THE SLOW ROLL

MAY 2012

CHARTERED #921
Since DEC. 1974

IMAA Chapter 782

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 by Joe Balabon of Brian O'Meara P-47……...SVF Ballot…….SVF Hall of Planes …F-104 Story.....……Landings….Cub Scouts photos...Scale event….Drones….SVF members photo…Toledo photos.....History on Model Avaition…….Prez report…. B'Days & Treasurer Report …….*MANY GREAT VIDEOS*…….*Much more, enjoy*

Don't forget SVF Meeting MAY 2nd @ 7 PM Bring a pen/pencil

THE PRESIDENTS CHANNEL

Frank Moskowitz

May 2012 Slow Roll Presidents Letter

Welcome to the May 2012 Slow Roll.

I'd like to start out by reminding everyone to please vote in the upcoming election. This will take place during our May 2nd club meeting. Ballots will be available at the meeting and a sample ballot showing whose running is included in this edition of the Slow Roll. We will not be accepting any proxy votes. You must be present at the meeting for your vote to count. Please review the ballot for the positions that are open this year and the candidates that are applying for them. Some candidates are incumbents and some are newcomers. When making your decision on voting for a new candidate for either Club Officer or BOD, remember to consider that persons past involvement with the club; Have they been active at all our events, have they offered positive comments to help us move forward as a club. The Officers and Board of Directors helps shape both our future existence and growth in this valley and is quite an important job. Use good judgment on your selections.

I had sent out an email a few weeks ago explaining the warning we received from the Deer Valley Air Traffic manager. For those of you that did not receiver it, it stated that: ***"An aircraft that was inbound over your field reported that a remote control aircraft was above him doing spins and that it descended off to his right side."*** I did receive many emails back from members who offered their views on the topic. I thank those of you that responded with your concerns and possible ways for both SVF and Deer Valley Airport to co-exist.

So at the last SVF Board meeting there was a push for a 400 foot hard limit right away rather than considering other options. The motion passed by about a 3-to-1 margin. However, since the method/details/consequences by which the rule would be implemented and enforced had not been discussed, the rule will not be implemented until the Board meets again May 7th to discuss these details. I will keep everyone posted as this develops.

Remember our next club meeting is **Wednesday May 2nd at 7:00 pm. This is our annual elections meeting.** If you want to eat I suggest you arrive no later than 6:00 pm. Location is Deer Valley Airport Restaurant. (7th avenue and Deer Valley Road).

The Club meetings get better every month. For added fun we have show and tell. We will always have more than one raffle prize and the 50/50 could make you very happy $$$. You never know what might happen, and you don't want to miss it.

Have fun out there!

Frank Moskowitz

President

Sun Valley Fliers Club Meeting Minutes
Date, April 4, 2012

The meeting was called to order at 7:05 pm by President Frank Moskowitz. 45 members were in attendance.

Guests: None

New Members: Bill Bedford and Barry Mazer

New Solo Pilots: **Neil Banyai**

Secretary's Report: **Bruce Bretschneider**

- Minutes of last meeting accepted as published in the Slow Roll.

Treasurer's Report: **Gene Peterson**

- We made $502 from the kitchen at the OEAF event and $500 from the OEAF for the use of the field. Thanks were extended to all who helped out in the kitchen during the event.
- Treasurer's report was accepted as published in the Slow Roll.

Safety Officer Report: **Ken Justice** (reporting)/**Frank Seminara**

- Observe the correct flight pattern direction, decided by the prevailing wind direction. Don't fly against the direction of the other 4 aircraft.
- Pilots are still flying from the flight station pads, standing in between the fencing on the starting pad rather than to either side of the starting pad. Pilots are also standing in the rocks at the safety net fencing.
- It has also been reported that pilots have been observed flying from the runway itself.
- REMINDER – Fly **NORTH** of the dead line… Not over the flight stations or the Ramada. The runway and the airspace over it are to be used only for take-offs, touch-n-goes, and landings!! **Fly all maneuvers north of the edge of the runway!**
- SVF monogrammed apparel is for sale. Contact **Ken Justice**.

Old Business:

- The OEAF event went well with 71 pilots and over 100 planes. The highlight of the event was the Corsair with folding wings and a Moki 5-cylinder radial engine.

New Business:

- Club elections will be held at the May meeting.
- Nominations for the upcoming election were opened to the floor. **Lou Pfeiffer** accepted a nomination for Secretary. All other officers will be running as incumbents. **Tom Guca** was nominated for an open position on the BOD.
- Ballots will be printed and available at the May meeting. Members must be in attendance in order to vote.
- There was a discussion on setting up additional club trainers.

Community Awareness: (**John Geyer**)

- Two groups of Cub Scouts are planning an event on Saturday, 14 April.

Door Prize Winners:

- **Neil Banyai** - 1 gallon fuel, **Lou Roberts** – fuel, **Mike Vivian** – fuel, **Roger Miller** – fuel
- **Ken Justice** – Real Flight T-Shirt donated by **Dale Newham**, **Val Roqueni** - Real Flight T-Shirt
- **Jim McEwen** – complimentary dinner

50/50 Winner: **Ken Stott won $66**

Show & Tell:

- **Bernie Frank** let us know that the Great Planes EDF F-86 is their latest arrival.
- **Jim McEwen** showed special dry transfers that he had had made for one of his scratch built planes. The artwork was created with Corel Draw and Calgraphics created the dry transfers.
- **John Wisniewski** told about his experiences at Glenview NAS with the late Jim Walker (1950-55).

Meeting adjourned at: 7:43

Respectfully submitted,

Bruce Bretschneider, Secretary

$ TREASURERS REPORT $ with *Gene Peterson*

Treasurer's Report APRIL 2012

We are well under way for 2012 with new Memberships and catching up with a few delinquent that just "forgot". 279 Members now as at this writing. Still tracking down a few that just joined or rejoined and we don't have an AMA membership for. Rules are that if you're a member of SVF, you must be a member of AMA. These are the basic rules of Club Charters from AMA. Sure it has a lot to do with the insurance. We do have some visitors at the field from time to time, and visitors are OK, they cannot however, be your Spotter. Anyone on the flight line must have an AMA membership. (Insurance Again.)..

Fun note……Went last weekend to the Scale Masters Qualifier in Hemet Calif. A bit low on the number of participants for the event. Everything went real good. Mike Peck, John Geyer, Howard Kennedy and Myself went from SVF. Austin Goodwin from AMA Club, Mesa also entered. Lots of wind in the afternoons made it hard for the flights but every one survived. No real crashes and that's good. Results published somewhere else in this publication.

