SAN dIEGO SCALE STAFFEL NEWSLETTER

May-June, 2011

John Ernst . 2006 FAC Nats

Orv and Marcie Olm, 2006 FAC Nats Banquet

Chris Starleaf, 2006 FAC Nats

Great Scalers, 2006 FAC Nats

Bob Hodes, Westfac 1

WWII Combat, Westfac 1

Mike Mitkiff, Westfac 1

Don Bartick, 2008 Barbeque

Roger Willis, 2007 -Lost Hills

Vance Gilbert's Gorgeous DH Flamingo at the 2006 FAC Nats

This Issue

President's Landing Strip-May / June, 2011

Wind, rain, or snow cannot keep the "Indoor Flyers" from meeting the first Sunday of every month at the Grossmont gym. Okay…maybe not snow, but with the unpredictable weather we've been having, it was nice to be able to fly no matter what Mother Nature threw at us.

Indoor flying is a great place to learn how to adjust free flight model aircraft. The outside forces of wind, thermals and ground effects are virtually nil at indoor flying sites. With these forces eliminated, it's easier to observe the effects of wash-in, wash-out, down-thrust, center of gravity and incidence changes on your airplane. It also makes it easier to judge the efficiency of the rubber and prop size. All this is happening at a slower speed; therefore the ability to learn is amplified. The techniques acquired flying indoors can easily be transferred to the outdoor models.

Come and join us at the Grossmont College Lower Gym from 9am to noon the first Sunday of every month. We frequently fly FAC events that are eligible for Kanones: Phantom Flash R.O.G. and No-Cal. We also fly AMA events such as Novice Penny Plane and EZB. The June 5th venue is Novice Penny Plane. However, you can fly anything you want.

Hope to see everyone at **WESTFAC III in Denver, June 22-25, 2011** – flying outdoors, of course.

LLFF! (Long Live Free Flight!) **John Hutchison**

Upcoming Events

Indoor Scale Staffel Contest & Fun Fly

June 5, 2011 Pennyplane and NoCal Scale - 9 am to noon at Grossmont Community College – Lower Gym

Don't miss this one! Along with our great regular fliers, we now have a hot new flyer at our 'indoors', Yuan Kan Lee ("Kan"), who finished a close second in EZB at Kent State with a time of about 19 minutes!

For directions to flying site see: http://www.scalestaffel.org/Indoor_Site.html

Outdoor Scale Staffel Contest

August 14, 2011_Second of three 2011 contests. 7 am to Noon at Otay Mesa Flying Field, San Diego.

Lunch following contest at "The Landing Strip" Café, Brown Field

For contest details see: http://www.scalestaffel.org/Contest_Schedule.html

For directions to field see: http://www.scalestaffel.org/Outdoor_Site.html (see more events on next page)

San Diego Orbiteers Club Outdoor Events for April / May, 2011

June 12, 2011 - Coupe, Power, P29, LG & CLG

July4, 2011 - *Walt Mooney Memorial* : Peanut, 2X Walt Mooney Peanut, Embyo Endurance & Bostonian

WESTFAC - SUPPORTING OUR NEW FAC REGIONAL CONTEST *Roger Willis*

The FLYING ACES are growing out West. That fact has led us to create WESTFAC, so rubber scale flyers from around the western states are now gathering for their third WESTFAC. This one is in our 3rd flying venue, Denver Colorado beginning on June 22nd and running through the 25th. That is a lot of great FLYING ACES flying and consists of over 23 events...our biggest WESTFAC event to date.

Many folks have opined that this regional approach may not work. They cite the current recession, the astronomical price of gas, the aging modeler population, a general lack of interest in building a new model verses flying the 20 year old Moth.... add infinitum.

However, this seems not to be the case. I recently talked to a builder and flyer from Texas who had never attended the FAC Nationals or a large regional event until he drove to WESTFAC II at Gainesville Texas. By the way, he said, " this was not a short drive." Texas is a big state and he drove a long way. He said he never had such a fantastic time, he flew only three events, but in one he took a third and went home with a WESTFAC award. More important to him was the great fellowship and all " the new stuff I learned about building and trimming". He will be at Denver . I often wonder how many great flyers simply don't fly outside of their "small pond"? This WESTFAC III is drawing flyers from Pennsylvania, Illinois and Indiana and some additional guys out East are seriously thinking about flying with us at Denver.

These individual decisions to plan, build and come and fly are the key to our success at WESTFAC. As long-duration free flight continues to lose flying fields, rubber scale comes to the forefront as an event that can be flown on smaller more available sites with just as much enjoyment, fellowship and fun. Just watch the expression on the faces of Mass Launch flyers lining up on the infamous flight line and you get some idea of what the FLYING ACES are all about.

Many of the folks coming to WESTFAC III are on limited incomes, so expense is a very real factor. However, they are banding together to car pool and share expenses. Some are camping on the field in small motor homes and sharing food and fuel expenses . Others are bunking together at the hotels that are available . All in the name of supporting the concept of WESTFAC and having some tremendous fun with a bunch of guys who love building and flying.

We hope you readers who decided not to come, re-think that one...if not for WESTFAC III, then for WESTFAC IV at Perris California in 2013.

Editor's Note:

