



# Wing Tips



## September 2016

The Newsletter of the Mid-Hudson Modelmasters

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### 2016 Club Officers

President: Brad Quick

Secretary: Larry Kunz

Sgt. at Arms: Flavio Ambrosini

Vice President: Lloyd Quick

Treasurer: Tom Eng

Junior VP: George Amenta

### Club Calendar

#### Coming Up:

- **Mid-Hudson Radio Control Society, Rhinebeck Jamboree, Sept. 9 -11, 2016,** For more information see <http://www.mhrcs.com/pages/Jamboree.htm>
- **NEAT Fair 2016, Thurs., Sept. 15 – Sun., Sept. 18,** Downsville, NY, [www.neatfair.org](http://www.neatfair.org)
- **Pleasant Valley Days, Sat., Sept. 17- Sun., Sept. 18,** For more information see the meeting minutes & Brad's article. The club will be participating in this event. Please contact Brad ([brad@jamestaylor.com](mailto:brad@jamestaylor.com)) to help out at our booth.
- **CLUB MEETING , Saturday, Sept. 24, 11:00am:** At Redl Park Flying Field, our flying field. The date was moved to avoid conflict with Pleasant Valley Days.
- **October Wing Tips articles & photo submissions due, Thurs., Oct. 6:** Send your submissions to [wingtips@modelmasters.us](mailto:wingtips@modelmasters.us) Due date is first Thursday of each month.

#### Other Events:

- **MONTHLY MEETINGS:** Indoor meetings will start in November at the Highland Middle School Gym, 71 Main St., Highland, NY 12528 and will be on the 2<sup>nd</sup> Friday of each month. Moved to 2<sup>nd</sup> Friday due to building scheduling conflicts. Indoor flying begins at 6:30pm, meeting will begin at 7:30pm or 8pm. *Note: Please limit flying to indoor types -- fly the larger, more aggressive models outdoors or at larger indoor sites. Sneakers or other gym floor type footwear should be worn.*
- **OUTDOOR FLYING SESSIONS AT WEST ROAD FIELD** – Every Saturday Morning, weather permitting. It is also possible to find some members at the field on Sunday mornings.

## From the President's Cockpit

What a marvelous summer it has been for flying. The weather has been reasonable with mild temperatures and calm winds. It all culminated with a perfect day for our annual picnic. The weather was perfect. The food was great. The contests were exciting and the contestants organized themselves so that they went off smoothly and quickly. Although it may not have lived up to the level of excitement we had last year, I enjoyed the combat event. I also enjoyed the impromptu large cub formation flying! (left photo) It couldn't have been a better day with a nicer bunch of people.



As I have mentioned earlier, we plan to participate as a club at Pleasant Valley Day, which is the 17th and 18th of this month. Currently, Larry and I have committed and we are each flexible about which day we man the booth. We plan on having some flight simulators that the kids can use and we'll help them build some very simple "meat tray" airplanes. We will also bring some of our planes to show to the public. We may do some demo flights from the adjacent field if it works out. We are also open to other ideas for activities we can do in the booth. I'd like to start putting together a list of members who can man the booth, so if you are available, please email me ([brad@jamestaylor.com](mailto:brad@jamestaylor.com)) and let me know whether you can help on the 17th or the 18th. Thanks.

### MEETING MINUTES – Redl Field August 20, 2016

- Party Day ! A nice calm sunny day for the annual Model Masters club picnic !
  - Between Members, spouses and children we had around 30 people in attendance
  - Lots of great food, flying, and socializing.
- Open Flying: from 9:00 till 10
- Business Meeting conducted by MM president Brad Quick. - Called to order at 10:05
  - Minutes of previous meeting in Wingtips. Accepted.
- Treasurer's report:

\$1857.02 (\$217.21 of which is the mowing fund) plus \$500 in escrow to Highland Middle School.

We have 55 members (welcome Stan Nack) plus several youth members.

- Mowing & Brush Hog:

Brad mowed Friday in preparation for party day. Volunteer needed for next mowing.
- Old Rhinebeck Aerodrome: Friday 9/9 – Sunday 9/11

Plan to attend if you can, and support our sister club MHRCS who sponsors the jamboree.

