



# SMOKE SIGNALS

## The Month of Love

*This is the month we should all pay homage to our better halves. We are lucky to have significant others that allow us our indulgences. I am sure that they could use the room we "have to have" for our planes for more practical uses and that the dining room table was meant to eat on, not for engines and balsa wood and things they can't pronounce. For all their sacrifices and love they show **us** all year long I suggest we all dig deep into our hearts and pockets to show them what they truly mean to us. AND I DON'T MEAN BUYING THAT ARF THAT SHOWS HOW MUCH WE LOVE THEM!! Love, Candy, Flowers especially Attention and a beautiful dinner, just the two of you will not only make your mate feel special but make you feel special too!*

There are varying opinions as to the origin of Valentine's Day. Some experts state that it originated from St. Valentine, a Roman who was martyred for refusing to give up Christianity. He died on February 14, 269 A.D., the same day that had been devoted to love lotteries. Legend also says that St. Valentine left a farewell note for the jailer's daughter, who had become his friend, and signed it "From Your Valentine". Other aspects of the story say that Saint Valentine served as a priest at the temple during the reign of Emperor Claudius. Claudius then had Valentine jailed for defying him. In 496 A.D. Pope Gelasius set aside February 14 to honour St. Valentine.

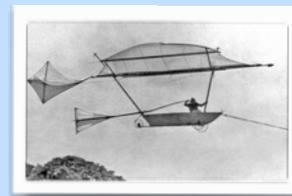
Gradually, February 14 became the date for exchanging love messages and St. Valentine became the patron saint of lovers. The date was marked by sending poems and simple gifts such as flowers. There was often a social gathering or a ball.

In the United States, Miss Esther Howland is given credit for sending the first valentine cards. Commercial valentines were introduced in the 1800's and now the date is very commercialized. The town of Loveland, Colorado, does a large post office business around February 14. The spirit of good continues as valentines are sent out with sentimental verses and children exchange valentine cards at school.

## FEBRUARY

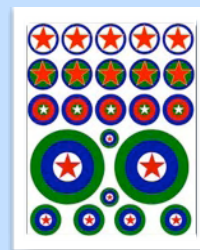
### Early Flying Machines PT 2

Sir George Cayley is considered to be one of the most important people in the history of aeronautics.



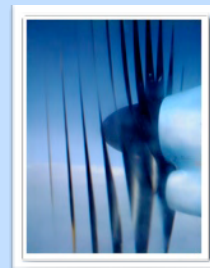
### No More Bubbles

How to get rid of the trapped air. The easiest way is to use liquid...



### Propeller Woes

The gyroscopic effect applies a yawing moment to the aircraft that tends to swing the nose to the left.



### A Conversation with...

Phil Friedensohn



### 2011 MEMBERSHIP DUES

**Dues are due!!**

Don't let the club go dead stick



As promised here is the second installment of the “TOP 10 QUIRKIEST EARLY FLYING MACHINES”.

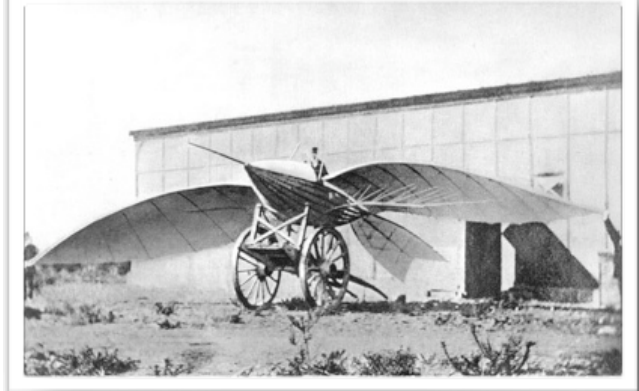
## 5 - Le-Bris' Artificial Albatross

Le Bris built a glider, inspired by the shape of the Albatross bird and named L'Albatros artificiel (“The artificial Albatross”). During 1856 he flew briefly on the beach of Sainte-Anne-la-Palud (Finistère), by being pulled by a running horse, face to the wind. He thus flew higher than his point of departure, a first for heavier-than-air flying machines, reportedly to a height of 100 metres (300 ft), for a distance of 200 metres (600 ft).

