

Cloudbuster membership and subscription to the newsletter is \$16.00 per year (\$6.00 membership without subscription). All memberships expire on Dec. 31. Subscription membership includes all Newsletter issues for the year.

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The Cloudbusters meet at 8pm. on the third Tuesday of the month at
Drayton Ave. Presbyterian Church
2441 Pinecrest Avenue
Ferndale, MI 48220 The meeting room is #309
No meetings in June, July, or August.

Be sure to visit our web page to get the winter 2014 handout. If you do not have access to the web or a printer, contact a member who does and get your copies for handout today.

Cloudbusters Model Airplane Club
976 Pearson St
Ferndale MI 48220

Cloudbusters NEWSLETTER

Cloudbusters Model Airplane Club of Michigan, Inc.

Our 76th Year

May-June 2015

Summer is Here! Finally!

The first outdoor contest of 2015 was a success! A big thanks to Chris for letting everyone know the field was WET but usable. And the wind allowed us to park on the big lot in the southwest. It remains surprising to me the amount of water that stands on that park; I don't know why it doesn't drain off faster. Down by the swamp near the CL circle, there was standing water and Jack and I didn't dare take our bike across - all ventures to the north of there were done on foot or with Winn's quad.

We had at least a dozen member/flyers show up. The temperatures were a little chilly in the morning, but they got up into the 60s by the end of the day. The sun was out all day, but there was a wind blowing to the NNE all day. This affected the contest - Winn and I agreed to a 90-second max for the day since we were flying on the shortest part of the field. However, even with the wind, there were thermals to be had. The combo of wind and thermals doomed at least one plane. We had four planes fly off the field, two of which were certain goners, one which might have been found later and one which was abandoned but found by another flyer.

Here are some highlights before the event results: Jack Bredehoff lost his brand new (finished the night before, of course) NoCal Cessna Centurion OOS in a big boomer. His two-flight total won NoCal. John Jackson came with a car load of new models and a determination to win. He took 3 Kanones, two of them with brand new planes. He gave up on finding his new Peanut Chambermaid, but Jack and I found it while looking (unsuccessfully) for my Dime Chambermaid. I lost my Chambermaid when it flew way north beyond the school. I did take home Golden Age Monoplane and WWII. Pete Azure's venerable King Harry also flew across the road; I don't know if he

found it later - he did say he would look one more time. Winn Moore took home zero Kanones - but he DID say that he left all his good flying planes in the boxes since he didn't want to lose them (smart man).

Here are the results:

Dime Scale - 3 Contestants

- 1st - John Jackson - Staggerwing
- 2nd - George Bredehoff - Chambermaid (lost on 2nd flt)
- 3rd - Winn Moore - MO-1

NoCal - 3 Contestants

- 1st - Jack Bredehoff - Centurion (lost OOS on 2nd flt)
- 2nd - Chuck Hickson - Chambermaid
- 3rd - George Bredehoff - Chambermaid

2 Bit Plus One - 3 Contestants

- 1st - Chris Boehm - Flying Aces Moth
- 2nd - George Bredehoff - Jimmie Allen Special
- 3rd - Winn Moore - Jimmie Allen Skokie

Golden Age Monoplane - 3 Contestants

- 1st - George Bredehoff - Pegna PC-1
- 2nd - Chris Boehm - Aeronca
- 3rd - Winn Moore - Mr Mulligan

Embryo - 3 Contestants

- 1st - John Jackson - Embryomatic
- 2nd - Winn Moore - Durham Mystery Ship
- 3rd - Ron Joyal - Big Cat

Peanut - 3 Contestants

- 1st - John Jackson - Chambermaid
- 2nd - Chris Boehm - P-51D
- 3rd - George Bredehoff - Stuka

WWII Combat - 4 Contestants

- 1st - George Bredehoff - Stuka
- 2nd - Chris Boehm - P-51D
- 3rd - Winn Moore - P-51B

--george

BIG NEWS! FLYING MODELS MAGAZINE IS COMING BACK.

When Winn & I attended the Toledo Show this year we were a bit surprised to see that Flying Models had a booth. Then we walked up and realized what was going on. Thayer Syme, the former Flying Models Editor, has purchased the magazine rights, plan service and the lot including all unfulfilled subscriptions. It just took him this long to get the purchase through the legal system. Having met Thayer at Geneseo last year we already knew he was committed to this project. That in mind Winn & I immediately signed up. There was a Toledo Show special and Thayer gave us permission to offer it to Cloudbusters for a limited time. The deadline for this newsletter offer is May 31. See the coupon below. If you would like to get in on this new introductory offer please contact Thayer at thayer@flying-models.com or phone him at 203-617-9308.

FLYING MODELS TOLEDO SHOW SPECIAL - JUST \$19.95!

