FLYING ACES

Club News

No.273 Sept/Oct 2013

1


WELCOME
FLYING ACES

2


"Our citizens can now rejoice
that a momentous victory is in the making..."
THE PLANES OF WWII
EXIT
FLYING ACES

3

4


Nikon

5

6


Brillion

7

8

Photo captions:

1. Bob Clemens' eye for the dramatic image is evident in this shot. "Here's a photo I made of that impressive, looming cloud formation on Friday night probably around 7:15 or so. I was about two miles south of the Lake Ontario shoreline when I made it. Rain began to fall about 45 minutes later. This image is a stitched composite of four individual frames." Bob Clemens

2. Mark Batterson snapped this shot of the welcome sign at the local motel when he arrived for the Non Nats. You can see the mountain bike he used to get around the flying field over the next several days.

3. The scale judging was done in one of the buildings on the flying field. The air conditioning was working hard to keep up, but it sure helped take the edge off the heat and humidity. Although space was a bit tight, the folks at GHQ had it well organized so the process went smoothly. Here we see Dan Olah handling compliance checks on TOTF models, ably assisted by Bruce Clark, while Pres Bruning, Dave Mitchell, Dave Niedzielski, and Mike Welshans await the verdict. The process was quick and painless. Mark Batterson photo

4. The weather for this year's contest at Geneseo was hot and muggy though most of the week so there's always the threat of a scattered thunderstorm. We had a brush with one on Saturday, as the edge of a storm added a little dampness to the WWII mass launch. Obviously it didn't discourage the fliers! Bruce Thoms photo

5. The binoculars hide Wally Farrell's tears as he watches his DH29 disappear over the northern horizon for its second max of the day. With the DH out of the game, Wally had to fly his trusty J-5 Cub to get into the running, finishing third in the Combined GA event. Bruce Thoms photo

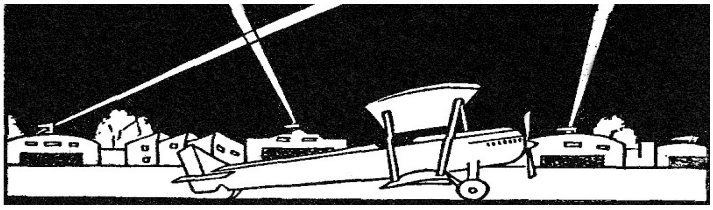
6. Vance Gilbert spent the week camped out right on the field. It was mostly quite pleasant, but there was one night full of rain storms (see the pic at the top of the page) that exceeded the design parameters of his tent. The next morning, he laid the damp bedding on top of his car to air out. When a gust came along and flopped his mattress on top of the model box containing his beautiful Avro 547 Triplane, he picked up the sad remains and "flew" it one last time. Tom Hallman photo

7. With a little coaching from the assembled gallery of experts, Gerard Kondrat got his Me109 flying pretty well. It needed a bit more turn to keep it on the field though, and ended up in a tree in the farmyard across the road. With the help of DJ Ruhlland, Wally Farrell, and Clive Gamble, the model was retrieved with minimal damage. You see all those guys with their hands up? You would think that one of them might have caught the model when it fell out. Didn't happen! Bruce Thoms photo

8. No, this is not the start of the golf cart race event. There were quite a few rentals on the field this year, and it worked out extremely well. In the spirit of the FAC, the guys with carts were courteous, and extremely helpful in picking up modelers marching back on long retrieves. It made all the difference in the heat of the day. A big thank you to all who "did their bit." Roy Courtney photo

Plans

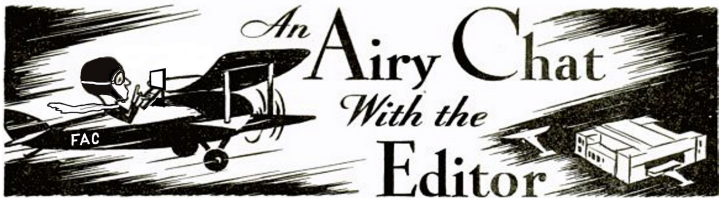
...or rather "plan." The summer contest results take priority this time of year so we've got just one plan for you, but it's a real honey. The classic **Waco Coast Guard** from Comet at 25" span is a great design that should fly quite well. It's presented full size in three sections with plenty of overlap, and we've got a photo spread and a bit of history to go with it.



In this Issue

Geneseo is that way, sir.

On our cover: Jack Moses shared some of the magic of Free Flight with grandson Eli at the Cloudbusters' annual picnic and contest in July. Bruce Thoms photo



Greetings Junior Birdmen,

I'm back from the FAC Non Nats with a lot of great memories, enough inspiration to carry me through another year of modeling, and a huge backlog of chores. This year's trip to Geneseo was nicely summed up by an exchange I overheard at the field on Saturday night:

Modeler #1: "What do you think...best one ever?"

Modeler #2: "Yep."

Modeler #1: "Don't we say that every year?"

Modeler #2: "Sure...but that's a good thing, isn't it?"

I couldn't agree more. Yeah, it was plenty hot for a while, but that didn't stop the Free Flight action. (Although I'd have to admit that at times, it did slow us down a bit.) CD Dave Mitchell and his band of merry men kept everything on track and running smoothly. The now customary informal evening flying sessions were icing on the cake, and some of my favorite memories originated there. I'm already dreaming of the 2014 Nats!

I got a very pleasant surprise in the form of an enormous number of photos from the Non Nats that were submitted for publication. A special thanks goes out to Bruce Thoms, Vick Nippert, Roy Courtney, Mark Batterson, and Ronny Gosselin. It's a tough job trying to figure out which pictures *won't* get published. There just aren't enough pages to print them all, even with the added color centerspread. It was even tougher to pick one for the cover. As it turned out, I couldn't resist using one that was from a different event altogether... offering evidence that there's Free Flight life beyond Geneseo!

This year the club got some extra help from Doug Beardsworth and the Cleveland Free Flight Society. They sent in donations to help defray some of the cost of running the Non Nats. Thanks!

Greg Thomas surprised all of us when he donated three (!) of his top-shelf kits as prizes. The winner of the WWI mass launch got a Bristol Scout, and his mechanic got the Thomas Designs plan for a Nieuport 27. The new 48" span kit for the DGA-8 went to the winner of the Earl Stahl event, and the Monocoupe kit was awarded to the winner of FAC Rubber Scale. Sure wish we had some photos of the awards presentation. As has happened in years past, we were all so busy (and fried out) at the awards ceremony that no one remembered to take any pictures, and this was after I promised myself that we wouldn't miss it this year. Anyway, a big thank you to Greg!

We got donations of raffle items from: FAC GHQ, Fred Smith, Dave Diels of Diels Engineering, Bubba Mayo, Charlie Sauter, Roy Courtney, George Bredehoft of Volare Products/Shorty's Basement, Dave Niedzielski of Easy Built Models, Dennis Ruhland Sr. and Jr., and An Anonymous FAC-er. Thanks to all of these fellows for their generosity. We couldn't do it without you! And we couldn't have a raffle if Bubba didn't organize it, and Diane Courtney didn't do such a terrific job of selling those tickets.

You'll note (I hope) the change we've made in where the club dues are sent. Change is always a bother, but at least in this case it simplifies things a bit. Now all payments will go to one place. We'll be posting that info prominently for a while so you won't be able to miss it.

The new **FAC calendar** is coming! Tom Hallman is working up a terrific selection of photos for the 2014 edition. Café Press always does a real nice job on the printing. **Just be sure you order through the club store.** If you just go to the regular Café Press website and search for our calendar, you'll find it, but the price will be a lot higher. Remember, the FAC gets a small cut on the profits, and you get a wall calendar with Free Flight fotos to inspire you throughout the year. Check out the ad on the back cover for ordering details.

See you on the flying field!
Wingnut

Nuts & Bolts

The Boring Organizational Stuff...

This is one of those columns that I hope we won't have to run very often. You can help make that happen by reading it.!

OK Troops, this is a big one so I'm going to write it big:

FAC CHANGE OF ADDRESS

Effective immediately, dues will be sent to:

Blake Mayo

3447 Adelaide Drive

Erie, PA 16510

Bubba has agreed to take on the roster duties so I'll have more time to devote to this little newsletter thing (and maybe build some models too). I hope you'll help us both out by sending your checks to the right place. It'll insure that your roster entry will get updated without delay, and save us both a lot of extra work.

PayPal payments are not affected.

Carry on as before. We can handle that part behind the scenes by pushing some magic computer buttons.

Thanks for your help! Wingnut

News on the Wing

Hey Clubsters! Another Non-Nats is history and what an event it was! **Heartfelt thanks for all the volunteers who helped the rest of us have such a great time.** Weather was an issue at times, but we're tough like 20 pound balsa. Everyone did a stellar job of keeping hydrated and covered up from the sun…well; there was one young buck that went home several shades darker than when he arrived.

And how about those golf carts? It was so good to see so many renters helping out those on foot who got really far down wind. Our fears of an Oklahoma Land Rush never materialized so my thanks to all the drivers who drove responsibly. Carts will be available at all future events if you were wondering.

As per the FAC by-laws, The FAC Board of Directors held their annual meeting prior to the contest. Here are the three most important items from that meeting: Rich Weber is no longer the Treasurer so he may spend more time and energy as the FA News Editor. This will also enable him to spend more time building those beautiful models he creates. As a result of that change, Bubba will become the Treasure and we will drop the office of Assistant Treasure. This will help alleviate what little confusion that still exits as to whom and where the membership sends their dues and etc. The transition should be complete within a few weeks.

The GHQ Council also held its annual meeting with observers Mark Razadca, Eddie Novak and Richard Zapf in attendance. At the end of the meeting, a comment was made (to paraphrase), "You guys spend a lot of energy trying to anticipate WHAT IF…" Well, guilty. We know we can't anticipate every for instance, but that bug has bit us in the butt before. But during the meeting there was an eloquent speech about maintaining the tradition of the FAC. We will be relying on tradition to help us solve those "what if" instances in the future.

Now, having said that, I invite everyone to think about these four issues: should there be bonus points for any model with four or more wings, should winding aids (blast tubes, torque meters, automatic counters and other devices) be banned from Mass Launch events, should any models be required to have 3-D pilot figures, and if Golden Age models had retracts…can these models be flown with the landing gear in the up position? Think about those issues so we can have a good discussion about them before any changes are made.

See you at Muncie for the Outdoor Champs sponsored by the Cloudbusters.

Ross

A Note of Thanks

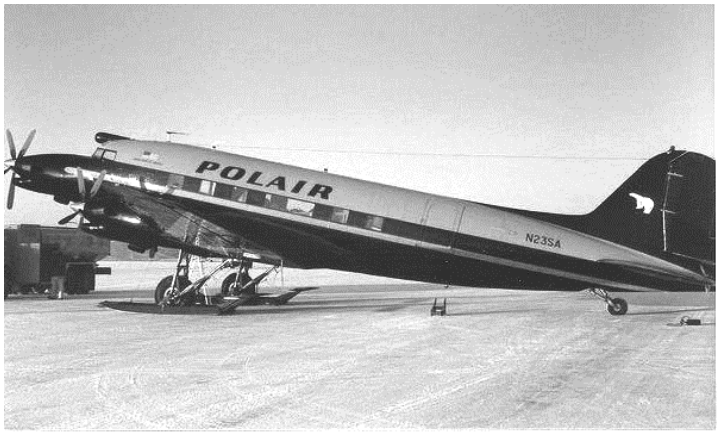
Like many of you, I have great memories of the Non-Nats at Geneseo this year. My daughter Maria really enjoyed the whole week, and got her embryo to fly well. My planes didn't really perform when it counted which was a little disappointing, but some generosity by fellow club members had me driving home reminiscing about a few decent flights and new friendships made. Although I am a veteran of many late night Guillows builds, I'm a bit short on flying time. Thanks to George Bredehoft, Chris Boehm, and the Cloudbusters for their help and encouragement.

There is one person who you know as a keen competitor and champion flyer but who is also a generous mentor, sharing his time and experience even when preparing for his own events. This person spent the better part of two hours on Saturday showing me many valuable tips, and helped me get the most out of my plane; displaying the spirit of the Flying Aces. This person is none other than Wally Farrell. Kudos Wally, and thanks!

Gerard Kondrat

Bonus Point Quiz

Answer on page 24



Not a 3 view this time, but you get the picture. I found a kit of the Guillows DC3, and my scheming mind went "hmmmm." Yes those are skis. Lighten up the Guillows construction a tad and....what a rocket ship! Imagine just freewheeling the outboards, yet that long motor run down the center hits me just fine. Count up the BPs and let us know.

Savoia S.65 BP Quiz Answer - Addendum

Despite my embarrassment, it was heartening to hear from so many of you concerning our last BPQ. Due to an editing error, the bottom of the text box that contained the answer was cut off so even though the info was there, it didn't get printed. The upside is that I now know that some of you actually read it! So with an apology for the snafu, and a pledge to do a better proofreading job in the future, here's the answer the way it was supposed *to look. Ed..*

Well here's an unfairly ignored rocketship. Even with 3 fuselages, this clean as a whistle Savoia S.65 Schneider wannabe would, at 27" span, sport 2 counter-rotating 11" props (plenty!!) and 12" peg-to-peg motors. Stable and ample even-steven power not unlike Don Srull's Lippisches (Lippi?), so downthrust on both would be the deal. Holding for launch might be like the proverbial monkey loving a greased football.

Bonus points add up as such:

Tandem twin.....10 pts
Low-winged.....10 pts
Floatplane.....10 pts

Rubber Scale Modeler's

Muse Shop

Vance Gilbert

COVERING

' "Show me a man that likes to cover, and I'll show you a masochist"...Bill Pardoe.
It may be reassuring to know that very few modelers actually enjoy this facet of the program, but all must accept it. Covering is not easy, consisting of part science, part skill, part art, and part luck.'

The above is a direct quote from Bill Hannan's essential, biblical, seminal book on rubber powered flying called Peanut Power!(**) But you're not helping me here, Bill. We love the books you used to publish and all, and the pictures of you and you lovely wife Joan and stuff with great models and all, but the previous paragraph does for us in the modeling world not a damn bit of good.

Phooey on you, Hannan. ;-)

And there are guys that are slayers at covering out there. Both Toms Hallman and Nallen, Dave Mitchell, Bob Clemens, The Pres - oh there's a list of fellows that make this "chore" look worth its travail.

Now, I have promised our editor, I'm not out to teach you new ways to cover. I want you to *think about what you're doing when you cover*. Are you dumping your framework into tissue baggies, dousing with water, then running out of the room hoping for the best when the stuff shrinks around your structure? Or do you think of covering as "the next to the last pieces of the plane" that carefully go on before details and markings? The difference between these ways of thinking about covering can determine the difference between a finish that looks like it "usually does" and one that really represents the aircraft, without having to adjust the eye for covering wonky.

Look, Guys, covering is a bit of a Zen thing, no doubt, but like anything else you do in this hobby, a clean, organized approach will bring great results. Period. Lemme run it down for you:

1) Covering is only as good as the surface beneath it
Lumpy framework = Lumpy covering. The key to that is your sanding block. I believe it might have been said in some book of building models or another "Sanding good, careful sanding better, sanding block best!".

2) You are covering a succession of flat areas
Tissue - domestic, Esaki, True Olde World, none of these tissues ever really wants to go *around* something in open space. It never wants to take a compound curve in open space. Sure, with spit and Elmer's you can get it to follow your sheet cowl or most of one side or another of a wheel spat. But the key to the great covering jobs of Hallman, Weber, Nallen, Bruning, Starleaf, is that they recognize that any open space tissue has to traverse must be:

at least 4 sided (ok 3, but let's say 4 for now)

flat

Yessir, even that lovely, rounded Gee Bee fuselage with all it's stringers is but a succession of long and short, flatly sanded rectangle areas. If my math is right, that fuselage with 20 stringers is actually an icosi-

kaigon (yep...look it up) ...20 flat open areas. 20 flat open areas with fronts and backs. And that's how the best guys at covering can even take a repaired round fuselage and make it look like Earl Stahl material - each flat open area is respected as an area that needs to be covered.

And this is where that sanding block comes in to play. That block will get each area on your plane to be flat and ready to accept tissue without stresses of curving in open space. (fig.1).

This "flat area concept" is true for every place on your plane. Wings, stabs, everywhere there's a flat area. And with judicious use of the sanding block, everywhere you cover will be a flat area.