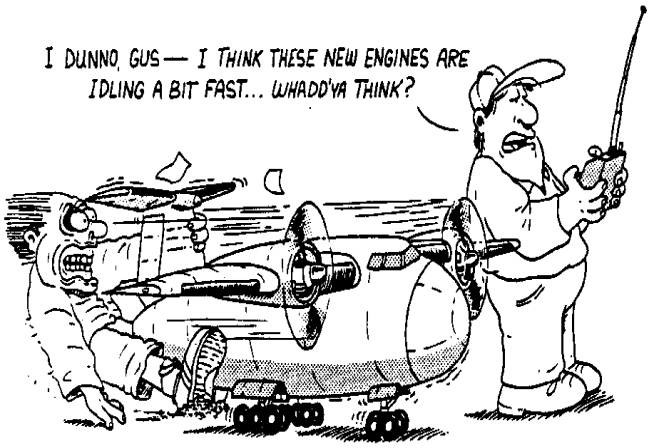
Getting a lot of calls on the gate being left open (Still……..) Rules are to close the gate after you. If someone is following you out, and he's right behind you, ok to not close it, but if he's still packing up and or is not close, please lock the gate. Roberts Rules of Gates says that if you leave it open for extra 10 minutes, the patrol guys from the Flood Control District will come by, sure as shootin……. Then we get the call, "the gates Open again." Do your part, "close the gate"

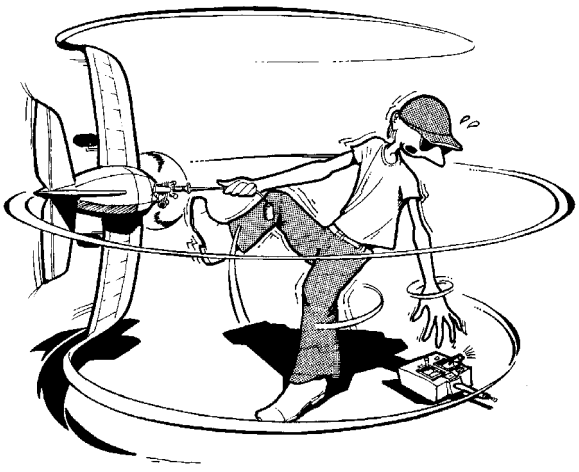
Happy Flying in May.

Regards *Gene Peterson, Treasurer*

MAY 2012 SVF BirthDay Boys

First name Last name	Member type	Dob
John Gibson	Regular	05/02/1964
Robert Vogel	Regular	05/03/1958
Richard Polkinghorn	Senior	05/06/1943
Thomas Hickey	Regular	05/06/1963
Ray Beliveau	Senior	05/06/1926
Jeff Clarke	Regular	05/09/1962
Warren Segal	Senior	05/10/1933
Ervin Nemec, Jr.	Senior	05/10/1942
Dave Borrow	Regular	05/11/1970
LLoyd Mason	Regular	05/12/1965
Ronald Norris	Senior	05/14/1930
Brian O'Meara	Regular	05/16/1948
Roger Miller	Senior	05/17/1936
Bill Powers	Regular	05/18/1947
Bob Wainman	Regular	05/19/1947
Cal Sutton	Regular	05/19/1965
Paul Clifton Jr.	Regular	05/22/1964
Tomas Perez	Regular	05/23/1965
Thomas Firth	Senior	05/26/1925
J D Sanchez	Regular	05/26/1967
Scott Okerstrom	Regular	05/27/1957





2012 SVF BALLOT

President: ___ Frank Moskowitz

(Vote for one) ___ _____ (write-in)

Vice-president: ___ John Geyer

(Vote for one) ___ _____ (write-in)

Secretary: ___ Jim McEwen
___ Lou Pfeifer IV

(Vote for one) ___ _____ (write-in)

Treasurer: ___ Gene Peterson

(Vote for one) ___ _____ (write-in)

Board of Directors:

(Vote for four)

___ Charlie Beverson (*incumbent*)

___ Loren Counce Jr (*incumbent)*

___ Mike Peck (*incumbent*)

___ Howard Kennedy (*incumbent*)

___ Tony Quist

___ Wayne Layne

___ Ernie Mack

___ Tom Guca

___ _____ (write-in)

Incumbent: [in·cum·bent] = somebody currently holding an official post

SVF SAFETY CORNER

Welcome to the May 2012 ***Safety Corner***! I hope that most of you took the time to read thru my lengthy April ***Safety Corner.*** I received some verbal feedback at the field and saw a few who were really trying to put an effort into incorporating some of what they had read into their daily "routine". But then again, I saw evidence of some who must not have read my article as they went about their daily "routine". April's article was focused on an "**attitude** toward a safety culture or environment" each and every day at our SVF field by everyone enjoying our great facility! We must continue to work toward this "cultural change or **attitude**". None of us should look the other way or ignore an incident just because "that person is new…or rusty". Or "well, there is just the 3 of us here; it's not going to affect me". This is an "**attitude**" or "culture" that shouldn't or doesn't set well with a lot of our members or with fliers from other clubs around the country when they visit our facility, whether they are actually flying or just visiting. We need to take pride in our culture or "**attitude**" toward **SAFETY** as much as we take pride in our facility! It is very important to surround yourself with the right kind of people in any enterprise. At the field, you should surround yourself with fliers who stress and practice safety. Our SVF Club needs to be a group of fliers who are proactive on the flight line and not be afraid to step up and tell another flier if he or she was endangering himself or others (and I must stress…do this appropriately and at the correct time). This is an admirable trait for our group to put forth but this style probably would get little traction if our group of fliers, in general, does not put a high value on a safe operation…from Club Officers, Board Members and our general membership!

Okay, I'll get off that soap box. The following link is to a good article on Propeller Safety that I ran across some time ago and had my two Grandsons, Cameron and Colin, read and review from time to time. Take a look: http://radiocontrolpilot.com/rc-aircraft-safety-propellers/ it's a good read for beginners and a good refresher for seasoned RC Pilots!

One side note not related to safety but to show pride in YOUR club. Again, I also take care of selling the caps and shirts for SVF. We now have in stock Ball Caps and a fresh supply of our SVF logoed T-Shirts with pocket. With longer days, we also have a few Adams Sun Block hats too. Just contact me at the link under the "For Sale" tab or see me at the field!

Thanks for reading thru this month's **SAFETY** article! That's it for this month! I look forward to seeing everybody out at the field! The summer's heat is around the corner…stay hydrated. And remember…

Safety is everyone's responsibility!

Ken Justice
SVF Safety Officer

SVF PILOTS HALL OF PLANES

Brian O' Meara P-47 Sleepy Jean 3rd

W.S. 144", 420cc engine/38X20 prop, plans Ziroli & Meister, weight @ 116lbs, Futaba 18 MZ, 2 recs., 10-400 oz servos, Sierra retracts, electric sliding canopy, bomb drop. 15V landing, wing tips & beacon lights, 3-4600mah A123 batts., Klass Coat epoxy. Lots of redundancy.

The plane was base in England, the pilot retired in Windsor, CO. with his wife ***Jean*** *of over 60 years.*

It has been a 3 year project with the majority building done by Denny DeWeese, Scale Squadron member. Wayne Layne put in many countless hours.

I now have 9 flights and she is headed to Lakeland, FL. for Top Gun in the Pro Class the first week of May. Brain O'Meara

Good Luck to you & Sleepy Jean 3rd

So Cal US Scale Masters Qualifier @ Hemet, CA April 21-22, 2012

By Howard Kennedy

The first photo is a full scale T-6. At least we don't get them this low at SVF.
The Hemet field is about the same distance from the airport as SVF is from DVT.
Obviously they have a much better working relationship with full scale there.
The second pic is Austin receiving his award from CD Curtis Kitteringham.
The third is of the OEAF members that were there.

A bunch of SVF members went to Hemet this past weekend for a Scale Masters Qualifier. Members that went were **Gene Peterson, John Geyer, Austin Goodwin, Mike Peck** and myself with Austin, Mike and John competing. We arrived about 1:30 Friday afternoon to a temp of 97 degrees. We were expecting a blast of hot air when we got out of the truck but it was quite comfortable.

