A beautiful view of Poplar Ford. Jim Coffman braved the snow to take this photo and to test out his ski equipped aircraft!

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Want to see more here?

Send your newsletter contributions to carllydick@hotmail.com.

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. Our new Lorton flying site is open on weekends. 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, Jon Pruett, jonathan.pruett@gmail.com

Vice President, John Roach, jagroach@verizon.com

Secretary, Carl Hampton, champton@cox.net

Treasurer, Bob Freas, freasman@gmail.com

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

Member-At-Large, Paul Lukas, paul.lukas@live.com

Member-At-Large, Tung Phung, ttp2d@virginia.edu

Past President, Mark Franke, mfranke@cox.com

President's Report: Welcome to 2019!

By Jon Pruett

We kicked off a great flying start to the new year with our Winter Fun Fly at Lorton last weekend. 10 pilots came out for an excellent morning of flying, and I had a personal fun-fly best - I completed the course with no penalties! Look for a nice write up of the event with some pictures in a future AMA magazine thanks to our CD Harold Chadsey.

Cold and wet conditions at Poplar Ford

Holding the Winter Fun Fly at Lorton wasn't the original plan, but due to the very wet conditions at Poplar Ford it became a necessity. Since we don't know how the weather is going to treat us this year (2018 was the wettest year on record in Virginia) we have a new policy for events that will help reduce disruptions. If any fixed wing event will be impacted due to unsafe or unsuitable conditions at Poplar Ford Field, we will be switching the venue to the Lorton / Burnett Field. All members and guests will still be welcome at the event, we just ask everyone follow the sign-in and safety vest requirements. Any changes of field location will be made at least the day before the event so people can plan travel appropriately.

We have a lot of great outdoor events planned for this year - streamer combat, pylon racing, giant scale, fun fly, and glider days - all thanks to great volunteers! And we always need more volunteers to help run club events. Those volunteers get more than just our thanks too - as an active AMA Contest Director they can get a discount on their annual AMA dues! For more info check the AMA website or send me an email - happy to help you get signed up, having fun, and saving some money too!

See you at the field!

Jon Pruett

VP's Report: Updates from Poplar Ford and Lorton

Compiled from John Roach's RC Groups Updates

As always, **John Roach** has been keeping busy keeping our flying sites in tip-top shape.

- Recently there was an attempted break in to the shed at our Lorton field. The would-be thieves attempted to use one of our metal fence posts to pry apart the hasp but were thwarted when the fence post broke. John proposed that during a work session we should install a proper gate to control access to the field and deter interest in our mower shed.

Lock and door show signs of attempted entry

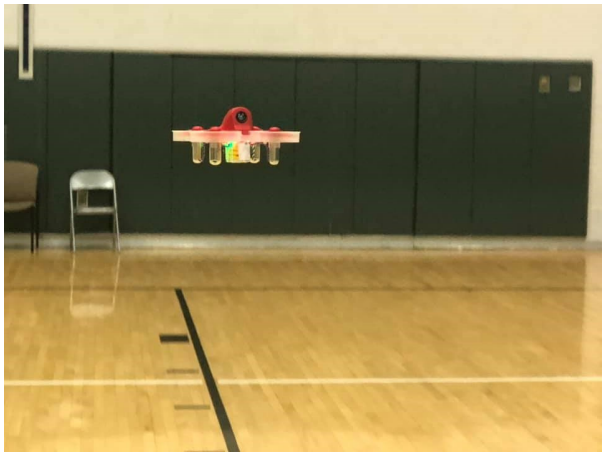
- The county will be preforming controlled burns in the areas around our strip at Poplar Ford. Some of the burns have already taken place at the time of this newsletter, but the dates for others have been shifted a bit due to weather and field conditions. We will attempt to notify everyone as quickly as possible when the county picks dates. John has pre-emptively relocated the primary windsock to the shelter so it will not be a victim of the burns.

