THE SLOW ROLL

CHARTERED #921
Since DEC. 1974

IMAA Chapter 782

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OCTOBER 2010

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..SVF Turkey Event ...SVF Members Fun Fly coming…..RENO Air Race info …...Hinges info...How's your C of G?....Vote for D10 VP …SORRY on missing the B-24 article in Sept. SR, was updated on SVF Website.....FT-104 story....SVF'ers at Warbirds over the Rockies……..Many Event flyers……. Prez report…....Minutes…..... B'Days & Treasurer Report …….SVF Members photos……..Videos & websites to see……..*Much more, enjoy!***

THE PRESIDENTS CHANNEL

FRANK MOSKOWITZ

OCTOBER SLOW ROLL PRESIDENTS LETTER

Welcome to the October Slow Roll.

Our next SVF event will be the Electric Turkey Fun Fly. That will be a one day only event on Saturday November 13th. All proceeds are donated to charity. Please contact the John Geyer 602-810-1767 jegeyer@cox.net for more information. If you want to help at this event, please talk to John about what positions he needs filled. Not much else to speak of this month so I might as well pith our SVF garments. Our temperatures will start to cool off real soon! Be prepared. Here is the current list and pricing:

SUN VALLEY FLIERS GARMENTS
See www.SanMar.com to view garments online
PA Legacy Jacket, embroidered with SVF large back logo, small chest logo and name –
Sm – XL - $66.00, 2XL - $67.00, 3XL - $69.00, 4XL - $70.00, 5XL - $72.00, 6XL - $73.00 Several colors available. See SanMar, Legacy Jacket for colors

Printed Tee Shirt, Hanes Beefy T, w/pocket, white, print SVF logo (blue arrow) on back, small round logo on front, Sm – XL - $7.50, 2XL - $9.00, 3XL - $10.00, 4XL - $11.00(4XL is from Port Authority, not Hanes)
Printed Sport Shirt, Port Authority, 100% cotton pique, with pocket, white, print SVF logo on back (blue arrow), small round logo on front, Sm – XL - $19.00, 2XL - $20.00, 3XL - $22.00, 4XL – $23.00, 5XL - $25.00, 6XL - $26.00
FlexFit Cap, embroider SVF logo on front, $15.00
Adams Sun Block Hat, khaki/black, embroider SVF logo (red arrow) on front, small Phoenix AZ on back, $28.00

I hope to see some more members at our next club meeting **Wednesday October 6th at 7:00 pm. Location is Deer Valley Airport Restaurant. (7th avenue and Deer Valley Road).** Remember in order to use the room free of charge each month we need to purchase some food items off the menu. So **arrive a little earlier** and enjoy some of their great food choices. **Lots of great food and a smoke free environment.** 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

Have fun out there!

Frank Moskowitz

President

SVF MEETING OCTOBER 6, 2010 AT 7:00 PM @ D V AIRPORT

Sun Valley Fliers Club Meeting Minutes
Date September 1, 2010

I. Call to order

President Frank Moskowitz called to order the regular meeting of the **Sun Valley Fliers** at **7pm** on **September 1, 2010** in **Deer Valley Airport restaurant**.

I. Roll call

Tony Quist filled in for Rusty Fried as Secretary.
34 club members attended.
There were no guests.
One new member was introduced, **Steve Sample**.
Frank Seminar was presented a Solo certificate.

I. Approval of minutes from last meeting

Frank Moskowitz showed the July minutes in the slow roll. The minutes were approved as published.
There was no Treasurer's Report.

I. Safety Officers Report

a) Lou Pfeifer was introduced as our new Safety officer, Frank Seminera and Karl Kohnke was introduced as assistants.
b) Karl was concerned about pilots calling out take off and landing loud.
c) Lou was concerned about pilots starting there planes without help.

I. Old business

a) Prez Raffle
b) Adams Sun Block hats are available
c) Landscaping has been completed
d) Pilots need to clean there area.
e) Please clean up after your dog.

I. New business

a) **Club dues are being increased for 2011. $75 for regular members $50 for Seniors**
b) **Charlie Beverson is organizing a Fun Fly for club members only**. He is still researching an open date. ***Editor: Date and more info is else were in this Slow Roll.***
c) BOD meeting will be moved to 9/13 because of Labor Day holiday.

Four gallons of fuel was given out as door prizes. Winners were Charlie Beverson, Paul DeLawder, John Deacon, and Mike Peck.
Presidents Raffle was drawn. SVF made $161 on the Raffle. T-28 was won by Ken Melbye, Toledo Special was one by Joe Balabon, and the PBY was won by Leon Smith.

The meeting adjourned at 7:40pm.

Tony Quist sitting in for Rusty

$ TREASURERS REPORT $

with *Gene Peterson*

The dues notices for 2011 should be in the mail by the time you read this so watch for them. ***As usual we will send out the sticker late in December along with the new Gate Code.*** Yes, it will be an annual thing. It really went smoothly this year and we hope it will be the same for 2011. We have developed a list of people that need that code and that seems to have worked out good for keeping all our corresponding tenants, vendors, police and fire all informed.