Friday was a day for practice and catching up with some old friends. Saturday morning started with static judging and then flying starting about 10'clock with plans to do three rounds that day. The wind picked up before the third round started canceling it. Because of only getting two rounds in on Saturday the plan was to do three on Sunday. That was not to be either, again because of the wind. Then it was time for award presentation with Austin getting, I believe, second in advanced. John and Mike finished out of the money. .Also John Geyer finished 3rd in open.

Gene Peterson volunteered to be a flight judge and did an excellent job both days. Thank you Gene. We did a little more visiting and then headed back East to Phoenix getting home a little after 10.

SVF MEMBERS PAGE

Photos by SVF Members

Wayne Layne P-38

Derek Micko ME-262

Landings

Not wanting to be outdone by my friend Gerry Goepfert, who wrote about attaching a bubble canopy, I'm going to write about how to making a better landing with your RC model. I still occasionally draw a few haw-haws when I make three landings in one, but at my age I'm entitled.

As a full-scale pilot, I learned that it was most important to enter a downwind leg, which should be more or less parallel to the runway, followed by a turn to base leg and then to final approach, all of which is known as the landing pattern. For our models, the downwind leg should not be too high and usually 100 feet is plenty and as close in as practical. Our airport, called OTX in Franklin, North Carolina, is 400 feet of groomed Bermuda grass with an additional 100-foot over-run and we commonly land 42% gassers with no problems.

But, allow me to review some of the mistakes I see in making a landing approach.

Either because of stubbornness, or embarrassment, newbies often attempt to force their airplane to land regardless, rather than performing a missed-approach and go-around, and simply try and jam the airplane into the ground. Ouch! Teach yourself that if you aren't lined up—too high, too low, or whatever—hit the throttle and make a go-around. Take an afternoon and practice nothing but repeated landings and takeoffs or touch and gos. With enough practice, your brain will learn so that things become instinctive.

I often see pilots feed in power and grab for as much altitude as possible during a missed approach. The problem here is that they are now way above landing altitude and to get to the runway again, they have to dive, which builds up too much speed and often overshoot the runway again.

Another mistake I see often is failing to slow down during the downwind leg. In a full-scale aircraft, if you haven't already done so, this is where you want to get your flaps and gear down and start slowing for landing. The same thing applies to our model aircraft. How much power to use depends on the aircraft, but I usually cut power to roughly one half during the downwind leg and when on final, I cut it even more and then cut to idle at touchdown (assuming I haven't bounced). If you find yourself in a bad bouncing situation, feed in power and make that go-round. (My buddies will tell you I have been known to bounce pretty high but don't listen to them.)

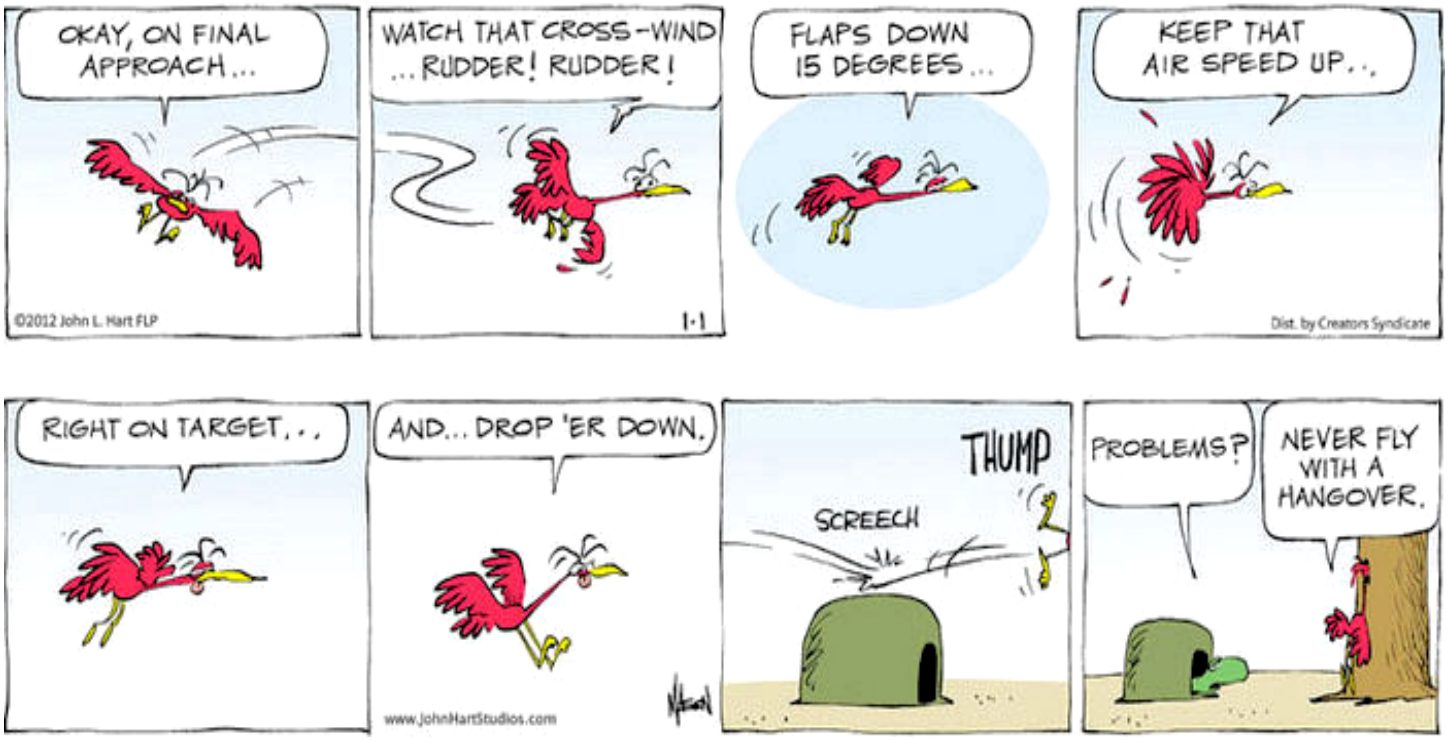
So here's my advice to the newbie:

Make your downwind leg parallel to the runway.
Keep the downwind leg as low as practical for your airport. 100 feet is good.
Begin slowing down during the downwind leg.
If you have to dive to land, you're too high and/or too fast.
Teach yourself to automatically go around if you mess up the approach.
Work that throttle continually during your landing, using power as needed.
Visualize a railway track in the sky and stay on the track. Downwind, base, and final.

By Bob Wilson, Franklin NC, 3dbob37n@frontier.com

LANDINGS ????

Thanks Ray Fulks



SPECIAL SVF MEETING MAY 2nd @ 7 PM Please plan to attend

SVF MEMBERS PAGE

Photos by SVF Members

Ron Peterec SIG Rascal 110 with a O.S. 160 Twin FS on board glow system, Futaba T6XA 6 channel radio, Hitec 645 metal gear servos, Zinger 18x6 Prop.

