SOME THOUGHTS ON FAC MASS LAUNCH EVENTS

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As I look back on my record of kanones, I find that over half of them are mass launch victories. The mass launch events are my favorite because I love the "shoulder to shoulder" type of competition they involve. The fact that everyone launches their model at the same time tends to level the playing field by forcing everyone to perform in the same wind and air. There is no minimum official flight time and, if you dork your airplane at the launch, you're out!

In my experience, even when facing the very best modelers, it is a rarity for the best looking and most skillfully built aircraft to win the kanone in a mass launch event. This is because broken motors, fly aways, mid-air collisions, rough landings and other mishaps so often preclude victory. More often than not, I find that it is the most reliable and robust aircraft that ends up on top.

Due to the fact that no field repairs are allowed during mass launches, I build extra structure into all my competition aircraft. Most damage comes in the form of caved in nose sections and busted wings. In my mind, most models can therefore benefit from a little extra nose weight, stiffer leading edges, and a few additional spars. Anyway, I'd rather put the weight into the structure as opposed to adding lumps of clay. Both indoors and out, I've often experienced the sudden stop produced by a tree branch, canopy pole or table leg and, because of the added structure, have been able to continue flying my model. In fact, on more than just a few occasions I've even been able to nurse a wounded bird to the winner circle.

As most have discovered, stick and tissue models can be unreliable and that even the best of them, will "betray" you at the most inopportune time. So here are some tips that have worked for me when flying in mass launch competition.

1. Use a preflight checklist! I can't tell you the number of times I've gone to the flight line only to find that my model had some unsuspected damage that could have been easily rectified with a checklist.
2. Know the max winds your model will take and stick to 90-95% of the maximum figure during competition. Let the other guy get winder fixation and blow up.
3. Keep it simple. For example, I never use a blast tube. Let's face it, this is a mass launch ship and not the pristine beauty you plan to enter in FAC Scale. Blast tubes complicate the process and increase the chance of having the motor slip from your fingers while attaching it to the prop shaft. If you blow a motor while winding you'll still have until the next contest to make repairs.
4. Use a figure eight hook. I use it for two reasons. First, it prevents motor creep over the prop shaft better than any other hook I've tried. Second, it locks the motor in the model. In the event that your model spits out the block during flight or at the end of the prop run, the nose block will remain with the airplane and can not be lost. 5.
5. Use the Nason clutch. The Nason clutch is the best free wheeling mechanism I've ever used. It never slips if constructed properly and, in the event of temporary bunching of the motor, it will free wheel and re-engage if the motor clears itself.
6.Make sure the nose block is secure. I use rare earth magnets from Radio Shack, and I install more than one when space permits. This is really important in unlimited rubber mass launch events where an ejected nose block due to rubber bunching is all too common and nose block rotation is endemic.
7.Practice with your model. Fly the full power envelope using progressive winds. Do this several times. A model will behave vastly different under different power conditions. For example, I was surprised by my normally reliable P-47D when, under max winds, it dove in to the right instead of zooming in a graceful left turn. The right thrust I put in to counteract torque, P-factor, etc., overpowered the system. In she went thanks to the fact that I'd never tested the limits of the power envelope.

Another important aspect of mass launch competition is the launch. There is considerable variability as to how different airplanes can be launched. For example, my FW Stosser is quite robust in this respect in that it can survive most upsets and goofs by me upon launch. My Mitchell A 10 flying wing is another story. It requires a 30 degree off the wind right hand launch, and even then the outcome is in doubt. George Nason has pointed out that a straight into the wind launch, if there is any kind of wind blowing, is asking for trouble. Most likely, you will experience the dreaded number nine flight pattern. Under most conditions a slight launch to the left or right is indicated in the situation. There is also the tendency to release the model at too high an angle. This alone can result in a number nine or stall. At best you can expect a dive and zoom climb where most of your power is lost thus losing the altitude advantage.

Surprisingly, there are actually times when a slight down hill launch is advisable. Such a launch can be a big advantage in a crowed field as one can fly under the chaos in addition to effecting a more positive climb out. The disadvantage is that some bystanders can often be complete idiots. Make sure you have an alley through which to launch. Don't be bashful about asking them to move!

Finally, a few suggestions on what to do when your at the flight line.

1. Choosing a spot on the flight line is always an important decision. I recommend picking out a spot on the extreme ends because this generally reduces the chance of being involved in mid-airs. However, I have found that in gusty weather, when a rolling gust comes in, it usually wipes out the left side of the line. In this situation, get on the right!
2. Knowing the strengths and liabilities of your aircraft helps tremendously. For example, I have had great success with my Embraer Tucano. It is a very rugged airplane and, with unlimited rubber, she is powerful and reliable. As a result, when flying this ship, I'm not as concerned with where I stand in the line. Rather, I'm more concerned with getting away fast in order to avoid collisions. On the other hand, when flying my FW-190A, which is more of a "floater" than the Tucano, I'm much more concerned

about getting to either side of the line where there is a better chance of staying out of trouble.
3. I don't think it's unfair or unethical to discuss the flight characteristics of your model or those of your competitors while "negotiating" a spot on the line. This is in everybody's interest as it increases the survival rate for all concerned.
4. Try to put as much space between you and the rest of the competition before launching. Don't worry, if the CD does not like the spacing he'll let you know about it.