THE SLOW ROLL

MARCH 2018

CHARTERED #921
Since DEC. 1974

President—Lou Pfeifer IV
Vice President—Andrew Schear
Treasurer—Nate D'Anna
Secretary—Robert Poe
Editor—Bob Purdy

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 of SVF Jim Spice Award Winning Cobra at the recent AEF**

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SVF CLUB Starting 43 years

SVF MEETING March 7 @ 7 PM

Presidents Report For March 2018

Hello all;
I am proud to announce that our membership is slowly on the rise. I along with our Membership Director Bob True have been striving to get New Members into our club. I have met with NEW Member perspectives' down the field on numerous occasions and they all signed up!
This month I am happy to say that our **FIRST SVF Cactus Classic IMAC EVENT** will take place on **March 24th. Ernie Mack and Brad Beedy, CD Randy Wegner** will be heading this up. If you are interested please contact them or I and we will be glad to help. They will also be holding a **dinner banquet in a private hanger at Scottsdale Airport**. **We will have the pleasure of 3 full scale IAC pilots and THEIR PLANES!! Ron Chadwick with his Pitts , Michael Mohn and his Extra 300, Budd Davission and his Pitts Special!!** Bud and Ron will also making an appearance at the contest on Saturday. **The price for the Banquet at Scottsdale Airport Hanger is $25 per head for dinner**. If you want to attend please contact brad@beedyinsurance.com or call him at 602 369-4163. So come on out and support our club! We will be needing **MEMBERSHIP INVOLVEMENT** for this event. I will be looking for **Kitchen Help along with a few dedicated SPOTTERS**. Please call me if you can help!
The gate change will take effect as soon as Bob True reviews the CLUB EMAIL LIST as to make sure everyone is in the loop! I will be sending out a club group email as soon as I get the ok from Bob for the change date.
Well that's about it. Everything is calm and non-eventful which is delightful!!! Remember our Membership meeting is on Wednesday march 7th at 7:00PM at Deer Valley Airport Restaurant. If you are planning to eat get there by 6:30 the latest. Please get involved!

Lou Pfeifer IV.

President

Sun Valley Fliers General Membership Meeting Minutes – 02/12/2018

Meeting called to order by Lou Pfeifer at 7:00 pm. There were 24 members present.
Executive members in attendance: **President – Lou Pfeifer, VP.- Andrew Schear, Treasurer- Nate D'Anna, Secretary- Robert Poe**
Board Members in attendance: **Wayne Layne, Steve Myers, Ernie Mack, Wayne Robinson, Bob True**
Absent: **Jamie Edwards, Scott Johnson, Tom Kametz**
Open: Review of AMA renewal entity issues. Election procedure reviews. Looking for committee members, vote is electronic, Bob True as Board Member to oversee. Lou is chair of committee, Dan Crum and Robert Santoro are members at large on committee.
Guests: **Jamie Sunenshine**
New Members: **Robert "Bobby" Santoro, Robert Anderson**
Solo Pilots: **Certificates were awarded to Dr. Peter and Jacob Sunsenshine**
Secretary's Report –
Minutes from the 12/2017 and 01/2018 meeting were lost, BOD minutes will substituted for these in their entirety.

Treasurer's Report – **Nate D'Anna**
Treasurer's report was approved as written by 1) Ron Thomas 2) Andrew Schear. Report on file to see by request by any member.

Membership Director's Report – **Bob True/Scott Johnson**
208 members as of 02/01/2018.

Safety Officer's Report – **Ernie Mack**
Reviewed spotter role for members, spotter needs to watch out for pilot as well as incoming aircraft, both model and full scale. This is main job of spotter.
Spotter MUST hold a valid AMA card as they are on the flight line and subject to danger. If you don't think you are up to the job feel free to ask for a substitute.
Ernie reminded all about IMAC event on 3/24-3/25, member help will be needed.

Old Business
John Skarda donated his Eflite Apprentice trainer to the club. John is leaving the hobby and we will miss him very much. Good Luck John!!
Winter Warbirds came off well. Runway fund will be increased from proceeds from WW event.
Please read new safety rules on website. Andrew Schear and Wayne Layne took the lead on updating and reviewing rules. Most of them parallel AMA safety guidelines.

