EL TORBELLINO

NEWSLETTER OF SAN DIEGO ORBITEERS FREE FLIGHT CLUB

NOVEMBER 2015

The Prez's Corner *– Don Bartick*

Our pursuit of a new flying field has moved one step closer. As I mention last month, a small committee consisting of John Merrill, Mark Chomyn & myself are investigating property near our old site at Otay Mesa. The committee met at the SD County Assessor's office in El Cajon November 9th. Mark was well prepared with property maps that he downloaded from various online sources. With prospective Parcel Numbers in hand, we went online using the County Assessors system and located owners and representatives that could be contacted to make our case. Since Mark had experience dealing with land issues while at SDG&E, we fingered him to make contact with the owners. Stay tuned.

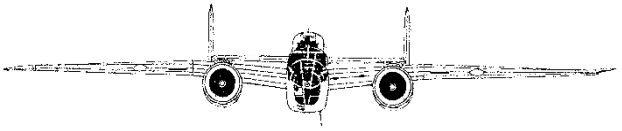
Arline and I attended the 4 day WESTFAC MK V event at Buckeye, AZ. Roger Willis really put on good show. Forty-Fifty entries made for great competition. I did get my WWI British SE5a finished. Along with my Rearwin Speedster and a Bostonian converted to Embryo we set forth to compete. The very first thing you realize is that flying on an Alfalfa field is really really neat. Flying on 18" of Alfalfa with a brand new untrimmed plane certainly takes the concerns away about crashing. That I did a lot until I figured out the appropriate incidence and CG. Even though we had some time to practice before the contest started, it wasn't enough for me. Didn't place in any event, but certainly had fun. Arline as usual was called upon to be the event photographer and she went about her business shooting close to 900 pictures. This batch was boiled down to 300+. Look for some of her photos in this issue. Mike Jester just coming off of back surgery with the marvelous help of wife Dorothy flew a lot of events. He place in many of them. Dorohty recorded ~18 miles with her pedometer chasing for Mike over the 4 days. That is true love. John Hutchison won Small Rubber Stick. That constituted the Orbiteers showing.

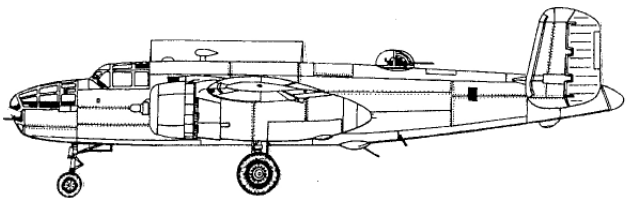
The Perris field has been cleaned up by the Oasis Flyers—FAC 20 squadron. Arline and I were up there November 11th and it really looks good.

The Orbiteers have submitted our preliminary contest schedule to the SCAMPS for posting on the Perris field schedule. We will finalize the schedule at out December Board meeting. It will then be posted in the December issue of the ET.

That's a wrap for now.

Remember: "There is no stigma attached to recognizing a bad decision in time to install a better one."
-Author Unknown





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THE FINE PRINT THE FINE PRINT

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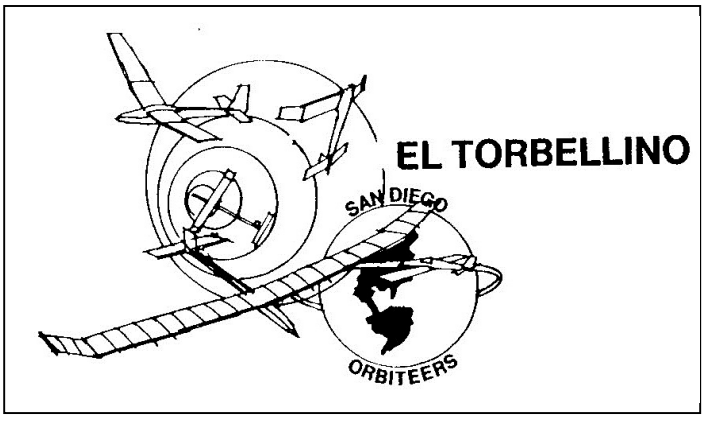


Gems for Building and Flying Outdoor Rubber Powered Free Flight Model Airplanes

By Mike Jester

Introduction. Since my entry into this hobby about five years ago, I have picked up a few gems along the way. Many were relayed to me by John Hutchison as he patiently mentored me in the basics of building and flying free flight model airplanes. John has built and successfully flown really nice looking models for decades. He's a Hall of Fame member of the Flying Aces Club. Here are a dozen of these gems, listed not necessarily in order of importance, but mostly just as they came to mind.

