THE SLOW ROLL

CHARTERED #921
Since DEC. 1974

President—Frank Moskowitz
Vice President—John Geyer
Treasurer—Gene Peterson
Secretary—Jim McEwen
Editor—Bob Purdy K9JNB
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DECEMBER 2013

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

IMAA Chapter 782

Inside this issue: **Cover Photo by Joe Balabon of Brian O'Meara F9F-8**

THE PRESIDENTS CHANNEL

Frank Moskowitz

DECEMBER 2013 SLOW ROLL PRESIDENTS LETTER

Welcome to the December 2013 Slow Roll. It's time to reflect on the past year and think ahead to next year.

So, I will take this opportunity to do a little reflecting on 2013. First of all, I want to thank all of the members of the Club. We had a great year of flying and FUN. We welcomed many new Club members and they have become friends. Our membership is very active and we shared many hours of flying, instruction and great conversation. We continued to make improvements to our field. Our most valuable improvement is our entire member's awareness regarding altitude and having a spotter at your side at all times. We started a test for the Central Pilot Station. We hope that you can test it out and offer your honest opinions. I'm positive that Sun Valley Fliers Club will become the premier flying club in Arizona. 2013 was a year I will remember for the great contributions of our elected officials and board members and the many members that gave their time and finances unselfishly. I thank you all very much!

For those of you that haven't attended a club meeting in a while, December is the time to start. Please join us for the December 4th club meeting. We will have many raffle prizes and the 50/50 could make you very happy $$$. You never know what might happen, and you don't want to miss it. Meetings start at 7:00 pm. Remember that you can purchase food prior to our meeting. If you want to eat I suggest you arrive no later than 6:15 pm. Location is Deer Valley Airport Restaurant. (7th avenue and Deer Valley Road).

I would like to close this month's article by wishing all a wonderful holiday season. Whatever holiday you celebrate, may it be filled with good health and happiness and the promise of a great new year. Enjoy your Holidays and start your projects for next year's fun.
Have fun out there!

Frank Moskowitz
President

SVF MEETING DECEMBER 4, @ 7:00 P.M.

Sun Valley Fliers Club Meeting Minutes – 11/6/13

The meeting was called to order at 7:05pm by **John Geyer (Frank was out of town on business**). There were 27 members in attendance.
John introduced the executive and the board of directors in attendance.

Guests:

- None

New Members:

- **Joe Keller**

New Solo Pilots:

- Howard has JB Bower's solo certificate and will deliver it.

Secretary's Report

- The minutes of the October meeting were accepted as published in the Slow Roll.

Treasurer's Report - Gene Peterson

- Dues are coming in pretty good so the regular account is $ income and $ in expenses so we have $ in the regular account plus the savings for a grand total of $. This includes $ in field cleanup fees.
- There was an incident at the field this afternoon. There were a bunch of stuck vehicles on the road coming out of the field. The City of Phoenix Firefighters were doing exercises and somehow got locked in.
- The Treasurer's report was accepted.

Membership Director's Report – Mike Peck

- 101 of 284 people have paid their 2014 dues.

Safety Officer Report - Ken Justice/Frank Seminara

- No safety issues to report.
- Read Ken's article in the Slow Roll please.
- Contact Ken for your SVF apparel needs (hats, T-shirts, polo shirts, jackets, etc)

Old Business:

- **Ken Justice** will be serving out **John Deacon's** term as a board member
- 25 people turned out for the field cleanup for two hours on Oct 26th. It was a big success and the field looks great. Many thanks to **Tony Quist** for organizing this effort.
- The SVF Members Only Fun Fly is Nov 17th has been cancelled.
- **Ron Norton** got the Best Golden Age award at the recent 1/8 AF event.
- A trial period will be conducted for the central pilot station to allow people to try it for a couple of weeks in mid-month (set up on 16-17 and run for two weeks Nov 30) and then we can all chat about it at the December club meeting.

New Business:

- The Electric Fun Fly will be at SVF on Nov 16th to support the Wounded Warrior program. John provided a sign-up sheet if you'd like to help with labor.
- TIMPA Giant Scale fly-in at Tucson Nov 9-10
- The 25th AZ Jet Rally is at Superstition on Nov 21-24 (Thurs-Sun)

Community Awareness – John Geyer

- **The Electric Fly-In will now be donating the Wounded Warrior program.**

Door Prize Winners:

- **John Olejniczak** CA and kicker, **Mike Peck** CA & kicker, **Tony Quist** CA and kicker, **Gary Hedges** CA and kicker
- **Bruce Bretschneider**5 minute epoxy, **Paul Brown** 5 minute epoxy, **John Mullins** Hex drivers, **Ken Justice** Zona saw
- **Dan Bott** Tarantula connector
- **Special Grand Prize** Spektum DX5 donated by **Tony Quist** – ***Johnnie Russell***
- **50/50 – Bernie Frank**
- **Ron Peterec** has a table of stuff for sale.
- Some of John Deacon's stuff was auctioned of: Fly Baby plane, Saito .40 4-stroke,

Show & Tell:

- **Wayne Lane** gave a short discussion on brazing aluminum. Bernie has the brazing rods at his store.

The meeting adjourned at 7:43pm.

Respectfully submitted by, *Jim McEwen* - Secretary

$ TREASURERS REPORT $ with *Gene Peterson*

TREASURERS REPORT December 2013

Here is again, the Christmas Season……Time to make up those Christmas wish lists and get all those airplanes and engines and stuff lined up you've been thinking about. I'm thinking of a new Twin Cylinder Engine. RCGF just released their new Twin 30cc Gas engine. Have to find a plane for it also. Need a ¼ scale something. Maybe a Cub.