Sun Valley Fliers

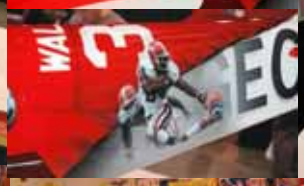
SVF MEMBERS PAGE

Photos by SVF Members

SVF'ers Dog owners. Send in your photo of your pet and airplane or pet and you. We'll be happy to have it in the Slow Roll

TOLEDO 2012 DISPLAY SETUP

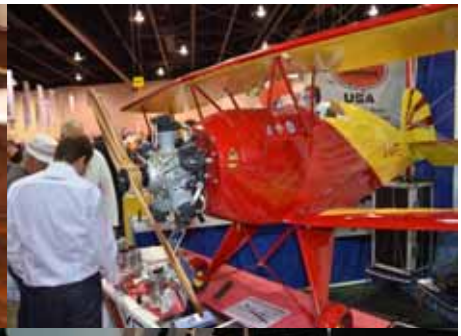
Toledo 2012 Static Display



Toledo 2012

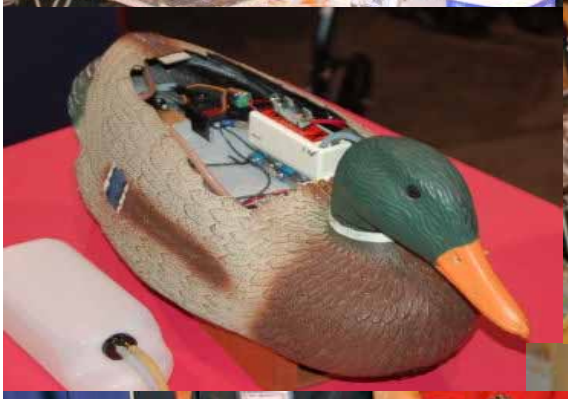
Sun Valley Fliers

Toledo 2012 Aircraft



Toledo 2012


U.S. Scale Masters

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duplex 2HBX


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Menu
Return
580

$75

Model Aircraft are not Drones

Recently, the AMA posted a blog post featuring comments from AMA President Bob Brown, in response to an op-ed piece in the Los Angeles Times. The editorial proposed that drone proliferation by amateurs in the National Airspace System (NAS) raises an issue that has received too little attention: the threat that they could be used to carry out terrorist attacks.

President Brown comments were not ignored by author of the op-ed piece, John Villasenor, electrical engineer, UCLA professor and senior fellow at the Center for Technology Innovation, Brookings Institution. Dr. Villasenor was immediately in contact with the AMA, including Rich Hanson, leader of the AMA government relations team. Dr. Villasenor was very interested in learning more about the hobby of aeromodeling and was open to educating himself of the successful safety record of the AMA.

He met with the AMA Executive Council at the Toledo Weak Signals Show in Toledo, Ohio and thanked the AMA for the chance to learn more about the hobby. With his experience, he has modified some of the comments made regarding the hobby, and believes it is important to differentiate model airplanes from other unmanned systems.

As a respected professional in his field, the AMA is eager to work with such influential policy analysts like Dr. Villasenor, and would like to thank him for taking the time to learn more about the hobby, and to voice his opinions regarding the necessity of differentiation.

Early this week, Dr. Villasenor was interviewed by Neal Conan of National Public Radio, regarding drones, safety and usage. The interview gave great insight to how drones might be used in the future, and allowed him to draw distinction between model aircraft, drones and other unmanned systems.

In the interview, he pointed out that when discussing drones, model aircraft should not be included in the discussion. He stated, I think its very important to emphasize that model aircrafts are not drones. Model aircraft are flown within the line of sight of, and under the control of a pilot at all times. And so whatever definition someone might adopt of drones, that definition should not include model aircraft.

We are thankful to our membership for continuing to support AMA ongoing efforts to protect aeromodeling from unnecessary and over-reaching regulation. And we appreciate that experts, like Professor Villasenor, recognize the differences between what we do as recreational model aviation enthusiasts and the more commercial, public-use aircraft that have been the focus of much of the media recent attention. states AMA executive director, Dave Mathewson.

AMA has experienced many victories, including the passing a bill that included a provision for model aircraft protecting it from FAA regulations.

To listen to the April 17 NPR interview with John Villasenor, please visit NPR website.

Click here to read Bob Browns response to the op-ed piece to the Los Angeles Time article.

To learn more about the current status of the NPRM and FAA regulation please visit the AMA Government Relations section of the Academy of Model Aeronautic website. ***Hyperlinks not working here.***

SVF Sun Valley Fliers

John Geyer (Instructor) presented the Solo Certificate to Neil Banyai.

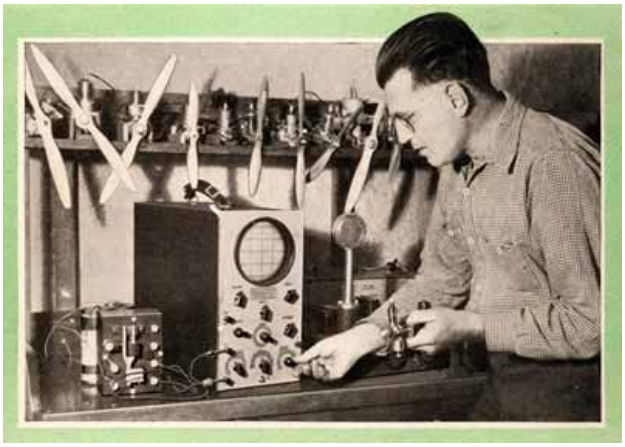
Congratulation Neil.

Cub Scouts @ SVF

Ray Arden

Added to museum: 10/17/08

Early Engine Developer is Best Known as "The Father of the Glow Plug"



Few photos of ay Arden can be found. This one is from a 1939 issue of Popular Science. The caption reads: "Here Arden is using a cathode-ray oscillograph to measure the efficiency of one of his power plants. Such tests have shown that his latest product, which weighs only an eighth of an ounce, is more efficient, for cubic inch of cylinder space, than the best modern two-cycle motor-boat engines!" (Click on photo to view a larger image.) Photo:**Popular Science**

Introduction

The following information was gathered from the Model Aviation Hall of Fame application submitted by Charlie Reich in 2004 and from other submissions from AMA members as noted. For a complete biography of Ray Arden, see http://www.modelaircraft.org/museum/bio/Arden.pdf on the Academy of Model Aeronautics web site. We felt Ray's significant contribution to model engines through the development of the glow ignition merited inclusion in this section.

No photographs of Ray Arden were available at the time of this writing. If anyone viewing this site has a photo of Ray or his engines, we welcome your submissions and will be glad to add it with appropriate credits to the photographer.

Biography of Ray Arden

Thomas Ray Arden was born in New York on February 24, 1890. Though a prolific inventor and innovator throughout his life, he is best remembered in the field of model aeronautics for not only his engine designs, but most importantly for his development of the glow plug ignition.

It seems Ray was good with his hands right from the start. It is reported he started making his own models of vehicles and boats at the early age of five, and by age eleven he had built his first rubber powered model airplane from magazine plans. However, his prowess with tools was not matched with good academic performance in Public School 63 in the Bronx, NY where he had to repeat some grades several times.

Viewing an early model engine changes the focus of his life

In 1907, at age 17 he attended a sportsman show in Madison Square Garden that would change his life. At the show he observed an early model aircraft engine developed by A.N. Herring who, like the Wright Brothers at the time was competing to be the first person to achieve powered manned flight. Ray studied Herring's 2-pound gas engine, which was mounted in a miniature biplane. He stared at it all day long and would return many, often skipping school to do so. He would buy tickets or sneak in to stare at the motor and dream of building his own. At one point he got to talk to Mr. Herring and boldly informed him, "Someday I will make the smallest engine ever built."

That year he did manage to make his first gas engine, and it weighed in at half that of Herring's engine. Working in the family kitchen and home shop he also designed a revolutionary vibrating spark coil and condenser that weighed less than two ounces. To combat the characteristic high-speed miss of the jump-spark ignition, he used an early version of glow ignition which supplemented but did not replace the spark plug. In 1908, he designed and successfully flew a biplane powered by this engine.