Enter my subscription to *Flying Models* New Renew

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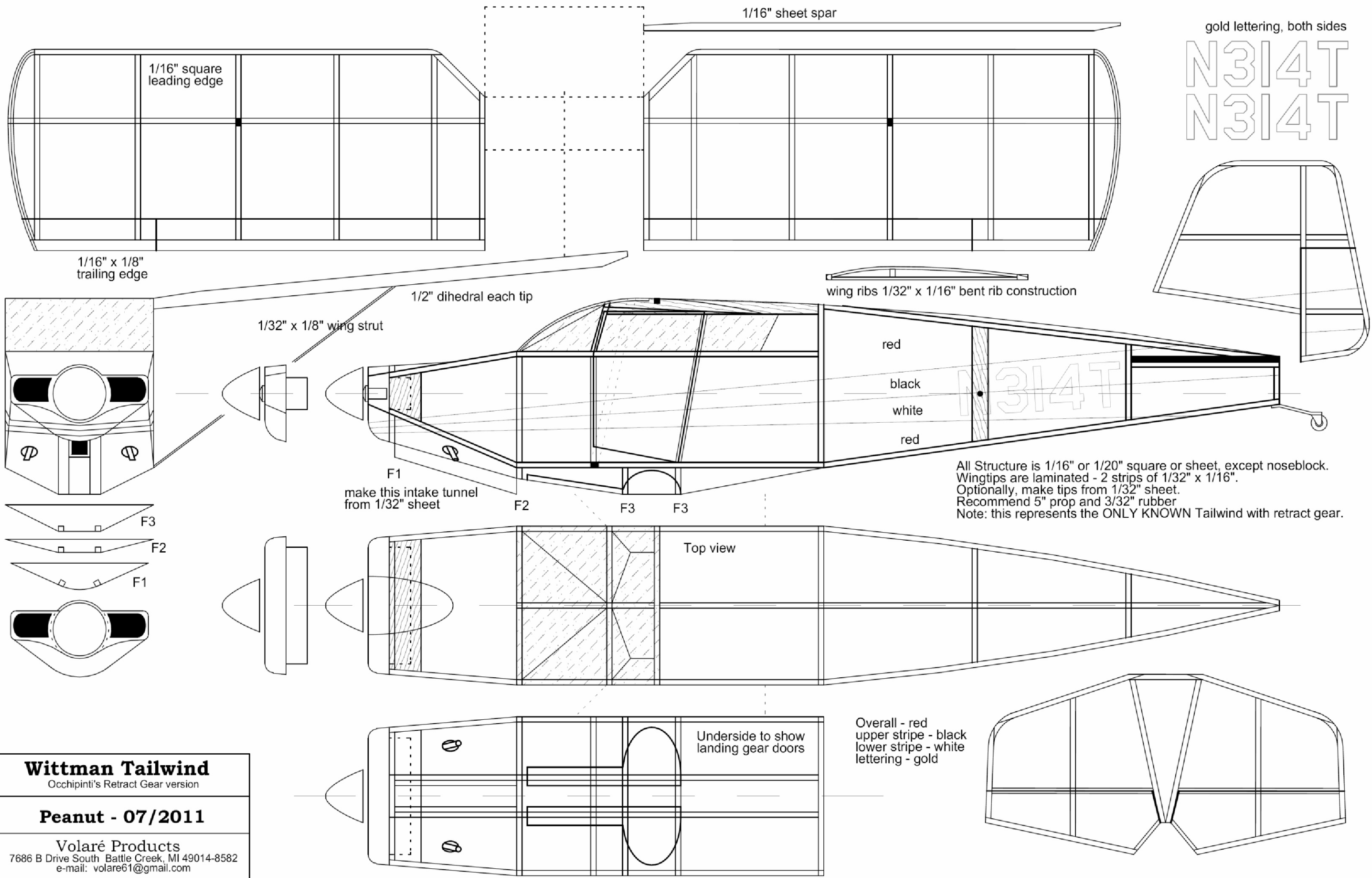
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FLYING MODELS
The Modeler's Magazine!
Thayer Syme
Publisher
www.flying-models.com
thayer@flying-models.com
(203) 617-9308



Wittman Tailwind
 Occhipinti's Retractable Gear version

Peanut - 07/2011

Volaré Products
 7686 B Drive South Battle Creek, MI 49014-8582
 e-mail: volare61@gmail.com

All Structure is 1/16" or 1/20" square or sheet, except noseblock.
 Wingtips are laminated - 2 strips of 1/32" x 1/16".
 Optionally, make tips from 1/32" sheet.
 Recommend 5" prop and 3/32" rubber.
 Note: this represents the ONLY KNOWN Tailwind with retract gear.

Overall - red
 upper stripe - black
 lower stripe - white
 lettering - gold



Detroit Balsa Bugs
66th Annual Inter-City Meet
June 20 & 21, 2014
AMA Field – Muncie, Indiana
America's Cup and National Cup



Saturday, June 20

FAI (JSO Combined) F1A, F1B, F1C, F1Q/F1P
7 – 1 ½ hour rounds, ½ hr. overlap starting at 8:00 a.m.
3 min. max., weather permitting
F1Q/F1P are combined

AMA/NFFS Events (JSO Combined)
¼ A - ½ A Nostalgia (Combined)
A/B and C/D Classic Power (Combined)
Moffett
Nostalgia Wake/Unlim (Comb 2-3-4 min. max)
P-30

(J) (SO)
2 min. max. starting at 8:00 a.m.

Sunday, June 21

FAI F1G, F1H, F1J
5 – 1 hour rounds, no overlap starting at 8:00 a.m.
2 min. max., weather permitting. **The first round will have a ½ hour launch window beginning at 8:00 a.m. Unlimited flight, 2 min. max. If you max out, the first round time over 2 minutes will be counted.**

AMA/NFFS Events (JSO Combined)
Mulvihill (2-3-4 min. max)
½ A Classic Power
A, B and C Nos. (Combined)
E-36
HLG
Catapult Glider

(J) (SO)
2 min. max. starting at 8:00 a.m.

Entry Fees:

- \$20.00 for Large FAI events, \$10.00 for Small, \$10.00 for each additional FAI event.
- \$10.00 for AMA and Nostalgia, includes first event. Additional events at \$3.00 each. Junior/Senior flat entry fee of \$3.00 includes one or all events.
- \$30.00 max covers all events.
- Valid AMA License required.
- Trophies awarded to Third in large FAI events and FIG. All other events, glassware for first, Certificates for second and third place. Scored as all separate events for National Cup points.
- With combined gas events, ¼ A, ½ A, A, B and C Nos. and Classic Power modelers can fly one or all for National Cup Points, the single highest time will determine placing. National Cup scoring kept for each event, even if combined. All scores will be kept separate.

Miscellaneous:

- All official flights must be made between **8:00 a.m. – 4:00 p.m.** on Saturday and **8:00 a.m. – 2:00 p.m.** on Sunday. FAI flyoffs will start as soon as practicable. All persons in the flyoff **MUST** provide timers for pool in order to fly.
- AMA/Nos. flights and flyoffs will be flown in accordance with Cat. III rules.
- Scores must be posted after each flight. Flights not posted will be voided.
- There will be no pen for HLG or CLG.
- FAI Events run per CIAM and America's Cup Rules. AMA/NFFS events will be run per AMA/NFFS rules.
- Teams of two in F1A, B & C will receive additional team awards. Teams must be identified before the start of the first round. Those not registering will be randomly assigned
- Max flights may be adjusted so as to minimize off-site landings.

