

THE SLOW ROLL



CHARTERED #921
Since DEC. 1974



President—Lou Pfeifer IV
Vice President—John Geyer
Treasurer—Oliver Heinen
Secretary—Bobbie Santoro
Editor—Bob Purdy

JUNE 2019

The Slow Roll is published by the Sun Valley Fliers by and for its membership to all others interested in the building and flying of radio control aircraft.



Inside this issue: Cover Photo showing Cynthia Hemenway with bench donated to the SVF SVF CLUB ending 44 years

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Warbirds
Wood 4 Wood

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Radio help
3D by Oliver
Poka Dots
OEAF Memorial

Sunset Fliers

Wayne Layne

VIDEOS

Meeting JUNE 5, 2019



Presidents Report For June 2019

Hello all,

Well the runway project seems to be a BIG success. I am glad to report everyone is enjoying this new addition to our club. Please let's all pitch in and keep our club clean and safe.

I hope that all of you got the chance to see the Memorial Bench that was donated to SVF by Allen Hemenway's wife Cynthia. This is a great way to remember one of our fallen members and every time we use it we will think of him. Thank you Cynthia!

I am glad to report that we received a Renovation AMA Grant check for **\$3000.00** toward the expenditure of the runway project. I had filed with the AMA in February for this and it finally came. Thanks to Dan Bott for his help with this.

There will be NO MEMBERSHIP OR BOARD MEETINGS FOR JULY AND AUGUST!!!! The Board has made this decision because of the poor attendance at last year's meetings due to people traveling and the heat of summer. So have a wonderful safe and happy summer. We will re-convene for the September meetings as usual. If any member has any pertinent questions that need to be answered please contact myself or any other Board Member.

Our Monthly Membership Meeting will be held at Deer Valley Airport Restaurant on Wednesday June 5th 7:00 PM. Please come out and support your club and say hello. ***This will be the last meeting till September 2019.***
Have a wonderful and safe summer!!

Lou Pfeifer IV.

President



05/01/2019 MEMBERSHIP MEETING AGENDA

Officers: President- Lou Pfeifer, V.P. - John Geyer, Treasurer- (OPEN), Secretary- Robert Santoro
Board Members: Jamie Edwards, John Geyer, Wayne Layne, Bryant Mack, Ernie Mack, Frank Moskowitz, Wayne Robinson, Bob True.

Absent: Wayne Layne, Bryant Mack

Open: 7:02 PM

This is our SVF Annual Election Meeting. Good Luck to all our incumbents and Nominees. Frank Moskowitz asked to address the Membership. Frank honored Lou and Bob for managing the club through the new runway project and going above and beyond to be sure the club received a wonderful runway.

Guests: Al Powell

New Members:

Solo Pilots: n/a

Secretary's Report: Bobby Santoro 1. Tony Quist 2. Frank Moskowitz

1. Approve April's Report

Membership Report: Bob True, 211 Members

Treasures Report: (OPEN) 1. Wayne Layne 2. Nate D'Anna

- 1) Approve April's Financials

Safety Officers Report: Ernie Mack Nothing of concern

Old Business:

- 1) Discussion on keeping field clean.
- 2) Garbage Dumpster.
- 3) Chairs on the Asphalt

New Business

- 1) Thanks Bob True for running the Election process.
- 2) No Drinking on the flight line
- 3) Bench has been donated to club in memorial of Allen Hemenway on behalf of his family.
- 4) Results for election are as follows.
 - President - Lou Pfeifer
 - Vice President - John Geyer
 - Secretary - Bobby Santoro
 - Board
 - Wayne Layne
 - Bob True
 - Jamie Edwards
 - Tony Quist
 - Bryant Mack
 - Craig Guest

Door Prizes: Jamie Edwards, Bobby Santoro, Al Powell , Oliver Heinen, Charlie Beverson
● Bernard Horenbeker, John Geyer, Rusty Fried, Frank Moskowitz

50/50 Raffle: Craig Demarcus

Show and Tell: n/a

Adjourn at: 7:56 PM



05/06/2019 Board Meeting Agenda

Officers: President- ABSENT, VP. John Geyer, Secretary- Bobby Santoro, Treasurer- (Open)
Board Members: Jamie Edwards, Craig Guest, Wayne Layne, Bryant Mack, Ernie Mack, Frank Moskowitz, Wayne Robinson, Bob True, Tony Quist

Absent: Lou Pfeifer

Commence: 6:32 PM

Open: Lou is out for personal reasons. John Geyer will chair Meeting. Thanks John! Lou congratulates the New Board Members and thanks them for helping our club!

Guests:

Secretary's Report: Bobby Santoro 1. Frank Moskowitz 2. Wayne Robinson

- 1) Approve April Minutes

Treasures Report: (Open position) 1. Wayne Robinson 2. Frank Moskowitz

- 1) Approve Financials for April as per report at Membership Meeting.
- 2) AMA Grant has been recieved
- 3) Dan Smith resignation as Treasurer at Membership/Election Meeting.
- 4) As per Lou Pfeifer's email on this topic Lou had asked Oliver Heinen to fill The Treasures position as his choice to the Board. In going with the past the 1st runner up in the election is usually asked to fill VACANT POSITIONS. Board to vote. **Vote is Unanimous**

Safety Officers Report: Ernie Mack

1. None

Membership Services: Bob True/ Bobby Santoro.

