


The Transmitter

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

AMA CHAPTER 640

IMAA CHAPTER 194

April 2005

<http://www.suburbanrcbarnstormers.com>

Coming in April and May

April 11th, Member Meeting (STATIC CONTEST), 7:00pm, Bloomingdale Library

April 25th, Board Meeting, 7:00pm, Bloomingdale Library

May 1st, Giant Scale Warm-Up, Pratt's Wayne Woods, 9:00am

May 9th, Member Meeting, 7:00pm, Bloomingdale Library

May 15th, Fun Fly #1, 9:00am Trim flights, 10:00am Start, Pratt's Wayne Woods

Next Meeting – Dozens of Planes on Display - Built by YOU!!

By Scott Taylor

Santa was good to you. He brought you all the cool stuff you've been reading about all year long. The Giants, the ARFs, the brushless motors, and who could forget the yards of foam insulation from your local Home Depot. You've been itching to fly but the cold weather is just not your cup of tea. So down to the basement you go to put together all those goodies Santa brought you. Now, you're ready for the first warm breezes of Spring, and they're almost here. The flat brown field is beginning to show signs of life and transformation from brown to green and soon those brightly colored fruits of your labors will be taking to the air. But first, it's time to share! Your fellow club members want to see your masterpieces in all their glory, long before they become a permanent part of the flying field landscape.

So, how can you do this? Well, by bringing your models to the annual Suburban RC Barnstormers' static display, of course. Not only will you be able to share your creations, but those of you who are deemed most worthy will be chosen by your fellow members and adorned with treasure (well a treasured piece of paper, anyway).

Just bring your favorite models to the next meeting (Monday, April 11th) and pick a category that most closely describes your plane. Your choices are Giant class, 40 Plus class, Under 40 class, and ARF class. Giants will generally have a minimum .60 or equivalent sized motor although most will have larger engines. The 40 Plus class kits will have engines in the .40 to .75 range. The Under 40 class models would be powered by .38 or under engines

or be powered by small electric motors. Most "Park Flyers" would fall into this category. Finally, for those of you who prefer to spend more of your time in the hobby store than in the basement there is the ARF category. Kits in this class have been built for you by the skilled hands of Asian workers, but you will get to take home the honors!

There are a few rules you must follow, but these are simple:

1. All entries must be radio-controlled models. Any type of power (or lack of) is allowed.
2. For the non-ARF categories, the plane must have been a minimum of 51% built by the owner. If the plane has been completely recovered by a new owner, that is usually sufficient.
3. The model must not have won a first place in any category in the past.

Remember, we want to see everyone's models! Although winning is fun, seeing the variety of planes built by your fellow members and sharing building experiences is really what this event is about. See you there!!

In this issue...

| | |
|---|---------------|
| <i>April Static Contest – by Scott Taylor</i> | <i>Page 1</i> |
| <i>Wing Loading – by Dave West</i> | <i>Page 2</i> |
| <i>Swap Results – by Bob Elsner</i> | <i>Page 3</i> |
| <i>Fuel Order Info – by Bob Elsner</i> | <i>Page 3</i> |
| <i>Dome Fun Fly – by Mert Mischnick</i> | <i>Page 3</i> |
| <i>'Lectric RC Corner – by Skip Carinno</i> | <i>Page 4</i> |
| <i>March Meeting Notes – by Ruth Egging</i> | <i>Page 5</i> |

Wing Loading?

by Dave West

“What’s its wing loading?” This is a question commonly asked when someone brings a model to a club meeting. Actually, asking the question is kind of a club tradition championed by former club member and Fermi Lab scientist, Al Dyer – who took a particularly scientific approach to modeling. The most common answers are “I don’t know” and the ever popular “What’s wing loading?”

Simply put, wing loading is the weight of the model divided by its wing area. It turns out that wing loading is a handy “rule of thumb” number that can sum up the flight characteristics of a plane. A heavy plane with little wings would have a high wing loading number. It would need a lot of power and fly very fast to generate enough lift to fly. Conversely, a very light plane with big wings would have a small wing loading number. Needing only a little lift to overcome gravity, it could fly slowly and would need only a little power to do so.

Calculating Wing Loading

It is easy to calculate wing loading. I will use my .25 powered Coroplast combat Vampire as an example.