A few years later in 1910, Ray designed a two-cylinder model engine weighing only fourteen ounces. Eventually, after 25 years of experimentation, he would be able to get the engine weight down to a mere two ounces.

In his biography of Ray Arden on the Academy of Model Aeronautics web site, Charlie Reich notes the following:

"After graduation Ray's career blossomed as an inventor with somewhere between 300 and 400 inventions sold through the 1920s. In the 1930s Ray formed a company called Ultrad Products to design and develop new products, primarily new toys in which Ray held a particular fascination. When a toy train manufacturer became interested in the possibilities of developing a miniature gas engine Ray was steered back to his natural field. A revolutionary valve-in-piston engine resulted and the Arden-designed Mighty Atom .097 ignition engine was introduced in 1939.

After introduction of the first Mighty Atom he continued to improve on the design and offered three additional progressively improved versions then called Super Atoms."

Getting into the model engine business at the right time

From the entry of the United States into World War II in December, 1941 until the final surrender of Japan in 1945, the model business was pretty much put on hold. However, after the war ended, previously restricted items like methanol became available, and thousands of soldiers returning from the German and Pacific theaters were hungry for any recreational item related to flying. The market was ripe for model aircraft products, and inventor Ray Arden was in the right place at the right time. He immediately went to work and produced his revolutionary Arden .099 and .199 IC engines, which were introduced in 1946. Their light weight and compact size made them instantly popular with modelers.

Ray Arden with a home-made propeller on one of his engines.
Photo: **Popular Science**

An accident leads to discovery of the glow plug ignition

At the same time, development of more potent fuels was under way. While Ray sampled over 500 blends of methanol based fuels, his friend Ed Chamberlin and Ben Shereshaw developed a hot new fuel Ed called “Liquid Dynamite.” By chance while testing some of this new fuel on one of Ben’s Bantam .19 engines Ben shut off the ignition and instead of stopping, the engine kept running. They physically stopped the engine and quickly removed the spark plug to find that the plug’s ground strap had broken and the center electrode was still glowing red hot, causing the engine to keep firing.

Ed immediately informed Ray of this exciting discovery, and both Ben and Ray started trying different glow plug designs. Ben’s first choice of wire for the electrode was Nichrome, which worked but burned out quickly. After experimenting with many different materials, Ray finally settled on a two-piece glow plug with a replaceable element made from platinum and iridium. When used with methanol-based fuel this element did not burn out.

At this point, Charlie Reich notes:

“Ray quickly introduced his second series of Arden engines, ceasing production on the clear plastic fuel tanks, which melted when using the hot new glow fuel. The 1947 engines offered the new, fuel impervious, black fuel tanks and the Arden engines were thereafter only offered in the ball-bearing version to take the additional stress and rpm’s created by the hot new glow fuel.

At the 1947 control line Junior Air Races in Cleveland, Ohio rumors started circulating that a man was selling a new gadget out of the trunk of his car. Word was that he had this “Gold Plug”—a replacement for our Champion Spark Plug, and that we could throw away our coils, condensers, points and batteries! Of course, it was Ray Arden with his new “Arden Glow Plug”, and modeling was forever changed! Ray Arden formally introduced the plug a month later at the Nationals in Minneapolis.”

In late 1947 or early 1948 Ray Arden transferred the rights for his glow plug to Ben Shereshaw. Ben then sold the Bantam engine manufacturing rights, spare parts and tooling to the OK-Herkimer Company. His agreement included a provision whereby he would manufacture the newly designed glow plug for them in his Miniature Motors plant to be sold under the OK-Herkimer brand name. The Miniature Motors plant soon started producing a line of new glow plugs known as OK brand XL Glow Plugs.

Ray Arden retired from the engine and glow plug manufacturing business in 1948, but in all probability continued to invent and design until his death in the 1950s.

View an article about Ray Arden from 1939

An article appeared in a 1939 issue of Popular Science magazine that tells more about Ray and his engines. CLICK HERE to view a copy of the article as a PDF file (16 MB—allow time to download). Our thanks to MECA (Model Engine Collectors Assn.) member Eugene Ethier for the donation of the magazine to our library museum.

The following note on the unfortunate fate of Ray’s engine tooling comes from Victor G. Didelot courtesy of Tandy Walker:

“Ray Arden passed away in the early 1950s, while still living in Danbury, CT. After Ray’s death, his wife retained all of the Atom and Arden tooling for several years. However there was an unusual Connecticut law enforced at that time that required her to provide semi-annual financial statements to the state. Even though the engines were no longer in production, this was still a requirement because she owned *the tooling that could produce*

the tooling that could produce these engines. To put a stop to this difficult task of providing these financial statements each year, she had all of the Atom and Arden tooling destroyed. Shortly thereafter, the state of Connecticut did away with that law!"

Arden engines (Click on any photo to view a larger image.)

This Arden .099 ignition engine was donated to the Craftsmanship Museum in Vista, CA by Donald Holcomb. The engine was designed and introduce in about 1945, right after the end of World War II to a public eager to go model airplane flying. The donor included the ignition system as well, so Tom built a display stand for it complete with the ignition components. When we got them, they were still attached to what was left of the original bulkhead from a plane last flown long ago.

This is the Arden .099 engine in glow plug form. A lucky discovery led to the development of the glow plug, for which Ray Arden is better remembered than for his engines. This engine was also donated by Donald Holcomb and like the one above is also on display in the Craftsmanship Museum in Vista, CA.

http://www.craftsmanshipmuseum.com/Arden1939PS.pdf

Cornerstone Church Open House

The Cornerstone Church in Chandler has invited the Sun Valley Fliers to fly and provide a "mall show" type presentation at their Vacation Bible School Open House on Friday June 15th. The theme for their Bible School is "The Sky" so they'll be doing aviation related activities all week and would like us to help them close out the week at the Friday night open house for students and their families. There is only enough room to fly Park Flier sized electrics and small electric helicopters. We would also like to have several larger models on display and a few "ambassadors" to talk to the families about the models and the hobby. If you're interested in participating, please contact: ***John Geyer 602-810-1767*** JEGeyer@cox.net

Thanks, JG

VIDEOS and Websites Links

Click on to view video, website

Spitfire Ace has 4 Episodes and close to 17 hours of viewing. I'll show the Episode 1

