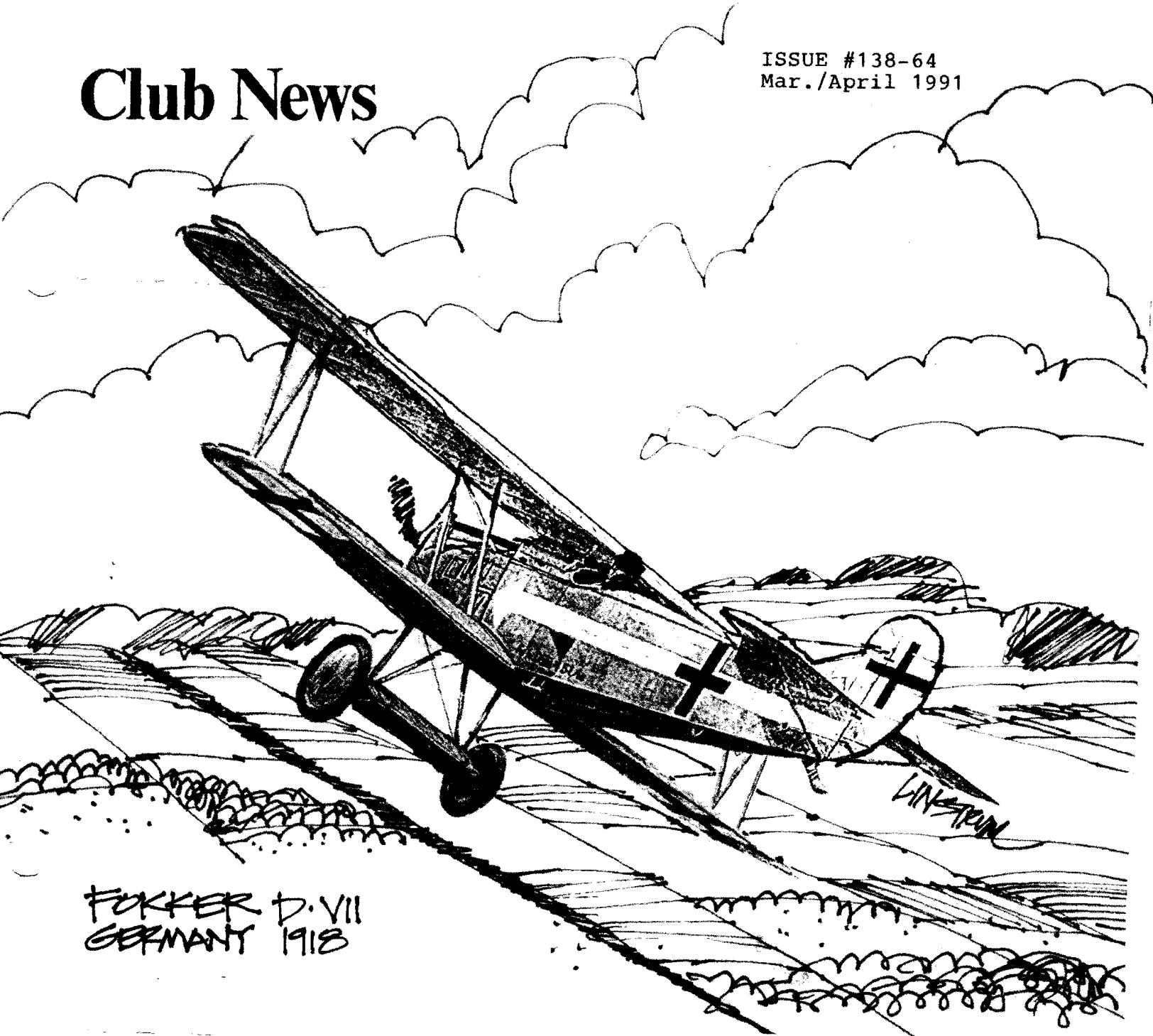


# FLYING ACES

Club News

ISSUE #138-64  
Mar./April 1991



FOKKER D.VII  
GERMANY 1918

# NEWS ON THE WING!

Thanks go to Dave Linstrum for another exciting cover, this time the ever popular Fokker D-VII. Nice job Dave! Thanks also go to FACers Dave Stott, Jerry Bockius, Leon Bennett, Joe Wagner, and Frank Faraco for their contributions to this issue.