1. The nose block needs to fit snugly into the fuselage. Unless it does there is no hope of accurately maintaining the thrust lines of your prop, and virtually no chance of repeatable flights and successful trimming. Worse, if the nose block falls out during a flight, your airplane may crash and be seriously damaged. I used magnets to hold the nose block of my Fairchild 24 in place. During some test flying, I wanted more down thrust so I inserted a balsa wood shim. The balsa plug on the nose block did not fit tightly into the nose of the fuselage due to wear. The shim weakened the force of the magnetic connection, and the nose block came out after the motor run. The airplane nose-dived into hard dirt at our old Otay flying field, and the resulting damage to the wing and the upper fuselage required significant repairs.

2. Don't build too light. It's very tempting to build using really light balsa wood, thereby minimizing the wing loading and hopefully achieving that "floater" that everyone dreams about. However, by way of example, 1/16 inch square stringers made of 6-7# balsa wood on your scale model fuselage are going to break when you grip your airplane during the launch. By the time you end up making all the repairs you will eventually have to make to your super light model airplane, it will end up weighing about the same as if you had built it a little more sturdy to begin with. Don't be afraid to use 8# balsa wood, and even 9-10# balsa wood for some critical parts. A slightly heavier model airplane will fare much better in breezy conditions than a super light one. Moreover, a sturdier airframe is more likely to resist warping and maintain an optimum trim, once that has been achieved. However, don't go overboard. Keep in mind the rule of thumb that 0.5 grams per square inch or less is a very nice wing loading for a mid-sized model (24-30 inch wing span) according to Don Ross in his book Rubber Powered Model Airplanes. By way of example, a scale model with a wingspan of 30 inches should preferably weigh less than 80 grams.

3. Wind to torque, not turns. If you wind without a torque meter, you are simply going on blind faith. Winding a new rubber motor solely based on feel, or the previous number of turns of a prior winding of a similar rubber motor, may result in a higher frequency of rubber motor breakage, or under-winding. If you wind the rubber motor of your airplane without a torque meter to a predetermined number of turns that do not break the motor, the rubber motor may still have too much torque for your model. This excessive torque may cause your airplane to power stall and dive to the ground, or to "torque in", i.e. roll into the ground shortly after launch. In the alternative, if you wind the rubber motor without a torque meter to a predetermined number of turns, the result may be a rubber motor with less than the optimum torque for your model. In such a case, the climb, and thus the time aloft of your model, may be significantly compromised.

4. Down and right. In terms of the thrust angles of the propeller, this is a good place to start with powered trim flights. You want to avoid a power stall that leads to a dive and crash, or worse, a high speed veer to the left and into the ground immediately after launching your model airplane. Too much down thrust will compromise the climb, but it can always be gradually removed. Too

much right thrust can lead to a tight circle, or other problems, but again, the right thrust can be gradually removed.

5. Make one change at a time when trimming. To correctly employ the scientific method, you need to make one change at a time, observe the results, and correct as appropriate. For example, if your airplane exhibits a stall you can decrease the negative incidence of the stab before the next flight. Don't move the CG forward at the same time by adding clay to the nose. Making two or more changes at the same time can make it difficult to determine what caused the less-than-optimum flight performance on the next test flight and how to attempt to correct it.

6. The batch of rubber being used is probably not going to determine the winner. I have heard from a number of reliable sources that almost any 2009 or later batch of Tan Super Sport rubber has energy storage properties close to the best Tan II rubber. I prefer to fly outdoors exclusively with September 2009 or later Tan Super Sport rubber and save my precious little supply of TAN II rubber for indoor competitions. Don't worry about losing to a competitor because he is allegedly flying with better rubber. In outdoor rubber powered free flight contests, many other factors are more important than the year and month of the rubber used in your rubber motor, so long as you are flying with TAN II or Tan Super Sport rubber. In particular, optimum trim, matching the prop to the rubber motor, and winding, are more important. However, don't fly with a worn out rubber motor, regardless of the rubber batch.