First measure and calculate your model’s wing area. This is just the wingspan multiplied by the average chord (wing width). If your wing is rectangular (no taper), area is just span times chord. If your wings are tapered add the wing chord at the root (at the fuselage) to the chord at the tip and divide by 2 – this is the average chord. Multiply by the span for area. If you have a curving wing make an estimate, an exact number is not critical.

My Vampire has a span of 40 inches. The wing is highly tapered measuring 11 inches at the fuse and 3.75 inches at the tips (including ailerons). The average chord is then $(11+3.75)/2 = 7.375$. So, the wing area is $40 \times 7.375 = 295$ square inches.

Now, weigh your plane (including batteries and/or fuel). The Vampire weighs 2.75 pounds ready to fly. This includes an allowance for 6 oz of fuel. (As with most liquids, a liquid ounce of fuel weighs about an ounce).

Since wing loading is commonly expressed in ounces per square feet (oz/sq. ft.) some conversions and calculations are in order. If your weight is in pounds, multiply by 16 to convert to ounces. My 2.75 lb. Vampire equals $2.75 \times 16 = 44$ oz.

Similarly, if your wing area was calculated in square inches, convert it to square feet by dividing by 144.

The 295 sq. in. Vampire wing equals $295/144 = 2.05$ sq. ft.

Finally, divide the ounces by the square feet to get wing loading. For the Vampire $44/2.05 = 21.5$ oz/sq. ft.

What Does it All Mean?

Here are some calculated wing loading numbers for some of my models:

- Tiny (Indoor Electric) 4.0 oz./sq. ft.
- Spadtana (.50 sized sport) 19.8
- Vampire (.25 combat) 21.5
- Tigercat (Giant scale twin) 29.7

In general, larger and faster planes can support higher wing loading numbers. The loading for the Vampire is quite high for a relatively small plane. Nonetheless, it is a great flyer, but requires a lot of power (500 Watts) and is very fast (65 MPH). In contrast, the Tiny is perfect for the dome. With its light wing loading it needs less than 20 Watts and can fly at little more than walking speed. The Tigercat is actually lightly loaded for a giant scale plane. In this class wing loadings up to 40 oz./sq. ft. are not uncommon.

Here are some rule-of-thumb guidelines (from experience and Andy Lennon’s book *R/C Model Design*):

- Indoor less than 5 oz/sq. ft.
- Park Flyers 4 to 10
- Gliders 8 to 15
- Sport (.25 -.60) 15 to 20
- Pattern Planes 23 to 26
- Giant Scale 25 to 40

Analyze Your Planes

Of course there are lots of other factors that affect model flight: power loading, aspect ratio, Reynolds number, drag, and airfoil to name a few. However, it is surprising just how much wing loading can tell you. For example, if your latest dome flyer is coming in at a hefty 10 oz/sq. ft. maybe it’s better off outdoors.

Calculate the wing loading of your own planes. Or better yet, bring your plane to the April (Static Contest) meeting. I’ll bring the measuring tape and scale. We can compare wing loadings of a larger number of planes and see how well we can predict flight performance. At the very least, you will have an answer when someone asks, “What’s its wing loading?”

Swap 'Till You Drop 2005 Results

by Bob Elsner - Treasurer

Well, Swap 'Till You Drop 2005 is history and it was the **BEST swap we've had in the last 15 years!!!**

As Barnstormers, we can be proud of the turnout we had for helpers, not only on Friday evening to setup tables, but all during the swap on Saturday and cleanup afterwards. We had a really great turnout of Barnstormers to help wherever they were needed.

We sold 144 long johns and coffee rolls, gallons of coffee, many cases of pop and lots of deli sandwiches. Raffle ticket sales, table sales and attendance were all up over last year. While our expenses to put this swap on were slightly higher than last year, income was significantly higher and our net profit exceeded our budget projection.

Thanks to all of you who helped in one way or another and a special **"THANK YOU"** to John and Debbie Howe, especially Debbie, who

once again did a spectacular job! Their countless hours of work in the months prior to the show helped make it the success that it was.

This year, in addition to our three cash prizes for our raffle, we had a P40, P47 and P51 kit all donated by Charlie Bauer. Thank you Charlie!! The winners were all elated that they'd won. A couple of them didn't believe they'd won when I called them as they'd never won anything in their entire life!