Contest Management:

- Contest Director: Bill Shailor, 2317 Clawson, Royal Oak, MI 48073
248-398-3786
- Assistant CD: Paul Crowley, 32604 Tecla, Warren, MI 48093
586-294-1236

FAI Inter-City Advance Entry

Name: _____
Address: _____ City: _____ State _____ Zip: _____
Phone: (____) _____ D/O/B: (J,S Only) _____ AMA No: _____
Junior _____ Senior _____ Open _____

Circle the events you wish to enter:

F1A F1G ¼ A Nos ½ A Nos. Moffett A,B,C Nos.
F1B F1H Mulvihill P30 Nos. Wake/Unlim F1P
F1C F1J 1/2A Classic Power Catapult A/B and C/D Classic Power
F1Q E-36 HLG

Fees: FAI
Large: _____ x \$20.00 = _____
Additional: _____ x \$10.00 = _____
Small: _____ x \$10.00 = _____
Additional: _____ x \$10.00 = _____
AMA/NFFS Nostalgia
First Event.....\$10.00
Additional - _____ x \$3.00 = _____
TOTAL: _____

-OR- \$30.00 Max covers all Senior and Open events. \$3.00 Flat Junior Fee, includes all events.

Payment
Please make checks payable to the Detroit Balsa Bugs, Inc. Return entry fee and this form to Paul Crowley, 32604 Tecla, Warren, MI 48093.

Occhipinti's Tailwind Peanut.

By George Bredehoff

Here is a little story about my Peanut Tailwind. The other day, Tuesday I think, I was trying to test fly a new model without much success. I tried in my small side yard for roughly an hour. The little Peanut shows "some" promise, but has provided more frustration than promise at this point in time. More on that plane another day - maybe. After this length of frustration, I wanted to partake in what my friend, Chris Boehm, has called "evening therapy" - just get some flights in with something that flies. I didn't want to get one of my contest models out, I just wanted to have some fun in my larger back yard with a model that wasn't important and hasn't shown much capability.

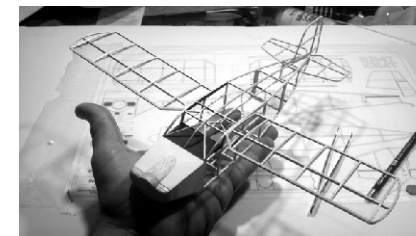
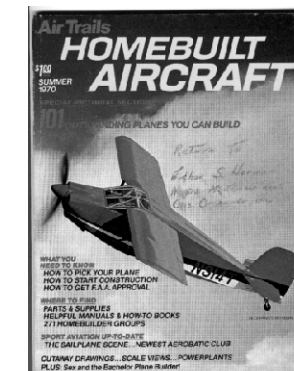
The model I chose was my Occhipinti's Tailwind Peanut. This was the first model I drew up and built after my 10+ year layoff from the hobby. I was seeing if I could "still" draw and build; an attempt to get back into the groove. The model turned out nicely, but it never really flew well. In fact, I doubt I hit a minute on it ever - and a high wing, retract gear, light weight Peanut should be able to do a minute! So this model was often dragged around to contests for 3 years, but rarely flown. I have better flying Peanuts. But it would be good for an evening of tossing something around in the back yard.

As I walked out to the yard with it, I tried to recall what I need to do to get it to fly. I know that it failed completely before, but something recently had been giving me hope (by "recently" I mean sometime last summer). I put about 400 turns in the long loop of 3/32" rubber and gave it a toss into the calm air. It climbed, proving my recent memories of potential, but was quite stall-y. I recalled that early failure was likely due to a nose-heavy condition and I had removed all added nose weight from the model. Now it was clearly tail heavy. I added a pea of clay to the spinner and gave it another toss. This one was much better, especially in the glide, but still stalling under power - shim that nose block!

So I did. I used some of Mother Nature's on-field shim material, in this case the stem of one of last fall's maple leaves. I gave it down and a little left and the same 400 winds. Well, that did the trick, the plane climbed up and circled and got higher and higher, now it was above the height of the evergreens that surround my back yard. No worries, there was only light drift and I had started far enough away that the plane should spiral down shortly within the yard.

Well, not quite. The pea of clay on the nose and the long motor laying in the fuselage must have been just right...the glide slope was very flat - this was good news for the future of the model - for about 10 seconds. As the plane circled and slowly descended, it drifted east into the evergreens. It got stuck about 30 feet up deep within the tree. I went to find my retrieval stick, but knowing it was too high. When I got back to the tree, I noticed that a breeze was picking up. I saw the model shift; it actually fell about 2 feet. The weather forecast called for a couple of nice days with some 7 mph winds, surely the wind would bump the model out of the tree. As of last night, the model was still stuck in the same place. The weather is turning to rain; it has already sprinkled some today, with a projection of real rain later in the day. At least I can go visit its final resting place.

It is strange...this model has never been a favorite. I rarely have flown it in contests - it wasn't competitive - in flight or as a high wing. It should have been, but never was. But, I want it back. So why has this affected me more than the fly-away of my Chambermaid Dime Scale last Sunday? That plane was a proven winner and would have continued to serve me well. This plane...maybe it is because I can see it...maybe because I overcame the problems with it...maybe because it was its turn (having sat in the box and now ready to perform)...maybe because... I don't know, but that's the hazard of Free Flight.



**Presidents Notes
Broome Park**

Our first contest at Broome was held April 12th and a good time was had by all. The next couple of contests are May 23rd and June 7th. Also don't forget the club picnic & contest the Sunday after July 4th. More to come.

Late payers

This will be the last issue of the Cloudbuster Newsletter delivered to you if your dues have not been renewed. If you have a red 2014 next to your name you're late. It's easy to pay now, just go to the web page and pay with Paypal, it's painless. Thanks guys.

Fair skies and tailwinds, Mike

NO ADMISSION FEE!

Sixth Annual Contest and Picnic

DOOR PRIZES!

CLOUDBUSTERS

MODEL AIRPLANE CLUB
MODEL AVIATION SINCE 1939

JULY 5, 2015

BROOME PARK – FLINT MICHIGAN

CONTEST STARTS AT 9:30 AM

FREE LUNCH AT 12:30

Bring your own lawn chairs and/or sun canopy.

