

# Make the Ultimate Electric flight field box

Maximize your flying time and fun

by Tyler Renkert



into the woods of upstate NY.

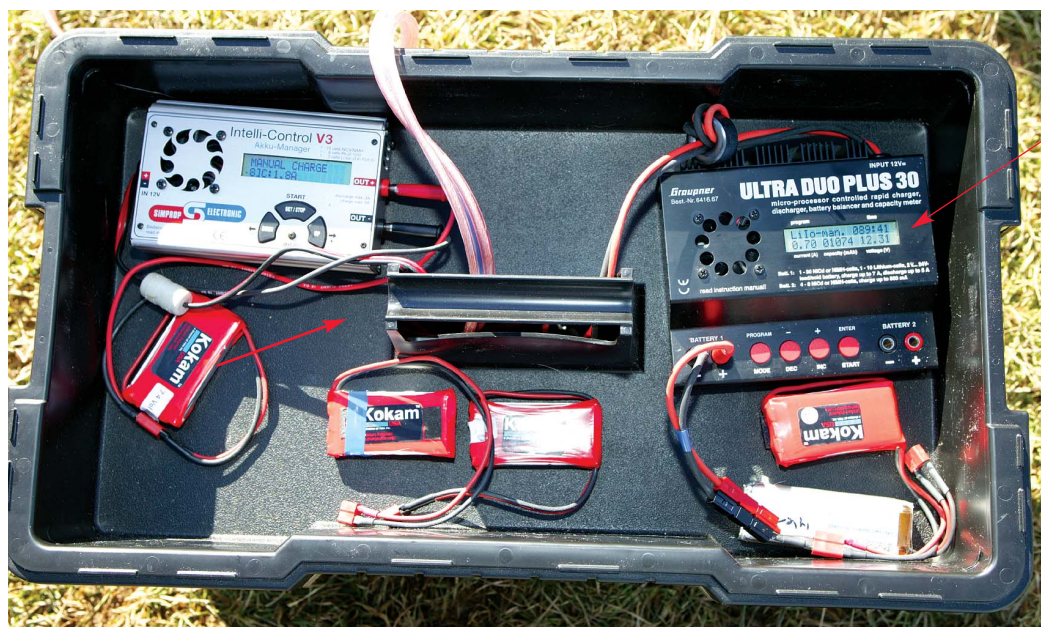
As I was walked to the flight line to admire all the great electric airplanes on display, I ran into Jim T. Graham (aka Billy Hell, founder of the Profile Brotherhood™) from Hobby-Lobby as he was preparing a ship for demonstration. What I really took interest in was not the airplane but the flight box he was using. It was a simple tackle box outfitted with chargers, batteries, and patch cords. The cool part about the box was its ability to charge NiMH, NiCd, and Li-Poly batteries in the field or at home seamlessly. I needed to build the ultimate electric flight box to complete my transition into electric flight!

## TIPS FOR SUCCESS

Setting up the box is very easy. The Plano box is very large so you will have plenty of room at the bottom to place your power supply, lead acid battery, and the RIGrunner power strip. The RIGrunner is a key component, as it uses automobile fuses to protect the circuits from overload. I took some hook & loop strips from Veltie products and stuck them to the bottom of the box to provide an anchor point for all the components.

In my quest to learn more about electric flight, I set off for the NEAT fair this summer to see all the new gear. This was my first trip to the fair and I did not know what to expect as I trekked

into the woods of upstate NY.



The Simprop Intelli-Control V3 charges up to 25 NiCd or NiMH cells, a 12v lead acid battery and 1 to 3 Lithium cells.

The Graupner Ultra Duo Plus 30 charges up to 30 NiCds (at rates of up to 7A), up to 30 NiMH batteries, up to 10 Li-Poly cells, and up to a 24v lead acid battery. You can trickle charge one battery while fast charging another!

