

Another Formula

For great sport flying with some aerobatics, 100 watts per pound is excellent. For aerobatics, 140 watts per pound is plenty, 200 watts per pound is "Wow! and see you at the World Championships!"

This is something to think about when you're considering converting a glow powered model.

EXAMPLE: *If you have a 6 lb. sport aerobatic model, a range of 600 to 1200 Watts will be the range depending on budget and type of plane....*

3S4C??? What is that?

And the Current Word is..... AMPS!

The world of batteries has changed a LOT the past couple of years. We went from Ni-cads, to Nickel Metal Hydride, to Li-poly. And now Li-poly are changing as fast as you can say "I want more power!"

Remember the Watt formula? You need BOTH Voltage and AMPS for power. Nicads are still king of the hill when it comes to the ability to deliver the highest AMPS. NiMh are a fairly close second and a distant 3rd are the Li-poly's... but they are getting better really fast.

We measure this ability to deliver AMPS by simply Dividing the MAX Amps the battery can delivery by the rated capacity of that particular battery. Simple eh? We will call this "C".

Because Li-Poli's are now the rage, let's focus on them.

EXAMPLE: *A 2,000 milliamp hour (2 amp/hour) battery that can deliver 10 amps has a rating of 5C. If it could deliver 20 Amps, it would be a 10C battery. 10C is pretty good these days.*

Here is the trick. Let's say you have a motor that needs 40 AMPS. You have 10C 2,000ma cells. Easy! You need to connect a minimum of 2 in parallel. (Going a bit over is ALWAYS a good idea and I would use 3 in parallel.)

The next word is: "Voltage"

NOTE! Li-poly cells come in 4 volts.

If you want more VOLTAGE, simply connect in series (plus to negative, like in a flash light) to add the voltage.

EXAMPLE: *2 Li-poly cells in series gives 8 volts. 6 Cells in series gives 24 Volts. So simple!*

How big of an electric "fuel tank" should I put in my plane?

We measure the size of the "fuel tank" in our new electric world in AMP/HOURS. If you have a battery that has a 2,000 ma rating, this means its 2,000 Milliamp hour, or 2 AMP HOUR. Now simply divide the capacity by the AMPS the motor will use. (AMP/HOUR divided by AMPS). The answer is how long your motor will run at full power. In real terms, however, expect about 50% more time because most of flying is at cruise power. (If not, it should be). If you have a motor that draws 20 AMPS, a 2 AMP/HOUR battery will last 1/10 of an hour, or 6 minutes. Hmmm, ok, for a 12 minute flight, a 4 AMP HOUR battery is needed and so on.