Are you thinking about attending the FAC contests at Lawrenceville, IL. or the other BIG ONE at Geneseo, NY? Well let me tell you Skysters, it looks like both of them will be very well attended. Entries for both have exceeded last years entries as of this date. Of course you should know by now that the Lawrenceville meet is in conjunction with the AMA Free Flight Nats. When first planning the meet at Geneseo, NY we had hoped to attract at least 30 Clubsters but that figure now seems to be a very low estimate of what we might really have. If you are going to attend either one, or both, of these meets we urge you to please get your entries in as soon as you can so as to help us in the planning, it will surely be appreciated. Entry forms are in this issue, as well as some motels in the Lawrenceville area. Motels for Geneseo have been listed in past issues although many of them are already booked. Lots of room in the dorms though and it's a great deal. Hope to see many of you Clubsters at both of these contests.

In this issue we have listed all of the Flying Aces Squadrons for you to gaze over and if you are not already a member of one of them you may find one near enough to you to join, If there isn't one near you then maybe you can form one of your own! We'll be glad to have you. If you don't know how to get one started just drop us a line here at GHQ and we'll be glad to help you get one started. We have tried to list them in chronological order but I am not going to bet on it, but it will be close. The one exception is that we have switched Squadrons one and two because what was formerly Squadron One and Squadron Two are now reversed.

GHQ now has official FAC T-Shirts for sale. You may have your choice of a design with a Waco "D" on it or you may have the one with a Curtiss P-6E on it, or maybe one of each. They come in your choice of gray or yellow with black lettering. Sizes are, small, medium large, extra lge. and extra extra lge. Price is just \$10.00 each plus \$2.00 for postage. Proceeds from these t-shirts will go towards fending off the recent postal hike and will keep us from raising the FAC dues. Which by the way, hasn't increased since we started putting out this rag eleven years ago. Just send your order to FAC-GHQ, 3301 Cindy Lane, Erie, Pa. 16506.

BUILD....FLY      WIN....EFF--AAA--CEEE!!!

Lt. Col. Lin Reichel, CinC-FAC

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This is an up to date listing of all of the Flying Aces Squadrons, we hope we haven't missed anybody. If we have, we sincerely apologize and let us know about it so we can include you in the next issue.

#### Squadron #1

FAC-GHQ

Erie Model Aircraft Assn.

3301 Cindy Lane

Erie, Pa. 16506

#### Squadron #2

Ye Olde Hanger #1

Glastobury Modelers

Ed Novak

106 Cutlery Ave.

So. Meriden, Ct. 06450

#### Squadron #3

Stork Squadron

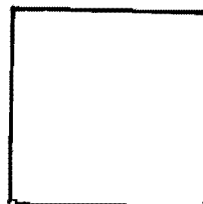
Cleveland Free Flight Soc.

Gordon Roberts

5539 Hilltop Oval

Parma, Ohio 44134

If the box on the right has the dreaded RED "X" in it, it is time to renew your membership which includes the newsletter. Cost is \$9.00 per year in the United States and Canada. Overseas cost is \$12.00. Six issues published every other month. This is your last issue under your old membership. Make checks payable to Flying Aces, send to FAC-GHQ, 3301 Cindy Lane, Erie, Pa. 16506



Squadron #4  
Detroit Cloudbusters  
Curt Haskell  
8035 McDermitt #88  
avison, Mi. 48423

Squadron #5  
McCook Field Squadron  
Frank Scott  
4283 Honeybrook Ave.  
Dayton, Ohio 45415

Squadron #6  
D.C. Maxcutters  
Jerry Paisley  
20 Clearwater Court  
Damascus, Md. 20872

Squadron #7  
Cactus Squadron  
Dave Smith  
1041 E. Rawhide  
Gilbert, Az. 85234

Squadron #8  
Scale Old Timers Soc.  
Walt Eggert  
26 Moredon Rd.  
Huntingdon Vly, Pa. 19006