Spitfire Ace Episode 1 Part 1 10:00 PART 1 of 6

http://www.youtube.com/watch?v=TQVnV0pm5TA&feature=related
Spitfire Ace Ep 1 Part 2 9:00
http://www.youtube.com/watch?feature=endscreen&NR=1&v=mjHmLsozXsU
Spitfire Ace Ep 1 Part 3 9:00
http://www.youtube.com/watch?NR=1&v=7J7YGH-5ZCo
Spitfire Ace Ep 1 Part 4 9:00
http://www.youtube.com/watch?feature=endscreen&NR=1&v=UUIMzo6ZS-A
Spitfire Ace Ep 1 Part 5 6:00
http://www.youtube.com/watch?v=BlaqRLR5ov0&feature=endscreen&NR=1
Spitfire Ace Ep 1 Part 6 6:31
http://www.youtube.com/watch?NR=1&feature=endscreen&v=1X8c9slwmEk
Jet Flying Dragon 1:37
http://www.modelairplanenews.com/blog/2012/04/14/fire-breathing-rc-flying-dragon/
Pilots 9:15
http://www.youtube.com/watch?v=ORv30MfbOhc&feature=related
How Hawks see the…. 3:01
http://www.wimp.com/hawkssee
Jet Man 3:44
http://www.flixxy.com/jet-man-formation-flight-breitling-wingwalkers.htm
State of Division 1973 TV Movie Pt.1 Only 14:36
http://www.youtube.com/watch?v=sstU7qvLw7Q
Sahara Desert P-47 Found PHOTOS
https://picasaweb.google.com/114682566226043469349/Zdj_samolot?authuser=0&authkey=Gv1sRgCKjxkt6rkNTFKg&feat=directlink#5734882088673789074
Toledo 2012 Day 2 5:59
http://www.youtube.com/watch?v=voi9SgPXB6U&feature=player_embedded#!
Toledo 2012 Day 1 5:50
http://www.youtube.com/watch?v=HU6HRXWxcxU&feature=relmfu
CARRIER Landings 2 parts
http://www.angelfire.com/ak2/intelligencerreport/carrier1.html

http://www.angelfire.com/ak2/intelligencerreport/carrier2.html

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

My thanks to those who passed this info on.

Zipping along at FL 730 - Flying the "hottest" 104

by Walt BJ, retired USAF F-86, F-102, F-104 and F-4 pilot

Ho-kay. Sit down, open a cool one, lean back and here it comes. And, gentlemen, this is the straight skinny. No B-S. This is about flying the 1956 F104A Starfighter with the new J79-19 engine, the modified F4E/S engine which replaced our old tired J79-3bs in 1967. Those -3b engines were about shot. They had cracked and warped frames - where the compressor meets the hot section and the hot section meets the turbine section and the afterburner bolts to the turbine section, whose meeting faces leaked hot air and gases. We had been using contractors to electron-beam weld these problems, but that could only do so much. If we got too slow at altitude, say under about 300 KIAS (around .85M, close to max L/D) we would often get an aft overheat light. That could usually be extinguished by speeding up to about 320. Needless to say, this wasn't a practical solution nor anything we really wanted to live with. But the F104s were needed in South Florida to keep an eye on Cuba's 125 MiG 21s . . .

So - new engine time. The project was pushed by a fine gentleman, Col. David Rippetoe, up at ADC HQ. The latest model of the J-79 was the J79-17, used in the USAF's F4E and the US Navy's F4S and also in the single-engined Italian Air Force's F104S. The J79-17 needed a few changes to go into the F104A, so that version was labeled the J-79-19. The 104A got more changes but it didn't get a new designation. The biggest mechanical change, for us, was the provision to lock the nozzle at a setting that allowed flight in case of oil loss. Without nozzle locks the 104A even at full throttle lost so much thrust with the nozzle failed wide open that it couldn't sustain level flight. The lock was actuated upon discovery of oil loss by pulling out a T-handle located above one's right knee; unfortunately there was no place else to put it. A subsequent bailout would definitely bang that knee, but that is the way it was. After the first flight we didn't care.

The improvement in performance with the Dash-19 engine was amazing. Our old -3b engines could get us to M2.0 in about 4 minutes 15 seconds, burn about 3000 pounds of fuel doing that, and cover about 100 miles. With the Dash 19 - 2 minutes in level flight, 1000 pounds of fuel, 27 miles. A 'Rutowsky' manuever involving a short dip to accel in zero G would trim 15 seconds off that 2 minutes; usually we didn't bother. Difference in thrust: military/AB: 9600/15000 vs 11870/17500. Thus there was about 2270 more in military, 2500 more in burner, increases in pounds of 'thrust available,' thrust actually exceeding that needed to maintain maximum level speed with the old 3b engine. Thus the added push went to added performance over and above what the original engine gave the 104A. I might add that the weight of the airplane minus 5800 pounds of fuel was a mere 14,500 pounds. Thus our thrust to weight ratio was better than 1:1 at half-fuel.

The 104A/Dash 19 could actually accelerate from .9M at 25000 feet to 1.05M in level flight in military power. At sea level, also in military, it could maintain .97M while its contemporaries had to go to afterburner to match it. From brake release to .94M took 42 seconds. Brake release to 45000 - 90 seconds. This all at a normal South Florida ambient temperature of 20C/85F with a standard armament load of 2 x AIM9B Sidewinder missiles and 750 rounds of 20 mm in an airplane right off the ramp. I did all of the above, feeling out the new performance levels. The Dash 19 engine had a more efficient compressor with a higher ratio and an 8% more efficient nozzle. But the nozzle's changed aerodynamics had sacrificed the J79's memorable 'hoot' or moan for the better performance. We missed that unique characteristic but then we were no longer bothered with the hot air leakage and resulting overheat-light problem. And we now had blazing performance!

Now it was summer 1967 and Paul Da San Martino and I were sent up to Tyndall AFB in the Florida Panhandle to do some fighter affiliation training with a U-2 to test its new electronic self-protection devices. We were

We were picked to fly the missions because we both had AN/APS22-3 full pressure suits, a USAF modified version of the Navy Mark IV. This suit was much more comfortable than the old partial pressure MC3 and MC4s, even flexible enough to perform air combat maneuvering wearing them, something that was not true of the MC3/4 suits. The U2 was up at the base of his operational altitude for the tests and we made numerous intercepts, playing the part of a typical enemy for him.

His fancy electronic devices put a few flecks on our scopes but didn't particularly bother us and we deduced from what we could see that our 1956 ASG14 radars were not sophisticated enough to be bothered. I don't know how familiar you are with RCA's ASG14 but it's a modern analog to the RAF's AI Mk 8 used in WW2. Basically it is a spiral scan search radar with no angle track capability. Very simple in construction and operation; just find him on the 20-mile (max!) scope, turn toward him to fly him to the center and go get him. He'll show up as a small arc on the scope when he's 45 degrees off the nose in the turn. You know when he's dead ahead (on boresight) because then he paints as a circle around the center of the scope - the circle's radius is his range. The set can, however, lock on and track a target in (only!) range from 10 miles on in. Press a button on the stick grip and the antenna reverses direction and generates about a 10 degree conical scan. The pilot has to keep the target centered by flying the airplane, as I said, since there is no angle track capability at all. It does, when locked on, feed range to the computing gunsight; effectively, too. Range numbers show up on the sight; in miles when missiles are selected, feet when guns are selected. Handily, the Sidewinders look right along the same axis and will growl when they see the target. By the way, live harmonization proved the Zipper's M61 20mm Gatling gun had a meager dispersion of only 3 mils. It was electrically driven firing belted ammo so 'only' fired 67 rounds per second.

A side comment on intercepting U2s. We had been doing this for some time in our F104As with the original engine. The mission was fuel-critical; a five minute delay meant every thing from then on had to go just right or we'd be low on fuel for the standard and oft-necessary instrument pattern approach. The installation of the J79-19 engine increased our excess thrust about 25%, so we expected an improvement but were uncertain as to how much. We were very pleasantly surprised.

The first time we ran an intercept on a U2 in his operational height zone using the Dash 19 bird we hadn't had the new engine long enough to get extreme high altitude performance data to plan from. Neither did the FSQ7 SAGE computer have any such data in its memory banks. I was the squadron fighter weapons training officer then so I was designated to fly this first U2 mission in the improved aircraft.