We'll see how that goes……..

Hope you have had a chance to try the New Central Pilot Station Test that is currently in place at the Field. We first started it at the Electric Fly last weekend and it seemed to work OK. Hope you can give it a try and we'll probably talk about it at the next General Membership Meeting on December 4th.

Renewals for the new year are going just a little slow 122 out of 284 current members as of Dec 1. Keep those checks coming in…….and thanks if you have already renewed. Thanks Mike for your hard work in getting the renewals in our Member Data Base and sending out the stickers. I'm likin' this new arrangement of having a Membership Director a lot.!!! Mike Peck@ **peckster1@msn.com .**

Have a safe and sane Holiday and buy lots of gifts for your kids and grandkids. They are all so under-appreciated…….ha

Regards *GENE PETERSON, TREASURER* **Az49er@cox.net** **602-579-0925**

DECEMBER 2013 SVF BirthDay Boys

First name Last name	Member type	Dob
Archie Dicksion	Senior	12/02/1938
James Osborn	Senior	12/05/1941
Louis Bennett	Senior	12/09/1944
Bernie Frank	Inactive	12/15/1929
James Talmadge	Regular	12/15/1949
Brad Schrimsher	Regular	12/16/1962
Peter Boland	Regular	12/17/1948
Stan Von Drashek	Senior	12/18/1925
Mark Bernier	Regular	12/18/1956
Dan Bott	Regular	12/19/1948
Ronald Topel	Senior	12/19/1937
Martin Jones	Regular	12/19/1967
Jim Schneck	Senior	12/20/1942
Joel Lieberman	Senior	12/22/1937
Bill Marhevka	Regular	12/22/1963
MahendraBairagi	Regular	12/24/1973
Wayne Frederick	Senior	12/25/1937
Robert Kintz	Senior	12/25/1926
Allan Flowers	Senior	12/27/1941
Richards Mills	Senior	12/27/1946
Michael VanHeemst	Junior	12/28/200
Vincent DiFabbio	Regular	12/29/1955
Gary Schlegel	Regular	12/29/1949
Tighe O'Meara	Regular	12/29/1978
Phil Roszak	Regular	12/30/1959

JANUARY 2014 SVF BirthDay Boys

First name Last name	Member type	Dob
John McClelland	Regular	01/04/1950
Brett Crowther	Regular	01/05/1973
Kenneth Melbye	Senior	01/06/1948
AlexanderVidales	Junior	01/11/1997
Jonnie Russell	Senior	01/12/1940
Kent Story	Senior	01/13/1947
Norman Pilcher	Senior	01/16/1940
Robert Beaubien	Regular	01/17/1966
Vic Pietkiewicz	Senior	01/18/1944
Bill Reitz	Senior	01/26/1946
Steve Peterson	Senior	01/26/1943
Carey Dicksion	Regular	01/28/1965

Thirteenth Annual
Electric Turkey Fly-In
November 16, 2013

Despite threatening weather forecasts, the weather turned out to be pretty good and we ended up with 31 registered pilots. As usual with this event we had a good mix of airplanes and pilots with lots of flying and an emphasis on meeting new people and enjoying other fliers' handiwork and flying styles. We also raised over $600.00 for the Wounded Warriors Project.

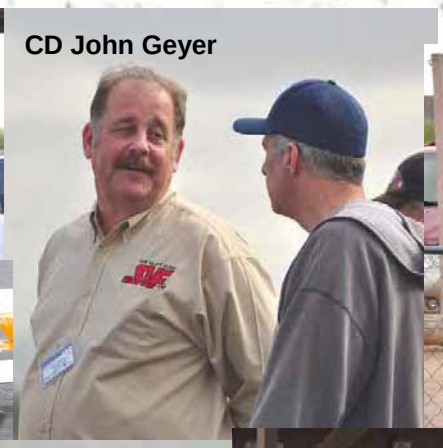
The success of the event was due to the enthusiastic support of many SVF members. Bob Bayless handled advertising and soliciting for sponsors and donations, coming up with enough merchandise that we were able to give every registered pilot at least one prize. Tony Quist handled registration and acted as the Co-CD, filling in wherever he was needed. Bob Purdy ran the kitchen and also jumped in wherever needed – from being the "Official Photographer" to emptying all the trash cans. Similarly, Howard Kennedy was involved in a little bit of everything, including coordinating all of the generous souls who spent time at the gate so we could leave it open without upsetting our County landlords. I know that Howard, Val Roqueni, and Bob Bayless all took a shift but I also know there were many others whose names I missed – special thanks to all of you that helped spread the effort to keep the gate covered without leaving anyone out there too long.

In addition to the larger hobby businesses, Gerhard Gallifant and his Mad Scientist Engineering (http://madscientistengineering.biz) gave generously to the pilot prize merchandise. Johnnie Russell, Eric Stevens and Bob Bayless also contributed as individuals. Please remember all of our Sponsors the next time you're buying hobby supplies and let's help return the support!