7. Build a high wing model as your first rubber powered model airplane. Most newcomers want to build a really cool looking scale model like the Spitfire right from the outset. However, many scale models, especially low wing fighters and bi-planes, are much more difficult to build, and far harder to trim, than a high wing model such as a Piper Cub. There is no better model to start out with than the Flying Aces Moth which is a non-scale classic.

8. You are going to lose free flight model airplanes so get over it. From time to your models will catch thermals, fly OOS, and never be recovered. You can increase the odds of recovery by using a DT, and even more by installing an on-board transmitter (RF tracker beacon). I can't hurt to put your name, AMA # and cell phone number on your model. If you really liked your lost model, build another one. It will probably be a better model with a few tweaks here and there based on your first build of the same design. I lost my first Moth at Perris and needlessly whined about it to others. I built a second Moth that flies even better than my first one.

9. The prop diameter should be roughly one-third the wing span of the model. The optimum prop diameter actually depends on the pitch of the prop, the configuration of the airframe, etc. And of course, matching the size and configuration of the prop to the rubber motor size for a given airframe is crucial. However, most of my scale and semi-scale airplanes that have flown well have adhered to the one-third rule, e.g. an 8 inch diameter prop works well for a 24 inch wing span Moth. Some large stick models can use props that are a bit bigger compared to the wing span. For example, my Gollywock has a 31 inch wing span and flies very well with a 13 inch prop.

10. Don't automatically fix the CG at one-third the chord of the wing behind its LE. The optimum CG location for your model airplane depends on many factors. For example, locating the CG at 33% would be bad for most Coupes. Start with the location of the CG shown on the plan, if its location is indicated. Otherwise, if you are good with measuring and calculating, you can determine the optimum CG location for your model by using the Tail Volume Coefficient/Starting C.G. formula set forth in the quintessential book by William F. McCombs entitled Making Scale Model Airplanes Fly first published in 1981. This

formula is used by ace flier Don DeLoach who has achieved incredible contest success. Here is that formula:

C.G. (%) = 16 + [TVo x 36]

TVo = stab area/wing area x tail moment arm/wing average chord

11. Launch into a thermal. Launching your model airplane into a thermal constitutes the holy grail of our hobby in terms of competitive success. Skill in consistently achieving this kind of launching is just as important to winning times as optimum trim, construction, and rubber motor winding. Even an airplane that can only fly for one minute in "dead air" can beat the best airplane if the flier of the former picks the "right air" or his airplane flies into it due to pure luck. Of course, I don't mean to discount the importance of good design, relatively low wing loading, sufficient airframe strength, proper CG location, correct decalage, optimum thrust angles, etc.

12. More Power! At contests I often see model airplanes that are well constructed and appear to be flying reasonably well. They show no tendency to power stall or torque in when launched. These models don't exhibit any stall during the cruise or glide segments of the flight. However, they have relatively short motor runs and/or seem to lack an initial burst of power that will help them climb. These models don't appear to be over-weight but they rarely break a minute in flight time. For some reason the fliers of these models are reluctant to put in more winds, or try a larger rubber motor, and thus their flight times suffer. The late, great Cezar Banks used to tell me that if you are not breaking rubber motors you are not winding enough. Of course he was speaking about indoor flying where backing off winds is commonplace. Even though we don't back off turns in outdoor flying the same adage applies. However, remember that in outdoor sport flying, it is the usual rule of thumb that you don't wind to more than 80% of maximum torque. You need to figure out what that torque is by test winding a rubber motor on a winding stooge to its breaking point.

Conclusion. Most of these gems are probably self-evident to members of the Orbiteers. Nevertheless, hopefully this short list and accompanying descriptions will be of benefit to some new builders and fliers out there.

NOV. 1, 2015 - INDOOR FLYING

PENNY PLANE (Scored best 2 of 5 flights)

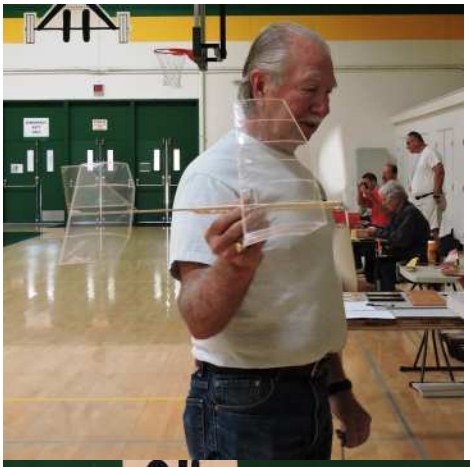
1.	Mike Jester	257	271	-	528
2.	Greg Hutchison	213	241	-	454
3	Richard Wood	232	219	-	451
4.	Don Bartick	156	244	-	400

