



# SMOKE SIGNALS



## HAPPY THANKSGIVING

### BIRTHDAYS

- Nov 2 **Lou Pinto**
- Nov 5 **George Althaus**
- Nov 7 **Herb Henery**
- Nov 7 **Ken Mandel**
- Nov 10 **Mark Guercio**
- Nov 25 **Bob Wohlgemuth**

### Calendar

#### **November 7, 2013**

Club Meeting

#### **November 16, 2013**

#### **Meroke Building Program Begins**

Saturdays 9a-12n

Wantagh Memorial Congregational Church

1845 Wantagh Avenue

Wantagh, NY 11793

#### **November 21, 2013**

#### **CLUB ELECTIONS**

\*\*\* For more information on upcoming events go to [www.liama.org](http://www.liama.org) and click on the events calendar.

Send all suggestions to:  
[newsletter@meroke.com](mailto:newsletter@meroke.com)





# FLIGHT NIGHT

On Saturday Night October 19, 2013. The Meroke RC Club held its second AMA sanctioned "FLIGHT NIGHT" under the guidance of club President Allen Berg and AMA event coordinator Russell Rhine.



The rain held off for most of the evening and gave us a good day for flying. While waiting for the darkness, everyone enjoyed barbecued hamburgers and hot dogs expertly prepared by chef Lou Pinto and chef Jeffrey Glasser. Joe Petrozza's lovely wife Nancy supplied baked beans "...my husbands favorite recipe..." she informed me. Again Tom Dutton supplied background music all day and night utilizing his trucks sound system and from the music stored on his IPOD.



Once darkness fell the creativity of our pilots became apparent as you can see in the pictures supplied by Meroke friend Dennis Andreas. THE PLANES LOOKED GREAT!!!

A special thanks goes out to Katie from Cedar Creek Park for lights along the roadway so all who attended could drive home safely.

All in all I had and I think those who attended had a very special time at the Meroke RC Clubs second "Flight Night".





This article was sent to me by Phil Friedensohn and comes from "MODEL AIRPLANE ELECTRIC FLIGHT" written by Greg Gimlick.

## MODEL Airplane NEWS electric flight

BY GREG GIMLICK September 24, 2013

### Don't cook your speed control!

#### Avoid these common power system mistakes

Electric fliers all have one thing in common regardless of the size or type of models they fly—the electronic speed control (ESC). It doesn't matter if you fly helicopters, airplanes, giant-scale, indoor, or micro models; at the heart of your power system is the speed control, and if it's unhappy, you will be too. The costs and types of speed controls vary in every aspect and that includes quality. The one constant, however, is your understanding of how to make them last, which in the end, saves money and your aircraft!



Poorly constructed motors can throw magnets and cause extreme current spikes that will destroy a speed control.

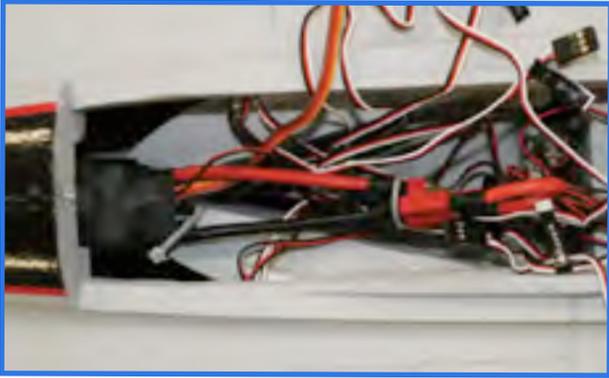
#### Quality Matters

This pretty much covers everything. Quality motors, connectors, speed controls, installation, solder joints, etc., but let's talk about components. When encountering speed control problems, we don't often think about whether they might have been caused by a cheap (poorly made) motor, but it can and does happen. I recently experienced a catastrophic failure in a foam jet that caused the speed control to melt and actually burn its way out of the bottom of the aircraft. Parts of it were left inside, but it unsoldered itself and melted completely. Upon post-mortem inspection,

I found that the magnets inside the motor were unevenly spaced and one had actually come loose and been chewed into pieces as the motor spun. The funny thing about electric motors is when something starts to go wrong, the motor will just ask for more current so it can work to overcome it. My on-board data logger showed normal current at takeoff and shortly after, it began to climb until it spiked off the scale. This is an indication that the motor was failing and the binding of the magnet chunks caused the excessive current spike that subsequently melted the speed control. Some speed controls have over-current protection and others don't. Look for one that does! This doesn't guarantee that it won't be damaged by a sudden failure like mine, but it just may help save the speed control. This was an expensive failure due to a poorly made motor.