3) Covering is as integral a part of the planes "structure" as formers and ribs

You should see Tom Hallman cover something. He doesn't treat covering as a sort of 2-sheet baggie that the wing goes into, gets tacked down, and then shrunken to fit. Each piece of tissue has as much purpose as each rib, stringer, spar, or former beneath it. Now, don't get me wrong - he will cover as large a part of an area as he can muster with one piece of tissue, but he'll opt for more pieces over more flat areas to get the job done if he sees that the tissue is being asked to get acrobatic between points "a" and "b".

He pays so much attention to each piece of tissue that he even does his markings on the tissue before he puts it on the plane!! In that case, the tissue is

1) preshrunk on an open picture frame, using alcohol or water spray painted while on this frame
2) laid out on a flat board taped at the edges, and marked with lines and such with a marker/pen that is not attacked by the stuff you use to shrink tissue down. He shrinks with alcohol, so he uses Copic pens.

Tissue needs different colors on the same piece? He tapes the tissue to a flat board and masks gently with Scotch Blue tape, or even blue masking tape will work if you "untacky" it on your shirt or pants a few times before you apply.

Spraying is multiple passes, of course….and here's another quick Hallman Hint - to keep paint from runny build up when he does this detail work, he makes a pass or two with the airbrush trigger spraying paint, then another pass or two with just air coming out over the subject material - it fast dries the paint so t hat he can make another pass with pigment without running….

Note all this pre spraying and such is done with water-based acrylic paints. Everything is hit with a two-pass 3 foot away fogging with a can of Krylon, truly the most chemically offensive part of the whole

process. Far less yucky exposure than dope. Apparently lots of folks get that as Shorty's Basement doesn't even sell the stuff anymore...Believe me, She Who Allows Me To Go To The Basement loves that aspect of my new-found finishing process.

Consider pre-shrinking your tissue
Even if you apply lines and detail after the covering is on, you may want to consider preshrinking tissue. A late, indoor, scale sage named Gerry Donahue once said "You framework needn't be any stronger than what it takes to support the stress of your covering". Loaded, isn't it? So the equation is:

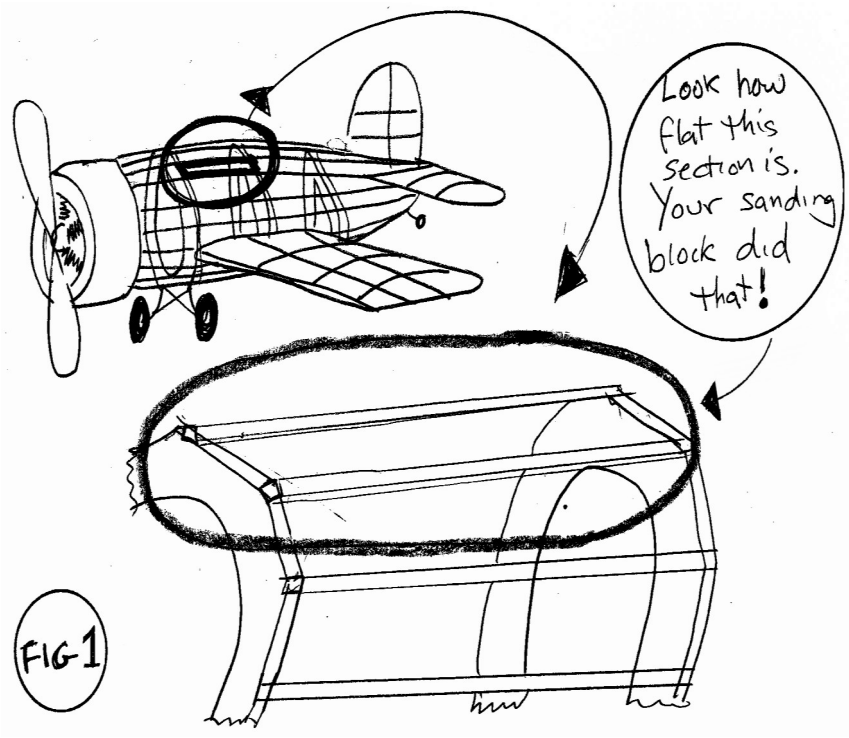
Pre shrunk tissue +
Deliberate placement of cut-to-fit piece of tissue (rather than shrunken to death on structure) =
Less structural mass needed =
Less wood mass =
Lighter wood =
Lighter plane =
Greater duration.

And an added plus to this equation…..*straight, wrinkle free covering.* And you may have also avoided that dreaded starved horse look to that fuselage….it only needs to snuggy up tight enough to, well, *be there*….

Note that when covering this way that the tissue does indeed still have enough "draw-up" in it to give the final shrink to what you are covering. Hallman hits all but his tail surfaces with a light mist of 70% isopropyl before he goes with the Krylon.

However, you could do like Master Builder Paul Boyanowski does….
- he'll preshrink some and cover his whole plane.
- he'll let all that covered structure, even on the assembled plane, do it's own drawing up over the next days, even weeks, with house humidity and time.
- They draw up to perfection

Find him at the NATS or a Cloudbuster's outing and go see his ships. Just follow the cigar. I just get mad when I see them ships...



Caveats:

~ Some tissue can be cajoled into spanning a curved, open space with some work, once dampened. You can pre-dampen the Japanese tissues, as they have a grain and have what's called "wet strength", and get it to both twist and bend. The Hallmark 5-n-dime stuff generally won't cooperate.

~ Yes, the fuselage to a P-47 does indeed have a sweep at the belly, making for curved stringers going back. Most tissues will make that kind of curve between formers

~ wingtips are often seriously compound curve areas. Get as many flat places covered with one piece as needed where you can between the end of the spar, that last rib, and the wingtip. Dampen a little to make other curves.
~ covering the wing top will make for ribs sticking out a bit, as that is a compound curve of sorts. Tissue can handle that. Just keep it as straight as possible following the curve of the wingtop. Spars that go all the way to the top of the rib help here too, as does serious use of that sanding block

~ FEAR NOT STRIPPING OFF WHAT DIDN'T WORK AND HAVE ANOTHER GO AT IT. It's only tissue. Just chase it again until you get what you like. You'd do the same with a crappy shaped rib or former that you cut, right? Oh, tell me you don't cut the occasional crappy former?

~ Some modelers and scale judges can't wrap themselves around the look of a light, preshrunk tissue style model, particularly when it is indoor for judging, flying indoors, or on a greater than average humidity day. They do have the tendency to get a little baggy, which one scale judge this summer at the Non-Nats thought made a typically all-metal plane look, well, less all-metal. The ships he judged missed out on a scale point or two. His reasoning was, and I paraphrase, "There are other planes here of that era that are covered tight and are rewarded greater scale points thusly. They are also undoubtedly heavier, and have to earn it at that end, whereas the preshrunk model will invariably fly longer…"

However, when the same baggy style in that damp, cool room at Geneseo was on a WW1 or Golden Age Lightplane, he gave full points all around.
Note that all of these "baggy" aforementioned models look perfect in the midday sun on the field - where most of your flying and judging is done at your home contests and fun-flys.

For my own modeling, I'm perfectly willing to take the hit on the judging table in exchange for a lighter structure that is less likely to warp in the sun. Like everything else in Free Flight, it's a trade off.

~ Mike Nasisse, Peter Kaiteris, Pres Bruning, Chris Starleaf, Dave Stott. I have seen all of these gentlemen work absolute genius with *domestic* tissue, and get every color in the book, so it can be done.

The upshot is - Cover your plane like you mean it. Physiologists consider skin an actual organ. Your model deserves more than a draping over it's bones.

(**) You can find Peanut Power! at Amazon, Abebooks, all over the web. Truly, I learned more form this book, for all my sizes of modeling (and we know I love Jumbo and Giant) than McCoombs, Don Ross' Rubber Powered Flying Models, and all other books and missives combined, no offense, Don or anyone else.

Jet Cat

The Voice of Experience...

Twang, whack ! Twang, whack ! Twang, smack ! Twang, crack .....!

If that reminds you of your last attempt to get a jet catapult glider to fly, you're not alone. The fields are littered with balsa dreams and jet catapult is the latest demonic FAC craze to turn those dreams into nightmares. Let's face it, jet catapult has a lot going for it, they can be built in a hurry, you can put a bunch in a small box, there's lot's of great color schemes and they go up fast. In reality, they can come down as fast as they go up and a shower of colorful confetti is sure to follow. Let's see what we can do to get some longer flights out of these puppies....

First, as the late, great Sal Taibi used to say," It's time to use the good wood !" Yep, that's right; use your light, contest grade balsa with the nice checkerboard appearance. Most of the jet cats I see are built way too heavy. And small! That's what I said: bigger models that are light, fly and glide better. Why do so many of us expect a model the size of a hummingbird and the weight of a Thanksgiving turkey to glide well? Sure they go up like a rocket, which appeals to the little kid inside all of us, but even if we can get it to glide, it'll have the glide angle of a space shuttle. All my past experiences with catapult gliders in AMA events dictated a catapult glider should be between 16 and 18 inches to get a good glide. And I strive to keep them below 1 ounce, well below one ounce. My winning catapult glider at the Chicopee Nats, the first time catapult glider was offered officially was the " Zip A Do Too ", weighed in at sixteen grams with a sixteen inch wing span. I shoulda named it "Sweet Sixteen."

In order to keep the weight down I've resorted to not only using contest grade balsa, but I weigh a wing after all the shaping and planing and sanding takes place and then stick it on a scale before I go any farther. If it weighs over 10 or 11 grams, it's time to get out a pencil, ruler and razor blade and make the wing into a built up structure. I cut the panels into wide leading and trailing edges and cut some ribs to hold 'em apart ! Keep the same thickness you were aiming at, max chord height of 1/4 inch or less. A good compromise is 3/16ths for good height and glide. By the time you finish sanding you'll probably have the tips tapered in thickness down to 3/32nds or so. Cover with Japanese tissue to further keep the weight down.

The fuselage is handled in a similar way, by planing and sanding from the back of the wing to the tail feathers, this saves your clay supply by minimizing the glob you'll have to put up front to balance the darn thing. I also use plywood cheeks over a ballast hole in the front. That helps hide the messy clay or lead in the nose and also reinforces the place where you insert the catapult hook. Hooks mounted under the wing make loopy launches!

I usually finish the model with a coat of sanding sealer, sanded well and then a coat of 50/50 Lite Coat, and two coats of dope on the Japanese tissue.... And then the base color is sprayed on using those new floral sprays you can get in Michaels' or other box store creative supply places like Hobby Lobby.

Better step back a bit here and talk about what should fly well and what won't. A full size jet aircraft has a long nose where all the avionics and radar and ammunition and.... well, you get the picture. If the engine was in the nose like a piston powered plane the nose would be shorter. Long ,high profile noses with swept back wings and short tail moments just love to spin after stalling, and they rarely recover. Although, I do have a Jet Catapult Glider MIG 15 that will stall and spin and then recover. I had to put on the wing air flow fences before it would do this.

Since we're launching these things at the speed of a baseball thrown by a high school pitcher and they have to glide at the speed of a bird, there are going to be lots of compromises in our design.... Use only enough incidence difference between the wing and stab to get some recovery from launch to glide without it nosing over into a dive. I set mine between 1/64th and 1/32nd of an inch, no more or you get a very loopy launch and have to put a lot of weight on the nose to balance the model for the glide. Swept wings don't slow down in the glide the way straight wings do, but seem to launch a bit higher, so take your choice as to what part of the flight profile you get excited about when looking for a design. I've been having fun with both!

You can't fly these Jet catapult gliders like an AMA catapult glider. The high climbing, flat gliding endurance gliders are set at zero/zero incidence between the wing and stabilizer with the CG (or balance point) back considerably more than you can get away with in a model of a jet set up with a normal tail moment for a full size aircraft. So we come up with a bit more of a compromise here. Build in that small amount of incidence so that the model will recover and glide, but not so much that the model will be loopy on the launch. Launch the model to the right, with the right wing tip held low and the nose up at about 30 to 45 degrees ,this will give a right turning climb. If you've set the glide to the left, the model will flatten out when it runs out of launch inertia and then settle into a left glide. (Of course the proper thing to point out here is you reverse the directions if you're left handed since you'll be clutching the little scooter with your left hand whilst holding the launch stick in your right.)

You have to work on this quite a bit because the launch trim and the glide trim interact throughout the flight. Trimming a catapult glider takes a lot of effort to get a good glider in trim and you have to work in small changes of rudder turn, incidence changes and even the launch angle. Even a slight bit of a warp change to the trailing edge on one side of the stabilizer will have a significant effect on the climb and glide.

As to full size aircraft to model, well, you takes your choice. Try to find aircraft with fairly short noses and long tail moments. Wings that are severely swept back won't glide well. Wings that are at or above the mid line of the aircraft will do well. My stable of jets right now consists of a F-86D, a Grumman Intruder, a Bell Airacomet and an English Electric Canberra. (Shown in the photo above.) There have been others ,but they weren't very consistent. As for what you choose to build, well I think we've all seen FACers fly models that everyone agreed were impossible, but keep in mind the problems with short tail moments and long nose moments when you're drooling over those 3 views.

One of the quickest ways to draw up a design is to take some of those old Jetex kit designs and trace your outlines from the wing and fuselage profiles. Pretend that the wing outline has to run all the way through the fuselage, since you won't have that additional cross section on a profile fuselage. Add a bit more stabilizer area too, since the real aircraft usually didn't need built-in stability; pilots get mad at an airplane that just wants to fly straight ! We, on the hand, have to cope with some serious free flight speed changes and turbulence by building the stability into our models.

Oh, and don't forget to chase away all the kids, old FACers and ladies when you get ready to launch your bird. It's very embarrassing to have to pull your model out of somebody's ear, especially when they're screaming in pain....

Jet Catapult Gliders ! ! ! ! ! ! !

