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# The Transmitter

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

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June 2009

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<http://www.suburbanrcbarnstormers.com>

## Coming in June and July

June 5<sup>th</sup>, 7th Annual Spad Fest

June 8<sup>th</sup>, Member Meeting, Bloomingdale Public Library, 7:00pm

June 14<sup>th</sup>, Fun Fly #2, Pratt's Wayne Woods, 9:00am trim flights, 10:00am First Pilot

July 13<sup>th</sup>, Member Meeting, Pratt's Wayne Woods, 6:30pm (due to Library being unavailable)

July 19<sup>th</sup>, Fun Fly #3, Pratt's Wayne Woods, 9:00am trim flights, 10:00am First Pilot

## Altimetry - Fun-Fly #2

*By David West*

How good are you at estimating the altitude of your plane? The June 14<sup>th</sup> Fun Fly will help you find out. Your plane will be fitted with an altimeter to indicate the peak altitude of your flight. Time permitting, we will fly two rounds:

### 1. "Glass Overcast"

Fly your plane as close as possible to an imaginary 400-foot ceiling. Upon landing, we'll check the altimeter maximum. The winner is the pilot closest to 400 feet without going over the limit.

### 2. "Name Your Altitude"

Make a flight to whatever altitude you desire. Upon landing, announce your estimate of your peak altitude. We will compare your estimate to the altimeter reading and calculate the error as a percentage. The pilot with the smallest error (over or under) wins.

Winged Shadow Systems will loan us a few "How High SP" altimeters for the event. We will move the units from plane to plane.

The unit is small (about a square inch) and light (1/4 ounce) and has its own battery (so there is nothing to plug in). For accurate readings, it is best to place the altimeter inside the fuselage, so it is nice to use a plane with a hatch or an easy to remove wing. However, you can also attach the unit to the outside of your plane if needed. If you own your own altimeter, feel free to use it.



Everyone can participate in this event – regardless of your plane or your piloting skills. To keep things moving along, we will limit flights to about 2 minutes each.

Trim flights (including test flights with the altimeter) start at 9:00 AM with the competition starting at 10:00. [Remember – it is impolite to be late!] As always, the fun-fly will include lunch and a prize drawing for all club members.

# Notes of the Suburban RC Barnstormers Membership Meeting

May 11, 2009

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## ATTENDANCE

There were 47 members present. New member Tom Volpe talked about how he went to a Florida Fun Fly and got hooked. Soon he was RC Sailing. Recently, he stopped at Pratt's Wayne and met Mert and others and decided he wanted to fly with us! Welcome, Tom!

## OFFICER REPORTS

**President: Mert Mischnick** presided over the meeting. Mert read a letter from Cub Scout Pack 152. They were interesting in flying activities that scouts could participate in to earn aviation badges. Any ideas?

**Vice President: Mike Maciejewski** said the rollover raffle prize was a Park Zone Corsair Plug and Play electric. The door prize was a classic Guillow's P-38 Lightning kit.

**Treasurer: Bob Elsner** reported that all of the permits had been submitted and paid for the year. The first event, Fun Fly #1, would be on May 17<sup>th</sup>.

**Secretary: Scott Taylor** reminded members if their name isn't on the attendance sheet, they might not have renewed. If you think your name is missing in error, please let us know.

## COMMITTEES

**Fun Fly – Ron Hilger** wanted to thank **Steve Dietrich** for driving the aircraft carrier around at the last dome fun fly. Try to land on the moving target was great fun!

**Scott Hurley** said that the first fun fly on May 17<sup>th</sup> was going to start simply by being a 60 timed flight event. Trim flights start around 9 am and first pilots off about 10 am.

**Dave West** said the event on May 31<sup>st</sup> was going to be an open fly day for members only. The field would be reserved and lunch will be served. Come out and get some relaxing flights in with other members!

## OTHER BUSINESS

**New Board Member – Mert** said that since John Howe shifted from an open Board position to a committee Board position, the open Board position needed to be filled.

The floor was opened up for nominations. Both **Stan Warden** and **Scott Barrie** were nominated for Board positions. After leaving the room, a show of hands favored **Stan** with the new position. Thanks to both Scott and Stan for their efforts in making the Suburban RC Barnstormers a better club!

**Flight Stand Update - Mert** said that the Flight Stand was in need of an updated club schedule. He was looking for a volunteer to print and install a copy of the 2009 schedule. Because the sign needs to be fade resistant, it was suggested it be a Xerox copy or fade resistant ink used.

**Static Awards – Scott Taylor** passed out the awards for winners of this year's static contest. Framed photos showing the winner, plane, date, and type of award were given to the winners. A total of 12 awards were presented, 6 for each of the categories, ARF and Build. Many thanks to all of the participants.

**December Dome eNiter – Stan Warden** said he has received the AMA sanction for the December dome event.

**Forth of July Idea – Mert** said that the slope hill at Green Valley was a great place to fly gliders, but it was also a great place to see the surrounding countryside. There was an idea floated to get permission from the Forest Preserve (FP) to stay atop the hill to watch fireworks of the surrounding town. The good news is the FP is willing to do this, the bad news is others have had the same idea! Because they only have 85 parking spaces, 85 permits will be distributed at 8am on June 15<sup>th</sup>. The permits are per car, so if we can pack them in many could participate with only a few permits.

**Swap Thanks – Debbie Howe** said she had some donated items collected at the Swap that she would be raffling off to volunteers at the next meeting.