Police Department now has a new precinct in our area that is responsible for all the territory from Carefree HWY to Union Hills and East to Scottsdale Road and West to I think 19th Avenue or I-17. This means a lot more police up and down Cave Creek Road. So,,,,,,,,,watch your speed on Cave Creek. Ha

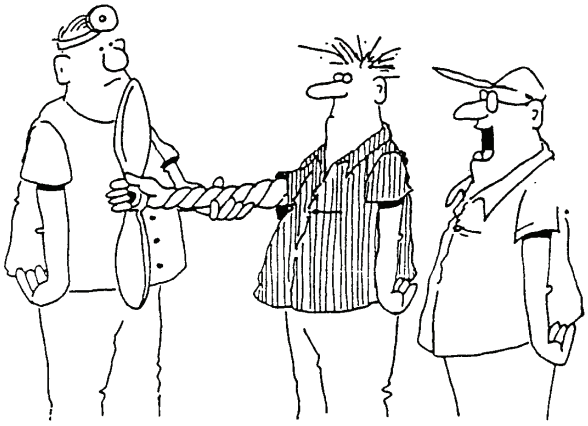
Please be patient with the locks on the gate. The County is doing some work on the dam to the west of the field, and needed some water for dust control hence the pipes along Jomax inside our gate. They have put some extra locks on for the vendors that are in and out Monday thru Friday. They people have had some trouble with the "Daisy Chain" of the locks. Call me on my cell 602-579-0925 if you get locked in or out. I am just a mile away and maybe can help. One of our members got locked in a week ago, and we were able to find the Park Rangers fast and get the locks back in sync. (or just put a pair of bolt cutters in your vehicle).

Better flying weather just ahead, and don't forget to put the 1/8th Air Force Fly In at AMPs Field on October 23 + 24 on your agenda and bring your scale plane out and fly, (anybody can fly in the event, but you should have a scale plane).

Regards, *Gene Peterson, Treasurer*

OCTOBER SVF BirthDay Boys

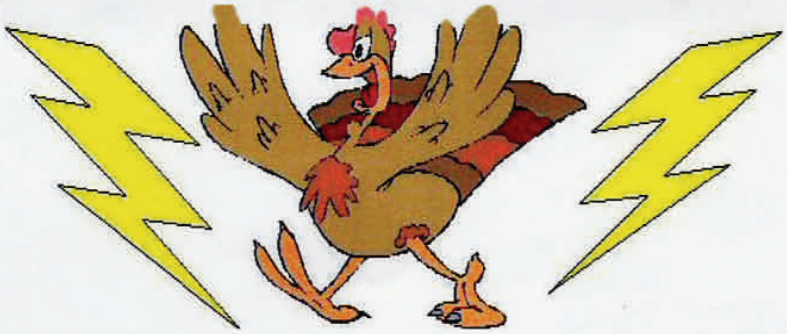
First name Last name	Member type	Dob
Craig Guest	Regular	10/01/1966
George Metro	Regular	10/01/1943
Robert Purdy	Senior	10/01/1935
Dean Brox	Regular	10/02/1973
Brian Clermont	Regular	10/02/1962
Mike Milner	Regular	10/02/1952
Warren Folkerts	Regular	10/03/1956
Cecil Walters	Lifetime	10/03/1940
Bruce Bretschneider	Senior	10/05/1940
Warren Fertig	Senior	10/10/1940
Richard Mesh	Senior	10/16/1942
Steve Miller	Regular	10/16/1952
Lee Piester	Senior	10/17/1938
Paul Steinberg	Regular	10/17/1951
Tim Nelson	Regular	10/19/1946
John Wolcott	Regular	10/20/1972
Chris Grier	Regular	10/22/1954
Ken Rhoads	Regular	10/22/1950
Ken Justice	Regular	10/22/1951
John Mullins	Regular	10/24/1952
John Mangino Sr.	Senior	10/27/1942
Keith Hoffman	Regular	10/28/1956
Neil Wallis	Regular	10/29/1969
Howard Buxton	Senior	10/31/1937
Dennis Suding	Regular	10/31/1968



.....And then the prop flew off of the 4-stroke and would you believe that ol' Lightning Larry here actually caught the sucker ?!"

"Tell you what, son... just to be fair about this, I'll help you move your stuff out to the garage."

S V F



S V F

Tenth Annual

Electric Turkey Fly-In

November 13, 2010

Hosted by the Sun Valley Fliers

Cave Butte Park, Phoenix AZ

Cave Creek Road to Jomax, Turn West at Traffic Light

$25 Landing Fee

All Proceeds to the Boys and Girls Clubs of Metropolitan Phoenix

All Electric Aircraft Welcome

Power Available at the Field

Phantom Judged Fun Events

Raffle, Trophies, and Prizes

On site Vendors, Lunch

Join us for a relaxed day of fun flying, and sharing information with other Electric Fliers, while helping the Boys and Girls Clubs of Metropolitan Phoenix

AMA Sanction 10-2100 **AMA License Required**

www.sunvalleyfliers.com

For More Information: CD John Geyer – 602-810-1767 or jegeyer@cox.net

WARBIRDS OVER THE ROCKIES

by Howard Kennedy

On Wednesday 9-22-2010about noon Dave Linne, David Morales, Val Roqueni and I left for Ft Collins Colorado and Warbirds Over The Rockies in Val's GMC truck and toy hauler. After driving all night we pulled into McDonald's in Ft Collins at 7 AM and grabbed some breakfast. Then on to the flying field about 9 miles east, unloaded our aircraft and set up an area in the pits. Tighe O'Meara had gone up a couple of days earlier, Ken and Betty Perkins from Lakeside, AZ showed up a little later with Bill Powers and John Deacon showing up after that. By Thursday evening the pits were totally full from one end of the runway to the other. After setting up we walked around and admired the beautiful aircraft that were there.

