



The Transmitter

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

AMA CHAPTER 640

IMAA CHAPTER 194

October 2011

<http://www.suburbanrcbarnstormers.com>

Coming in October and November

October 10th, Membership Meeting, Bloomingdale Public Library, 7:00pm

October 24th, Board Meeting, Bloomingdale Public Library, 7:00pm

November 14th, Club Meeting, Bloomingdale Public Library, 7:00pm

November 17th, Dome Fun Fly, White Pines Golf Dome, Bensenville, 11p to 1a

November 26th, Dome eNiter, White Pines Golf Dome, Bensenville, 11p to 5a

November 28th, Board Meeting, Bloomingdale Public Library, 7:00pm

October Entertainment

By Dave West

Our October Barnstormer meeting will feature a member-to-member swap shop. It's an opportunity to make some space in your model hanger (or fill what space you have). Bring a plane, engine, radio, accessories, or other items you would like to sell or trade. Bring some cash too! Someone is likely to have just what you need.

The rollover raffle starts fresh this month. With the cooling weather its time to think of indoor flying. The new prize is the FlyZone Überlite combo. This is a modular, ready-to-fly setup complete with radio, motor, battery, and three interchangeable airframes (mono-plane, biplane, and flying wing). With a flying weight of less than 3/4 ounce, these can fly in a quiet corner of the dome -- or maybe in your living room!

Forest Preserve Meeting on Field Improvements

Hello to all, I received a phone call from ranger Mark Spencer about the flying field. Mark's boss would like to meet with me to see what we would like to see happen to the flying field. The meeting will happen in October. I was not given any details on what they would do, or if they would spend any money on the field for us.

I have asked Dave West and Stan Warden to join me at this meeting. This will allow for a better presentation back to the club on what the county has in mind. I asked Orvil (one of our past presidents) if the county has ever

asked for a meeting before and he said no. This will be a good time for a one on one with the county.

We will be looking for ideas to talk with the county about what we would like to see. So bring some to the meeting for me. I do not know how long this meeting will be so we may not get to talk about everything, but we will try.

Mike Maciejewski

President
Suburban RC Barnstormers

Notes of the Suburban RC Barnstormers Membership Meeting

September 12, 2011

ATTENDANCE

There were 38 members in attendance. There were no new members.

OFFICER REPORTS

President: Mike Maciejewski presided over the meeting.

Mike said that a number of members have been asking about the possibility of a runway and other possible field enhancements. Volunteers were needed to look into the cost so that we can discuss the options with the Forest Preserve.

Mike also mentioned that the last fun fly would be held next Sunday. He reminded everyone that the event starts at 10:00am, so get there early for practice and trim flights.

Vice President: Dave West said welcome to the "Big Room" and thanks for showing up. Our meeting at Poplar Creek library was off our normal path but better than the field!

Dave said he still has the two kits for the rollover. They will both go tonight. The first person to be picked and is at the meeting will have first choice.

For the entertainment, Dave said he would be talking about making your LiPo batteries last longer. Dave also extended his thanks to those members that have given presentations. He welcomes others. Please share your experience!

Treasurer: Bob Elsner reported a balance of \$5192 in the treasury.

He also reminded the Officers and Board members that our Board meetings startup for the winter on September 26th.

Secretary: Scott Taylor said he has been building quite a collection of nametags. If you have ordered one and cannot make it to our regular meetings to pick it up, please let him know how best to deliver it

COMMITTEES

Fun Fly's – Mike Maciejewski said we needed a volunteer or two to run the next fun fly. Jeff Peca said he would help with the event. It would be either a wiffle ball touch and go, or a bomb drop.

There will be a Giant Scale Fun Fly on September 26th. Bring your planes!

Dome Flying – Stan Warden was looking for help delivering dome flyers to Strickly RC, Adventure Hobbies, and DesPlaines Hobbies. If anyone is near these stores, please let take a stack. He said we will once again have free flying for the opening week of the dome, which will be the first week in November. He also asked for ideas to boost attendance, such as free passes to first time flyers.

Safety – Tom Lyons talked a bit about flying safety in the dome. Among the safety features, will be orange buckets full of sand and tongs available to put out battery fires.

Mike Maciejewski talked about outdoor field safety at the Forest Preserve. Don't taxi into or out of the "pits" area and do not ready your planes on the picnic tables. We have setup stands for planes.