See Ya Downwind, Vic Nippert

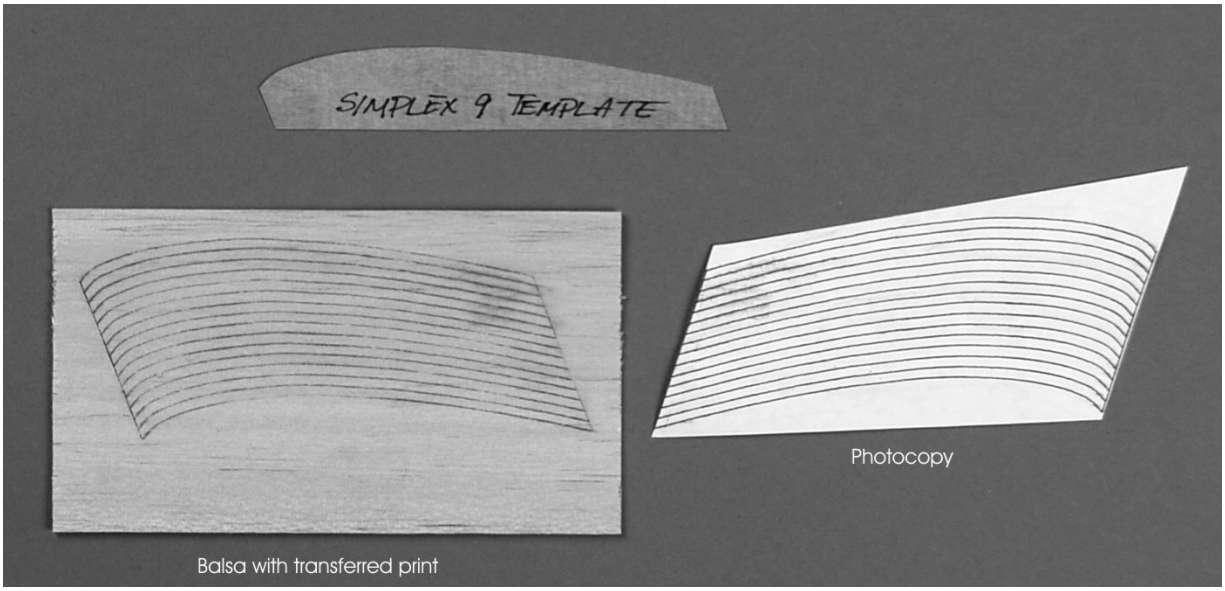
The Gadgeteer

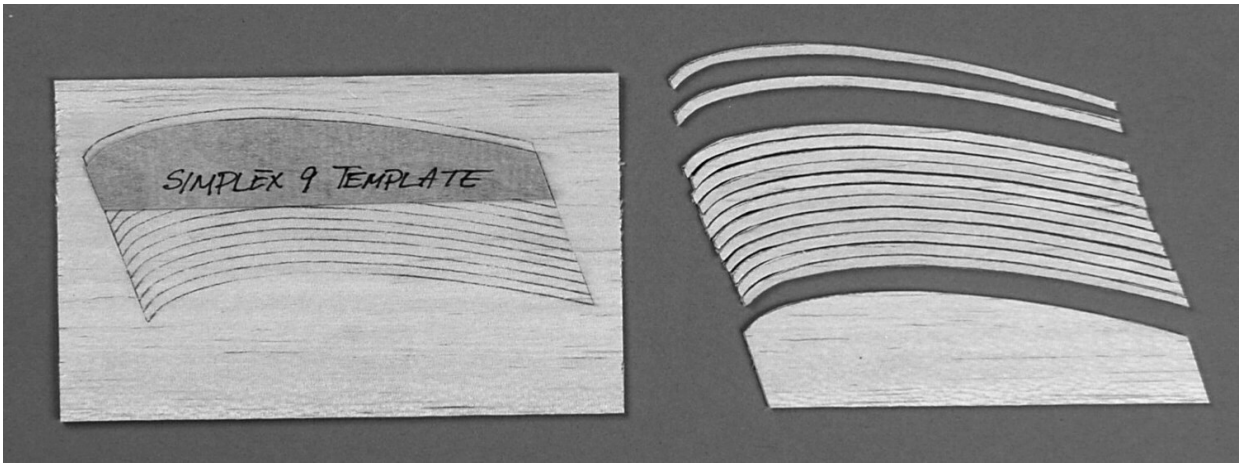
Simple Simplex Sliced Ribs

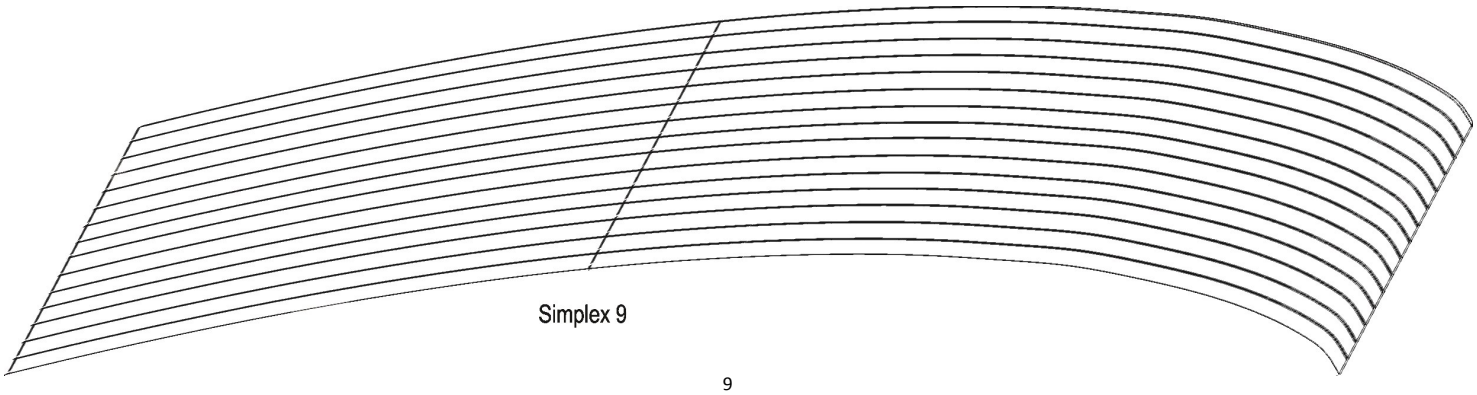
The Gadgeteer loves sliced rib wing construction, particularly when the rib tops are generated from a Simplex airfoil. This family of 'foils has the wonderful property of maintaining the same curvature, even when a portion at the end of the airfoil is removed. This is great for tapered or elliptical wings because a single curve can be used to create all of the airfoil tops: just cut away the back ends as you go along.

Years ago, Bob Meuser pointed out that sliced ribs of a uniform depth tend to break near the leading edge, but the problem can be reduced by staggering the slices as you go along with the slicing process. Shown here is just such an arrangement, printed out from a CAD file. The printout is for the 9% Simplex airfoil, a good general purpose choice for builders of rubber-powered models. Because the ribs are exactly 3/32" apart, precise cutting is guaranteed when the pattern has been transferred to sheet balsa. A smaller wing might require 1/16" thick rib tops, but here's how the process works:

The first photograph shows the printout and a photocopy of a 4" section, all that was needed for the project at hand. Another printout was glued to 1/32" plywood and carefully cut out in order to make a cutting template. A printout of the staggered airfoils was transferred to 1/16" balsa sheet using the common process of rubbing the back with a cotton swab dipped in acetone. Voila! The staggered airfoils are now on the balsa, making it a simple matter to use the template to cut precise Simplex ribs for the new wing. Now if only some ambitious entrepreneur would adapt the process to laser-cut balsa, wings could be constructed in record time!







WESTFAC
News from Out West

It has been a busy summer at WESTFAC. It began with a bang and WESTFAC IV was the match that lit the fuse. The Perris California event was much fun and the coverage in this newsletter was terrific. It was greatly appreciated by all of us at WESTFAC.

The summer has been full of FLYING ACES activity all over the WEST. The RIO GRANDE Squadron has been having numerous fun-flys, and is currently searching for a new flying site near Albuquerque. They currently fly on what is known as "the balloon park" where the annual Balloon Festival is held each year.

The Squadrons in Texas are teaming up with some Free Flight Clubs to bring the TEXAS SCALE CHAMPS to FACers in Texas and beyond. The Scale Champs is scheduled for November 16th and 17th at the Gainsville Municipal Airport; the site of WESTFAC II. Duke Horn and Ed DeLoach will co-CD the event. Flyers interested in flying at The Texas Scale Champs should contact Duke Horn at 214-500-7652. Also coming up in Texas is the Texas Cloud Climbers 66th Regional Free-Flight Champs on September 21st and 22nd. This will be held at the Robson ranch site near Denton Texas. This event will also include FAC Events. Assisting CD Mike Fedor in these efforts are Ed DeLoach and Mike Midkiff – FACHOF, both members of the WESTFAC Working Committee.

The SCALE STAFFEL Squadron in Southern California has completed its first two day contest at Otay Mesa near the Mexican border. This event was very well attended, and over 11 FLYING ACES events were flown over the two day period with flyers coming from Nevada and Arizona to compete. This active growing Squadron plans another two day FAC Contest in October (dates to be determined) that may be held at the Perris flying site.

The MARIN AERO Squadron is always active and represents the best in FLYING ACES events in Northern California. Rod Parsons has sent us some photos of recent builder projects and fly days. They have a beautiful flying site in Marin County and a thriving group of flyers.

Also, coming up in Denver from August 31st to September 2nd is the 48th Rocky Mountain Free Flight Champs. This contest features seven FAC events over a two day schedule. It will be flown on the 35,000 acre free flight site just East of Denver. The CD is Don DeLoach (also a member of WESTFAC's Working Committee). For more info, you can call Don at 719-964-7117.

Changes to the WESTFAC Committee are also occurring this summer. We plan to expand the Committee to represent more of the Western states. Gene Smith will be representing Oklahoma and just next door in Kansas, Dana Field will represent that state. Chuck Michalovic will be our man on point in Arizona, with Dave Moody as an addition to the Texas team. John Donelson will be added to the California team.

This expanded Working Committee will bring some new perspectives to important upcoming decisions that will involve new venues and new events at WESTFAC.

Texas Contest Planning Group - Front row L to R: Wm. Bruce, Carl Shifferlein, Steve Spense, and Mike Midkiff. Back row L to R: Mike Reeves, Jesse Shepperd Jr, Duke Horn,-CD, Jerry Barnette, Ed Vandlandingham, and Mike Fedor-CD.

Jim Whitman, and Phil Thomas at a recent Rio Grand Squadron event in New Mexico.

FAC Book Nook

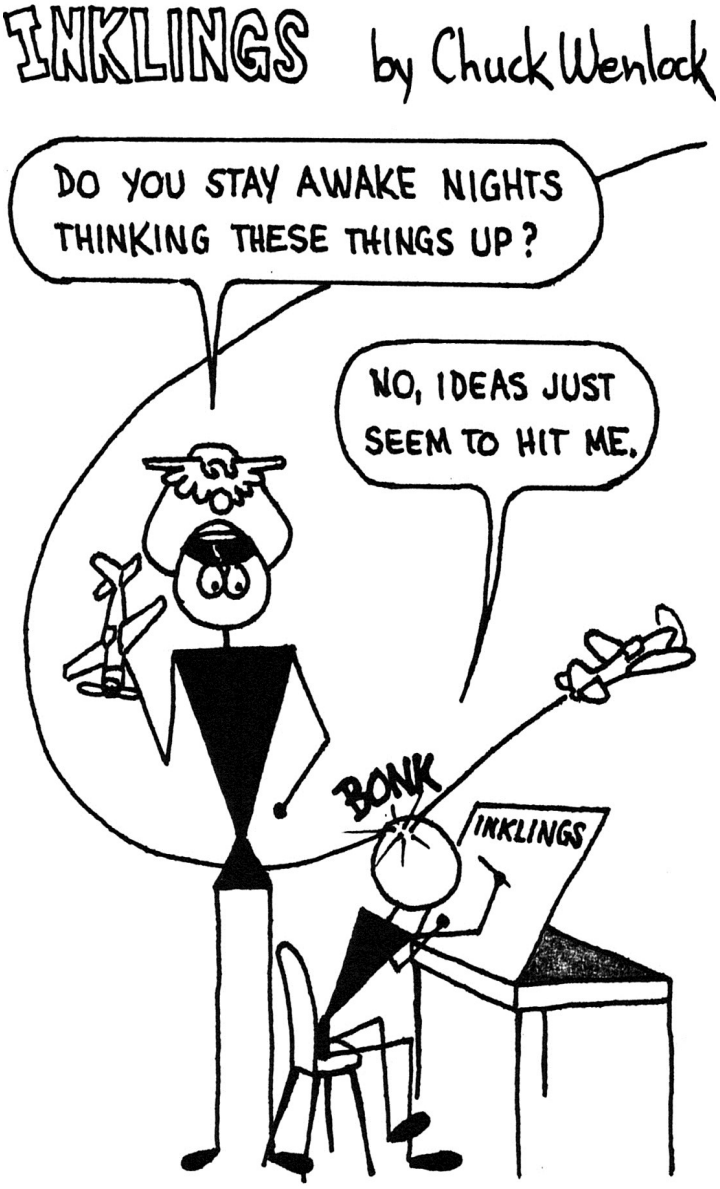
Allison-engined P-51 Mustang, Martin Chorlton, Osprey Publishing, 2012

The P-51 Mustang family of aircraft have been written about to such an extravagant degree that one wonders if it is still possible to say anything new and interesting about the beloved Mustang. Martyn Chorlton may now respond in the affirmative.

Mustang literature has been so dominated by the Merlin-powered D model that one may not know the full story of the Allison-powered types, from the NA-73 prototype to the F-82 Twin Mustang. A substantial part of this well-written volume is devoted to the origin of the Mustang, a small miracle in itself, and its early deployment with the RAF. Several facts were new to this reader, such as the difficulty North American had in obtaining an Allison V-1710-39 because the government considered the Mustang a private venture (it was being built for the British) and wanted Allison production to go to the P-38 and P-39. Many readers know that the name of the P-51 originated with the RAF but may not know that the A-36 variant was never officially called "Apache." The official name always remained Mustang for the A-36. It was even suggested that it be called the "Invader," because it invaded so much territory in Italy. Go figure.

Interspersed with the story of the P-51A, A-36, Mustang Mk I and IA, and photo recon versions F-6A and F-6B are accounts of combat in Europe and Asia. Recon versions were active on D-day and beyond. Amazingly, the longest-serving Mk I was in service until 1947, outliving many of its bubble-canopied brethren. More advanced Allison-powered variants were the lightweight Mustangs, the P-51H and –J, which never saw service, and the Twin Mustang, which did. Chortlon's text is accompanied by many black-and-white photos and several color profiles and action paintings by several talented illustrators. Alas, there are no general arrangement drawings, which model builders may regret.

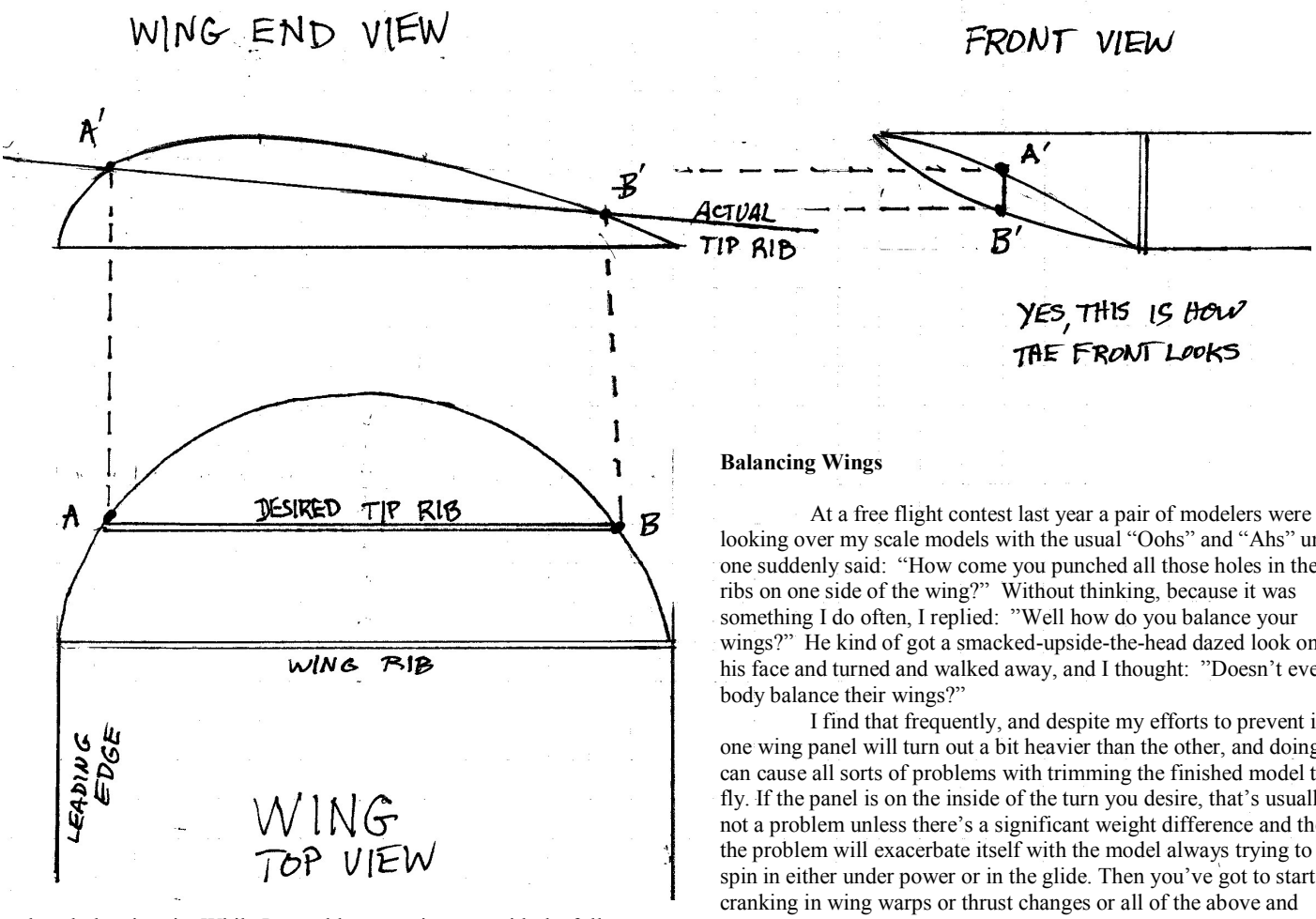
Note: The book was purchased from discount merchant Edward R. Hamilton Booksellers, worth a visit at: http://www.hamiltonbook.com/



No Secrets - Tips and Tricks from the Aces

A Fooler

While working on a full size airplane wing restoration, I was faced with the job of reconstructing a riblet between the outermost full size wing rib and the tip. The bottom sloped up to the wing tip bow much like many of our models. "Easy Peasy", I thought as I drafted up the perfect rib as I had done this many times on my model work bench. In fact, that up-slope on the bottom tip was actually a little free dihedral and a benefit of a clean life and picking such a great subject. From that point on, things got ugly as no matter what I did, drew, cut or hammered, the rib sloped down at the trailing edge giving me a ton of WASH-IN---a bad thing for free flight outdoor scale models and a freaking disaster for a full scale model that my pink butt was going to ride in. After literally weeks of struggle, I finally realized that it is an unavoidable product of the geometry of the whole wing tip. While I was able to continue on with the full scale project, I realized that my model side of my brain needed to be aware of this dirty little trick of Euclidian geometry. For years I put that upslope on the bottom of my model wing tips and was always a little irritated that I always needed as much wash-out in the fat, Hershey Bar wings as I did in anything else. In actual fact, the whole wing tip was geometrically washed-in (past tense. Is that even a word?) before I even unpinned it from the board.