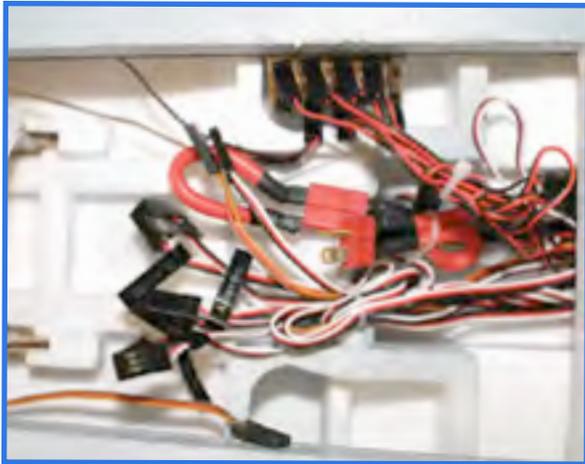
## BE COOL!



The speed control in this foam jet is jammed into the nose, so it's fully insulated and gets no cooling air. With the heavy load from the motor and too many servos, this will overheat and die quickly.

Install your speed control in a place where you can get maximum airflow across it. Remember that if you let cool air into the fuselage, you have to provide a place for the air to get out too. That exit hole should be about twice the size of the inlet hole. Heat is the enemy, so the cooler you keep your speed control, the happier it will be.

Eleven servos and an onboard LED lighting system overtax the speed control's BEC.



## SIZE MATTERS

The quickest way to get experience buying speed controls is to buy them too small for the application—meaning the motor voltage and current requirements along with the BEC (battery eliminator circuit) requirements if you're using one. If you're sizing your speed control based on the maximum requirements of the system and you're just barely meeting them, go to the next size up. If you can use one with a heat sink, do so. If your BEC requirements match or exceed the ratings of the speed control's BEC, then choose a different speed control or disable the BEC and use appropriate receiver power. Remember, if your BEC fails, you lose the airplane.

## Proper Soldering



A good soldered joint between the wire and 6mm bullet will handle a lot of current. Note that there is no excess solder running all over the outside of the bullet and the joint is shiny clean.

Many of the connectors in our electric power systems need to be soldered to wires. Always use properly sized wire gauges and quality connectors. Even the best soldering job can't make up for bad wire and poorly made connectors. A properly soldered joint is shiny! Your components can't be too clean, so clean the components before trying to solder them. Your fingers will get oils on everything, so be careful with what you touch. Tin both surfaces before joining them and then use just enough heat to let the solder flow between the two pieces. If the iron is oversized and too hot, it will end up being a dark, burned joint. If the solder flows and ends up nice, shiny, and bright—you've been successful.



## Wiring Basics

This is a big motor requiring a large speed control and unfortunately, this one isn't up to the task. Adding to the problems is the small gauge wire and adapter using uninsulated bullets. This system was caught and changed before there could be a problem.

A question I often hear is, "Is it better to lengthen the wires from the battery to the speed control or to lengthen the wires from the speed control to the motor?" Online forums are full of ideas, opinions, conjecture, and debate over this question. Let me give the simple answer first; it is better to lengthen the wires from the speed control to the motor and keep the battery wires as short as possible. That's it, plain and simple.

The debate arises over resistance and inductance. It's argued that using a larger gauge wire reduces the resistance, making Recipe for a Cooked longer battery wires acceptable. While it does reduce resistance, it doesn't take into account the increased inductance it causes. Proponents of lengthening the battery wires say that can be overcome by adding additional capacitors to the front of the speed control. This is a patch, not a fix. The speed control comes with capacitors installed as determined by the manufacturer for its intended application. Without specific knowledge on current and how good the flyback diodes are, along with the switching speed of the FETs, voltage rating of the FETs, and types of FETs, you're grasping at straws. If you do know those things, you'll still need to do a lot of math to figure out the appropriate caps to add.



### Recipe for a Cooked Speed Control

Take one undersized speed control

Add cold solder joints

Use extra long wires from the battery to the speed control

Pack it in a foam plane with no cooling air

Fly partial throttle settings extensively

Push the BEC to its max limits and beyond

Fly consecutive flights without a break

Here are quotes from AstroFlight's Bob Boucher on the topic of which wire to lengthen:

- Wire resistance may rob you of a bit of power, but it will not destroy your speed control or motor.
- Wire inductance will not damage your motor nor will you be able to detect any effect even with 100 feet of wire.
- Wire inductance will kill the mosfets in your controller and may even blow the caps. Ed. Note: Bob is comparing inductance in the motor to speed control wire with inductance in the speed control to battery wire.
- You must keep battery wires as short as practical. Short means one foot or less, brushed or brushless makes no difference.