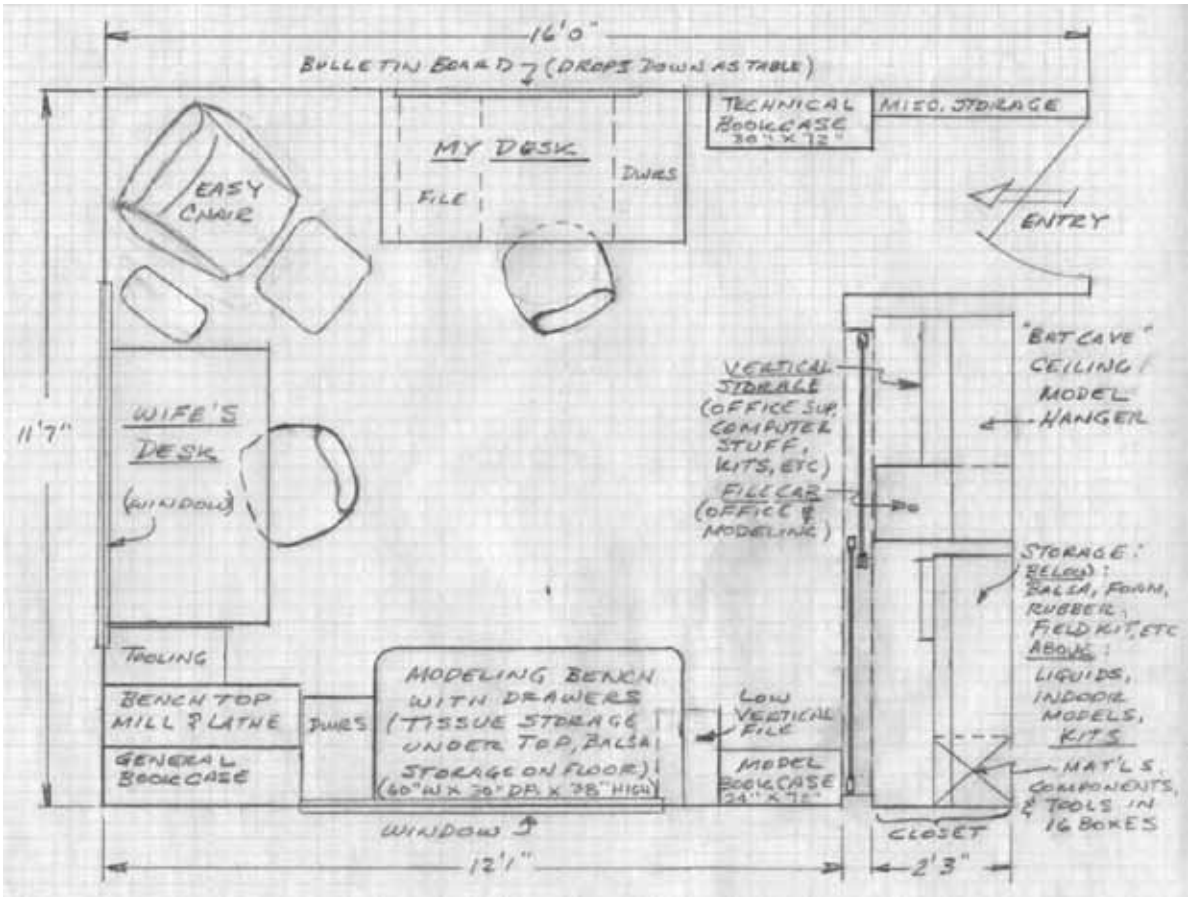
FAC member Keith Sterner is coming all the way from Pennsylvania to compete in Westfac III. Not only that, he has designed and is building an exquisite ***Walt Mooney Memorial Perpetual Trophy*** to be awarded to the highest scoring ***Peanut Scale*** model at our Biennial contest. Below are shots of his completed Damoiselle model which will be mounted on top of the trophy. Many thanks Keith; Walt would be delighted!



Editor's Model Shop

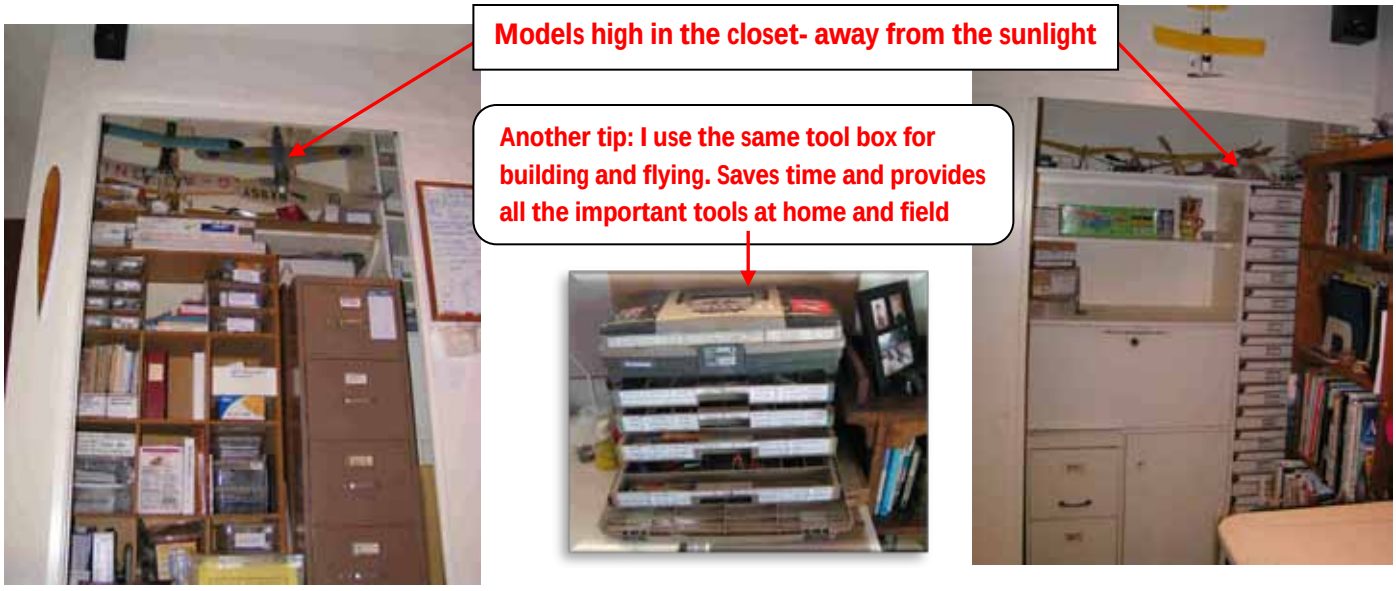
George Mansfield

While we're waiting for Roger Willis to settle into the reincarnation of his fabulous shop at his new home in Arizona, here is a look at my office - sometimes used for modeling. Painting is done in the garage and mercifully, most of my hanger queens are hanging black-bagged in the attic. One great idea stolen from John Hutchison is the use of any extra vertical surfaces for a 15-clipboard ad-hoc file system. This provides quick access to useful modeling info like tips for building/flying, contest results, rules, plans, computer stuff, etc, etc.



