Glitch Busters

October 2011

FROM THE EDITORS

Terry Blanch has decided to hand the reigns of the club newsletter over to Roger and Scott McClurg. Roger will act as Editor in Chief and Scott will provide photos, graphic design, etc. We'd like to thank Terry for all the hard work he's put into the newsletter. We'd also like to encourage everyone in the club to contribute to the newsletter. If you have photos, stories, technical tips, or reports on R/C events, please send them to us. We'd love to include them.

UPCOMING EVENTS

Wrapping the Pavilion - Sunday, October 30

Auction & Swap Meet - Saturday, November 5

Freeze Fly - Sunday, January 1

NEXT MEETING
November 1
Newark Senior Center

AMA #197 / IMAA #687

PREZ SEZ

Information just received from the FAA Unmanned Aircraft Program Office (UAPO) indicates the release of the sUAS NPRM has been delayed once again. Due to delays in the internal review process, it's unlikely the NPRM will meet the previous target date of mid December. The UAPO is now projecting February 2012 as the new release date for the proposed rule.

Reports of a giant scale meet where there were several crashes observed by FAA representatives, has the modeling community more concerned than ever about what will be in the NPRM, possibly putting limits on our flight activities. Consequently, we must all be more careful about our safety habits:

- Keep at least 25 feet between the line of flight and other pilots.
- Don't walk onto the field unannounced.
- When two or more are flying spotters are necessary.
- Spotters should watch for full scale planes as well as keeping track of the other model(s).
- Learn to control the effects of torque (P-Factor) and use right rudder when needed on T.O.
- Read the Safety Code that comes with this year's AMA card, and follow it.

Every one in the club is responsible for the safe operation of the field.

If you see an unsafe act – talk to the pilot – we can't allow reckless behavior to cost us the right to fly at the park.

The AMA will soon publish a Model Aviation Hazard Analysis in response to hazards identified by the FAA UAS Safety Risk Management Panel. This will cover the entire field of activities regarding outdoor RC model aircraft operation. It is likely that the Safety Code will be modified to reflect this study.

Hunting season is here. Be courteous to the hunters. Watch for them to walk across the flight area; they probably aren't aware of the danger. If you are threatened, call the park office.

Deer Season dates:

Archery – to January 31
Shotgun – November 11-19; January 14-21
Muzzle loader - January 23-28

Small Game Season – through February

PREZ SEZ (Continued)

The board has decided that anyone that acts as Contest Director for an event at our field or that is sponsored by the club must be a member of Delaware RC Club. This will be added to the bylaws.

UPCOMING EVENTS

WRAPPING THE PAVILION - October 30 (Sunday)

Volunteers are needed Sunday, October 30th to help wrap the pavilion and cleanup around the field in preparation for winter. Please lend a hand. If you have questions, please contact John Kirchstein.

AUCTION & SWAP MEET - November 5 (Saturday)

The Annual club-sponsored Auction & Swap Meet will be held on Saturday, November 5th at Shue Middle School, located on Kirkwood Highway (1500 Capitol Trail). Doors open to the public at 9:00 AM and the auction begins at 11:00 AM sharp. There will also be raffle prizes and 50/50. Hot dogs, coffee, sodas and snacks will be available.

For more info, call Dick Stewart at (302) 368-5171.

FREEZE FLY - January 1 (Sunday)

The Annual Freeze Fly will take place on New Year's Day, which falls on a Sunday this year. Last year's was a ton of fun - food, flying, even snowballs!

Photos from last year: http://www.delawarerc.org/2011freezefly
Video from last year: http://www.youtube.com/watch?v=mzB_cAX6RxI

TIPS & TRICKS

CARING FOR LIPOS

Lots of us fly electrics now days. Even those die hard "I'll never fly electrics" pilots have been spotted at the field flying an electric foamy. Those electrics, be they large or small, have one thing in common: batteries. In most cases those batteries are lithium polymer batteries, better known as lipos.

I recently came across an article entitled Lithium Battery Secrets that had a lot of very useful information to help us get the most out of our lipos. The article is located at: http://tmenet.com/pdf/LithiumBatterySecrets.doc.pdf It is a worthwhile download.

LIPO SAFETY

Lithium polymer batteries are safe if treated properly, but you should never become complacent while charging, storing, or transporting them. Here are some important lipo safety tips taken from the RC WIKI.