Bob is better known as “AstroBob,” former owner of AstroFlight and holder of a patent on electric flight. When AstroBob talks, I listen. Always lengthen the wires from the motor to the speed control if needed. The best possible solution is to keep all wires as short as possible, but we know that’s not always easy when you’re doing that special scale project.

### NEATNESS COUNTS

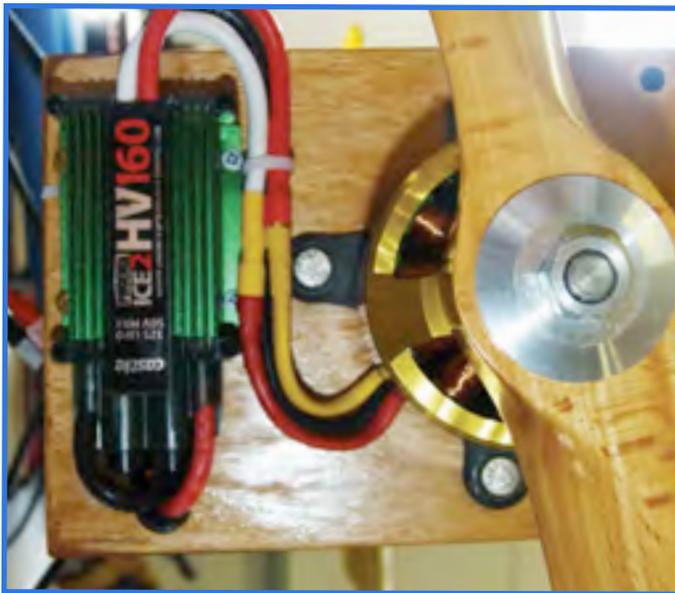
All of these unsecured wires flopping around right over the receiver antenna will cause trouble. There is also 18 inches of wire from the battery to the speed control, and that’s WAY too much!



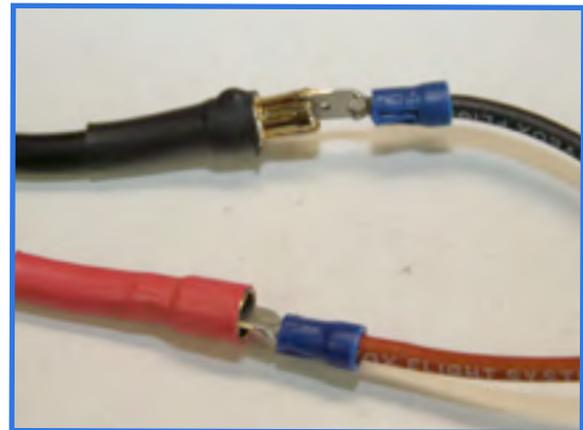
Remember what your mother told you, “neatness is important.” A jumble of wires just stuffed into a fuselage can cause many problems, especially if they are unsecured and flopping around on top of your receiver antenna. We have become overly secure with our robust 2.4 systems, but wires moving around in close proximity or touching the antennas can and will cause reception problems. If you have so much wire that you need to bundle them or tie them up, take the time to trim them to the proper size. This makes the plane safer, but also shortens wires and decreases resistance. This counts whether it’s for your motor/speed control or servos.

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### Connectors & Adapters



Note the securely attached speed control for this big power system and how the connections are well insulated and secured. Short wire runs and a protective grommet in the firewall, where the wires pass through, ensures no shorts over time.



Mismatched connectors are ALWAYS a bad idea.



An improper extension made by jamming a bullet into the EC5 connectors. Great



There is no standardization between connector types, so most of us end up using an adapter at one time or another. Be sure to wire and solder them carefully. Double check the adapter before using it. The goal in electrics is to reduce the possibility for increased resistance in our circuits. This causes heat and wasted power. It's best not to use an adapter, but if it's necessary, be sure it's properly sized and constructed. Wire nuts have their places in home wiring construction, but NEVER belong inside our aircraft.