Squadron #9  
Calumet Escadrille  
Phil Cox  
3351 Highway Ave.  
Highland, Ind. 46322

Squadron #10  
Swamp Squadron  
Dean McGinnes  
1503 Clairdale Lane  
Lakeland, Fla. 33801

Squadron #11  
Miami Hanger  
"Doc" Martin  
2180 Tigertail Ave.  
Miami, Fla. 33133

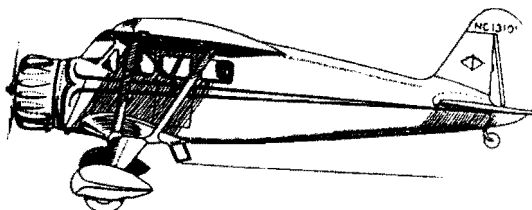
Squadron #12  
Palmetto Squadron  
David Smith  
3013 Sigmund Circle  
Columbia, SC 29204

Squadron #13  
KUDZU Flying Corps  
Dave Rees  
606 Walnut Creek Dr.  
Goldsboro, NC 27534

Squadron #14  
Moskitoe Squadron  
Steve Bacom  
836 Banbury Dr.  
Port Orange, Fla. 32119

Squadron #15  
Mid-South FAC Squadron  
Oliver Benton  
409 Brady Point Rd.  
Signal Mountain, Tn. 37377

Squadron #16  
Diablo Squadron  
Harvey Lance  
1206 Hale Dr.  
Concord, Ca. 94518



OK Rib-Slicers, there you have it! Join a group and get in on the fun. Like we said before, if there is no squadron in your area, START ONE!

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### 28th ANNIVERSARY BANQUET

28 years! Yes, that's how long the Erie Model Aircraft Assn. has been in existence. They would like to welcome all of you who can attend to help them celebrate the occasion..

The date.....April 27, 1991  
The place.....Lee Kontis Charcoal Pit  
The time.....Happy hour at 6:00 pm....Dinner at 6:30 pm.  
Menu.....Stuffed pork chops or stuffed Chicken breast.  
Price.....\$12.50 per person.

For reservations and directions to restaurant contact; Vic Didelot  
4410 Lorna Lane, Erie, Pa. 16506 phone (814) 838-3263 no later  
than April 22, 1991.

Guest speaker will be John Mohr who was a P-47 pilot in the CBI Theater during World War Two. Also our "Old Buddy" Earl Van Gorder, he of the column "Flying Things For Fledglings" from "Flying Models Magazine" will be there too. Sounds like another great night of revelry!

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## 1917 EULER QUADRUPLANE

By Dave Stott.

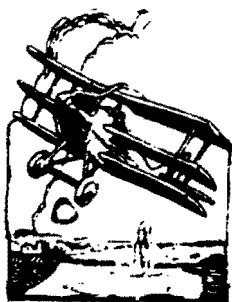
August Euler, pronounced "Oiler", Germany's first certified aviator opened his aeroplane works in 1908 when he built Voisin ships under license. By 1910 he was designing his own machines, monoplanes, biplanes, and even tripes. Although Augie had no preference as to the number of wings supporting his sky buggies, he was hung up on the power plant. It seems herr Euler was enamoured of the Gnome rotary to the extent he had a flower bed in front of the factory in Frankfurt in the shape of a 7 cylinder Gnome complete with prop! All of colorfull flowers! Now, this probably did not do him any good in the war years to come when the top brass from Wilhelmstrasse favored the Mercedes as the mill to push heinie flyers in the ozone over the battle lines.

In 1917, the third year of the Big Fuss, he and his design chief, Julius Hromadnik dreamed up the quadruplane presented here. Rotary powered, of course, it was fairly straight forward to behold, but rather off beat in it's control system. Instead of sporting normal ailerons, Augie and Jules decided to make the entire top wing surface serve as an aileron, thereby allowing all the wings to be constructed with a single spar which was a great weight saving gain. It seems to this writer that there must certainly have been a nose-up pitching moment during banked turns with the drastic increase in drag so far above the thrust line caused by the deflection of those upper wing/aileron. Anyhow, during it's evaluation at Adlershof in early 1918, the type was given a thumbs down by the test pilots, who probably didn't care for the gyrating torque producer flailing around in the beezee of the crate, either.