To make things simple and sure I had the controller roll me out 35 miles behind the U2 at an initial altitude of 38000 (tropopause that day). Catching the U2 would be no problem since the overtake at attack speed (M2.0) would be in excess of 700 knots. At rollout on the intercept heading I went to maximum afterburner setting (throttle all the way left and forward - joy!) and followed the controller's steering. I was mostly looking out ahead since often the U2 emitted a wisp of a contrail.

As the controller called "18 miles" I glanced down, saw a blip (contact) there at 12:00 on the radar scope, indicating the target was off-axis vertically, as I had expected. (20 miles was the only range selection in search mode) and glanced around the gauges. Surprise! I was now doing M1.8 at 58000, and I was most impressed since the old 3B would have still been way below that struggling to get to M2.0. I saw him at about 2 miles and pulled off the target with about 1000 pounds more fuel than I'd ever had left with that old engine. One caveat I should add - we frequently had much colder than standard OAT over Homestead (HST) at 25N latitude - as cold as -75 Celsius. That does help even the Dash-19's performance. (+2% performance for every -10C)

By the way, I liked SAGE and data link after the bugs were engineered out of it - it was nice and quiet; the only voice communications were for safety. It even worked pretty good! Never as good, though, as an expert GCI controller who knew the ropes of fighter v fighter combat. For example: "BJ, Dave - he's 20 port 15, turning hard into you.....hard port 140; he'll be 12 o'clock for 10, 10,000 high..."

I have a Lockheed-computed E/M graph of the Dash 19 104. I must say it is considerably understated. E/M

I have a Lockheed-computed E/M graph of the Dash 19 104. I must say it is considerably understated. E/M refers to Energy Maneuverability Theory, a concept promulgated in the early 60s by John Boyd, a fighter expert who was also one of my F86 Sabre instructors at Nellis AFB. Its units are in PsubS - a combination of kinetic (velocity) and potential (altitude) energies. The units are in feet per second - 1300 PsubS means that theoretically the airplane can generate a vertical climb rate of 1300 fps or about 78000 fpm/400 mps. One uses the aerodynamic and other limits of the airplane under consideration to derive and plot lines of equal Ps on a graph with altitude on the Y-axis and speed on the X-axis.

A warped trapezoid results; the curved left margin is the one-G stall speed, the curved top line is the absolute ceiling, the curved right margin is the limits redline or if you're game enough (dumb enough) the absolute speed attainable.

Superimposing one aircraft's Ps chart over a dissimilar one's Ps chart for comparison immediately reveals the good and bad zones of each with respect to the other. Naturally we carefully examined the 104 and the F4 against the MiG17/19/21 and 23. (Guess which ones were blue and which ones were red.) Since the 104A could exceed the 710 CAS redline speed by a very wide margin I don't doubt the bird could reach that 1300 state - I seem to remember that was around 27,000 at 'only' M 2.0. I never exceeded the 710 limit by much - saw 750 a couple times (once at about 100 feet above sea level) and have had friends without kids reach 825 plus. I, on the other hand, being married with two young daughters, always exercised a modicum of discretion.

I have zoomed many times from 38-42000 and M 2.0 and seen the altimeter stop while still going up. (Our standard USAF 3-needle altimeter had a mechanical stop at 86000). I estimate we were topping out at between 90-95000 depending on how slow one arced over the top. I always floated over the top with my buttocks just touching the seat, less than a tenth of a G on the airplane max, trying for as close to zero AOA as I could get, with the IAS down around 125 or so, far below one-G stall speeds, especially with flaps full up, where stall speed would be about 190 or so.

You can plainly see the curve of the horizon up there. And it is a long ways away, too, around 400 miles or so. And yes, the sky above is noticeably darker, but there is a whitish zone along the horizon.

I always handled the controls delicately in that situation so I never had a problem. I would place my elbow on my thigh and fly by bending my wrist, my usual position when flying precise close formation as in a flyby. Sometimes I would release a pencil in front of me and use that as an indicator to maintain a true parabolic flight path. Since the pencil was now in free flight, just keeping it apparently motionless in front of me let me maintain the same ballistic flight path - no lift being generated meant no stall was possible, no stall meant no problem. Come to think of it I was flying formation 'around' that pencil. I did not spend much time at absolute zero-G, as that interferes with normal oil and fuel flows. Unfortunately I never got to chance to zoom the Dash 19 bird. I do not doubt it would exceed 100,000 feet starting from Vne. Zooming from Vmax (my guesstimate is at least M2.5) would probably establish a new world record for jets.

Climb profiles - We normally used standard profiles because of the programming of the SAGE computer. Military - 350KIAS to .9; AB 450 to .95. Yes, we made formation climbs in afterburner even at night or in the weather - or both. Once at commanded altitude we flew at the speed commanded by SAGE. Profile 1 - AB climb, AB cruise to target, normally 1.7, could be 2.0. Profile 2 - AB climb, military cruise, .95. Profile 3 (normal one) Military power climb, 'liner' (max range) cruise - normally about .87. I have flown a max energy climb a couple of times. I would reach 600 KIAS ASAP after TO then maintaining 600 to crossover to M 2.0. This 'profile' was devised by us to get a fighter to a place in space in minimum time for intercept or to provide cover for an asset under attack/harassment. It was very impressive in the Dash 19 bird.

Our environment there in S. Florida had a need for that option. But we never had to use it for real, although I did use it once during an exercise to hit a close-in target that was about 60 miles away at 45000 when we got scrambled. We checked in with our controller. He said "Skip it - he's too close." I saw a contrail heading

He said "Skip it - he's too close." I saw a contrail heading toward us about 50 miles away on the scramble vector. I replied "Negative - keep talking." He did that, and we did an Immelmann starting at Mach 2 and about 28000 up into the target's six and got him 35 miles out. Performance!

Now up at Tyndall it was time to go home - the U2 system test was over. I doubt if they learned much from us, except that sometimes simple and unsophisticated works. But we enjoyed the flying, a decided change from the usual missions. Since we had our p-suits with us I suggested to Paul that we go home at high altitude. He was all for it and so we filed IMC for Homestead, planning the route so as to dogleg south into Warning Area 168 to avoid civvie traffic and incidentally not boom anyone.

I had done a little Flight Manual research and fiddled with my E6B calculator a bit and came to the conclusion that FL730 was attainable at M2.0 and would also give us an IAS a bit on the fast side of best L/D and one we could comfortably fly at, plus have enough fuel to get home with a decent reserve. I filed the IMC clearance for a TAS of 1150 knots and FL 730 via a step climb. By the way, the TAS certainly raised the eyebrows of a C119 aircraft commander standing next to me at the clearance desk.

We suited up, got our clearance, and took off heading due south on a dog-leg into Warning Area 168 away from land (and telephone calls referencing double bangs). We climbed in military to the tropopause. Down south there it's usually around 38-39,000. There I called Miami Center and got clearance to accelerate for the M2.0 climb on up to FL730. We went into afterburner, my throttle back a bit in AB to give Paul a little slack out there in loose wing. Arriving at 2.0 fairly quickly, about 2 minutes, we began the climb, maintaining 2.0. We leveled at 73000 on the altimeter and eased back to about 3/4 AB to maintain 310 IAS, on the good side of max L/D during the 30 degree banked turn towards Homestead.

I had called "Level Flight Level 730" to Miami Center and he came right back with "And you weren't lying about your true airspeed, either!" I chuckled to myself, envisioning the vector arrow and alpha-numeric symbology simply jumping across his radar scope at 20 miles a minute.