In 1868, with the support of the French Navy, he built a second flying machine, which he tried three times in Brest without great success. It was almost identical to his first flying machine, except that it was lighter and had a

system to shift weight distribution. His flying machine became the first

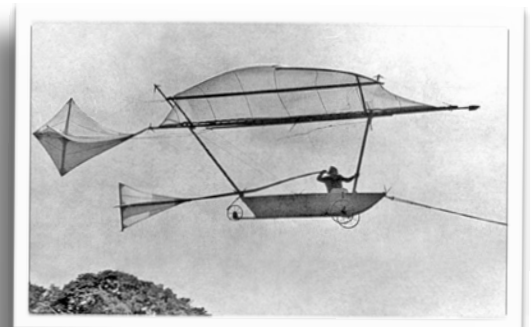
ever to be photographed, albeit on the ground, by Nadar in 1868.



Le Bris invented flight controls, which could act on the incidence of wings. This invention was patented during March 1857. Le Bris' dedication to the cause of soaring flight, his innovative derivation of design and function from nature, and his translation to mechanical device, rather than merely being a copying of a natural form, was in itself a remarkable achievement. He persevered with his experiments, succeeding in a fashion, despite personal injury and insult, and despite being relatively poor.

## 4 - Cayley's Glider

Sir George Cayley is considered to be one of the most important people in the history of aeronautics. He is considered by many to be the first true scientific aerial investigator and the first to really understand the underlying principles of aviation and flying. His first device (a model helicopter) was built in 1796 with contra-rotating propellers. Three years later he inscribed a medalion which clearly showed the forces that apply in flight. On its reverse he sketched his plan for a monoplane gliding machine.



In 1804 Cayley designed and built a model monoplane glider of strikingly modern appearance. The model featured an adjustable cruciform tail, a kite-shaped wing mounted at a high angle of incidence and a moveable weight to alter the center of gravity. It was probably the first gliding device to make significant flights. Pictured above is a replica of Cayley's glider.



## 3 - Giffard's Airship

French engineer, Henri Giffard invented the injector and the powered airship with a steam engine weighing over 400 lb; it was the world's first passenger-carrying airship (known as a Dirigible). Both practical and steerable, the hydrogen-filled airship was equipped with a 3 hp steam engine that drove a propeller. The engine was fitted with a downward pointing funnel. The exhaust stream was mixed in with the combustion gases and it was hoped by these means to stop sparks rising up to the gas bag; he also installed a vertical rudder.



On 24 September 1852 Giffard made the first powered and controlled flight traveling 27 km from Paris to Trappes. The wind was too strong to allow him to make way against it, so he was unable to return to the start. However he was able to make turns and circles, proving that a powered airship could be steered and controlled. In response to his declining eyesight, Giffard committed suicide in 1882, leaving his estate to the nation for humanitarian and scientific purposes. His name is one of the 72 names on the Eiffel tower. Pictured above is a model of Giffard's airship. [\[Wikipedia\]](#)

## 2 - Clement Ader's "Bat" Planes

Clement Ader was, by all accounts, a brilliant man who taught himself engineering. His interest in aeronautical matters began in earnest in 1870 when he constructed a gas balloon, and later he invented a number of electrical communications devices. He is most well-known, however, for his two remarkable flying machines, the Ader Eole (model pictured right) and the Ader Avion No. 3. (below.)