John Geyer

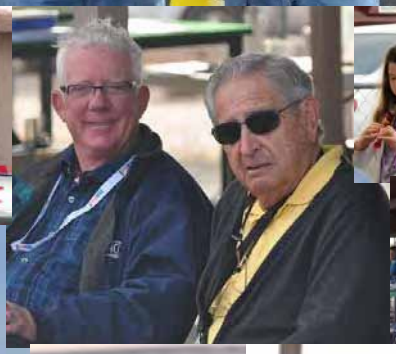
2013 TURKEY FLY IN

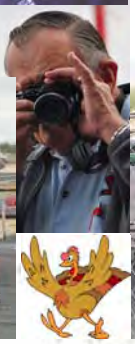
November 16, 2013



CD John Geyer

John Russell raffle prize winner





SVF 13th ANNUAL FLY IN

For Wounded Warriors Project

Best Civilian Scale
Gary Schlegal -- Pietenpol

Best Military Scale
Joe Balabon -- B-25

Best Multi-Engine
Scott Okerstrom - B-17

Best Multi-wing Bob Bayless
deHavilland Tiger Moth

Best Aerobatic
Ed Hansen

Best Jet
Bob Ruff -- F-22

Best Rotary Wing
Scott Okerstrom

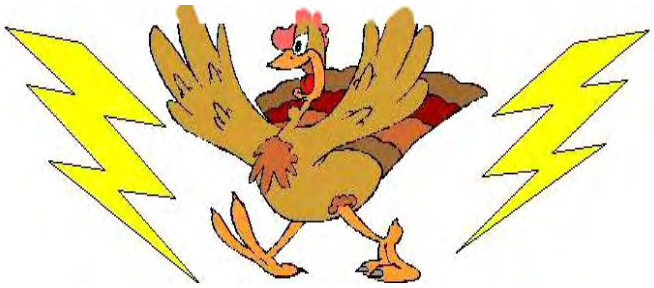
Best Sport Plane
Gary Porter - Pilatus

CD's Choice
Paul Sheffield - FW-190

Best Scratch-Built
Jeff Bean Howard DGA
"Ike"

Harold Land Memorial Award
Gerhard Gallifant
2012 & 2013 Winner

S V F



S V F

Thirteenth Annual
Electric Turkey Fly-In
November 16, 2013

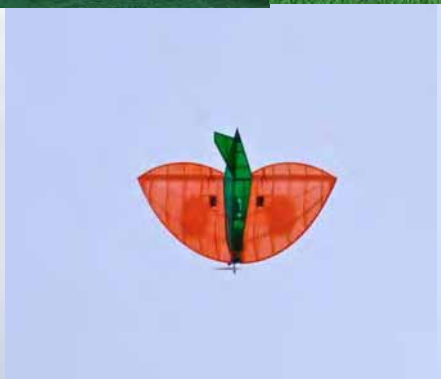
Sponsors

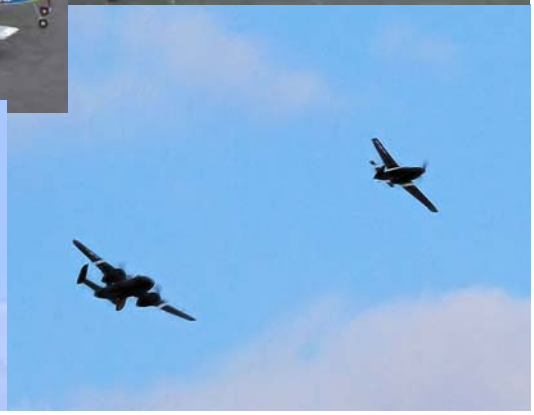
AeroWorks
Castle Creations
Duncan's R/C
Frank's Hobby House
Innov8tive Designs
Mad Scientist Engineering
RTL Fasteners
SIG Manufacturing
Sullivan Model Products

Please Remember to Return the Support!