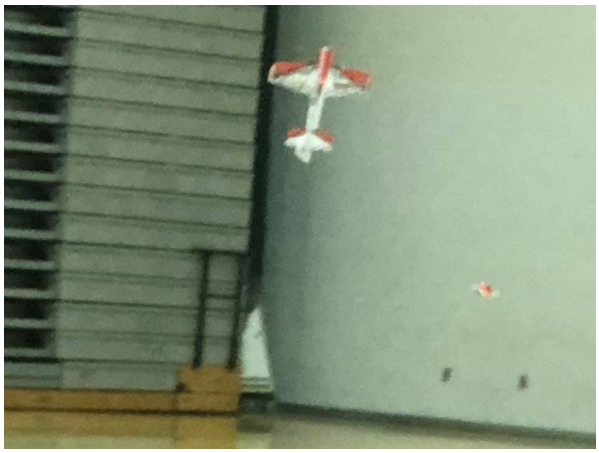
- During a visit to Poplar Ford on 1/28 John noted that the NVRC mailbox fence post finally succumbed to the bugs that had eaten away the base. This will be added to the list of repairs that will be needed when warmer weather arrives.

Indoor Flying at Westfield High School!

Pictures shared by Paul Lucas via NVRC on [Facebook (CLICK HERE)]

Everyone had a great time flying in comfort in the Westfield High School gymnasium on January 27th. The next indoor event is coming up on February 2nd at West Potomac High School. [Details HERE!]





NVRC on the WEB

Join us online for up to the minute news!

2019 will be a busy year for NVRC, and we will of course re-cap events here in the newsletter. If you want the latest, up to the minute news and events from the NVRC community you can join us online at the locations below. We encourage everyone to share anything RC related with the club. Beautiful day at Poplar or Lorton? Have a new toy you want to show off? The last landing didn't go as planed and now you've got a trash bag full of parts? We want to see it! (*especially the bag of parts!!*)

NVRC on Facebook

https://www.facebook.com/groups/1nvrc/

NVRC on RCGroups.com

https://www.rcgroups.com/forums/...NVRC

NVRC on Instagram

https://www.instagram.com/nvrc.club/

NVRC

http://www.1nvrc.com/

January Meeting Minutes:

Provided by John Roach, NVRC VP and Carl Hampton, Secretary

Visitors and New Members – A new NVRC member, Casey Goins, introduced himself and described his RC interests.

Johnathan Pruett, Club President, announced the 2019 Board Members and Club Officers including Trainers Jon Haitsuka, Ken Bassett and Bob Burnett. He thanked all our volunteers who now lead NVRC.

VP Report, Poplar Ford and Lorton – John Roach described damage to the Lorton shed caused by an attempted burglary in December. He proposed a weekend work crew install proper access gate posts at the field entrance to deter interest in our mower shed. The 11 January controlled burn at Poplar Ford burned 2 of 4 designated areas. Two additional areas adjacent to the field will be burned when the weather improves. In the meantime, the primary windsock has been moved to the shelter. The possibility of installing a weather station was discussed. New events proposed in the budget include a giant scale fly in at Lorton In May and a fun fly at Lorton. A possible sailplane event at Lorton was discussed.

Mystery Plane – Supermarine Spiteful, of which only 19 were built.

Treasurer's Report— Bob Frease summarized NVRC finances at the close of 2018 and its 2019 budget. A number of factors caused NVRC to spend less than budgeted for 2018 resulting in a small overall net positive cashflow for 2018. Proposed event expenses for 2019 are projected to exceed projected income by $1035. Event cancellations due to weather are likely to keep our actual expenses below 2019 income. The 2019 budget was accepted by the membership as presented. A 2019 wish list item to bring to the attention of park staff will be to repair the tractor road and resolve the parking lot drainage problem.

January Meeting Minutes:

Provided by John Roach, NVRC VP and Carl Hampton, Secretary

Special Guest – Jon Haitsuka described his Thanksgiving visit to the EAA Museum at Oshkosh.

