



# The Transmitter

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

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## **Coming in February and March**

**February 17<sup>th</sup>, Member Meeting, Bloomingdale Public Library, 7:00pm \*\* DATE CHANGE \*\***

**February 24<sup>th</sup>, Board Meeting, Bloomingdale Public Library, 7:00pm**

**March 10<sup>th</sup>, Member Meeting, Itasca Public Library, 7:00pm \*\* LOCATION CHANGE \*\***

**March 24<sup>th</sup>, Board Meeting, Bloomingdale Public Library, 7:00pm**

## **President's Corner**

*By Mike Maciejewski*

Hello to all,

It is now October and the view out my basement window still has not changed. I have to make it a point to talk to the publisher about the schedule for getting articles in.

This is a great hobby. Have you ever wondered what could happen to you with this hobby? Your picture could end up in a magazine or you can be seen at a flying event. There are many careers in the hobby. We are lucky to be where we live. For there are several manufactures of kit and parts in this state.

During WWII the United States had a company building radio controlled drones for target practice. One of the planes was the OQ-2A. If you look up this airplane a picture of a woman will show up. It is a picture of Norma Jeane Mortenson. For the young people out there, Marilyn Monroe. She worked at a plant that built radio controlled airplanes and had her picture taken. You can see what a difference it made in her life. She was in the right place at the right time.

There are ways to make a carrier out of this hobby, ask Dave West. He is not Marilyn Monroe but he did take a hobby idea and make a business out of it. Glenn Larocco is making airplane hold downs. If you have an idea for a product, strike out on your own and give it your best shot. Or try to get a job at one of the manufactures in this area.

Don't forget this is an election year. You may want to be the club president or secretary. Both of these are good positions to meet our club members. There is always a board position to try for. It really does not take up much more of your time than going to the general meeting. So think about it.

Hey, I found my magic eight ball the other day, let's see if it works. Shake, shake, and shake. Will the March meeting be at the Itasca library? Come on I can't see the answer. Its, its, "Yes". So the March meeting will be there at the Itasca library.

*Mike*

# February Meeting Date Change And March Meeting Location Change

By Scott Taylor

The Bloomingdale Library has informed us that the dates we requested for our February and March meetings are unavailable due to conflicting requests with other groups.

Apparently, holding meetings in the same place for 30+ years doesn't have the same weight it used to!

The Library did offer us another date in February the 17<sup>th</sup>, and we have chosen to accept that. However, for March and June, the

Library could not offer an alternative date. So, in March, our meeting will be held at the Itasca Library. June is to be determined. Please mark your calendars so you don't forget!

The Board will be attempting to determine what has changed in bookings at the Library and determine if we have any alternatives, such as a different evening, or a different location. Stay tuned!

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## February Entertainment

Member Paul Kramer has volunteered to provide members with tips on covering your airplane with materials like Monokote. Many of our newer members began the hobby with Almost Ready to Fly airplanes and have not had the experience of covering. Paul will help

members that have no covering experience understand the fundamentals, and for those familiar with covering, perhaps provide some tips and techniques to make covering faster, easier, and smoother! Don't miss this educational presentation!

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## Rollover Prize for February

February marks the start of a new rollover and this month we will be offering a radio with 2 receivers! That's right! This is a complete 2.4ghz setup that can be placed in any of your larger aircraft. This is a 6-channel transmitter with 2 receivers! Don't miss out on this one!



# Powering a Servo from a Separate Battery

By David West

In most R/C systems the receiver and all the servos are powered from a single battery. But sometimes it is useful to run one or more servos off a separate battery. You might have a high power servo (like a retract servo) that draws substantial current and you don't want to risk a dip in the receiver voltage. Or you have one of the new high-voltage servos that can take two LiPo cells (7.4V-8.4V) but your max receiver voltage is only 6V. Maybe you have a servo a long distance from the receiver (say for the water rudder on a float plane). In any of these cases you can safely run the servo off its own battery if you keep two simple wiring rules in mind:

1. **ALWAYS connect all the grounds(-) together.**
2. **NEVER connect the power(+) from separate sources together.**

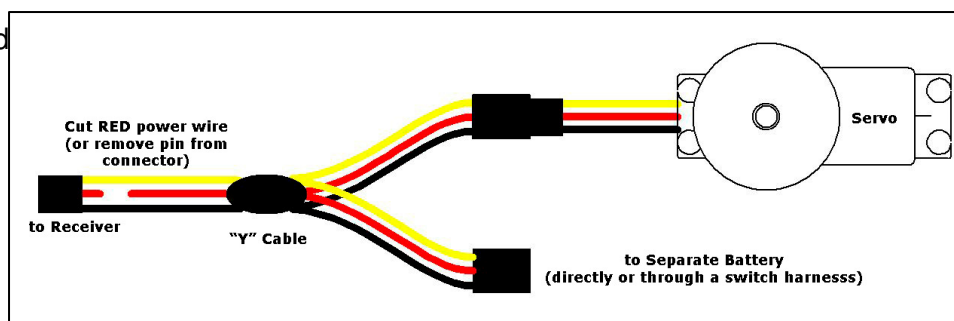
R/C servos have three wires: ground(-), power(+), and signal. On most servos the ground wire is brown or black; the power wire is red; and the signal wire is yellow, orange, or white. Inside the receiver all of the ground wires are connected together. Inside the receiver all of the power wires are connected