Here is a sketch to explain it. The Wing End View is the way the wing looks to the eye as you sight along its span from the tip. The bottom of the wing is smoothly brought up to the upper surface. However, look at the Top View. AB represents a common short rib between the tip and the outermost wing rib. Look what happens when you draw a vertical line to the end view. A' B' is clearly NOT parallel to the expected rib position. The cause is the fact that the top surface of the wing is not an arc but an airfoil with the "hump" towards the leading edge and it cannot be changed. My example is extreme to illustrate the phenomenon but the wash-in is always there. What that means is for whatever dihedral effect you get, you must pay for in tip stall. In fact, that whole tip becomes a problem. So what's the solution? This is painful: don't upslope the wing bottom, instead make the top of the wing slope down to the bottom surface and forget the dihedral effect.

Tom Arnold

Balancing Wings

At a free flight contest last year a pair of modelers were looking over my scale models with the usual "Oohs" and "Ahs" until one suddenly said: "How come you punched all those holes in the ribs on one side of the wing?" Without thinking, because it was something I do often, I replied: "Well how do you balance your wings?" He kind of got a smacked-upside-the-head dazed look on his face and turned and walked away, and I thought: "Doesn't everybody balance their wings?"

I find that frequently, and despite my efforts to prevent it, one wing panel will turn out a bit heavier than the other, and doing so can cause all sorts of problems with trimming the finished model to fly. If the panel is on the inside of the turn you desire, that's usually not a problem unless there's a significant weight difference and then the problem will exacerbate itself with the model always trying to spin in either under power or in the glide. Then you've got to start cranking in wing warps or thrust changes or all of the above and usually it leads to all sorts of problems when wind gusts disturb the neat pattern you set up on a calm day.

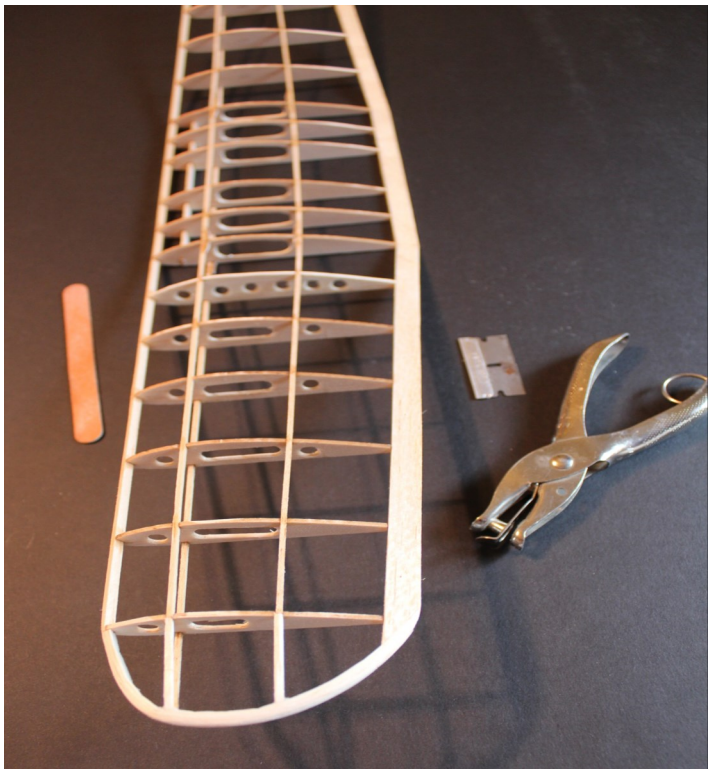
A heavy panel on the outside of the turn will cause the model to constantly want to go off toward that side in the glide and the flight pattern will be erratic. And it always seems to happen when you hit lift!

Now I know enough to get the wings as balanced as possible before I cover them, but I do it the opposite of what some other modelers do, I take weight out of the offending panel! Most of the modelers add weight to the lighter panel to balance the wing, but this adds unnecessary weight to the model and that is something we want

to avoid because it reduces flying performance.

So how do I do it? Easy, and fun; I use paper hole punchers to pop out holes in the balsa ribs. If the panel is still a bit too heavy, I attack the webs between the holes with an Exacto knife and take off more weight between the holes that are already punched out. If you are still not pleased because of the raggedy finish of the ribs and everything has to be linear and orderly, then a fingernail sanding stick will clean everything up.

I often use the leftover popped out circles of balsa for other things like tail wheels and little reinforcements where scale control wires will be inserted and glued. And the paper punches are also great for thin plywood faces on nose blocks for thrust buttons, etc... Use your imagination!



None of all this would be necessary if we weighed every piece of wood while building, but we get a lot of kits where the manufacturers ,even if they try their best, will throw in a sheet or two of ribs that are much heavier than the others or there are spars that are much heavier than the others, and then the fun begins!

Vic Nippert

Biplane Set Up

My last two FAC Nats entries in WWI had TVos between 0.40 and 0.44. .40 for bipes is *THE NUMBER* below which performance drops significantly...just as I consider .60 the TVo threshold for monoplanes. Stick to these numbers, calculate your CG and LEAVE IT. Next proceed to trimming. Trimming is not stability. They are separate and distinct!

Two ways to achieve higher TVo in bipes: enlarge stab or reduce wing area (sesquiplanes like Fokker D.VII or Nieuport are excellent in this regard). True bipes with identical upper/lower wings need really large stabs compared to sesquiplanes.

Don DeLoach

The accompanying image in the next column is taken from William McCombs' Making Scale Model Airplanes Fly. It's available through Amazon Books. You should have this book! Ed.

The average chord, C, is found as shown in Fig.7-1 and used for locating a starting c.g. (p.2.6). Draw the 2 dotted

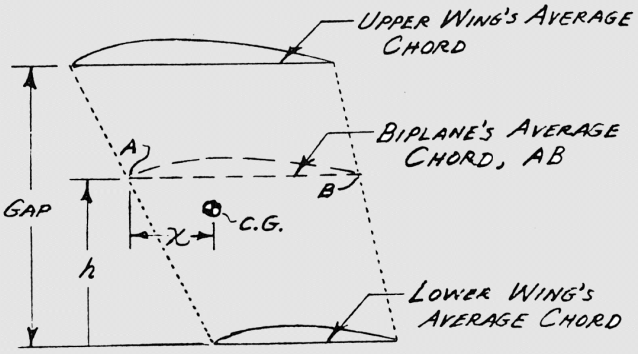


Fig.7-1 Finding a Biplane's Average Chord

lines (on a side view). Measure the "Gap" Calculate (or estimate) the area of the upper wing and also of the lower wing (Fig.1-6). Calculate h as

$$h = \frac{\text{Gap} \times \text{Upper Wing Area}}{\text{Upper Wing Area} + \text{Lower Wing Area}}$$

Then go up the distance h and draw in the biplane's average chord from A to B as shown. X (p.2.6) is measured from the L.E. of the average chord and the average chord length is used for C in the formula on p.2.6 and for determining the Tail Volume as calculated on p.1.4.

It's always best to adjust a biplane (or any FFS model) without the outer wing struts and wires as these have only a minor effect on trim when added later (unless needed for structural strength).

* For a more conservative (larger) value of h, multiply the upper wing area by a factor of 1.25 (but not if there is negative stagger)

Worthwhile Website

This review was taken from Thumb Print, The newsletter of the Thermal Thumbers of Mid Atlanta, editor David Mills.

The future of the excellent **Indoor New and Views** was a shaky one until just recently. This magazine/newsletter has been the reliable source of exclusively indoor Free Flight coverage for decades. I've always found it delightful and a good and informative read. However, it was moribund for too long, and its future didn't look good. Well, not to worry, young and oddly unaffiliated Nick Ray has assumed the editorship. Now all is well and production has resumed. Current and all past issues can be found on:

indoornewsandviews.worldpress.com

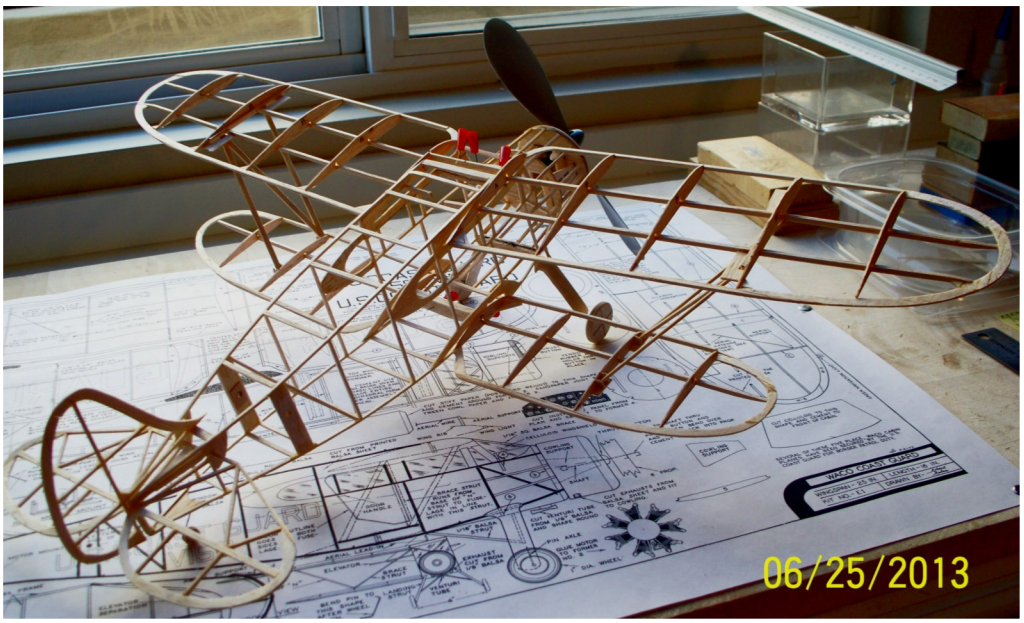
I gave the website a good going-over and found it to be very accessible and easy to use. There's a ton of very cool stuff to be seen with a few easy clicks.

U.S. Coast Guard WACO

Building rubber scale sometimes scares folks off a bit. However, picking a good subject adds a lot to the fun and enjoyment. My friend Don DeLoach snuck one up on me here. He knew from previous conversations that I was an old Coast Guardsman. I had served as rescue crew on the old Grumman Albatross, lovingly referred to as the "ruptured duck" back in the early 60's. We flew SAR missions (search and rescue to you landlubbers) out of the Coast Guard air station in San Diego.

I'm not sure where Don found it, but he sent me a rare plan of a U.S. Coast Guard WACO circa 1937. I did some research and found out that only three of these planes were built by WACO in Troy Ohio in 1936. They were designated as the J2W, and essentially identical to the EQC-6 civilian model, but a second cabin door was added to the right side of the fuselage to accommodate rescue efforts.

I had to build this plane! As many of you may know, the WACO is a great bi-plane rubber subject. It has good wing area and a big roomy fuselage to pack plenty of rubber into. I had built two previously. Both were Walt Mooney plans built as double Peanut size. Both flew well and have given much enjoyment over the years.



This is an easy plan to build from. It's all 1/16th square so it's real light. Mine finished out at 40g without the Gizmo front-end (7g). The graphics are simple and Callie Graphics (New Mexico) did them all, including a fantastic scale Coast Guard emblem, for next to nothing.

Some interesting building materials were used: the wheel covers are Avery file stickers. Just spray them the color of the model, peel them off and stick them on. The LG braces are 1/16th white plastic tubing. You could also use bar straws.

The tough part of this build was trying to determine the original color scheme. WACO did not know. They checked all their old contracts, but came up dry. The Coast Guard Museum in Washington DC didn't know. They checked everything they had on file. Finally, one of my flying pals from the CONDOR Squadron in Arizona found a reference on the internet no one else found showing a gray/silver color with yellow top wing topside and the distinctive USCG rudder stripe arrangement. Zingo! I now had color documentation.

These Coast Guard WACOs have a sad history. After service at other stations, they were sent to El Paso Texas to patrol the Mexican border and Gulf. Over a short period of time, all of them crashed, with several fatalities. The Coast Guard moved on, never to re-order these planes again.

I am now beginning the trimming process and looking forward to seeing what this WACO will do. Many Maxes to All Roger Willis

Western Air Express EQC-6

2013 FAC Non Nats Results

FAC PEANUT SCALE	Event # 1						FLIGHT TIMES			11
		PN	CP	MK	WK	BP	T1	T2	T3	FACT'R	SCORE
TOM NALLEN	JODEL D-9	1	28	19	12	10	120	60	0	82.50	151.50
PAUL GRABSKI	LEMBERGER LB-20	1	29	19	12.5	15	81	81	0	70.50	146.00
GEORGE BREDEHOFT	PEGNA P6-1	2	29	19	12	15	60	47	0	60.00	135.00
CHRIS BOEHM	P-51	1	29	20	12	10	60	48	0	60.00	131.00
WINN MOORE	MIRAGE	2	28	18	12	5	44	25	69	64.50	127.50
DALLAS CORNELIUS	CHAIMBERMAID	1	29	19	12	0	36	61	58	60.50	120.50
DENNIS RUHLAND	FOKERTS SK-2	1	29	20	12.5	5	52	54	47	54.00	120.50
DAVID MITCHELL	VAGABOND	1	29	19	12.5	0	48	0	0	48.00	108.50
PRES BRUNING	HUSTLER 400	1	29	15	12	10	25	40	35	40.00	106.00
BRUCE CLARK	ANDREASSON BA-4B	1	29	18	12	15	28	29	0	29.00	103.00
JACK BARKER	JODEL D9	1	25	10	10	10	24	24	25	25.00	80.00
SECOND ENTRIES	**WITH LOWER TIMES**										
WINN MOORE	NESMITH COUGAR	1	29	19	12	0	37	44	32	44.00	104.00
GEORGE BREDEHOFT	FALCON SPECIAL II	1	0	0	0	0	0	0	0	0	0

FAC JUMBO SCALE	Event # 3						FLIGHT TIMES			8
		PN	CP	MK	WK	BP	T1	T2	T3	FACT'R	SCORE
CHRIS STARLEAF	G159 GULFSTREAM	1	28	19	11	35	132	0	0	82.5	175.5
THOMAS HALLMAN	MIG-DIS	1	26	17	10	35	93	99	89	77.25	165.25
TOM NALLEN	PTERODCTYL MK 5	1	29	19	12	30	73	0	0	66.5	156.5
DALLAS CORNELIUS	BOEING 306-B	1	22	18	10	20	72	42	120	82.5	152.5
WALTER FARRELL	SPARROW HAWK	1	24	18	9	10	105	0	0	78.75	139.75
DOUG BEARDSWORTH	M-29	1	24	16	10	10	47	88	108	79.5	139.5
EDWARD ALLEBONE	TURBO AG-CAT	1	26	18	10	15	77	59	51	68.5	137.5
JOHN REGALBUTO	DOUGLAS XTB2D-1	1	23	14	8	15	38	23	0	38	98
SECOND ENTRIES	**WITH LOWER TIMES**										
DOUG BEARDSWORTH	NORTHROP GAMMA	2	28	19	12	10	65	46	51	62.5	131.5

Left - Pete Kateris launches his Me109Z Scale entry. The plan for this model was published in FACN #271, and it's a fine flier. Ron Gosselin photo **Below -** Paul Grabski's Lemberger got great scale scores, and flew well for a second place finish in Peanut Scale. Mark Batterson photo

