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NVRC is one of the largest radio control clubs in Virginia with over 200 members. Our primary flying field is located at Poplar Ford Park and we expect to have a new Lorton site in 2016. The club includes pilots in all areas of radio-controlled flight: Sport, Giant Scale, Electric, Sailplane, Aerobatics, Combat, and MultiRotor. NVRC has members with decades of expertise to share in many types of flying and building. Whether you're a beginner or someone looking for advanced techniques there are volunteer instructors to provide assistance. Don't be timid! Just ask for help!

In existence for over 50 years, NVRC is proud to be a club where everyone is welcome!

Officers and Contacts

President, Mark Franke, mfranke@cox.net

Vice President, John Roach, jagroach@verizon.com

Secretary, Terry Terrenoire, amad2terry@juno.com

Treasurer, Bob Freas, freasman@gmail.com

Safety Officer, Pat Dunlap, pdunlap@cox.net

Chief Flight Instructor, Tony Claridge, tclaridge1@aol.com

Newsletter Editor, Carl Lydick, carllydick@hotmail.com



President's Report:

By Mark Franke

NVRC and the FAA

Folks,

as some of you may know we have been visited by the FAA in the past week. By all accounts it was a cordial visit however folks were asked if they had their card and their aircraft labeled. I need to make this perfectly clear to every member and guest at our field.

All pilots must register with the FAA. <https://registermyuas.faa.gov/>

You may not fly at the field if you are not registered with the FAA and your aircraft is not appropriately labeled. The club will be enforcing this rule because it puts everyone at jeopardy if we failed to follow the guidelines. We are under a microscope because of our proximity to the nation's capital and there will be no exceptions to the rule.

You should carry your **FAA card, NVRC Card and AMA card.**

Your aircraft must be labeled: this means your FAA registration number must be either on the plane or in a battery hatch that can be opened without a tool. Again there will be no exceptions to this.

All pilots flying at Poplar Ford Field must **AMA** members and members of an **NVRC**. The only exception to this is AMA members who are flying as guests. However they also must be FAA registered.

We will shortly be posting a sign at the field so it's clear to everyone who shows up what is required to fly the field. I'm sure there has been some controversy about this. We have to protect our hobby by following the letter of the law. If you have a car you have to have insurance, inspection, a license and registration. Think of this as no different. We are a self-policing hobby allowed to fly at our field by the county. I thank everybody for their cooperation and also for your participation to make sure everyone is compliant.

NVRC and Volunteering.

Thanks to everyone who has volunteered over the past couple of months. Without volunteers our club would not be successful. In particular I would like to thank John Roach , Bob Burnett, Gary and Paula Quinn, Bob Freas, Ken Bassett, Paul Lucas, Tony Claridge, Charlie K, Carl Briskie and Carl Lydick.



President's Report:

By Mark Franke

Air and Scare is a great event to showcase our club in a positive light. The event is this weekend at the Air and Space Museum. There are literally thousands of visitors who will get exposed to our hobby. Thanks to Gary Quinn for heading up the event. If you would like to volunteer please contact him at 703-581-4857.

Toys for Tots is our next community event. It is scheduled for **November 5** rain or shine **10 AM till noon**. Please bring one unwrapped new toy to contribute. Feel free to contact Pat Dunlop pdunlap@cox.net for further details. This is a great charity to support.

Annual Holiday Party is confirmed for **Sat ,December 3** Fairfax City Fire Station STA #3 5 PM until 9 PM. This is a great event to share a little holiday spirit and spend time with your and NVRC friends and their families.

Meeting Reminder the **November meeting** will be on the **second Thursday** of the month this year. Please mark your calendars the date is **November 10 not November 17**

Lorton updates Bob Freas has been working tirelessly with the county trying to get this field established. There have been many hurdles. He is working out the last details now

Shelter for Poplar Ford we are waiting a final permit process. There was a snag with our vendor as they had supplied us with drawings not acceptable for our particular circumstance. We are hoping that the shelter will be in before the end of the month. The new shed has been installed. Thanks to John for making it weatherproof and sorting out our equipment.

Folks as you well know we have been through many hurdles over the past several years. I'm very pleased to say I was at the field flying last week middle of the week and there was a large number of pilots participating in the great weather.

We have a great club with great potential. The board and I appreciate your patience and look forward to 2017 as we open a second field at Lorton. We will be looking for volunteers for fieldwork and helping John Roach continue his outstanding care at Poplar Ford.

Thanks

Mark Franke

NVRC



Leesburg Air Show: NVRC Members Needed!!!

By Gary Quinn

Enjoy some images from the 2016 Leesburg Airshow. Thanks to the members who came out and participated!





Indoor Pattern Contest: November 19th

Indoor Fly-In

Where? South Run Rec Center Field House

When? November 19th from 8-10 PM

Who? All are invited- Open Flying for All

How Much? \$10 (includes snacks)



With the large available flying space, we will also be hosting an indoor pattern competition in conjunction with the open fly-in. Come watch the U.S. F3P team compete with their aerobatic routines, and bring a plane to try it out! Indoor pattern competition entry fee: \$20. Awards will be presented to the winners of the F3P international class, Intermediate and Advanced classes. Sequences at <http://xavier.mouraux.com/indoor/sequences.html> we also plan to have a "club class" for Sportsman which is centered around a UMX Extra, Yak or similar.