Friday morning the event started with a fly over (several passes) by four full scale RV-8's in formation and then went to r/c flying until the noon break when there were several r/c demonstrations including a WWI gaggle with pyrotechnics, a WWII gaggle with more pyro and a bomber gaggle with even more fireworks. The big (159 inch) B-29 did a simulated atomic bomb drop with of course the largest pyro explosion. More regular r/c flying in the afternoon with a BBQ at the field that evening.

Saturday started with multiple passes by a full scale WWI era SE-5 followed by r/c flying until noon and then a repeat of the gaggles, etc. Also at noon Saturday we were treated to multiple fly-bys of a full scale P-51 and a T-28. Back to the usual r/c stuff for the rest of the afternoon and then off the University of Colorado for the banquet. Good food, and then the awards. Dave Morales captured three awards for his Vimy and Ken Perkins got one for his Japanese Claude. After that was a speech by Steve Pisanos a WWII double ace. Also there was Russ Kyler another WW II ace. The banquet was concluded with an auction of lot of r/c stuff most of it going for ½ retail or less.

Sunday started with a fly over of a full size Fokker D-7.

I finally managed to get a flight on my big Hurricane late Sunday morning that went very well. Right after I landed I was asked to fly in the fighter gaggle and had to really scramble to make it, but made it I did and had another good flight. Around 2 PM we started to pack up and left about 4 PM arriving back in Phoenix about 2 PM on Monday. All in all a great weekend with great friends, wonderful weather, lots of beautiful scale aircraft and a lot of r/c flying. *Howard Kennedy*

BILL, BETTY, KEN, JOHN, VAL, TIGHE, DAVE L, HOWARD, DAVE M

KEN AWARD

DAVE M. AWARD

SVF'ERS AT WARBIRDS OVER THE ROCKIES

http://www.warbirdsovertherockies.com/

Misplace Center of Gravity

Misplaced center of gravity (CG) is a perennial killer of newbies and old pros alike. Since it's almost building season, this is a good time to go over the basics. A new airplane with the wrong CG location is almost a guaranteed crash. (I can write authoritatively about this since I've screwed it up so often myself.) If you're an experienced builder/pilot please bear with me, I'll try to pass information to the newer guys without talking down to you.

The basic deal: any and all airfoils in any fluid—air, water, peanut oil, whatever—share this perverse characteristic: when they move through a fluid at a slight angle (the angle of attack), they experience lift forces that act "as if" they are ahead of the CG. This effect makes the foil want to tumble. We've all seen this since we were kids. When you toss a simple strip of wood or a wing-shaped piece of paper and expect it to fly, it won't! It starts tumbling right away.

To stabilize the main wing, most airplanes (and birds) use the same approach. The CG is placed a small distance forward of the center-of-lift of the wing. The slightly forward CG overcomes any natural pitching-up moment of the main airfoil and makes the "plane" want to pitch forward and down. This overall pitch-down tendency can then easily be controlled by a force (normally down) from a stabilizer/elevator mounted rearward of the main airfoil.

You might ask why the initial step of adjusting the CG ahead of the foil wasn't good enough to control the foil. Why do we need the additional step of adding a rear stabilizer? The answer is that the CG needs to be only a very small distance ahead of the center-of-lift and, if the wing has no other form of stabilization, its location is sensitive and difficult to maintain. On the other hand, a small stabilizer mounted some distance behind (or ahead of the wing as in the case of a canard) makes the job relatively easy. The farther away from the CG the stabilizer is located, the smaller it needs to be. At the extremes, planes with long fuselages like a Blaster hand launch or a super-ship can use what appears to be a relatively small stabilizer. Aircraft with very short distances from CG to stabilizer need relatively large stabilizer-elevators. Flying wings recurve the entire airfoil or use full-span elevons to act as stabilizers.

Let's go through some of the implications of CG location: The farther forward of the airfoil center of lift you put the CG, the more stabilizer down force you need. Generating lift, even in the down direction, generates drag. The more lift, the more drag. So, a plane with CG too far forward will need a stab set to a high-lift, high-drag condition in the down direction. Think of the center of lift of the main wing as kind of a fulcrum or pivot point. The farther forward the CG is from that point, the longer its effective moment arm becomes and the harder it is for the elevator at the other end of the "Teeter-Totter" to swing it around. This makes the model less responsive to elevator control and the airplane can feel sluggish. (This is only a partial reason for control insensitivity but I won't turn this article into a book.) Even though forward CG makes an airplane less sensitive and increases overall drag slightly, the slower response time can be a good thing for beginners if it isn't overdone.

Going the other way: as CG is moved rearward and closer to the center-of-lift, the required stabilizer down force will decrease and the airplane will become more sensitive to elevator, but eventually the model will get twitchy and hard to control. If the CG gets on top of the center of lift, the plane will become neutrally stable and won't automatically tend to pull out of a dive. It's for this reason that we use a "dive test" to help fine-tune the CG location. It's not a perfect test, but it is helpful. If you're not familiar with how to do it, ask one of the old dogs.

Okay, but you've gotta get the plane set up initially before you can even go out and do a dive test … how do you get close "on the bench?" Mother Nature helps us here, because the center of lift of almost all airfoils tends to act as if it's at a point about 25% from the leading edge of the wing. (To become more accurate, it's 25% of the "effective chord length" for the leading edge of the "effected chord.") A simple general rule is that the CG should initially be set at 23-25% of the average chord of the wing. (For a flying wing this should be 16-20% of the effective chord.) Most modern kits and plans show an initial CG location, but a surprising number of older kits don't.