2013 TURKEY FLY IN

November 16, 2013





Sun Valley Fliers

SVF MEMBERS PHOTO SHOTS

SVF Sun Valley Fliers

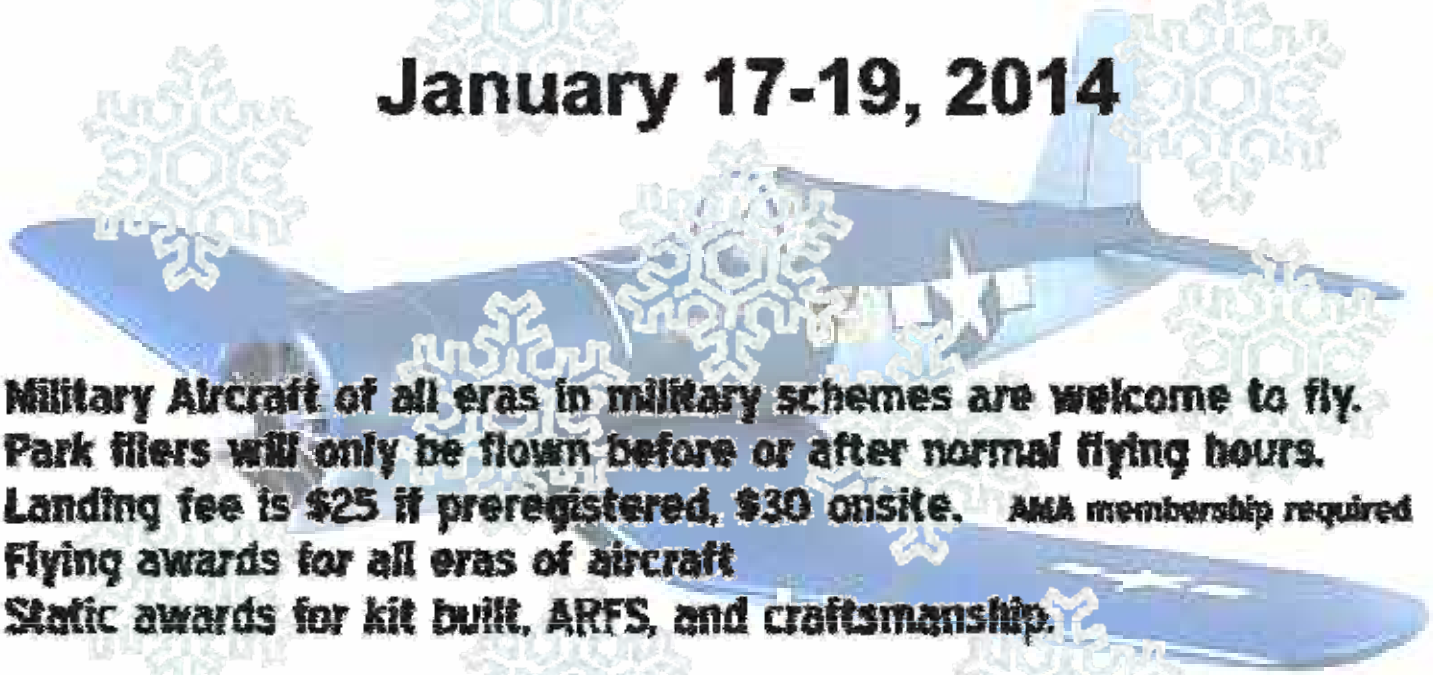
SVF MEMBERS EXTRAS

SVF Sun Valley Fliers

2nd Annual

Winter Warbirds

January 17-19, 2014



Military Aircraft of all eras in military schemes are welcome to fly.
Park fliers will only be flown before or after normal flying hours.
Landing fee is $25 if preregistered, $30 onsite. AMA membership required
Flying awards for all eras of aircraft
Static awards for kit built, ARFS, and craftsmanship.

Hosted by Sun Valley Fliers
Cave Creek and Jomax RD in North Phoenix, AZ

Registration forms can be found at http://www.sunvalleyfliers.com

ON THE SAFE SIDE
Flightline Communication

This summer I attended an out-of-town event here in the outback of the US. At this fun-fly event, there were pilots and models of all types—from small electrics, to large Scale airplanes, to even larger 3-D aircraft. The weather was great and lots of airplanes and pilots took to the air to enjoy the day and the camaraderie. The local club was well represented, but many of the pilots were from other towns and some did not know one another very well.

At the end of the day, I sat in on a conversation by a few of the modelers who were disgruntled about "hogging the airspace," near misses, and supposed malicious near misses. The biggest complainers were the smaller airplanes and the biggest targets were the large 3-D airplanes.

I don't have an answer to these types of problems and concerns, but I might have something in the way of a solution. At this event and some others I attended there was no requirement to fly with a spotter. I think there should have been.

In many competition events, spotters or callers are required. Obviously, they are there to aid the pilot in his or her own performance, but they are also there for safety. Their job is to monitor the flight path of other airplanes and inform their flier if they pose a threat. It is also the spotter's job to call the pilot's intentions to other fliers in the pilot station.

Surely, the pilot can also make these intentions known, but his or her full concentration should be on flying his or her airplane. It is the spotter's responsibility to make sure the other pilots understand his or her pilot's intentions and that his or her pilot is aware of the intentions of other pilots.

I think requiring a spotter should be part of all your event organizations whenever there will be multiple pilots on the line at the same time.

Obviously, it is a safer way to fly. The best way to see and avoid other aircraft is to have more eyes on the situation. Any in-flight emergencies should also be called in a loud voice so other pilots get out of the way. The spotter should loudly announce takeoffs and landings. It is also the spotter's job to retrieve the aircraft from the runway if necessary, but not before calling loudly announcing his or her presence there. Those are basic responsibilities of the pilot's second.

Back in the day, it was common for pilots to distance themselves from one another to avoid radio interference. With the new radios and improved technology, this is no longer a great concern. It is more important for the pilots to be able to communicate with one another. Your flightline should be arranged so that all pilots can easily hear what the others are saying.

There is a value in having your pilots and spotters talk to one another. They should make their intentions known to the other pilots. If a 3-D pilot wants to use the centerline to do some hovering, his spotter should announce it. If the Scale flier wants to make a low pass and a victory roll with his Mustang, his spotter should announce it. This not only allows the others to clear the space for those actions, it is simply common courtesy. It also asserts your rights to some of the airspace. If your small electric is in the air with a 50%-er, your words and intentions are the signal that you are going to use the airspace and that should be respected by the others on the flightline.

Your club safety officer or his or her designate should be the Air Traffic Controller. Even if the flying is intermittent he or she should have a presence. Have the person wear a colored shirt or vest and announce his or her authority at the pilot meeting.

The person should stand behind the flightline and monitor the fliers and those starting up, coming out to the runway, or leaving it for the pits. Once again, it is the spotter's eyes and ears that should be attuned to those directions.

This is the best way to avoid ruffled feathers when one pilot thinks another has wronged him. Many of those situations are simply a failure to communicate. This way you are doing your best to avoid them.

continued

Yet another benefit is that the pilots get to know one another a little better.

I know what you are thinking. There are a few airspace bullies out there. In my experience, more often it is a perception or a lack of communication, but sadly, there are a few. If you have one at your event, your CD and safety officer should deal with it. Give a warning and if the actions are not corrected, ground that pilot. It is your event.

As I have said so many times in this column, the key to safe flying and having fun is the Golden Rule. By doing a few of these things you are simply facilitating it.

At my club field, this kind of pilot interaction is the norm, not just for events. That's how I know it works. It should be that way at your field too.

Jim Tiller, jtiller@hotmail.com

Setting Up Your Servos

One of the problems for most beginners is that they rarely set up the servos properly. I have said for years that you need to learn how to set up your aircraft mechanically before you touch the computer on your radio. Therefore, I am going to review what I do to set up any servo on my aircraft.