Sponsor: Northern Virginia RC (NVRC)



Address/Map: 7550 Reservation Drive, Springfield, Virginia. Right off of Fairfax County Parkway (approximately 20 minutes from Hobby Hangar)

Contact: Don Szczur dszczur@verizon.net (703) 378-0126



Battery Charging Safety:

Presented by Pat Dunlap, Summary by John Roach, NVRC VP

Pat began his presentation by urging those who were there to read the battery safety guide that comes with your newly purchased battery. It mentions, and Pat emphasized, that we should never leave batteries charging unattended and to disconnect them when charge is complete. Most connectors are keyed to prevent accidentally reversing the polarity when connecting a battery, but if you make an extension, take care to correctly assemble the connection to avoid reversing polarity during its assembly. It is a fact that when dealing with higher voltages, you will get bigger arcs when making and breaking connections. Be prepared for it.

Several manufacturers now sell chargers that are capable of charging six, 6S packs at one time, in 20 minutes. These newer chargers also provide a measure of the internal resistance of each cell in a pack. If you do not want to buy a new charger just to be able to measure internal cell resistance (IR), the Turnigy IR charger (Hobby King), is a low cost alternative. It is important to measure IR because lower resistance means that a battery can deliver more current under load. The IR increases over the life of a battery. If you measure the IR of each cell in a new battery, you will find that the battery is ready for discard when its IR is double what it was when it was new.

Another sign that it is time to discard a battery is puffing. This swelling may occur from misuse, but it can also occur with age. It is caused by the release of gas from an irreversible chemical reaction that leads to a decline in battery performance or its catastrophic failure.

Question from the audience – “What is normal cell resistance?”

Higher capacity battery packs (C rating) have the lowest internal resistance. Tony Claridge added that when the IR doubles, the battery is shot. Pat went on to explain that he flies his packs down to 20% by timing his flights. He cautioned us not to fly below 20% of the battery capacity. He also warned that if a crash wrinkles a battery, not to bring it into your house – Store it outside prior to its disposal. In summary, he suggested that we never hurry when working with battery connections and to also be careful that dangling battery leads cannot short by contacting metal after you unplug them.



Setting Flight Times to Stay Bove LVC:

Presented by Tony Claridge, Summary by John Roach, NVRC VP

In a follow-on presentation, Tony explained that flying until low voltage cutoff (LVC) quickly ruined batteries and repeatedly created an emergency situation in which you were forced to land dead stick from where ever the pack went below LVC. Even though there are different types of LVC, hard, soft, pulse, he emphasized that we should not depend on the LVC to announce the end of a flight. Different aircraft reach LVC at different rates.

For example, ducted fans are hard on batteries and quickly deplete them in comparison to other aircraft. It is possible to fly normally and periodically check the flight battery voltage to estimate a safe flight time, but it is also possible to calculate a safe flight time. Multiply battery capacity by 70% and divide that value by milliamphours per minute (MAH/min) to compute a battery consumption rate per minute. Use this value to calculate a normal flight time.

For example, if your plane used 2783 MAH in 4 min, that would be 696 MAH per minute. If 70% of a 5000 MAH pack is 3500 MAH, $3500/696 = 5.03$ minutes of safe flight available from that battery.



Tony Claridge covering timing and LVC for electric models



September Meeting Minutes:

By Terry Terrenoire, NVRC Secretary

- Called to order at 7:32 by acting President, Mark
- There were 31 members present.
- Mark made the following announcements:
 - The new shed a Poplar Ford field is in process and should be done before year's end.
 - Sign repair and updating for Poplar Ford is near completion.
 - "Deer depopulation" has started at Poplar Ford.
 - A new housing development "Northern VA Homes at Bull Run Winery" has been started within ear shot of our field.
- Treasurer, Bob Freas reported on update of Lorton site:
 - At what he thought would be a routine meet to get Occupancy permit he was informed that we had 5 more requirements to meet and they require another \$4000, plus in additional fees:
 - Land disturbance fee: \$1847.78
 - County Storm water permit: \$308.00
 - State Storm water permit \$756.00
 - Parking bumpers and signs: \$1575.00
 - Then add the cost of the storage shed \$200.
 - A motion was made, seconded, and passed to authorize the expenditure up to \$4500.
- Ken reported that he had 16 entrants for the Bi-plane fun fly and the event ran from 10:00 to 12:05.
- A motion was made, seconded and passed for the club to match up to \$150 in donations to AMA for funds raised to support National Model Aviation day.
- October 8th will be our fall fun fly Poplar Ford.
- October 15th will be our Fall Auction to be held at Potomac HS.
- Help is needed for the 9/24 air show at Leesburg airport.