Joe Eskert in Bloomingdale won the 3rd cash prize of \$50.00, Jim Stryjewski in Hanover Park won the 2nd cash prize of \$75.00 and Joel Whitaker in LaSalle won the 1st prize of \$100.00. Bob Babyar in West Chicago won the P40, Bob Baldwin in Romeoville won the P47 and Scott in Villa Park, didn't get his last name, won the P51.

Thanks again to all!!

Fuel Order Update

By Bob Elsner - Treasurer

If you want to order fuel, please let me know either by email at srcbarn@aol.com or come to the April meeting and add your name to the list. So far I only have orders for 14 gallons which is

3 ½ cases. We need at least 5 cases to get to the first price break. Last year we hit the 12 case price.

Whistle Stop

by Mert Mischnick

FREE! April 14 will be the last Dome Fun Fly for this season, and it will be a **FREE** night, so make your plans to attend now. Also, Thursday April 21, and April 28 will be **FREE to Barnstormers**. Friday, April 29 and Sat. April 30 will be **Half Price** to all. Come on out and fly inside.

How do you play 'Musical Chairs' when you have no music and no chairs? With electric R/C airplanes and a whistle in a golf dome! When the whistle blows, everybody flies. When the whistle blows again, everybody lands. Last one down is out. Do it again with the remainder of the planes until only one plane remains as the winner of the round. No touching the plane between flights. You must

take off from wherever you stopped. If you cannot take off from your position on the ground, you are out.

It might as well have been a 'one design' competition. All 6 of the competitors were flying a Slo-Stick design. Don't blink; you will be looking at someone else's plane!

Jeff Peca won round one and two, mostly because he is really good at this stuff. Also, his 'Blue Stick' design flies very slow and very low, and very well in his capable hands. This gives him a distinct advantage over a klutz like me, and the other fliers who have talents a lot closer to average. **Mike Cannata** won round 3

with his retractable gear Slo-Stick. I stand corrected, his gear did not retract, it fell off!

The next two rounds had a minimum fly height, and a spot stop for landing. At the whistle, you had to not only land, but also come to a stop on one of two 'Greens' in the Dome. That usually meant you had to taxi to the 'Green'. Often it meant turning around if you overshot, or whatever it took in ground handling to get to stop on the 'Green'.



Mert Mischnick got lucky and won round 4, then watched as **Jeff Peca** took round 5. There is just no way to beat a talent like Jeff. On the other hand, why not try your luck at beating Jeff next month? If Mike and I can beat him, you can too! Congratulations to **Jeff Peca** for a job well done. Winning 3 out of 5 rounds proves his talent is real.

Steve Wolski, our Fun Fly chairman was at the dome without a plane, and was the official 'Whistle Blower' and judge for all 5 rounds of 'Whistle Stop'. Thanks for the help, Steve.

When it came to prizes, we used the Barnstormers raffle. That's where we completely ignore the talent and effort required to win the competition, and use a random drawing to allow the participants to pick from the prize table. Completely random drawing drew #5 on the list for the first pick. Who was #5? Who else? **Jeff Peca**. He chose a GLO BEE tachometer which has a 3 reading memory, 4 position, 1/2 inch digital read out, and preset for 2, 3, or 4 bladed prop tracking. A mini servo went to the next draw, and lots of other neat stuff.

'Lectric RC Corner

by Skip Carrino AMA#797338

Well, I am still alive and no burns! Like every plan, the trip to the hobby shop with PK. never took place, but a trip to the golf dome paid off royally. The youngster saw a good variety of planes and how they flew. It included the mighty slow stick, which turned out to be the plane he selected as his first rc plane. Actually, it is a modified slow stick, the same plane the club members built at a club meeting last year. I have to thank Jeff Peca for the loan of the patterns which made the whole build simple enough for PK and myself to cut out 3 planes for the whooping price of 3 bucks total. Remember what I said last month about joining a club and how reasonable the price of the membership really is!