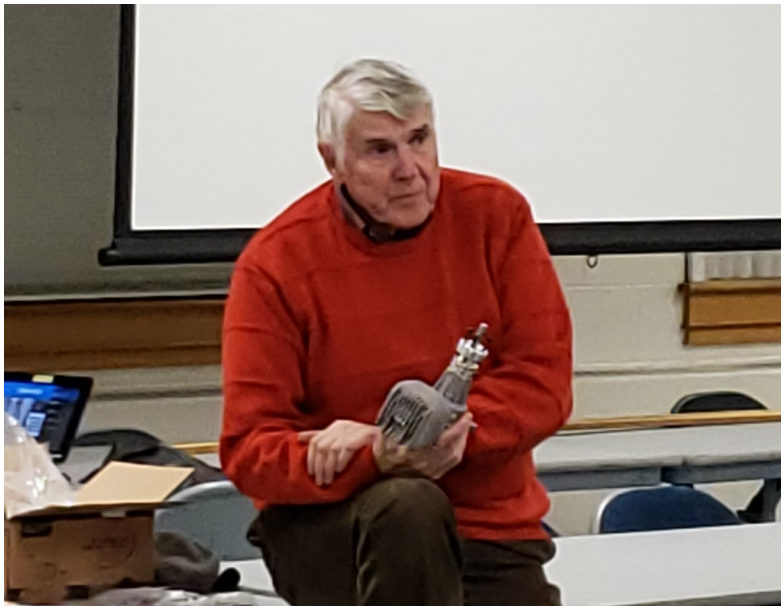
January Meeting Minutes:

Provided by John Roach, NVRC VP and Carl Hampton, Secretary

FAA Rulemaking Report – Johnathan Pruett summarized several key aspects to watch in the FAA proposed rulemaking for sUAS. He noted that most of the proposals are directed at part 107 pilots in that it was proposed that part 107 pilots may fly over people and at night. All sUAS operators must be prepared to present documentation to law enforcement officials at all times. [This includes hobbyists.] The nature and scope of transponder rulemaking and its impact on hobbyists remains unclear for now because those proposed transponder rules have not yet been released.

Events – The **Winter Fun Fly** will have to be re-scheduled. Poplar Ford field and parking lot are too wet. Monster Mini Golf will now feature FPV Hovercraft racing on Wednesday nights. Hobby Hanger is making hovercraft available to try at the last Westfield Indoor Funfly. If these trials interest enough people in hovercraft racing, Hobby Hanger is prepared to offer a discount of 15% for group purchase of 12 or more hovercraft and a 20% discount for 20 or more hovercraft. Jon Haitsuka reminded members to be sure and list their cell phone number when they sign in at the Lorton Administration Building before flying at Lorton. Cell phone contact information is an important Lorton safety requirement as is wearing a safety vest at all times while at Lorton.

Show N Tell – Bob Burnett led off with a pitch to use gasoline engines to power giant scale aircraft. He reported that aircraft with a wingspan of 80 inches or more are easier to fly than smaller aircraft because they are more stable and less affected by unstable air than smaller aircraft. Gasoline engines are cheaper to operate and run longer than batteries. Hobby Hanger sells RCGF and DLE gasoline engines that are just as strong and reliable as more expensive gasoline engines



January Meeting Minutes:

Provided by John Roach, NVRC VP and Carl Hampton, Secretary

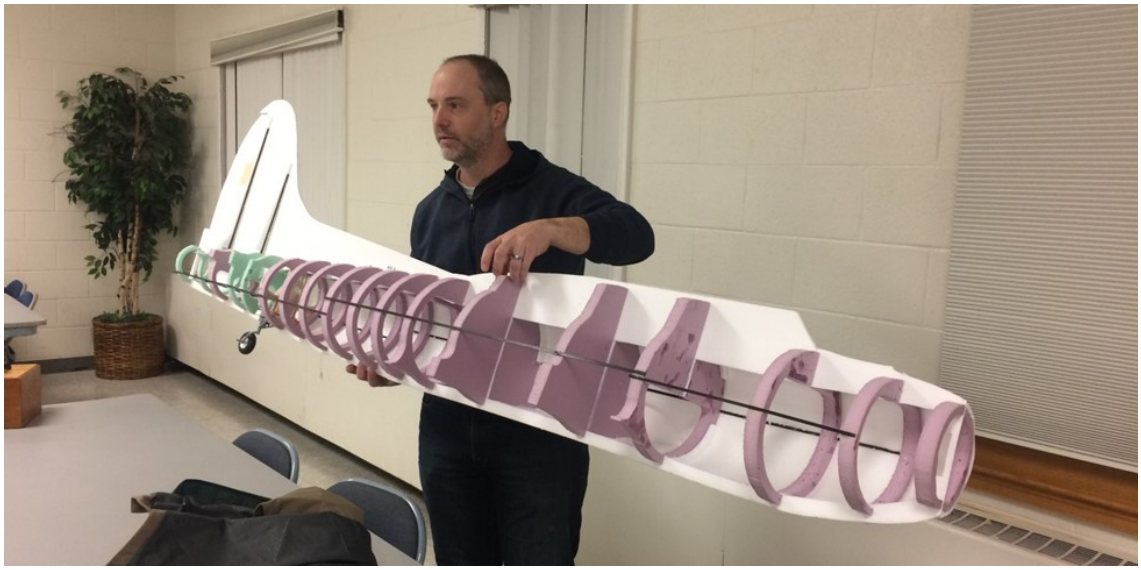
John Roach reported that the addition of 1/16 plywood reinforcement to landing gear mounts and wooden coffee stirrers to wing areas compressed by rubber bands results in more robust Flite Test aircraft. He then described his experience building and test flying a racing drone at NOVA Labs in Reston, VA. The 10,500 sf Maker facility is a volunteer run shop where students and Makers create things with 3-D printers, laser cutters, woodworking and metalworking tools.

Jim Coffman showed off a ski-equipped aircraft and a video of its performance in powder snow at Poplar Ford. He noted that the same skills are needed to fly off of water as are used to fly off snow.

January Meeting Minutes:

Provided by John Roach, NVRC VP and Carl Hampton, Secretary

Carl Lydick brought his partially completed 1/9 scale B-17 to the meeting and described his progress in its construction.



Jonathan Pruett brought in his nearly complete FW-42 canard medium bomber.

Upcoming Events:

See the Events Calendar at www.1NVRC.com for more details!

January 30th	Tiny Whoover FPV Racing
February 2nd	Indoor Flying at West Potomac High School
February 10th	Indoor Flying at Westfields High School
February 10th	NVRC Multi-Rotor Racing
February 21st	NVRC Club Meeting
February 22-24th	AMA Expo East in NJ
February 24th	Indoor Flying at Westfields High School
March 10th	NVRC Multi-Rotor Racing
March 21st	NVRC Club Meeting
April 18th	NVRC Club Meeting
April 20th	Streamer Combat
May 11th	Spring Fun Fly and Poplar Ford Open House
May 16th	Build Contest (monthly meeting)
May 25th	Lorton Glider Day
June 2nd	Pylon Races
June 15th	Streamer Combat
June 23rd	Lorton Giant Scale Fly In and Open House

… and MORE TO COME! Keep an eye on the EVENTS page as well for more information.

Editor's Corner: SEFF 2018

By Carl Lydick

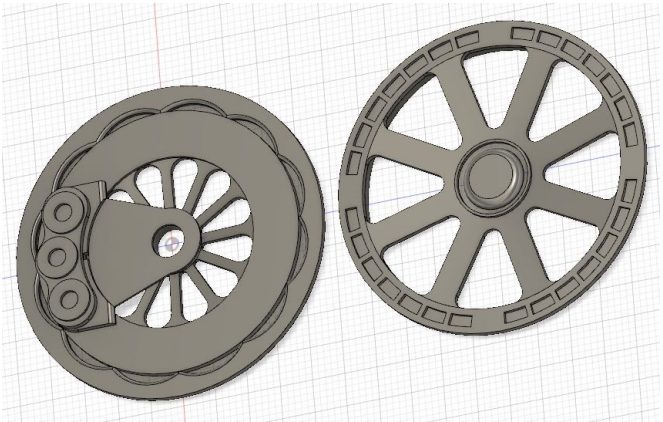
I've never been one for new years resolutions but I have one this year, and it is to get the NVRC Newsletters back on schedule! 2019 will be a great year for NVRC and I'm looking forward to documenting all the fun!