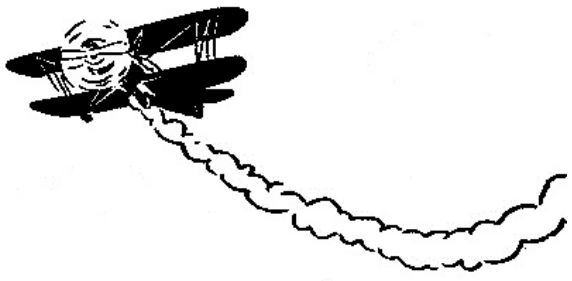
NO-CAL (Scored best 3 of 3 flights)

1.	Richard Wood	87	51	65	-	203
2.	John Hutchison	70	57	60	-	186
3.	Mike Jester	71	58	54	-	183

(More Nov.Indoor pictures on next page)

NOVEMBER 2015 INDOOR (Continue)
Photos by Arline Bartick





2015 SAM CHAMPS REPORT - K.Gies

We arrived at the Fiesta Henderson Hotel on Sunday, October 18.

Before going any further thank you to all that organized and ran the contest as you all di a terrific job. I won't name names for fear of forgetting someone but than you all for a terrific job well done.

My brother Jack accompanied me and on Monday morning we picked up a little lake mud from the rain over the weekend, but it was not bad. Monday was a pretty good day with some wind in the afternoon.

Both Tuesday and Wednesday were pretty much blown out and very few models were flown. We sat out there until mid afternoon and then went back to the hotel both days.

Thursday and Friday had pretty decent flying in the morning with a lot of wind in the afternoon. I was entered in six rubber events plus some other fun events like Tomboy, but all I could get in on the last two days were rubber events. Of the regular rubber events, the only one not entered was large rubber stick, as I no longer have one and will not build another not being able to do much chasing anymore. The only way I got through this contest was my brother chasing everthing down on his for wheeler. I placed in five events, taking 1ST in 8 Ounce Wakefield, 2ND in both 4 Ounce Wakefield & Small Rubber Stick, and 3RD place in Large Rubber Cabin & Small Rubber Cabin.

Now this sounds good on paper but keep in mind that several top rubber flyers, such as Car Redlin left for home early due to the wind. So on Thursday & Friday there were not many flyers left. I was the only contestant in 8 Ounce Wakefield and won it going away. Captain Cornell Crawford once stated that "90% of Success Is Just Showing Up!"

The best part of the contest for me has and always will be seeing old friends again. Sadly

K.Gies launch of Lanzo Duplex (4 oz. Wake.)

I have reached the point in life at age seventy-eight that many of my friends have moved to thermal land or could not physically make it. But there were still many fine friends at the contest.

The contest was international in scope as a bunch of fine guys form Italy were there, as well as two flyers Australia, and one flyer from Denmark. There were modelers from all over the U.S. including two from Alaska, our Van Wilson being one of them. Cheers, cccnh.

WESTFAX MK V - Buckey Az - 2015
Photos by Arline Bartick

WESTFAC MK V PHOTOS (Continue) - Photos by Arline Bartick

2015 Southwest FAI Challenge
October 24 & 25, 2015
Boulder City, Nevada

Most of the time when I sit down to write the recap of the Southwest FAI Challenge, I start with the weather, the venue or both. While the SAM Champs competitors who were the occupants of the lakebed for the week prior to our meet only had a couple nice days, we were once again fortunate to have two if not perfect, very flyable days and another successful get together. What really makes this meet special however, are the people. Two in particular stand out and deserve special thanks. Sharron Emery who stepped in and ran the contest table on Saturday (which allowed me to fly) and Linda Piazza who piloted the barbeque production line so that free hot dogs, chips & cookies were available to everyone in attendance. John & Sally Clapp always seem to make it from the east and we were happy to see Drake Hooke and his wife make the long drive cross country for the second year in a row. Mike Fedor from Texas stuck around after the SAM Champs, Blake Jensen and Tiffaney O'Dell flew in from Oregon and of course our good friend and regular attendee, Henning Nyhgen from Denmark round out the longest of the long distance travelers. It was also nice to see Bob & Sue Tymchek in attendance. Bob is almost all the way back from his latest surgical adventure and has been seen actually making some F1B test flights, getting ready for a return to contest activity.