New Business
Use permit for field is moving slowly along through the channels at Maricopa County and City of Phoenix but Wayne sees no reason it won't be completed. He is monitoring it on behalf of Club. Started in August of 2017.
Lou and BOD reviewed new FAA (or reinstated) registration rules. You register yourself once at FAA site, not each plane. However, both AMA number AND FAA number must be on RC aircraft, consult AMA and FAA for placement guidelines. And you WILL need an email address to register.
Reminder that gate code WILL change on March 1. Current members were admonished by Lou to STOP giving out gate code to non-members and former members. There are obvious exceptions to this but very few of them.
Some members (about 30) have NOT renewed their AMA cards. No flying until AMA renewed.

Doo Prize Winners: BobTrue, SteveMyers, Dr.PeterSunenshine, JacobSunenshine, Bruce Bretschneider, Lou Pfeifer IV, Wayne Layne.
50/50 Winner: Ron Anderson
Show And Tell: **None**

The meeting adjourned at 7:57 pm
Respectfully submitted,

Robert Poe

Sun Valley Fliers BOD Meeting Minutes – 02/12/2018

Meeting called to order at 6:30 P.M by Lou Pfeifer IV. Executive members in attendance;

•President-Louis Pfeifer IV., Andrew Schear - VP, Treasurer- Nate D'Anna, Secretary- Robert Poe

Board Members in attendance:
•Bob True, Scott Johnson, Wayne Robinson, Wayne Layne, Ernie Mack

Absent: Jamie Edwards, Bryant Mack, Tom Kametz, Steve Myers
Open:AMA Charter renewal issues, Corporation Commission renewal issues-Lou to address, candidates for BOD – SVF Board has 2 spots open.

Members/Guests:
•Bobby Santoro, new member

Guest Statements:
• Bobby gave overview of his IT skills and flying experience. Extensive IT background.

Secretary's Report – Robert Poe - Motion to approve: 1) Wayne Robinson 2) Nate D'Anna
•**Minutes** from **01/03/2018** meeting were reviewed and approved.

Treasurer's Report – Nate D'Anna – Motion to approve: 1) Wayne Layne 2) Andrew Schear
•**Financial report** for 01/03/2018 were approved and on file for review by members.

Membership Director's Report – Bob True/ Scott Johnson
•We have 208 members to date.

•Election committee appointed with Bob True to oversee election process.

Safety Officer's Report – Ernie Mack
•IMAC event progress was reviewed. IMAC event is 3/24-3/25. Need kitchen and gate people for weekend. Lou to handle kitchen personnel recruitment.

Old Business:
•Gate code will be changed 3/1/2018. Some members are giving out code to non members, growing problem. Lou to incorporate policy on giving out code to non members in code change email. Accommodation for flying visitors can be made on a case by case basis.

•Gate closure issue has gotten worse. BOD members should check out fliers that are not recognized to ensure only current members are using field.

New Business:
•Runway expense reviewed and cash flow issues discussed if runway project is implemented. At this point in time it does not appear project is ready to proceed. Will be revisited again in January 2019 after membership count is determined.

•Motion: Appoint Bobby Santoro to BOD. Motion to approve: 1) Wayne Robinson 2) Andrew Schear.

The meeting adjourned at 7:29 pm Motion to approve: 1) Andrew Schear 2) Ernie Mack