1. Bob True on Email's for New Positions (John, Oliver, Tony, Craig, Bobby).
2. New Badges for above mentioned.

Old Business: None

New Business:

- 1) Discussion on revamping sign that is permitted at the east end of parking lot
- 2) Solar Project, where does it stand post runway project.

Adjourn at 7:08 PM

What's Happening



Lou, Tony, Tom & Wayne were the guys that put the bench together.



Frank Moskowitz showing his appreciation to Bob True and Lou Pfeifer IV for their hard work they are doing for the SVF by presenting the FM award to them.



Ken's new turbine



What you can do with a little time and love. This is/was a COX's Pitt that was Lou's, given to Bob, then to Mike, and Mike's brother did the rebuild. Nicely done!

**OEAF MEMBERS AT THE GREENWOOD
MEMORY LAWN ON MEMORAIL DAY**



CAMERA OVER HERE, BIG SMILE



EVERYBODY HERE FOR PHOTO SHOOT?



NOW WHERE DID FRANK GO???



And the Winners Are... Top Gun Special Awards!

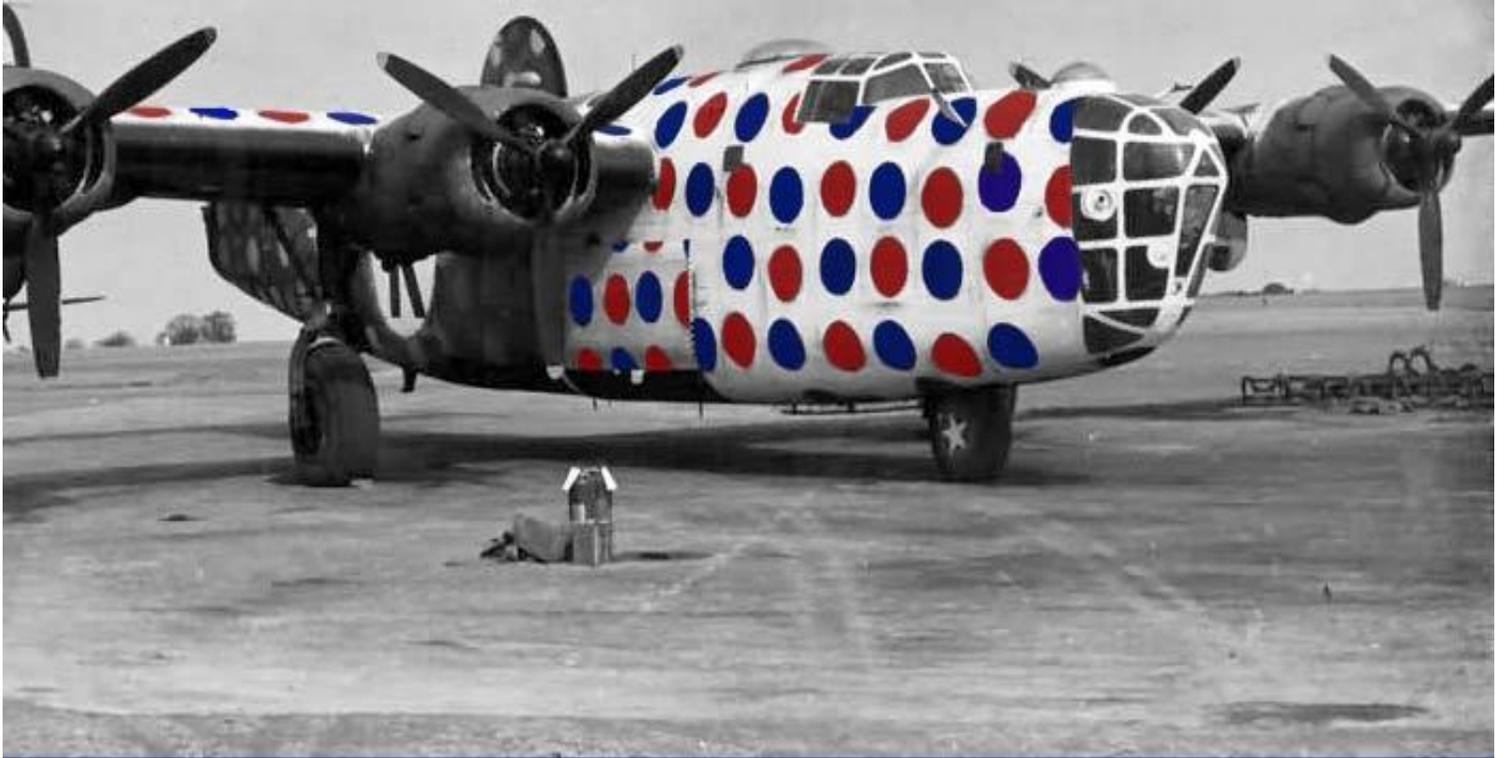
<https://www.modelairplanenews.com/winners-top-gun-gold/>

WAYNE LAYNE SVF



POLKA DOT WARRIORS

THE ASSEMBLY SHIPS OF THE MIGHTY EIGHTH



CLAPPED OUT AND PAINTED IN HUMILIATING MARKINGS,
THE "JUDAS GOAT" AIRCRAFT OF THE MIGHTY 8TH AIR
FORCE KEPT THEIR UNITS IN LINE.

