

THE SLOW ROLL



CHARTERED #921
Since DEC. 1974



IMAA Chapter 782

President—Frank Maskowitz
Vice President—John Geyer
Treasurer—Gene Peterson
Secretary—Jim McEwen
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MARCH 2013

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



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SVF MEETING March. 6, 2013 @ 7:00 P.M.



THE PRESIDENTS CHANNEL

Frank Moskowitz

March 2013 Slow Roll Presidents Letter

Welcome to the March 2013 Slow Roll. The "SVF Pattern Championships" was a great event accompanied by almost excellent weather conditions. Saturday February 23rd was a beautiful day but Sunday turned ugly. Lots of wind and cold temperatures so CD Rusty Fried called off flying for that day. Thanks to the assistance of Ken Melbye and other Pattern folks, who kept the contest moving and certainly made the better of the first day. I would also like to thank to the SVF members especially Tony Quist, Mike Smith, Loren Counce and Ron Thomas for volunteering as spotters for the event. Rob Petterec and Neil Banyai donated their time to help out at in the kitchen. Thanks to all of you.

There will be a few weeks before the next event which is the Phoenix Helicopter Fly-In. Better known as the 2013 Phoenix Fun Fly. For information on this event you can visit www.phoenixfunfly.com It is hosted by ARMS (Arizona Rotary Modeler's Society). You can also contact Eric Stevens who is the CD. The event will take place Friday, Saturday and Sunday March 22-24. Once again, the field will be closed to members flying during that period. You're welcome to visit and watch these amazing pilots. We could use some volunteers for kitchen duty and folks to man the gate. We charge per car at this event so someone has to be at the gate to receive guests. Please contact me if you want to help.



The board of directors would like to remind all of our members to conduct their flying activities in a safe manner and to observe the safety rules of the organization. For the protection of all of us, we also believe that it is the duty of each member not only to conduct his own operations in a safe manner, but to report serious violations of our safety regulations by other members to the Safety Officer. Minor or occasional infractions should be pointed out to the individual involved in a helpful, constructive, and certainly a civil, manner and preferably in private. If the alleged violator doesn't respond, and continues to violate the safety rules it should be reported to the Safety Officer and if one is not present at the field, then such infractions should be reported to any Officer or Board Member who is present

That's it for now. See you at the field!

Our next club meeting is Wednesday, March 6th, 2013 at 7:00 pm. We really would like to see more members at the meeting! So please make every effort to show up. We look forward to seeing you there!!! We will have many raffle prizes and the 50/50 could make you very happy \$\$\$\$. You never know what might happen, and you don't want to miss it. If you want to eat I suggest you arrive no later than 6:15 pm. Location is Deer Valley Airport Restaurant. (7th avenue and Deer Valley Road).

Have fun out there!

Frank Moskowitz

President



Sun Valley Fliers Club Meeting Minutes Date, February 6, 2013

The meeting was called to order at 7:03pm by **Frank Moskowitz**. There were 32 members in attendance.

Frank introduced the executive and the board of directors.

Guests:

- **George Ford** – see “Show and Tell”

New Members:

- None

New Solo Pilots:

- None

Secretary's Report – Jim McEwen

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

Treasurer's Report - Gene Peterson

- Gene wasn't in attendance so Frank did the report.
- As of yesterday, we have 264 paid members.
- The non-renewed list (aka “deadbeat” list) will be published on March 1st so please get your annual dues in.
- Gene will be leaving the Treasurer's position. We haven't yet had a volunteer to replace him.

Safety Officer Report - Ken Justice/Frank Seminara

- Please read the safety articles in the Slow Roll. The LiPo battery sand buckets haven't yet been purchased as the vendor is out of stock.
- Please be sure to loudly announce your intentions (eg. Take-off, and Landing) when flying.
- John Geyer crashed a student's plane because the ailerons were reversed. He checked that they were functional (but not in the right direction). Please check for functionality and direction of control surface travel for any new model or after performing radio/programming changes.

Old Business:

- **Tony** thanked the members who volunteered their assistance at **Winter Warbirds**.

New Business:

- The pattern event will be Feb 23-24. **Rusty Fried** is the CD but the club is to provide four spotters over the two days. It is critical that we provide at least four spotters to ensure that there are no issues with full-scale aircraft.
- The helicopter meet is Mar 22-24. The 1/8 AF event is also this weekend but it's at Superstition.
- Five of the board members and the Executive will be up for election. April's meeting is the nomination meeting and the election will be held during the May meeting.
- Please get your membership dues in by March 1st. Please note that a \$10 late fee applies after that (not to mention appearing in the dead-beat list).
- On Sunday Jan 20th, there will be the second starter scale event.

Community Awareness – John Geyer

- John is waiting to hear back from the Boy Scouts. We will likely make a presentation to them in the future and potentially have them out to the field for some buddy box time.
- We need to get the check sent to the Boys and Girls Club.

Door Prize Winners:

- **Charlie Beverson** – gallon of fuel, **Howard Kennedy** – multi-tester, **Ray Przybylski** – 2200mah battery
- **Loren Counce** – motor/speed controller, **Ed Klein** – 10A speed control, **Walt Tessier** - 4 cell battery 18A speed controller, **Roger Miller** - assorted heat shrink

50/50 – Steve Miller

Show & Tell:

- Ron Petterec brought in a ¼ scale clipped wing Cub.
- George Ford of Gnat Warfare provided an FYI briefing of his new R/C related business venture.

The meeting adjourned at 7:44pm.