The following five pictures start with a view of the workbench and scan clockwise around the room:

Serendipity played into making a shop out of my den. Years ago (pre-modeling), I designed an in-closet office. On the left side is a set of vertical cubbyholes next to a tall file cabinet with a shelf above them for bulk storage. On the right side I made a drop-front desk unit with file cabinet and cupboard below. Next to that is a set of 17 slots (each 4" H x 12" W x 14" D) to hold covered IKEA file boxes. Various shelves high up complete the unit. Now 75% of the closet 'office' is dedicated to model stuff. The big upper shelves are mostly for equipment and kits, while the dark highest spaces hold my mostly unpainted, i.e. prone-to-fade, models. Paints & other volatiles are happy in the sealed right side 'desk' unit, while the 17 covered boxes sort lots of things like metal & plastic sheet, batteries, props, décor, tools, etc. The bottom file cabinet was gutted to hold bulk balsa, foam & rubber, and the bottom cupboard now has my field kit and model plans. When an extra horizontal working surface is needed, I put a lightweight 30" x 72" folding table in front of the closet.



RUBBER POWERED HELICOPTERS – background, building, flying, and competing by Mike Jester

Indoor rubber powered duration free flight is dominated by airplanes. Few people realize that indoor rubber powered helicopters are also flown casually, as well as to set AMA duration records. The current AMA record for a rubber powered helicopter in the “open” class is 11:46. There are no size limits in the AMA helicopter class and world class helicopters can weigh 1 - 2 grams. The plan on page 7 will allow you to construct the relatively simple and rugged River City Rocket helicopter in a few hours. This helicopter can fly over two minutes on two grams of rubber. Before describing how to build and fly the River City Rocket, I will provide some background that might convince you that I know something about building and flying aircraft of this type.

I originally became involved with indoor rubber powered free flight modeling in the Fall of 2004 through coaching the Wright Stuff event held in Science Olympiad which allows middle school and high school students to compete, nationally, in twenty-three events, about a half dozen of which are building events. The Science Olympiad Wright Stuff event has been invaluable in recruiting a whole new generation of rubber powered airplane enthusiasts. While the rules for the Wright Stuff airplane event have changed over the years, generally there is a minimum overall weight of seven or eight grams for the airplane, and a maximum rubber weight of one and one-half or two grams, with different maximum wing span and chord dimensions. I learned most of what I know about indoor free flight thanks to John Hutchison and Cezar Banks, and coached Francis Parker School to a number of gold and silver medals in the Wright Stuff event. One year my daughter Julie won the gold medal in the San Diego regional Wright Stuff competition with a record flight of 4:04. The Science Olympiad national organization changed things up in 2011 when they replaced the Wright Stuff event with the Helicopters event.

I coached Francis Parker High School to the gold medal in the Helicopters event in the San Diego regional Science Olympiad on February 19, 2011. There were about 65 high school teams. Francis Parker's winning time in the Helicopters event was 3:56. On April 9, 2011 I coached Francis Parker to the silver medal at the Southern California state finals with a time of 2:31. First place at the finals was 2:44. Like any indoor flying event, winning the Helicopters event sometimes requires a little luck, and Francis Parker didn’t have enough on April 9!

During my coaching of the Helicopters event, I found out that many of the skills I had learned in building and flying indoor rubber powered tractor and pusher planes translated well to the Science Olympiad Helicopters event, but these mostly had to do with the building part. Many things about flying rubber powered helicopters turned out to be very different than flying rubber powered airplanes.

The 2011 Science Olympiad Helicopters event rules set a minimum weight of 4.0 grams, not counting the rubber. The maximum allowable rubber weight is 2.0 grams. The maximum rotor dimension is 40 cm. It turns out that only a co-axial counter rotating design like that shown in the attached photos flies in a stable fashion. The upper and lower rotors have the same pitch angle, but they are oppositely pitched. That's one of our team's co-axial helicopters supported on a wooden block in the attached photo. Other configurations were tried, like the tandem rotor design in the attached photo, but they did not fly well at all. The attached plans show the basic construction of the River City Rocket - a helicopter that would qualify under the 2011 Science Olympiad rules for the Helicopters event except for the fact that the Aluminum tubes between the spars of the rotors are not allowed. They aren't needed. Any kind of usual prop bearing will work so long as the axis of each rotor is parallel to the axis of the motor stick. The axes of the rotors also need to be aligned.

Unfortunately the dimensions of the various parts are not shown on the River City Rocket plans so I will spell them out here. I first want to credit the person that drew up the plans and posted them on the Internet. His name is Bill Carney. I think he was a successful Wright Stuff competitor and is now in college pursuing a B.S. degree in aeronautical engineering if my memory serves me correctly.

The spars for the rotors of the River City Rocket are made of 1/16" square balsa. They are spaced about 1 1/4" apart (vertically). Use stiffer heavier balsa for the leading edge spars, e.g. eight pound density. The trailing edge spars and the ribs can be made from lighter balsa. Make sure you construct the rotors on jigs as shown in the plans. It's a pain to sand the ends of the ribs to bet a snug fit, but you can use a san paper nail file to make it easier. Use adhesive tape to hold the 1/16" spars in position on the jig. To get a plan scale factor, note that the chord of the longest rotor rib is 3.0 inches. You can cover the rotors with film like Ultrafilm plastic or you can cover the rotors with tissue. Ten to twelve inches in length is good for the motor stick. With proper wood selection, it is pretty easy to end up with a final weight slightly below the 4 gram minimum. Add clay ballast on the lower end of the motor stick if needed.

The whisker pole that extends axially from the center top rotor does not need to be pointed. A plain 1/16" square balsa stick of 8 - 10 pound density is fine. The music wire motor shafts that extend through each rotor should be encased between two pieces of square balsa that connect the upper and lower spars for added strength. The plans show an Aluminum tube, and this would be nice to use if you have the right diameter music wire so the tube won't wobble. Make sure your rotors are balanced. Add a suitable amount of clay to the tip of any rotor that is on the light side. It is very important for the motor shafts to extend perpendicular to the spars to further reduce wobble in flight, particularly during the descent.