Clement Ader claimed that while he was aboard the Ader Eole he made a steam-engine powered low-level flight of around 160 feet on October 9, 1890, in the suburbs of Paris, from a level field on the estate of his friend. He also claimed a flight of some 900 feet in his Avion No. 3 and two witnesses confirmed the event. The Avion No. 3 was a triumph of engineering design derived from nature. Not only did it have an external resemblance to a bat but much of its internal wing structure followed that of the bat, also. To many people, the Ader Eole and Ader Avion No. 3 have become the very symbols of Victorian Era attempts at powered flight.

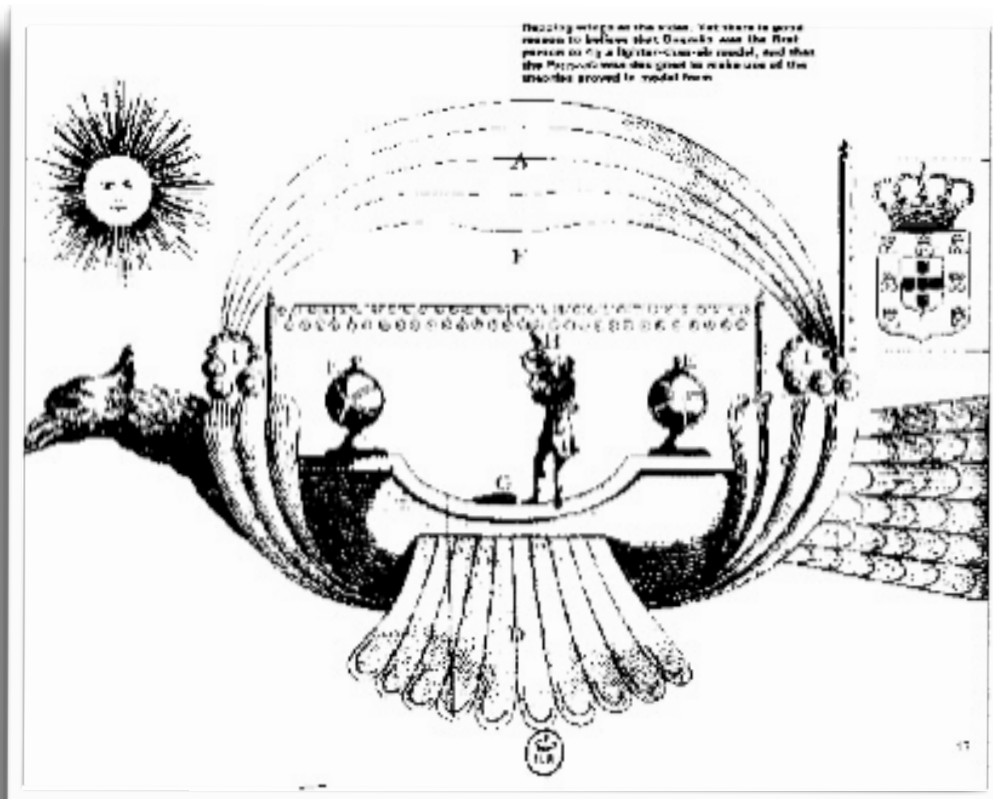
The claim Ader made about his flight in Avion 3 have been largely disproven, though both planes were remarkable machines in many regards and the majority of French people consider him to be the father of French Aviation.

## 1 - Gusmão's Lighter-than-air Airship

Bartolomeu de Gusmão (1685, Santos, São Paulo, Brazil – November 18, 1724, Toledo, Spain), was a Portuguese priest and naturalist born in Colonial Brazil, recalled for his early work on lighter-than-air airship design. In 1709 he presented a petition to King John V of Portugal, begging a privilege for his invention of an airship, in which he expressed the greatest confidence. The contents of this petition have been preserved, as well as a picture and description of his airship.