SAFE CHARGING

The majority of lithium battery fires happen during charging, so it makes sense to charge where a fire will not spread.

1. Do not charge inside a vehicle, especially a moving vehicle.
2. Charging in a heat-resistant ceramic container with a loose fitting lid is recommended. Flames, smoke and gas are released if a battery "vents."
3. Metal containers can be used, but ensure the charging wires cannot be cut or shorted.
4. Keep batteries separated so that a fire cannot damage other batteries.
5. The charging container should be kept away from anything flammable.

SAFE TRANSPORT

There have been very few cases of batteries suddenly exploding when they are not being used, abused or charged (i.e. during transport and storage). Lithium batteries are commonly air-freighted protected by a few layers of bubble wrap and small versions are carried around in mobile phones. Should shipping an R/C pack be necessary, pack it so it cannot be physically damaged.

Some fires have been caused because a dog was attracted to the smell of a lithium battery and bit it.

BALANCING

Many batteries, especially the larger packs now come with a second, smaller, multiwire plug for balancing. A lithium balancer can be plugged into this either during charging or afterwards to ensure that all cells are at the same voltage. If a battery is not balanced, some cells may be overcharged, others may be over-discharged and the life of the pack can be reduced.

Balancing is required because lithium batteries are not automatically balanced by a small overcharge in the way nickel-cadmium batteries are.

There are many different lithium battery balancers on the market, no standard plug and no clear agreement about the "best" balancer or method of balancer. Not all balancers are compatible with all chargers, so some research may be necessary.

Some balancers are only able to balance a small amount of amps which, depending on the LiPo cell, may not be enough to achieve a balanced state. Some newer LiPo chargers are able to individually charge each cell using the balancer plug, thus both eliminating the need for a separate balancer and ensuring that the balancing is done with sufficient power.

SAFE DISPOSAL OF LIPO BATTERIES

The article below comes from the maker of Thunder Power Batteries. It has valuable tips that should be used any time you dispose of a lipo.
Unlike NiCd batteries, lithium-polymer batteries are environmentally friendly.
For safety reasons, it's best that LiPo cells be fully discharged before disposal (however, if physically damaged it is NOT recommended to discharge LiPo cells before disposal - see below for details). The batteries must also be cool before proceeding with disposal instructions. To dispose of LiPo cells and packs:

1.If any LiPo cell in the pack has been physically damaged, resulting in a swollen cell or a split or tear in a cell's foil covering, do NOT discharge the battery. Jump to step 5.

2.Place the LiPo battery in a fireproof container or bucket of sand.

3.Connect the battery to a LiPo discharger. Set the discharge cutoff voltage to the lowest possible value. Set the discharge current to a C/10 value, with "C" being the capacity rating of the pack. For example, the "1C" rating for a 1200mAh battery is 1.2A, and that battery's C/10 current value is (1.2A / 10) can be used, such as a power resistor or set of light bulbs as long as the discharge current doesn't exceed the C/10 value and cause an overheating condition. For LiPo packs rated at 7.4V and 11.1V , connect a 150 ohm resistor with a power rating of 2 watts (commonly found at Radio Shack) to the pack's positive and negative terminals to safely discharge connecting it to an ESC/ motor system and allowing the motor to run indefinitely until no power remains to further cause the system to function.

4.Discharge the battery until its voltage reaches 1.0V per cell or lower. For resistive load type discharges, discharge the battery for up to 24 hours.

5.Submerse the battery into bucket or tub of salt water. This container should have a lid, but it should not need to be air-tight. Prepare a plastic container (do not use metal) of cold water. And mix in 1/2 cup of salt per gallon of water. Drop

the battery into the salt water. Allow the battery to remain in the tub of salt water for at least 2 weeks.

6.Remove the LiPo battery from the salt water, wrap it in newspaper or paper towels and place it in the normal trash. They are landfill safe.

PHOTOS

We're trying to include photos of as many club members and their families out at the field as we can. So, if you see us poking a camera in your face, that's why. We'd also like to encourage all of you to send us your own photos. If you don't see yourself here, keep looking. We're out at the field pretty often, so we're likely to catch you sooner or later. If we miss you, feel free to jump up and down and shout, "Hey, you!" the next time you see us with a camera.

We give photo cred on all the pictures. If you don't see a name on it, the photo was taken by Scott.

Photo by Roger McClurg


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Photo by Roger McClurg


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Photo by Roger McClurg

Photo by PJ McClurg


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