Some of the more exotic airplanes, such as the variety of 3D type planes he observed, although they looked more like an airplane should (PKs words) he was quick to realize they were not the type of model that would be suited for a newbie. If the trip to the hobby had taken place, I might have had a real chore

trying to convince him of that fact. Yet again, another good reason to join a club! Where else but a club event like indoor flying at the dome, in the dead of winter can you go for practical advise and like they say " a picture is worth a thousand words", or something like that. It is a shame that no standards have been put in place to help anyone interested in learning and flying rc electric planes to select the right model . I will try to give you, in my opinion, what I think will give you some basic facts and some models of planes for the newbie to help select a proper model and why.

Model aircraft with wing loading of less than 10 oz./per square foot, will give you the best chance of success for a newbie. I know, what the heck is wing loading! In very simple terms, it relates to the skill level of the pilot and is also the point in which the wing will lose lift and fall out of the sky. The higher the wing loading the more skill the pilot should have. To bad companies who produce the aircraft do not always give you the wing loading of the craft

they are selling. There is a very simple formula for determining the wing loading, (I always hated math.!) and an example of a popular aircraft for beginners, the Peca stick, the plane PK and I will build. Here we go, add the root cord of the wing (the part of the wing closest to the fuse) which is 10 ¾ “ to the tip cord ,(the part of the wing furthest from the fuse) which is 10 ¾ “, divide the answer by 2 and multiply the answer by the length of the entire wing length which is 46” , so $10 \frac{3}{4} + 10 \frac{3}{4} = 21 \frac{1}{2}$ divided by 2 = $10 \frac{3}{4}$. $10 \frac{3}{4} \times 46 = 494.5$ sq. inches. In order to convert sq. inches to sq. feet divide 494.5 by 144 which becomes 3.43 oz. per sq. foot. Boy, am I glad that is over! The

3.43 oz. per sq. foot is well below the the 10 oz. per sq. foot number for newbie planes and should be a plane that flys slow with a lot of lift. However,(here it comes) because the plane has such a light wing loading, it will not tolerate high winds and is best flown in winds less than 5 miles per hour. The Peca stick or slow stick is the all time favorite for beginners and is the plane most pilots will use when it is fun fly time indoors. Just check out the dome on fun fly nite.

Next time, motor size, battery type and props.

Proud to be a Barnstormer !

Notes of the Barnstormers Meeting

March 14, 2005

Attendance

Thirty-eight members were in attendance, which included three new members: Carl Barshop, Scott Duffin and Brian Dullum.

Officer Reports

President: Jim Scahill called the meeting to order at 7:10 PM. Jim started an award program. The first award is entitled “Award from the Heart.” Jim presented this award to Debbie Howe for all her work with the Club regarding Toys for Tots, Bloomingdale Wish Tree, running the Swap Shop and all her efforts regarding the Club. Thank You Debbie. Jim also presented an award to Bradley Dean for the Most Improved flyer. Congratulations!

Vice President: Orvil Fluharty reminded us that he will be in Florida during April and May. The Top Gun event will be held in Lakeland, Florida April 27th to May 1st.

Secretary: Ruth Egging handed out the membership cards to the members present and gave the balance to Scott Taylor to attach to the next newsletter. For those members that have not renewed the March issue of the Newsletter is the cut-off period.

Treasurer: Bob Elsner stated that there is \$1,988 in the bank. He needs to pay the fairgrounds \$1,300 which is the balance of the buildings for the Swap Shop. Bob believes that the AMA now has the correct mailing addresses for the Club as he received the

Insurance Certificate. Regarding the fuel order, somehow the prices in the March Transmitter are not the correct prices. Generally the price per gallon is an additional \$.25 more.

Committees

Swap Shop: John and Debbie Howe reminded everyone that the Swap Shop is March 26th and the more help received will make this a greater success. They also reminded everyone to pay for the raffle tickets. There will be a club table and anyone that wants to bring in a small airplane can use the Club table, just keep in mind that other club members will be using the club table as well.

Safety: The fire extinguisher that is in the flight stand needs to be replaced. Jim Scahill will take care of this. He is also making sure the buddy boxes are fully charged for the upcoming flying season. Besides the First Aide Kit, it was felt that emergency services phone numbers be posted on the flight stand. Orville stated that he could put them on the flight stand.

Fun Fly: Steve Wolski was looking for suggestions from Club members on what they would like to do for fun flys. Any suggestions can be emailed to him.