Contest will be held if the wind is less than 15 MPH and no rain.

Please Call or Email by Friday, July 3 10:00 AM

with your head count so that we know how much food to have available.

For More Information Call or email
Chris Boehm - 810-348-8675
merlin236@comcast.net
or
Mike Welshans - 248-545-7601
mbwelshans@aol.com

All Aviation Enthusiasts Friends and Relatives

WELCOME!

Control Line
Free Flight
Radio Control
Port-A-Potty
ON SITE!

Making Box Fuselage Frames

By Michael Heinrich

July 25, 2010 in Articles, Tutorials

Here's a procedure for making box frames that Tony Peters showed me when I was just starting out in this hobby. I think it's the easiest and most accurate way I know, and requires no fancy tooling at all. As with any technique in this tradition, I've added a bit here and there, and I also will bring in comments and tips from friends who've added to the craft.

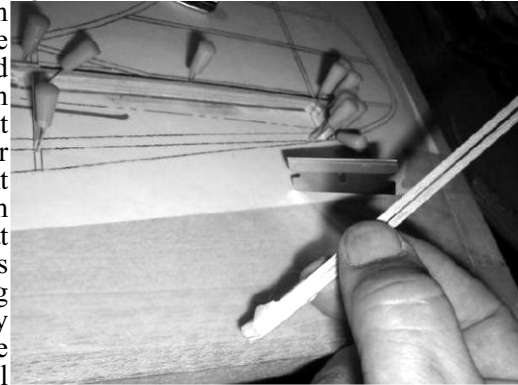
For anyone doing this for the first time, the best basic text for learning this stuff is a series Bill Warner did in Model Builder magazine, titled "Hey Kid!—Ya wanna Build a Model Airplane??" This series started with the basics of flight and learning how to "see" what a model is doing and how to deal with it, and works you

t h r o u g h progressively more complex models and c o n s t r u c t i o n procedures that get you ready for anything you might want to try from there. It's a great source. Dennis Norman sells a ring bound reprint, by permission, of the entire series. Email him for details.

In this first image you see several things. First and shiniest, the one tool I need to do all my chopping, scarfing, fitting and trimming: one single-edge razor blade, unadorned. You can chop straight through just about all you need with this, with a bit of practice, and save your ExActo blades for later. You learn quickly to cut vertically through your stick (or pair of sticks, as you'll see) by leaning the blade just barely into the cut, so the knife-edge bevel doesn't push outward against the wood. Also, pushing the razor sideways in a short slicing motion is way better and easier than straight down. Practice a little on bare sticks first; you pick up the skills fast.

LARRY MARSHALL: "So many modelers believe that a #11 blade can substitute for any other cutting device. As you've indicated, when building with sticks, you NEED single-edged blades, which don't crush the stick ends and can facilitate obtaining square cuts. They are NOT optional or some affectation of us old guys building model airplanes." To expand on Larry's comment: a nice #11 blade looks sharp, pointy, and efficient, but you need a long flat surface to sight down when cutting square. Save your #11 for slicing curves in sheet, and even then, leave stock for sanding. (Editor's Note: I like using a double edge razor blade, broken in half, then checked in my exacto knife. I can tell when it is angle just right, before slicing.)

The second thing I want to mention: I'm doing both left and right sides of the box here at one time, with no Saran wrap, no worry about gluing together, no nothing. Why? Because it's half the time that way, and more importantly, it's lots more accurate. I start by pinning the pair of top longerons to the line with side-by-side pins holding the longerons snugly. Then, I'll cut pairs of uprights, a little long, and glue them wherever they go. I'll put the bottom longeron in later, and you'll see why then. All the



bits of wood that go against the top longeron—the uprights, any gussets like you see here at the sternpost, the scarfed piece that will form the stabilizer slot—all are glued in now, while I have room to work. You see the pin at the bottom of the too-long uprights, pushing them against the longeron for the glue to dry. This takes maybe fifteen minutes in aliphatic glue, less with Duco; so you'll go from one end of the fuselage to the other in that time, then go back and remove the pins for the next step.

But not yet, there's one more thing I want you to look at here. I'm holding sticks taped together to make sure the wood I want is all matched up. Store-bought sawn strips are never quite perfect in dimension, and they're all different stiffness and weight. I use a gram scale to grade all the strips I have, then decide if the lightest ones will be stiff enough by bending them in both directions, selecting the stiffest (You'll notice those with straight, long grain are stiffer than ones where you see diagonal grain running through the stick on one side). Now, those stiff long ones are paired up for longerons, and the less-stiff ones can be used for the short bits (within limits: no punky wood, anywhere. You decide.). The taped-together part is so I can work with TWO bits of upright at a time, without having to fumble with them.

Here's the sternpost after the pins are removed. Everything hangs down well past the inner edge of the bottom longeron, and you see the little gusset bits glued to the upright, also long: so that when I trim the bottom line, that joint will be perfect and I won't have to fiddle with tiny angle bits, which sometimes can be a tricky angle indeed.

Now here's the bottom longeron in place. See where the diagonal braces (which can be even lighter wood, as they're all compression, and anything that will break them is more than the model will like anyway!) have been fit a little long, and they have been trimmed too when the cut was made; now they form part of the glue joint as well. The corners against the top longeron and uprights were beveled too, but I had room to work then, remember?

Joints are critical. The closer we get our sticks to fit, the better the airframe will be. Filling glue between balsa does not give a great joint. It's one reason I like cutting and trimming the sticks I use in the ways I do, it gets me joints that line up & fit in a pretty easy way. Also, I can spread out the joint over a longer area, when I cut my diagonals and uprights in one pass like you've seen here; if I had to make that four-bevel cut on each diagonal and get the lengths right before dropping it in, I'd go crazy.

The best thing to me about doing things this way is that I can't cut anything too short, ever. There's no fiddling around trying to fit exactly between top & bottom longerons, or do any of the other fiddly bits need anything fancy at all.