And, more troubling, even with modern kits, some of the locations shown are just plain wrong! If you don't know how to determine the effective chord for a given wing, I can quickly show you how.

I don't mean to belabor the moment-arm thing, but the longer the relative moment arm of an airplane (the longer the wing-stab distance of the "longer legged" plane is), the more tolerant it will be of CG location. A long-bodied glider with CG at 33% might fly beautifully while a short-bodied fun-fly plane or scale model with CG at 33% could be uncontrollable.

Be smart: make darn sure that the CG is at or slightly forward of the 25% point for your initial flight with a new plane! Don't bring it home in a garbage bag! After you know how the thing flies, you can adjust the CG rearward to suit your own nervous system.

Last year Wolfie talked me into buying one of the Great Planes balancing stands. If I recall it was about 19 bucks but it's been the best plane saver I've had for some time. When I started using it I was embarrassed to find that the CG locations of some of my planes weren't where I thought they were. I'd been careful balancing them with wing supports, string hangers and so on, but they were off enough to make the planes seem like poor flying machines. They weren't. They were just improperly balanced.

From the Greater Detroit Soaring and Hiking Society

Servo Arms

By Richard Lindberg

"Those pesky servos—why can't I ever find one that's properly centered? Every time I attach an arm, it seems as though the servo center shifts! What's going on here?"

Sound familiar? What causes this and what can you do about it?

All (standard-sized) servos today have splined shafts on which those servo arms are bolted. The problem arises because of the number of splines (teeth) on those shafts—Airtronics and JR use 23 splines, Hitec uses 24, and Futaba uses 25. (Your radio may be different—grab a servo and count the splines on the shaft to find out. Use a magnifying glass!) This is a really neat feature, and you should take advantage of it when you set up your airplane!

Put a servo arm on a servo. Now, every time you lift and rotate the arm by one spline, you change its position by a fixed number of degrees: for Airtronics or JR, this is 15.65º, for Futaba its 14.4º, and for Hitec it's an even 15º. The formula is simple: 360º divided by the number of splines. Now consider that your servo arms have an even number of fingers—two, four, even six. You can see by experimenting that rotating the servo arm and putting each finger as near as possible to where its predecessor was (about 90º, or 180º, or 60º) will result in a shift in position of 3.91º, 3.6º or 3.75º for Airtronics/JR, Futaba, and Hitech respectively. The formula is equally simple: 360º divided by (the product of the number of splines times the number of fingers). So, for Futaba, finger one is assumed at 0º, finger two (rotating clockwise) is placed at 3.6º offset, finger three at 7.2º, and finger four at 10.8º. (For Airtronics/JR, use multiples of 3.91º, and for Hitec use 3.75º.)

"Whoa, that's too complicated for me!" I hear you exclaiming. Well, don't worry about it—just keep rotating and pressing on the servo arm until you get a finger as close as possible to that magic 90º position.

One of those fingers will be right. (Actually, Futaba makes it simple—the fingers are numbered! Choose number one and you're there. JR has a raised dot in the lower right of its number one finger. It doesn't matter as much with Hitec, as there are even numbers of splines, and two of the fingers (out of four) will be right at any time.

Incidentally, the number of splines being different is the reason why servo arms are not interchangeable between servos of different brands—don't try to use Futaba arms on JR servos, etc.

This also clears up the apparent servo-centering shift. Most of the servos today have electronics that are so good that mechanical centering is a thing of the past and isn't necessary. If you in fact have a servo that won't center properly, or consistently, it's probably bad! Send it back for repairs!

From the* Rocky Mountain Flying Machine*, Albuquerque, New Mexico

2010 RENO AIR RACES STATIC DISPLAY

Photos by Bob Purdy Sept. 17,2010

Mechanics-Control Linkage and Hinges

The purpose of control linkage is to take the motion generated by the radio control servos and transfer it to the airplane's control surfaces and other control devices. Since this motion is mechanical, there are considerations for choosing one technique over another.

In its simplest terms, a control linkage will include a servo control arm, push rod, control horn, and a way to attach the push rod to the servo control arm and control horn, some way to adjust the position, distance of movement, and the controlled device itself. This is obvious to those of us who have been around the RC circuit for a while, but for the newcomer, this is a challenging topic.

Always plan ahead and avoid mechanical interferences between the moving parts. Engine vibration, inertia, and G-forces will cause our control linkages to behave erratically. These forces introduce stress and must be considered, even in a docile trainer.

Cost

The real cost of the control linkage is the price of the entire model if it were to fail doing its job! If we take into consideration the initial cost of the hardware, the time it takes to install, adjust, and lock, special tools, as well as any maintenance during the life of a model, we might want to consider using the higher initial price of carbon fiber push rods (titanium ends give you special bragging rights!), nylon brushed control horns, ball/stud clevises, etc.

The old adage, "you get what you pay for," comes into play here, especially for the Giant Scale and Speed models. Often, we use parts because they are part of a kit. We forget that the kit manufacturer makes choices based on cost—many times providing parts that "will do" as opposed to those best for the application. Some don't even provide these parts, leaving the choice to the preference of the model builder.

Precision and Strength

The important measurement for the control surface is whether it will provide the proper movement, with no slop, exact mechanical repeatability, no wear, and no maintenance. It must tolerate the stress placed on it during normal, reasonable flight. It should tolerate changes in temperature, and wear slowly. Parts that have been problematic over time are:

Threaded metal clevises that can split apart and/or become stripped by vibration (Sullivan provides an interlocking design that is good).
Nylon parts that are too soft or too brittle.
Wooden dowels that twist and warp from moisture.
Incorrect application or numbers of supports.
Incorrect application (i.e. braided wire for elevators … yikes)!