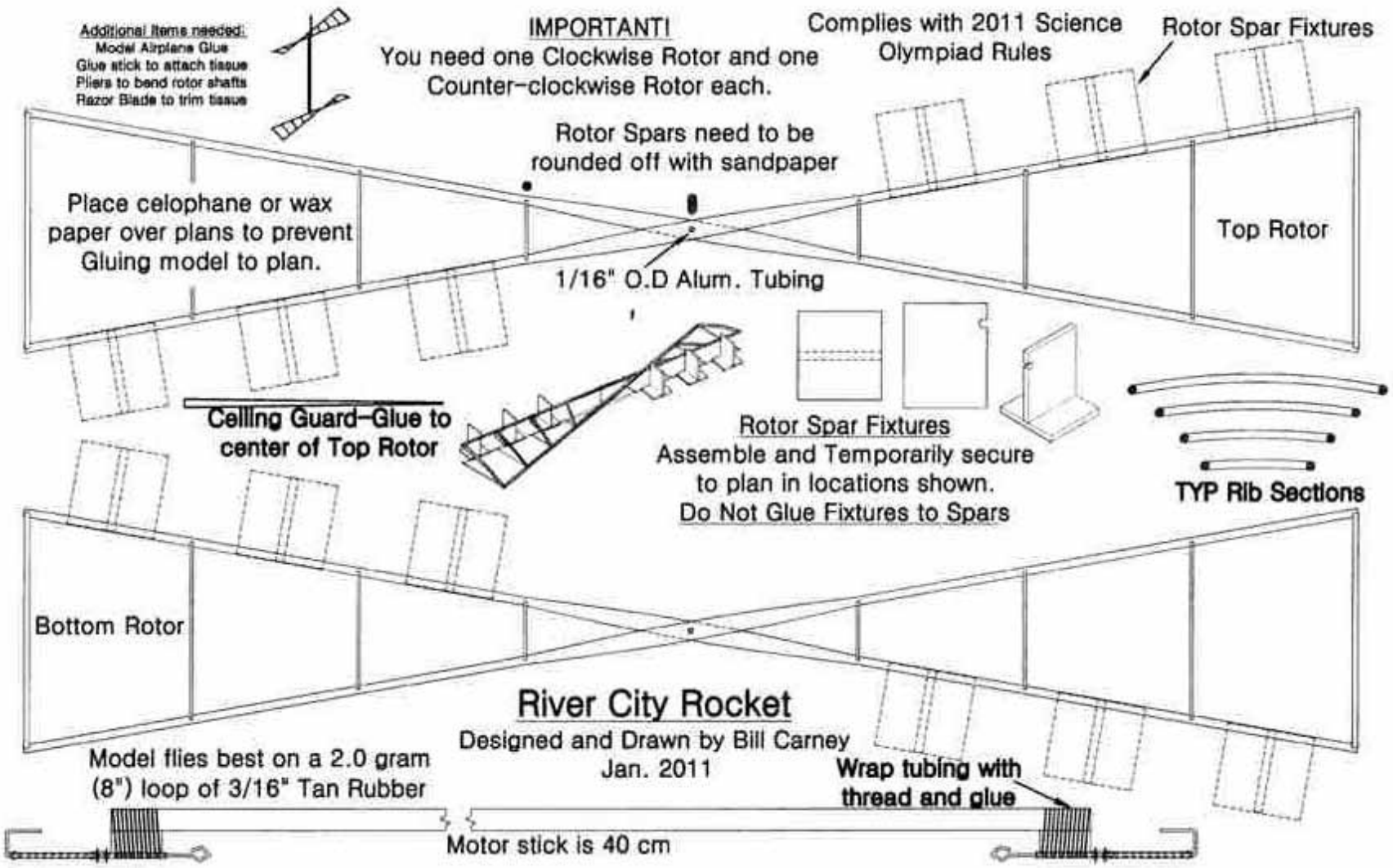
There is a Science Olympiad Helicopters kit available from www.freedomflightmodels.com. The lower rotor in the design of this kit is mounted directly to the motor stick with a pair of V-shaped braces to bring its axis into alignment with that of the free spinning upper rotor. Most Science Olympiad competitors in the Helicopters event used this kit. The helicopters made from this kit fly very well. The kit is a little expensive at nearly $50 but it does provide some nice rotor jigs and very detailed instructions.

Flying an indoor rubber powered helicopter is a different experience compared to flying an indoor rubber powered airplane. There is no backing off winds when you get ready to fly your helicopter. Select a smooth spot on the ceiling, let go of the top rotor first, and then let go of the bottom rotor with your other hand. The helicopter will rise rapidly to the ceiling in about five to ten seconds. The whisker pole extending from the center of the top rotor will engage the ceiling and spin in place as shown in the attached photo. The cruise portion of the flight will last for more than two minutes if you built your helicopter correctly and use good rubber. When the winds are nearly gone, the helicopter will gradually descend to the floor over a ten to fifteen second interval.

The Francis Parker Helicopters team eventually used a rolled motor stick, mostly to save weight but also to resist bending at the relatively high rubber torque levels. If the motor stick bends, the axes of the rotors will not be aligned, and the helicopter will not ascend in straight fashion. Our team tried different rotors with different pitches, without much success in terms of improving the flight duration. Of course, if you change the pitch of the rotors, you will have to change your rubber thickness. World class helicopters sometimes have dihedral in the rotors, apparently for added stability, but our team did not build any rotors with that configuration as the challenges in building V-shaped rotors strong and balanced seemed daunting for our high school students. Have fun with rubber powered helicopters if you want a different indoor free flight experience. You can fly them in your living room!