If I am going to re-set up an existing aircraft, first I copy the current settings to an unused memory location. See your radio manual for exact instructions. After the current settings are copied, clear all the programming for an unused memory location. Set all radio trims to the center. At this point the servo end points should be at 100% and the servo subtrim should be zero.

With the control rod disconnected from the servo, move the control rod until the control surface is centered. Center the servo arm as close to center as possible. The servo arm should form a 90° angle between the arm and the control rod. Reposition the servo arm on the servo until you have it as close as possible, adjust the length of the control rod to match as necessary, and then adjust any subtrim to center the servo.

Temporarily connect the control rod and look at all the links for that control. On a helicopter you may have two or three connections, as the control rods runs through bell cranks, before the servo actually connects to the control surface. Check each of these 90° connections and adjust as necessary. Now disconnect the control rod from the servo.

Now, turn on your radio and center the joystick for that channel. The servo arm should be in the center position. Move the joystick to one end of its movement and hold the joystick there. Manually move the control to where the servo arm is now positioned.

Notice the end of the control rod carefully. Does it move past the servo arm reach? Does it not move far enough? Make note of that difference then move the joystick to the opposite end and do it again. The difference between the servo arm and the control rod should be equal on both ends. If not, you may have something else not set properly.

If the control rod goes past the servo arm in both directions, then the control surface will move farther than the servo will allow. At this point, change the positioning of the control rod on the control horn closer to the control surface a hole or two. Reposition the control rod until you get everything matched up. Sometimes a longer servo arm is required.

If your servo arm moves farther than the control rod will move, then use an inner hole on the servo arm until you get everything matched up.

At this point you have technically setup your servo. The servo is centered to the control surface and the control rod will move the control surface through its maximum range.

Now you can use your computer radio to adjust the end points for each servo to get the desired amount of control movement. Many times the control surface will move farther than recommended for normal, sport, or 3-D flight. Check your aircraft instructions for recommended control surface throws.

Bob Ackerman, Mid-Missouri Radio Control Association

One warning: Helicopter pilots must ensure to check for any control binding during extreme joystick movements. The controls on some helicopters can move farther than necessary for normal flight, which can cause control binding during flight.

Fantastic Flying Fortress: the Nine-O-Nine!

Representing some 15 years of work by Bill Fuori, this B-17 is now owned by the always enthusiastic Ana Estavez and expertly flown by her husband, Eduardo who gave the heavy bomber to Ana to celebrate 20 years flying scale models together.
Ana choose the Nine-O-Nine color scheme. As mentioned already, the model was scratch built by Bill Fuori and took 15 years to complete the project in his shop in Ocala. Eduardo joined him during the last two years to customize the color scheme, electronics and mechanical features. Ana and Eduardo visited Bill many times to admire the great job. The B-17 is a G-model and built to 1/8 scale, has a 154-inch wingspan, and weighs 64 pounds. It features a fiberglass fuselage and many other formed parts. The wing is traditional wood construction. The model is unique in that it uses counter-rotating DLE-35 engines for torque compensation. The four gasoline engines have two with clockwise and two with counter-clockwise rotation. The 3-blade props were made special by XOAR. The B-17 also features Robart retractable landing gear with tires, wheels and brakes by Glennis, and a BVM smooth stop valve. Electronics are by JR with a 12X transmitter and a JR 1221 receiver and all JR servos and batteries. The model is finished with Klasskote epoxy paint and the markings are by Pro-Mark.
Eduardo comments that: “The model flies beautifully, the sound and its presence in the air makes our B17 looks real.” And Eduardo did a great job flying at the Monster Planes/12 O’clock High event, and earned the “BEST MULTI ENGINE” award.

Black Hornet:Micro Flyer has a Big Job

This is serious RC! The Black Hornet nano drone, which can be carried in a soldier’s pocket, has an onboard camera that gives troops video and still images of hard-to-access places. Weighing only 16 grams (0.56 ounces), the Black Hornet looks like a tiny toy helicopter but it’s really a nano-size piece of military hardware.

VIDEO 4:54

http://www.youtube.com/watch?v=4o7mRg74qcY

Amazingly Awesome Airliner

Check out this 15-foot-long, 17-foot-span A-380 Airbus! Powered by four Jetcat P120 turbines, this aircraft consumes a gallon of fuel every 3 minutes! The magnificent model was filmed at a Swiss airshow.

VIDEO 8:08

http://www.youtube.com/watch?v=-Rt9zX1rZFU

Happy New Year!

Going to a Float Fly! Where?

Sun Valley Fliers

Sun Valley Fliers

Six Keys to Success for New Pilots

Whether you have a coach or you are trying to learn to fly on your own, you will need to be mindful of **these** six areas if you are going to become a successful RC pilot. After many years of working with new fliers at our club, and coaching fliers on the forums, there are a few things I have seen as the key areas to stress for new pilots. Some get it right away and some have to work at it. They are in no particular order because they all have to be learned to be successful.

Wind, Orientation, Speed , Altitude, Overcontrol, Preflight Check

Wind: The single biggest cause of crashes that I have observed has been the insistence upon flying in too much wind. If you are under an instructor's control or on a buddy box, then follow their advice, but if you are starting out and trying to learn on your own, regardless of the model, I recommend dead calm to 3 mph for the Slow Stick and Tiger Moth type airplanes and less than 5 mph for all others. That includes gusts. An experienced pilot can handle more. It is the pilot, not the model that determines how much wind can be handled.