Respectfully submitted, *Jim McEwen* - Secretary

Sun Valley RC Championship

The 32nd Annual
Feb 23-24, 2013



Sun Valley RC Championship Results

The 32nd Annual
Feb. 23-24, 2013

From Jarvis Johnson,

Hey guys we just returned from the Phoenix, we were able to get in 4 rounds on Saturday. So that was a good thing, because on Sunday the weather went very bad, [man](#) it was cold, with a 90 degree cross-wind at about 25 mph and gusting up to 35. So the pilots voted not to fly. So Rusty called the contest and gave out the awards, and we were gone by 9:30. We had 17 pilots. I would like to thanks, the Sun Valley Flyers for hosting, and Rusty for CDing, a great contest, an also thanks to those pilots that drove in from out of state.

Result from Phoenix

Sportsman

1. 3000.00 Jamie Schoolcraft (California)
2. 2909.322 Jeff Worsham (Albuquerque NM)

No Intermediate

Advanced

1. 3000.000 **Rusty Fried** (Phoenix)
2. 2936.690 John Gayer (Albuquerque NM)
3. 2897.446 Alan Schiaffino (Juarez, Mexico)
4. 2684.452 Mike Greear (California)
5. 2672.717 Gary Switala (Chandler)
6. 2626.377 **Ken Melbye** (Phoenix)
7. 2619.044 Greg Meierhoff (California)

Masters

1. 3000.000 Jeff Carder (Goodyear)
2. 2955.207 Sean Mersh (California)
3. 2814.914 John Bently (Gilbert)
4. 2649.796 Jarvis Johnson (California)

FAI P-13

1. 3000.000 Tony Frackowiak (California)
2. 2890.452 Dan Underkofler (Colorado)
3. 2868.376 Steve Hannah (California)

SVF MEMBERS PHOTOS



VIDEOS and Websites Links
Click on to view video, website

Flying the Mosquito 16:21
<http://www.youtube.com/watch?v=rGfQQW0soB8>

Mosquito built in Austria 3:01
http://www.youtube.com/watch?v=vf-x7tLgDbQ&feature=player_embedded

Mosquito in action 3:30
<http://www.youtube.com/watch?v=r-UUTo3wHds>

Mosquito Raiders 46:00
<http://www.youtube.com/watch?v=G31MCPp-azY>



SVF Website Buy & Sell items.
<http://sunvalleyfliers.com/classifieds/classifieds.htm>
My thanks to those who passed this info on.



IT WAS MENTION,
The B-29, Fifi is on display at Falcon field March 2-3rd. Then on March 4 at Deer Valley Airport. Do check to see if this info is correct. Bob

How to box a Mosquito



So how do you get a warbird safely from one side of the world to the other? Well, in the case of Jerry Yagen's recently restored de Havilland Mosquito, known as KA114, it's being disassembled and placed into a shipping container for its trip home to the U.S. New Zealand warbird experts Avspecs Limited rebuilt the twin-engine aircraft, nicknamed the "Wooden Wonder" for its mostly wood construction, last year. Following its first post-restoration flight last September, KA114 – a Canadian-built fighter-bomber variant of the Mossy — made several public appearances throughout New Zealand. Check out the video to see how the Avspecs crew carefully prepped the plane before it heads to Yagen's Military Aviation Museum in Virginia Beach, Va.

Please go to the VIDEO page in this issue to see more Mosquito videos.

VIDEO http://www.youtube.com/watch?v=M0JIjVqSR4c&feature=player_embedded#!

Curing a Lean Engine Mystery

This was an odd sort of problem. It began when I swapped out the Magnum .91 on my Aero Works Edge 540 to get some run time on a new engine that I wanted to use on a new project. The new engine started okay, but when it flew, everything seemed to be off. There wasn't the power that I used to have; the high speed needle (HSN) and low speed needle were both way out of adjustment.

I reinstalled the original engine, and had the same problem. Then, just because I had it, I dropped in a third engine—to confirm that it wasn't the engine itself—with the same result. That confirmed it was the fuel system.

The key symptom was that I could not get a good pinch test from the engine. It had all the indications of a lean-running engine. Even with the HSN opened 4-5 turns, I was not getting a pinch check. During that first engine swap, the fuel system had been checked out just to be safe. Obviously, that had to be the reason, but what did I do to create this problem?

The Edge's tank was pulled again and the three-line fuel system was checked over very carefully. After about two beers, my vision suddenly cleared and I had an aha! moment. Look at the picture on the right. What do you notice about the clunks?

Like most three-line systems, this one has two clunks; one to the fill line and one to the carb line. The picture shows one clunk with a large feed hole to let lots of fuel through. The other clunk has just a slit and a small hole. Guess which one was connected to the carb inlet line? Here's a hint: it wasn't the one with the large feed hole. That clunk with the slit would be fine for feeding your .40 or .46, but there was absolutely no way that it was going to let enough fuel in to run a .91. That undersized clunk was the cause of the lean runs. The clunks were swapped and the problem vanished. The clunks had been inadvertently swapped during the rebuild.

This is being written to give folks a heads-up if they run into the same problem somewhere down the road. A clunk is a clunk, right? No, they're not. Ask me how I know!

Bob Mandeville (n1edm@comcast.net), Wingbusters Model Airplane Club, Halifax MA



BIRDEYES? VIEW OF THE SVF FIELD



Jun 22, 2008

Sun Valley Flyers, Phoenix Arizona

Photo: Aerial-Perspectives.com



June 22, 2008

Photo: Aerial-Perspectives.com



SUN VALLEY FLIERS
Phoenix, Arizona

A123/LiFe Monitoring

I have been using A123 battery packs to run my onboard electronics in my fuel-powered RC aircraft for a couple years now. A123 Systems makes, in my opinion, the best LiFe chemistry batteries on the market and LiFes in general are almost ideal for use in our larger, fuel-power aircraft. As a result I have gotten somewhat complacent when it comes to onboard batteries as they have proven to be extremely reliable.

