LiPo Battery Break-In

It's a concept that may be difficult to accept because we can not observe the chemical exchange taking place inside each cell. But, it has been established in practice, that properly exercising LiPo cells during their initial use will contribute to the power output and increased cycle life.

Some Guidelines

For BVM "Matched Cell" Break-in

Shown here is a 6416 power system. The (4) 4s packs utilize (1) "Y" Harness and (2) Power Plugs 2's.

Install the Saddle Cells™ in your model using adhesive backed Velcro to adhere them to the plywood battery support shelf and the sides of the fuselage. For break-in purposes, they can rest on foam pads on the wings as shown.

Make sure that your transmitter (Spektrum 7) ATV adjustment's are set to approximately 85% for high throttle and 75% for low throttle.

The goal is to run the freshly charged cells at 40-50 amps and consume about 70% of the available capacity, keeping the battery core temps around 110°-115°F maximum. To accomplish this without a good quality amp meter, position the throttle stick about 2/3rds position maximum and cycle it to low power a few times during a 2 minute run time. Adjust this time on the following runs to accomplish the 70% consumption target. You can immediately recharge the batteries @ 1C if the temps are below 125°F. Always use a cell balancer during charge operations and always note that the number of balance lights (when first plugged-in) agree with the number of cells in the pack.

Cycle the packs 5-6 times on the ground at the shop. Then, fly the model conservatively for the first few flights with the goal of utilizing about 70% of the m.a.h. capacity.

We realize that you may want to show the guys at the flying field just how fast, how high, and how long your EVF model will fly. If you follow this break-in procedure, there will be plenty of time to do that later.

On subsequent flights, the goal should be to utilize 80% or less of the pack capacity with post flight pack temps below 140°F. Give yourself time to develop a flight routine (profile) that maximizes the performance and flight time without over taxing the batteries. Following this break-in course will go a long way towards maximizing the cycle life of your EVO/BVM power packs.

Aerodynamically clean models like the BVM Electra, Sabre, and F-80 with EVF power allow some power-off cruising time between high speed passes and zoom climbs that add greatly to total flight time.

Note: Exceeding the 80% capacity and 140°F guidelines won't necessarily ruin the batteries but experience has shown that the cycle life may be reduced.