



# The Transmitter

Suburban RC Barnstormers - P.O. Box 524, Bloomingdale, IL 60108

AMA CHAPTER 640

IMAA CHAPTER 194

March 2013

<http://www.suburbanrcbarnstormers.com>

## Coming in March and April

March 11<sup>th</sup>, Member Meeting, Bloomingdale Public Library, 7:00pm, **Club Meeting Room A Only**

March 14<sup>th</sup>, Dome Fun Fly, White Pines Golf Dome, 11:00pm

March 25<sup>th</sup>, Board Meeting, Bloomingdale Public Library, 7:00pm

March 29<sup>th</sup>, Swap Shop Setup (Friday), 4:00pm (time to be confirmed)

March 30<sup>th</sup>, Swap Shop, Dupage County Fairgrounds, 8:00am – 12:00pm

April 22<sup>nd</sup>, Member Meeting – Static Contest, Bloomingdale Public Library, 7:00pm, **(2 Wks Late)**

April 25<sup>th</sup>, Dome Fun Fly, White Pines Golf Dome, 11:00pm **(2 Wks Late)**

April 29<sup>th</sup> Board Meeting, Bloomingdale Public Library, 7:00pm **(1 Wk Later Than Usual)**

## President's Corner

*By Mike Maciejewski*

Hello,

Two months down in the books for 2013. This is a great hobby we are in, depending on how much money you want to spend there is a model for you. Once you have a radio you can buy as small of an airplane or as large as you would like. If you want an ARF or build from plans there is a plane for you. Maybe you want to go to the hardware store and buy some foam insulation or a 2x4 and rip it for spars, there is a place for you. Are you into scale or are you inventive we have a place for you. This is what I like about our club, the diversity of the members interest. But we have one thing in common, our love to fly radio control airplanes.

The new flying field that the county is putting in at Pratt Wayne is smaller than our current field we have. It will be the minimum flying field that the AMA suggests. If you read the page on the

AMA web site it tells you to consider "The types of aircraft the site is anticipated to accommodate". I am sure that Woodland Aero Modelers and the PropMasters RC Club know what we need. It would have been nice if the county people would have talked to us and got a few suggestions.

We will probably lose a few members because of this. Some of you may be happy but not me. My job as President of the Suburban RC Barnstormers is to represent all of the members, not just the few. I think I have done this for our membership. We don't always agree with everyone, but we all get a chance to give our opinion.

Thank you

*Mike*

# Notes of the Suburban RC Barnstormers Membership Meeting

February 18, 2013

## ATTENDANCE

There were 37 members present. There were no new members or visitors.

## OFFICER REPORTS

**President: Mike Maciejewski** presided over the meeting.

Mike read a letter Debbie Howe received from the Bloomingdale Wish Tree organization (Volunteer Council of Bloomingdale Township Food Pantry) thanking us for our \$625 donation. In turn, many thanks to those that made donations at the December meeting!

Mike reminded members that we do not have a location for our May meeting. We are looking for ideas, so please let Mike or one of the other Board Members know if you have one. The March meeting will also only be held in the A half of the conference room.

**Vice President: Steve Thill** had a roll of purple Ultracoat and a charging harness with Deans connectors for door prizes. There was a new rollover prize, a 40 size Chipmunk ARF.

Steve said we have several presenters tonight for our entertainment. **Jason Boettcher** will talk about the IMAC and **Paul Kramer** about properly mounting a glow engine.

**Treasurer: Bob Elsner** reported on a number of documents he processed including the Annual Report, the AMA Charter Renew, and insurance for the Dome and Fun Fly events. Currently, there are no conflicts for field fun fly events with other permit requests. We have a treasury balance of about \$2800.

**Secretary: Scott Taylor** once again, reminded members to look for membership cards in the newsletter. If you normally only receive an electronic notification of the email publication, you will get a hard copy for the purpose of sending the membership card, only. After mailing the card, you will not receive a hard copy again.

If you haven't renewed, please do so soon. Members who normally get a hard copy newsletter and have not renewed will get their last newsletter in March.

## COMMITTEE REPORTS

**Dome Flying – Marty Schrader** said participation on Thursdays has been very light. There were no members at the last Thursday evening. We are considering discontinuing Thursday flying. He also said he was looking for another volunteer to help manage the dome events. If you can help, please let him know.

## OTHER BUSINESS

**Swap Shop – Debbie Howe** talked about the Swap Shop this March 30<sup>th</sup> at the Dupage Fair Grounds. Our Swap starts at 8am but vendors will be unloading starting at 6am. We will need help of all kinds from our members. In particular helping vendors unload in the morning is needed most, but help can be used throughout the day and to help break down the event at Noon. Also, help will be needed on Friday the 29<sup>th</sup> to set up tables and chairs. Debbie also asked members to support the event by buying the raffle tickets. You can either mail or turn in money to Bob Elsner in person. Flyers are available to distribute at hobby shops.