FAC RUBBER SCALE	Event # 2						FLIGHT TIMES				19
		PN	CP	MK	WK	BP	T1	T2	T3	FACT'R	SCORE
CHRIS STARLEAF	F-82	1	28.5	19.5	12	35	92	0	0	75.50	170.50
TOM NALLEN	BEARDMORE WB26	2	30	20	11.5	15	77	114	0	81.00	157.50
DAVID MITCHELL	WACO QDC	1	26.5	19.5	12	15	120	80	0	82.50	155.50
PETER KAITERIS	ME109Z	2	28	18	10.5	35	52	55	0	55.00	146.50
THOMAS HALLMAN	PT-26	1	27.5	19	12.5	10	99	0	0	77.25	146.25
VANCE GILBERT	DH-95 FLAMINGO	1	27.5	19.5	9.5	25	60	62	60	61.00	142.50
WALTER FARRELL	MILES FALCON	2	26	20	7	10	103	0	0	78.25	141.25
CLIVE GAMBLE	PIPER VAGAQBOND	1	27.5	19	11.5	0	120	0	0	82.50	140.50
DOUG BEARDSWORTH	ALBATROS D.V	1	28	19	10.5	15	65	75	72	67.50	140.00
PAUL BOYANOWSKI	SPARTAN EXECUTIVE	1	29.5	19.5	11	10	50	76	0	68.00	138.00
LUC MARTIN	CAUDRON SIMOUN	2	26.5	19	11	10	63	79	78	69.50	136.00
GEORGE BREDEHOFT	CAUDRON RACER	1	25	16	11	10	70	0	0	65.00	127.00
VICTOR NIPPERT	LIPPISCH STORCH	1	27	19.5	10	18	49	43	50	50.00	124.50
BOB CLEMENS	Y10-43	1	23	16	10	3	43	64	0	62.00	114.00
PRES BRUNING	CURTISS XP-71	2	24.5	15	11.5	20	27	42	0	42.00	113.00
MATTHEW KING	HE100	1	20	16	10	10	44	39	55	55.00	111.00
ARA DEDEKIAN	VOLKSPLANE	2	21	18	11	10	28	42	31	42.00	102.00
ED NOVAK	WATERMAN MONOPLANE	1	27	18	11	3	39	0	0	39.00	98.00
ORVILLE WILLIAMSON	AERONCA CHAMP	2	22	18	8	0	27	22	28	28.00	76.00
SECOND ENTRIES	**WITH LOWER TIMES**										
CHRIS STARLEAF	BREDA 88	2	28	20	12.5	25	87	79	63	73.50	159.00
VANCE GILBERT	DEWOITINE D-33	2	15	18	10.5	10	86	63	97	76.75	130.25
PETER KAITERIS	B5N1 KATE	1	25	17	10.5	10	63	0	0	61.50	124.00
TOM NALLEN	VOLKSPLANE	1	28.5	19	11.5	10	42	48	47	48.00	117.00
MATTHEW KING	MIG3	2	27	17	10	10	26	0	0	26.00	90.00
ARA DEDEKIAN	AMERICAN EAGLET	1	20	18	10.5	3	27	29	28	29.00	80.50
LUC MARTIN	SIPA S-12	1	26	16	10	10	22	0	0	22.00	84.00

FAC PIONEER SCALE	Event # 4						FLIGHT TIMES					6
		PN	CP	MK	WK	BP	T1	T2	T3	FOF	FACT'R	SCORE
THOMAS HALLMAN	BLERITO XXV	1	30	20	12	10	89	0	0	62	77.25	139.25
TOM NALLEN	CURTISS TYPE D HYDRO	1	28	20	12.5	50	44	26	26	60.5	76.00	136.50
WALTER FARRELL	BLERIOT	1	28	20	5	10	53	62	0	53	66.00	119.00
ED NOVAK	EASTBORNE MONOPLANE	1	29	20	12	0	41	37	0	61	41.00	102.00
JOHN P HOUCK	1913 PONNIER	1	28	20	10	0	31	0	0	58	31.00	89.00

FAC GIANT SCALE	Event # 32						FLIGHT TIMES				4
		PN	CP	MK	WK	BP	T1	T2	T3	FACT'R	SCORE
THOMAS HALLMAN	JUNKER J-1	1	29	19	11	15	120	120	0	82.50	156.50
VANCE GILBERT	TWIN JENNY	1	27	17	10	40	50	40	52	52.00	146.00
CHRIS STARLEAF	B-24	1	25	17	10	35	51	58	44	58.00	145.00
MATTHEW KING	TAYLORCRAFT	1	25	16	9	0	99	64	0	77.25	127.25
RICHARD ZAPF	CHEYANNE III	1	0	0	0	0	0	0	0	0.00	0.00

FAC POWER SCALE	Event # 5							FLIGHT TIMES				3
		PN	CP	MK	WK	BP	T1	T2	T3	FOF	FACT'R	SCORE
DON SRULL	PTERODACTYAL MK 7	1	28	17	9	43	120	0	0	54	120.00	217.00
EDWARD ALLEBONE	VICKERS VIMY	1	29	20	12	20	120	0	0	61	120.00	201.00
MARTYN RICHEY	XB-42A	1	27	17	10	25	120	0	0	54	120.00	199.00

GOLDEN AGE COMBINED	Event # 7					19
		P#	T1	T2	T3	SCORE
JIM DETAR	REARWIN SPEEDSTER	1	82	101	120	303
PAUL BOYANOWSKI	REARWIN SPEEDSTER	1	125	99	78	297
WALTER FARRELL	J-5 CUB	1	62	120	79	261
GEORGE WHITE	HOWARD DGA	1	70	68	77	215
PAT MURRAY	STINSON SR-7	1	63	64	80	207
GLEN SIMPERS	HOWARD DGA 8	1	64	76	63	203
BOB CLEMENS	FARMAN400	1	40	91	60	191
JACK MOSES	FAIRCHILD 24	1	67	64	50	181
VICTOR NIPPERT	PIPER CUB	1	79	81	21	181
LUC MARTIN	CAUDRON SIMOUN	1	68	48	61	177
DAVE NIEDZIELSKI	AERONCA CHIEF	1	67	57	43	167
JOHN P HOUCK	RWD-5	1	59	45	44	148
ED NOVAK	FAIRCHILD 22	1	36	47	54	137
RICHARD PENDZICK	SR-8	1	50	73	0	123
ED MCQUAID	DH 71 TIGER MOTH	2	38	46	33	117
PRES BRUNING	FOKKER SUPER UNIVERSAL	1	50	37	26	113
PETE AZURE	O57	1	40	50	0	90
ED MCQUAID	J-5 CUB	1	35	0	0	35
WILLIAM LOOMIS	FIESLER STORCH	1	21	0	0	21
SECOND ENTRIES	**WITH LOWER TIMES**					
WALTER FARRELL	DH29	2	87	120	0	207

MODERN CIVIL	Event # 8					5
		P#	T1	T2	T3	SCORE
WALTER FARRELL	CITABRA	1	70	102	120	292
CLIVE GAMBLE	VAGABOND	1	120	23	51	194
GEORGE WHITE	CESSENA 182	1	103	60	0	163
RICHARD ZAPF	DH BEAVER	1	33	17	55	105
JOHN P HOUCK	HELIO CURRIOR	1	35	0	0	35

MODERN MILITARY	Event # 9					9
		P#	T1	T2	T3	SCORE
TOM HALLMAN	PULQUI	1	108	104	117	329
DALLAS CORNELIUS	T-28 D TROJAN	1	74	79	120	273
WALTER FARRELL	MIG 15	1	81	69	85	235
GEORGE WHITE	T6-B	1	71	76	60	207
JIM DETAR	GRUMMAN GUARDIAN	1	85	62	56	203
TOM ARNOLD	SEAMEW	1	48	54	45	147
DAVID MITCHELL	SWALLOW	1	56	25	51	132
RICHARD ZAPF	F-86	1	63	35	20	118
JOHN REGALBUTO	XTB2D-2 SKYPIRATE	1	31	39	42	112

The photogenic Houck clan took a moment from their busy flying schedule to get a pic of their Peanut party. Roy Courtney photo

OLD TIME RUBBER STICK	Event # 10						13
		P#	T1	T2	T3	FO#1	SCORE
PAUL GRABSKI	ACE WHITMAN FALCON	1	120	120	120	208	360
DAN DRISCOLL	SMITH	1	120	120	120	176	360
EDWARD ALLEBONE	WANDERER	1	120	125	127	149	360
MARK RZADCA	GOLLYWOCK	1	118	120	120	0	358
DON SRULL	1936	1	116	120	120	0	356
JOHN STOTT	GOLLYWOK	1	120	120	110	0	350
DAVID PISHNERY	1945 SKYROCKET	2	120	93	105	0	318
PAT MURRAY	GOLLYWOK	1	74	86	120	0	280
CLIVE GAMBLE	MANULKIN TWIN PUSHER	1	120	120	0	0	240
ALBERT TIMKO	KORDA COQUEROR	1	91	120	0	0	211
WINN MOORE	GOLLYWOCK	1	76	77	49	0	202
GEORGE BREDEHOFT	THE SHAFT	1	38	41	50	0	129
G THORNTON	FURY	1	54	0	0	0	54
SECOND ENTRIES	**WITH LOWER TIMES**						
DAVID PISHNERY	1942 M. FARTHING	1	90	85	0	0	175
PAUL GRABSKI	ACE WHITMAN FALCON	2	120	0	0	0	120

OLD TIME RUBBER FUSELAGE	Event # 11					14
		P#	T1	T2	T3	SCORE
PAUL GRABSKI	ACE WHITMAN ALBATROS	1	120	120	109	349
JOHN STOTT	HORNET	1	73	120	120	313
MATTHEW KING	BLACK BULLET	1	84	72	62	218
DAVID PISHNERY	1939 SPRITE	1	91	88	0	179
ROBERT BARD	KORDA VICTORY	1	59	56	61	176
CHRIS BOEHM	ERIE DAILY TIMES	1	53	58	63	174
JOHN P HOUCK	SPARTAN BOMBER	1	56	69	48	173
JACK MOSES	JR COMMERCIAL	1	52	41	42	135
DAN DRISCOLL	EXP 1-BLADE	1	120	0	0	120
WINN MOORE	FAC MOTH	1	40	38	35	113
BRUCE FOSTER	LANZO 30	1	71	0	0	71
GLEN SIMPERS	LANZO 30 INCH	1	71	0	0	71
ROBERT HAMMETT	ACE WHITMAN ALBATROS	1	66	0	0	66
PETE AZURE	CHEIFTAIN	1	38	0	0	38

2-BIT +1 O.T.R. FUSELAGE	Event # 12					14
		P#	T1	T2	T3	SCORE
SAM BURKE	BABY COMERCIAL	1	115	96	118	329
DAN DRISCOLL	JR COMMERCIAL	1	120	80	120	320
DAVID PISHNERY	1945 PETREL	1	97	120	98	315
BOB CLEMENS	RANGER	1	54	82	120	256
MICHAL ESCALANTE	FAC MOTH	1	75	113	66	254
PETER KAITERIS	SKOKIE	1	78	93	80	251
PAUL GRABSKI	FAC MOTH	1	89	88	74	251
RICHARD PENDZICK	BABY FLEA	1	78	72	64	214
FRANK ROWSOME	MOTH	1	93	68	44	205
JOHN P HOUCK	SCOTCH MOMOPOD	1	50	94	55	199
ROBERT BARD	SUPREME TRAVELER	1	62	62	63	187
CHRIS BOEHM	F A MOTH	1	45	46	35	126
WINN MOORE	FAC MOTH	1	79	0	0	79
ALAN MKITARIAN	JIMMY ALLEN SPECIAL	1	26	0	0	26

JIMMY ALLEN	Event # 13					11
		P#	T1	T2	T3	SCORE
PETER KAITERIS	SKOKIE	1	118	120	120	358
GERALD CRAWMER	SKOKIE	1	96	90	120	306
JOHN P HOUCK	BLUE FLASH	1	103	72	71	246
JOHN STOTT	BA CABIN	1	65	45	86	196
PAT MURRAY	SKOKIE	1	70	60	56	186
MARK HOUCK	JA SPECIAL	1	61	77	46	184
JACK MOSES	JIMMY ALLEN SPECIAL	1	65	58	58	181
WINN MOORE	PARASAL	1	85	50	45	180
MATTHEW KING	BLUEBIRD	1	50	61	56	167
R BLAIR	J A SPECIAL	1	57	50	51	158
SCOTT RICHLEN	BLUE FLASH	1	21	0	0	21

OLD TIME GAS REPLICA	Event # 14		TARGET TIME				FLIGHT TIME					8
		P#	S1	S2	S3	S4	T1	T2	T3	T4	FO S	SCORE
EDWARD ALLEBONE	CAVU	1	72	64	58	0	72	78	55	0	0	17
BOB CLEMENS	ZIPPER	1	72	64	58	0	64	55	57	0	0	18
VICTOR NIPPERT	ARADO	1	72	64	58	0	89	62	55	0	0	22
MARK RZADCA	NEW RULER	1	72	64	58	0	70	55	30	0	0	39
GERALD CRAWMER	SIMPLEX	1	72	64	58	0	115	54	0	0	0	111
MIKE WELSHANS	SCRAM	1	72	64	58	0	69	0	0	0	0	125
EDWARD SMITH	VIKING	1	72	64	58	0	97	0	0	0	0	147
SAM BURKE	HALF PINT	1	72	64	58	0	99	0	0	0	0	149

SIMPLIFIED SCALE	Event # 15						23
		P#	BP	T1	T2	T3	SCORE
DALLAS CORNELIUS	KI-61 HIEN	1	10	120	70	102	302
WALTER FARRELL	MIG 3	2	10	91	97	97	295
JOHN P HOUCK	FAIRCHILD 45	1	10	92	93	84	279
RICHARD ZAPF	HE112	1	10	99	78	90	277
DAVID MITCHELL	STINSON 049	1	1	80	89	93	263
VICTOR NIPPERT	CORBIN SUPER ACE	1	1	64	59	120	244
JIM DETAR	WACO E	1	15	81	60	68	224
EDWARD ALLEBONE	CORBEN ACE	1	1	63	61	83	208
ERIKA ESCALANTE	P51	1	10	58	37	63	168
ED MCQUAID	BT-9	1	10	33	33	75	151
WINN MOORE	AERONCA	1	1	52	52	44	149
MIKE WELSHANS	TCRAFT	1	11	38	46	46	141
MARK RZADCA	HOWARD GH-9	1	1	49	42	45	137
TOM ARNOLD	SEAMEW	1	5	82	21	0	108
ROBERT BARD	AERONCA CHIEF	1	1	36	30	36	103
LARRY SWEAT	C-180	1	1	39	34	21	95
BOB CLEMENS	FARMAN 400	1	1	90	0	0	91
ARA DEDEKIAN	VOLKSPLANE	1	10	21	28	28	87
PAT MURRAY	STINSON 125	1	1	74	0	0	75
DAVE NIEDZIELSKI	GLOSTER GLADIATOR	1	15	53	0	0	68
GARRY HUNTER	T-CRAFT	1	1	49	0	0	50
PETE AZURE	O-57	1	1	40	0	0	41
THOMAS HALLMAN	HOWARD GH-1	1	1	37	0	0	38
SECOND ENTRIES	**WITH LOWER TIMES**						
WALTER FARRELL	CORSAIR	1	10	82	0	0	92