The next Dome Fun Fly will be delayed a week due to a death in Mert’s family. Mert came up with a way to get several pilots flying at the same time. He stated that is is like Musical Chairs, all pilots will be in the air, when the music stops the last one to land is out. Next

round same thing. He was asking the Club to allocate \$75 for the Fun Fly, however it had been agreed upon earlier that the Club would Budget for two \$75 Dome Fun Flies and this would be the second Fun Fly. This would mean there is no more money allocated to Dome Fun Flies for the remainder of the year.

Flight Instruction: Jim Scahill stated that flight instruction will start in May.

Static Contest: The Static Contest will be on April 11th, at the next meeting. There was some discussion on the different categories and prizes. It was determined that the contest will have basically the same rules as last year with certificates given to the winners followed up with a plaque or trophy.

Old/New Business:

Spad Fest: Scott Hurley announced that the Spad Fest will be held on July 15, 16, and 17. It was noted that one of the Fun Fly's was also scheduled for this date. There will be a conflict with a Fun Fly, but the Fun Fly will not be rescheduled.

Miscellaneous:

Airplanes

Skip brought in a 40" plane that used to be made by Carl Goldberg, which was bought out

by Lanier. Skip had some issues with this airplane as the landing gear was like spaghetti and the motor did not work. He contacted Lanier, but did not receive much satisfaction as they stated they were aware of the problems.

On the up side Ron Howe stated that he bought an ARF from Great Planes and the half the wing decided to land first followed by the other half. Ron had sent in the plane on Monday, GP emailed by Wednesday and sent him a replacement within a week.

Ron brought in a Great Planes Kaos, it had a Super Tiger 60 and had modified the canopy to be further back on the fuselage.

Jerry had a Dakota made by BMJR with a .049 engine. He did not know if it would fly with all the extra weight from the batteries and servos as the plane was not designed to be RC.

Ron Hilger has 44 flyable airplanes and has decided to sell five of them.

The Toledo Show will be the first weekend in April. For newcomers to the Hobby this is one of the best shows to attend.

Tom McAvoy won the door prize, which is a wrench set, and he also won the March Turkey.

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@megsinet.net

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

OFFICERS/BOARD OF DIRECTORS

| | | | |
|--------------------|----------------|--------------|--|
| President | Jim Scahill | 815-439-8522 | J.scahill@comcast.net |
| Vice President | Orvil Fluharty | 708-624-3856 | Of Luharty@msn.com |
| Secretary | Ruth Egging | 630-773-0164 | IBDiver@aol.com |
| Treasurer | Bob Elsner | 630-653-5345 | Srcbarn@aol.com |
| Flight Instruction | Jim Scahill | 815-439-8522 | J.scahill@comcast.net |
| Safety Officer | Mike Cannata | 630-351-7194 | MCCannata@aol.com |
| Fun Fly/Board | Steve Wolski | 630-953-0768 | Xtremeflier@aol.com |
| Newsletter/Board | Scott Taylor | 630-932-9624 | Taylorstr@megsinet.net |
| Board | Charlie Baxa | 630-530-2935 | c.baxa@att.net |
| Board | Ron Hilger | 630-833-8111 | Ronhilger@aol.com |
| Board | Mert Mischnick | 847-437-0410 | Mert914@comcast.net |
| Board | Scott Hurley | 847-695-1509 | Flying_ace99@hotmail.com |
| Board | John Howe | 630-541-3054 | Iflyrc2@comcast.net |

NEWSLETTER STAFF

| | | |
|------------------|--------------|----------------|
| Web Master | Dave West | (630) 837-6553 |
| Editor/Publisher | Scott Taylor | (630) 932-9624 |

Please Support The Following Hobby Shops

| | | | |
|---------------------------------------|---------------------------|-----------------|----------------|
| Al's Hobby Shop, Inc. | 121 Addison | Elmhurst, IL | (630) 832-4908 |
| Venture Hobbies | 23 Huntington | Wheeling, IL | (847) 537-8669 |
| PMC Model-Tronics | 653 Florence Rd. | Freeport, IL | (815) 233-5646 |
| Hobbytown USA | 3627 E. Main | St. Charles, IL | (630) 587-1256 |
| His and Hers Hobbies | 2051 22 nd Ave | Kenosha, WI | (262) 551-7187 |

Visit our web site at <http://www.suburbanrcbarnstormers.com>