On Saturday, the contest conditions were pretty typical with a lot of fairly easy maxes, but those occasional dead periods that challenge even the best air pickers. Having no flyoff in F1A was a bit unusual as was the low number (four) of flyoff participants in F1B. Every contestant in F1C was in the flyoff, but the number was still unfortunately only two. Brian Van Nest was the only man standing at the end of 7 rounds in F1A, Randy Secor took home a walkover win in F1C when Henning elected not to fly past 7 rounds. It was a bit breezy at the end of the regular rounds and rather than sit around for a couple hours hoping for it to calm down, the F1B flyoff was moved to early Sunday morning. I managed to edge Walt Ghio by a few seconds for the win with Jack Emery ending up in third and Mike Richardson who had a sudden prop stop at about 10 seconds was fourth. Mike Fedor took home the blue glassware for first (and only) in F1P. F1Q entry was down a bit this year (three), but Jack Murphy still posted a clean score to beat Mike Pykelny and Drake Hooke.

Sunday morning gave us perfect conditions for both the F1B flyoff and the Espresso tie-breaker flyoffs for the mini events. Tiffaney O'Dell threw down her usually dominant early morning challenge at 267 seconds that topped John Clapp's next best time by 38 seconds. Brian Van Nest took the second leg of what tuned out to be a weekend hat-trick by posting a 212 second Espresso flight in F1H.

The next few hours were perfect (maybe not so perfect for the CD) as almost everyone ended the regular rounds in every event with a clean score. Seven out of eight in F1G. The only drop was by 5 seconds. Two out of three in F1H. Blake ran out of time in round two and took a "zero" or he almost certainly would have made it three out of three. All contestants in E-36 had a clean score for their first three flights. Congrats to the winners, Tiffaney in F1G, Brian in F1H and Lee Hines in E-36 all of whom prevailed in their respective flyoffs that followed the regular rounds.

James Rhoades from Salt Lake City who also stuck around after the SAM Champs also put up a perfect set in Vintage FAI Power with his oddly elegant, extra-long tail moment Jay Jackson model powered by an unusually strong K&B Green Head 15. Jack Murphy put up a couple excellent flights at the end of his string to top Lee Hines in catapult glider. We missed the local P-30 flyers, but heard they were off at an FAC meet that conflicted with our dates. I think F1J has probably run its course and may be dropped as we have had only two entries in the last seven years.

Attendance was down a bit this year, but as always the funds collected that exceed contest expenses will be contributed to the US Junior Team.

Hope to see you next year when we will celebrate the 20th edition of the Southwest FAI Challenge!

Bill Booth Jr.

2015 Southwest FAI Challenge

F1A

Brian Van Nest	210	180	180	180	180	180	180		1290
Shlomi Rosenzweig	210	180	180	127	180	180	180		1237
Peter Brocks	184	180	180	150	180	180	180		1234
Don Zink	208	180	180	119	180	180	180		1227
Jim Parker	210	180	180	115	180	171	180		1216

F1B

Bill Booth	240	180	180	180	180	180	180	352	1672
Walt Ghio	240	180	180	180	180	180	180	340	1660
Jack Emery	240	180	180	180	180	180	180	305	1625
Mike Richardson	240	180	180	180	180	180	180	060	1380
Mike Achterberg	240	180	180	180	180	180	176		1316
Roger Morrell	240	180	180	180	175	180	180		1315
Blake Jensen	240	180	180	163	180	180	180		1303
Bob Piserchio	240	180	180	180	180	140	180		1280
Allan Ulm	240	180	180	105	132	180	097		1114
John Clapp	240	180	180	121	180	105	DNF		1006

F1C

Randy Secor	240	180	180	180	180	180	180	225	1545
Henning Nyhegn	240	180	180	180	180	180	180	000	1320

F1P

Mike Fedor	180	140	180	176	180	000	000		0856

F1Q

Jack Murphy	180	180	180	180	180	180	180		1260
Mike Pykelny	130	162	173	180	126	116	180		1067
Drake Hooke	127	141	148	130	180	138	180		1044

