

# THE FLYER



Middlesex County  
R-C Fliers, Inc.

April 2007



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**Custom Finish, John Parisi's T-rex with custom paint & decals**

## President's Message - Charging up and Checking Out

I had the great pleasure of loading up my truck and going to the field to fly R/C yesterday, for the first time in several months. It was a beautiful morning, with light winds straight down the runway. Sweet!

In preparation for my first outing of the season, I spent some time in the shop checking equipment, cycling and charging Rx, Tx, glow-starter, and Flight-box batteries as necessary. As usual, I found a couple of battery packs that had been OK in

the fall, but were displaying signs of degradation these several months later. I had what I needed to fly safely for the day, but put a couple of packs in the "bad" bin for recycling. I'll be buying some new packs this week - why risk your model on a marginal battery pack? That fifteen or twenty dollars for a new pack will seem like small potatoes when you're canoeing out into the beaver pond to retrieve what's left of your aircraft.

Other checks I made on the trusty 4-Star

Sixty were for propeller attachment, control surface hinge strength, control movement (correct direction and range of motion, without binding), and correct engine adjustment.

I'll be honest and admit that I didn't do a range check - I meant to but forgot. Fortunately it wasn't a problem, but any time your equipment has been idle for a while, a full system check is in order. If your aircraft has experienced a hard landing or been repaired, a thorough pre-flight inspection with range

check is a must.

On a completely different subject, the club will be hosting an information session on April 18th (evening) at the Lewis building. It's open to the public, and we already know we'll have some Girl Scouts there. Weather permitting, we'll be doing some flying with the scouts on the following Thursday afternoon/evening. Also, come on down for field cleanup and repair day on Saturday, April 21st. Fly safe, and have fun!

*Jeff*

## March Meeting Summary

The March 2007 meeting had 15 members and 3 visitors in attendance. Our Treasurer again reported that we still have money in the bank. In fact, this month I noted that the beginning balance was about \$4,780 and the ending balance was around \$4,900. John mentioned that he had received \$529 in dues and paid \$398 in bills for the gifts at the Holiday party — guess income exceeded expenses, so we can have another Holiday party this coming year!

Jeff offered some details from the January auction. The bottom line there is that we netted \$471 as our por-

tion of the proceeds. Great work Jeff, and thanks to all of the workers who showed up to support this event.

Other details included the following statistics:  
112 Attendees  
84 Auction Items

Planning for next year started by asking for a volunteer to head the committee. Dave Varrell volunteered and he has agreed to look for the site and coordinate plans with the Burlington club.

The remainder of the meeting focused on a discussion of several upcoming events. Flyers were passed out for the Construction Derby that has been scheduled for June 10th this year. His-

tory suggests that the flyer is correct when it says you can't have more fun by attending any other event. So please mark the date on your calendar.

This year, we also ↓

These projects include some repairs to the gazebo and painting the ceiling. Combined with the usual trash pick-up and routine maintenance; we're asking everyone to



**A couple of friends under the gazebo.**

## Flight Training Resumes

Question: What do you think about the early change to Daylight Savings time this year? Well, it does mean we already have the opportunity to get in some late afternoon flying time.

Students should start making plans to meet Wednesday evenings for flight instruction. Start by contacting your instructor to see when he is available. Generally, instructors are available Wednesday afternoon until sunset. And even if it may seem a little windy stop by and someone can check out your plane and ensure that it is ready for the first training session.

hope to have a Family-Fun Day or Open House. The July meeting and cookout date is July 11th.

Finally, there was much discussion about the choice of dates for our Spring Clean-up day at the field. This year, the date is Saturday, April 21st.

The Field Committee says that there are several extra projects that need to be accomplished this year.

consider lending a hand.