EMBRYO ENDURANCE	Event # 19						25
		P#	BP	T1	T2	T3	SCORE
WINN MOORE	DEBUT	1	9	110	120	120	359
DAN DRISCOLL	NIT II	1	9	96	101	120	326
DAVID PISHNERY	OLD SPECKLED HEN	1	9	84	101	120	314
MARK HOUCK	PRAIRIE BIRD	1	8	83	89	120	300
GEORGE BREDEHOFT	BIG CAT	1	9	88	70	120	287
PAUL STOTT	MR MALCOM	2	9	87	97	79	272
JOHN P HOUCK	SWALLOW	1	9	85	120	36	250
MARIA KONDRAT	FRESHMAN	1	5	95	62	70	232
MARK RZADCA	PUMA	1	9	46	77	94	226
PAT MURRAY	JABBERWOK	1	9	71	66	65	211
DENNIS RUHLAND	HONEY BEE	1	9	80	120	0	209
CHRIS BOEHM	YELLOW CAB	1	9	52	64	72	197
PRES BRUNING	FLYING FISH	2	9	63	64	53	189
JOHN STOTT	SLIM	1	9	81	40	37	167
ALBERT TIMKO	EAGLET	1	9	56	44	56	165
ARA DEDEKIAN	BORN LOOSER	1	9	46	49	47	151
ED NOVAK	ENSLOT	1	9	58	28	39	134
ROBERT BARD	GONZO	1	9	33	33	36	111
TOM CANFIELD	TABLEHOPPER	1	9	35	38	26	108
EDWARD ALLEBONE	DEBUT	1	9	94	0	0	103
JACK BARKER	GONZO	1	9	33	27	24	93
GEORGE WHITE	HORNET	1	9	74	0	0	83
CHARLES SAUTER	DEBUT	1	9	54	0	0	63
ALAN MKITARIAN	BMJR JABBERWOCK JR	1	9	47	0	0	56
EDWARD SMITH	FRESHMAN	1	9	35	0	0	44
SECOND ENTRIES	**WITH LOWER TIMES**						
PAUL STOTT	GYSPY	1	9	90	70	79	248
PRES BRUNING	KLINGON	1	9	38	34	28	109

NO-CAL PROFILE	Event # 17					17
		P#	T1	T2	T3	SCORE
WINN MOORE	DAYTON WRIGHT RACER II	2	92	70	114	276
DENNIS RUHLAND	FOLKERTS SK-4	1	75	82	112	269
MARK RZADCA	MR SMOOTHIE	1	80	91	94	265
JOHN P HOUCK	METEOR	1	69	83	74	226
WALTER FARRELL	CESSNA CARDNAL	1	105	27	82	214
CLARENCE RAKOW	CESSNA CARDINAL	1	91	188	0	211
ALAN MKITARIAN	CHAMBERMAID	1	53	85	60	198
BOB CLEMENS	OHKA FLYING BOMB	1	68	65	58	191
ED NOVAK	FARMAN 190	1	53	53	67	173
PAUL STOTT	AMBROSINI RACER	1	49	52	39	140
JOHN STOTT	EXTRA 400	1	107	25	0	132
MATTHEW KING	SAI 7	1	42	34	52	128
JACK BARKER	SPITFIRE	1	55	62	0	117
ARA DEDEKIAN	AVENGER	1	33	48	35	116
ED MCQUAID	BOLKHOVITINOV 5	1	30	22	45	97
GEORGE BREDEHOFT	P-39	1	46	44	0	90
GLEN SIMPERS	P40	1	64	0	0	64
SECOND ENTRIES	**WITH LOWER TIMES**					
WINN MOORE	DAYTON WRIGHT	1	40	0	0	40

DIME SCALE	Event # 16						18
		P#	BP	T1	T2	T3	SCORE
THOMAS HALLMAN	STAGGERWING	1	15	93	114	94	316
GLEN SIMPERS	VEGA	1	1	104	102	87	294
JIM DETAR	STAGGERWING	1	15	78	74	120	287
RICHARD ZAPF	HURICANE	1	10	55	65	84	214
JOHN P HOUCK	REARWIN INST TRAINER	2	1	55	62	44	162
DAVID MITCHELL	VAGA	1	1	39	57	58	155
WALTER FARRELL	STAGGERWING	1	15	28	66	45	154
MARK HOUCK	MESSERSMITT M-20	1	1	53	54	45	153
JACK MOSES	FAIRY FULMAR	1	10	37	43	43	133
PRES BRUNING	PT-19	1	11	39	39	41	130
MIKE WELSHANS	MILES MAGISTER	2	10	40	38	42	130
CHRIS BOEHM	BRISTOL BROWNIE	1	11	30	20	31	92
JOHN T HOUCK JR	BELLANCA	1	10	39	20	21	90
ED MCQUAID	ONG CONTINENTAL	1	1	23	30	26	80
PHILIP MCGOVERN	REARWIN	1	0	26	20	20	66
ORVILLE WILLIAMSON	STAGGERWING	1	15	24	0	0	39
BRUCE CLARK	REARWIN TRAINER	1	1	35	0	0	36
MICHAL ESCALANTE	MONOCOUPE	1	1	31	0	0	32
SECOND ENTRIES	**WITH LOWER TIMES**						
JOHN P HOUCK	VOUGHT PURSUIT	1	10	36	31	46	123
MIKE WELSHANS	HOWARD GH	1	0	39	35	28	102

Left - Dave Niedzielski with his Chambermaid**.** Ironically, the first three places in the Greve mass launch were taken by Mr. Smoothie models built from the Easy Built kits that Dave produces. (Side note: Paul Stott made it into the final round of the Greve with his Haines Racer!)

Right - Tom Nallen II campaigned his GeeBee QED and made it into the final round. This ship is overlooked by many, but it a real contender in this event.

Vic Nippert photos

JET CATAPULT	Event # 20												12
		PN	CP	MK	WK	BP	T1	T2	T3	T4	T5	T6	SUM
RICH WEBER	P-59	1	8	8	4	0	53	29	22	0	0	0	124
VICTOR NIPPERT	A-6	2	4	8	4	0	2	12	15	9	34	47	112
WALTER FARRELL	HE178	1	8	6	4	0	29	24	21	0	0	0	92
PAUL GRABSKI	HA200	2	8	6	4	0	15	24	34	0	0	0	91
TOM HALLMAN	HE178	1	8	8	4	0	22	27	18	9	14	10	87
GLEN SIMPERS	F2H	1	8	6	4	2	15	16	24	0	0	0	75
WINN MOORE	F-84	1	7	8	4	2	27	11	12	0	0	0	71
MICHAEL KAITERIS	F9F COUGAR	1	8	6	4	0	10	18	12	0	0	0	58
GERALD CRAWMER	B57A	1	5	6	4	2	9	3	6	12	18	7	56
TOM ARNOLD	CANBERRA	1	4	4	4	2	4	10	8	10	12	8	46
BLAKE MAYO	F9F PANTHER	1	8	6	4	2	9	9	6	5	7	4	45
MIKE WELSHANS	FOLLAND MIDGE	1	8	4	4	0	3	7	6	1	4	7	36
SECOND ENTRIES	**WITH LOWER TIMES**												
VICTOR NIPPERT	P-59	1	7	7	4	0	14	6	14	16	8	24	72
PAUL GRABSKI	MIG-15	1	8	6	4	0	17	12	10	24	11	10	71
GLEN SIMPERS	B-57	2	8	6	4	2	16	15	12	0	0	0	63

THOMPSON RACE	Event # 22	RAW TIMES		
		T1	T2	T3
CHRIS STARLEAF	HUGHS H1	56	59	86
CHARLES SAUTER	MARCOUX BROMBERG	62	56	63
MATTHEW KING	MR MULLIGAN	43	48	46
TOM NALLEN	QED	72	65	37
WALTER FARRELL	MR. MULLIGAN	56	47	
THOMAS HALLMAN	LOOSE RACER	44	30	
JIM DETAR	ALTAIR	63	28	
PAUL BOYANOWSKI	LAIRD SOLUTION	36	9	
MICHAL ESCALANTE	CESSNA	60	8	
CHRIS MCGOVERN	HUGHS H1	34		
RICHARD ZAPF	LTR-14	25		
ARA DEDEKIAN	HUGHS H-1	24		
ORVILLE WILLIAMSON	STAGERWING			
GEORGE BREDEHOFT	HUGHS H1			

GREVE RACE	Event # 23	RAW TIMES		
		T1	T2	T3
WALTER FARRELL	MR SMOOTHIE	93	107	110
DOUG BEARDSWORTH	MR SMOOTHIE	96	99	102
DALLAS CORNELIUS	MR SMOOTHIE	107	93	94
PAUL STOTT	HAINES	113	105	55
GERALD CRAWMER	CHAIMBER MAID	100	89	
GEORGE WHITE	MR SMOOTHIE	67	78	
DAVE NIEDZIELSKI	CHAMBERMAID	73	75	
DAVID MITCHELL	PETE	79	74	
CHARLES SAUTER	KR-4	66	72	
RICHARD ZAPF	LC-DE	74	12	
JIM DETAR	MISS LOS ANGLES	63		
FRANK ROWSOME	CHAIMBERMAID	62		
DENNIS RUHLAND	FOLKERTS SK2	60		
ROBERT BARD	CHAMBERMAID	53		
MICHAL ESCALANTE	JACK RABBIT	43		
MIKE WELSHANS	JACK RABBIT	33		
GEORGE BREDEHOFT	CAUDRON C460	14		
RICHARD GORMAN	SMOOTHIE	12		
GERARD KONDRAT	BROWN B-2	6		

LOW-WING MILITARY TRAINER	Event # 6	RAW TIMES		
		T1	T2	T3
DALLAS CORNELIUS	G46B	135	91	99
GEORGE WHITE	T6-B	85	70	70
WALTER FARRELL	MAGISTER	81	77	69
TOM HALLMAN	PT26	96	99	12
CHRIS STARLEAF	T-28	62	69	
PAT MURRAY	T-34	65	57	
JOHN P HOUCK	MILES MAGIE	63	57	
FRANK ROWSOME	PT-19	55	57	
DOUG BEARDSWORTH	T-34	36	47	
DR. RICHARD ZAPF	BT-13	63	45	
PAUL STOTT	BC-1	52	45	
TOM ARNOLD	DO 335 T	20		
DAVID FRANKS	G594	7		
LUC MARTIN	SIPA S12	7		
MARK HOUCK	CT-4	6		
MIKE WELSHANS	T-28			
TOM NALLEN	TOKYO KI 107			

WWI COMBAT	Event # 25	RAW TIMES		
		T1	T2	T3
TOM HALLMAN	FOKKER D7	21	106	93
DOUG BEARDSWORTH	SOPWITH PUP	56	67	58
RICH WEBER	ROLAND D.IIa	49	100	55
RICHARD GORMAN	SE-5	72	89	14
WALTER FARRELL	MARTINSYDE	41	30	
GEORGE WHITE	FOKKER D7	48	28	
PETER KAITERIS	NIEUPORT 11	15	28	
MATTHEW KING	FOKKER D7	41	12	
JOHN P HOUCK	SE-5	43		
CHRIS STARLEAF	POMETIO PE	9		
DENNIS RUHLAND	NIEUPORT 11	9		
FRANK ROWSOME	FOK D-7	7		
RICHARD ZAPF	FOKKER D7	6		
CHRIS MCGOVERN	FOK D7	6		

WWII COMBAT	Event # 26	RAW TIMES			
		T1	T2	T3	T4
WALTER FARRELL	JUDY	101	114	90	132
PAT MURRAY	DEFIANT	68	79	90	82
CHARLES SAUTER	P-51B	62	74	77	
LUC MARTIN	ARSENAL VG-33	86	99	8	
GERALD CRAWMER	KHARKOV	75	62	8	
WINN MOORE	TONY	75	58		
FRANK ROWSOME	F4F WILDCAT	99	57		
PETER KAITERIS	KATE	101	55		
CHRIS STARLEAF	FIAT G-50	81	55		
RICHARD GORMAN	TONY	85	51		
TOM NALLEN	P-66	88	21		
MIKE WELSHANS	A-36	58	13		
DR. RICHARD ZAPF	HE-112	60	7		
PETE AZURE	C3603	62			
MATTHEW KING	HE-100	51			
TOM ARNOLD	P-39	50			
JOHN ERNST	P-47	48			
PROF. DAVID FRANKS	HE 100	48			
BILL MUEFFELMANN	HE 100D	45			
CHRIS BOEHM	P51D	44			
DALLAS CORNELIUS	KI-61 HEIN	25			
ERIKA ESCALANTE	P-51	16			
CHRIS MCGOVERN	FAIREY FOX	14			
ROBERT BARD	SDB	12			
LARRY SWEAT	A-36	12			
DAVE NIEDZIELSKI	GLADIATOR	12			
JOHN P HOUCK	KATE	4			
ARA DEDEKIAN	BUFFALO				
GERALD KONDRAT	BF-109 F				

B.L.U.R.	Event # 27	
		PLACE
DALLAS CORNELIUS	MR SMOOTHIE	1
JOHN P HOUCK	F-86	2
LUC MARTIN	KB-28	3

S.L.O.W.	Event # 28	
		PLACE
DAVE NIEDZIELSKI	BLERIOT	1
JOHN P HOUCK	EASTBORN MONOPLANE	2
ED NOVAK	BLERIOT	3

GOODYEAR / FORMULA RACE	Event # 24	RAW TIMES	
		T1	T2
RICHARD ZAPF	WLH-1	78	67
CHRIS STARLEAF	POGO	67	66
PAT MURRAY	MIDGET MUSTANG	49	33
MATTHEW KING	MIDGET MUSTANG	60	16
WALTER FARRELL	POGO	53	4
GEORGE BREDEHOFT	FALCON SPECIAL 2	31	
TOM NALLEN	LEIGHNOR	15	
RICHARD GORMAN	SONERA1	11	
WINN MOORE	MIRAGE	2	
DALLAS CORNELIUS	LONG LA-1		

Orville Williamson and Chris Starleaf crank in the turns for the first round of the Thompson mass launch. Russ Brown and Dennis Ruhland lend a hand. Chris went on to win the event with his Hughs H-1.
Vic Nippert photo

BP Quiz Answer

I make it out to be 17 points with dummy props on the wings, 33 if they are all powered. If you don't like the idea of dragging skis along on your flight, dump the extra three BPs they get you and go with the undercart in the "up" position. It flew on wheels too.

Gone West

Vern Neff, long time member of the Cleveland Free Flight Society, passed July 6, 2013 peacefully at home surrounded by family. Dr. Neff achieved a Ph.D. in Chemical Physics from Syracuse University. After a four year enlistment in the U.S. Army as a Physical Chemist, he moved to Ohio, where he did research in Molecular Spectroscopy for General Tire and Rubber Company. The realization that research and teaching were his true passion, lead him to take a position at Kent State University as a Professor of Chemistry, where he remained until retirement in 1993. The students that were lucky enough to have him as a professor knew his greatest gift in life was his love of teaching and his passion to help any individual to learn. He received the Distinguished Teacher Award from Kent State University. He was instrumental in the development of liquid crystal display technology, and published 24 articles on his scholarly research, mostly in the field of electrochemistry of Prussian Blue. He was a member of the Academy of Model Aeronautics, Cleveland Free Flight Society, American Chemical Society, Sigma Xi, and a longtime member of the Cleveland Ecophilia Club. He greatly enjoyed the hobby and challenge of building and flying model airplanes designed to test the limits of very light weight construction and endurance.

Jim Kaman, a long time FACer has passed away. Jims' notoriety was through his model related cartooning that has been duplicated many times in local and national newsletters over the past decades. He did all of the illustrations for Bill Warners series of small books "Hey Kid, Ya Wanna build an Airplane?" He also was a master scale modeler doing many plans for Cleveland Model Supply Company; his crowning achievement being the Curtiss NC-4 series. Jim was an outstanding artist, having worked with John Pike in watercolors and before that as a cover illustrator for pulp magazines in New York City. Before retirement in 1987 he had taught art in Kingston (NY) City Schools on the High School and Junior High School levels. *Vic Nippert*

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Tom Nallen II
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*Note - Names in **bold type** are FAC Board members.

When contacting FAC officers via email, please be sure to include "**FAC**" in the subject line so that your message isn't overlooked.