<http://www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/477/Polka-Dot-Warriors.aspx>

Radio Fundamentals: fly better with dual rates, expo & mixing



Utilizing your radio's built-in programming will let you fly better with more control of your model. This article is intended for new and intermediate fliers and highlights three important features you need to understand, dual rates, exponential, and mixing.

LET'S GET STARTED

First of all, when holding your radio during your flight, it's a good idea to have the "standard" position on all switches be "away" from you. Another way to say this is to have the switches located on the top of your transmitter toward the back of the case and those on the front of the transmitter toward their top position. Establishing this allows you to always return to your most comfortable flying parameters should your flight get on the edge of your control abilities for whatever reason.

EXPONENTIAL

Simply stated, exponential in our radios gives stick inputs a softer "feel" around the center of stick travel. The greater distance we move the stick away from center, the less effect any programmed expo has. Expo works in concert with rate settings and is another piece of the puzzle in getting your radio controls exactly the way you want them.

Sneaking up on how much expo to use is a good way to do it if you've never tried it before. Entering a 10% value would be a good start. You will hardly notice that amount of input on the bench or in the air. But once you figure out the procedure for setting it, there's no mystery about going into the menus and increasing it to +15 or +20, or even more. Some of the best pilots use +70 or more on expo to fly 3D. Most sport flyers will and should be in the range of +20 to +40. The type of aircraft you fly will determine how much expo you should use, if any. Even trainer aircraft and novice fliers can use some expo to advantage.

Have no fear of exponential. The softer feel around stick center will make you a smoother flier; just don't overdo it. For most helicopters, it's a must. For most sport aircraft and sport fliers, it really helps a lot in advancing your flying skills.

DUAL RATES

Dual rates are one of the neat features of our modern radios. The elevator dual rate switch is usually in the upper left front corner of the transmitter; the aileron switch is in the upper right front corner; and the rudder switch, if you have one, is in the upper right top. The purpose of these switches is to establish a limited servo travel position when the switch is moved to either of its two positions. For example, the switch "away" from you might give 100% servo travel, and if you click it toward you, your dual rate setting might provide 70% travel of that same servo (surface).

Here's a specific example. Let's say you are flying a tail-dragger and that you need to input small amounts of rudder on takeoffs. You might program your standard position rudder rate at 70% of available rudder throw (the switch would be away from you, toward the back of the transmitter). Your second rate might be 100% (or even more) so that when you want to fly aerobatics, clicking the switch forward will give you almost double the throw on rudder. The result of this setup is that your ground handling and basic maneuvers will be very smooth on your standard setting, but your rudder authority for maneuvers will be very powerful on your high rate setting. The amount of travel that you set needs to be adjusted after flight experimentation. As you know, servo arm and surface horn length are also factors that control surface deflection amounts. Programming "rates" are the final step in tuning your aircraft to your liking.

Dual rates are not to be ignored! This feature is an important component provided by our modern radios that make us smoother, more accomplished fliers. They are easy to program, and even the beginner-level transmitters

sport dual rates. Top shelf radios have triple rates! Several radios can combine all rates on one switch. In my opinion, that's a really nice feature that might be used after[ITAL] you program individual rates/switches and get them where you want them. Then, one switch sets all three surfaces to do either high or low settings, or any combination you want.

MIXING

Mixing presents more of a challenge. It also requires more patience to get it the way we want it, but the effort is worth it.

Most modern radios feature mixing circuitry. Some radios even have pre-programmed mixes. One of the examples of how mixing can help make you a better pilot is the knife-edge mix between rudder and elevator. Knife-edge flight is a very cool maneuver, and really cool when you don't have to constantly input elevator to hold the plane in position as it flies down the flightline on its side! So how is this accomplished?

Let's start by assuming you have the rate switch the way you want it. That means it's set to hold the nose of your aircraft up a bit and level with the ground as the plane flies by you rolled over on its side. You might have fine-tuned your "normal" rate setting to achieve this. Now let's get more specific. Let's say you are at the field, and the wind is blowing right to left. You are going to fly your knife-edge maneuver from left to right, into the wind. You enter by giving the aircraft right aileron, making it bank to the right a quarter turn, and left rudder to hold up the nose. All is going well at first, but in a second or two you see the nose of the plane going off line and pulling toward the canopy as you fly by. You need to correct with a bit of down-elevator. After a few passes, you get the feel of what is required to make the knife-edge look good. But you are constantly correcting, and the flyby looks ragged when you over/under-correct. The solution to this condition is a rudder/elevator mix.

What you need to do is program about 5% of down-elevator to automatically input into your aircraft when you hold rudder. Since you don't want this to happen all the time when you use rudder, you put the mix on a switch on the transmitter. Now, just before entering knife-edge, you hit the switch, roll a quarter turn, and when you enter your rudder command, the elevator deflects downward to whatever value you have entered in the mixing program. Five percent is a good starting point, but it may take more or less, and sometimes it may even take a "negative" mix, meaning the plane was moving toward the landing gear, not the canopy. In that case, you program up-elevator mixed with rudder. It sounds complicated, but it really isn't. The best advice is for you to read the manual that came with the radio, and try it on the bench, then out at the field. I like to take some written notes also, so when I get to the field I can remember what I did, and how to add or subtract more input if necessary.