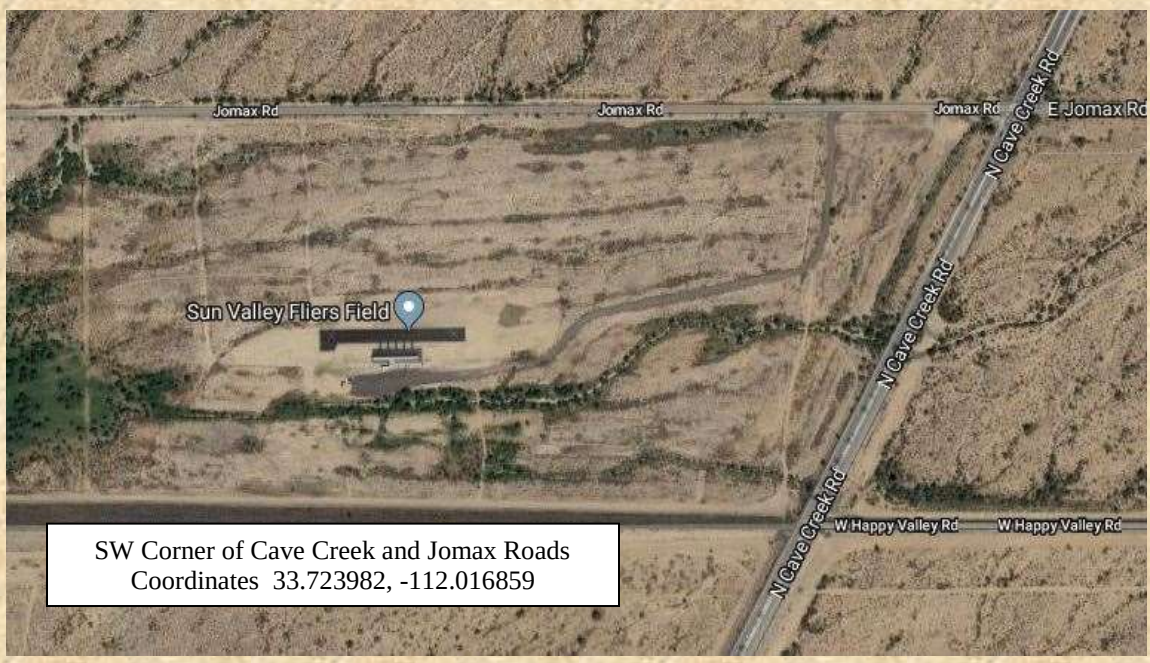
Respectfully submitted,

Robert Poe

March 24th 2018

SUN VALLEY CACTUS CLASSIC IMAC

- Bringing the historic contest back to Sun Valley Fliers club! www.sunvalleyfliers.com
- Pilot packets will be mailed to all pre-registered contestants with hotel details, maps, banquet ticket, pilot name tags, personalized score cards, etc. Please email your phone number and mailing address to brad@beedyinsurance.com
- Camping / RV will be permitted at the field. No hook-ups
- Saturday evening banquet 6pm – 9pm in an airplane hangar at Scottsdale Airport with music and great food with full scale aerobatic airplane to admire and enjoy! Tickets $25 per attendee, please RSVP to Brad Beedy at brad@beedyinsurance.com or 602-369-4163 to reserve your seat and dinner with number of guests.
- Jacket tradition will continue for 1st place pilots!
- Basic through Unlimited will compete – Registration fee $50 IMAC Member, $60 Non-IMAC. Registration opens Saturday morning at 6am. Field will be open for practice Thursday and Friday prior to the contest.
- Freestyle if time permits.



SW Corner of Cave Creek and Jomax Roads
Coordinates 33.723982, -112.016859

Lunch will be available and cooked by the SVF club Saturday and Sunday

2018 Sun Valley Cactus Classic IMAC

Ladies and Gentlemen, it is my honor to announce the **2018 Sun Valley Cactus Classic IMAC in Phoenix, AZ on March 24th and 25th.** This historic event is coming back to the Sun Valley Fliers RC Club, a premier flying field with a 600 ft long, 60 ft wide paved runway with paved and covered pit area.

This contest is one contest you WILL NOT WANT TO MISS! We are anticipating a pilot count of close to 50 pilots from all over the SW Region and beyond. Our aim is for this contest to be one of the premier regional IMAC contests in the country.

Saturday evening, we will be hosting a dinner banquet in a private hanger at the Scottsdale Airport. We will have the pleasure of enjoying the attendance of 3 full scale IAC aerobatic pilots AND THEIR PLANES:

Ron Chadwick and his spectacular single-place Pitts Special. Ron flew F-100's in Vietnam, hosts the IAC event in Marana, AZ and competes with his Pitts Special.

Michael Mohn and his Extra 300. Michael Mohn is an IAC champion and we are organizing a "Fly-by" over our contest in his Extra 300. Michael is also a model enthusiast who has many smaller models and is now just starting to get into some of the larger gas models. Let's show him how we do model aerobatics!! Hope he doesn't end up being in the judging chair behind me!!

Budd Davisson and his two-place Pitts Special. If you ever wanted to learn to fly aerobatics, this is the guy to talk to. Ask anybody who's anybody in the field of aerobatic and smaller planes in the SW (and much of the country) they'll know Budd Davisson! He probably signed off on their license at one point or another. Budd and Ron will also be making an appearance at our contest to check out what we do!