## ENTERTAINMENT

**Dan Naumowicz** gave a presentation on converting a glow 40-46 size model to electric power. He discussed sizing motors, batteries, and controllers correctly for the size and weight of your model. The outline of his presentation will be included in the newsletter.

## PLANES

**Jerry Jeske** brought in a plans built Taylorcraft with a 54 inch wingspan. The plane had a new .15 Magnum engine bolted to the firewall and was set up for 3 channels but did not have a radio. Jerry brought the plane in to be auctioned off with the proceeds going to the club. **Keith Egging** served as the official auctioneer and **Dave West** had the winning bid at \$55. Thanks to both Jerry and Dave for their donations!

**Ron Hilger** showed of an Olsen .60 that he purchased on E-Bay. It is an old ignition engine that he tested and said started on the first flip. This will be going into a similar vintage model.

**Scott Barrie** showed the members a bird kite that he purchased at Costco for \$17.50 and converted to electric power. It flies nice and slow and the

wings flap to give it a very realistic look. It was powered by a 370 size motor. Great idea!

**Marty Schrader** told a tale of his double size electric Delta Dart. He had a very hard time controlling the original model as built. He had an idea to add square tube pods at the end of each wing and voila, flying characteristics were greatly improved. He thought the improvement was from both the increased wing area and fact the center of gravity was shifted further below the center of lift. Very clever.

## RAFFLES

**Mike Cannata** was the winner of the Thanksgiving turkey. **David Klassman** took home the door prize, and **Scott Taylor** won the rollover raffle (yeah! - Ed).

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## May 17<sup>th</sup> Fun Fly Report

*By Scott Hurley*

Thirty-four club members showed for our first outdoor fun fly of 2009. The event was a simple timed flight to a spot landing. The pilot had to guess when 60 seconds would be up and land in a 12' box.

I now understand why so many people are always showing up late to events. It seems that most of club members can't judge their time. We had flights from 48 seconds to 2 minutes. All in all I think everyone had a great time. Scott Stampfli took home the honors followed closely by Jeff Peca and Scott Barrie who tied for second.

Three hundred dollars worth of prizes and four pizzas quickly disappeared to round out this season opener. I want to thank Mert and Ed for doing the timing, Jeff for making the time sheets and all those who attended making this a truly a "fun Fun Fly.

The June 14<sup>th</sup> event will be run by Dave West. Dave told me it will have something to do with your attitude...or maybe he said altitude. Watch for more details in this news letter and make sure to mark your calendars.



Pictures from May 17<sup>th</sup> Fun Fly

*Photos courtesy of Ed Wonnocot*

# Converting a 40/46 Glow Powered Model To Electric Power

*By Dan Naumowicz*

The actual weight of the airplane is the basic information needed to convert it to electric power. A typical 40/46-size model weighs around 4-7 pounds maximum.

We start off with the knowledge that for basic flight you need about 60 watts of power per pound of weight. This is a minimum usually used in aircraft with high lift airfoils. Most model manufacturers will recommend around 100 watts per pound, which is easier to remember and figure. For example, for a 5-pound model, the motor manufacturer recommends 500 watts of power. For most 40 to 46 size application you can use a 500-600 watt motor.

Many electric motors can be used with different voltage and propeller combination to achieve the needed power. A Tower Pro 3520-7 motor can be used with 4s and 5s LiPo batteries to create anywhere from 500 watts at half throttle to as much as 900w at full throttle.

Similar performance setups are also recommended by E-flite. An E-flite Power 46 motor can be set up for up to 925 watts.

The propeller you use and battery voltage will dictate the actual power output of the motor. The recommended propeller for an E-flite Power 46 is a 13x8 to create 725 watts on a 4s LiPo battery. The recommended propeller for Tower Pro 3520-7 is 11x6 to generate 700 watts on a 5s LiPo battery.

Both these setups will give similar results. All you need to do is choose the one based on your charger capability, propeller clearance and flight time expectations. Changing the propeller size and battery voltage will affect the power output. Remember that if you go with higher voltage you have to use a smaller propeller of the same pitch or the same size propeller with a smaller pitch.

A basic ESC (electronic speed controller) for a 40 to 46 size setup would be a 60 amp controller. These controllers are capable of up to 80 amps for short bursts.

The controller used has no affect on the actual draw from the battery. It's simply there to convert the DC voltage of the battery into an AC voltage used by the 3 phase brushless motor. Again, the motor and battery combination dictate the power draw.

The battery used should always be selected based on the actual power draw of the motor. The maximum continuous battery power rating should match the motors maximum amp draw rating (although you could get a battery up to 20% less then the motor maximum if full power use will be intermittent).

Both the E-flite Power 46 motor and Tower Pro 3520-7 are rated at about 50 amps maximum by the manufacturer. The minimum battery would be a battery capable of at least 40 amps continuous discharge (50 amps X 80% = 40 amps) or better yet, a battery capable of delivering a minimum of 50 amps continuously. The battery discharge rate is usually identified as a number times the capacity, express as "40C" for example, where C is the capacity. So, if you bought a 2000 milliamp battery with a 40C discharge capability, the battery could deliver 80 amps (2000 milliamps = 2 amps = C, 40 X 2 amps = 80 amps).

Choosing the capacity of the battery will depend on the room you have in your plane, where you need to be with your CG (in other words, how heavy the battery is) and how long you want to fly.

Now you are ready to fly!

# 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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Visit the Club Forum at our web site: <http://www.rcbarnstormers.com>

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