My two largest planes (both 50cc class—a Mustang and a Slick 540) each carry two 2300 mAh two-cell packs that power everything onboard from receiver to servos and ignition. I typically charge them after each flying session, but rarely even check them when I get to the field if I've charged since the last trip. I can do this because LiFes have the characteristic of very low drain while being stored—on the order of 2-3% a month. That means after a year on the shelf at room temperature, two thirds of the capacity is still available!

One of the great things about LiFe batteries is that they have a flat discharge curve. That means that, throughout a vast majority of the time, they are in use from a few minutes after they are taken off charge until they are very nearly drained, they put out the same voltage. That range is between 6.5 and 6 volts over roughly 90% of their available capacity. That means our onboard electronics see a constant voltage during every flight.

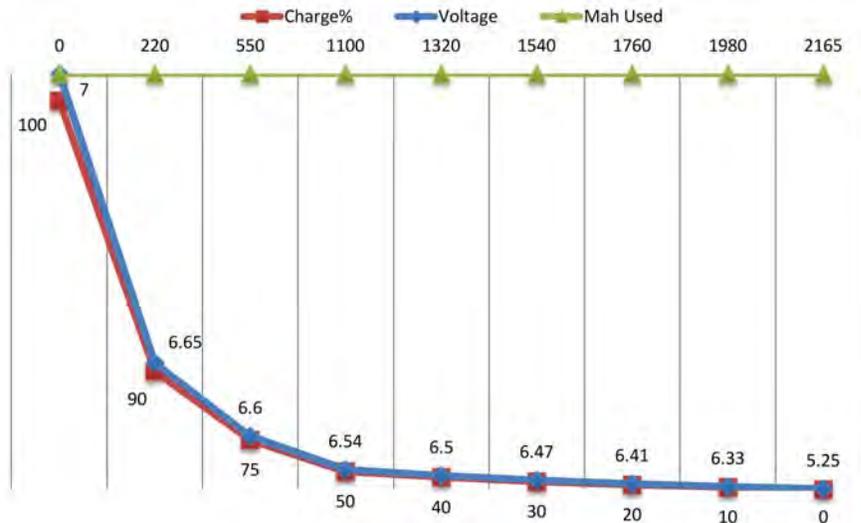
LiFes also are capable of massive current delivery—on the order of 15C (15 times the 1 hour discharge rate of the pack) with little sag in voltage, so short bouts of high-load maneuvering don't cause an issue either. Even then, voltage seems to stay above 5 volts so all onboard systems continue to run flawlessly.

A few other folks have adopted LiFe use in their airplanes and one of them approached me with a question that started me thinking. It went something like this. "My battery is showing 6.42 volts. I should be okay for another flight, right?" It would soon be dark and even a quick charge would have likely ruled out another flight. I so rarely check my battery voltage these days that I was not immediately sure how to respond. Of course it would be easy to say to play it safe and charge, but was it really necessary?

In the past, most users of LiFe batteries didn't look at voltage output of a LiFe pack as the measure of whether to fly. Aficionados of the LiFe batteries have all been taught to charge and fly a couple flights and then calculate our usage per flight. Repeat this a few times and then get an average mAh used per flight and divide into the pack capacity and you have an idea how many times you can fly without running low on battery power. It's sort of like running your car without a working gas gauge. You know you can go 200 miles on half a tank so you make sure to fill up every 300 at least, 200 if you're the cautious type. We adopted this method with LiFe batteries because of the aforementioned characteristics of these batteries. The range of usable output voltages is constant and putting a load on the battery—even if it's mostly dead—does not help make the test any more accurate. LiFes simply don't sag any more under load at 90% depleted than they do at 10%.

Looking for answers, I started researching on the Web as well as running some tests on my own and here is what I discovered. First, a loaded volt meter (the very thing we need for NiCad and NiMH cells) is the wrong tool in this case. The load applied by the meter is too small to be useful in the LiFe world, putting virtually no strain on the battery, but could cause an issue because every connection in the system can show a small voltage drop when enough current is pulled through it (extension leads, switches, etc...), which may throw off the accuracy of the reading. This might also result in different readings depending on where in the system the measurement was taken (at the charge jack, balance lead, etc.). Add to this that there is no standard for exactly how much load such a meter places. I've seen 250 mAh, 500 mAh, 1 amp, and even 5 amp loads placed by these devices and the resulting readings would be all over the board. The only consistent reading seems to be an "at rest" or "no load" reading that imposes little or no draw on the batteries. This reading will not vary significantly no matter where the measurement is taken, within reason. With that in mind I have found references to and then did my own tests of no load voltage readings of a LiFe two-cell pack.

What I found can be seen in Figure 1.



First I drained my pack to 2.5 volts per cell, a conservative low-voltage cutoff for LiFes that will not harm them in any way. Some chargers use 2.0 volts. (I used a different charger to run this whole procedure with the cutoff set to 2 volts and the results are almost identical. The last .5 volt drop happens very quickly and is well outside any usable charge level of the pack) I then fully charged and noted the capacity. My 2300 pack showed a capacity of just over 2200 mAh. I then set my charger to discharge the pack at a rate of 2.3 amps. This is a 1C rate and is near what I believe my 30% Slick draws, on average, during flight. This is based on some past observations. (On a repeat test using a similar pack I used 1 amp and found similar results, so I don't believe the rate of discharge is particularly relevant to the at rest voltage measurements.)

I then went through a procedure of discharging the pack, pausing at various times and measuring the packs at rest voltage with a standard Digital Multi-Meter (DMM). DMMs are designed to place very little load on the circuit under test and therefore do not affect the readings significantly. They are also inexpensive. I also did these measurements with varying times at rest before making the measurement and found that the battery will recover slightly over time giving a somewhat higher reading. This change is small and likely not a concern so 1 minute or 10 minutes after the flight appears to be largely irrelevant.