Other - Mike Maciejewski said there was recently an article in the AMA magazine on a free version of 2D CAD software. Mike is very familiar with CAD and checked the package out. It is similar to AutoCAD and can create DWG, DXF and other file formats. It is well worth the money! Of course they hope you will buy the 3D version. You can download this free version at: <http://www.3ds.com/products/draftsight/overview/>

Combat Flying – Steve Merrill expressed interest in seeing our club fly combat events. After some discussion about past events, Steve volunteered to write an article for the newsletter and coordinate activities.

ENTERTAINMENT

Dave West gave a presentation on increasing the life of Lithium batteries. This was based on the approach taken for

the Chevy Volt batteries (of which he is soon to be a proud owner). Chevy claims their LG/EverReady made batteries will last 8 years or 100,000 miles.



Their approach is 5 fold.

1. Use high quality cells (which may be easier said than done).
2. Monitor and balance each individual cell in the pack (of which there are 288). We can monitor plane cells when charging, but not while flying.
3. Avoid temperature extremes. Although the car can operate in -40 to +150 Deg F temperatures, cooling and heating is keeps batteries in a more ideal range. The best we can do here is to make sure the batteries are well ventilated.
4. Limiting stress increases life. For the Volt, draw is about 2C with a 7C maximum and charging is at .25C. These are not very practical limits for our batteries, but we can consider limiting flight times and slowing charge rates.
5. Avoid using the full battery capacity. The Volt does not exceed about 50-65% and they do not charge beyond 80%.

Battery technology is rapidly evolving, so watch for changes!

PLANES

Keith Egging show the club a portable plane preparation he designed years ago. It folds to a small suitcase size, but expands with legs and all the accessories!

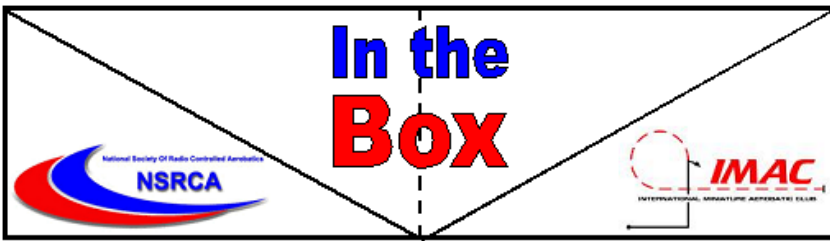


Nick Chysogelos show the club his foam SR-71 and X-41 canard planes. Very impressive and they fly well too!



RAFFLES

Scott Taylor was the winner of the turkey. **Chuck Weibler** won the heat shrink tubing and **Tom Lyons** won the glue. No winner in the rollover.



Pattern Flying - Precision Aerobatics

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

By: Bob Sarley
AMA 909308

Welcome to the second article related to pattern flying. This article will contain some information on the different classes of NSRCA competition and identify the Sportsman Class maneuvers.

What is Competitive Pattern Flying?

Competition pattern flying challenges your ability to execute specified maneuvers better than the other pilots in the event. The competitive event is governed by the National Society of Radio Control Aerobatics. It is a special interest group (SIG) within the AMA that has rules and regulations specific to pattern flying competition in addition to the general rules of the AMA itself. A great deal of information is available at the NSRCA website: <http://nsrca.us>.

AMA pattern competition is divided into 5 classes, each representing a progressively higher piloting skill level. The first four (in lowest to highest level order) are called Sportsman, Intermediate, Advanced, and Masters. These are U.S domestic AMA classes. The 5th class is the class used for international competition and is called FAI - F3A. The FIA is for Federation Aeronautique Internationale and F3A is the event identifier. Each progressively higher class contains additional as well as more complex and skill challenging maneuvers. A Pilot progresses through the classes based on his/her performances in these AMA sanctioned contests. There is also the opportunity to move to a higher class voluntarily if you feel competitively capable.

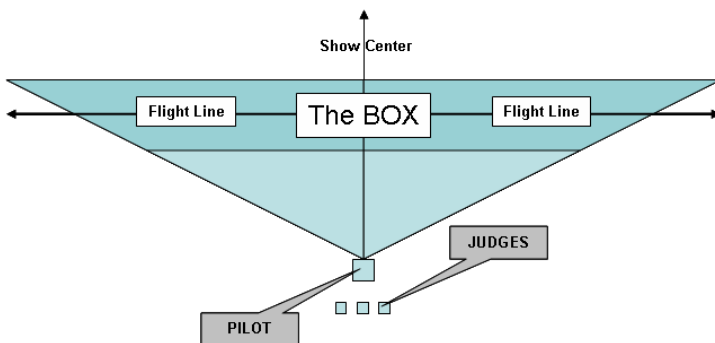


You got to have CLASS!