River City Rocket gently poking the ceiling

Experimental tandem rotor helicopter model


Additional Items needed:
Model Airplane Glue
Glue stick to attach tissue
Pliers to bend rotor shafts
Razor Blade to trim tissue
IMPORTANT!
You need one Clockwise Rotor and one Counter-clockwise Rotor each.
Complies with 2011 Science Olympiad Rules
Rotor Spar Fixtures
Rotor Spars need to be rounded off with sandpaper
Place celophane or wax paper over plans to prevent Gluing model to plan.
Top Rotor
1/16" O.D Alum. Tubing
Ceiling Guard-Glue to center of Top Rotor
Rotor Spar Fixtures
Assemble and Temporarily secure to plan in locations shown.
Do Not Glue Fixtures to Spars
TYP Rib Sections
Bottom Rotor
River City Rocket
Designed and Drawn by Bill Carney
Jan. 2011
Model flies best on a 2.0 gram (8") loop of 3/16" Tan Rubber
Wrap tubing with thread and glue
Motor stick is 40 cm

Warp Free Flying Surfaces

After years of producing stabs and fins with little potato chip makers stored inside- waiting for the sun to energize them, I'm finally going to get serious about my crazy-maker construction. Along with lots of advice from flying buddies, I gleaned (and stole) the following approaches from the net, old notes and our modeling siblings' newsletters. Even though most of you know most of what's presented here, I thought it would be good for us to look at several ideas in one place.

Ramon Albon Vintage Model Airplane - Tips 'n Tricks - #1 - Warp Free Flying Surfaces

With Vintage Model Airplanes there is very little latitude within competition rules to add anti-warp elements to a basic structure. Thus it may be difficult to prevent unwanted warps appearing in flying surfaces at the building and covering stage. Indeed I would venture that if one can build and cover a vintage wing or tailplane that is inherently warp free then it will also be much easier to prevent warps at later stages. From my early experiences building rubber powered models for competition use I realised I needed them to fly "out of the box" on full chat with total confidence often without benefit of trimming flights on the day and that flying surfaces had to be guaranteed warp-free. What follows is how I solved this problem using sound techniques and practical prevention.

It is axiomatic that flying surface components are made from materials having conventional grain and weight characteristics appropriate to their need ie:straight grain, hard enough spars/edges, 'C' grain ribs, etc. In addition joints must be accurate, correctly glued, with suitable dihedral braces and gussets. Vintage rules may allow "local strengthening" making it possible to add discrete gussets to rib/trailing edge joints so all the above is common practice but what follows may not be.

My technique requires the use of high quality Jap tissue with grain running lengthwise (see $) on all flying surfaces (ie, 90 deg to the ribs), pre-doping (60% viscosity) top/bottom of all ribs and outline components and cellulose thinner as the adhesive catalyst. Cut all tissue in advance about 1/2" larger than individual panels. Cover the bottom of every panel first. Proceed by laying the tissue, shiny side down (see #), over the surface lightly pinning each corner to prevent movement. Use a fine brush and cellulose thinner to touch a TE corner and spot-fix the tissue. Wait a few seconds, ease the tissue lengthwise to do the same at the other TE corner. Now spot-fix at each TE/rib junction. Re-adjust the LE pins to remove wrinkles repeat the above for the LE. Do not flood the tissue.

Starting at a centre rib, gently push down on the tissue and run a fine bead of thinner along the rib (undercambered or not) rubbing with a finger until the tissue is grabbed. Work outwards one rib at a time until all ribs, tip and root are fixed. Do not flood or adhesion will fail. Now run a bead of thinner along the LE and TE rubbing with a finger to encourage adhesion. Do not fold tissue around edges, use fine wet n' dry abrasive paper to trim waste and redope the feathered edges.

From the top, run a fine bead of thin (30%) dope along both sides of each rib/tissue junction to enhance adhesion. Check all outline edges remain doped (60%) and recheck the same with the top of each rib. Use exactly the same technique to cover the upper surfaces except **DO NOT** run thinners across the top of the ribs. For a wrinkle free wingtip lightly damp covering with a damp facial tissue and ease it around the curve securing with thinners as before. Trim and seal as before.

Lightly water shrink (steam is good) and pin down on small raised scraps of 1/16" balsa sheet to allow air circulation. Any pre-built-in warps should be replicated now. When dry and whilst still pinned down, brush thinner over the top edge of each rib to enliven the dope and fix the tissue. Allow to dry for a minute and repeat for all panels of the flying surface. Unpin and dope with 40% shrinking dope (be quick) and just as it dries pin it down on the same balsa scraps and allow to dry for 1 hr.

Now do the same again with 30-40% dope or better still 30% banana oil which is waterproof and non shrinking. Pin down for several hours or longer if possible. A problem here with di(poly)-hedral surfaces, it may not be so convenient to have one surface pinned down for too long so move on a little sooner if needed.

Each rib bay is now a unique doped section (or "torque box") that cannot warp in isolation and for that reason the whole flying surface is highly warp-resistant.

Now make a keeper (including any built-in warp characteristics) from 3/16" or 1/4" balsa sheet and strap the flying surface to it for the whole of its life - except for flying or course. When flying is over replace it on the keeper and ensure the model is stored in a stable atmospheric environment.

Note $ - "Grain running lengthwise" ensures a stronger structure with less dihedral warping tendency. Because tissue tears easily along the grain it virtually eliminates chordwise splits caused by twigs or stubble and by the kinetic energy of the wing mass during hard DT arrivals.

Note # - "Shiny side down" ensures that dope amalgamates readily with tissue fibres on the dull side whereas dope on the shiny side has less penetration thus tending to remain more on the tissue surface. Consequently, shiny side down produces a stronger covering.

"Too much trouble?" Think about it. Warped surfaces make an airplane impossible to fly so time spent as suggested will save countless hours repairing crashed models later.

Paul Bradley RC Groups

To help avoid major warps in the wing and stab, the tissue on those surfaces is not water shrunk. I used Future floor finish to seal the tissue on the flying surfaces. The fuselage and fin tissue was water shrunk and received a coat of 50/50 clear dope followed by a coat of Future floor finish.

Michael Heinrich-Small Flying Arts Forum
(http://www.smallflyingartsforum.com/YaBB.pl?num=1303503309)

Gonna hijack this, since it allows me to post a pic of my mod to Stahl frames--someone was PM'ing about it and I couldn't attach!