Let me share a story:

The wind was roughly 8 mph steady with gusts to 12. That was strong enough that some of the experienced pilots flying 3- and 4-channel, small electric airplanes chose not to launch. A new flier insisted that he wanted to try his 2- and 3-channel park flyers. Crash, crash, crash—three models in pieces. He would not listen. Sometimes you just have to let them crash. There is no other way to get them to understand.

Many park flyers can be flown in higher winds by an *experienced* pilot. I have flown my Aerobird in 18 mph wind (clocked speed), but it is quite exciting trying to land it.

Always keep the airplane upwind from you. There is no reason for a new flier to have the model downwind ever!

Orientation: Knowing the orientation of your airplane is a real challenge, even for experienced pilots. You have to work at it, and some adults have a real problem with left and right regardless of which way the model is going. Licensed pilots have a lot of trouble with this one as they are accustomed to being in the airplane.

Here are two suggestions about how to work on orientation when you are not flying: Use a flight simulator on your PC. Pick a slow-flying model and fly it a lot. Forget the jets and fast airplanes. Pick a slow one. Focus on left and right coming at you. Keep the airplane in front of you. Don't let it fly over your head.

An alternative is to try an RC car that has proportional steering. You don't have to worry about lift, stall, and wind. Get something with left and right steering and speed control. Set up an easy course that goes toward and away from you with lots of turns. Do it very slowly at first until you can make the turns easily. Then build speed over time. You'll get it! If it has sticks instead of a steering wheel, even better but not required. Oh, and little cars are fun too.

Too Much Speed: Speed is the enemy of the new pilot, but if you fly too slowly the wings can't generate enough lift, so there is a compromise here. The key message is that you don't have to fly at full throttle all the time. Most small electrics fly very nicely at 2/3 throttle and some do quite well at ½. That is a much better training speed than full power. Launch at full power and climb to a good height, say 100 feet as a minimum, so you have time to recover from a mistake. At 100 feet, go to half throttle and see how the airplane handles. If it holds altitude on a straight line, this is a good speed. Now work on slow and easy turns, work on left and right, flying toward you and maintaining altitude. Add a little **throt**tle if the airplane can't hold altitude.

Not enough altitude: New fliers are often afraid of altitude. They feel safer close to the ground. **Noth**ing could be more wrong. Altitude is your friend. As previously stated, I consider 100 feet—**about dou**ble tree height where I live—as a good flying height and I usually fly much higher than **this. Fifty feet, is** minimum flying height for new fliers. Below that you better be lining up for landing.

Overcontrol: Most of the time the airplane does not need input from you. Once you get to height, a **properly trimmed** airplane flying in calm air will maintain its height and direction with no help from you. **In fact**, anything you do will interfere with the airplane.

When teaching new pilots, I often do a demo flight of their airplane. I get the model to 100 feet, **and** then bring the throttle back to a nice cruising speed. I get it going straight, with plenty of space in front of it, then take my hand off the sticks and hold the radio out to the left with my arms spread wide to emphasize that I am doing nothing. I let the airplane go wherever it wants to go, as long as it is holding altitude, staying upwind, and has enough room. If you are flying a high-wing trainer and you can't do this, your airplane is out of trim.

Even in a mild breeze with some gusts, once you reach flying height, you should be able to take your hand off the stick. Yes, the airplane will move around and the breeze might push it into a turn, but it should continue to fly with no help from you.

Along this same line of thinking, don't hold your turns for more than a couple of seconds after the airplane starts to turn. Understand that the airplane turns by banking or tilting its wings. If you hold a turn too long, you will force the model to deepen this bank and it will eventually lose lift and go into a spiral dive and crash. Give your inputs slowly and gently and watch the airplane. Start your turn, then let off, then turn some more and let off. Start your turns long before you need to and you won't need to make sharp turns.

I just watch these guys hold the turn, hold the turn, hold the turn, crash. Of course they are flying in 10 mph wind, near the ground, coming toward themselves at full throttle.

Preflight check: Before every flight it is the pilot's responsibility to confirm that the model, the controls, and the conditions are correct and acceptable for flight.

Airplane:

Batteries at proper power
Surfaces properly aligned
No damage or breakage on the airplane
Everything secure

Radio:

Frequency control has been met before you turn on the radio (this has gone away with 2.4 GHz systems)
A full range check before the first flight of the day
All trims and switches in the proper position for this model
Battery condition is good
Antenna fully extended
For computer radios: correct model is displayed
All surfaces move in the proper direction

Conditions:

No one on the field or in any way at risk from your flight
You are launching into the wind
Wind strength is acceptable (see wind information)
Sunglasses and/or hat to protect your eyes
All other area conditions are acceptable

Then and only then can you consider yourself, your airplane, radio, and the conditions right for flight. Based on your model, your radio, and local conditions, you may need to add or change something here, but this is the bare minimum. It only takes a couple of minutes at the beginning of the flying day and only a few seconds to perform before each flight.

If this all seems like too much to remember, do what professional pilots do, take along a **pre-**flight checklist. Before every flight they go down the checklist, perform the tests, in sequence, **and** confirm that all is right. If you want your flying experience to be a positive one, you should **do the** same. After a short time, it all becomes automatic and a natural part of a fun and **rewarding day.**

I hope this is useful in learning to fly your airplane.

Ed Anderson, aeajr@optonline.net

SVF JET PILOTS @ The JET RALLY

I had to fill the page with some jets at SVF.

Sun Valley Fliers

Eliminate Bounce in Your Landings

In order for a taildragger not to tip over on its nose, its wheels must be ahead of the center of gravity (CG). As it is further forward, it can tolerate rougher ground, but the tendency to bounce is worse. But when a taildragger lands, the impact of the main wheels tends to push the nose up, increasing the angle of attack, lowering the tail, and increasing the lift—and the airplane is flying again.