Our model packs 90 square inches of wing area into a mere 16 inch span allowing it to be almost completely structured with 4 to six pound 1/16 square balsa thus achieving a very low wing loading. The completed model weighs 1.1 ounces complete with motor and ballast.

Construction is simple enough to be humdrum, except for cutting out 56 wing ribs, which is definitely a ho-hummer. While you are at it, cut an extra rib to set up the incidence angles of the two bottom most wings by pinning the rib in place on the side view and putting the parts of each saddle in place around the rib. Comprenny? No? O.K., we will discuss it in more detail.

Let us begin by numbering the wings. We will call the bottom wing number 1, the next one up number 2, the next 3, and the top most wing number 4. Look at the side view of the plan and note the different angles of incidence called out for these wings. It is important to the performance of your model that you try to maintain these angles. We can do much during the construction of the fuselage sides to automatically establish these angles on wings 1 and 2. Wings 1 and 2 are made straight thru with their dihedral set up in the construction of their center sections, so when they are glued on to the fuselage we need only be concerned with aligning their sweep and incidence.



When building the fuselage sides carefully pin the extra wing rib in place where wing #1 will pass thru the fuselage. Build the upper saddle around the rib and into the fuselage side structure. This will pretty much insure the zero degree incidence angle needed. The small triangular piece below wing #1 is added after final assembly.

The sheet balsa wing saddle for wing #2 has a slot cut into it the shape of the airfoil to allow the one piece wing to slide thru it during final assembly. By having this wing already built you can check to see that the saddle will slide on over it fairly snug. Now, take that extra rib from it's position where the bottom wing nests, and pin it in place on the side view where wing #2 passes thru the fuselage at it's  $\pm$  degree incidence. Drop the sheet saddle over it, trimming it's perimeter if need be to fit into place in the fuselage side structure. Presto! Automatic incidence for the wings passing thru the fuselage.



Let us continue to mount the wings of this model. The cabane struts are built over the side view of the plan, the material being hard balsa, or bass wood. The cabanes are glued to the inside of the fuselage sides. As the upper fuselage from nose to former 4 is covered with stiff paper, this is easily accomplished. The cabane struts are an inverted "V", the aft strut terminating at the lower end flush with the upper surface of wing #2. The fore leg continues down and is tapered to a point almost even with the cowl side stringer. A small gusset is added to the aft leg to help support wing #3.

The simple single bay strut with it's 3 gussets is built directly over the side view of 6 to 8lb. balsa. It slides thru the slot left by the double wing ribs in each wing. Be sure to cant these ribs during construction so the bay strut passes thru properly in spite of dihedral angle.

Number 3 wing is glued in place next, one panel at a time. The incidence angle should be checked, preferably with a level. The bay struts, being in place already, will establish the dihedral angle automatically, and sweep alignment should be automatic as well, but be sure to check it. Follow along with the other panel using the same technique. The top wing is assembled last. Note it's incidence angle. It is minus 1 degree. This may seem strange, but that wing is so high over the thrust line, and forward of the CG it is better to reduce it's lift and drag by using a negative incidence angle. It works. As far as multi-planes go, this quad is fairly simple to set up properly, and the thread rigging is by no means complex. As a matter of fact, there are many biplanes with far more rigging than this ship.

Before discussing the thread rigging, which is the last phase in final assembly, let us cover some other points of construction. The area between the lower longerons between 1S and 2S is filled in with 1/16 sheet balsa to provide a platform to glue the dummy cylinders on to and a hard surface within the fuselage nose to hold clay ballast.

The upper part of the fuselage is covered with pre-painted (silver) light bond from former #4, forward to former 2T just in front of the forward cabane strut. The sides are covered with the same material from 2S aft to the vertical line about 3/16 behind the end of the cowl cheek. The belly is covered between these same stations as the sides. The engine cowl is a single piece of card stock wrapped completely around the fuselage between 1S and 2S.