Size and Space

These seem obvious until you consider that each model has many moving parts that may interfere with each other as they move. Some planning for the elevator and rudder push rods is required, even on ARF aircraft, or problems will occur.

Some problems occur with the aileron movement, noticed only when the wing is mounted to the fuselage (parts hit items mounted in the fuselage). Sometimes the needed supports cannot be installed because the construction has already progressed past the point of making this easy (think of an ARF fuselage).

Mechanical gain and differential

Many times the control horn and servo arm have different locations for installing the push rod. If the push rods (or pull-pull cables) are installed at the same distance from the pivot center, the travel is linear.

Some modelers will install the push rods so they are in a mounting hole farther from the pivot center in the servo and closer to the pivot center at the control surface. This will increase the travel. For precision, moving the push rod to the innermost hole on the servo arm and farthest from the pivot point in the controlled surface provides the greatest precision but the lowest possible movement.

Some vendors provide longer servo arms to help get the amount of travel a control surface needs.

Wear

Providing free movement for our control linkages is one of the goals. Checking that wear has not created slop is one of the routine inspections we should make. Those nylon parts will wear oval holes where they were once round. This introduces a great amount of slop. Check and replace these as needed. Make sure the parts aren't too tight. This speeds up the wear and causes repeatability problems.

Weight

Although not usually a primary factor, weight in some of the lighter models is a big thing. Building with components that add unnecessary weight is poor practice. Using composite materials such as carbon fiber rather than wooden dowels or threaded steel rods makes a difference in both weight and precision.

Usually the choice of materials is dependent on several of the factors already mentioned. A good scale (digital or otherwise) is a wise investment for the builder. Choosing parts that perform identically based on their weight is the right way to build. If a model needs additional weight for balance, why not choose the parts that will help balance the model rather than installing dead weight (i.e. lead) later.

Coolness

Advertisers being good at what they do, the neatest products might not be what you want in your model. Sometimes the simplest, tried-and-true parts are the ones to stay with.

Ask your fellow modelers if they've used the new products. You might save yourself some headaches.

You may want to avoid:

Clevises that have multiple parts that could get lost.

Plastic stuff that can wear (due to vibration).

2-56 linkages.

Parts that require a special tool to adjust might not be field-friendly.

You do want to avoid metal-to-metal connections.

Ease of use

Using parts in control linkage that make adjustments easy to do and will hold those adjustments from outside the model is a huge plus. Also, make sure the adjustable bits can be locked in place and unlocked for later adjustments. Some modelers CA their threaded parts; others use lock nuts. Some use thread locker; some use safety wire. Many use a combination of these.

Ideally we want our adjustments to stay forever; however, if we've selected less-than-ideal components, parts with a different coefficient of expansion (the ratio of change in length or volume of a body to the original length or volume for a unit change in temperature), or incorrectly installed our components, the model may have very different flying characteristics from one day to the next.

A few tips:

Keep the control linkage as short as possible.

Use mechanical adjustment to set end points and center rather than relying on a computer radio.

Use silver solder on these types of joints. 60/40 rosin core solder (electrical) should not be used! Make sure to use flux when soldering. Clean the flux off; it is usually an acid.

Coreless digital servos are expensive for a reason: They are fast, precise, repeatable, and strong.

Control systems always fail at the weakest point. If you use balsa servos mounts or thin light plywood, guess where the weak link is …

Providing bearings for push rods and attachment points for the plastic sleeve is a good thing. Depending on the load and power requirements, you may need to put one every six inches or less.

Bending the control wires to reach the attachments points weakens the system.

Slop causes flutter. Slop occurs in the servo output spline, control horn holes, hinges, and push rod itself. Installing the control rods so they run straight between the servo and the control horn is best but not always possible.

Counter balancing control surfaces (equal weight on both sides of the hinge), usually prevents flutter.

Some ARF vendors supply 2-56 or 2 mm metric parts. Sometimes the threads are rolled; sometimes they are cut. Metric and standard (SAE) are not exactly compatible or interchangeable. Close is not good enough. Check your parts and make sure they fit correctly.

Hinges

Another area that brings modelers' opinions to the forefront is hinges. Many use the hinging techniques that become familiar. This is all right if you are building models in the same class (size, weight, power, capability, etc.).

When you migrate from Peanut or .40-size Sport Scale to other types of models, different choices must be made.

Many kit manufacturers include or at least recommend the type and number of hinges to use. Lately, the larger 3-D type ARC/ARF kits do not include any reference to hinging (or control linkages). They leave it up to the modeler to use the components he or she likes.