As can be observed, the pack dropped markedly in the first 220 mAh/10% (90% capacity remaining)... from 7 to 6.65 volts, but then levels off quickly and is only down to 6.33 volts at 10% remaining. I.E. Approximately the same voltage drop from 90-10% of capacity as we got in the first 10%! So, if I were to draw a green/yellow/red scale as many of the old loaded/expanded scale meters did... it would probably look something like Figure 2.

Jack's Expanded Scale Volt meter for LiFe batteries



Based on past recharge experience in the plane I know that the receiver and servos draws 100-250 mAh per 10-minute flight and the ignition may draw another 80 mAh.

Let's round up to a worst case scenario of 350 mAh per flight. That means at the 40% remaining line (1320 mAh used) I have two/three flights left over on a single 2300 mAh pack and have already flown almost four full flights. Now consider that I have two packs onboard and I actually have eight flights accomplished and perhaps five in reserve. So my green safe-to-fly zone would be from 7 volts to 6.5 volts. To be safe I would say my yellow line starts at 6.5 volts with a good reserve and extends down to 6.4 volts. My red line would be at the 6.4 volts level with just under 20% remaining. I would not fly this aircraft below that level. This allows for 10 full flights and a reserve of two with a small buffer.

I will test this with some real flying in the spring but expect that this whole calculation will turn out to be overly conservative, and wouldn't be surprised to get 10-12 full flights without dipping down past the 6.5 volts level. I rarely actually fly 10 minutes and my maneuvers do not include a lot of demanding 3-D maneuvers. I will attempt to report back with more real world measurement at that time.

So what would my answer have been to my friend? Considering he is flying a much smaller airplane that likely draws far less power per flight and, being a glow aircraft, there is no ignition to account for, I would have told him to fly with confidence and simply monitor his battery after every flight since he was already below 6.5 volts and has a single LiFe pack.

So in conclusion I believe that a voltage measurement, if done correctly and backed up by experience with the aircraft in question, can be a useful tool for monitoring your LiFe battery packs. All it takes is a bit of know-how and practical experience to stay safe using this new battery technology.

It should be noted that this test was using true A123 brand batteries and has not yet been verified using other brands of LiFes. I do not expect significant differences would occur. A123s are just more capable of high rate charging and discharging than other brands, but that is largely irrelevant to the data presented here. Voltage levels are constant across brands in my experience so the above presented measurements and calculations are still valid with other manufacturers.

One last note: In order to keep LiFes in good working order you want to use an appropriate charger with balancing capabilities. Keeping your batteries in good condition and having access to the proper connections can be a challenge, but is doable with the right equipment and know-how.

Jack Sallade (j.sallade@comcast.net)

What Is a Drone, Anyway?

Are traditional model airplanes "drones"?

In a word, no. Here's why:

Model airplanes have been around for well over a hundred years and actually predate manned flight. Models have been used for decades to test aircraft design theories and to validate full-scale performance. Some models are small-scale replicas of real airplanes; others are original designs intended for sport or competitive activities. In many cases, they are built to stunningly precise levels of detail. Most, though not all, model airplanes today are flown by radio remote control.

Model aircraft are flown by thousands of enthusiasts with a common interest in aviation and a love for watching their aircraft fly and perform. For this reason, models are largely flown within visual line of sight and in the presence of an operator who watches and maintains control of the airplane during flight. That alone is enough to place model airplanes cleanly outside the boundaries of "drone."

Click the link below to read John Villasenor's complete blog on Drones in the April 2012 online edition of *Scientific America*...

[What Is a Drone, Anyway?](#)

SVF MEMBERS PHOTOS

Photos by SVF Members





[British Soldiers in Afghanistan deploy Micro UAV Helis](#)

This updated image released by the British Army Monday Feb 4 2013 of Sergeant Scott Weaver, of The Queens Royal Lancers launching a newly issued Black Hornet miniature surveillance helicopter MUAV during an operation in Afghanistan. The Scandinavian-designed Black Hornet Nano weighs as little as 16 grams (0.56 ounces) — the same as a finch. The four-inch-long (10-centimeter-long) helicopter is fitted with a tiny camera which relays still images and video to a remote terminal. Troops used the drone to look for insurgent firing points and check out exposed areas of the ground before crossing. (AP Photo/Sgt Ruper Frere)

LONDON (AP) — British soldiers in Afghanistan have been issued with surveillance drones so small they can fit in the palm of a man's hand.

The Scandinavian-designed Black Hornet Nano weighs as little as 16 grams (roughly half an ounce) — the same as a finch. The 4-inch (10-centimeter) -long helicopter is fitted with a tiny camera which relays still images and video to a remote terminal.

"We used it to look for insurgent firing points and check out exposed areas of the ground before crossing, which is a real asset," said Sgt. Christopher Petherbridge, with Britain's Brigade Reconnaissance Force. In a statement, he called the Hornet easy to operate and said it offered "amazing capability to the guys on the ground."

The military said Sunday that the toy-like Hornet is capable of flying even in windy conditions.

It said the Hornet was developed by Norway's Prox Dynamics AS as part of a 20 million-pound (\$31 million) contract for 160 units with southern England's Marlborough Communications Ltd.

Drones of all shapes and sizes have rapidly become a mainstay of U.S., British and other nations' military operations around the world. Late last year the U.K. said it was doubling the size of its armed drone fleet in Afghanistan to 10 with the purchase of a new batch of Reapers.

VIDEO: http://www.youtube.com/watch?v=FBxmck16FhA&feature=player_embedded



DIY Balsa Rack

Wayne McNab writes, "I am an organizing kind of guy. I hate messes even though I seem to be very good at generating them. Up until four years ago, I had been out of model aircraft for about 20 years. My memory was of a time when if you wanted to fly, you had to build. The kits were 'die crushed', and lots of times the parts had to be cut out of the sheet even though they were supposed to just push out. You could handle the sheets and the parts would stay attached. Enter laser cutting, that wonderful process, which along with CAD design has generated precision dimensioned and cut parts, and a sheet of parts that falls apart if you even so much as look at it. Compared to the historic option, I much prefer this, but I wanted a method where I could sort through sheets to look for specific parts without having to reassemble the sheet.