Check your manufacturer's website to see the limits of their connectors. If you're pushing the limits of your 4mm bullet connector, then go to a 6mm size. The same applies when you're using EC3s or whatever brand. You want the most surface contact and least amount of resistance you can get for maximum efficiency from your system.



A homemade parallel battery connector in a plane; wire nuts belong at home, not in your plane..

#### Tips for a Happy Speed Control

- Buy a quality speed control
- Buy one large enough to handle the load
- Don't exceed the BEC limits
- Provide cooling; all that you can get
- Keep wires as short as possible
- Use appropriate connectors

NEVER mismatch connectors. I've seen Dean's Ultras jammed into female bullet types and that is a recipe for disaster. I've also seen spade plugs shoved into the grooves between the contacts on a male bullet connector. Likewise, alligator clips have no place in an electric airplane. They may seem like a universal fix, but it's actually a universal mistake. All of these things can be inefficient, but more importantly—they are all dangerous and create a fire hazard.

#### MOUNT IT SECURELY

It's not always easy to find the right place to securely mount the speed control, but it's absolutely necessary. Some larger controllers come with mounting brackets so they can be screwed to the front of a firewall, etc. Most smaller controllers depend on you to figure it out. Velcro is the usual method of choice and works well. Be sure it is secure though. If in doubt, use industrial strength versions or rigid lock tabs. Whatever you do, don't allow it to flop around inside your plane held only by the wires.

#### BOTTOM LINE

No one wants to cook their speed controllers! As with everything else involved in our hobby, it's the small details that matter the most. Avoid these common mistakes and you'll maximize your airplane's efficiency and greatly lengthen its lifespan. —BY GREG GIMLICK



## ABANDONED & LITTLE KNOWN AIRFIELDS-NEW YORK

*Recently Ernie Schack e-mailed me saying that this would be a good series of articles for the Newsletter. Ernie is right and so was I when I included this in the November 2010 Newsletter. Great minds think alike, so here it is again as originally published.*

I found this on line, I am not sure what I was looking for at the time but glad I stumbled upon it. I was amazed to find that there were so many fields in local neighborhoods of New York back in the early 1900's including Brooklyn, Queens, Staten Island and of course Long Island. I hope you find this as fascinating as I do.

### Hicksville Aviation Country Club,

40.74 North / 73.53 West (East of New York,

According to an [article by John Fleischman](#) in the 2/99 issue of Air & Space / Smithsonian Magazine, this airfield was founded by an elite group of fliers who formed what they thought would be the first of a string of aviation country clubs that would extend from coast to coast. A national committee had been formed in April 1928 to issue charters, and at one point, 114 such clubs were supposedly in the works.

Charles Lindbergh was a charter member of the Aviation Country Club in 1929. He was brought in by its first president, Charles Lanier Lawrance, who'd designed the Wright J5C Whirlwind air-cooled radial engine for the Spirit of St. Louis. Lindbergh, who had just married Anne Morrow that May, taught his bride to fly at the club.

The club's treasurer was another giant of the aeronautics industry, Chance Vought, and the board was fleshed out with society types, such as Cornelius Vanderbilt Whitney and Reginald Langhorne "Peter" Brooks, a band leader & a superb young pilot (he was also the nephew of Lady Astor).

The Aviation Country Club of Long Island opened in June 1929, which turned out to be very unfortunate timing, as the stock market crashed 4 months later.

An article (courtesy of Bob Levittan) described the club as follows:"The Aviation Country Club,



which is at Hicksville, is the swankiest of its kind in the country There are dozens of other

flying clubs in the U. S., the most active ones lying west of the Alleghenies. But most of them use commercial hangars & airports. Often enough they consist of a group of enthusiasts who own a secondhand Waco & take off from a cow pasture. The Aviation Country Club, however, counts 175 wealthy flying members. Of these, 76 own their own planes & most of the rest are licensed pilots. The Club's swimming pool, tennis courts & clubhouse (with 4 bedrooms) are frills.

The members really pay their \$250 initiation fee & the \$150/year dues because the Club offers useful facilities for their planes: a landing field, a big hangar, mechanics, fuel & oil. It has a flying instructor, just as another country club would have a golf pro. It rents & sells planes. Every now & then, it stages an air demonstration, comparable to an invitation golf match...



## Hicksville Aviation CC

In nearly 20 years of flight operations, the club never had a serious accident resulting in injury - not even at the annual airshow. Instead of death-defying stunts & hell-for-leather pylon races, manufacturers used the show to put on dignified exhibitions of their latest products.