PHOTOS BY WLATER SIDAS





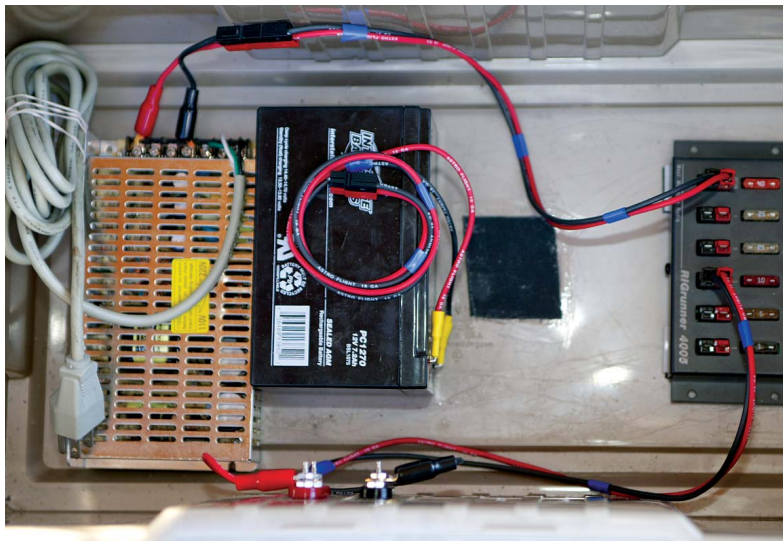
Next, I created patch cords with Astro Flight 16-gage silicon wire and Power Pole connectors. The cords connect the power supply or the battery to the RIGrunner to power the chargers. I also ran some wire to the chassis mount on the side of the box to supply power to the female banana plug posts. These posts can be used to power other chargers that are external to the box, or to bring power into the box when an external fused “umbilical” cord is used to connect to a car battery (umbilical cord must contain an inline fuse at the car battery end). Use a cord that is 20 feet long and you can work on a park bench or the grass without having to climb around your car. Be sure and cap or cover the exposed banana plug pins on the inside of the box so that no “hot” metal is exposed.

The power supply requires a grounded cord to attach to a wall outlet. The connections on the power supply should be covered with either silicon or PFM to protect the exposed areas from a stray screwdriver or bolt that may create a short. There are protective plastic ridges built in that separate the terminals, but you’ll want the extra protection suggested here.

The RIGrunner “fuse box/power bus” uses Power Pole connectors, so I simply cut the charger power-in wires near the ends where



**These female banana plug posts can be used to export power to external chargers, or to import power from a 12v source such as your car battery.**



**Box interior. Left to right: Hobby Lobby AC power supply, Hobby Lobby 12v lead acid battery, Veltie hook & loop fastener strip for an additional lead acid battery (optional), and the West Mountain Radio RIGrunner power strip with Power Pole connectors and fuses.**

## THE COMPONENTS

*All the components are available at Hobby Lobby (\*except where noted)*

Plano Contractor Grade toolbox #823	.....\$30.00*
Graupner Ultra Duo Plus 30 charger	.....\$229.00
Simprop Intelli-Control V3 charger	.....\$179.90
RIGrunner 4005	.....\$49.95**
120-220V AC-DC power supply	.....\$71.90
Hobby Lobby Chassis-Mount Dual Female Binding Post	.....\$4.99
Lead acid 12v battery	.....\$30.00
Anderson Power Pole connectors	.....\$1.00/pair

(\*Wal-Mart) (\*\* Westmountainradio.com)

## BENEFITS

- Fused power panel for safe use
- Power Pole connectors have no exposed pins or contacts
- Versatility—charge at home or at the field; compact and easily transported
- Charge multiple NiMH, NiCd, and Li-Poly batteries simultaneously
- Return on investment (ROI)—spend more time flying instead of setting up chargers or dealing with dead batteries
- Looks cool and works great!

the alligator clips were and attached Power poles to each (did the same with the ends of the leads from the alligator clips). Now I retain the use of the clips or just plug straight into my power strip—very easy! The RIGrunner can provide 40 total amps of power (the master fuse limits power to 40A); plus each connection has an individual fuse for safety (these can be 15A, 25A, or whatever suits your needs).

The chargers rest in the middle tray and only need a small strip of hook and loop fastener to keep them stable. The power cords for the chargers run beneath the tray handle and go into the fused power panel in the bottom of the box. The top tray can hold your batteries and miscellaneous tools while the removable containers on the box lid can provide great storage for all your charging cords.

## CONCLUSION

If you already have a charger, you can simply substitute yours; however, having two chargers makes this whole package work. You will be able to fly all day and always have a fresh pack, whether you are at an indoor event, five miles from nowhere at a remote field, or just down the street at the local school yard. ☺

### Links

**Hobby Lobby International, Inc.**  
www.hobby-lobby.com, (615) 373-1444.

**Radio Shack.** www.radioshack.com.

**VelTye Hook & Loop,**  
(757) 318-7240, www.velyte.com.

**West Mountain Radio,** (203) 853-8080,  
www.westmountainradio.com.

For more information, please see our source guide on pg. 153.