My solution is very simple. Acquire some thin but stiff cardboard, 1/16 to 1/8 inch, and cut it the size of the balsa sheets. This can be acquired at more good craft stores. Putting this under each balsa sheet allows them to be moved around or stacked without disturbing the parts. With an additional piece on top of a bundle of sheets, and some elastic bands, becomes a very secure way to store and protect the sheets of the kit.

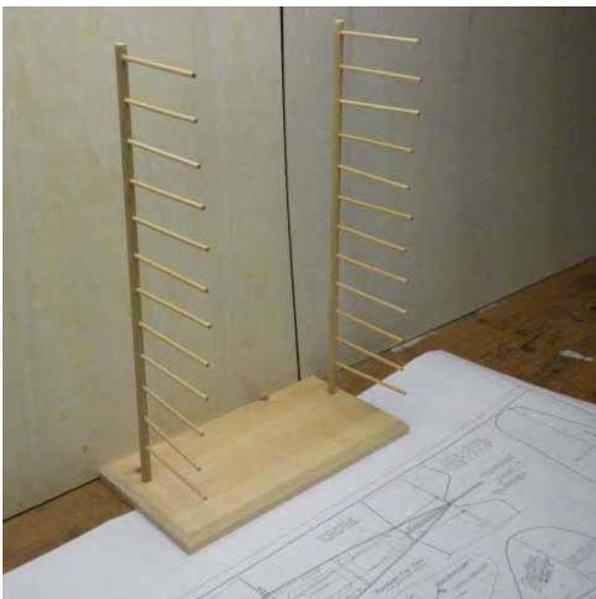
I also found that by building a dowel rack, the cardboard backed sheets can be stacked and accessed separately without having to sort through a bundle of sheets. Because there is a space between each sheet you can see the parts you are looking for.

This rack is very simple to make. Mine was made from standard 3/16- and 1/2-inch dowel, and a piece of pine shelving. Start by cutting 2 pieces of 1/2-inch dowel 19 1/2 inches long for the verticals, 28 pieces of 3/16-inch dowel 5 inches long for the horizontal racks, and a piece of 3/4-inch-thick pine shelving cut 7 x 14 inches for the base.

Each 1/2-inch vertical dowel will have 12 holes 3/16-inch diameter drilled into it, placed 1 1/2-inch apart. Place the first hole 1/2 inch from one end. All these holes are to be square to the dowel, without rotating the dowel while drilling otherwise at 3/16-inch racks will stick out at all angles. After drilling, press a rack dowel into each hole. These can be glued, but if the fit is tight, glue won't be necessary. If you have taken care drilling, all 12 rack dowels will be inline.

Drill two 1/2-inch holes in the base 12 inches apart, 4 1/2 inches from the front edge. The 1/2-inch verticals fit into these. The verticals can be glued if you wish, but I made mine a snug fit so they can be taken out and stored flat when I am not using the rack.

That's it. A simple half hour project to neaten up your workspace. You will wonder what you ever did without it."



SVF MEMBERS PHOTOS

Photos by SVF Members





F-86 Sabre: SUPER SIZED

Flown by Henri Wild at the Icare-Airmeet in France, this 14-foot-span F-86 weighs in at 145 pounds and uses two JetCat 160 turbines for power. We've learned that the plane experienced an air leak in its retracts during this flight; at minute 2:59 the pilot starts to retract the gear but due to lack of pressure he decides to keep the gear extended for a safe landing.

VIDEO

[http://www.youtube.com/watch
v=7_Uupl5IQxo&feature=player_embedded&list=UU1QF2Z_FyZTRpr9GSWRoxrA](http://www.youtube.com/watch?v=7_Uupl5IQxo&feature=player_embedded&list=UU1QF2Z_FyZTRpr9GSWRoxrA)



Smartphone-controlled paper airplane!

PowerUp Toys takes the ubiquitous paper airplane to new heights! Last year, they introduced an electric conversion kit that can propel a paper airplane and this August they plan to offer a control system so that you can control it with any Bluetooth-equipped smartphone! Free airplane templates, inexpensive (\$14) electric power systems and the upcoming control system sound like a great way to introduce kids to RC (and a lot of fun for experienced pilots, too!). Check out the video ... we can't wait to get our hands on one of these.

VIDEO http://www.youtube.com/watch?v=XrSn_Napb48&feature=player_embedded#



Osprey attacks quadcopter!

When YouTube's Womackke saw a giant bird's nest at a local park, he decided to fly his quadcopter with GoPro video up to check it out. He notes, "To my surprise the bird flew at me. The bird was not hurt and I didnt do this again after seeing their response. This tree is so tall that from the ground you cant really tell if there is a bird in the nest or not. I still visit the park and the birds are doing great." This video proves that just because you CAN do something doesn't mean you SHOULD do it (but if you do and get a cool video, we'll watch it!). In this case, we're very thankful the birds weren't injured. This serves as a good reminder to always keep your distance from wildlife—evenwhen filming with a UAV—for everyone's safety and well-being.

VIDEO http://www.youtube.com/watch?v=WvqD7wxC3uc&feature=player_embedded



Is it a UFO or RC?

Check out this aircraft! Made by UAV manufacturer Aesir and called "Vidar," this portable craft is designed to provide surveillance and situational awareness inside buildings and in confined spaces. It's LiPo batteries provide up to 15 minutes of flight time. It weighs 400g and is capable of carrying a 100g payload.