## ENTERTAINMENT

**Jason Boettcher** talked about the International Miniature Aerobatic Club (IMAC). He described the types of maneuver and typical patterns that would be flown at competitions and how they would be judged. There are different categories for competition with the "basic" category allowing a wide range of aircraft. Membership in IMAC is \$25 per year and Jason will be happy to help or answer any questions you have.



**Paul Kramer** gave members a lesson on mounting glow engines. In particular he discussed how to

add right and down thrust necessary to compensate for turning forces generated by the engine without it. This is a must for Pattern flyers. Other great tips were given as well.



**Dave West** showed members a small receiver powered GPS tracking module he built for tracking location, altitude, and speed when flying. Dave was willing to sell these units to members for what it cost him to build them, \$40. But he has no plans to sell them.

### PLANES

**Mike Maciejewski** showed members his F-20 Tiger Shark electric ducted fan. He flies this using both 3 and 4 cell packs. The plan can be hand launched and has very good flight characteristics



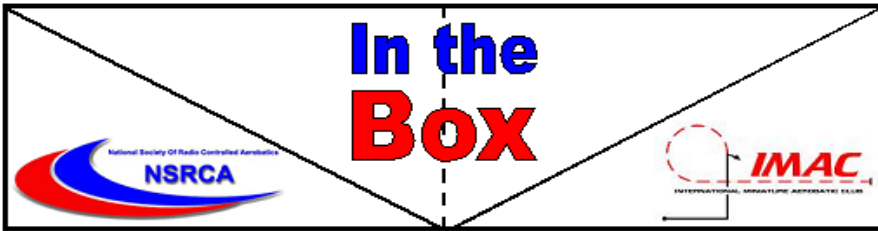
**Marty Schrader** had a new F-22 foam flyer to show members. He flies this plane on 2 cells and it weighs in around 177 grams. He demonstrated how tough it was fly letting it fly into the floor.



### RAFFLES

**Marty Schrader** won the purple Ultracoat, **Bob Elsner** won the connectors, and **Bob Sarley** too home the turkey. There was no rollover winner.





## Pattern Flying - Precision Aerobatics

Taking your passion for flying RC airplanes to the next level!

By: Bob Sarley

This issue of **In the Box** contains the reprint of an original article by Steve Thill (our new vice president) that offers some very useful insights regarding the PARALLEL CHARGING, DISCHARGING AND STORING of Lithium Polymer batteries.

Take it away, Steve:

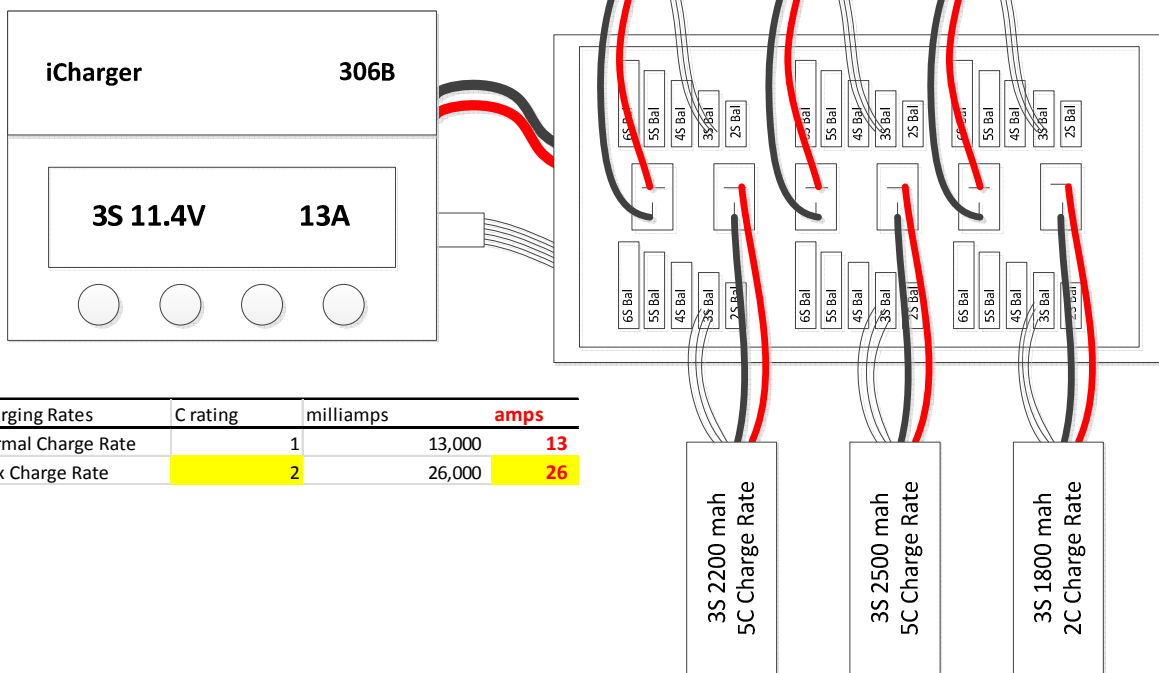
Parallel charging leverages newer high power chargers (200 – 1000+ watts) to charge discharge and store multiple 2S-6S packs simultaneously as if they were one large 2S-6S pack. This approach can dramatically reduce charging time while still charging your packs at a low C setting. Aggressive parallel charging pushes a lot of watts so having a quality power supply, charger and parallel charging board is essential!