F1G

Tiffaney O'Dell	120	120	120	120	120	180			0780
Tom Ioerger	120	120	120	120	120	166			0766
John Clapp	120	120	120	120	120	161			0761
Bill Holt	120	120	120	120	120	159			0759
Mike Richardson	120	120	120	120	120	157			0757
Peter Brocks	120	120	120	120	120	136			0736
Alan Petersen	120	120	120	120	120	117			0717
Mike Pykelny	120	120	115	120	120				0595

F1H

Brian Van Nest	120	120	120	120	120	180	240		1020
Jim Parker	120	120	120	120	120	180	199		0979
Blake Jensen	120	000	120	120	120	180			0480

E-36

Lee Hines	120	120	120	120	068				0548
Drake Hooke	120	120	120	120	057				0537
Jack Murphy	120	120	120	107					0467

2015 Southwest FAI Challenge (Continued)

Vintage FAI Power

James Rhoades	180	180	180	180	180		0900

Catapult Glider

Jack Murphy	(041)	044	(032)	(037)	060	088	192
Lee Hines	073	(041)	042	(036)	(041)	049	164

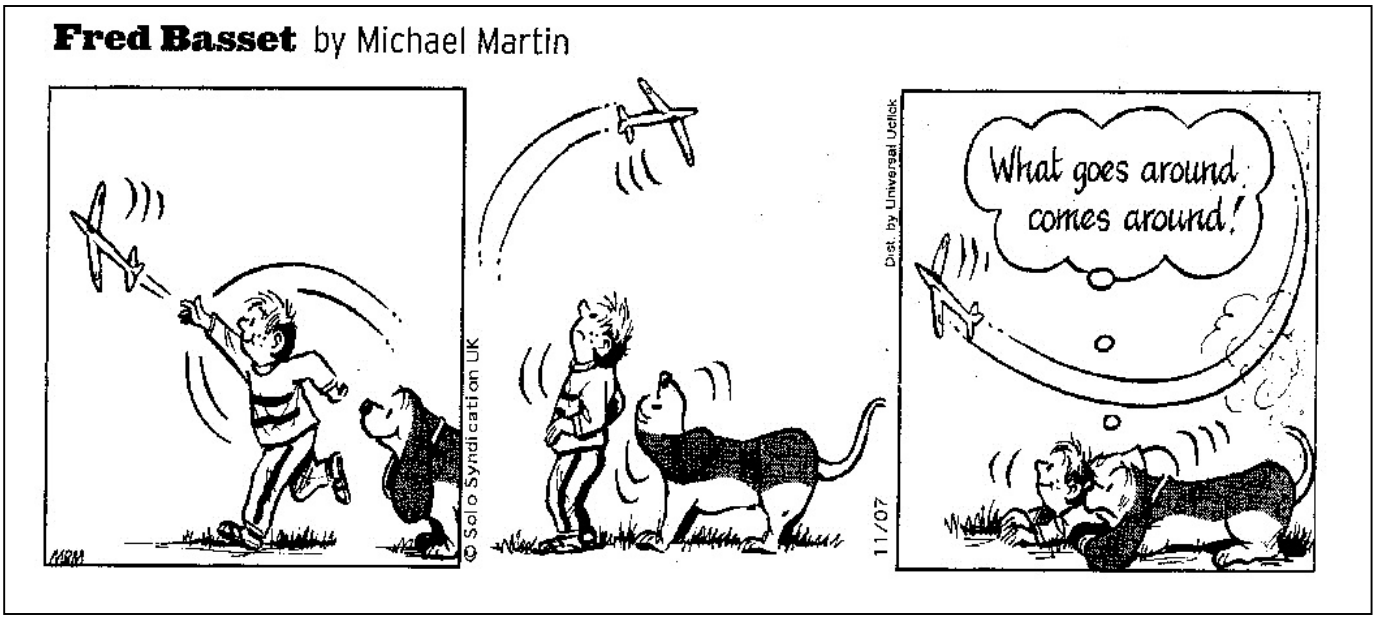
F1G Espresso Flyoff

Tiffaney O'Dell	267
John Clapp	229
Peter Brocks	205
Allan Petersen	159
Mike Richardson	108