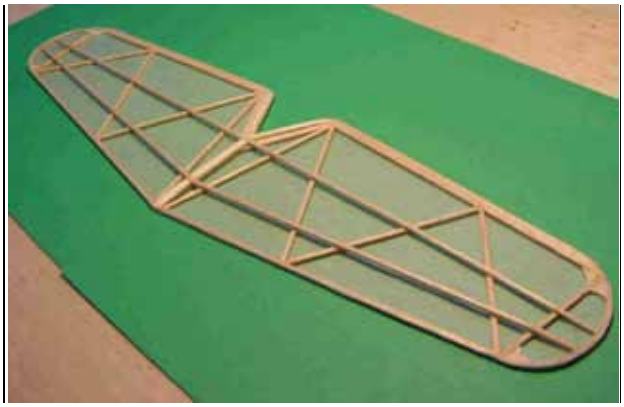
Everybody's got a different take on warps, and they all will work for someone. Here's mine--I've not found preshrunk to be helpful, as you then must ask your framework to carry that load that the traditional dynamic of "balsa compression, tissue tension" would normally do--not my preference. I'll build a stiff outline and cover with Esaki, tacked to every bit of surface available, and shrink, & dope. Keep pinned down during the shrinks & dries, and a few days after doping if I can. Then I just watch for warps and deal with 'em if & when.

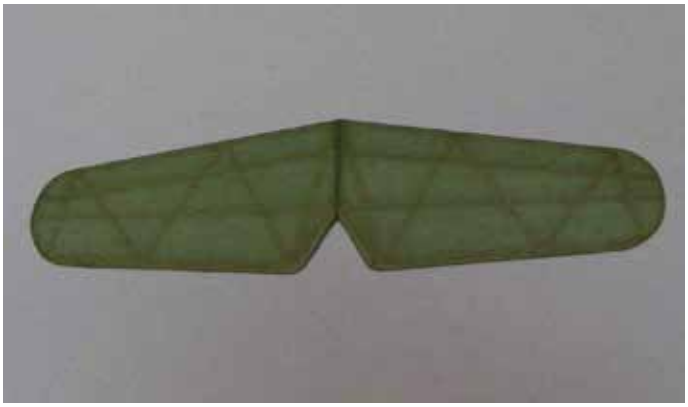
I've shown this in a couple of places--my version of the Stahl foil is to lay a central spar in and build the outline, then spring sticks over that spar to dive inside the outline structure, making that side of the foil; flip over, chock up outline, and spring sticks over that side, to overlap as they dive down to LE & TE. It's micro-lighter, less sanding, and no feathering out the grain--runs continuous through the structure. Also less glue in the laminating, & what's there is along the laps where the sticks meet.

The Chris Starleaf Stab (as understood by G. Mansfield)

After building my Starleaf-designed Fairey Barracuda in 2008 having an absolutely flat (until warp time!) stab with the spars in the same plane as the diagonals, Roger Willis let me know that I didn't follow the plans correctly. DUH! Here is the correct construction. 1. Except for the spars, build all of the stab flat.

Glue full-length medium balsa spars to the tops of the diagonal 1/16 square 'ribs'. 3. Score the spars at the outermost diagonals, then bend them down, and cut them to be glued flush with the stab tips' inner faces. 4. Preshrink your tissue two or three times. 5. Cover using a glue stick, lightly mist and pin down for a few days. 6. Dope or Krylon and pin down again for another few days. Looks good so far-crossing my fingers. John Donelson swears by this construction and says he's never had one warp! Here are a couple of pics:





Finally, an excerpt from "STABILIZER SECTIONS FOR SCALE MODELS" by Bill Henn

Published in the Nov/Dec 2006 issue of Tailspin, the New England Flying Aces News, Mike Nassise, Editor

It has always been a mystery to me as to why almost all scale modelers use flat plate stabilizers since they are inferior to symmetrical and flat bottom lifting sections in just about all respects. The most likely reason may be that they are simply following traditional building practice, but I also suspect that many modelers are just not aware of the superior characteristics of lifting sections.The only advantages to a flat stab are that it is easier to construct and that it can be made slightly lighter. However, flat stabs are much less resistant to damage and far more prone to warpage. More important, flat stabs have low lift and stall more easily because of separation at the nose at low angles of attack. Why use them when the role of the stab is to provide lift so as to keep the wing happy and the flight stable?There has been a recent trend among some endurance flyers towards making their stabs symmetrical, limiting the maximum lift that's generated by the stab but keeping the flow over the top under control by the addition of turbulators and invigorators. In a scale model with an advanced CG, the use of symmetrical stabilizers may be appropriate. Semisymmetrlcal stabs may also work well because they will not stall abruptly like flat sections.Years ago, I switched from building models for flying in AMA and SAM endurance competition to FAC Scale. Since all of the endurance models I had been flying used flat bottomed lifting stabs, I thought it best to use similar structures on my scale models. They worked very well and I have continued using them up to the present, even on Peanuts. The sections I use are similar to my 10% thick wing sections, only thinned down to about 7% thickness.These flat bottomed lifting stabs have numerous advantages over flat plate stabs. They are much more resistant to warping and, with care, can be built almost as light as a flat stab. Most important is fact that flat bottomed cambered stabs increase tail volume. This permits a more rearward CG and the use of less decalage, making the model more loop resistant. Furthermore, the model can be made lighter because less ballast and/or a lighter propeller can be used. Most of my models, including the Chambermaid, balance at about 40% of the chord. My Helio Stallion balances at 50% of the chord. Both the Helio and the Chambermaid require no ballast and use light, carved props. The rear pegs are located directly in front of the leading edge of the stabilizers. This gives them a big advantage in the length of the motor used and, consequently, the motor run time. At recent FAC Nats, these models were reaching very high altitudes with 90 second motor runs and achieving maxes on most of their flights.As far as appearance is concerned, flat bottomed cambered stabs can be made smaller and more true to scale while providing the same tail volume as larger, flat plate stabs. Besides, they look more realistic on World War II fighters and most modern subjects. I'm not sure whether scale judges give this aspect of model construction a great deal of consideration or not, but every point garnered is one step closer to a Kanone.

