
The Transmitter

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

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<http://www.suburbanrcbarnstormers.com>

Coming in and August and September

August 12th, Member Meeting, Bloomingdale Public Library, 7:00pm

August 18th, Fun Fly # 4, Pratt's Wayne Woods, 9:00am Trim Flights, 10:00am First Pilot Off

September 9th, Meeting has been changed to the Itasca Library, 500 W Irving Park Rd., Itasca

IMPORTANT NOTICE! – Meeting Location Change!

The August meeting will be at the Bloomingdale Library, but the September 9th meeting has been changed to the Itasca Library. The Itasca Library is located at 500 W Irving Park Rd., Itasca, IL 60143

From the President:

Hi, how are you doing? We are more than half way thru the summer and there are still things to do. Have you gone to any of the fun fly put on by other clubs? It is a great way to learn how to deal with different size fields. The one field I went to was a 125ft across the runway with weed on the other side. Yes I did land in the weeds twice, but I still had a good time. I was there with other members of the club for a fun day.

I have a Balsa USA Taube, it is a WWI observation plane with an 83" wing span. Is it flashy, no. but what it does is it gets me into the giant scale events and the war bird events too. It is easy to fly and that is what I need. You don't see too many of them at the events. So if you want something different it is a nice plane to have. Now you are thinking, " why are you telling me about this plane?" Well, there are many good airplanes out there that are good to fly if you look. John Howe let me fly his large Hobby Lobby Telemaster around the field. It was fun and easy to fly. It is not a barn burner for speed but it is fun to fly. If you make a mistake you will have time to recover from the maneuver. The Telemaster comes in a few sizes, so there is one just right for you.

On Sunday, Stan Warden handed me the radio while flying his Horizon Hobby T-28. It's a foam airplane and I was afraid of breaking it. He said don't worry, just have some fun. There is plenty of power left in the battery. It was fun and easy to fly. It took me two tries to land it and I didn't break it. This is a plane I could buy one day. There are plenty of airplanes out there that you can have fun without going fast.

See you at the flying field, Mike M.

Fun Fly #4 - BOMB DROP TIME AGAIN!

By Steve Merrill

Be sure to come out to the field on August 18th for Fun Fly #4. Since we had so much fun last year, we are bringing back the bomb drop contest!

All participating pilots will get a foam cup and popsicle stick with some rubber bands to attach to your favorite airplane. We will fill some plastic Easter eggs with flour, and draw a bulls-eye's on the field. Pilots will get points for hitting the field, but more points will be awarded to the pilot who drops the egg within the 75' circle. We will also use this circle as a "Spot Landing Zone". Bonus points will be awarded for any part of your plane landing inside the circle at touchdown. Mechanical bomb drops **will be** allowed. Please come out for the 9am trim flights, the contest will start promptly at 10am. Food will be served, along with some secret prizes for the top 3 pilots.

Notes of the Suburban RC Barnstormers Membership Meeting

July 8, 2013

ATTENDANCE

There were 33 members present.

OFFICER REPORTS

President: Mike Maciejewski presided over the meeting.

Mike gave a short update on the status of the new field.

- There will be a safety fence separating the flight area from the spectators.
- There are no plans for a flight station/gazebo.

Mike suggested we keep the rhetoric to a minimum until we find out more definitive information.

Vice President: Steve Thill

Steve introduced Jarvis from MAX Products as the guest speaker for the evening.

Treasurer: Bob Elsner

- Bob announced that due to a scheduling conflict with a library event, the September meeting will be held at the Itasca library.
- The first board meeting will be held at the library on September 23rd.

COMMITTEE REPORTS

Fun-Fly: Steve Merrill

- The July 14th fun fly will be a balloon bust (Fun-Fly #3). Come and enjoy.
- The next fun fly will be on August 18th (Fun Fly #4).

Flight Instruction: John Howe

- Instructions for anyone interested are available. Call John or Deb to schedule a day/time out at the field.

Safety: Tom Lyons

- Nothing to report this month. Keep up the good (safe) work!

EDUCATION/ENTERTAINMENT FOR THE EVENING

Jarvis from MAX Products in Lake Zurich was the guest speaker. He brought some product samples and catalogs for the membership.