With a frame like I'm making here, there's not so much stress to that gentle curve of the bottom longeron, and the diagonal braces will keep the curvy part from moving when it's freed up. But you do want to consider those stresses, and in your own box frames you may add a brace or two in areas you might be worried about. Don't be afraid to depart from the draftsman's drawing, that's how you come to find your own way of doing things.

With stressed structures, a lot of us will give the frame a soak of water (usually mixed with ammonia, or Windex, to cut down the surface tension of the water and get it to seep in better), to relax the wood a little. Ammonia will loosen white-glue or aliphatic joints, while Windex doesn't so quickly. Acetate- nitrate glues like Duco or Ambroid won't be affected.

Suggested by ART HOLTZMAN: "Many frames have

pronounced curves at the chin, like from the nose block to the landing gear. When I encounter these, I carefully slice the longeron in half (1/16 sq into two 1/32×1/16) from the LG forward, wet-form the curve on a mold, and run some glue down the split to bond it together again. Once dry, lay it on the plan and keep on building."

I'll let this dry overnight then I'll take out the pins and sand the top of the double frame while it's still sticking to the wax paper, just a gentle sanding to bring down any high spots.

Speaking of wax paper, another neat trick comes from DAVE MITCHELL: tack everything to your board using Artists' Spray Mount repositionable adhesive, available in rattlecans at art and craft outlets. Put the plan down to the board with it, stick wax paper over that, and you'll have a smooth flat surface that doesn't bunch or wrinkle under your work. Better yet, this sanding procedure can be done with incredible ease when all's tacked down and the frame is hanging to the wax paper.

Now to the cutting-apart. The only places the box sides stick together are at the glued joints. You can slip a razor between the sticks at any other place, and push toward the joined spot and it'll cut/crack loose. Takes about five minutes to do the whole thing.

A very important thing first, when you are ready to separate the sides, mark an "X" on the front or back of the whole frame to remind yourself which are the OUT-sides. You'll need this little nicety just once, but it's a big once.

You MUST control your blade—if your hands are not in contact with each other, your big arm muscles will push the blade right through the frame. Keep the frame in one hand and the blade in the other, and press two fingers together as a rest-stop. This allows fine motions with great force. Once in thirty slices, you'll go a little crooked and start cutting an upright. Back off and get back in line, and glue the upright when all's loose.

Any sideways slice will ease the force of the cut. Prove this by pushing a sharp knife straight down on a tomato. Look at how deep you can go with a single-edge blade; you can cut most everything you build apart from the outer edges of the frame. Cabin models with elaborate window glazing may be deeper, but the sticks usually flex enough that you can start to bury the backside reinforcement on the blade between the sticks and get down there. Sure, you could break out the blade from its backing, glue it to a handle or not, use a different blade (typically thicker, not a good thing), but I'm preaching the simplicity of using these blades, unadorned, for a very good reason: you don't want to become too fond of them. If you spend time making up something special, you don't want to go through re-making, so you try to stretch more much work out of something that is going to get dull. Sharper would be better. When a blade even hints at getting hard to push, throw it out and unwrap a new one!

Now we start to frame out in three dimensions. I'll talk a little about building straight boxes. We worry over how to guard against "banana" boxes; those frames that seem to fishtail off to the left or right when seen from above. Well, work carefully. -Great, thanks, Michael...but that's really all, and still there'll be that time when the frame goes off. Like everything you do with such a vague material as balsa, stuff

happens. Learn to enjoy it. My best advice, build over a centerline and work one station at a time. Use as many blocks, jacks, squares, what-have-you as you need, it'll work out. There are a few specific things you can do as you build, though, and now we'll look at some.

First, and I didn't talk much about this earlier, try to pick your longeron sticks to be about the same stiffness. I weighed my lumber and picked a dozen nice ones, and I did mention examining them for straight grain (which helps in the stiffness part), but also you can actually try to match for stiffness in the two directions, either trying to gage this by bending in your fingers or by making up a bending fixture with weights and a protractor. I won't go into it here, as I think it's too much to think about right now, but some dedicated guys will go that route.

Larry Marshall's take on this: "Personally, I would never build with pre-cut sticks as I'm too darn lazy to start sticking them on flex meters and such. But as I create them with a wood stripper, I will create pairs of sticks, cut right next to one another off a sheet and these serve as my longerons. This ensures the same amount of flex that you describe."

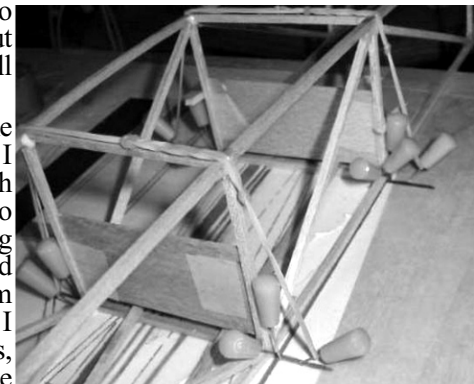
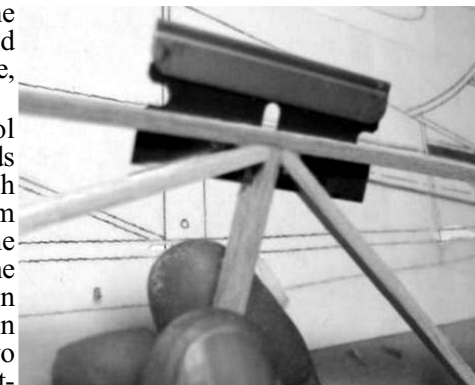
Now, start to box up. I will do two stations at the first glue-up and no more (if I'm smart, and I'm not always smart), and get the resultant box right and solidly dry before continuing. What you see here is all I did for one evening, and then I let it set up thoroughly. Continuing down the frame from here, you'll have the advantage of an already-dry, solid, integral structure you can count on.

So let's see what's in this picture. These two stations are the only square ones in this trapezoidal-box frame, so they're good as starters. When I cut the cross sticks for the stations I also cut squaring pieces of scrap sheet, a neat trick I got from ART HOLTZMAN—these get taped in and hold the box nice and perpendicular. The great thing is you can cut them for the trapezoid sections in just the same way.