together too. The receiver does not turn on and off the power to control each servo. All the servos receive power all the time -- whenever the receiver

is on. The receiver uses timed pulses on the signal wires to control the position of the servos. So each channel output has a unique signal connection, but the power and ground connections are the same for all servos.

To power a servo from a separate battery, we need to break the power connection from the receiver to the servo and replace it with power from the separate battery (rule #2). We also need to connect the ground terminal of the separate battery to the servo ground and the receiver ground (rule #1). The diagram shows an easy way to make these connections using a common "Y" adapter.

If you want to power more than one servo from your separate battery you can use a block of connector pins instead of modified "Y" cables. Wire it so that all the servo power leads go to the separate battery (with no connection to the receiver power pins) and



all of the servo ground leads go to the battery ground (with at least one connection to receiver ground). Each servo signal lead

goes to the appropriate receiver channel. Just make sure you follow rules #1 and #2.

## Six Keys to Success for New Pilots

by Ed Anderson ( [aeajr@optonline.net](mailto:aeajr@optonline.net) )

Whether you have a coach or you are trying to learn to fly on your own, you will need to be mindful of these six areas if you are going to become a successful RC pilot. After many years of working with new fliers at our club, and coaching fliers on the forums, there are a few things I have seen as the key areas to stress for new pilots. Some get it right away and some have to work at it. They are in no particular order because they all have to be learned to be successful.

- Wind
- Orientation
- Speed
- Altitude
- Overcontrol
- Preflight check

**Wind:** The single biggest cause of crashes that I have observed has been the insistence upon flying in too much wind. If you are under an instructor's control or on a buddy box, then follow their advice, but if you are starting out and trying to learn on your own, regardless of the model, I recommend dead calm to 3 mph for the Slow Stick and Tiger Moth type airplanes and less than 5 mph for all others. That includes gusts. An experienced pilot can handle more. It is the pilot, not the model that determines how much wind can be handled.

Let me share a story:

The wind was roughly 8 mph steady with gusts to 12. That was strong enough that some of the experienced pilots flying 3- and 4-channel, small electric airplanes chose not to launch. A new flier insisted that he wanted to try his 2- and 3-channel park flyers. Crash, crash, crash—three models in pieces. He would not listen. Sometimes you just have to let them crash. There is no other way to get them to understand.

Many park flyers can be flown in higher winds by an experienced pilot. I have flown my Aerobird in 18 mph wind (clocked speed), but it is quite exciting trying to land it.

Always keep the airplane upwind from you. There is no reason for a new flier to have the model downwind ever!

**Orientation:** Knowing the orientation of your airplane is a real challenge, even for experienced pilots. You have to work at it, and some adults have a real problem with left and right regardless of which way the model is going. Licensed pilots have a lot of trouble with this one as they are accustomed to being in the airplane.

Here are two suggestions about how to work on orientation when you are not flying:

Use a flight simulator on your PC. Pick a slow-flying model and fly it a lot. Forget the jets and fast airplanes. Pick a slow one. Focus on left and right coming at you. Keep the airplane in front of you. Don't let it fly over your head.

An alternative is to try an RC car that has proportional steering. You don't have to worry about lift, stall, and wind. Get something with left and right steering and speed control. Set up an easy course that goes toward and away from you with lots of turns. Do it very slowly at first until you can make the turns easily. Then build speed over time. You'll get it! If it has sticks instead of a steering wheel, even better but not required. Oh, and little cars are fun too.

**Too Much Speed:** Speed is the enemy of the new pilot, but if you fly too slowly the wings can't generate enough lift, so there is a compromise here. The key message is that you don't have to fly at full throttle all the time. Most small electrics fly very nicely at 2/3 throttle and some do quite well at 1/2. That is a much better training speed than full power. Launch at full power and climb to a good height, say 100 feet as a minimum, so you have time to recover from a mistake. At 100 feet, go to half throttle and see how the airplane handles. If it holds altitude on a straight line, this is a good speed. Now work on slow and easy turns, work on left and right, flying toward you and maintaining altitude. Add a little throttle if the airplane can't hold altitude.

**Not enough altitude:** New fliers are often afraid of altitude. They feel safer close to the ground. Nothing could be more wrong. Altitude is your friend. As previously stated, I consider 100 feet—about double tree height where I live—as a good flying height and I usually fly much higher than this. Fifty feet, is minimum flying height for new fliers. Below that you better be lining up for landing.