The vessel was to be propelled by the agency of magnets which, apparently, were to be encased in two hollow metal balls. The public test of the machine, which was set for June 24, 1709, did not take place. According to contemporary reports, however, Gusmão appears to have made several less ambitious experiments with this machine. His contrivance in the main represented the principle of the kite (aeroplane). In all probability he did not have magnets in the aforementioned metal shells, but gases and hot air generated by the combustion of various materials.





### **NO MORE BUBBLES** - by Nelson Ramos

I've been asked many times how to get rid of bubbles when decal and trim film is applied to monokote or some other plastic finish covering.

The question is why does it happen? What to do about it and how to prevent it. Now to think science! When two pieces of plastic film are applied onto each other, such as placing a decal or a trim on top of plastic covering, air is trapped between them. The big mistake is the modeler proceeds to seal the trim or decal creating the bubbles.



How to get rid of the trapped air. The easiest way is to use liquid, specifically, soapy liquid. Why? Well, for two reasons- first, the soapy suds lets you move the decal or trim to the correct location you pick. Second, and this is the most important reason, is to remove the trapped air.

Now comes the technique how to do this. I use a little dishwasher soap detergent mix with water or what ever you have to clean the model. Some people use Windex. The idea is to squeegee the soapy suds out from under the film or decal, start from the center and squeegee out to the edges. For a squeegee use a plastic credit card, a playing card, a piece of balsa, anything with a smooth, straight edge. Every move from the center out to the edge will move the soapy liquid and the trapped air together. Go from the center up, down, left, right, all directions.



The next big mistake is using high heat. Why, you ask? For two reasons- first, using too much high heat will shrink the top layer and not the bottom, creating a wrinkle effect on the finish. The second is the glue under the film will create gasses and expand under the film, creating the dreaded bubbles. Use enough low heat to tack it in place. This will activate the glue and still not shrink it but will adhere it to the film. After you have it in place, use another technique to help seal it in place. Use a trim iron on high heat on the edges of the monokote, about 1/8<sup>th</sup> an inch, sealing the edges.

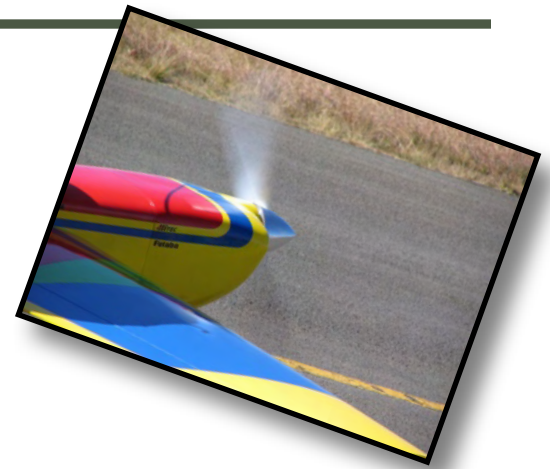
Now for the long term, how to keep it place when flying and not have glow fuel lift it up after a few flights. The answer is to seal the edges. Use automotive clear coat, or (ask her first) clear nail polish.

Very important, some cheap decals are sensitive to heat. Just use soapy suds and squeegee the liquid- the trapped air will get out. Then, let it dry overnight, and seal it the following day.



## **PROPELLER WOES** - from "Model Aviation" December 2010 by Ben Lanterman

Put your hand in a pail of water and stir it until you have a spinning mass of water. Now stop your hand and hold it flat to block the spinning water. You can feel a large force. This is essentially what happens when the spiral propwash (SP) hits the vertical tail of a model. Spiral means "in a rotating motion" and propwash is the air that the propeller blows towards the rear. So we have a spiraling mass of air moving to the rear of the airplane: a small tornado.



With the power plant in front, the tail in back, and the power plant turning clockwise as viewed from the back, the SP has an opportunity to hit the fuselage. With no vertical tail, no side force is generated when the SP hits the fuselage. When we stick a vertical tail on top of the fuselage in that mass of rotating air, we get a force on the left side of the vertical tail. The result of that force on our aircraft is a yawing moment that wants to force the nose of the model to the left.