As this is the first pin-down and because part of this particular box bends out of the straight line, I hung the frame off the end of my board. After this I will glue up all the rest over a reference centerline, carefully measuring everything I do to make sure I'm not bananaing the box—but for now, all I needed was a square drawn on the board to line everything up to for this glue-up; that's the red lines you see here. One side, the near one, gets pinned down along the reference line, the bottom cross sticks glued up and placed in their positions, the opposite side brought up and pinned down. Then the squaring pieces are put in with lo-tack tape, top cross sticks glued in, and as a precaution I spread rubber bands over the whole thing. (Those are little dental bands, looped together with a lark's head knot, to make up the length I want. Handy and quick.) I'm building with aliphatic glue, which has a little more working time than Duco, but that's doable too; and you could set up the whole frame you see here and run drops of CyA to assemble, too, if you do that sort of thing. (Editor's note, do not rely on your uprights alone to align both sides here, look at the aft end. Make sure they are the same length, they were when you built them, make sure they line up now. You might even want to pinch the tail together and see if it is even when on the centerline.)

Once dry I'll pull this off the board and glue up fore&aft of this. One more banana-busting tip, and you'll see it in this next sequence: do the low-stress end of the box first: usually heading toward the tail. Then tackle the hard end.

DICK FORS: "When assembling both sides of a box frame, as in the process of building a square section, once I'm certain a section is square, I like to glue in a temporary diagonal brace. Sometimes, several of them in different sections as I go along. Adds lots of



strength until the frame is complete!"

Earlier, I told about stress-relieving with Windex, but there's something more important to try to do: don't have any stresses in the individual bits of wood that make up the frame! This is a guitar-maker's trick, and they have good reason to have no tension in their structures—here, it just means we have less ready to break off at the wrong moment.

I will pre-roll a curve into a stick that bends, just laying it on the board and pulling it under one pressing finger until it takes the shape of the curve I need. Harder bends, I'll soak and pin up overnight, or soak and then pop in a 250-degree oven for an hour. I didn't need that here for this frame, but keep the technique in mind. It's harder to pre-bend the sides to curve into the nose of the box. Bending a whole side frame—nope, better to soak with Windex and gently pull in with pins, squares and rubber bands.

Not all box frames are square-section. You'll often need to make trapezoidal boxes, both when unadorned as in a boxy-shape model or with formers hung over the box—which is where this method really comes into its own as you can bend the box around to fill out the most space with the least wood. This will be shown in detail in the next installment of this tutorial. In the picture below, you see my cheep and dirty method of cutting cross sticks for trapezoid sections.

Ignore the lines on my drawing here. I blew it up, and the wood sizes as shown are now way over what I'm using, so I can't just go slicing my crosspieces off the section views. So, to get the right size, I'm holding two sticks of my model's size in my right hand lined up with the outside edge of the section; I'm pushing the crosspiece against the inside edge of those sticks, and cutting the piece a long the outside line on the other side of the section. See? [Section] minus [two sticks] equals [space between sticks on each side]. Jeez, I hope that's clear.

Now comes the gluing of the sections. I've drawn a centerline on my board, willy-nilly and in no place, just to line the frame up with. The box frame is laying curved-side down and I've pinned the last square section down, centered, there out of the picture. You can just see a little black hatch mark on the crosspieces, right in the middle of their length—they tell me which side is up as well as where they should go on the board centerline. I glue the bottom one and pin the sides against it, then pry open the top and glue the top crosspiece in, and run my rubber bands over the whole section for tension. I'm holding my scale on end as a quick square-check, and if the mark on the crosspiece is out any amount, I can pull the pin with the rubber band out on that side and pull the section back into place that way. It's a very easy and, once you get used to the risk and just trust yourself to do it right, a surprisingly accurate way to get things lined

up.

Here's the end of the frame. Two things I want you to see here: first, I pinned and closed the tail post with pinpoints on the bottom, but the top edge still spread open. So I sliced a bit of extra stick at a long angle and used the two pieces as wedges. Cheep&dirty, again. Also, notice my two sides are about 1/64" mismatched; after all I did to keep things lined up perfectly. The frame is square and un-banana'd, though, and after a pass of my sanding block, you and the air will never know the difference. So don't worry the little stuff!

There're the basics. After this, you can hang any bit of wood you need for attachment hard points, anything you didn't put in your original box-side, what have you; and we can go on to fit formers, for a rounded model airframe.

-Collected by Michael J. Heinrich

Ramblings from the Editor

I have been asked how to build straight fuselage sides, but rather than explain my way, let me say, this article is very similar to what I do. The above article was saved from the old smallflyingarts forum by using a web page called, the waybackmachine found at <https://web.archive.org>. If you have no trouble building fuselages without bananas, don't read it, but if you want some good tips, read and enjoy.

I also have been asked for more peanut plans, well, here are two great ones. As always, if you need documentation contact me and I can provide 3 views and color schemes. Chris



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Event Managers
FAC- Winn Moore 248-830-6294
winn_moore@yahoo.com
AMA- Paul Crowley 586-294-1236
usa2298@comcast.net

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	248-212-9666 retro.rc.com	** No Bonuses for this unofficial event
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	269-559-9755 vintageproducts.com	

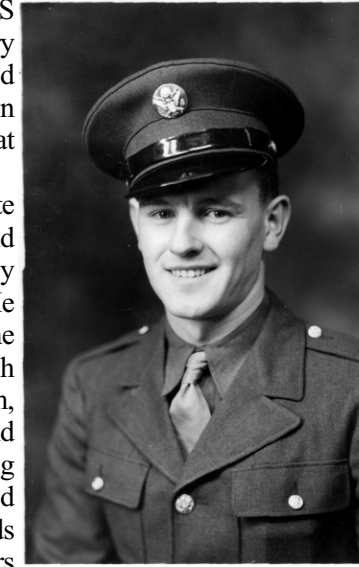
See Registration Form for map to site and details of events.

Vendors Welcome!

A wonderful site with a 72' center ceiling and 40' at the walls.
The Arena is on South Blvd. E. (20 Mile Rd.) just west of Opdyke Rd. on the northwest corner.
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Major Donald T Smith US Army Air Force World War II

My father was an orphan from Battle Creek. He somehow got into the University of Detroit and graduated as an accountant. On September 26, 1942 he joined the US Army Air Corps. He was never very big on telling war stories. He attended basic training at Fort Benjamin Harrison in Indiana and OCS at Duke.