Non pilot attendance is welcome to family members, club members, and spectators. Cost is $25 per head at the dinner. Please RSVP to **brad@beedyinsurance.com** or call/text him at **602-369-4163.**

Customized pilot packets will be mailed approximately 1 month prior to the contest to all pre-registered contestants. If you are thinking of attending this contest, please pre-register and email, call or text Brad Beedy your address so that we can get these packets out to you in a timely manner. Also, please RSVP for the banquet **brad@beedyinsurance.com** or give me a call/text at 602-369-4163. Please include the number of attendees so we can plan accommodations appropriately. Banquet payment will be due at sign up on Saturday morning.

Back to the IMAC stuff - this contest is being hosted by the Sun Valley Fliers and run by Ernie Mack, Brad Beedy (myself,) CD'd by Randy Wegner, and assisted by Jacques Telles. In an effort to help eliminate the frustration of judging bias, the judging matrix will be generated by the new software that SW RD Alex Dreiling just rolled out.

Jackets for last year's champions will be presented by **Rusty Fried**, former CD of the Cactus Classic for many years. Jacket tradition will continue this year as well. Come give it your all to become one of the elite Cactus Classic champions!

There will be pilot prizes and a large raffle you'll want to be in on. More on this in the near future!

So.....Come One, Come All! Sign up today! The 2018 Sun Valley Cactus Classic is upon us!

SVF Sun Valley Fliers

What's Happening

Lou Pfeifer presented their Solo Certificates to Dr, Peter Sunsenshine and Jacob Sunsenshine

Tony Quist at a Jet Rally event in California over the weekend. IT WAS FRICKEN COLD!!

Tony Quist at the recent Winter Warbirds.

Editor: IT WAS FRICKEN COLD

Recently I went over to the AMPS field to meet with Bob Putnam and he had his twin engine Skymaster. It flew great. *Editor*