**Overcontrol:** Most of the time the airplane does not need input from you. Once you get to height, a properly trimmed airplane flying in calm air will maintain its height and direction with no help from you. In fact, anything you do will interfere with the airplane.

When teaching new pilots, I often do a demo flight of their airplane. I get the model to 100 feet, and then bring the throttle back to a nice cruising speed. I get it going straight, with plenty of space in front of it, then take my hand off the sticks and hold the radio out to the left with my arms spread wide to emphasize that I am doing nothing. I let the airplane go wherever it wants to go, as long as it is holding altitude, staying

upwind, and has enough room. If you are flying a high-wing trainer and you can't do this, your airplane is out of trim.

Even in a mild breeze with some gusts, once you reach flying height, you should be able to take your hand off the stick. Yes, the airplane will move around and the breeze might push it into a turn, but it should continue to fly with no help from you.

Along this same line of thinking, don't hold your turns for more than a couple of seconds after the airplane starts to turn. Understand that the airplane turns by banking or tilting its wings. If you hold a turn too long, you will force the model to deepen this bank and it will eventually lose lift and go into a spiral dive and crash. Give your inputs slowly and gently and watch the airplane. Start your turn, then let off, then turn some more and let off. Start your turns long before you need to and you won't need to make sharp turns.

I just watch these guys hold the turn, hold the turn, hold the turn, crash. Of course they are flying in 10 mph wind, near the ground, coming toward themselves at full throttle.

**Preflight check:** Before every flight it is the pilot's responsibility to confirm that the model, the controls, and the conditions are correct and acceptable for flight.

#### **Airplane:**

- Batteries at proper power
- Surfaces properly aligned
- No damage or breakage on the airplane
- Everything secure

#### **Radio:**

- Frequency control has been met before you turn on the radio (this has gone away with 2.4 GHz systems)
- A full range check before the first flight of the day
- All trims and switches in the proper position for this model
- Battery condition is good
- Antenna fully extended
- For computer radios: correct model is displayed
- All surfaces move in the proper direction

#### **Conditions:**

- No one on the field or in any way at risk from your flight
- You are launching into the wind
- Wing strength is acceptable (see wind information)
- Sunglasses and/or hat to protect your eyes
- All other area conditions are acceptable

Then and only then can you consider yourself, your airplane, radio, and the conditions right for flight. Based on your model, your radio, and local conditions, you may need to add or change something here, but this is the bare minimum. It only takes a couple of minutes at the beginning of the flying day and only a few seconds to perform before each flight.

If this all seems like too much to remember, do what professional pilots do, take along a preflight checklist. Before every flight they go down the checklist, perform the tests, in sequence, and confirm that all is right. If you want your flying experience to be a positive one, you should do the same. After a short time, it all becomes automatic and a natural part of a fun and rewarding day.

I hope this is useful in learning to fly your airplane.

## 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.

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

### OFFICERS/BOARD OF DIRECTORS

President	Mike Maciejewski	630-513-1476	<a href="mailto:macieml@sbcglobal.net">macieml@sbcglobal.net</a>
Vice President	Steve Thill	630-208-9830	<a href="mailto:steve@thill.us">steve@thill.us</a>
Treasurer	Bob Elsner	630-653-5345	<a href="mailto:Srcbarn@aol.com">Srcbarn@aol.com</a>
Secretary	Scott Taylor	630-999-1372	<a href="mailto:taylorstr@core.com">taylorstr@core.com</a>
Flight Instruction	John Howe	630-541-3054	<a href="mailto:iflyrc4@att.net">iflyrc4@att.net</a>
Fun Fly Chairman-Outdoor	Steve Merrill	630-251-5945	<a href="mailto:steveme@sbcglobal.net">steveme@sbcglobal.net</a>
Safety Officer	Tom Lyons	630-668-9525	<a href="mailto:gtpslyons@comcast.net">gtpslyons@comcast.net</a>
Board	Dave West	630-837-6553	<a href="mailto:dwest@wingedshadow.com">dwest@wingedshadow.com</a>
Board	Ron Hilger	630-833-8111	<a href="mailto:Ronhilger@aol.com">Ronhilger@aol.com</a>
Board	Scott Stampfli	630-440-6475	<a href="mailto:stamper022@comcast.net">stamper022@comcast.net</a>
Board	Jeff Peca	630-305-0018	<a href="mailto:j_pec@yaho.com">j_pec@yaho.com</a>
Board	Bob Sarley	630-267-9534	<a href="mailto:bobs@commeq.com">bobs@commeq.com</a>

### NEWSLETTER STAFF

Web Masters                      [Marty Schrader](#)                      (630) 588-0241  
Editor/Publisher                [Bob Sarley](#)                                      (630) 267-9534

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