The US armed forces operate under a division of labor concept and since my dad was an accountant, they put him in The Finance Corps. He toured the islands of the Pacific, one step behind the action, carrying cash to pay the troops. Tarawa, Guam, Saipan, Tinian, the Philippines, and Okinawa. He wasn't in the big landings, but the Japs still occupied the interior of many of these islands and picked off some GI's with snipers and guerilla warfare tactics.

Among his souvenirs are some photographs of the white Betty bomber flown by the Japanese surrender delegation. Some other recent photos of that event show hundreds of American troops lining the runways to view the surrender. This was a unique event in that few people have ever witnessed a total victory by the US in any war.

There are also a few photos of the island girls. It seemed like posting with the topless beauties was quite the thing in the South Pacific. My father's notes are completely sanitized as to which island was which.

Their duties included carrying around cash in brief cases, duffle bags and even foot lockers to replenish the base banks and pay the troops. One of their mottos was if you're going lose money you might as well lose a million. If you lose a hundred or a thousand they'll take it out of your pay.

My father was under the Seventh Air Force in Hawaii as was I while in Vietnam in 1972. My dad came down with stomach problems related to life on these "paradise" islands and returned home via the VA



hospital in Battle Creek. One of his friends from the hospital was the Senator and presidential candidate Bob Dole, who got actual hostile combat wounds in Europe.

Paul Smith

PRES BRUNING & Family Military Service

Corporal Pres Bruning

From 1963 to 1969 I served in the Army National Guard. Did basic training at Ft. Jackson, South Carolina. After basic I was stationed at the Light Guard Armory on 8 Mile Road.

I was called to active duty in 1967 during the Detroit Riots and again after Martin Luther King was assassinated. In both cases we had no riot training. We were issued M1 Carbines but were given no ammo. I was discharged in 1969 after attaining the rank of Corporal.

Lt. Commander Richard H. Bruning (Pres's Dad)

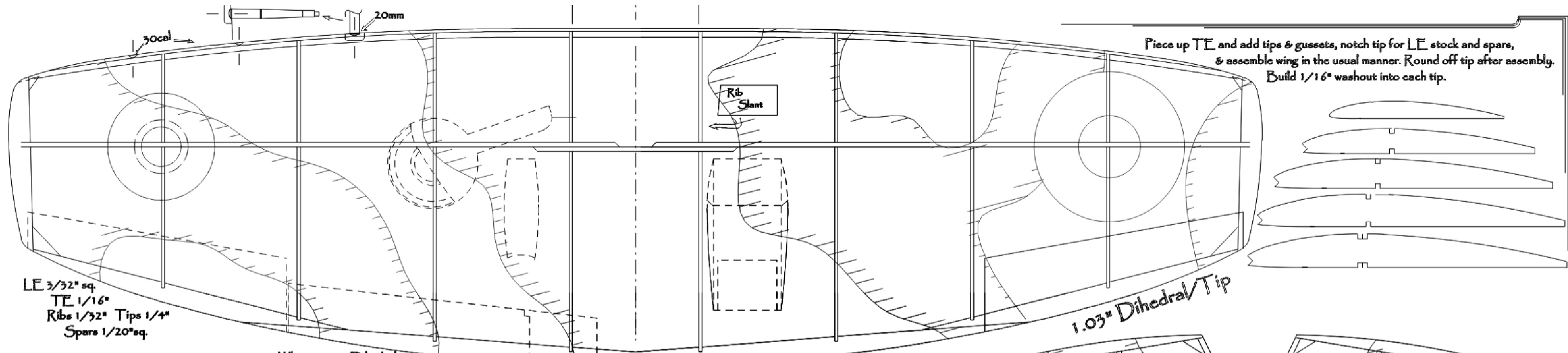
My Dad was a Navy doctor serving in the South Pacific during World War II. The Japanese had already bypassed the island he was on so my Dad treated the island natives for elephantiasis which was running rampant there. He was promoted to Lt. Commander and flew home to New Jersey in 1946.

I was a Navy brat, 5 years old, and at that time we lived in Norfolk VA in a naval base community, "Oak Dale Farms." I went to the base one room school house and had the privilege of being on board the aircraft carrier Hornet during its christening before Gen. Doolittle flew B-25's off it on his Tokyo on his raid in 1942.



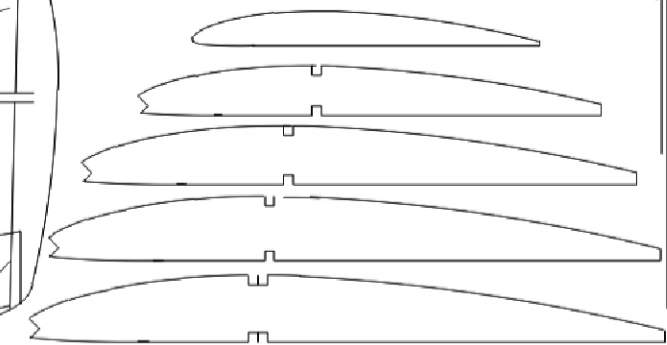
Harry Alstad (Pres's Father in Law)

My wife's Dad fought in the Norwegian Underground during World War II. The German's invaded Norway in 1940. My wife was born in 1941 and was too young to remember much of the war but remembers black shades pull over windows every night and that she had to take the elevator in the 6 story apartment building to get to the basement during air raids. She seldom saw her Dad much as he was away often on ski patrol. He was captured by the Germans but was able to escape with a Jewish prisoner from a prison camp and they got to be lifelong friends. They hid in a hotel in large drawers. Later he skied for days and lost his toenails. He found a German helmet and bayonet that he kept as souvenirs.