F1H Espresso Flyoff

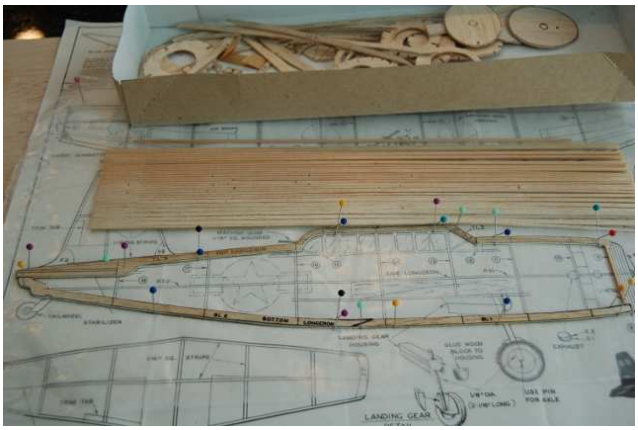
Brian Van Nest	212
Jim Parker	145
Blake Jensen	134

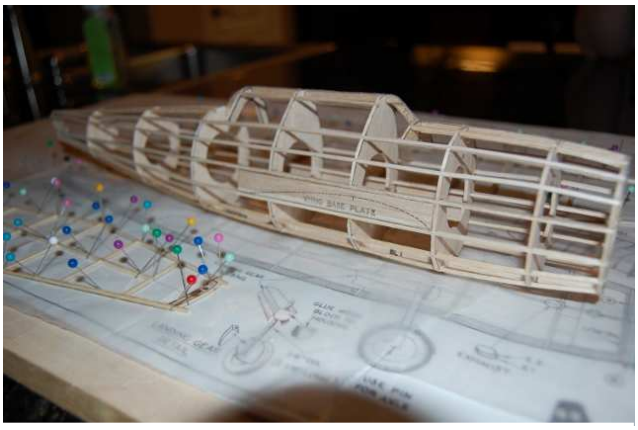
SAN DIEGO ORBITEERS

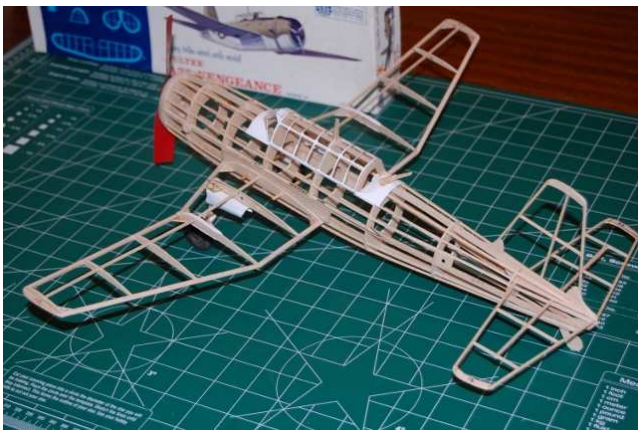


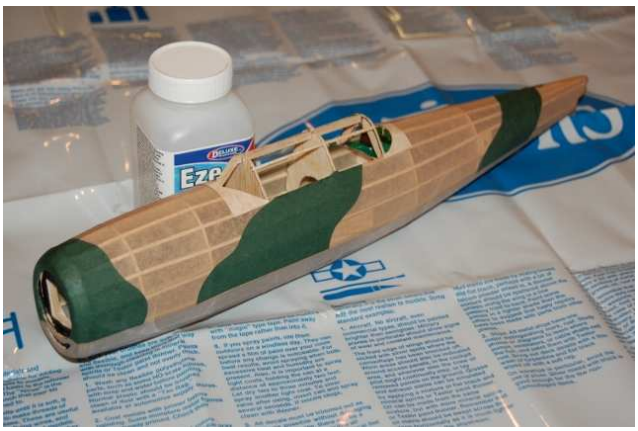
FROM THE WORKSHOP - D.Sciglianol

I am currently working on a Sterling Corsair, once again built out of the box, but it will not be finished until my Corsair Blue Aerogloss dope shows up. In the meantime here is a vintage Comet Vultee A35 I built out of the box, covered
with Peck colored tissue and doped with Eze Dope. The build is straight forward for a Comet kit, the wood quality was not too bad for an older kit and typical of Comet the plans are lacking in directions. As you can see this is a light build not much wood and one could definitely beef it up for a sturdier plane. For covering the fuselage I applied the tissue wet fastened to the structure with 50/50 Elmers/water mixture. The wings and tail surfaces were covered with dry tissue and shrunk in a make shift jig to prevent warping. The green trim was applied with Eze Dope and lightly dampened with water to conform around the curves. Once everything was in place I tried airbrushing 70/30 Eze Dope, worked OK but I will stick to applying with a brush. The landing gear is removable for flight and I decided to leave the canopy open for flight. Comet does a great job of providing a pattern for you to cut out the canopy and glue in place. I use 3M spray to attach the tissue to the paper pattern and cut out the pattern. I then carefully glue the paper side of the canopy to the clear canopy material using Deluxe Materials Rocket Card Glue. I find the best glue for this is Deluxe Rocket Card glue, basically thinned PVA. I have taken her out for test flights and does real well as can be expected with 3/16 rubber lubed with traditional Glycerin/Green Soap.