SVF Sun Valley Fliers

Arizona Electric Festival 2018

Febuary 9, 2018

Sun Valley Fliers

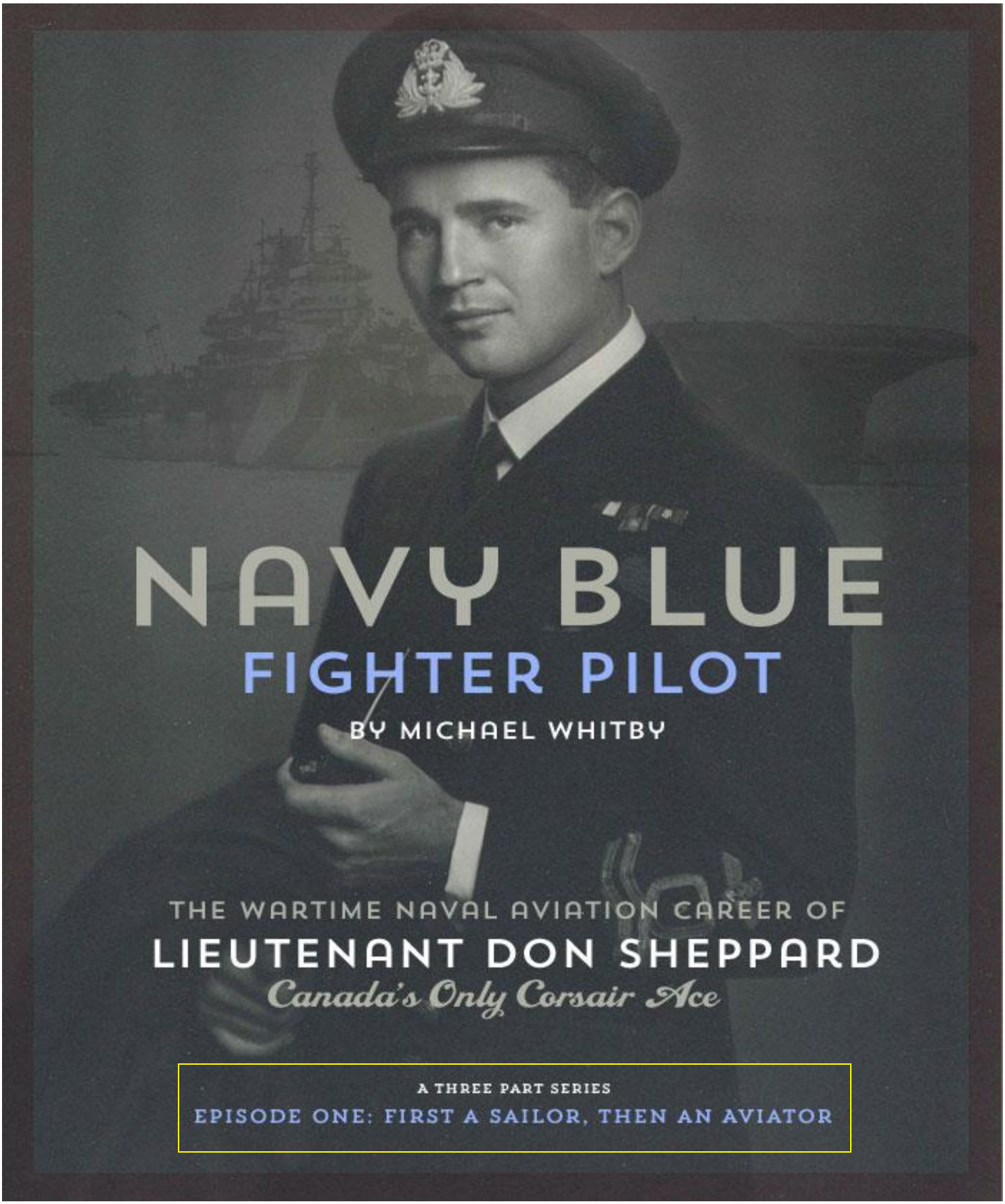
Photos by Bob Purdy

Arizona Electric Festival 2018

SVF Jim Spice receiving an award for Best Scale Flight With his Cobra

SVF Tony Quist P-47

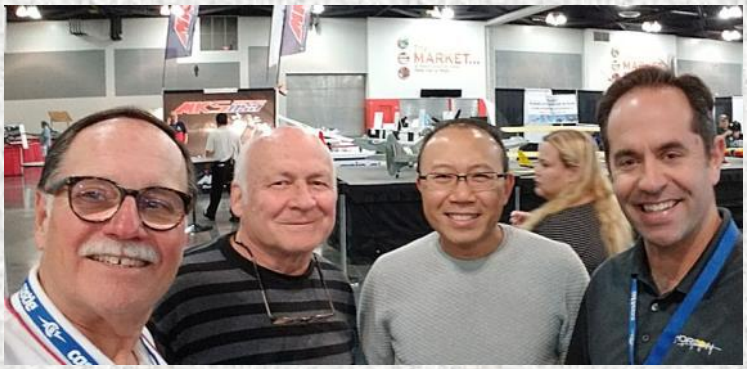
Sun Valley Fliers

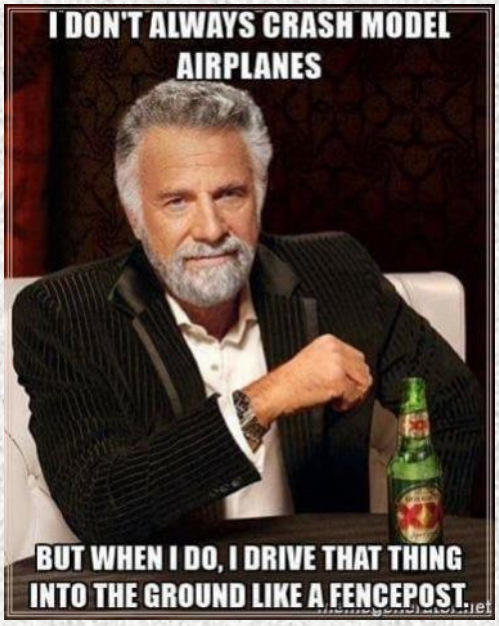


http://www.vintagewings.ca/VintageNews/Stories/tabid/116/articleType/ArticleView/articleId/468/Navy-Blue-Fighter-Pilot-Episode-One.aspx

Dan At The AMA Expo 2018

Sun Valley Fliers





How to Install Retractable Landing Gear

Written by Chuck Snyder

I suspect most modelers have their first experience with retractable landing gear in some form of sport or aerobatic model. In my case it was probably with one of the 1970s vintage Pattern airplanes such as a Kaos or Dirty Birdy.

