

Website of the Month

This month's website was submitted by John Bollinger and is called Flying Giants. As you may have guessed, this website is devoted to giant scale airplanes. Here is the link:

<http://www.flyinggiants.com/>

Do you have a favorite website? If so, let me know and I will put it in the newsletter. Favorite online store, how to build, how to fly, etc- send me the link! My email address:

AlanWFEmail-CVA@yahoo.com

Safety First and Fuel Tank Leaks

I found a great article titled Safety First by Jim Myers of Valley Forge Signal Seekers radio control model airplane club in Pennsylvania. The article provides valuable advice on ensuring that you and your equipment are in good flying condition, especially after a winter layoff. Although winter passed a few months ago, I still felt like the article had useful advice that we can use now. Further, the article describes how to test fuel tanks for leaks. Here is the article:

Safety First

By Jim Myers

“Hear Ye” Newsletter, Valley Forge Signal Seekers

As spring approaches, our thoughts return to getting back to the flying field. Although there are always a few hardy modelers who will fly RC planes outdoors in the winter, I think most of us have given our equipment a rest for several months. Some of us use that time to acquire and assemble new aircraft. Also, we use the time to repair damages suffered last fall. So, as we get ready to take a new or repaired model to the field for the first time, I would like to offer some suggestions to help preserve your models and also prevent injuries or property damage.

Personal checklist

But before we think about aircraft, don't forget to consider your own abilities; tune your skills on an RC flight simulator, if available. Also, your eyesight is extremely important. Are you having a little difficulty reading highway signs at night? It could mean you

need eyeglasses or that your prescription needs to be updated. Practice looking at birds and airplanes in flight to estimate how well you will be able to track your RC airplane this year. Remember that your piloting skills may not be as sharp as they were last fall. There-fore, when you get out again for that first springtime flight, take along a tried-and-true model that is in good shape. However, remember that even this model, after having been stored for several months, may have developed a few defects.

Plane checklist

If the model has a fuel tank, you should check it for leaks*, since the rubber stopper that seals the tubing may have hardened and cracked while stored away. Also, check the engine mounting bolts, wing joiners, and all parts of the structure. And of course, check your servos, mounting screws (or double-sided tape if used), pushrod connectors, and all electrical connections. Be sure that your servos work smoothly.

Electrical equipment

Naturally, you will check your radio gear, won't you? But, did you remember to check the batteries both in the transmitter and the receiver? It's good to fully charge your batteries and then allow them to discharge over several hours of time. A good way to check your receiver battery pack is by connecting an expanded-scale voltmeter (ESV) to the battery pack. This type of instrument has been available for many years, particularly for use with four-cell and five-cell NiCad battery packs. Its scale readings have red and green regions representing low (bad) and high (good) battery performance. The ESV can be used primarily to check receiver batteries, and should be carried along in your flight box for field checking. An important feature of the ESV is a resistive load that draws roughly 30 milliamps of current from a typical four-cell pack. This approximately equals the average current drain when the receiver is turned on and the servos are in action during flight. So, to check your battery capacity, connect the ESV and leave it connected for several hours. It's good to check the voltage reading every 15 or 30 minutes. Write down the readings. At first, you will see the voltage drop a little, and then overtime it will settle out to a constant value for over an hour or more. Then, after a couple of hours, you will see the battery voltage drop rap-idly; on the ESV scale, the needle will get into the "red" region, indicating that it would be unsafe to fly with the battery in that condition. If your ESV reading sinks into the red in less than an hour, you may have to re-place the pack. Also, if the voltage never gets into the green even after an overnight charge, your battery pack should be replaced.

Expect the unexpected

Just heard from a friend who's living in Florida and flying his planes there. He recently launched a brand-new Ultimate Bipe, with the help of another pilot, who supposedly has had more flying experience than my friend has had. When the plane took off, the pilot immediately realized that the ailerons were reversed! That is, the polarity switch in the transmitter had not been set correctly. The pilot quickly put the plane into a high climb, without trying to use the ailerons. Then, he successfully landed the biplane using rudder instead of ailerons. I've seen other planes take off with reversed ailerons, and every one of them crashed. So, here's my advice: Before every flight, stand behind your aircraft, and carefully check the polarity of all control surfaces. Remember, moving the aileron stick to the right should make the right aileron go up, not down!

***Fuel Tank Leaks**

Here's a way to check the tank for leaks without removing it from your plane. Build yourself a simple manometer, using clear plastic tubing mounted in a "U" shape on a vertical board. The board and tubing should be long enough to show up to 10 inches of difference between water levels. As you inject water into the tube, water levels in both halves of the "U" will stay even. Bring the level up to approximately half the height of the "U." Before testing the tank, make sure that all fuel has been drained out of it. Disconnect the fuel and pressure lines from the engine, and connect one of them to one end of the manometer tubing. Then, connect a clean tube to the other tank line and blow gently into this tube. You will see the water levels change in the manometer tubing. Try to raise the level to between six and ten inches of difference. Then, without releasing the tube, put a clamp on the tube you are blowing into; the tank is now pressurized with air due to the water level difference in the manometer. If the water levels in the manometer stay constant for a couple of minutes, your tank is in good shape. If not, then you need to remove the tank and tighten the screw in the stopper, replace the stopper with a new one, or replace the tank. Another occasional problem with a fuel tank is that the "clunk" tube inside the tank becomes bent due to a hard landing or more likely in a tank that has been recovered from a crashed airplane. In this condition, when the tank is only partly filled, the remaining fuel will not be drawn up into the engine when the nose of the plane is raised. If you try to fly the plane, the engine is likely to quit prematurely. So, if that symptom arises, and if you have tried to tune your engine and it still quits, remove the tank and check that the fuel tube is not bent, and does not itself have a crack or hole that could leak air into the fuel line.

See you at the field.

Alan Fry

Training Coordinator