on finding what your Lipo Battery’s Maximum Constant Amp Draw is. Knowing how to find this can help you better design your RC Airplane power system correctly and help keep from overheating, puffing, and/or destroying your Lipo Battery.

Here is a simple formula that we have found to be commonly used in the RC Community to find the Maximun Constant Amps a Lipo Battery is capable to sustain.

Formula: (C-Rating) X (AH) = Maximum Constant Amp Draw

Now to use this formula you first need to convert your battery size from the common MilliAmpHours to AmpHours. A MilliAmp is One-Thousandth of an Amp. So here are some Examples of converting MilliAmpHours to AmpHours:

800mAH = .800AH

1350mAH = 1.350AH

2200mAH = 2.200AH

The converted number will be the “(AH)” in the formula. Now that you have your “(AH)” number, plug it in to the formula with the “C” rating number of your Battery and Calculate.

Here are some Examples:

(800mAH 10C Lipo Battery): .800AH X 10C = **8Amps Max Constant**

(800mAH 20C Lipo Battery): .800AH X 20C = **16Amps Max Constant**

(1350mAH 15C Lipo Battery): 1.350AH X 15C = **20.25Amps Max Constant**

(1350mAH 30C Lipo Battery): 1.350AH X 30C = **40.50Amps Max Constant**

(2200mAH 20C Lipo Battery): 2.200AH X 20C = **44.00Amps Max Constant**

(2200mAH 30C Lipo Battery): 2.200AH X 30C = **66.00Amps Max Constant**

After you Know what your Battery can Handle:

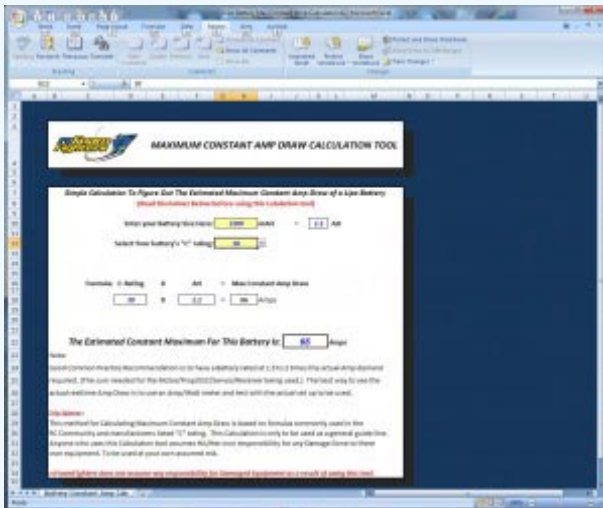
Now that you know what your battery can handle, you can now choose an appropriate power system that will meet the battery's output range. Good common practice and recommendation is to use a battery that is rated somewhere between 1.5 to 2 times the actual max amp demand of the components installed. (Motor / Prop / ESC / Servos / Receiver / etc.) So in example, if your motor/prop/esc demand 20Amps max, you should use a battery with a Max Constant Amp rating of 30 to 40 Amps or better.

The best way to see the actual real time Amp draw of your power system is to use an Amp/Watt meter and test with the actual setup to be used. As a starting point you can also refer to the manufacturer's spec sheet for all component ratings.

Here is a link to a **Free Excel Calc Tool** we have made to make it easier to estimate your battery's max constant amps. It is based on the above formula. Please use at your own discretion.

<http://rcfoamfighters.com/FileDownloads/Lipo%20Battery%20Amp%20Calc.zip>

Pic of Tool:



Hope this helps.

Frank & Paul of rcFoamFighters