VIDEO http://www.youtube.com/watch?feature=player_embedded&v=KXVtUCABiv8

SVF MEMBERS PHOTOS



Wayne Layne Eurofighter



Tony Quist Ultra Flash



Mike Dolan Panther



Marty's new electric



Dan Smith



Tom Gucca

SVF's Bandstand

Geronimo Vidales



Warbird Makeover: small details create big results

No doubt about it, among warbirds, the Vought F4U Corsair ranks way up near the top as a favorite with modelers. The bent-wing bird, as it's often called, has a look like no other WW II fighter. From its big, round cowl through its aft cockpit to its unique inverted gull wing, there's no mistaking a Corsair. This is the second Corsair makeover I've done, the first being a .50-size glow version that I transformed from a traditional overall blue ARF to an attractive gray-on-gray rendition of a Royal Canadian Navy machine in the July 2012 issue of MAN. For this presentation, I started with the all-foam (EPO) Corsair offered by Tower Hobbies.

Instead of a complete re-paint, I decided to take the alternative route of using the stock version as a basis for a "weathered," or in-service look, which the real Corsair was likely to have experienced. The techniques employed are relatively easy and inexpensive, and you really can't make a serious mistake. Equally important is the fact that these techniques can be used even after you've repainted your model in order to give it a personalized look. While both the refinishing and weathering techniques improve the overall appearance, the refinish changes the look while weathering, or properly done aging, enhances the realism.

The search

The first—and most important—part of the process involves the "search." Much like the documentation hunt for that "just right" paint scheme, photos of actual aircraft are essential. This search for a weathered appearance is a little bit easier than the complete documentation phase, as you don't need a specific airplane; photos of any airplane operating under similar environmental and service conditions will do. Typically, WW II subjects operating in harsh environments like deserts or salt air will tend to look "beat up" in a shorter amount of time. Without the benefit of hangars, covers, shelters, or daily maintenance, they took some serious abuse and it showed.

Panel lines [See Photo #1 and #2](#)

A small artist's brush is used to flow the gray wash into the molded panel lines. Wipe the excess away with a paper towel and the residual gray will stay in the panel line.

The final appearance of the model is anything but monochromatic and you've created a look of realism; don't be afraid to try it!

Since I had decided not to repaint the model, there was no need to remove any of the manufacturer-applied markings, prepare a new stencil or markings, or even mask for color separation. All that was required was a light spray of glass cleaner to the overall model, a thorough wipe down, and adequate drying time. Since this Corsair has crisply molded-in panel lines and surface detail, the first step was to highlight these details with a medium gray wash applied to the panel line with a fine brush. I use water-based acrylic paint (latex house paint will work) and thin it so that it flows easily into the panel lines. Apply this wash to each panel individually and, with a paper towel, wipe the excess wash off the adjacent surface, leaving some wash in the groove. You should do this fairly quickly after application of the wash but don't worry, any excess film can be removed later with fresh, clean water. The key is to leave some residual wash in the groove and allow it to dry completely. If you're really nervous about making mistakes, start on the bottom surfaces first; by the time you reach the top, you'll be an expert!

Sun and sand

OK, the panel lines now all pop out visually and you're probably quite pleased with the transformation. Well, there's more to be done. Let's get out that very same wash that you allowed to accumulate in the panel lines to make them stand out. This time, starting at the leading edge of all flying surfaces, dab some wash onto the surface with a brush and immediately use a paper towel to spread it aft toward the trailing edge, always in the direction of the airflow. The density of the wash will determine the intensity of the streaking. I suggest diluting the wash to the point that it is just visible when first applied with the brush. Once again, when in doubt, go to the underside of the model! As with most weathering techniques, the key here is a light hand. When you reach the point where what you've done is obvious, you've gone too far. Using water-based paint for weathering, however, removes a lot of fear factor from the process, as most of it can be removed for "re-dos!" You want some very subtle streaking (tone changes) created by airflow over the surfaces. In the case of the fuselage, the direction of the streaking should be vertical, from top to bottom; long periods of being exposed to the sun will do that. Again, subtlety is key.

Wear and tear [See Photo #3](#)

Small, spring-loaded panels, like this handhold, lose a lot of their paint through daily use. Silver paint, randomly applied with a fine brush, creates the illusion of chipped edges.

In those areas requiring wear, rather than the chipping replication, I use a craft material called Rub 'n Buff applied with either a cotton swap, paper towel, or my finger. [See Photo #4](#)

To next page

continued.....

Getting even more excited about your efforts, huh? Sure, it's looking great and luckily there are just a few steps left. The part of the weathering process that seems to get the most attention but is easiest to overdo is the panel wear or paint chipping. I usually start by sizing up the level of wear I've already applied and imagining how some of the panel edges would look after frequent opening, closing, or removal. How much of the finish on the leading edges of the airplane would be beat up by sand, stones, and other debris found on operating theaters like that desert we mentioned earlier? You can be sure that any painted surface kept outdoors and exposed to regular dirt, sand, or rocks found on most airports, will suffer the effects of these materials. Naturally, the worst wear usually occurs at the leading edge.

The next step is deciding how to simulate the wear or chipping. For sharp-edged panels or large chipped areas, as on the leading edge of wings, I use a fine, pointed brush to randomly apply silver paint stippled along the edge of the panel. The drier the brush the better; you don't want a lot of paint, just a suggestion of metal peeking through on the edges.

Chipping uses the same paint, but application is better handled by random dabs of a coarse, mostly dry sponge dipped in the silver paint and blotted before you apply it to the surface. Using a different corner of the sponge for sequential dabs will prevent a "repeat pattern" look. Also, when going from one leading edge to the opposite one, try not to look at the first one to "mirror image" it. Avoid symmetry of chipping if it never happens that way!

Now, for those areas where the paint was worn through rather than chipped, I use a craft material from Amaco called Rub 'n Buff. Crafters use it to create a metallic look on candles and other items. It's wax-based and I apply a small amount to a cotton swab before touching it directly to the model's surface. Don't apply it too heavily or you'll be on your way to a chrome-plated leading edge! Excess can be removed with alcohol but you'd best practice on something other than your model until you feel comfortable with the process and result.