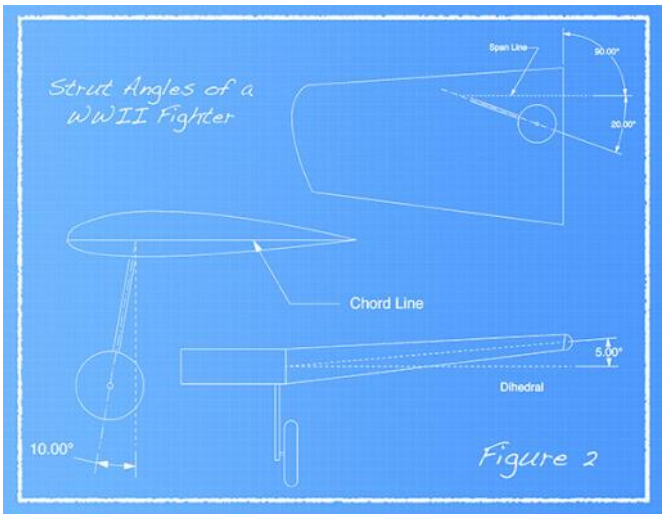
The installation was straightforward: mount the main gear retract unit perpendicular to the centerline of the model and parallel to the lower surface of the wing. The nose gear (and this is the last time I'll mention that item) was usually mounted directly to the firewall.

Figure 1.

Figure 1 is a 3-D CAD drawing (top, front, and side-view) of how the main gear mechanism, strut, and wheel look in the extended and retracted positions for this type of installation. The mechanism is elegant in its simplicity, and everything is at right angles to everything else. In keeping with the concept that right angles are good, the strut swings through 90º. This works out nicely for sport models.

Figure 2.

Things get slightly more complex when we move on to an accurate scale model. World War II fighters are popular builds; most are tail-draggers, and many have the gear arranged so the struts rake forward relative to the wing chord line when extended, and rake aft from the span line when retracted (Figure 2). Add the dihedral angle seen in the front view and it becomes difficult to visualize just how to fit the retract mechanism in the wing.



Let's plan the retract installation for a hypothetical model with the strut raked forward 10º in the side view, raked aft 20º in the plans view, and perpendicular to a flat center section of the wing.

With the power of the CAD program, you can see how the gear installation will look after making any changes. All drawings will be of the left wing.

It is clear that you will have to tilt and rotate something to get the strut where it belongs. What happens if you tilt the entire mechanism 10º forward (clockwise) in the side view and rotate it 20º backwards (clockwise) in the plans view? That will create 20º of toe-in on the extended wheel, but you can fix that by twisting the strut 20º counterclockwise in the trunion. That gives the result shown in Figure 3.

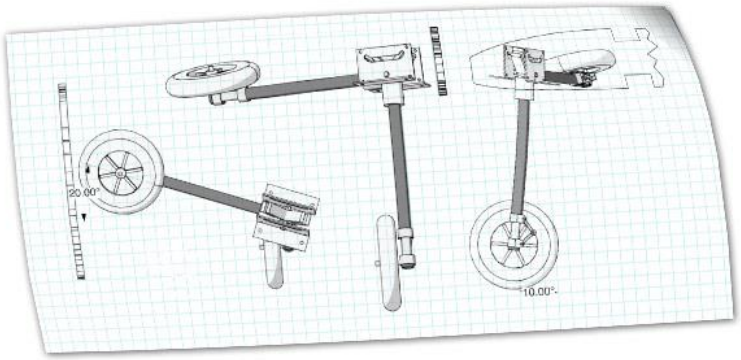


Figure 3.

This may actually be acceptable, depending on the size of the tire and the thickness of the wing. Looking at the strut in the front view, you can see that there might be circumstances where the wheel would not retract completely into the wing. In the side view, the wheel is at quite an

angle compared to the lower surface of the wing.