It was a standard Florida day, bright sun, some towering cumulo-nimbus scattered about, the tops well below us, lots of puffy white cumulus, even further below. A little odd to see cumulo-nimbus anvils with cirrus toppings so far below. The sky overhead was a noticeably darker blue than down on the deck, yet not as dark as it got at the apex of a zoom climb. The horizon had a definite hazy whitish shroud to it. Our motion across the dark blue Gulf of Mexico was perceptible as the clouds and jet traffic contrails way down below passed swiftly under us.

We were burning about 100 pounds of fuel a minute (derived from fuel quantity readings 6 minutes apart) and covering 20 miles a minute and the TACAN mile-meter was really counting down, a tenth of a mile (smallest division) clicking past about every third of a second. Yet in the cockpit it was no different than cruising down at say 37,000 amd .87M. The aircraft was smooth and steady and gave no indication other than the Mach meter that we were really moving that fast. I didn't try any maneuvers but I could tell we were nowhere near our absolute ceiling, and not at maximum power, either.

Maybe 50 miles out from Sarasota, still about 250 miles from Homestead AFB (HST), I raised my fist, jerked it back to signal to Paul 'out of AB', nodded my head for execution, and eased the throttle slowly back to idle. Paul was out in loose wing, staying right with me. (He is an ex-TAC F-100 Vietnam vet with lots of fighter time, a skilled and aggressive pilot and a valued friend.) We held 310 KIAS, a little better than max L/D, all the way down the descent and hit the initial for runway 05 about 10 miles out of Homestead. I think we burned less than 200 pounds or so of fuel all the way down to 1500 AGL. I believe we each had about 1400 pounds of fuel remaining as we pitched out to land.

What a great flight and what a great view of the world from up there. Not as different as the view is up above 90000 on a zoom climb but still visibly darker overhead with a thicker belt of white haze on the horizon than at 35-40000. The curvature of the horizon was faint but discernable. It was odd to look way down and see contrails along the airways and the anvil tops of thunderstorms, also way below. Oh, yes, we did have the J79-

Oh, yes, we did have the J79-19 engines installed - that made the U2 intercepts and the high XC really pieces of cake!

One thing I did notice exploring the Zipper's performance with its new mod engine. The normal fuel flow reading static on the runway before takeoff was about 8500 PPH. At 600 KIAS under 500 feet ASL right after T/O it read about 12500. Our GE Tech Rep affirmed that was factual and the standard engine/AB fuel proportion was still in effect. That meant that at that speed and altitude the Dash 19 was developing at least 25000 pounds of thrust. Zipper, indeed..

To my present-day regret I misplaced the DD175 flight clearance sheet and my annotated navigation card and then compounded that error by turning in my full pressure suit when I transferred from ADC to TAC - it was on a hand receipt and I realized later I could have kept it and no one would have been the wiser. It was tailored personally to me and would fit no one else and would have made a damn fine souvenir of some awesome flights. But I will always remember the great times flying the Zipper - and the rare flights like the ones I just described, and the lasting friendships made with my fellow Zipper pilots around the world.

Summary of Glue and Tape Recommendations

By RCADVISOR.com

Loctite Crafter's Indoor-Safe Adhesive – Looks like a white toothpaste. Non-toxic. Reasonably priced. Reasonably fast drying. Great bond to foam and wood when fully dry and has some give.

Liquid Nails Small Projects Repair Adhesive – A great value, and reasonably non-toxic. Very similar to the Loctite Crafter's glue. Used to be widely available, but not so much anymore.

Liquid Nails Perfect Glue – Sometimes referred to as "Perfect Glue #1". My favorite glue for foam and wood joints. Looks like a thick gel. Does not run when applied. Initial set in 10 minutes. Flexible when dry. Easily cut or sanded when dry. Strong bond to foam and wood. Relatively non-toxic. Parts can be handled after 30-60 minutes. Available at Home Depot hardware stores.

Craft Bond Extra Strength Glue Stick – Large tube. Non-toxic. Deep blue color that is easy to see when initially applied. Great for foam-to-foam laminations.

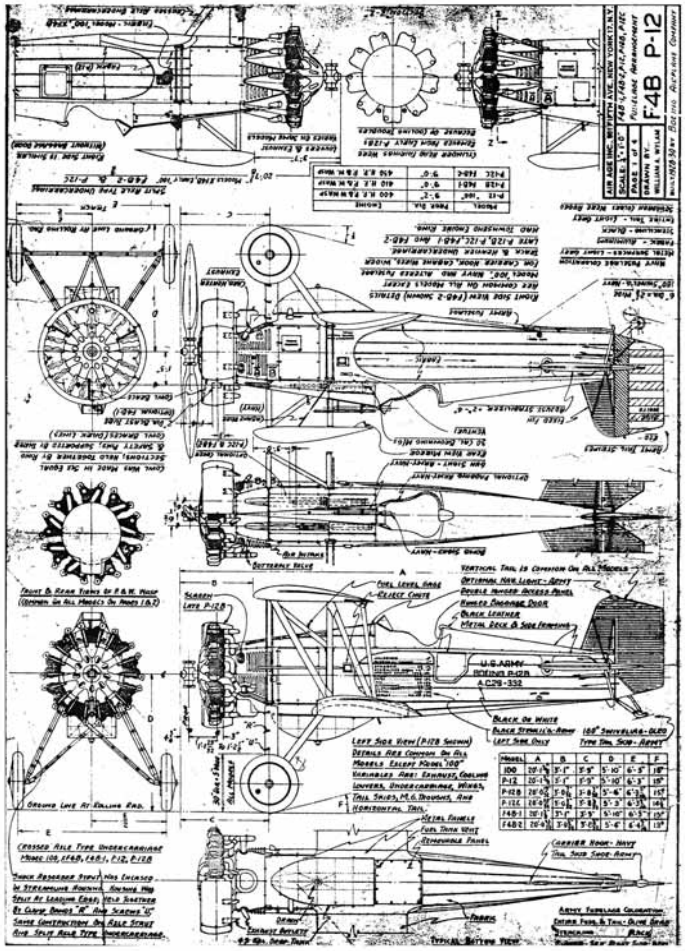
UHU Stic – Buy the large tube. Non-toxic. Deep purple color when wet. Great for foam-to-foam laminations.

3M Durapore Surgical Tape – Used to be widely available in pharmacies, but not so much anymore. Also called 3M Nexcare Durable Cloth tape. I use it for hinging control surfaces.

3M Medipore H Surgical Tape – Made out of thin cotton cloth. Instant strong grip on foam, paper, and wood. My current favorite hinging tape.

3M Blenderm Surgical Tape – Still a reasonable choice, just don't spend too much on it

SVF MEETING MAY 2, 2012 @ 7 PM @ DEER VALLEY AIRPORT



Next month Issue

Lets welcome our new officers!

Your photos and articles are welcome.

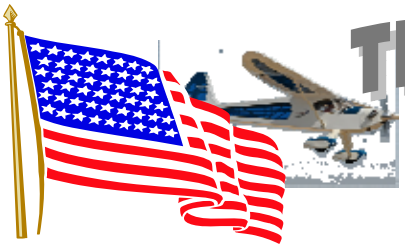
Would you like to be notified when the SLOW ROLL new issue is available? Give Gene your e-mail address.
AZ49ER@COX.NET

Hope you will enjoy it. Bob *rcbobsvf@aol.com*

This Month Issue

Get out and VOTE! Toledo coverage, F-104, model history, and many videos & a P-40 found.

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.*



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