Each class of pattern competition is comprised of flight maneuvers that are performed in a specific order called a sequence. The order in which the maneuvers are performed is determined by the NSRCA rules committee and changes every couple of years to keep the pilots on their toes. The individual maneuvers are performed one after the other to form a flowing series of aerobatic patterns. The accuracy in which the geometry of each of the maneuvers is executed and the flow or rhythm in which the sequence of maneuvers is performed determines the overall score the pilot receives for that sequence from the judges of the event.

The sequence itself is typically divided into segments. A segment is comprised of a subset of maneuvers that ends with the pattern ship exiting "the box" and turning around in any manner the pilot wishes to reverse direction and make any corrections to the line, attitude and altitude of the airplane before re-entering the box for the next segment. These out of the box maneuvers are not scored and give the pilot a chance to relax and take a breath.

Starting with the Basics



The judged and scored maneuvers are flown within the confines of a virtual "box" bounded by lines projected from a point where the pilot stands at 60 degrees each side of center. The vertical height is also a line projection not to exceed 60 degrees from the horizontal. From this description and the diagram to the left, one can correctly infer that the box (and therefore the flight line and ceiling) gets larger as the aircraft is oriented further from the pilot. Each pilot needs to create a box that is large enough for him/her to perform the required maneuvers without feeling rushed while not placing the aircraft so far away that it is difficult for the judges to see.

In the Box – Continued...

The Sportsman class sequence is comprised of the following basic aerobatic maneuvers. Scored maneuvers include the takeoff and landing. The “K” factor is an indication of the maneuver’s difficulty and is used by the judges to assess points.

1) Takeoff (upwind, K=1)

Procedure turn and trim flight back (downwind), free turnaround, enter box going upwind

2) Straight Flight Out (upwind, K=1)

3) Half Reverse Cuban Eight (turnaround, K=2)

4) Straight Flight Back (downwind, K=1)

5) Stall Turn without rolls (turnaround, K=2)

6) Two Inside Loops (upwind, K=2)

Exit Box going upwind, free turnaround, enter box going downwind

7) Two Point (2/2) Roll (downwind, K=2)

8) Half Cuban Eight (turnaround, K=2)

9) Double Immelmann without rolls (upwind, K=2)

10) Immelmann Turn (turnaround, K=2)

11) 45 Degree Downline (downwind, K=1)

Exit Box going downwind, free turnaround, enter box going upwind

12) Vertical Upline on center (upwind, K=1)

13) Split “S” (turnaround, K=2)

14) One horizontal Roll (downwind, K=1)

15) Half Reverse Cuban Eight (turnaround, K=2)

16) Cobra without rolls (upwind, K=1)

Exit Box going upwind, free turnaround, free return, free turnaround to line up for upwind landing

17) Landing (upwind, K=1)

Aresti - The Shorthand Description of Aerobatic Maneuvers

In 1961, Colonel Jose Luis de Aresti Aguirre published his “Sistema Aresti”. This system of diagramming aerobatic figures came about because pilots competing in international aerobatic events (full scale) from different countries speaking different languages needed a way to understand the required maneuvers. The simplicity of the diagrams made the system work for everyone and it has been accepted worldwide as the preferred system of depicting aerobatic maneuvers. The FAI officially adopted the methodology in 1962 and the use of Aresti diagrams quickly spread to RC model aerobatics.

Some of the conventions used in drawing Aresti figures include:

A solid line or a dashed line represents the line of flight. Solid lines indicate upright flight, dashed lines indicate inverted flight.



The “Dot” represents the start of a maneuver; the “Bar” represents the end of the maneuver. There are many aerobatic maneuvers, but one constant to note is that all maneuvers start and end in level flight, whether upright or inverted.

Next Time

In the next issue I will show other conventions and the Aresti diagrams for all Sportsman Class maneuvers. We will also begin to discuss how the maneuvers are performed and what the judges are looking for in their execution.

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

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