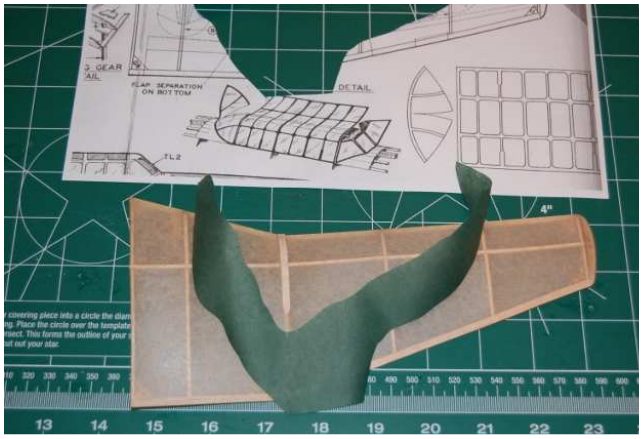


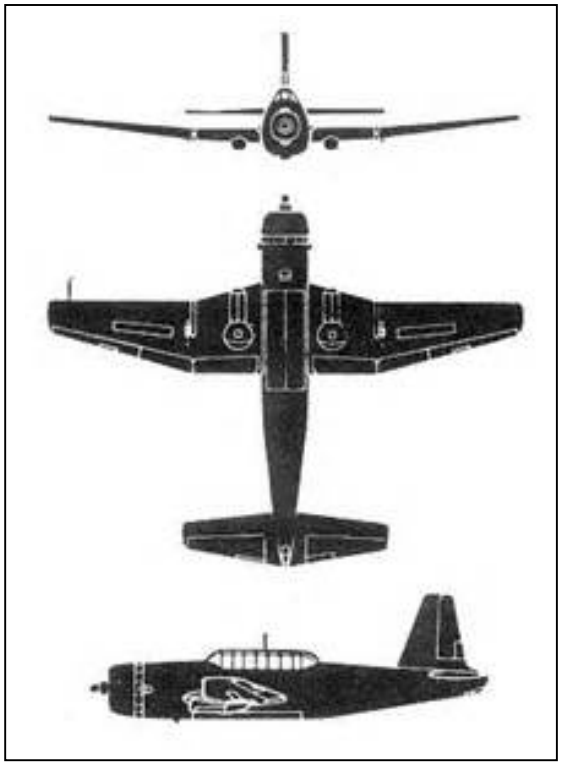




Vultee pictures continued on next page.

VULTEE PICTURES - (Continued)





HUGE

ESTATE SALE!
RC AIRPLANES & ACCESSORIES

2-DAY SALE

WHEN: Friday, Nov. 20, 2015 (1 pm-4 pm)
Saturday, Nov. 21, 2015 (9 am-1 pm)
(NO PRIOR SALES)

WHERE: 9320 Lake Hill Rd. Santee, 92071

WHAT: ★ MODELS ★ KITS ★ SUPPLIES ★





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EL TORBELLINO

WHAT'S HAPPENING - NOVEMBER / DECEMBER 2015

Nov. 22 - **Orbiteer Outdoor Monthly,**
SCAMPS Field, Perris CA., 8:00 am.
Feature Event: **Old Time Nostalgia Ruber** Other Events: **Power & Glider**

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Dec. 6 - **Indoor Flying**, Grossmont College (Upper Gym), 7:30 am to 11:30 am.
Feature Event: **Catapult Glider,** Other Event: **Embryo***

Dec. 9 - **Orbiteer Board Meeting**, 6:00 pm.
Don Bartick's residence, 22465 Casa De Carol, Ramona CA 92065

Dec. 13 - **Orbiteer Outdoor Monthly,**
SCAMPS Field, Perris CA., 8:00 am.
Feature Event: **Coupe** Other Events: **Power & Glider**