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- Membership brings you six issues of the **Flying Aces Club News**, and all the grins that come with being a Junior Bridman.
- When the **Dreaded Red X** shows up in that circle next to your address label, it is time to renew your membership. Please note: the **DRX** is the only notice you will receive. Memberships will not be back dated so any missed issues of the newsletter will have to be purchased. (For back issues, see below.)
- Your renewal date will be printed on your newsletter mailing label so the **DRX** won't sneak up on you.
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FAC Contest Calendar

Durham, CT	Sept 1	PINKHAM FIELD IRREGULARS - MINI MEET	Paul Stott	203 929 5139 H 203 258 3962 C
Flint, MI	Sept 1	CLOUDBUSTERS	Mike Welshans	mbwelshans@aol.com
Muncie, IN	Sept 5 - 6	**FAC OUTDOOR CHAMPS**	Ralph Kuenz	rdkuenz@yahoo.com
Meriden, CT	Sept 15	GLATONBURY MODELERS FALL FLY-IN	Paul Stott	203 929 5139 H 203 258 3962 C
Lorain, OH	Sept 15	CLEVELAND FREE FLIGHT SOCIETY	Jim Gaffney	jamesfgaffney@hotmail.com
Flint, MI	Sept 22	CLOUDBUSTERS	Chris Boehm	merlin236@comcast.net
Muncie, IN	Sept 28 - 29	**CIA "TED DOCK" MEMORIAL FREE FLIGHT MEET**	Lonnie Kinder	lonkin@comcast.net 765 945 7626
Marion, KS	Oct 5-6	12TH ANNUAL HAFFA OUTDOOR CONTEST / NFFS NATIONAL CUP MEET	Jeff Englert	316-722-7491 jenglert@cox.net
Durham, CT	Oct 6	PINKHAM FIELD IRREGULARS - MINI MEET	Paul Stott	203 929 5139 H 203 258 3962 C
Lorain, OH	Oct 6	CLEVELAND FREE FLIGHT SOCIETY	Jim Gaffney	jamesfgaffney@hotmail.com
Flint, MI	Oct 6	CLOUDBUSTERS	Winn Moore	winn_moore@yahoo.com
Pensacola, FL	Oct 12 - 14	2013 GATHERING OF THE TURKEYS	George White	White76@cox.net
Wawayanda, NY	Oct 19 - 20	BARRON FIELD AIR RACES	Tom Hallman	maxfliart@hallmanstudio.com
Flint, MI	Oct 19	CLOUDBUSTERS	Mike Welshans	mbwelshans@aol.com
Flint, MI	Nov 2	CLOUDBUSTERS	Chris Boehm	merlin236@comcast.net
Durham, CT	Nov 3	PINKHAM FIELD IRREGULARS - MINI MEET	Paul Stott	203 929 5139 H 203 258 3962 C
Gainsville, TX	Nov 16 - 17	**TEXAS SCALE CHAMPS**	Duke Horn	214 500 7652
Meriden, CT	Nov 17	GLATONBURY MODELERS TURKEY FLY	Paul Stott	Ditto above
Durham, CT	Dec 1	PINKHAM FIELD IRREGULARS - MINI MEET	Paul Stott	Ditto above

To get your event listed on this page, ***send the info to the editor.*** *To get your event listed on the website contest page, send your stuff to our esteemed Webmaster, Dave Mitchell.* ***Contact information is on the Membership Information page.***

Ode to Don DeLoach

Wings are more efficient if elliptical
But that isn't especially practical
From a structural point of view.
Tapered wings built well won't fracture
And are easier to manufacture.
Elliptical wings we thus eschew.

Unless we're building for Flying Aces
A scale design that by rules places
The design in WWII.
Spitfires, Heinkels then are practical,
Notwithstanding wings elliptical,
And might beat your F-4U.

Grant Carson

Every Summer, the Cloudbusters have a big club family picnic in conjunction with their July contest, complete with hot dogs and all the fixins. These photos and the one on our cover were taken by Bruce Thoms at this year's bash. 1.) Pete Azure on retrieval with his Nassise P-47. 2.) Pres Bruning did some flying with his amazing new Constellation. 3.) Winn Moore built this Stinson from Earl Stahl plans. 4.) Pat Murray drove up from Indianapolis to join the fun, and won the WWII mass launch with his Boulton Paul Defiant.

*5.) FACer Matt King sent us this photo and caption: "*I took a break this week from FF models and did some work on something bigger (bigger even than Giant Scale). We at the Old Rhinebeck Airdrome are rebuilding the Albatros DVa that we have. The color scheme will go from Von Scliech's to Walter Boning's beautiful Bavarian blue and white diamond/checkerboard. HmmHmm! We've been scraping the varnish off and sanding till elbow grease is gone (an orbital palm sander helps though). Stab and upper wing in GA being rebuilt. Had AAA go thru it one day during a show. Should be in the air by September. Take a guess how much rubber cross-section this one takes!" Might need a Mercedes engine to power the winder.

6.) Don DeLoach carved up a nice prop for his new WWI ship, a Phoenix C.I, and then gave it a coat of wood stain before sealing it. It's a quick a and easy step that adds a lot of character to a model. Don DeLoach photo

7.) *Mike Stuart sent us a contest report and a couple of photos from the other side of the pond. He's pictured here with his beautiful Portsmouth Aviation Aerocar at last year's FAC Nats in Geneseo. "*Yesterday was the Oxford Dreaming Spires meeting in blazing sunshine, plenty of thermal activity and an 8 mph breeze. One of the events is a low key scale event, with the flying part judged on realism rather than duration. A large turnout this year - about 30 models I think (you were allowed to enter two models) . You get three flights, best two count. Peter Smart entered his Lancaster and new Wellesley (see photos *8 & 9* - love the airbrushed geodetic effect). Anyway - I'd been working on the Aerocar trim, with a Gurney tab as suggested by Tom Hallman, plus I added small plastic bobbins at the rear pegs which seemed to stop the bunching problem. It was flying better than ever. You can guess what's coming… Third competition flight, 1400 winds, it got into some good air and was timed at 4 minutes 30seconds OOS, disappearing over the trees on the far side of the river. It's the first scale model I have ever had fly away in all my years of aeromodelling, and even the drag of two freewheeling props didn't help bring it down. It was also the only model in the scale competition to be lost. I now have felt the bittersweet experience many of you have previously described." *I wonder if he got any extra realism points for long distance flying...*

BUILD...What you really like FLY...All you can WIN...Just let it happen


1


2


3


4


5


6


7
G-AGTG


8


9

FLYING ACES CLUB 2014 CALENDAR*

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FLYING ACES Club

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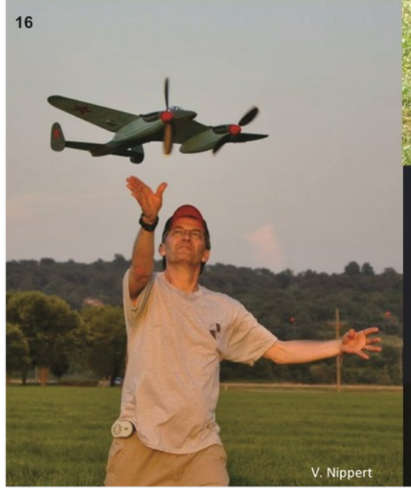
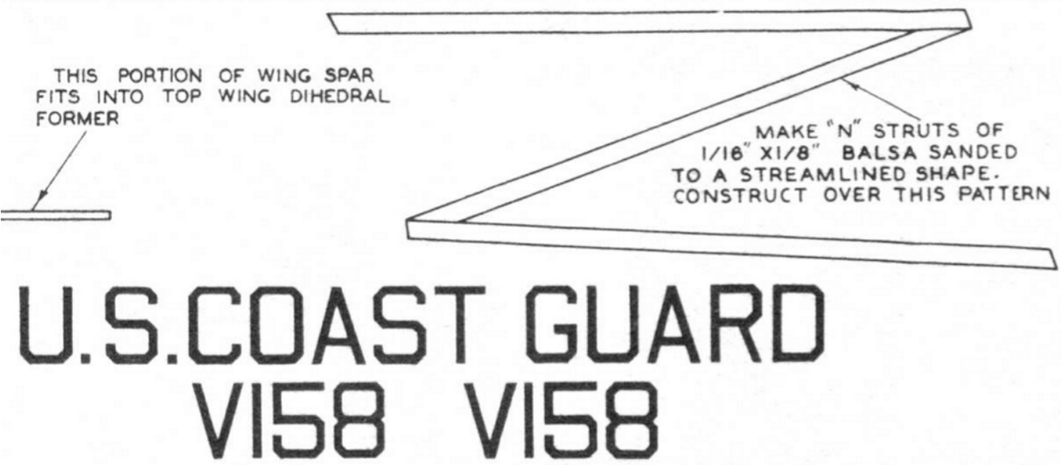
Below: Benedict Dion came to the Non Nats with a new biplane that he built from his own design. The "B-8" showed imagination, craftsmanship, and it flew beautifully! Benedict is one of the younger members of Escadrille Harfang. Bruce Thoms photo

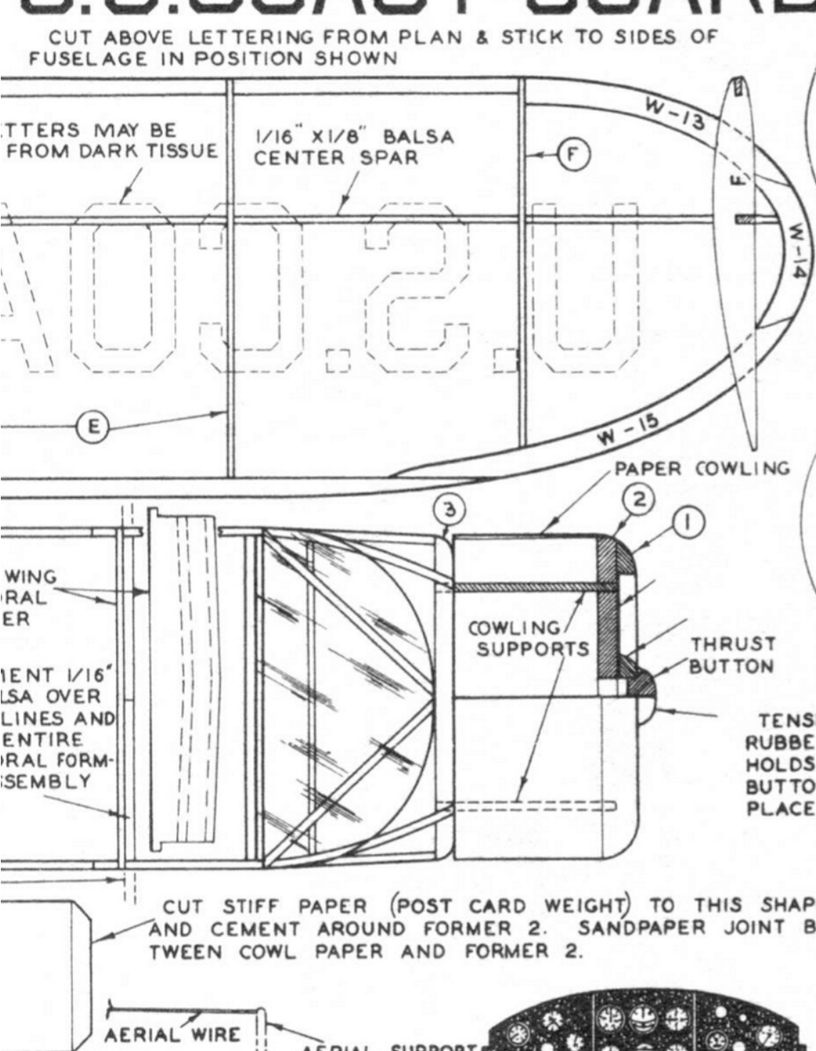


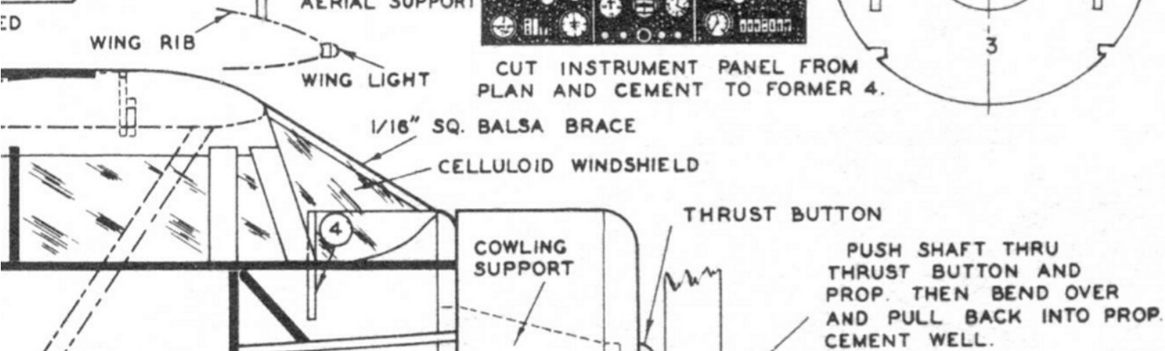
1. Dallas Cornelius launching his Boeing 306B for an evening trim flight **2.** DJ Ruhland having fun with a classic HLG...it's not always about the competition **3.** Wally Farrell's Miles Sparrowhawk put in a *very* memorable flight during an informal evening Jumbo mass launch **4.** Ara Dedekian with his OT Stick model **5.** Erika Escalante isn't just another pretty face, she flew a P-51 in the WWII mass launch! **6.** Maria Kondrat holds the crumpled remains of Vance Gilbert's Avro 547 **7.** Doug Beardsworth's Albatros cruises by **8.** The ever popular Greve mass launch ended with an all-Smoothie finish, despite the efforts of Paul Stott and his Haines Special **9.** Chris Starleaf launching his Scale winning F-82 **10.** Dave Mitchell's Waco QDC maxed to place in third in Scale **11.** The final round of the WWI mass launch: Hallman, Weber, Gorman, and Beardsworth. **12.** Beardsworth again, this time with his big, beautiful Messerschmitt M29 **13.** Hickam Field hangar on wheels. You gotta love the creativity that FACers bring to the field! **14.** Part of the WNYFFS delegation; Jim Detar and Mark Rzadka **15.** The smile says it all; Paul Boyanowski on the way back with his Spartan Executive **16.** Tom Hallman's great flying MiG DIS took second place in Jumbo **17.** Gerard Kondrat gets some pointers from George Bredehoft during one of the evening trimming sessions **18.** Matt King gives his Giant Scale Taylorcraft a mighty heave **19.** Clive Gamble launches his brand new Monsoon Clipper **20.** It's hard to believe that anyone could sleep through all that excitement, but here we have three of the FAC's sleeping beauties...we're not going to mention any names. But these fellows can be thankful that their pals didn't follow through with the idea of scattering large quantities of beer cans around their chairs before the pics were snapped! The perp, er, photographers wish to remain anonymous.

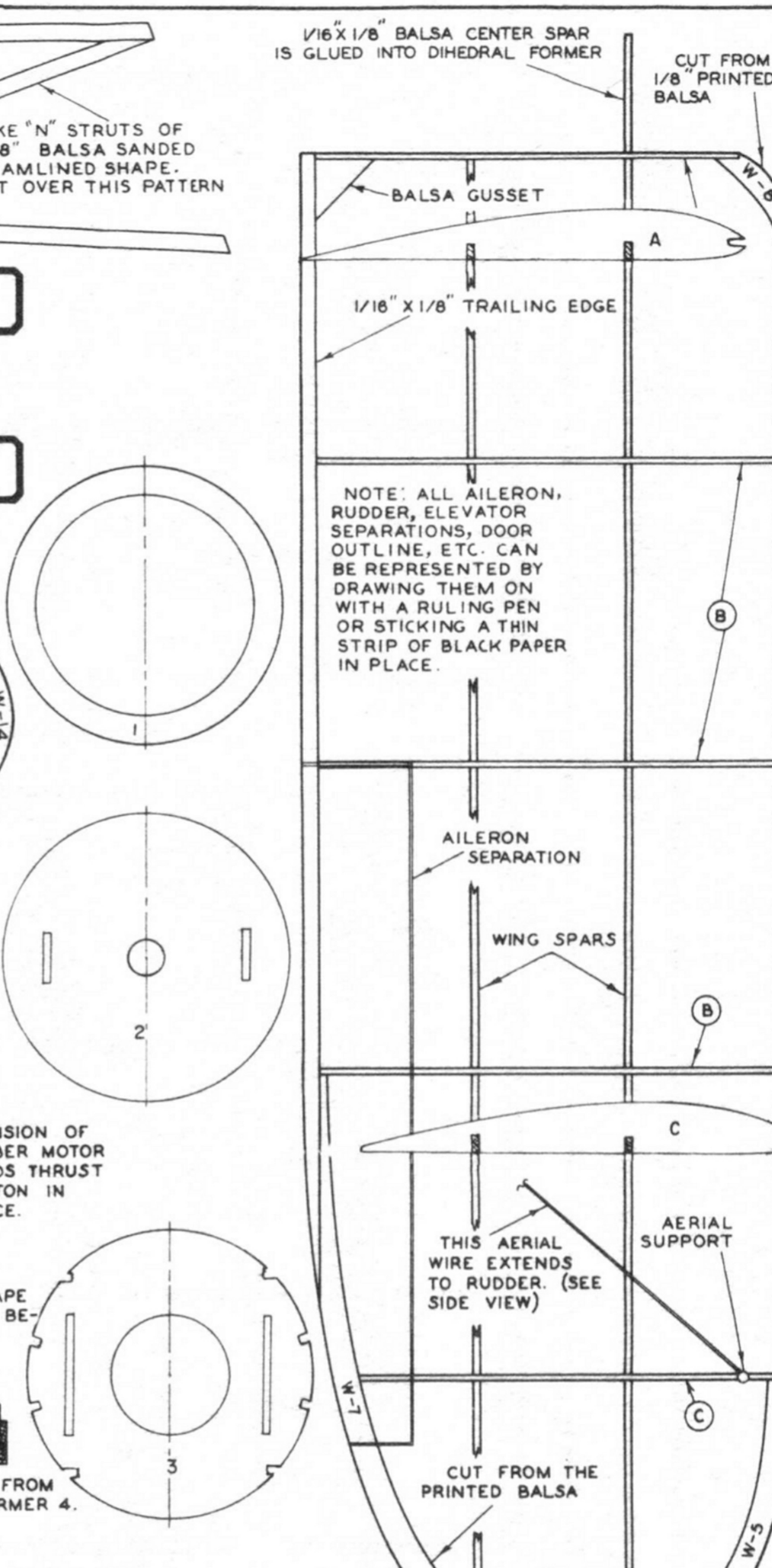


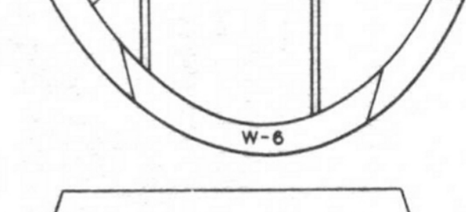
U.S.COAST GUARD
V158 V158
U.S.COAST GUARD

CUT ABOVE LETTERING FROM PLAN & STICK TO SIDES OF FUSELAGE IN POSITION SHOWN

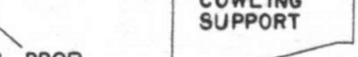








SEVERAL OF THESE FIVE PLACE, WACO CABIN PLANES HAVE BEEN SECURED BY THE U.S. COAST GUARD FOR BORDER PATROL DUTY.