The Flying Committee's 1939 invitation to manufacturers made the tone of the event clear. "Each demonstrator will be asked to demonstrate his ship in the air for approximately 5 or 6 minutes. The Committee will permit no stunting, excessive pull-offs & climbs or unorthodox maneuvering, the demonstration being purely to show off the ship's best qualities. It is important that each demonstrator realize that he is not in competition & also that no sales approaches be made."

The chance to present the best aircraft to the best people was irresistible to those in the business (many of whom belonged to the club anyway), and the shows were hugely successful - too successful in some ways. Club members & demonstrators were issued entry ribbons, but keeping the ordinary people of Hicksville away was difficult. They lined the roads & trespassed on the

airfield for a glimpse of the amazing craft on display or flying by. In 1939, the club had TWA's "stratosphere laboratory plane" & a trio of Goodyear blimps, as well as flybys from Pan Am's Sikorsky S-42 Bermuda Clipper flying boat & the Douglas DC-4 prototype.

The crowds, both beribboned & uninvited, were enthralled. The club's mix of status, wealth, and insider connections produced some unusual scenes on the flightline.

The club newsletter noted in August 1938 that "Mr. Roy Grumman is now keeping his new G-32A in the hangar. It is a 2-place conversion of the Navy F-3-F fighter with an 830 HP Cyclone. It can climb to 12,500 feet in 5 minutes." Imagine a modern day "Mr. Grumman" rolling up at a general aviation field in a civilian version of his company's Navy F-14 Tomcat.

The same issue noted that Mr. Howard Hughes had dropped by the club at the conclusion of his record 3 & a half day around-the-world flight and had been

ferried back to Newark Airport in the club's Stinson.

WW2 seemed to help the club in the first months; flying lessons were in high demand.



Barbara Kibbee Jayne was hired by Bud Gillies early in 1942 as the club's chief instructor. He'd flown up to Troy, New York, where Jayne had just qualified as the first woman instructor in the new Civilian Pilot Training Program, just to talk her into it.

After she reported for work in Hicksville, there weren't enough hours in the day. She taught 7 days a week, dawn to dusk. "All kinds of people went out & learned to fly," she says. "To this day, I can't think of anything more thrilling than a first solo. It was just you & God."



## Hicksville Aviation CC

The 1945 AAF Airfield Directory (courtesy of Scott Murdock) described the Aviation Country Club Airport as an 80 acre irregularly-shaped property within which were 2 sand & sod runways, with the longest being the 2,400' east/west strip. The field was said to have a single 200' x 60' brick & wood hangar, and to be privately owned & operated. To be sure, the Aviation Country Club of Long Island survived the war & resumed operations.

Former airfield worker Alfred Merrill, however, did not get back to Long Island to visit his parents until the spring of 1948, only to be told the club had just closed permanently. Standing outside his parents' house in Hicksville, he found the silence strange. There were no small aircraft taking off from the club airfield.

On another visit, Merrill drove over to see for himself. "The place had been bulldozed & they were building Levittown," he recalls. "The buildings were gone. What happened to all our planes I can't say, but everything was gone."



For some, that's the final irony of the Aviation Country Club of Long Island: It's buried under Levittown. What was once an elite social club in pre-war America was sold off for post-war America's most famous mass-housing development. For former members like Betty Gillies, the memory of the club's end was painful. "That horrible time," she said. "Those little houses. Hundreds of them."

The club had fallen victim to rising land values. While Hicksville was charmingly rural in 1929, twenty years later it was about to become solidly suburban. And as the houses closed in, it became dangerous to operate an airfield.

When William Levitt offered \$2,200 an acre, the club ceased flying in May 1948 & began looking for a new home. The hangar was sold & reassembled in nearby Bethpage, where it served for years as a perfume factory, then a pickle works, and finally a tuxedo warehouse.

Local historians say parts of other club buildings were trucked away & incorporated into 5 private homes.

Today a street in Hicksville called Pilots Lane is essentially the only sign that the Aviation Country Club of Long Island ever existed.





## Final Thoughts!

awards dinner dec 7 - must pay by check to nick by the second meeting this month nov 21 cost \$20 member...\$30 guest...party is at the Jones beach hotel, , live dj, directions coming



Please pay dues by second meeting this month



build club begins nov 16 9a-12n  
note the new location & time  
Wantagh Memorial  
Congregational Church  
1845 Wantagh Avenue Wantagh,  
NY 11793

include in next months Newsletter the bio of Jim Plackis who gave us a riveting presentation at our oct 17 meeting