There are many mixes you can use. Flap/elevator is a common one, and so is aileron/spoilers. Give mixing a try; like rates and expo, you are going to like it when you get it right.

Most important, any radio inputs or changes should be done by you, the modeler, owner, and flier of the radio and aircraft. It's OK and even preferred if someone with experience is looking over your shoulder, giving instructions or making suggestions, but don't let them make the changes. Hands-on experience is a basic tenet of effective learning.

We have these features and many more in our radios. It might be time for you to give them a detailed look, with the goal of making your flying the best it can be. Master your radio; don't let it master you!

By Tony Ianucelli

WOOD FOR WOOD

THE NEAR MYTHICAL BOMBER COMMAND ATTACKS
GERMAN DECOY AIRFIELDS WITH WOODEN
ARE NOW MORE THAN JUST APOCRYPHAL

ON WOODEN
BOMBS
LEGEND



<http://www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/355/Wood-For-Wood.aspx>

SVF Sunset Fliers



Pin the names on the photo

Spencer, Yuri, John, Barry, Bryce,
Joe G, Mike, Rachel, Joey G, Bryant,
David



3D Printing – An alternative approach to fixing airplanes

Some weeks ago, on a nice day with some nasty cross wind, I had an unfortunate crash with my Viper Jet. I had maneuvered it somehow down onto the runway (aka landing) and brakes were already applied when my brain decided to make a more than dumb move and put in rudder to correct for wind however to the wrong side. The result was an encounter with our newly made fence. The good news, the fence works as intended and prevented bigger harm from potentially hitting someone.

So much for the good news ... one of the wings had some internal damage but nothing that couldn't be fixed with a healthy dose of gorilla glue, however, more importantly, the nose of the Viper Jet had been crushed up to the first former. The fuselage is made out of one fiberglass piece all the way from the nose tip to the tail end, and as with every good airplane that you have for some time it's not made anymore, and there are no spare parts anywhere to get. The classical approach to fix this kind of problem is to create a new nose cone by sanding down a Styrofoam or Balsa block by hand in an endless effort to eventually create something that hopefully somehow resembles the original shape. After that, you spend another lengthy while creating a negative mold form of the thing to then laminate the new part into that mold. The entire process typically involves a significant mess made up of sanding dust, cut glass fiber debris, and epoxy in all kind of states all over the place including your best pair of jeans and the most beloved T-Shirt. At the end you hate yourself, your wife hates all of it and even the otherwise laid-back cat it heavily annoyed and ready for combat.

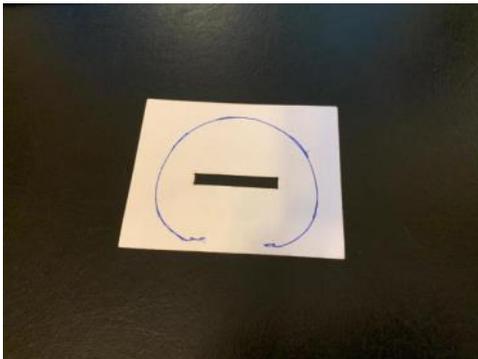
Having that perspective in mind, I decided to try another way that turned out to work pretty well. Although I have to admit that you need to have some affinity to computers and software to go this route, if Microsoft Excel is a complex witch-like thing from a distant future to you then you are better off with the traditional messy way and spending some money on flowers for your wife and premium cat food to get things straightened out again.

The way to go: Create a Computer 3D model of the Nose Cone and then simply print it using a 3D printer.

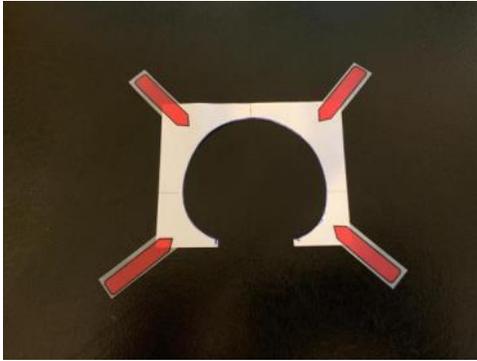
The biggest challenge in this is to create the 3D model. Once you have the 3D model, you can print as many parts as you want. Did some major mistake painting it ... hit the print button, and a few hours later, you have a new one. The same accident again in a year from now hit the print button, and a few hour later, you have a new one. You get the point ...