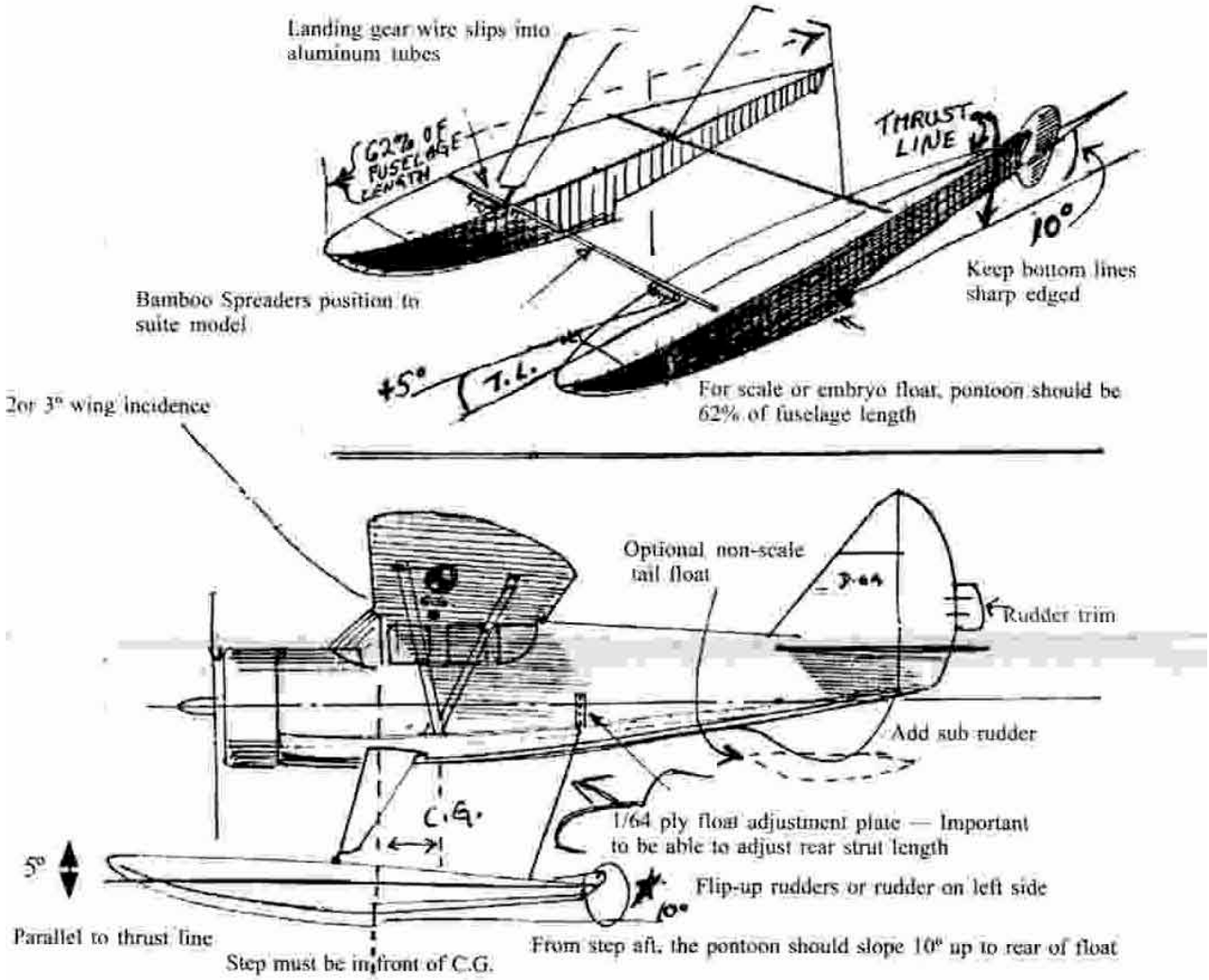
P 10

Adapting your ROG ship for the ROW event in our upcoming November 13, 2011 contest

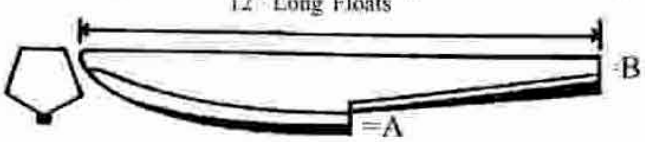
CONVERTING ANY LAND PLANE TO AN R.O.W. SUCCESSFULLY

By Millard Wells

Originally Published in issue 181 of The Hangar Pilot, Dr. John Martin, Editor



Comment by Jake Larson: My planes track dead straight in the water, as if on rails. I attribute this to the special float design I use. The idea came from a course I took on boat building. A flat-bottom hull without keel tracks (wood strips attached to its bottom), or a regular keel, has no resistance to being blown sideways. So, I added a long external keel to each of my floats. The drawing below shows how this was done.



A&B are 1/8" deep (3/16" max

The longer the float length, the deeper the external keel, but you shouldn't have to go deeper than 3/16". The additional length adds more area to the keel, and this adds more power to track straight. Once my models were in the air, they flew as trimmed, and I didn't have to play games or worry about the water rudders acting like air rudders and trying to compensate for them.

Latest creations of two of our most prolific builder/flyers

Jumbo Cessna Phantom

by

Bob Hodes

E-Power Scale

Fokker DR-1

by

Roger Willis

Scale Staffel FAC Contest at Perris, April 17, 2011

Thanks to all of you who flew, helped me, helped us and helped each other make our first 2011 contest so much fun. Free flighters- what a great community! We had 14 entrants - result: 45 flyers in 9 events. Special thanks to our 'most distance traveled' buddies, Tom Arnold, Bobby Haight, Bob Hodes, and the redoubtable Herb Kothe, who to no one's surprise swept up the most awards.

Good to see Sandy Peck again, she and Bob left a great legacy for all the folks in our hobby. Also, I hope you got to see Jim Sprenger's exquisitely made air motor; plans and construction details will be featured in an upcoming issue of Free Flight Quarterly.

Check out this super shot of our WWII mass launch by Tom Arnold's son, Marc. He absolutely nailed it, right after the launch command.

George Mansfield, CD

To complete our report, here is Roger Willis's coverage posted on the AMA District X website:

Sunday, April 17th dawned clear and sunny with zero drift in the tall grass at the SCAMPS flying field at Perris California. That's the definition of Rubber Powered Scale heaven to builders and flyers.

The SCALE STAFFEL FAC-41 Squadron from San Diego and the GRASSY KNOLL FAC-69 Squadron from Los Angeles came together for nine fantastic FLYING ACES events ...the first competition of the 2011 contest year for the FLYING ACES Squadrons in Southern California.