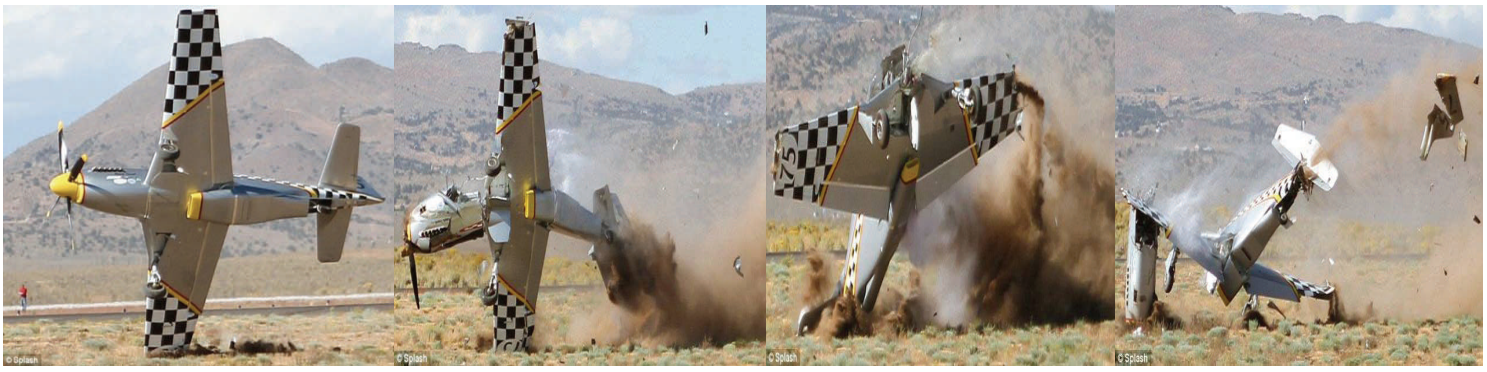
There are several new tools available to make hinging easier. The idea is to provide a strong connection between parts that have no slop, small or no air gap, no friction or binding, and are simple and repeatable in use.

CA: Many vendors make these glues, but they are not all equal. I have seen many hinges installed with CA fail. When they do, it is tough to fix, often involving cutting the control surface off and rehinging. Still, some modelers swear by them and not at them.

Non-CA: Most hinges are installed with epoxy or white glue. If you use the hinges with a metal hinge pin, before gluing these in, it is a good idea to put oil or Vaseline on the hinge-pin area to prevent glue from migrating to these areas. Pinning the hinge is a very good idea and may save your model someday.

From Buzzard Droppings*, Barnyard Buzzards RC Club, Duvall, Washington*

Rusty scaring the girls at Clovercreek??



RENO AIR CRASH

But then there was the wind. About 30 MPH with higher gusts and dust getting kicked up. As we stood in front of the crowd, the Sport Gold race was happening. George Giboney flying the Thunder Mustang named "Rapid Travel" declared a mayday and entered a right downwind for 26 with no power. He flew clear of the other racers before turning base. Due to the strong winds, he ran out of altitude and landed rolling almost perpendicular to the runway. He rolled into the dirt and then a bump which launched the plane about 10 feet into the air. It then cart wheeled and tumbled - wings came off, engine pulled from the fuselage and the plane appeared to settle upside down, gear up. Everyone thought the worst. About 10 minutes later, the pilot was announced OK. The fans cheered.

VIDEOS and Websites Links

Click on to view video, website

RENO Friday 5:21
http://www.youtube.com/watch?v=MW5WKSwgmSE

RENO Saturday Wrap up 3:39
http://www.youtube.com/watch?v=nUqEUCV026k

RENO Wednesday Kevin Eldridge 4:16
http://www.youtube.com/watch?v=WX0DH6vlAFY

Number is the TIME of the VIDEO

RENO Air crash 1:17
http://www.youtube.com/watch?v=E54Pk9UOvM0&feature=related

RENO Sunday Wrap up 5:54
http://www.youtube.com/watch?v=XGb0bNgQSVY

RENO Jet pace lap 9:04
http://www.youtube.com/watch?v=jxZNf_p_1-s

Click on the http (hyperlink) in BLUE will go to that *VIDEO* or website

RENO Sunday Jets Gold :32
http://www.youtube.com/watch?v=AsoepgRrq_w

Rocket test 3:40
http://www.youtube.com/watch?v=8QK9GZruG1Y&feature=player_embedded#

SVF M.J. Landing at LAX???
http://www.youtube.com/watch?v=NHu9lUrzZGU&feature=related

MotorCalc, Free for 30 days
http://www.motocalc.com/

No time indicated means it's a *WEBSITE* to browse.

Need to know more about electric flight. Go to this site.
http://www.wattflyer.com/forums/showthread.php?t=18521

SVF Website Buy & Sell items. ***NEW ITEMS!***
http://sunvalleyfliers.com/classifieds/classifieds.htm

Narrow margins - in gliders and the Starfighter

Dag Myhre is today a Captain in SAS. Like many aviators, Myhre`s background is from the Norsk Aero Klubb, and here he describes some flight-experiences which has made a special impression on him. At the same time he encourages all others to do the same.

*Dag recalls: Enginefailiure, low and fast.**

Then a few years later. I was still a student, or undergoing transition as it¹s called. Position was Kvaløya in Finnmark at about 1000 feet, surrounded by steep mountainsides which peaked a lot higher. Speed 450 kts. Aircraft, an F-104G. Suddenly the plane was shaken by a large bang and a series of bopp, bopp, bopp. A quick look at the instruments told me that the engine was about to quit. I could not believe my eyes, still my left hand started executing the well trained procedures. Throttle back to cut-off. Ignition on. Throttle idle. There was only one checklist for compressor stall. It said: Throttle MIL (full power without afterburner). The theory from Lockheed was that the engine had stalled due to operation "outside the envelope" which meant outside the operative parameters like altitude or angle of attack. To me, this procedure was impossible to follow. All instincts and experience from compressor stalls in the F-5 told me to be careful. I could sense the engine starting again and stabilizing on IDLE. I pushed the throttle gently forward while keeping one eye on the rpm and another on the speed-gauge which was coming down towards 300 kts. Slowly the engine powered up and as it reached 92% I started to ease a little. Then the shattering noise came on again.