This year is the 50th anniversary, so it is a big deal. Please contact Warren Batson

([batson.warren@gmail.com](mailto:batson.warren@gmail.com)) and volunteer to help.

- Pleasant Valley Days: Sat 9/17 & Sun. 9/18

We will man a booth at this event, with club info, some planes on display, and maybe build some small gliders to fly at the fair site. Please contact Brad Quick ([brad@jamestaylor.com](mailto:brad@jamestaylor.com)) and volunteer to help !

- Show & tell / presentation:

Brad Quick showed us his almost completed new Fokker. He described his process for building the cowling,



and later in the day he made several successful flights ! (sans cowling)

## - MM Annual Picnic: Saturday 8/20

We had perfect weather for the annual picnic – Sunny skies and little wind.

Event planned and organized by Bob Santoro.

Many members came early to set up shade tents BBQ grills, tables, etc.

Tom and Susan spent most of the day cooking.

Many members and guests contributed food and deserts.

Brad did his usual stellar job of planning and running several fun flying events.

- 90 second flight (without timers)

- 100 meter taxi sprint

- Bean loop

- Crepe paper bomb drop.

- And, of course, the combat wing demolition derby !

Thanks to all the folks who helped make this happen !

## Picnic/Fun-Fly Enjoyed by All by Bob Santoro, Event Director

I wish to thank all our members and their guests who helped make our 6th annual picnic/fun-fly a big success. We had 32 participants from age 3 to 85, had perfect weather, great food prepared and served by Tom and his wife Susan and a whole lot of fun participating in the challenging flying events conducted by Brad.

The success of an event like this depends upon the willingness of members to volunteer their services and to provide the equipment we need. And in this regard, I am grateful for the eagerness in which members offer their help. At the risk of leaving anyone out I wish to thank everyone who brought equipment and assisted in the duties of the day. We had a lot of delicious food contributions but regrettably, with few exceptions, I don't know who brought them. For all of you who contributed, my sincere thanks.

I hope you all will join us again next year for this annual event. We look forward to and welcome your participation.



*Bob & granddaughters,  
Stella and Sofia*

## Battery Monitors by Rich Kleinhenz

There are lots of ways to avoid running out of juice while in the air. Usually ESCs cut or pulse the power to the motor before the battery is completely dead, so hopefully you notice that and are still able to do a deadstick landing with those last few stored electrons - the power to the servos is not cut until there is nothing left for the BEC (battery eliminator circuit) to work. You generally try to avoid that by using a timer - you establish once how much flying time you get out of a battery and set a warning to that. Of course, if you fly more aggressively than usual you'll use more charge and run out quicker so you need to be conservative in your timer setting. So you check your battery before flying - and there are lots of voltage checkers available. Most will let you check total voltage as well as individual cell voltage. The one I like even better is one that also gives you a percentage without scrolling - it's nice to see at a glance 9% (don't fly) or 39% (take another quickie flight). These are available lots of places, incl. ebay or amazon,

e.g. <https://smile.amazon.com/Tenergy-Intelligent-Capacity-Discharge-Resistance/dp/B0178P8H9U/> (shown on left)



Some radios like my Taranis have telemetry available, so battery or cell voltage can be sent back and audible warnings can be set up to warn when the battery gets low. I like this a lot, but it involves an additional sensor to be installed, at extra cost - and is only available if a FrSky receiver with telemetry capability is also used. One of the nice things about



the Taranis is that I can fly Spektrum or Orange receivers and then this is not possible.