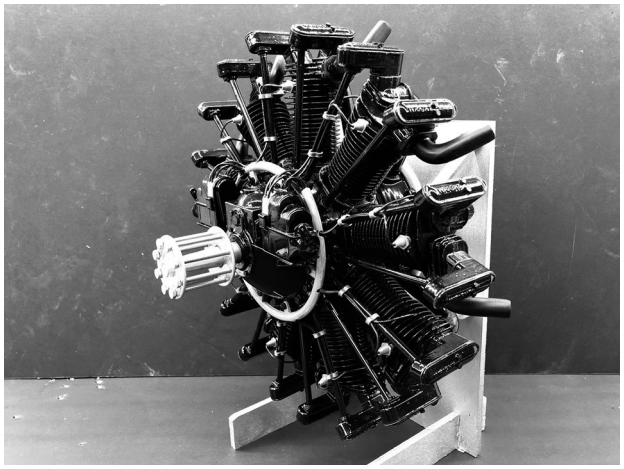
As part of my B-17 project I've spent quite a bit of time recently working with CAD designing parts to be 3D printed. We've seen an influx of 3D printed parts (and even planes!) in the hobby, but like any new technology there can be a learning curve for anyone who wants to give it a shot. I wanted to share some resources here that may help NVRC members who want to give this whole 3D printing thing a try.

Software:

In principal there are a LOT of options for CAD software, ranging from very basic and free tools to VERY pricey professional suites. My experience is that MOST hobbyists, including myself, are using a tool called Autodesk Fusion 360. This is a powerful tool that can be used to create practically anything, AND it is **FREE** for hobbyists like us. I'll link this tool, along with other resources, at the end of this article.

Autodesk Fusion 360 will feel familiar to anyone who has worked with CAD programs before, but it can be a bit daunting finding your way around at first. There are great tutorial videos that will walk you step-by-step through simple projects, teaching you how to use all of the features. Some of the parts we may want to 3D print are actually relatively simple and with a few hours of practice you can be creating instrument panels or basic small details. With more practice there really is no limit to what can be designed with this tool.





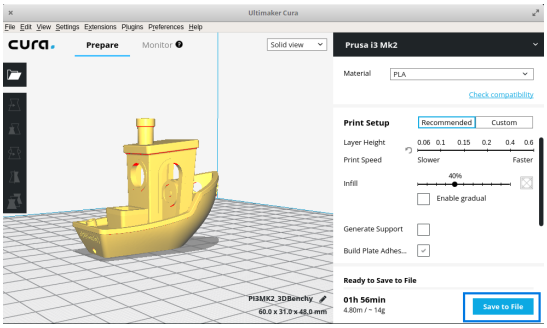
Scale 3D parts can range from "simple", like these parts to dress up an ARF P-47 wheels, to "Extreme", like this Wright Whirlwind J-5C Radial Engine. Both are made with the same software and printed with similar hardware.

Editor's Corner: SEFF 2018

By Carl Lydick

Software (Continued):

In addition to the design software you will also use a program called a "Slicer" that will take the file you create in Fusion360 and create a "tool path" that tells the printer how to create the part. In my experience there are a LOT more options here, with several popular versions. Most of these are free and offer similar features and people tend to find one they like and stick with it. Personally I have been using a tool that came with my 3D printer called Sailfish, but more popular tools include Cura, Slic3r, Makerbot Print, and others.



Screenshot from the Cura Slicer software

Generally when you purchase a 3D printer the manufacturer will recommend a particular tool, and I would recommend starting with their recommendation while you get comfortable with the printer. This is the tool that will let you specify things such as the height of each layer, the speed of the printer, and how densely the parts are printed (the "infill" for the part).

If you don't own a printer and are having your files printed by someone else, GOOD NEWS! You don't have to worry about this! You can just give your friend the .STL file you created with Fusion 360 and THEY can tweak the slicer settings.

Getting your part printed:

So you've designed a part… but you don't have a printer! There are plenty of options to get your part printed. Online vendors such as shapeways.com or 3Dhubs.com can print your part and ship it to you. There are even some local companies popping up such as 3DHerndon.com. I have NOT personally used any of these services, but the big ones such as Shapeways.com and 3Dhubs.com have been around for a while and are reputable.