At that point I seriously started to consider ejecting. Below me was water and to the sides, the steep mountainsides and this was autumn. The anti exposure suit had not yet become obligatory and I had been stupid enough to leave it at home. I turned the plane slightly towards one side, as to be closer to land while going through the procedures again: SHUTOFF -IGN -IDLE. The engine lit up again, but this time I had learned. I kept it carefully on 90% and there it kept running. These percentages measure engine rpm. and are not directly equivalent to thrust produced. Almost all the thrust appears at the last 5% because at this point the engines exhaust-nozzle closes. Flight IDLE would be around 75%. 90% was just enough power to stay airborne. It would even enable a gentle climb. I needed to get to an airport, and Tromsø turned out to be the nearest. I set course for it, and called up the radar-control with a mayday, mayday and a short description of the situation. This resulted in a stream of questions which were important enough, but right then, at 15000 feet, the engine stalled again. Now I had other things to concentrate on, and I asked them to keep quiet for a while.

This time was a little less urgent and I tightened the parachute straps before starting to relight the engine. Now I knew two things: Not more than 90% rpm and not above 15000 feet. I was now happy to re-establish contact with ground control and told them I was holding over Tromsø.

*"Just tell me when you want to land" the controller said. I was quite unfamiliar with the airports in northern Norway and after thinking it through, I realised I had started to relax too early. Tromsø was a civilian airport with a short runway and no arresting cable at the end of it. I knew the landing would have to be done with take-off flaps and an approach speed of 190 kts. This required tight control by the engineand the engine could not be trusted right now. The odds were not good enough. I got the weather report for Bardufoss. There were clouds and steep mountains. On Andøya, conditions were better, but it meant flying over the open ocean of Andsfjorden for at least 15 minutes. What if the engine quitted and I came down in the water with no anti exposure suit?
Bardufoss had a rescue helicopter, Andøya did not.*

I asked the control to scramble the helicopter at Bardufoss and make it fly towards the route I would be on. Control came on and told me thesquadron commander wanted to speak to me. This was like an old bad experience with a glider-instructor repeated. "Line engaged" I replied,this was my emergency, nobody else¹s. What would he know that I could make use of at this moment? I made up my mind and started flying over the ocean. If the engine quit in an F-104, it was like flying a space-shuttle. The optimum glidepath was about 1 to 5 and a turn of 360 degrees would cost you 16000 feet of altitude.

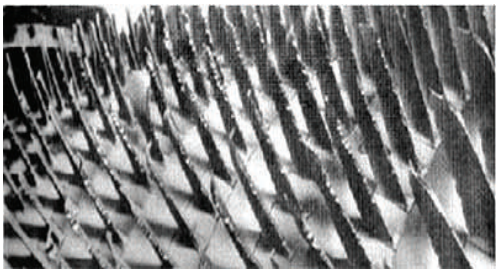
Downwind was at 11000 feet and final at 5500. Speed should be 260 kts. even if optimum glide was at 245 kts. You were supposed to take aim at apoint one nautical mile short of the runway and level out at 500 feet.

Downwind was at 11000 feet and final at 5500. Speed should be 260 kts. even if optimum glide was at 245 kts. You were supposed to take aim at apoint one nautical mile short of the runway and level out at 500 feet. Now came the critical part. The landing gear could not be extended until you were certain to reach the runway. Any misjudgement on this could lead to a critical loss of airspeed and a sudden decent, too rapid for a successful ejection.

I felt relieved to sight the airport. I positioned myself on downwind, 11000 feet, but there was a cloud layer. The airport disappeared , but I had to continue to the point I assumed would be right before turning in. Descending through the clouds I let the airspeed build up to have some extra energy, in case of any misjudgement, an old glider-technique. When the runway reappeared, I was doing 300 kts directly towards it, and it was coming at me too fast. I popped speed brakes, but was still above gear-speed. "Shit - it will hold" ...Gear down! Still 250 kts and the end of the runway was approaching fast. At that point I pulled the throttle and the rumbling noise from the engine that I had been only too familiar with by now, reappeared. This time I was not looking at any of the instruments, only focusing on the end of the runway. I felt how the plane was twisting as the big General Electric J-79 engine stopped
completely. From the tower they could see black smoke trailing the aircraft. The rest was gliding. Passing the edge of the runway I was doing 200 kts. A nice gentle touchdown, wait for dragchute speed, 180 kts - pop, what a delightful sensation of shoulder straps tightening as the chute opened. There were no power brakes, no anti skid, no nose-wheel steering.

Later that night I was almost kicked out of the officers mess for showing up in the bar wearing flight suit. That was against regulations.
Ordung muß sein. The Air force can not make exceptions due to minor snags. Later it came to my knowledge that Lockheed sent their representatives to countries operating the F-104G to introduce a new procedure for compressor stalls: "Start the engine and let rpm build to a point two percent below where it stalled". As you see on the picture, the engine was severely damaged by a screw which had been ingested some way or another. It was never clarified.

/Greetings from Dag Myhre /



SVF MEMBERS ONLY FUN FLY

Saturday December 11, 2010

The SVF Members only fun fly will be on Sat. Dec. 11, Lot's of prizes also in conjunction with the fun fly a swap shop for all the goodies you want to trade or sell. Our snack bar will be open for food and drink. C.B.

More info in the November 2010 Slow Roll

WE NEED MORE SVF PILOTS HALL OF PLANES PHOTOS

Come on and let us see those new projects you got.

ARIZONA MODEL AVIATORS
R/C AUCTION

R/C KITS, ENGINES, AIRPLANES, BOATS, CARS, TOOLS, RADIOS, ETC.