Factors that will result in a higher SP are more power, bigger propeller, and high rpm. Factors that make the SP more effective are a bigger vertical tail and a slow-moving airplane.

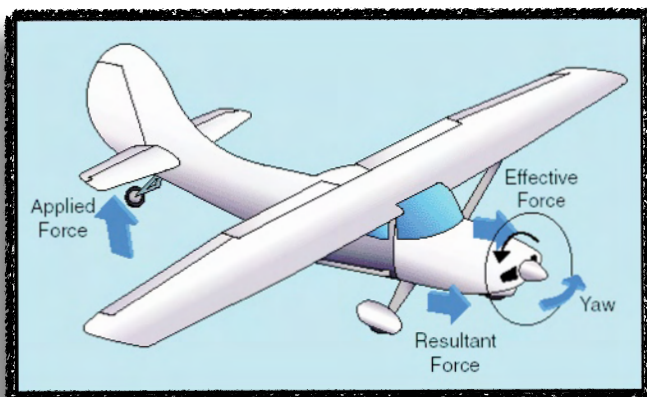
The result is that we need to input right rudder immediately upon power application for takeoff. There is little we can do about the effect of SP; it is simply a negative part of a model configuration that otherwise is great.

**The propeller** produces P-factor. A propeller moving through the air with no angle relative to the air has zero P-factor. If the axis of the power plant is tilted upward, such as in a tail-dragging airplane with conventional landing gear running along the ground, we develop P-factor.

The up-going propeller blade (on the left side of the aircraft) has a lower relative angle of attack than the down-going propeller blade (on the right side of the aircraft). This means that the right side propeller "disk" produces more forward thrust than the left side. The result is a left-yawing moment on the model.

A higher-power motor or engine, a bigger propeller, and a higher angle of attack of the airplane give us a larger P-factor, and we need more right rudder to counter it.

**Gyroscopic Effects:** As the aircraft accelerates down the runway, the propeller blast on the horizontal tail lifts the tail wheel off the ground, leaving the model free to pivot in yaw on the two main wheels.



As the propeller blast lifts the tail, it forces the rotating propeller (which is now a big gyroscope) to change its pitch angle (because it is attached to the motor shaft). Also known as "gyroscopic procession", that effect further increases the need for corrective rudder input.

The gyroscopic effect applies a yawing moment to the aircraft that tends to swing the nose to the left. The magnitude of the gyroscopic torque depends on the mass of the propeller, the rpm of the propeller, and the pitch rate of the fuselage.

Heavy propellers plus high rpm plus rapid pitch rates equals large gyroscopic effects and major left-yawing tendencies. A large-scale World War I model with a big propeller that starts out at a hefty angle with respect to the ground will have a much larger gyroscopic effect.



# CHARLIE LANDO



# SHOW & TELL

“Many thanks to those of you who asked for specifics regarding the original design electric I showed at November’s Show and Tell. I didn’t have them in my head at the

time, but I believe the following table answers those questions and provides additional information. Many thanks for your interest”...Charlie Lando

## LANDOLELECTRIC

### Statistics:

- Wing Span: 48.5”, total
- Wing cord, root: 10”
- “ “ , tip: 8”
- “ “ design: modified Clark Y
- Wing area: (48.5” – 4” = 44.5”) x avg. cord, 9” = 400.5 sq. in.
- Wing loading: 76 oz./400.5 sq. in. = 0.19 oz./sq. in.
- Fuselage length: 30”
- “ width: 4” at wing
- Total weight: 4 lb., 12 oz. = 76 oz.
- Horiz. Stab. Area: 18” x 5.5” avg. = 99 sq. in.
- Vert. Stab. Area: 8” x 5.5” avg. = 44 sq. in.