This competition was attended by flyers from as far East as Wyoming and Colorado and some rugged VULTURE Squadron folks from Las Vegas. Three MASS LAUNCH events were held: WW I Combat, WW II Combat and a combined GREVE/THOMPSON RACE…all rubber powered scale aircraft, stick and tissue from those great Cleveland Air Races of the Golden Age of aircraft. Several duration events were flow to entice those folks who love to build light and fly long.

The accompanying photo shows the micro-second after the MASS LAUNCH release during the WW II COMBAT Event. That's your poor AMA District X guy [me] out on the far end launching a French Caudron Fighter . You can't see my hernia truss since that plane is a bit heavy. It took third place.

These great FREE FLIGHT fields are getting hard to come by in Southern California. We are truly blessed to have this one.

Roger Willis

FAC Squadron 41 April 17, 2011 Contest Results and Kanone Report

EVENT: Rubber Scale (6entries)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Roger Willis	Ipanema	85	36		72.5	10	43.7	126.2	3	Y
Fernando Ramos	Douglas O-38	28	28	40	40	15	56	111.0	5	Y
George Mansfield	Fairey Barracuda	69	46		64.5	5	43.7	113.2	4	Y
Robert Hodes	YAK-3	113	60	99	80.7	10	45.7	136.4	2	Y
Mike Mulligan	Heinkel	65	98		77	10	52.2	139.2	1	Y
John Alling	Neiuport 11	43	45	26	45	15	43.6	103.6	6	Y

EVENT: Power Scale (4 entries)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
John Donelson	Interstate L6	120			120.0	0	57.9	177.9	3	Y
Robert Hodes	Sopwith Schneider	95	120	120	120.0	25	49	194.0	1	Y
Roger Willis	Fokker DR-1	62	120	120	120.0	20	44.6	184.6	2	Y
Bobby Haight	Marshonet	120		28	120.0	15	29.2	164.2	4	Y

EVENT: Embryo (4 entries)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Robert Hodes	Modified Microbox	43	73	61	177	9		186	4	Y
Linda Wrisley	Debut	45	120	120	285	9		294	2	Y
Roger Willis	Debut	120	78	76	274	8		282	3	Y
Herb Kothe	Go Devil	120	120	120	360	9		369	1	Y

EVENT: Dime Scale (I entry)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Jim Sprenger	Mauboussin Hemiptere	46	64	86					1	Y

EVENT: Jimmie Allen/2 Bit (6 entries)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
John Donelson	Miss Canada Jr.	97	120	120				337	2	Y
Robert Hodes	Skokie	120						120	6	Y
Linda Wrisley	FA Moth	74	61	85				220	5	Y
Roger Willis	FA Moth	113	120					233	4	Y
Herb Kothe	BA Cabin	120	109	120				349	1	Y
Fernando Ramos	Sky Chief	78	107	120				305	3	Y

EVENT: WW II Combat (9 entries)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Tom Arnold	Aircobra	53	22							Y
Robert Hodes	Yak-3	113	60	92					2	Y
Roger Willis	Caudron	46	51	50					3	Y
Mike Mulligan	Heonkel	61								Y
Herb Kothe	Yak-3	144	114	174					1	Y
George Mansfield	Barracuda	2								Y
MarK Chomyn	Hein	27								Y
Jim Sprenger	P-40	91	41							Y
John Alling	F4F Wildcat	44								Y

EVENT: Phantom Flash (2 entries)		TOTAL FLIGHT SECONDS OR BEST								FAC MEMBER?
		FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS			SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Robert Hodes	Phantom Flash	120						120	1	Y
Linda Wrisley	Phantom Flash	12						12	2	Y

FAC Squadron 41 April 17, 2011 Contest Results and Kanone Report (cont'd)

				TOTAL FLIGHT SECONDS OR BEST						FAC MEMBER?
EVENT: WW I Combat (4 entries)	FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS				SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
John Alling	Nieuport 11	43	24	45					1	Y
Bob Hodes	SE5A	13	10						3	Y
Bobby Haight	Fokker DVII	4								Y
Marc Chomyn	SE5A	12	20	23					2	Y

				TOTAL FLIGHT SECONDS OR BEST						FAC MEMBER?
EVENT: Greve Race (7 entries)	FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS				SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Robert Hodes	Chambermaid	51	45	34						Y
David Boals	Caudron	12	11	40					2	Y
Roger Willis	Mr. Smoothie	9	4							Y
Mike Mulligan	Schoenfelt	68	72	63					1	Y
Fernando Ramos	Mr. Smoothie	6								Y
Bobby Haight	Chester goon	8								Y
Mark Chomyn	Caudron	32	31	38					3	Y

FAC Squadron 41 May 1, 2011 Indoor Contest Results and Kanone Report

FAC KANONE REPORT	Scale Staffel Model Airplane Club-Squadron #41	DATE: 5/1/11
CD's: George Mansfield/John Hutchison	Email: gmansfield75@gmail.com	
Sheet # 1 of 1	TOTAL NUMBER OF FLYERS IN EACH EVENT INDICATED IN PARENTHESES	

				TOTAL FLIGHT SECONDS OR BEST						FAC MEMBER?
EVENT: Phantom Flash (6 entries)	FLIGHT TIMES OR HEAT ROUNDS FOR ML EVENTS				SCALE FLT	BONUS	SCALE			Y
CONTESTANT'S FULL NAME	MODEL	1	2	3	FACTORED	POINTS	POINTS	TOTAL	PLACE	N
Mike Jester	Phantom Flash	41	40	43				124	1	Y
Bill Hill		43	36	42				121	2	Y
William Scott		35	37	33				105	3	Y
Larry Miller		42	28	20				90	4	Y
Mark Chomyn		18	22	27				67	5	Y
John Hutchison		18	22	26				66	6	Y

Scale Staffel Model Airplane Club-FAC Squadron #41/AMA Chapter 915

Founded to encourage and advance the hobby of building and flying free-flight scale and sport airplanes

Annual Dues: None
Emailed Newsletter Subscription Fee: None (send your email address to **gmansfield75@gmail.com**)

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Vice President:	Bob Overcash	619-579-2174
Treasurer:	Kathy McLaughlin	619-303-0785
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