Eventually, air speed is reduced and it falls to the ground again, maybe harder. The nose rotates, and the airplane becomes airborne once again. This process will continue until all flyable airspeed is exhausted. The aircraft may continue bouncing because of a phenomenon known as “loping.”

Loping occurs in a taildragger when the bounce of the main wheels causes the tail wheel to slam into the ground while the main wheels are still in the air. Then, the tail wheel bounces, slamming the main wheels onto the ground. This argument between the front and rear continues until momentum is lost. But the severity of the loping can increase in the interim.

Loping can occur in trike-geared aircraft as well. If the nose wheel strikes the ground before the main wheels do, the nose is pushed up severely, slamming the main wheels onto the runway. Being behind the CG, the rebound of the main wheels rotates the airplane forward so the nose wheel slams down again, maybe harder than the first time.

The process repeats. Loping in a trike airplane can start with taxiing. If the main wheel hits a bump, weight is shifted forward onto the nose gear. It rebounds, returning weight backward. This ping-ponging can grow, especially if the airplane is accelerating. The only way to stop it is to stop the airplane. The longer the distance between the main wheels and the nose wheel, the greater the tendency to lope. Loping also increases if the main wheels are too far aft of the CG. Stiff struts and bouncy wheels aggravate matters.

Trike gear has less potential for bounce because the main wheels can be placed closer to the CG. When the main wheels touch down, the impact lowers the nose and the angle of attack, reducing lift. Some trike-gear designs actually have negative angles of attack when sitting on all wheels. This holds the airplane on the runway. Trikes have more positive ground steering because the nose wheel makes firmer contact with the runway than a tail wheel, especially at higher speeds.

Another little-known cause of bounce is main wheels that are too far apart. This may be shocking because this practice is generally considered good for ground handling. It usually is because it improves directional stability when rolling along the ground. What happens when the airplane lands and one wheel hit the ground before the other? A lateral form of bounce occurs from one wing to the other.

One might think that soft tires and springy struts would increase bounce. Not so. More often, bounce is aggravated by the landing gear that is too stiff. Rigidity does not absorb energy; it reflects it. The hardness of the runway contributes to bounce for the same reason. Some early racing airplanes, such as the Howard Ike, had landing gear so rigid they could not land on concrete runways because of the uncontrollable bouncing that occurred.

Moving the main gear close to the CG reduces bounce and improves tracking. The Spitfire, for example, is quite bounce resistant, but it tips over easily on rough ground.

Moving the nose and main gears closer together reduces bounce and loping, but it degrades tracking and increases the tendency to tip over on rough ground and in crosswinds.

Oleo struts help absorb impacts, but the spring tension must be just right—stiff enough to keep from bottoming out, soft enough to absorb shock. The same may be said of tires.

If your airplane rebounds into the air after a severe impact, head off further bounce by inching up the throttle slightly. Apply down-elevator if necessary to level the nose. This increases air speed, prevents a stall, and lowers the rate of descent.

Fuel: The Ins and Outs

What is the best fuel to run? I hear this question ring throughout the flightline repeatedly from new pilots and longtime fliers alike. Many wonder what the best fuel is for their airplane, costs, protection, and other things associated with fuel and glow/gas engines for our RC aircraft.

This article will cover a month-long adventure I was on to determine just what fuel I should be using, along with field tests, a lot of reading on the Internet, and conversations with experienced longtime fliers. I hope to be able to explain what might help anyone determine the best type of fuel for them to use.

Being fairly new to this hobby, and absolutely no expert in this field, I will explain this in the best possible way in an effort to have something to point to when somebody asks “What is the best fuel to use.”

Disclaimer: This information is provided as is, with no warranty. Use this information at your own risk. Feedback is always welcome; please feel free to contact me if you like.

Fuel: model aviation fuel contains three elements:

Alcohol, Nitro, Oil

Engine fuel for RC aircraft known as glow fuel contains three elements that are determined by the manufacturer and usually printed on the gallon jugs or cans purchased when you buy your fuel.

Out of these three elements, only two are combustible: the nitro and alcohol. In my testing during the past month, my main concern was the oils used in these fuels. Allow me to explain.

I generally run Saito four-cycle engines and these engines require slightly less oil than their two-stoke counterparts. Determining the oil content is what has taken me down this road because of a malfunction on my Saito 100 that is currently flying in my U-Can-Do 60. A deadstick over the runway, inverted at about three feet makes you start figuring on things you had not thought of in the past. The airplane survived, however the rush I got from getting the model flipped over and back on the ground had me thinking.

After further examination, I discovered that the engine had a stuck tappet in the tappet guide; this caused the exhaust pushrod to hang and rip teeth off of the cam gear— a really ugly site too.

Repairing the Saito 100 (or better said, an attempt to repair) found that any small debris in this motor will cause damage. Finding that this motor did the same thing on the second flight after the repair, I found that microscopic pieces of the cam were lodged in the tappet guide once again.

A full breakdown of this motor and repair once again, replacing the bearings (rusted and pitted) and a complete cleanup and soaking helped put it back in the air.

With this information in hand, I was able to determine that rust had played a part in the first engine malfunction and pieces of the cam gear on the second malfunction.

This all started with rust. Where does this rust come from? There is moisture in the engine. Where does this come from? The adventure was on its way …

Moisture in your engine can cause damage, sometimes catastrophic damage and so, this takes us to the third element listed: oil.