Creating a 3D model in a computer that is supposed to seemingly fit onto an already existing real-world object is not easy. And it is even more complex if the object involves complex shapes like the curvature of a fuselage which is neither a perfect circle, nor a straight line nor anything close to it. So this is how I did it:

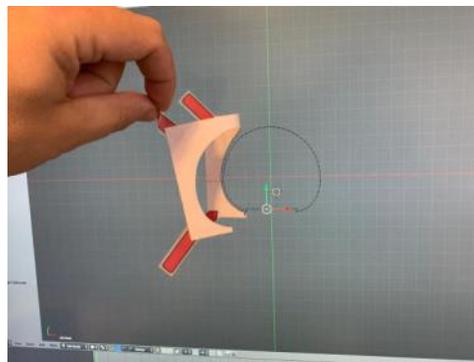
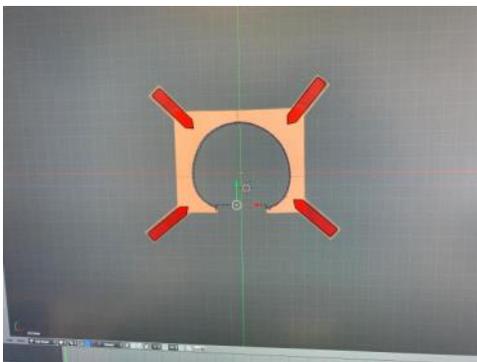
1. Carefully cut off the destroyed nose cone at the former preserving as much as possible of the crushed nose.
2. Hold a sheet of paper against the now flat front end of the fuselage and mark the outer shape of the fuselage with a pen. This leaves you with something like this:



- Using some good scissors cut out the inner part of the shape and attach some post-it marker stickers to the edges:



- Fix this onto your computer monitor and create the inside shape (the outside shape of your fuselage) using a 3D modeling software of your choice.



This leaves us with the first important milestone in creating the 3D model. We have the base shape of the nose cone that needs to go onto the fuselage.

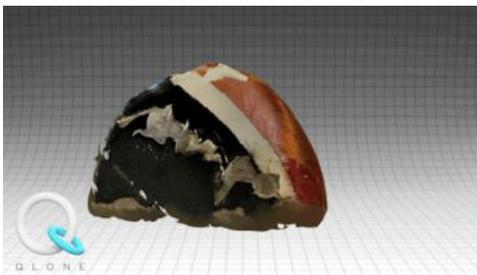
Now here is the catch, choosing and using the right 3D software is a topic of its own that brings quite some complexity and if you are not computer savvy and you have never done anything similar then this is the point where you are better off with the traditional messy way. 3D software – like almost all software – comes in two flavors, open source (at no cost) and commercial software. Good commercial 3D software is everything but cheap. Professional 3D software as used in the auto or airplane industry can easily cost thousands or tens of thousands of dollars in license fees every year which is why I went with the more accessible open source approach. I am a big fan of openSCAD, and I am using it for almost everything. It lets you create very complex functional parts as long as the geometry can be described in a mathematical way, however for this specific case of the nose cone the software of choice is Blender (as we do not have any reasonable mathematical description of the shape). Blender is a professional level tool that lets you create and render 3D scenes, cut and render movies, etc. Blender has been used in some professional movies, and I also use it to create my YouTube videos. However, all the functionality comes at the price of a pretty complex user interface. If you are using Blender for the first time, you have to expect several hours of watching tutorials on YouTube before achieving anything meaningful. It's always the same; you cannot teach quantum mechanics using the vocabulary of a 3-year-old – same thing, you will never find software that lets you do complex things with an easy user interface (unless it is specifically built to do just one specific complex things and nothing else).

5. The next challenge is to 3D model the new nose cone by extruding the base shape step by step (I used 2mm increments) and shrinking the shape with every step such that it ends in the nose tip at the right distance from the base. It also has to be done in a way that the curvature of the cone resembles the curvature of the fuselage. Trying to do this out of the blue without any guidance will never be successful. You will spend days, and it will still not be any close to what you really need.

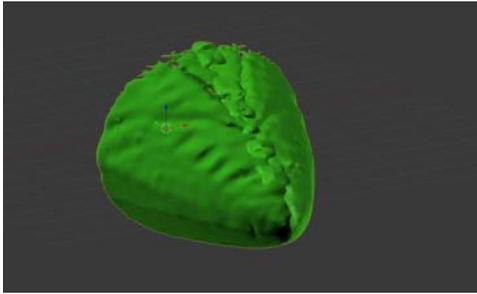
The solution: 3D scanning of whatever is left of the original nose cone to use this information as a design guide. I was lucky in that I could get two helpful pieces from the debris, one half of the front end of the nose cone and a part of the rear end of the cone. The following picture shows the two parts together with the final result of this entire exercise, the new 3D printed and partially painted nose cone.



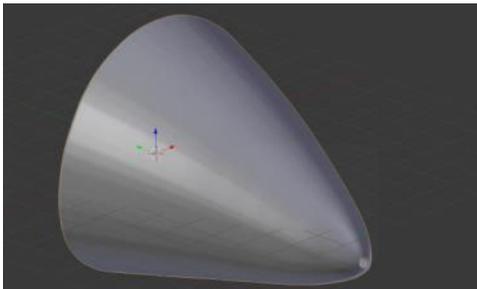
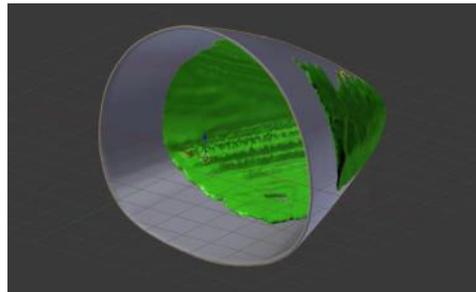
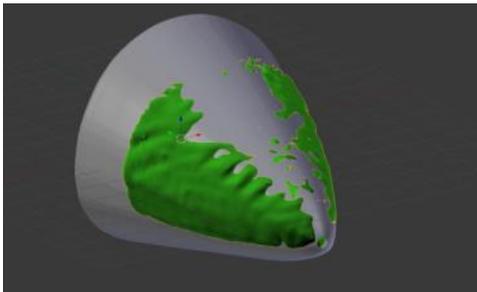
Using the iPhone app “Qlone” I did a 3D scan of the front half nose cone part. The app is free for download in the Apple App Store (and I guess on Android as well), and you can play around with it for free but you have to pay for exporting files to actually use them (the app also has an interesting augmented reality feature that lets you put a 3D scanned object in a room as if it would be there in real world ... but we don’t need that here). I was quite surprised of how good the scanning works with an app that only uses the iPhone camera to reconstruct a 3D object, a task that usually requires complex laser-scanner tools. This is the scanned 3D model of the old nose cone:



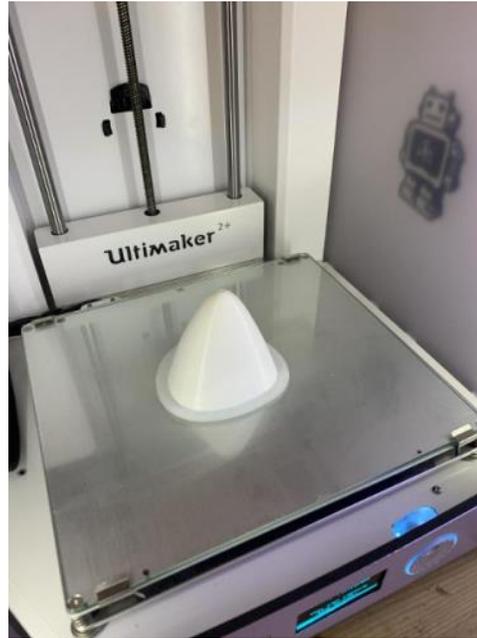
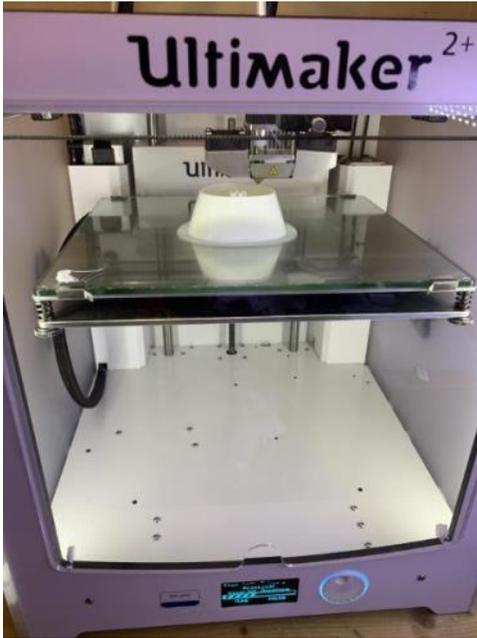
6. Now that we have this, we can export the 3D scanned file of the old nose cone as .stl file and import it into Blender. In Blender, we create a copy of the half cone (such that we have two of them), mirror one of them along the center plane and put both halves together to create a 3D model of the original nose cone front end:



7. This does already look very promising; however, the scanned model of the old broken nose is not good enough to directly print it. But we can use it to 3D model a new nose cone around it by using the old scanned cone as a guide for achieving the right curvature and shape. Measuring the height of the other part (the partial ring) from the old nose cone we know how far away to place the 3D scanned front end of the nose cone from the base that we created earlier (using the cutout paper on the screen). After that, it is fairly straight forward to model a new nose cone around the old one – this process takes 1-2 hours, but it does not involve any magic anymore. The next two pictures show the newly modeled nose cone together with the 3D scanned old cone (green), and the third picture shows only the new 3D model:



8. At this point, all the heavy lifting is done; we have a proper 3D model of the part in our computer. What now follows is the regular process of 3D printing; exporting the model to the slicer software of choice and printing it.



9. Now we have the nose cone in our hands, and we can print as many of them as we like at the push of a button. Most probably the first print will not fit perfectly, and you need to go back to your 3d model and make minor tweaks. In this specific case, I had to print three cones before I got it right enough (you can continue forever and always get it a bit better). The only two things left to do are to paint it and glue it onto the airframe. As I did not have the original red-brown-ish color of the airplane, I decided to change the color scheme a bit, so I only needed black and white. The following pictures show the final result, including some comparison of the old cone fragment to the new one (old one put on top of the new one).





And yes, next time I'll spend more time on creating a smooth transition with no visible line between the fuselage and the nose cone whatever ...

So what's the bottom line of all of it ... ?

If you are already into 3D printing and this kind of stuff then using a simple 3D scanner app on your Smartphone can be a quite powerful tool to create spare parts in a matter of hours that you then can print as often as you like with almost no additional efforts. However, if you are not into computers ... don't try it; it will cause a lot of frustration.

Thinking ahead, the next time I am building a new plane, I will probably 3D scan all parts before putting the plane together, so I have the 3D information of the new parts in case I need them. This is 1-2 hours of work that can save a lot of time and potentially money later on.

I hope you enjoyed the read,

Oliver Heinen

Anatomy of First Person View (FPV) — What's needed for that “from the cockpit view”.