SATURDAY, November 6, 2010

SUPERSTITION AIRPARK
MERIDIAN Rd. & LEVEE DR.
MESA, ARIZONA

REGISTRATION AT 7:00 AM – STARTING TIME 8:00 AM
ADMISSION $3.00 FOR BUYERS & SELLERS
CLUB RETAINS 10% OF SALE PROCEEDS
MINIMUM BID - $35

SALE TABLES AVAILABLE FOR ITEMS UNDER $35

Note: **All auction items will be picked randomly instead of selling all of a persons items at one time. This will allow us to present the best possible program to both buyers and sellers.**

HOT COFFEE, HOT CHOCOLATE & DONUTS WILL BE AVAILABLE ON SITE

FREE PARKING

FOR MORE INFORMATION CALL Art Ashenden AT:
480-314-0064

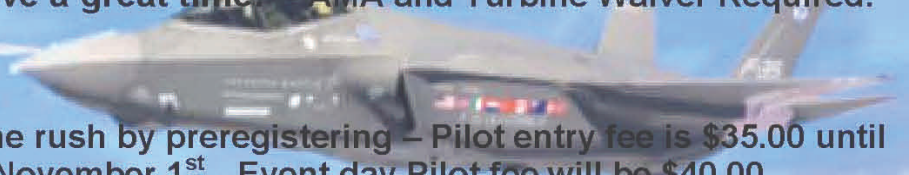
The Arizona Model Aviators

Present

The 22nd Annual Arizona Jet Rally

Join us this November 19th, 20th &21st at Superstition Airpark - Mesa Arizona

This is a *Jet Aircraft* only event! – Come spectate, converse, fly and have a great time! – AMA and Turbine Waiver Required.



Avoid the rush by preregistering – Pilot entry fee is $35.00 until November 1st - Event day Pilot fee will be $40.00

Plaques will be awarded for different categories

Entry qualifies for pilot raffles.

Aircraft must fly to qualify for awards

Event day registration starts at 8:00 am - Flying starts at 9:00am

Pilot's Parking is included in the entry fee - Public Parking is $6.00 per car

Food Vendor will be on-site Friday, Saturday and Sunday

Sorry, no overnight camping is allowed

Trailers can be left at the field on Friday and Saturday night

Security will be provided

Contact: Art Ashenden@ 480-314-0064 or artashenden@gmail.com Steve Ross @ 480-986-8338- stevelr@cox.net Model Aviators web site

http://www.azmodelaviators.com

WINGS OVER ARIZONA 2010

The Arizona Model Aviators # 770

IMAA GIANT SCALE FLY-IN

December 4th & 5th, 2010

Location: Superstition Airpark, Mesa AZ

+ IMAA Guidelines apply to all aircraft. No exceptions.

+ 80" Monoplane, 60" Biplane, Planes Can Be True Quarter Scale, Jets Must Have a Combined Wingspan & Length of 140"

+ Just come, fly and have a good time.

+ Food will be available Saturday and Sunday.

+ Plaques will be awarded for different categories.

+ Planes Must Fly To Qualify For Any Plaques.

+ Landing fee $20 for as many planes as you bring.

+ Pre-registration is recommended. Registration Sat. 7:30 AM. Flying starts at 8:30 AM Sat. & 7:00 AM Sunday

+ Pilot's Parking & Saturday night Pizza Party is included in the Landing Fee.

+ Public Parking is $6.00 per car.

+ No Overnight Camping Allowed At The Airfield. Trailers may be left overnight. Security will be provided the club.

+ Proof of AMA & IMAA membership required. For Turbines, an AMA Turbine waiver will be required.

+ IMAA Applications Will Be Available At Registration.

Contact: Paul Goldsmith 602-323-7753 or wiinger@aol.com

Arizona Model Aviators web site http://www.azmodelaviators.com

Next month Issue

If you got something going let me know. Be the *SR* field reporter, great job and good benefits, like free fresh air.

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

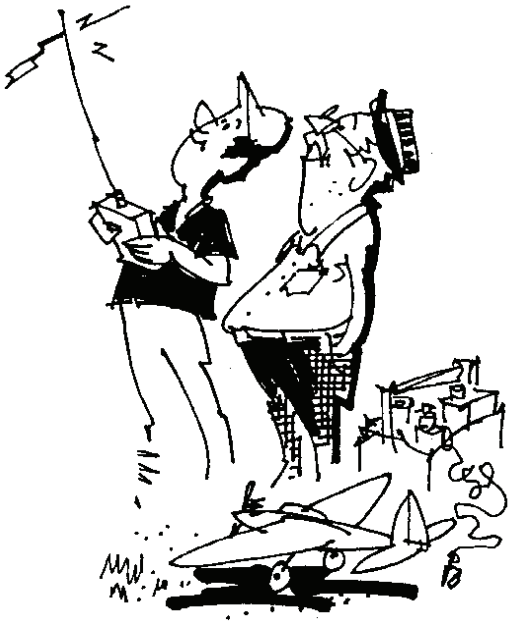
Hope you will enjoy it. Bob *rcbobsvf@aol.com*

This Month Issue

Got some good info articles, CG, hinges, servos. Many event coming soon as cool weather is coming. Don't forget to vote for your AMA VP. Do look at the new videos, websites. Send those articles and photos in and for the SVF HALL of PLANES.!

*Remember to **ZOOM** the **PDF** page to see more.*

THE SLOW ROLL



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Rusty Fried, Secretary

Walt Freese,
Website Supervisor

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