September Meeting Minutes:

By Terry Terrenoire, NVRC Secretary

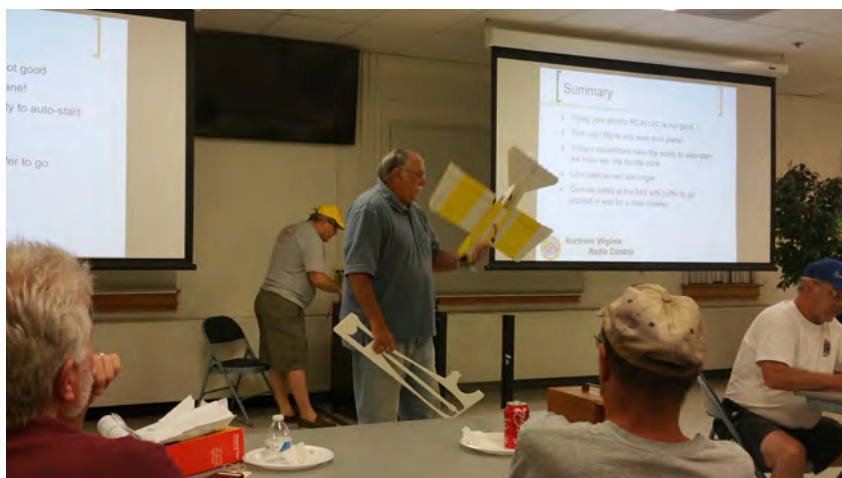
- There was discussion of quad racing to be held at Poplar Ford. Paul Lucas will be providing guidance and advice. He is working with a "multi-GP" chapter. October 2nd was set for first trials at the field. The club authorized the expenditure of up to \$500 for the purchase of timing equipment used in the quad racing.

Programs:

- Pat talked about the importance of knowing not only the voltage and amp capacity of your batteries, but also knowing the internal resistance of each cell and pack. A tool to measure his resistance is available from Hobby King for about \$30. Pat measures the resistance of a new pack and records that info. This resistance is frequently checked and when the resistance doubles from the base reading he no longer flies the pack.
- Tony then talked about the method he uses to protect his flight packs from over discharge. On the first flight of a new or modified system he sets the transmitter timer for 4 minutes of flight. He then measures the amperage used and divides by 4 to find the per minute use. Then he divides that into the usable amperage on any pack used in that system too determine the safe length of a flight. If you are flying until the battery gets down to the warning level you are shortening the useable life span of the pack as well as putting your plane at risk if you can not get safely back to the field. When recharging your pack if it takes more than 70% of it's capacity you are shortening the lifespan of that pack.

Show and Tell:

- Brian showed a foam racer and there was enough interest in possibly building a bunch of the to have "one design" races in the future, possibly next year.



Brian showing off the Flite Test Bloody Baron



September Meeting Minutes:

By Terry Terrenoire, NVRC Secretary

Show and Tell (Continued):

- Mark showed his new Spitfire from Horizon Hobbies.
- Terry showed 2 new pattern planes scratch built fro AMA plans, "Forte".
- Tony Showed the club Hobby Zone "E-Glider" bought for \$150 using the AMA TAG grant funds.
- Tony won the \$25 Show and Tell drawing.
- Barry Croucher won \$7 in the 50/50 drawing.
- The meeting was adjourned at 9:14.

Respectfully submitted:

Terry Terrenoire
Secretary, NVRC





Editors Corner:

By Carl Lydick

Hopefully everyone is enjoying the cooler fall temperatures and getting some flying in while the weather is good! My hobby time has been limited this month but I've still been able to get some afternoon flying in at Poplar Ford and managed to meet up with a fellow RC Pilot from MD and do some flying at his club field. The Hangar 9 Sbach continues to be a joy to fly, and the foam board P-38 has survived yet another treetop "landing". I particularly enjoyed sharing the skies with a father-son duo who recently joined NVRC and were out flying some scratch-built planes.

As my wife and I are expecting a new baby (our first) in early November I expect hobby time will take a back seat for the foreseeable future. I'll still be working to get the newsletter out and to keep the website up to date, but I will mostly be flying vicariously through the rest of you, so please share your stories, pictures, and videos with us and have them included in the newsletter! I would also like to solicit pictures and stories from your winter build projects to share with the club. It is the start of "Build Season" after all! If you've got a project you'd like to share send me a few pictures and a brief write up and we'll include it!

While it will be tough to block off time to get out and fly I do hope to get some building done between diaper changes. To help with that I've picked up a T-38 kit from Wowplanes.com that I'm looking forward to starting on. She'll eventually run on a 90mm Jetfan unit and the kit looks good. It is definitely a builders kit... rough foam blanks, vacuum formed parts, and some nice fiberglass duct work. I've explained to the misses that this is my "Pull" gift... a spin on the new tradition of "push" gifts for new moms. I doubt most expectant mothers would find it funny but my wife just rolled her eyes and reminded me of the *other* unfinished aircraft in the shop. Before starting on that project I'm focused on putting the big P-40 back together. She will be ready to go in another week or two but will likely wait for Lorton before making another attempt for the skies



Lots of patch work to wrap up on the P-40

Happy flying and building!

If you have something you'd like included in the NVRC newsletter please send it to carllydick@hotmail.com