Glow engines run fuel like our everyday two-stroke motors with a combustible (alcohol, nitro) liquid and a lubricant (oil). Oil is an important piece of ensuring that your engine does not rust and also keeps the engine running smoothly and well lubricated to prevent heat.

Rust can build in your engine, whether it is stored for long periods or short periods of time and thus, we simply should have oil in the engine to prevent the rust.

When an engine runs, it takes in moisture from the fuel source and carburetor. Nitro acts as a magnet to moisture and will draw the moisture into your motor. Have you ever noticed when you spill any of this glow fuel it will quickly obtain a milky looking film over the top? This is the nitro pulling in the moisture from the air.

The oil used in the fuel plays a big part in protecting the engine from moisture and preventing

rust long term and short term.

Many fuel companies list what they use in their fuels. Many use synthetic oil and this oil allows the motor to run more rpm's than castor-based oil will. Castor is a thicker, natural oil and will protect the motor (long term) better than a synthetic fuel. If the motor is running a lot where it does not have time to ever be dry from a synthetic fuel, then synthetic fuel may be okay to run with no issues.

Castor being a natural lubricant (hey, this stuff comes from beans) is thicker, and will leave residue all over the motor, which will protect it while in storage helping to prevent rust.

So, I decided that I would want a fuel that had castor to beat the rust, but also wanted a synthetic fuel that would loosen up the mixture so I could produce the RPM range I was looking for.

Let's look at some of the fuel tested here (percentages are based on volume):

Cool Power 2-cycle fuel.

15% nitro/20% oil (10% low viscosity, 10% high viscosity)

Cool Power 4-cycle fuel

15% nitro/18% oil (9% low viscosity, 9% high viscosity)

Cool Power 4-cycle fuel (castor based)

15% nitro/18% oil (9% castor, 9% synthetic)

Ritch's Brew 2-cycle fuel

15% nitro/22% oil (known as the 11-11)

The goal was to use like brands to determine the best RPM and change the oil content. And with the findings, the Cool Power 15% 4-cycle, 100% synthetic has proven to provide the most rpm and power however, running this fuel comes at a cost.

Back to the rust issue. (Note: This is on a four-cycle engine, for a two-cycle; you would want the 20% oil). Running a fuel that is 100% synthetic can prevent rust in a short-term period however, my feeling and understanding is that the castor would assist in preventing rust.

So, how can you run the best fuel and get away from the worry of rust? If you run a fuel with castor, there is probably nothing to worry about. If you run a fuel without castor you should use after-run oil.

If you read a label on the Cool Power (this was amazing to me) it states "after-run oil not required." After all I had read through and understood, this was somewhat of a mystery to me. How can you run 100% synthetic fuel and not have to use after-run oil? They attribute this to low-viscosity synthetic fuel from what I gathered in the information online at Morgan Fuels.

In short, use my recommendation because this is based on what I know to be the best fuel for me. But, if you're running a fuel and it does well for you, then that is the fuel for you. In my opinion all fuel is about the same: different manufacturers are the difference in the production of fuel. I personally like Cool Power however; another brand with the same mix would probably run the same.

Mike Philips, mike@rcrenegades.com, North Dallas R/C Club

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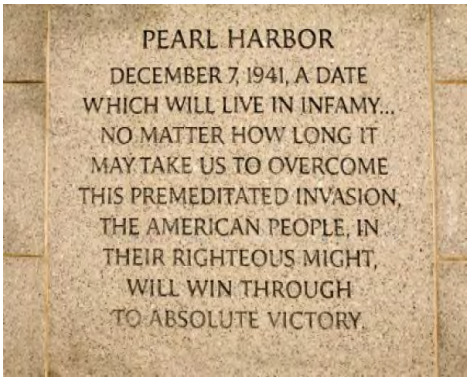

http://education.nationalgeographic.com/education/multimedia/interactive/pearl-harbor/?ar_a=1

VIDEOS and Websites Links

Click on to view video, website

4:54 NANO UAV
http://www.youtube.com/watch?v=4o7mRg74qcY#t=132

A380 8:08
http://www.youtube.com/watch?v=-Rt9zX1rZFU

Crash happy robot 2:22
http://www.youtube.com/watch?v=TIpqxsVDgVs

Single channel escapement RC flying 3;13
http://www.youtube.com/watch?v=FB4faISZJd8

Carbon-Z Cub 4:04
http://www.youtube.com/watch?v=GmwGpgwehXU#t=82

Matt Younkin Beech 18 Cockpit VIDEO 28:36
https://www.youtube.com/watch?v=h1qSzCnzXvY

SVF Website Buy & Sell items.
http://sunvalleyfliers.com/classifieds/ classifieds.htm

My thanks to those who passed this info on.

From the editor desk

First I want to wish all the SVF members a very Merry Christmas and a great healthy New Year.

I want to give thanks to the officers, board members and SVF members in helping me put together the Slow Roll for 2013. For providing me with the reports, birthdays, photos, articles, and videos. Thank you, Bob

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This Month Issue *11-2013*

Photos from the TURKEY FLY IN. Some good articles for our new pilots to this hobby. Much more!

Some good VIDEOS to watch. *GOOD stuff in this issue, MORE photos, so enjoy!* Send those articles and photos in and for the SVF HALL of PLANES.! *Remember to **ZOOM** the **PDF** page to see more.* **We need your NEW projects to put in the *SR* SVF HALL OF PLANES.**

Next month Issue

There will be no JANUARY 2014 Slow Roll

Would you like to be notified when the SLOW ROLL new issue is available? Give Gene your e-mail address. AZ49ER@COX.NET

Hope you will enjoy it. Bob

rcbobsvf@aol.com

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