Dirt and grime See Photo #5

Here is an example of both wear and chipping simulation in the same general area of the model. Compare the "before" and "after" images below to see the difference just a little weathering can make on your scale project.

Finally, there's the exhaust staining and grime accumulation that is best handled with an airbrush but can also be convincingly duplicated with pastel chalks or even ground-up pencil leads. Again, subtle is better! You will notice in your photos that the engine grime starts behind the cowl flaps, as you would expect. No need for masking anything here, just take the cowl off, do your thing, and replace the cowl; the stains will begin exactly where they should.

Conclusion



Before



After

There you have it, breathing life and realism into a great foamie warbird in a small number of easy and inexpensive steps. It is easy, but you'll never know until you try it. Just think of all the admiring looks your new weathered warbird is going to receive at the field; go ahead, go for it!

TEXT & PHOTOS BY RICH URAVITCH

To next page



Warbirds over Florence

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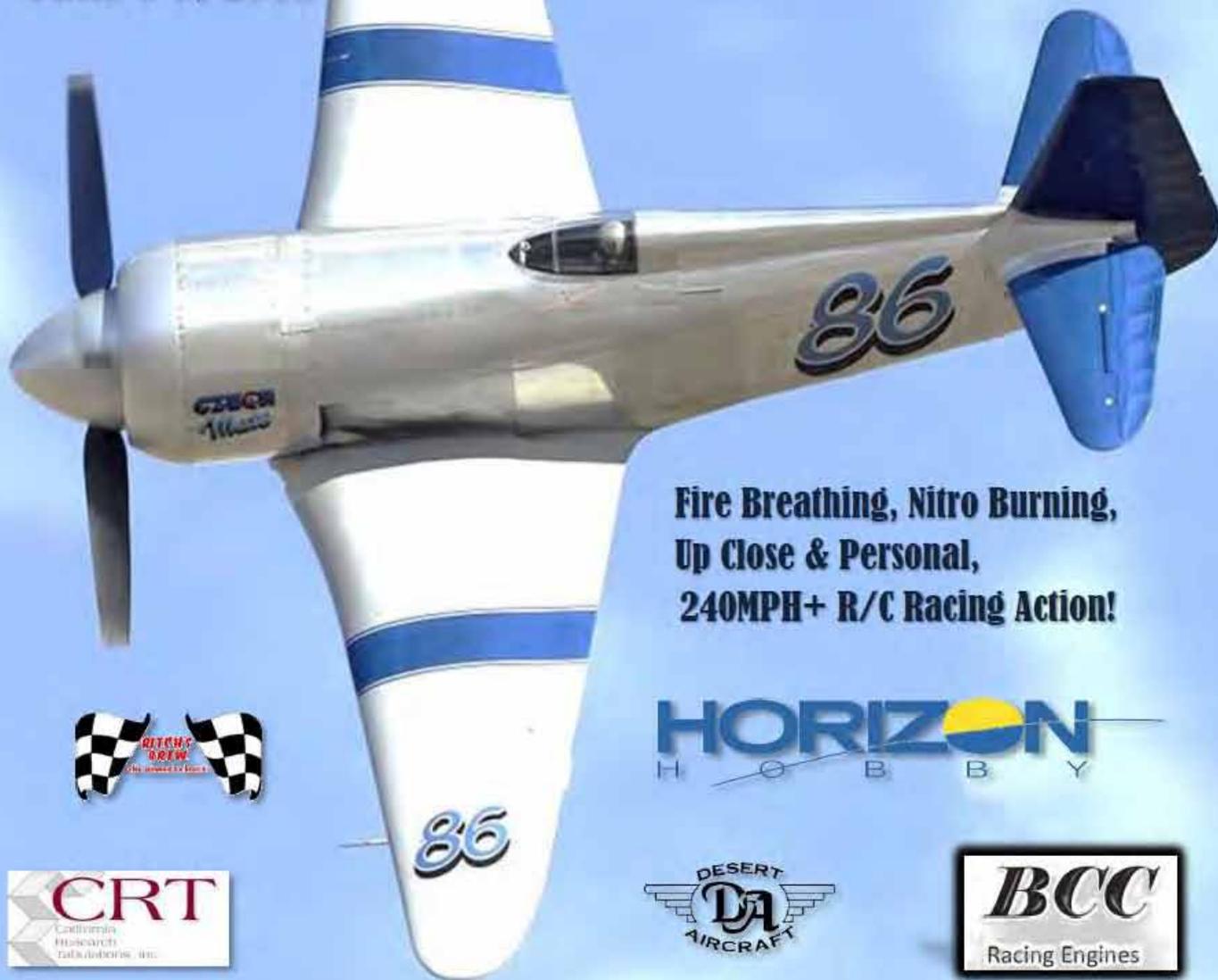
April 13, 14, 2013

Location: Superstition Airpark, Mesa AZ

- + IMAA Guidelines apply to all aircraft. No exceptions.
 - + 80" Monoplane, 60" Biplane or Planes Can Be True Quarter Scale, Jets Must Have a Combined Wingspan & Length of 140"
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 - + Food will be available Saturday and Sunday for purchase.
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 - + Public Parking is \$6.00 per car.
 - + No Overnight Camping Allowed At The Airfield.
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 - + Trailers may be left overnight. Security will be provided by club members.
 - For Turbines, an AMA Turbine waiver will be required.
 - + IMAA Membership Applications Will Be Available At Registration.
- Contacts: Paul Goldsmith 602-323-7753 or wiiinger@aol.com or John Mangino 480-980-1386 or manginoaz@cox.net Public Relations Steve Ross 480-986-8338 or stevetr@cox.net Arizona Model Aviators web site <http://www.azmodelaviators.com>**