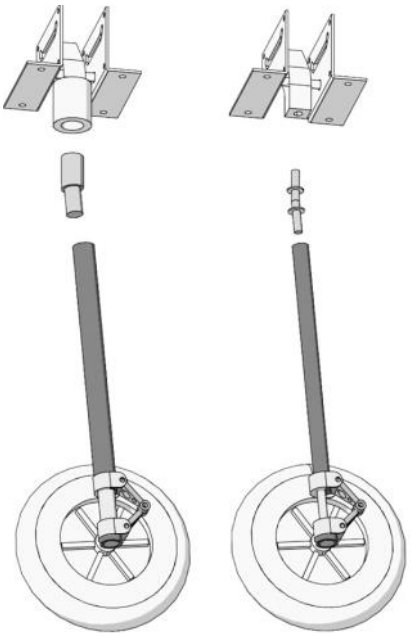
Now think about adding a cover door to the strut. It ought to be roughly parallel to the tire, but with this setup it will either be way out of alignment with the lower wing skin in the retracted position or angled to the slipstream when the gear is extended.

The full-scale aircraft manufacturers made numbers like these work so shouldn't you be able to mimic that? Yes you can, with the following three-step procedure.

First, add the rake forward angle (extended) to the rake aft angle (retracted) and divide by two. In our example, [(10º + 20º) ÷ 2 = 15º], the mechanism—actually the pivot pin is the key item here—will be mounted in the wing rotated 15º clockwise in both the side and plans views.

The second step is to rotate the strut relative to the pivot pin. Subtract the rake aft angle (retracted) from the rake forward angle (extended) and divide by two. In the example, it is (10º - 20º) ÷ 2 = -5º

Figure 4.



The negative sign means the strut is rotated 5º counterclockwise in the side view. In other words, you need to put a "kink" in the strut. This kink may be the hardest part of the installation to implement and I'll give some ideas on how to do it. Figure 4 is an exploded view that shows two ways of making the kink.

The third step of the procedure will be to calculate the required retraction angle. In the example, you can see it should be greater than 90º. Or the opposite can happen. When I built my Ki-61 Tony, the retraction angle needed to be less than the 90º built into the mechanism. I was unable to fudge it and got downgraded at every meet I entered because the strut was not at the proper angle with respect to the lower surface of the wing.

I had to splay the strut outward, otherwise the retracted wheel would have popped through the upper wing skin!

You can find the required retraction angle using solid geometry, trigonometry, and an $11 scientific calculator. First, calculate the distance between the lower end of the strut in the extended and retracted positions. Then plug this number into the Law of Cosines to calculate the retraction angle.

This is only a "first approximation," because it does not consider the kink angle. In the example, the correct angle is approximately half a degree larger. This is insignificant given the tolerances in the building and the manufacture of the gear mechanism. See the sidebar for these calculations.

Commercial retracts are available with retraction angles varying in 5º increments. The sidebar calculation determined that about 94º of retraction angle was needed, so let's install a 95º unit.

In the previous example it was necessary to rotate the strut in the socket of the trunion to avoid a huge amount of toe-in on the wheel. That must be done again, but you have two ways to do this. You can either rotate the strut on the kink, or rotate the kink in the trunion.

The better way is to fix the strut to the kink and rotate this assembly in the trunion. This will keep the strut vertical in the front view.

Figure 5.

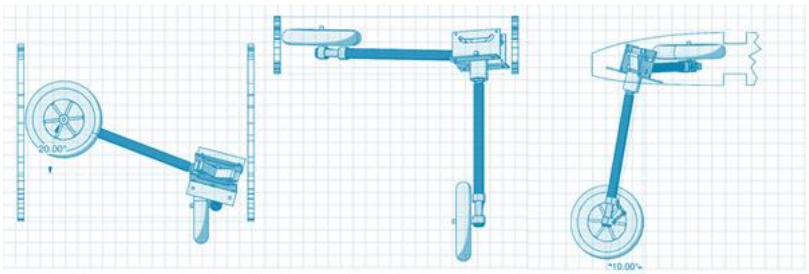


Figure 5 shows the installation if you use a 5º kink and rotate the mechanism 15º clockwise in both the side and plans views. This is essentially what you set out to achieve. The only deviation is that the strut is raked a bit too far in the plans view. I'm reasonably sure this is because of the 95º retraction angle where the method's geometry is based on a 90º angle.

The installation may still not be exactly as

the full-scale gear. To match the full-scale geometry you would have to have the point where the strut intersects the pivot pin at the same relative location in the wing as on the full-scale. This may not be possible given the relationship of the strut socket, pivot pin, and height of the model's retract mechanism.