Jarvis talked about:

- Gas to electric conversion
- Watts/pound; trainer = 50-75, sport = 100, aerobatic/3D = 150-200
- Use total weight to determine watts needed.
- Propeller size will affect current drain of electrical system at given voltage.
- MAX Products got into electric flight around circa 2000.
- Be safe – electric can be more dangerous than fuel powered planes.

PRIZES, PRIZES, PRIZES . . .

Door prizes won by:

John Kubitz, Debby Howe, Tom Jacobs, Ruth Egging, Keith Egging and John Cacciatory.

Turkey won by:

Steve Merrill.



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 information originally contributed by Dan Naumowicz. I took the liberty of editing and augmenting the original article.

Glow Powered To Electric Power - Some Conversion Considerations

It all boils down to power-to-weight ratios. The “ready-to-fly” weight of the airplane is the fundamental information needed to successfully convert a fuel powered (gas or glow) model to electric power. For this article, we will address a typical .40/.46-size model (not a scale war bird, around 48” to 56” wingspan) that would weigh around 4-7 pounds maximum.

We start off with an accepted axiom that for basic trainer/sport type flight you need about 60 watts of power per pound of weight. This is a minimum power-to-weight ratio usually applied to aircraft with high lift airfoils (flat bottom and semi-symmetrical). For more ambitious or aggressive flying, most model manufacturers will recommend around 100 watts per pound. So for a 5-pound model, the manufacturer would recommend 500 watts of power. This leads us to the conclusion that for most .40 to .46 size applications you can use a 500-600 watt motor and expect reasonably good flight performance that is very comparable to the .40-.46 glow fueled engine counterpart.

Modern electric motors can be used with different battery voltage and propeller combinations to achieve the needed power. For example: A Tower Pro 3520-7 motor can be used with 4s or 5s LiPo battery to create anywhere from 500 watts at half throttle to as much as 900w at full throttle. Similarly, an E-flite Power 46 motor can be run at up to 925 watts. For pattern flying, the higher power ratings will be desired.

The propeller selection combined with the battery voltage used will dictate the actual power output of the motor. The recommended propeller for an E-flite Power 46 is a 13x8, which will create 725 watts when using a 4s LiPo battery. The recommended propeller for the Tower Pro 3520-7 is a 11x6, which will produce 700 watts on a 5s LiPo battery.

Because the effective thrust is a result of the combination of propeller RPM, pitch and diameter, both of these setups will yield similar results in terms of perceived performance. Changing the propeller size and battery voltage will affect the power output. All you need to do is choose the one based on your charger capability, propeller clearance and flight time expectations. If you go with higher voltage battery, you will need to use a smaller diameter propeller of the same pitch or the same size propeller with a shallower pitch. The empirical results should be measured with a watt/current meter to insure you are not over taxing either the motor or the electronic speed controller (ESC). A recommended ESC 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 (5 to 10 seconds, like for a vertical maneuver at full throttle).

The controller used has no effect on the actual draw from the battery. It is there to convert the DC voltage of the battery into the 3 phase pulses used by the brushless motor. Again, the motor, propeller and battery combination will dictate the power draw from your electrical system.

The battery used should always be selected based on the actual power handling capabilities of the motor. The maximum continuous battery power rating should match the motors maximum amp draw rating. If you are not intending to fly at full throttle all the time, you can probably get away with the 80% rule and use a battery with less maximum capacity.

Both the E-flite Power 46 motor and Tower Pro 3520-7 are rated at approximately 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 identified as a number times the capacity, or “C” and expressed as “40C” for example, where C is the capacity of the battery in milliamperes/hours. So, if you have a 2000 mAh battery with a 40C discharge capability, the battery could deliver 80 amps (2000 milliamps = 2 amps = C, 40 X 2 amps = 80 amps).

Battery capacity (in mAh) combined with the effective current draw will determine how long you can stay in the air. The maximum capacity of the battery that you can actually use will also depend on the room you have in your plane and where the battery is to be located to comply with CG requirements. Overall battery weight may also be a factor for some flying modes.

Let's give it a try and go fly!

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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.

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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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