My current parallel charging solution utilizes an iCharger 306b charger with an eBuddy ([www.ebuddy.com](http://www.ebuddy.com)) parallel charging board. These ParaBoards can be purchased with a variety of main plug and balance plug configurations and cover the majority of the common combinations.

### Parallel Charging Example:

Let's say you want to charge 6 x 3s packs of various capacities. Prior to charging you need to do some math to figure out the capacity of your combined batteries as well as decide on the C rating you would like to charge at.

Cells in Series (S)	Capacity(mah)	Max Charge Rate ( C )
3	2,200	5
3	2,500	5
3	1,800	2
3	2,200	5
3	2,500	5
3	1,800	2
3	13,000	2
<b>MUST ALL BE EQUAL</b>	SUM this column	Max this column



Charging Rates	C rating	milliamps	amps
Normal Charge Rate	1	13,000	13
Max Charge Rate	2	26,000	26

### **A few rules to Parallel LiPo Charging:**

- Read The Fine Manuals – Read the manual that comes with your charger and ParaBoard twice, then read them again.
- Follow similar safety precautions as when charging one LiPo at a time.
- You can charge batteries of different mah ratings. Just add up the mah's of the batteries to be charged to determine the total capacity and charge rate of your combined battery.
- ***You can ONLY parallel charge packs with the SAME S (cell count) rating at the same time! Failing to follow this rule could easily start a fire.***
- ***NEVER exceed the charge rate (C rating) of the lowest C rated pack in the configuration.***
- ***Never parallel charge a questionable pack.*** This includes packs that have been over discharged, crashed, puffed, or damaged in any way. It is best to charge dispose of or charge these packs individually in a fire safe container until they are no longer questionable.
- ***Never exceed the max amp rating of your ParaBoard.***
- **Warning**, if something goes wrong during the charging cycle it could damage multiple packs.
- When parallel charging you lose the ability to monitor each pack independently. Only averages are displayed by the charger.

### **Steve's Parallel Charging Best Practices:**

- Always balance charge, this ensures your charger verifies the cell count of your batteries.
- Connect all of the mains to the ParaBoard FIRST and then the balance plugs.
- Only parallel charge packs in the same state of charge/discharge. For example, don't connect a fully charged pack and a fully discharged pack to a parallel board at the same time. If packs are at vastly different voltages when you connect them together in parallel, it is possible that a large amount of current can flow between the packs as they equalize themselves. In most cases this will not damage the batteries but it can damage the wiring.
- Don't get greedy. This process will charge 6 batteries at once so even if your batteries are rated for 5C charge rate this is a great way to take it easy on them and only charge at .8C to 1C.
- Typically I try to charge batteries purchased in the same batch (same cell count, cycle count, age, etc) together. Sometimes mixing old /new batteries won't let newer batteries charge to their fullest.
- Parallel charging large packs on less power chargers will give little to no benefit, aside from only having to set up charger one time, due to small output capability.
- Buy a quality built parallel charging board. They are cheap and easy to use with most costing less than \$20.

Lastly, does parallel charging add additional risk? Yes and No....

Charging 6 x 4S 2650 packs at 1C one at a time can take 4-5 hours! Charging 6 x 4S 2650 packs at 1 C using a ParaBoard can take 45 minutes. It is far more likely that you will be attentive and watchful over a ParaBoard solution than you will be over a single pack solution while putting NO additional stress on your packs.

**Stay Safe and Happy Charging!**

**Thanks, Steve.**



## The Transmitter

This newsletter is published monthly by the Suburban RC Barnstormers, Inc.

We reserve the right to edit all information forwarded to us. Permission is hereby given to reprint any article that we publish as long as proper credit is given.

Material can be submitted for publication: (1) at a meeting, (2) by mailing to Suburban RC Barnstormers, Inc., P.O. Box 524, Bloomingdale, IL 60108, (3) sending it to the email of the editor, Scott Taylor, at [taylorstr@core.com](mailto:taylorstr@core.com)

Articles must be received by the 4<sup>th</sup> Saturday of the month to be included in the following month's newsletter.

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