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Flagstaff/Winslow, Arizona
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Parking: \$5.00 for full event

Camping: \$15.00 for full event

Payable to: Chuck Hebestreit, 5755 Townsend-Winona Rd., Flagstaff
AZ. 86004. chuckh@informagic.net, (928) 853-1975

Suggested Flagstaff Area Accommodations:

Super 8: 725 N. Kasper Ave. (928) 526-0819

Days Inn: 3601 E. Lockett Rd. (928) 527-1477

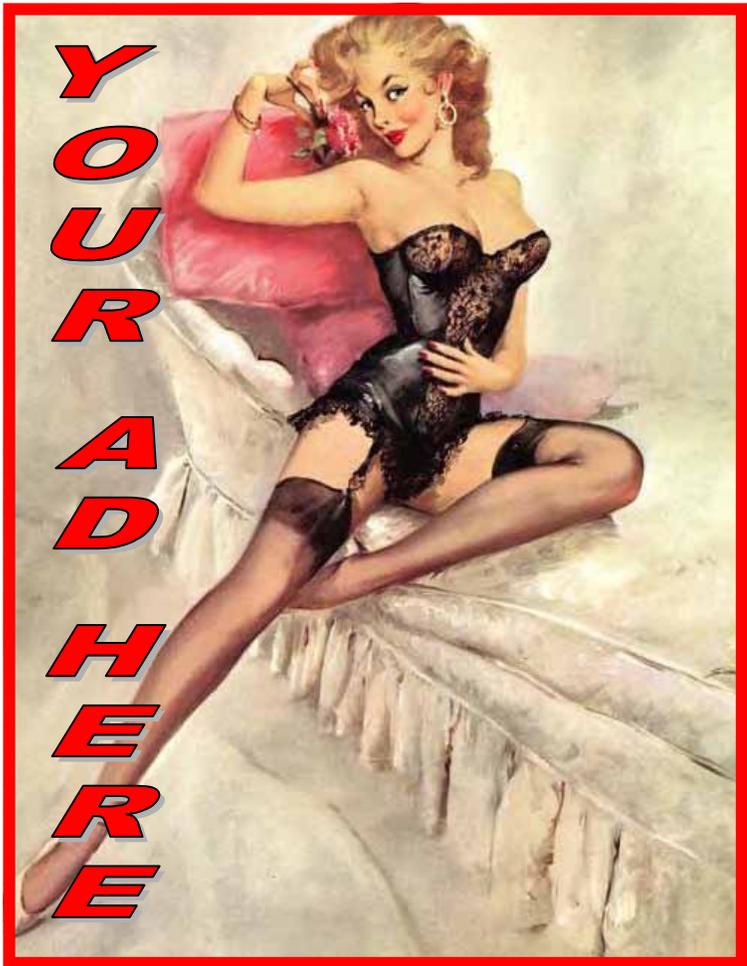
Hampton Inn: 3501 E. Lockett Rd. (928) 526-1885

(These three motels are right next to each other. We recommend you ask for a room in the back since Flagstaff does has rather frequent trains.)

Little America Hotel - 2515 E Butler Ave. (928) 779-7900

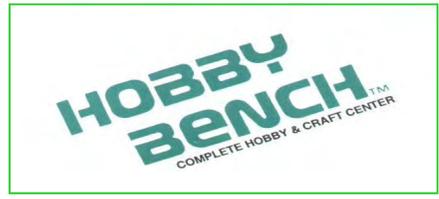
All Entries must be post marked by May, 3 or there will be a \$25.00 late fee.

Photo courtesy Neal (Nirni) (Wingman Photo) ©2007

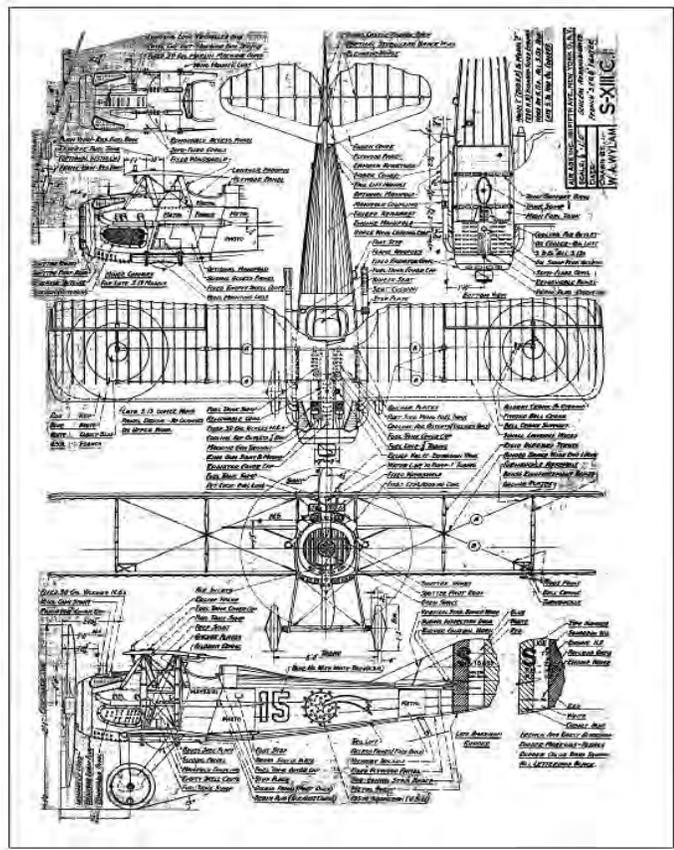


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This Month Issue 3-2013

One contest finish recently, the next **BIG** one is the Helicopter event. Lots of info in this issue. Make sure to view the videos

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.



Next month Issue

More photos from the Heli event. I HOPE!

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

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



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