Once you get involved with RC airplanes, it doesn't take long for you to hear the term “FPV,” and many have already discovered how much fun this onboard video feature can be. The acronym “FPV” stands for “First-Person View,” and the equipment needed to enjoy that “from the cockpit” video experience has become one of the most popular add-on

packages available today. There are several kinds of RC aircraft that now come with First-Person View function as standard equipment, you can add aftermarket FPV gear to your aircraft if it isn't equipped with it. Let's take a closer look.



Hobby King's RC832 5.8GHz plug and play FPV set comes with everything you need except a monitor.

There are several sources for aftermarket FPV equipment, and here is an excellent 2.4GHz setup using mixed and matched brand products.

BASIC OPERATION

FPV requires a mini video camera, a video signal transmitter, a video receiver and a video monitor or video goggles. As with anything else involved with RC, it is always going to be easier to start with a complete FPV package where everything is designed to work together. If you buy each part by itself, you will have to figure out how to make all the connections with a custom homemade wire harness, or adaptor, which may require soldering wires and connectors together. As a rule, for your first time out, stick with a plug-and-play package.



Video Camera

Available in all shapes, sizes and price points, whichever camera you get will have to be wired to your airborne power source and the FPV transmitter. Note Spektrum's ultra micro FPV camera to the left comes with a built-in transmitter and antenna.



Most of the compact lightweight cameras used in FPV setups come with inexpensive plastic lenses. Once your system is set up, you may have to focus the camera so you have a sharp video image. Most have a removable/adjustable lens, and to focus it you have to loosen a set screw and then

carefully screw the lens in or out to bring the video image into focus. It is also here where you can improve your optics, as there are replacement lenses available made of glass and with different viewing specs. For the best experience, use a wide-angle lens.

Airborne Video Transmitter

Transmitters for FPV systems are relatively small and compact. Some quads come with the equipment integrated while others can be upgraded with aftermarket add-ons. Transmitters produce a lot of heat, so

be sure to install them where there's proper airflow to cool them down.



This is the part that converts what the camera sees into a video signal that can then be transmitted down to the FPV ground station. The camera is connected to the transmitter with a wire lead and it is important to match the wires properly. With a plug and play setup, you simply plug the connectors together. For a mix and match, the color of the wires becomes very important. The wiring for FPV is the same as with all electronics. The black and red wires are the ground (-) and power (+) wires respectively. The other wires leading from the camera will be yellow (video signal) and if there is a fourth (white) wire, it will be the audio signal.

WARNING

It is very important to first attach the antenna before applying power to the transmitter unit. The antenna is required to load the unit's circuitry. If you apply power to the unit without the antenna attached, you can overload and burn it out. If in doubt, always follow the directions.

Ground-based Video Receiver

Your ground station can be anything from a set of goggles that have a built-in receiver to a table top supporting the FPV receiver of your choice. Various antenna arrangements are used and here you can also fine-tune choices for the best signal reception possible.

This is the matching part to the transmitter that receives the video signal transmitted from the FPV-equipped aircraft. It too is equipped with one or two antennas, and they should also be connected. Once the video transmitter and camera are powered, some transmitters will automatically lock on the video signal while others have a switch for selecting the clearest, strongest signal. Some cameras/transmitter may also have channel select switches. Matching the channels provides the best signal reception.



Monitor

When it comes to seeing what your FPV camera is looking at, you have a lot of choices. Standard flat monitors are very popular and like the smaller one to the left, can plug into your ground-based receiver. The larger one below with dual antenna is a combination of monitor and receiver. It even has built-in rechargeable batteries!

The ground-based video receiver will have an output jack that plugs into a standard AV (audio/video) cable. The cable connects the monitor to the receiver unit. Again, you have to match the colors of the jacks, yellow for video and white for audio if your FPV camera/transmitter is equipped with a microphone.

FPV Goggles



The ultimate in "geek swag," FPV goggles are the coolest way to experience FPV video. The white Cinemizer OLED goggles from Zeiss (left) are top of the line headgear. The Fat Shark goggles above, are less expensive and are available in complete packages. Notice its mushroom antenna, the goggles have a built-in FPV receiver.

Here's a close up of the optics in the Zeiss goggles. The are very high quality and the focus is adjustable.

A popular alternative to the flat monitor, are one-size-fits-all FPV goggles. These come in varying levels of quality and they provide a virtual experience of the video viewed directly with split images, one for each eye. Basic gog-

goggles have fixed focus and most cannot be used by people who wear glasses. It is best to wear contact lenses as the goggles do not fit over glasses.



There are also high-quality goggles that, much like a set of binoculars, have adjustable eyepieces for focus and pupil position for each eye.

There are also combo sets for both goggles and monitors that combine the viewing part of the system with the receiver all in a single unit. They have an antenna jack, and some also have rechargeable battery packs incorporated into them as well so all you have to do is put them on and turn them on to see

the FPV video image.

Power



Power systems for your FPV system, as well as the wire leads and connectors, should all be compatible. Of course you will also need a battery charger for the battery pack(s) you use for power.

Once again, if you use a plug and play package you don't have to worry about getting your setup up and running. Most airborne units can be run with a wire harness plugged into between your aircraft's battery pack and speed control. You can also supply a separate battery pack to power your FPV equipment if your aircraft can handle the additional weight. In general, additional weight means less flight duration. You don't need to include a power switch, just plug in the battery to turn on your system.