A method that always works is a direct onboard voltage monitor/alarm (shown on right). These units plug into the battery balance plug and will beep when the lowest cell reaches a preset value. Many ESCs are set to cut out at 3.3V which is also the lowest value you should let your lipo ever get to. I set my monitor to 3.5V. The monitors weigh next to nothing (9g) so in all but ultralight and indoor models this will hardly be noticeable. The cost is negligible also, like \$2 or so on ebay or amazon. I usually have a bunch with me, if you want to try one hit me up at the field, NC :-) The beep is pretty loud, but you won't hear it if you are way up there, so make some low passes when you think it's getting time. Also... if several people at the field have these, when you hear a beep everyone will make a low pass to see if it's their model :-) Unfortunately pitch or beep length is not adjustable, they seem to be all alike no matter where you buy them. Also, you need to make sure there's a way for the sound to come out. Some models have the battery compartment surrounded by lots of foam and no direct vents... that makes it hard to hear! For me the little monitor is an extra safety margin, I use it along with my timer, and it lets me make full use of my battery. The unit beeps when the lowest cell dips below the set threshold, 3.5V. If there is a load on the battery like when you take off or you give it full throttle (and the battery internal resistance is not at its prime any more) it may beep and recover, you may find 3.7 V on the lowest cell once she's on the ground. When you are at that point it's probably a good time to bring her home anyway!

One super-cool thing I just found out about these is that they work on 1S cells also! The capacity checker shown above and all similar ones only work on 2S and up, the chips they use apparently run on 5V. I've not had a way to check these little 1S batteries used on ultralights. For those I've maintained a 'charged' and 'empty' ziplock baggie and relied on putting batteries in the right bag. The little voltage monitor allows me to check the voltage, apparently it runs on 3.3V or perhaps 2.5V internally. These units are not super accurate, but if I see a value near 4.2V it's good to fly, if it's under 3.8V it goes into the 'empty' baggie where it should have been. You have to make a custom cable, of course, one end for your battery and the other anything with a 0.1" pitch, like a servo connector.



## Tape Tightening by Brad Quick

Any of you that built one of our group build planes that we covered with packing tape are probably now looking at a wrinkly finish on your model. The tri-plane that I just finished had this problem too. The day after I covered it with tape, the wrinkles showed up over the entire surface of the wings. The fuselage didn't wrinkle as bad, but they were there. I still don't know exactly why some installations wrinkle more than others.

In preparation for bringing the tri-plane to the Rhinebeck Jamboree, i wanted to reduce the wrinkles, so I got out the heat gun. As it turns out, the heat gun does a nice job of shrinking packing tape and eliminating wrinkles. It takes a little technique because there is a fine line between shrinking and over shrinking. I had my Harbor Freight heat gun on its low setting and held it about 3" from the surface that I was working on. Sometimes, the tape actually gets slightly MORE wrinkly just before it starts to shrink. As soon as it starts to shrink, you have to move on to another area because if you stay a fraction of a second too long in one area, the tape will shrink to the point that it peels away from the other layers of tape and makes a big split between rows. The good thing is that it's packing tape, so repair is simple. Cut out the bad area and slap on a new piece of tape.

When I was done with the tri-plane, I shrunk the tape on my entire large Piper Cub. After about a half hour of work, it looks like new!

## Interesting Stuff Contributions from Members

**Rich Kleinhenz** – A quick tip for anyone flying with GPS (quadcopters mostly): This site <https://www.uavforecast.com/#/> will give you a forecast by specified location for the number of satellites you can expect to get locked. It includes GLONASS satellites which are recognized by newer GPS modules like the M8N. GLONASS can also be turned off. This is pretty cool, since the number of satellites visible can vary.

**Bill Bolitho** - For when you have absolutely nothing to do. (editors note: Bill has provided many many URLs from all over the world which contain free plans. Here is a small sampling. If you are interested in more please contact Bill or the editor.

Free R/C Books - <http://www.rclibrary.co.uk/browse/index.asp>

Russian Language Website - Plans in various languages <http://rcplans.ru/>

German R/C Magazine - <http://www.vth.de/flugmodell-und-technik>

Polish Site - <http://www.alehar.aplus.pl/plany.html>

Newer Plans - Czech Site - <http://www.profilii2.com/eng/plans.asp> & <http://www.rcrevue.cz/objednejte-si/planky/>

**John Knight** – Mega Cub maiden flight, August 13, 2016 (Photo courtesy of Scott Fellin)



**Larry Kunz** – 2016 Picnic Photos