Please check your email and the club Website for any last minute changes but here are the highlights planned for this year:

### **MCRCF Calendar of Events**

**April 21st** Spring Clean-up Day at the field

**June 10th** Construction Derby Flyers are on the Website

**July 11th** Summer Meeting and Cookout at the Field

**Aug 12th** Members-Only Fun-Fly at the field

## I've Been Looking At Another Website (Cont.)

Last month I mentioned this Website I was reading, and talked a bit about the Power Curve. The Website I'm talking about is called "See How It Flies" and can be found here: <http://www.av8n.com/how>

Let me begin this discussion with two questions. 1) What did the Wright Brothers use a stick and a piece of yarn to measure? And 2) Most aircraft do not have an instrument to display this flight parameter, even though sensor data may be used by the Auto Pilot system? Answer: Angle of Attack.

Angle of Attack is defined as the angle between your wing and the relative air hitting the leading edge. The Wright Brothers piece of yarn attached to the end of a short stick protruding from the leading edge of the wing made an ideal Angle of Attack sensor.

Angle of Attack is so important, because it is the dominant factor that will effect how your plane flies. We all know how difficult it is to fly a model that

is not properly trimmed for level, hands-off flight. Well basically the process of finding the proper trim setting is one of using the elevator trim to change the model's Angle of Attack until it exhibits the desired level flight.

Most of our ARF planes do not include main wing adjusters. I've recently been looking at a couple of Pattern planes and they are the exception. In fact the NSRCA's Aerobatic Trim Guide suggests that these wing incidence adjusters be set first.

This NSRCA Trim Guide suggests that the pilot make a test flight and adjust the elevator trim to level flight at cruise speed. Then land and take a look at the elevator in relation to the main stabilizer. If the plane needed Up Elevator trim, then they suggest raising the leading edge on the main wing. And conversely, if the plane required Down Trim, then lower the leading edge on the main wing. By making these adjustments, you are basically setting the Angle of Attack that gives level flight with neutral elevator trim.

As I said, most of our ARF planes do not have main wing adjusters, but if you have a plane that seems to require significant elevator trim (either Up or Down) you may want to consider adjusting the main wing anyway.

So what else happens when we change the Angle of Attack? The first thing that comes to mind is that the plane will stall at a particular Angle of Attack. Most of us are familiar with this and know that if you keep pulling on the Angle of Attack control, the plane will eventually stall — you will recognize this condition when the nose suddenly drops and the plane starts to lose altitude rather quickly.

As I mentioned earlier, most planes don't have an Angle of Attack instrument, so I guess this is one area where we're not at a big disadvantage over full scale pilots. In fact, we might even be at a slight advantage as long as we know what to look for when flying our models.

Angle of Attack management during landing is one example that

comes to mind. When teaching new students how to land, we always mention that they need to keep the nose of the plane pointed down, and that they need to be very careful about pulling Up elevator. Know why?

Well the answer is Angle of Attack. Because your plane is descending, the relative wind is coming at the wing from a low angle. As long as the nose of the plane is below level the Angle of Attack will result in positive lift and it will be impossible to stall. Raise the nose (Up Elevator) and the change in Angle of Attack can very quickly result in a dangerous, low altitude stall.

On the other hand, as the plane approaches the runway, a small increase in the Angle of Attack will result in a lower airspeed and smoother landing. So once you've learned to use all four controls on landing, remember that the right stick actually controls airspeed and the left stick controls altitude. Just keep the changes small and smooth.



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**We're on the Web!**  
<http://www.mcrcef.org>

## First Class Mail

April 11<sup>th</sup>, 2007  
7:30 PM  
Lewis Building  
248 Boston Road (Rt. 3A)  
Billerica, MA

### *Official Publication of the Middlesex County R-C Fliers, Inc.*

**The FLYER** is the official publication of the Middlesex County R-C Fliers, Inc., a non-profit organization chartered for the promotion of radio controlled model aircraft building and flying. The club operates a flying field located on Treble Cove Road, Billerica, MA. The club offers free flight instruction to any member provided they have a current membership with the Academy of Model Aeronautics. Contact any club member for details. Meetings are held on the second Wednesday of every month between September and June in the Billerica Recreation Dept building at 248 Boston Road in Billerica, starting at 7:30 PM.

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