### Components:

- Motor: ElectriFly RimFire Outrunner GPMG4700, 800 RPM/V,
- ESC: ElectriFly Silver Series SS-60 brushless.
- Batteries: Power: ElectriFly 5 cell, 2100 mAh, 18.5V, 20C Continuous Discharge
- Receiver: 4.8V, 2100 mAh
- Servos: 4 Futaba S3004. 2 in the wing, 1 each for the elevator and rudder/nose wheel.
- Stall Torque: 44 oz.in. @ 4.8V.; 56 oz.in @ 6.0V.
- Operating Speed: 0.23 sec. @ 4.8V.; 0.19 sec. @ 6.0V. (60° at no load).
- Propeller: 10 x 5E

# NELSON RAMOS AT-6 TEXAN



"The engine is an **OS 91** 4 Stroke and this baby cost me with shipping and everything \$274 and let me tell you it is a great engine... when you hear it it sounds fantastic!

It's inverted...a lot of people don't know how to set up an inverted engine... normally they get an engine that bogs down on idle. They don't know about the siphoning effect number one...the siphoning effect is this here, you have the tank, you have the carburetor you bring it straight in it keeps flooding the stupid carburetor, it bogs down. With the fuel, you take the fuel line you go over the top of your tank and **then** into your carburetor and you prevent the siphoning effect, there it is"





## A CONVERSATION WITH PHIL FRIEDENSOHN

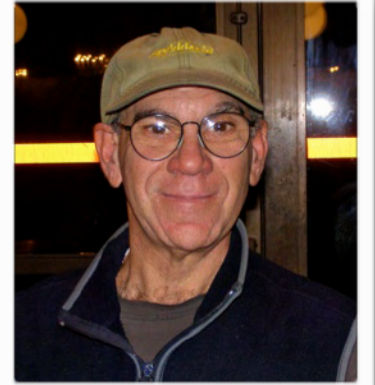
Phil Friedensohn, affectionately known to Meroke club members as “Dr Phil” was born in Forest Hills Queens more than a few years ago. Even at an early age Phil was a teacher getting all of his neighborhood friends involved in building and flying control line models in the local school yard.

Phil received his BA from CUNY Queens College and did post graduate work at NYU. After pursuing his academic studies he went on to his first career in the entertainment industry. He was a Booking Agent working for Associated Booking Corp. in the music business through the early '80's. After settling down he became an Applications programmer/Analyst working on IBM mainframe business applications. Phil worked in the Securities Exchange and Banking industry until he was involved in the World Trade tragedy of 2001. Following that, he worked as a consultant in the Securities and Exchange industry for a number of years.

Phil lives in Forest Hills with his lovely wife Pat. Phil is an avid skier and golfer, he also loves sailing, spending many happy years sailing out on Long Island sound with friends and family.

Phil joined the Meroke RC Club in 2005 and has held the positions of Programs Coordinator, Dr. Phil - Newsletter contributor, Unofficial recruitment officer, Intro pilot.

Phil's favorite plane to fly as he puts it “None that I own”.



### **Question - HOW DID YOU GET IN OUR HOBBY?**

**Answer -** As a boy, I used to see guys flying control line airplanes in the parking lots at Willets Point before Shea Stadium was constructed. I always liked modeling and bought myself a Sterling Ringmaster to build. My father and I used to go to Riis Park during the off season and try our hand at teaching ourselves how to fly. The Ringmaster lasted one season. At Riis park we saw RC flyers who used to buzz us for the fun of it. Years later while living in Manhattan I saw an advertisement for the WRAM show. I just decided to check it out. At the time, I bought a M.E.N. three channel trainer kit that I built but never flew. I still own it. It took me years to actually have the time to participate in the hobby again.