BOTTOM LINE

Whether you want to try piloting your aircraft using a live down feed "from the cockpit" view or you just want to give your friends a virtual "ride," First-Person View provides a lot of fun and excitement. This electronic bird's-eye view provides a new perspective of the world around you. Give FPV a try; you'll never look at RC aircraft the same way again.





VIDEOS and Websites Links
Click on to view video, website



The 150th Anniversary of Driving the Golden Spike

<https://www.up.com/goldenspike/index.html>

https://www.youtube.com/watch?time_continue=29&v=WXpXvyFjFDM

Joe Nall 2019 - Scale Large Stucka ZDZ 210 Inline

https://www.youtube.com/watch?time_continue=248&v=jG0hOmrD_4Y

Joe Nall 2019 - Carf P-47 Razorback Moki 250 radial engine warbird

https://www.youtube.com/watch?time_continue=8&v=m_e-Q0cdHYg

Joe Nall 2019 - Elite Aerosports Havoc GTS Noon Demo

https://www.youtube.com/watch?time_continue=54&v=rmCvu-zAp3M

Joe Nall 2019 - Twin Riley Model B R/C Planes Radial & Boxer

https://www.youtube.com/watch?time_continue=51&v=Nw_IBQtWle8

Joe Nall 2019 - Kolm Engines 6 Cylinder Boxer 4 Stroke

https://www.youtube.com/watch?time_continue=69&v=oEAmJM_3Erg

Joe Nall 2019 - Post Great War Military Plane with Radial Moki Engine

https://www.youtube.com/watch?time_continue=12&v=WFaDj4vfONo

Joe Nall 2019 - Skymaster Large 1.365 Hawk 100

https://www.youtube.com/watch?time_continue=198&v=Sb6RDCn6kqo

Joe Nall 2019 - Scorpion Power Systems Noon Demo

https://www.youtube.com/watch?time_continue=85&v=1rnpprFOi5k



My thanks to those who passed this info on.



JUNE 2019 SVF Birth Day Boys

Jerry Dolbow
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Loren Counce
Tom Perkins
Jerry Dolbow
Jared Simmons
Keven Resinger
Allen Casey
Yuri Higuchi
Ernie Mack
Joe Giammarino
Louis Pfeifer iv.
David Ingraham
Mike Rogers



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SAT 10:00 AM — 8:00 PM
SUN 11:00 AM — 6:00 PM

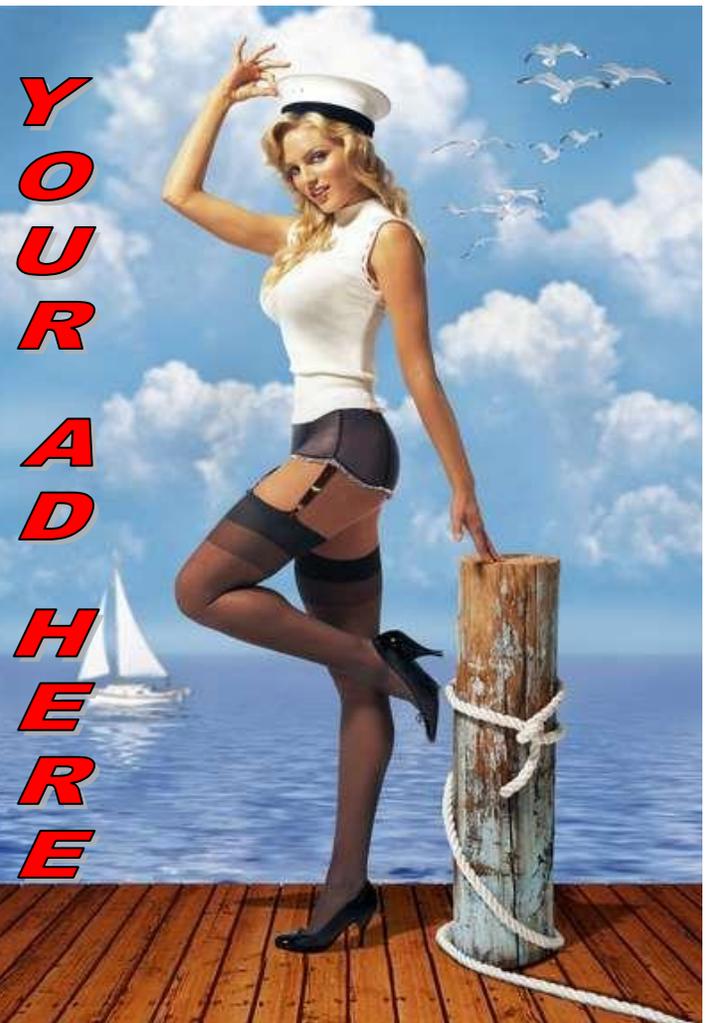
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SPECIAL NOTICE TO PILOTS!

"Sun Valley Flyers Utilizes a 400ft ceiling for flying model aircraft allowing for only momentary breaks caused by non-sustaining maneuvers.

All pilots must utilize a spotter at all times and abide by AMA Rule 540d" (see and avoid procedures)

Any pilot willfully violating this rule is subject to loss of flight privileges.





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