Another option are local maker spaces. Nova Labs and Makersmiths are two popular ones in the area. You may need to be a member or pay a fee to use their 3D printers, or even provide your own filament, but policies will vary from one place to another. These are both linked in the resources section and you can contact them directly.

Editor's Corner: SEFF 2018

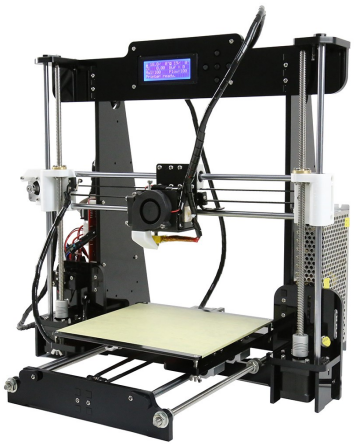
By Carl Lydick

Obviously an even better option is to know someone. I would be happy to help out NVRC members with 3D printing parts for their models, within reason of course! I won't be printing entire planes, but if your part will fit in my machine and you're not in a rush I'll be happy to work with you and bring it to the next club meeting.

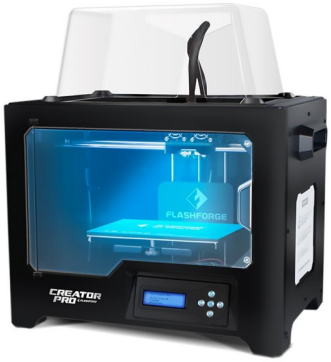
Buying your own printer:

So you've got the bug and you can't get enough of these 3D printed parts. It is time to bite the bullet and buy a printer.

There is a HUGE rage of options, features, and models available. Too many to cover here for sure. I'll do a more comprehensive breakdown of printers in next month's newsletter. I will say this... you do NOT have to spend big money to get a quality, reliable machine. If you're comfortable assembling it yourself (*you build airplanes… how hard can it be?!?*) a popular model is the Anet A8, which you can pick up on Amazon for $169.99. If you want a pre-assembled printer you will be looking at something starting closer to $500, and as with everything in this hobby the sky is the limit for features and cost. Some models with more features and larger print volumes can reach several $1000s of dollars. In my opinion these systems are NOT necessary for most of us in the hobby. I would look at offerings from some popular manufacturers such as Prusa, Anet, Makerbot, Lulzbot, and Flashforge to see what fits your budget and meets your needs.



Anet A8 is a popular DIY printer



Flashforge Creator Pro Pre-assembled and ready to run.

For my printing I use a Flashforge Creator Pro. I opted for this system because it was pre-built, enclosed (I need to keep it in my dusty shop), and has dual extruders, meaning I can print in 2 materials at the same time, or two colors of the same material. For most jobs this is unnecessary, but it can be a nice feature to have. I'm happy with the quality, easy of use, and reliability, but I am not their salesman and there are tons of other options that work just as well.

Editor's Corner: SEFF 2018

By Carl Lydick

Conclusion:

3D printing has become as diverse a hobby as RC aviation. Communities have sprung up, people have taken sides in favor of their favorite vendors and technology, and it is easy to find 100 conflicting opinions about everything. Don't let that stop you from enjoying and benefiting from 3D printing. There are already a number of members using 3D printing today, and I'm going to encourage everyone who may be interested to pull us aside and pick our brains with any questions you have. If I don't know something I'll be happy to help figure it out. If you've got a part in mind and don't know how to approach it, let me know and we can chat about it together.

Links:

Autodesk Fusion 360

Download: https://www.autodesk.com/products/fusion-360/overview

** This software appears to have a cost associated with it, but when you install you specify that you are a hobbyist and it is free for at least 1 year.

Slicer Applications

Cura Download: https://ultimaker.com/en/products/ultimaker-cura-software

Slic3r Download: https://slic3r.org/download/

Makerbot Print Download: www.makerbot.com/3d-printers/apps/makerbot-print/

3D Printing Services

Shapeways: https://www.shapeways.com/

3DHubs: https://www.3dhubs.com/

Local Maker Spaces

Nova Labs: https://www.nova-labs.org/

Makersmiths: https://makersmiths.org/