## Euler Quadruplane, continued.

The cowl cheek, detailed in 3-view on the plan, is made of foam. The landing gear "V" strut is made of bass, with the spreader bar being made of medium balsa. Twenty thousandths wire is used to make the spindles. The wheels are vac-u-formed over Williams Brothers plastic W.W.I wheels. Be sure to drill two very small holes 180° apart next to the rim on the plastic wheel otherwise the plastic sheet will not suck down to form the tire and rim properly. A hub of 1/16 O.D. aluminum tubing is used for the wheel hub. The tail skid is light balsa. Be sure to add a cross member in the fuselage to support the aft strut of the tail skid.

The dummy cylinders were made up of balsa dowel wrapped with course thread. Rocker mechanism was phonied up of bits of balsa. The single push rod was made of a strip of Hinoki wood, which is about .040 square, sanded round. The cylinders were pegged into place after they had been glued on to help keep them on, and the inside ends of the pegs (of 3/32 birch dowel) were left protruding to help retain the clay ballast.

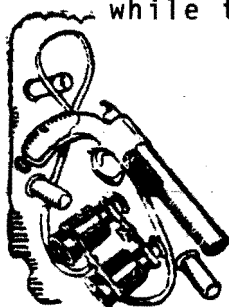
The real aeroplane was simply clear doped fabric, with the cowl and other sheet metal parts raw aluminum. A rather old sheet of

white Jap tissue was used to represent the clear doped fabric, while the simulated aluminum parts were silver lacquered. The engine cavity in the cowl was painted flat black. In spite of the clear doped natural fabric on the full size ship, she sported black crosses outlined in white. This was reproduced on the model by shrinking and spraying tissue with white dope over a frame. The crosses of white were cut from this stock. The smaller crosses were cut of black Jap tissue. The white crosses were doped in place, and the black ones superimposed over them. Cabane and bay struts are black, as is the tail skid. Landing gear struts are silver. Wheel discs are also silver.

The small control horns on the tail surfaces were made from 1/32 bass sheet, pushed thru slots in the tail, and zapped in place. They are black in color.

All rigging is of grey thread. Letters in circles on the side view and front view of the cabane assembly should clarify which is which. Rigging A&B are control wires and are duplicated out at the bay struts in the same geometry as they are at the cabanes. Wires F&G are lift wires and are attached at their positions shown on the bottom longeron and travel up and out to attach at the bay struts just under wing #3. Wires H&K are drag and anti-drag members and emanate from similar positions on the lower longerons and travel out to attach at the bay strut just above the upper surface of wing #1. It is wise to have a fuselage cross member tying the lower longerons where the lift and anti-drag wires attach. An access hole can be cut in the belly behind that member and the one at the motor peg station to facilitate rigging.

Wire E is a landing wire. It emanates at the cabane as shown in the front view, goes out and down, passing thru wing #2, and attaches to wing #1 just in front of the bay strut as shown on the side view. Wire D goes from each cabane aft strut, thru the bond paper covering, and around the center stringer. This is a bit demanding, as you must work thru the front of the fuselage to accomplish this. The empennage has only one brace wire starting from the stabilizer above



## Euler Quadruplane, continued.

the brace strut, running up to the top of the rudder, and down to the stabilizer again on the other side.

At the time of this writing the model has been flown with 4 strands of 3/32 FAI 15 inches long turning a carved balsa prop. The prop was cut from a block 5/8 X 7/8 X 6 1/2 inches. The blades have full radius tips, flat, no undercamber blades on the outer half, and about 1/32 undercamber on the inner halves. Keep the blades thin.

Balance the model to place the CG about 1/16 behind the spar of wing #3. Glide test it. The amount of down thrust shown on the plan worked out to be correct. Add a few degrees of right thrust and a bit of right rudder, crank in a few turns, and take to the air lanes! The model so far has turned left under power. This is safe, but an open right turn will produce a better rate of climb. I think the ship needs a bit more power, say a loop of 1/8 and a loop of 3/32 to fly better out doors, while the power mentioned earlier would be nicer indoors. You might try a ~~North~~ Pacific 7 inch prop (they measure about 6 13/16) with the tips trimmed to a full radius if you don't like carving props. The ship has been flown about a dozen times with minimal trim changes. It has shown no nasty traits. Flight paths have ranged from the left turn pattern to wandering both left and right during power on. The glide has been very slow with a low sink rate...really nice. All the testing has been done over frozen ground, So you see, skysters, this bus can fill a fella with confidence as well as pride. Happy landings!