### **Question - WHERE DID YOU LEARN TO FLY?**

**Answer -** I Learned to fly at Cedar Creek Park. I spotted the field one day in winter while driving on the Wantagh Expressway. I made a note of the location and in the spring I found Cedar Creek park and the field. While visiting the field I actually met some nice people like Joe Scotto, Pete List and Brian Cashen, they convinced me to try again and supported my efforts to do so. Since I finally had some time on my hands to devote to learning how to fly, I jumped right in. I am now an avid supporter of giving back to the hobby. This is why I always have time to give flying instructions or talk to someone who wants to get involved with the hobby. I presently fly a Sig Fourstar .40 w/ OS .46, a Hangar 9 Ultra Stick .40 w/ OS .46 and an electric E-Flite Mini Ultra Stick.

### **Question - WHAT IS YOUR FAVORITE TRICK OF THE TRADE?**

**Answer -** Only listen to the advise of those people you know - know what they are talking about.

### **Question - ONE THING ABOUT YOU THAT WOULD SURPRISE US?**

**Answer -** If I tell you it would not be a surprise anymore.

## TIP OF THE MONTH



Here's a tip from Mark Klein...To make an inexpensive plane carrier, get a cardboard box, fold the flaps into the box for support. Now cut a half moon in each of the lengthwise ends. Cut foam strips (from insulating foam the kind that you put on pipes) and place over the half moons that you cut out of the cardboard ends. You now can position your plane right side up or inverted and carry it to the field or wherever you need to. An added bonus is that the pipe insulation has a slit which allows for its fitting and removal when folding the box for storage.

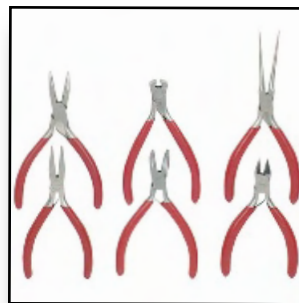
## TOOLS FOR THE HOBBYIST

*Here is a reprint of a Newsletter article from Lou Pinto which should save you money.*

Harbor Freight opened its 1st store on Long Island In December 2010. The store is located at 270 Peninsula Blvd. Hempstead, NY 11550. The store carries a large assortment of tools and accessories all of us in the hobby might be interested in at a fraction of the price other stores sell them for.



You can go to their web site at [Harborfreight.com](http://Harborfreight.com) and also find monthly sales and also coupons which will even save you more. They also have coupons for free small flashlights, screwdrivers and work gloves from time to time so check it out. Harbor Freight is a great store and worth the drive so check it out.





## 2011 MEMBERSHIP DUES

The 2011 membership dues are payable on November 1. Please see our Treasurer Nick Guiffre at the next meeting!!

### SUGGESTION BOX

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



### Calendar

#### **FEBRUARY 2, 2011**

Club Meeting  
Show and Tell

#### **FEBRUARY 17, 2011**

Club Meeting  
Virtual Fun Fly

#### **FEBRUARY 13, 2011**

Northern Connecticut RC Club  
Annual Auction & Swap Meet  
For more info: [www.ncrcc.org](http://www.ncrcc.org)

#### **FEBRUARY 25 - 27, 2011**

43rd Annual WRAM Show  
The Westchester County Center  
914-995-4050

#### **\*\*\*SPECIAL NOTE:**

At the March 17 meeting, club members are asked to present tools they feel are very useful for our hobby.

### BIRTHDAYS

<u>Feb 2</u>	<b>George Carley</b>
<u>Feb 7</u>	<b>Jack Stone</b>
<u>Feb 11</u>	<b>Robert Colquhoun</b>
<u>Feb 12</u>	<b>Jack Tramuta</b>
<u>Feb 16</u>	<b>Gene Kolakowski</b>
<u>Feb 17</u>	<b>Michael Canale</b>
<u>Feb 19</u>	<b>Richard Boll</b>
<u>Feb 23</u>	<b>Ed Wiemann</b>
<u>Feb 26</u>	<b>Joe Petrozza</b>
<u>Feb 26</u>	<b>John Townsend</b>
<u>Feb 29</u>	<b>Roger Scanlon</b>