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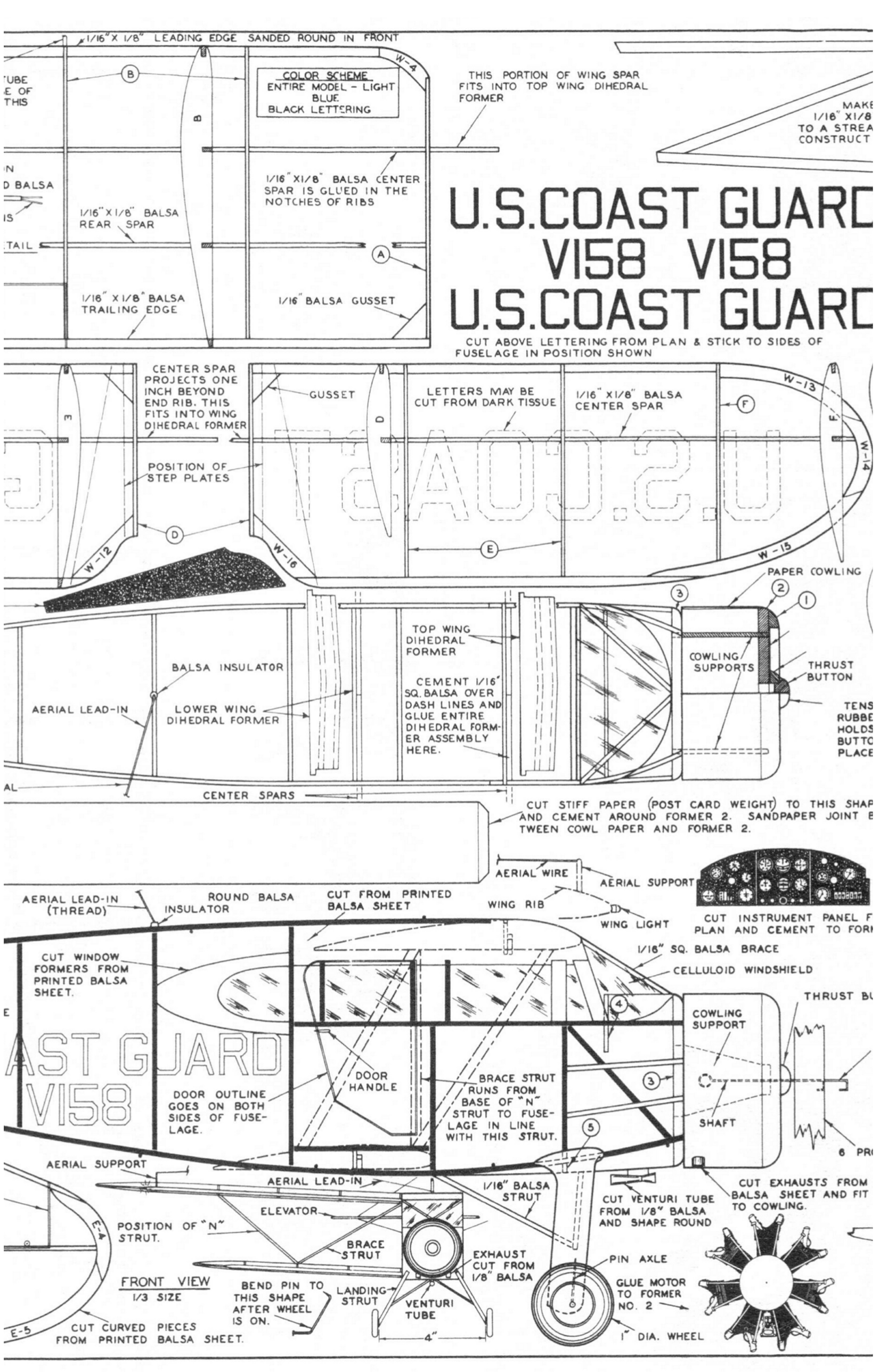
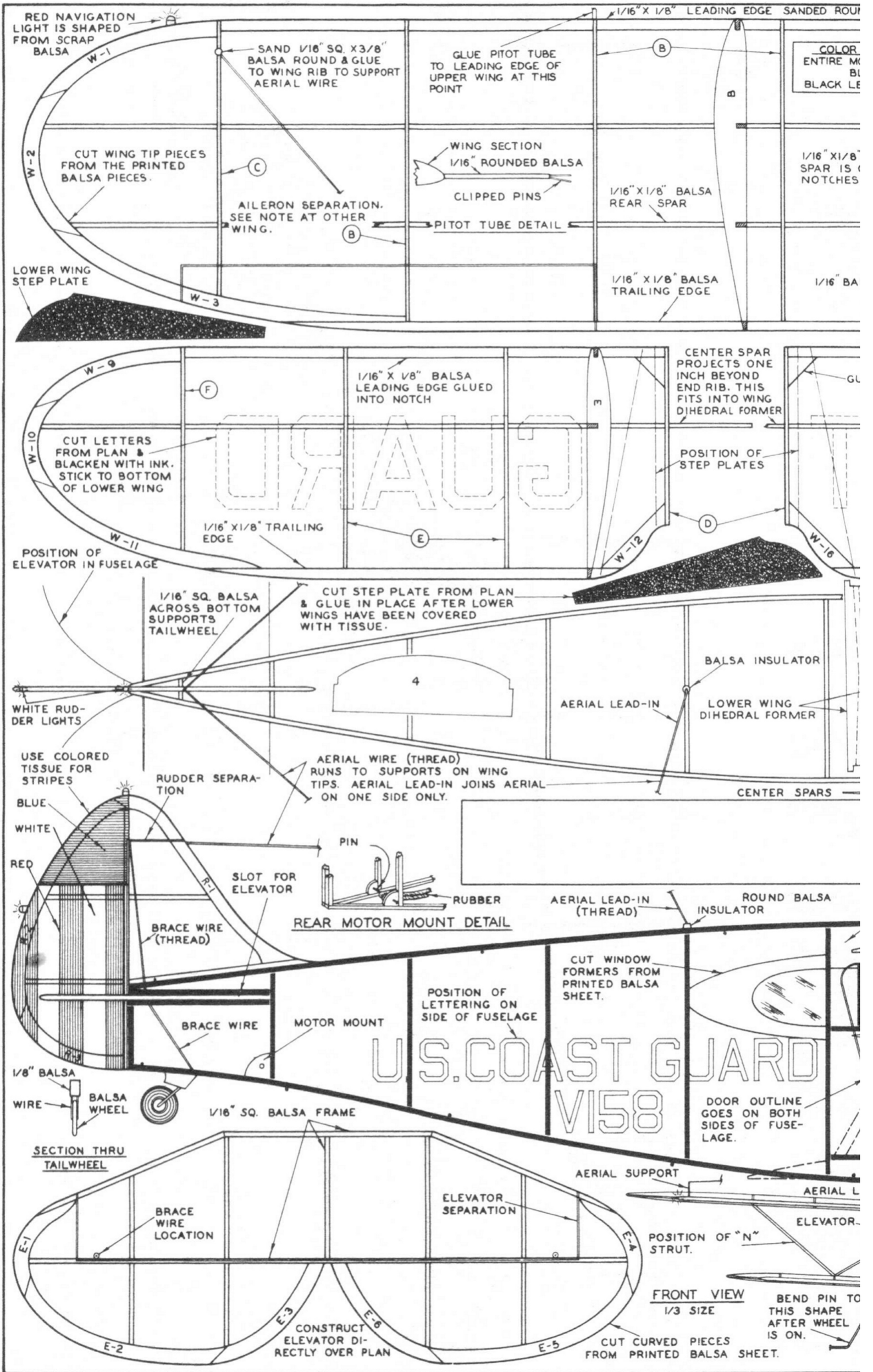
WACO COAST GUARD

WINGSPAN - 25 IN.	LENGTH - 16 IN
KIT NO. - E1	DRAWN BY - Robert Peden


1/16" X 1/8" LEADING EDGE SANDED ROUND IN FRONT
COLOR SCHEME
ENTIRE MODEL - LIGHT BLUE.
BLACK LETTERING
THIS PORTION OF WING SPAR FITS INTO TOP WING DIHEDRAL FORMER
1/16" X1/8" BALSA CENTER SPAR IS GLUED IN THE NOTCHES OF RIBS
1/16" X1/8" BALSA REAR SPAR
1/16" X 1/8" BALSA TRAILING EDGE
1/16" BALSA GUSSET
U.S.COAST GUARD
V158 V158
U.S.COAST GUARD
CUT ABOVE LETTERING FROM PLAN & STICK TO SIDES OF FUSELAGE IN POSITION SHOWN
CENTER SPAR PROJECTS ONE INCH BEYOND END RIB. THIS FITS INTO WING DIHEDRAL FORMER
GUSSET
LETTERS MAY BE CUT FROM DARK TISSUE
1/16" X1/8" BALSA CENTER SPAR
POSITION OF STEP PLATES
PAPER COWLING
TOP WING DIHEDRAL FORMER
BALSA INSULATOR
AERIAL LEAD-IN
LOWER WING DIHEDRAL FORMER
CEMENT 1/16" SQ. BALSA OVER DASH LINES AND GLUE ENTIRE DIHEDRAL FORMER ASSEMBLY HERE.
COWLING SUPPORTS
THRUST BUTTON
CENTER SPARS
CUT STIFF PAPER (POST CARD WEIGHT) TO THIS SHAP
AND CEMENT AROUND FORMER 2. SANDPAPER JOINT B
TWEEN COWL PAPER AND FORMER 2.
AERIAL WIRE
AERIAL SUPPORT
AERIAL LEAD-IN (THREAD)
ROUND BALSA INSULATOR
CUT FROM PRINTED BALSA SHEET
WING RIB
WING LIGHT
CUT INSTRUMENT PANEL F
PLAN AND CEMENT TO FOR
1/16" SQ. BALSA BRACE
CELLULOID WINDSHIELD
CUT WINDOW FORMERS FROM PRINTED BALSA SHEET.
COWLING SUPPORT
THRUST BU
DOOR HANDLE
BRACE STRUT RUNS FROM BASE OF "N" STRUT TO FUSELAGE IN LINE WITH THIS STRUT.
DOOR OUTLINE GOES ON BOTH SIDES OF FUSELAGE.
SHAFT
6 PR
AERIAL SUPPORT
AERIAL LEAD-IN
1/16" BALSA STRUT
CUT EXHAUSTS FROM BALSA SHEET AND FIT TO COWLING.
CUT VENTURI TUBE FROM 1/8" BALSA AND SHAPE ROUND
ELEVATOR
POSITION OF "N" STRUT.
BRACE STRUT
EXHAUST CUT FROM 1/8" BALSA
PIN AXLE
GLUE MOTOR TO FORMER NO. 2
FRONT VIEW
1/3 SIZE
BEND PIN TO THIS SHAPE AFTER WHEEL IS ON.
LANDING STRUT
VENTURI TUBE
4"
1" DIA. WHEEL
CUT CURVED PIECES FROM PRINTED BALSA SHEET.


RED NAVIGATION LIGHT IS SHAPED FROM SCRAP BALSA
W-1
W-2
W-3
SAND 1/16" SQ. X 3/8" BALSA ROUND & GLUE TO WING RIB TO SUPPORT AERIAL WIRE
GLUE PITOT TUBE TO LEADING EDGE OF UPPER WING AT THIS POINT
1/16" X 1/8" LEADING EDGE SANDED ROU
B
COLOR
ENTIRE M
BL
BLACK LE
CUT WING TIP PIECES FROM THE PRINTED BALSA PIECES.
C
WING SECTION
1/16" ROUNDED BALSA
CLIPPED PINS
PITOT TUBE DETAIL
1/16" X 1/8" BALSA REAR SPAR
1/16" X1/8"
SPAR IS
NOTCHES
AILERON SEPARATION. SEE NOTE AT OTHER WING.
B
LOWER WING STEP PLATE
1/16" X 1/8" BALSA TRAILING EDGE
1/16" BA
W-9
W-10
W-11
W-12
W-16
F
1/16" X 1/8" BALSA LEADING EDGE GLUED INTO NOTCH
CENTER SPAR PROJECTS ONE INCH BEYOND END RIB. THIS FITS INTO WING DIHEDRAL FORMER
GU
CUT LETTERS FROM PLAN & BLACKEN WITH INK. STICK TO BOTTOM OF LOWER WING
POSITION OF STEP PLATES
1/16" X1/8" TRAILING EDGE
E
D
POSITION OF ELEVATOR IN FUSELAGE
1/16" SQ. BALSA ACROSS BOTTOM SUPPORTS TAILWHEEL
CUT STEP PLATE FROM PLAN & GLUE IN PLACE AFTER LOWER WINGS HAVE BEEN COVERED WITH TISSUE.
BALSA INSULATOR
4
AERIAL LEAD-IN
LOWER WING DIHEDRAL FORMER
WHITE RUDDER LIGHTS
USE COLORED TISSUE FOR STRIPES
RUDDER SEPARATION
AERIAL WIRE (THREAD) RUNS TO SUPPORTS ON WING TIPS. AERIAL LEAD-IN JOINS AERIAL ON ONE SIDE ONLY.
CENTER SPARS
BLUE
WHITE
RED
R-1
PIN
SLOT FOR ELEVATOR
RUBBER
REAR MOTOR MOUNT DETAIL
AERIAL LEAD-IN (THREAD)
ROUND BALSA INSULATOR
BRACE WIRE (THREAD)
CUT WINDOW FORMERS FROM PRINTED BALSA SHEET.
POSITION OF LETTERING ON SIDE OF FUSELAGE
BRACE WIRE
MOTOR MOUNT
U.S.COAST GUARD
V158
1/8" BALSA
WIRE
BALSA WHEEL
1/16" SQ. BALSA FRAME
DOOR OUTLINE GOES ON BOTH SIDES OF FUSELAGE.
SECTION THRU TAILWHEEL
AERIAL SUPPORT
AERIAL L
ELEVATOR SEPARATION
BRACE WIRE LOCATION
E-1
E-2
E-3
E-4
E-5
E-6
ELEVATOR
POSITION OF "N" STRUT.
FRONT VIEW
1/3 SIZE
BEND PIN TO THIS SHAPE AFTER WHEEL IS ON.
CONSTRUCT ELEVATOR DIRECTLY OVER PLAN
CUT CURVED PIECES FROM PRINTED BALSA SHEET.