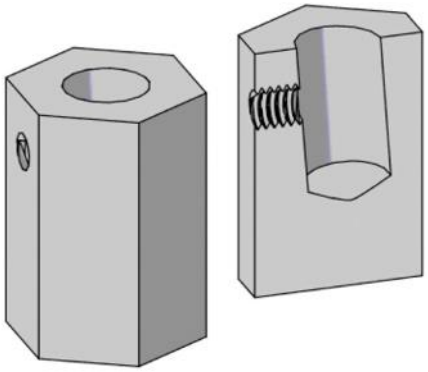
This could also make the gear door geometry even more challenging. I can only suggest some finessing and finagling to fine-tune the installation to meet your standards.

As mentioned, making the kink in the strut may be the biggest challenge in this project. On a small model with 5/32- or 3/16-inch wire gear, it is only necessary to bend the wire that inserts into the trunion.

I did this on a Hurricane, but unfortunately, the wire would bend on rough landings and I would have to remove it and adjust the bend angle. I suspect the wire lost its temper when I soldered washers on the kink to set the length of insertion into the trunion and strut.

The retract mechanism in my 86-inch span Ki-61 was set up for a 1/2-inch diameter strut. The strut itself was hollow tubing. I used some 1/2-inch aluminum bar stock to make a fitting such as the one shown in Figure 4. First, I made a fixture (see Figure 6) from a piece of 1-inch hex stock.

Figure 6.



I drilled a 1/2-inch hole in the face of a short length of stock, but at a 5º angle. (The kink for the Tony's gear also worked out to be 5º, but 5º forward.) A piece of the aluminum bar stock roughly 1-inch long was inserted to half its length in the fixture and held with a set screw.

The fixture was mounted in the three-jaw chuck of my mini-lathe and the exposed portion of the aluminum turned down until it would just fit inside the strut. The axis of this necked-down portion is rotated 5º from the axis of the 1/2-inch diameter section. When the parts were as well aligned as I could get them, I drilled the strut, kink, and trunion for bolts to hold them together.

I hope this technique will save you some frustration and yield a more accurate model on your next scale build.

Another Day In February

Howard and John

George and Paul

Steve and Bob

Both Tiger Moths are Electric

Sun Valley Fliers

LUKE DAYS 2018

THE FUTURE OF AIRPOWER

Luke Days moves to March 17-18, Welcomes U.S. Navy Blue Angels

http:www.luke.af.mil/2018-Luke-Days/

Photos provided by SVF Mike Vivian an AF F-104 pilot
Thanks Mike

SVF EXTRAS

Jared Simmons new Edge

Andrew , Kyle & guest

Yuri & gang

Andrew

Purdy's ZAZZY

Bob Poe

Would this be permitted in the IMAC Event??

SVF CACTUS CLASSIC IMAC EVENT

MARCH 24-25, 2018

MARCH 2018 SVF Birth Day Boys

Eric Kaehr
Eric Sauley
Dean Clarkson
James Godziela
John Nansen
Chris Pangilinan
Mike Schmidt
William ray Olsen
Wallace Balfour
John Geyer
David Brown
Jeff Mitchell
Michael Taylor
Tom Kametz
Jeffrey Bean
Oscar Diaz
Terry Bohl
Robert Nelson
Joseph Balabon

AMA EXPO WEST
NOVEMBER 2-4, 2018
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POMONA, CA
NEW LOCATION

Duncan's R/C
(602)347-5518
7146 N. 35th Ave.
Phoenix, AZ 85051

Mon-Fri 9:00 AM — 8:00 PM
SAT 10:00 AM —- 8:00 PM
SUN 11:00 AM — 6:00 PM

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4240 West Bell Rd. 602-547-1828 Glendale
M-F 9:30-9PM, SAT 9:30-6PM, SUN 11-5PM

THE SLOW ROLL

Club Officers 2014-2015
Lou Pfeifer IV, President
Andrew Schear, Vice President
Nate D'Anna, Treasurer
Robert Poe , Secretary
Safety Officer Ernie Mack

Bobby Santoro
Website Supervisor
Please check your Membership list for Phone numbers.

Board of Directors
Wayne Layne '17-19
Jamie Edwards '17-19
Bryant Mack '17-19
Bob True '17-19
Wayne Robinson '16-18
Bobby Santoro '16-18
Steve Myers'16-18
Tom Kametz '16-18
Ernie Mack '16-18

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