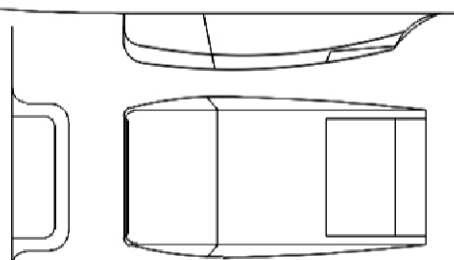
LE 3/32" sq.
TE 1/16"
Ribs 1/32" Tips 1/4"
Spars 1/20" sq.

Piece up TE and add tips & gussets, notch tip for LE stock and spars, & assemble wing in the usual manner. Round off tip after assembly. Build 1/16" washout into each tip.

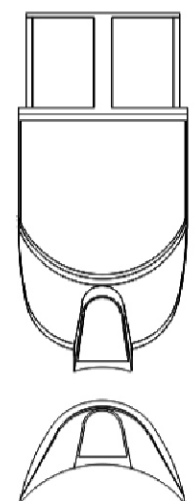


1.03" Dihedral/Tip

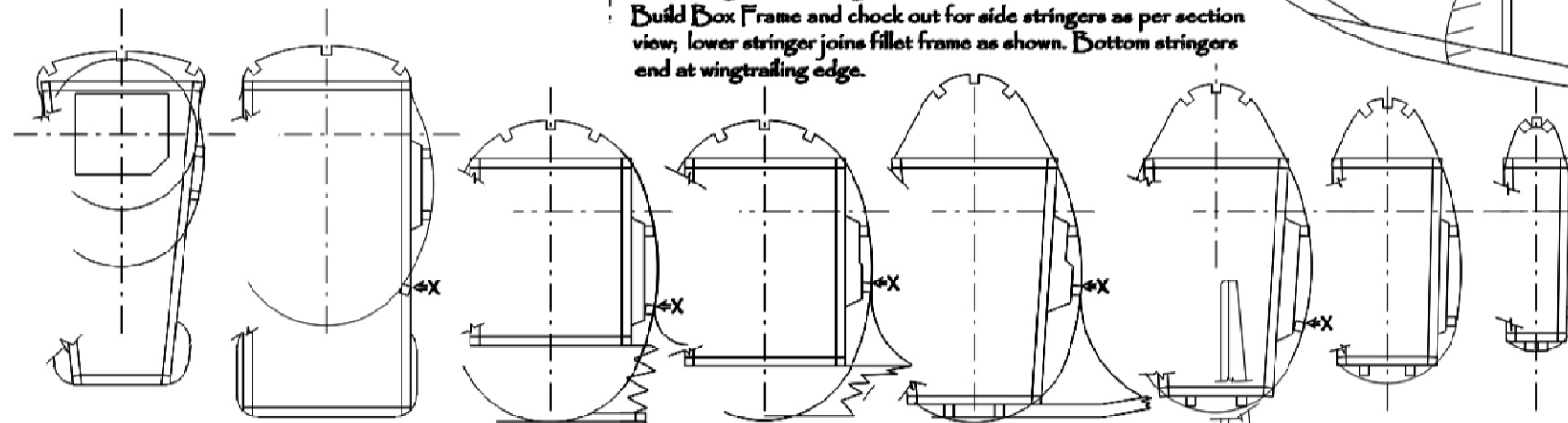
When setting Dihedral, block up the wing to height and have some room under the center section. Lap glue the spar as shown, and fashion a filler piece for the leading and trailing edge joints, to make a flat surface over the top in the center section. Then sand underneath to thickness.



Radiator



Oil Cooler

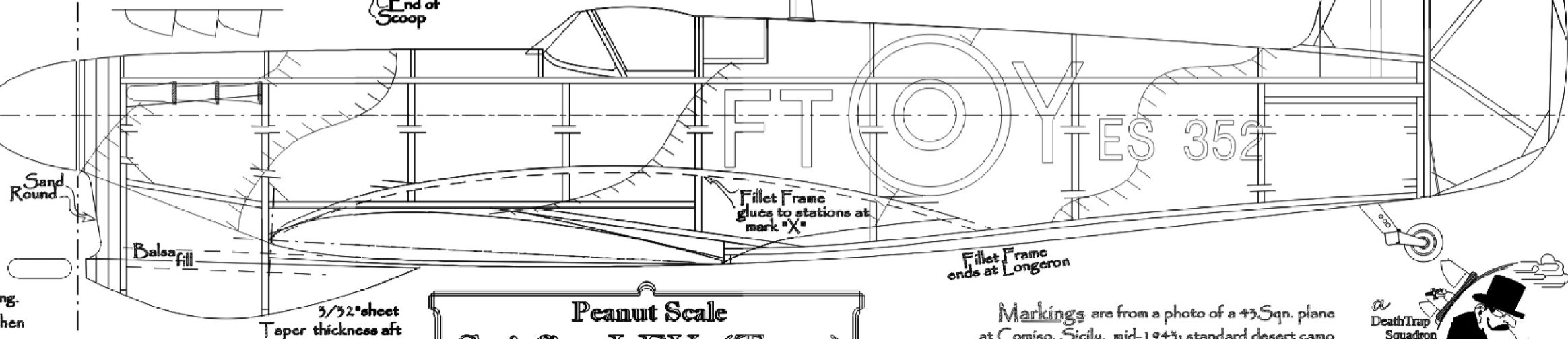


Fuselage Framing is intended to use fewer formers. Build Box Frame and chock out for side stringers as per section view; lower stringer joins fillet frame as shown. Bottom stringers end at wing trailing edge.

Tailfeathers are shown as built with 1/20" stock and with flat stock a nominal 1/20"x1/8" strip size. As always, you might vary the construction based on your taste and the interests of lightness.

Refer to source material for air filter shape. The scoop narrows under the engine cowl and widens again at the aperture. You may use just enough filler balsa to hang tissue on, or fill and shape the entire structure.

With this size of model, fuselage structure under the wing is minimal but the air filter must be completed before installing wing. Complete the fuselage and wing and cover both, assemble, and then fair out the underside as desired.



Peanut Scale Spitfire LFVc(Trop)

Rockland F. Russo
& Michael J. Heinrich

Markings are from a photo of a 43 Sqn. plane at Comiso, Sicily, mid-1943; standard desert camo of Dark Earth/Middle Stone/Sky.



"...Sometimes A Great Notion..."