Ref: 3-view and photo, Air International, Oct., 1978, pg. 196.

History of Quad, same as above.

History of August Euler and his company, Jane's "Fighting Aircraft of World War I.", pg 147. Also, Jane's "All the World's Aircraft." for 1913, pg.135.

Since we received this article from Dave we have the following report from him. The Euler is flying quite nicely now. I have tried a six inch prop and found the ship even more easily trimmed. I reccomend the six inch prop for outdoors, and the 6 1/2 incher for indoors.

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## DOPE ABOUT DOPE

As many of us have found out the hard way, most model airplane dope on the market today cures out as brittle as a fresh potato chip. There's a reason for this: The dope purveyors (Sig and Aerogloss primarily) feel that the openwork structure of model airplanes is going to get covered with some variety of iron-on plastic.

Since iron-ons are plenty pliable (too much so at times), there's no need to worry about making dope flexible! Quite the contrary: when dope dries out brittle it's much easier to sand. The guys at Sig and Aerogloss pay no attention to those of us who've complained about brittle doped finishes. They believe (with some reason, I guess) that nearly all their liquid finishes get applied to solid wood, where a plasticized paint'd clog sandpaper badly during the process of obliterating all trace of wood grain....

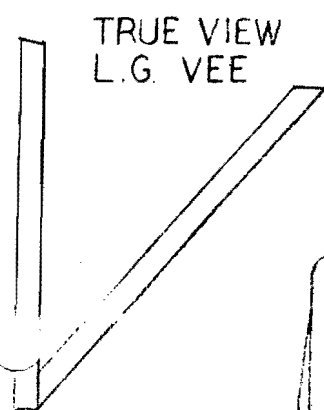
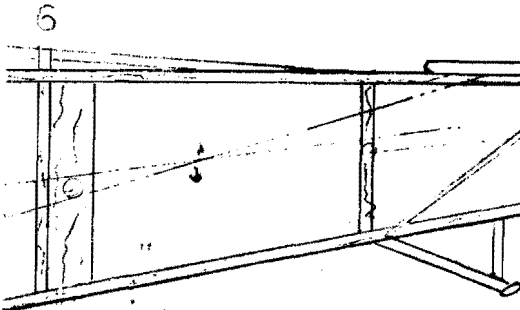
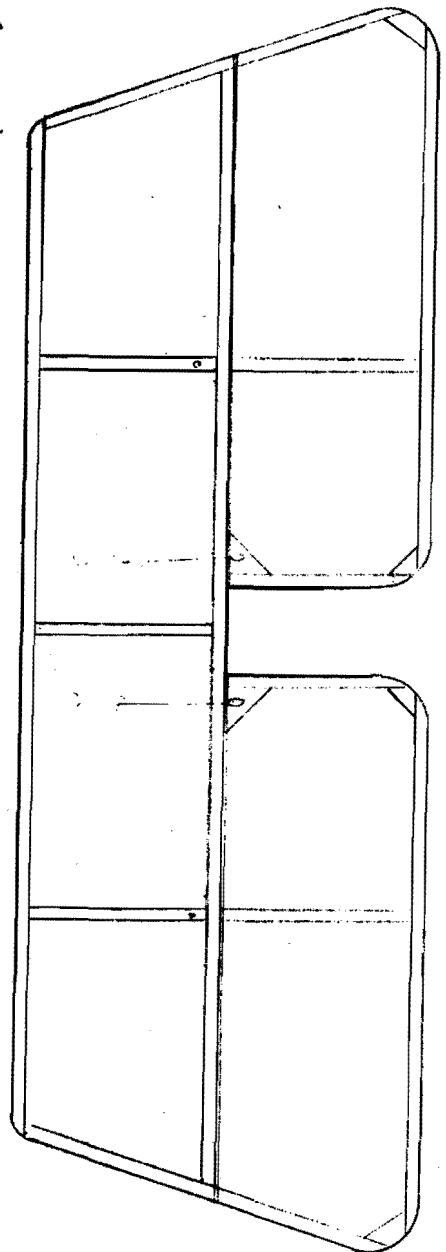
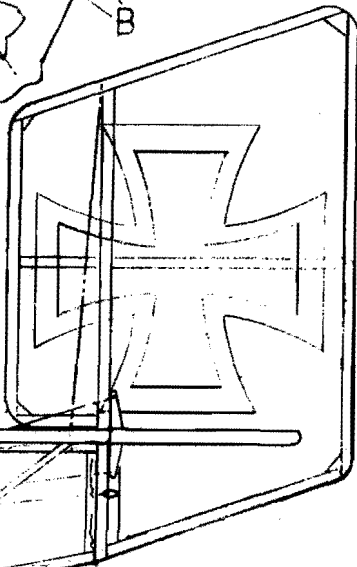
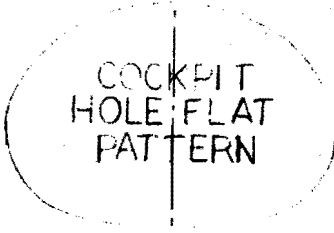
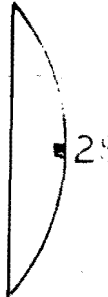
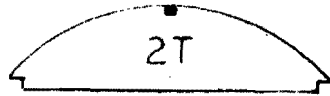
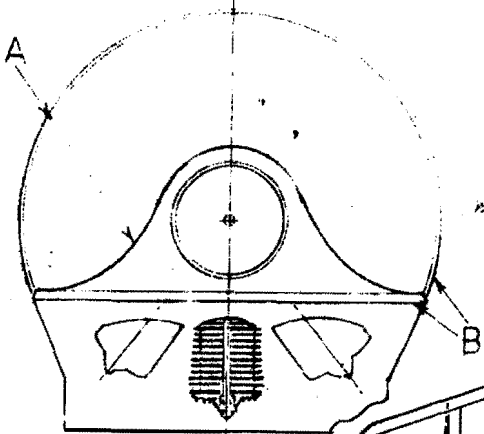
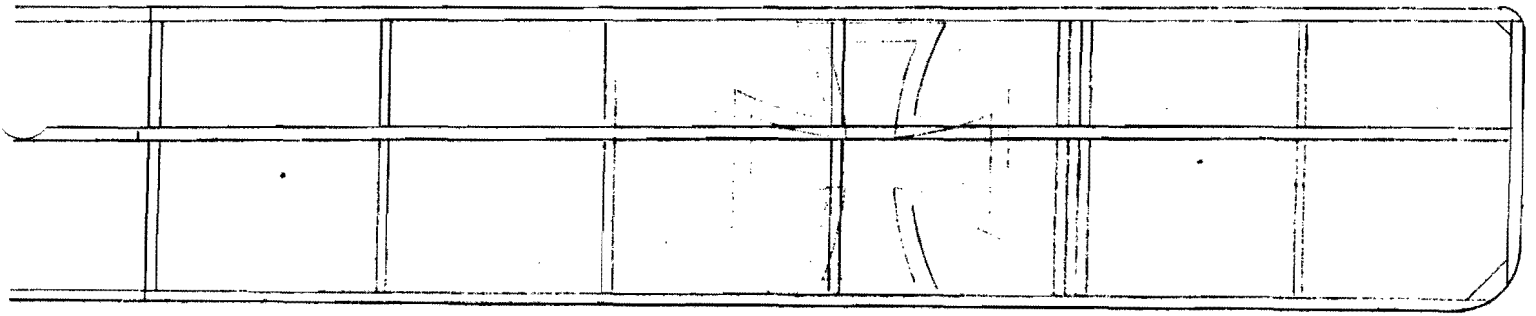
Randolph's dope is made to a different philosophy. The stuff is genuine aircraft grade; designed (and renowned) for finishing fabric-covered airplanes. And it works just as well on silkspan and tissue. Brushed or sprayed on, Randolph dope cures out to just the right degree of flexibility. And it stays that way too!

Write to Jim Correll (an old-time modeller) at ABC Hobby Supply, P.O. Box 2391, Clarksville, Ind. 47131. Or call him at (812) 944-5557 for all the dope about Randolph' dope.

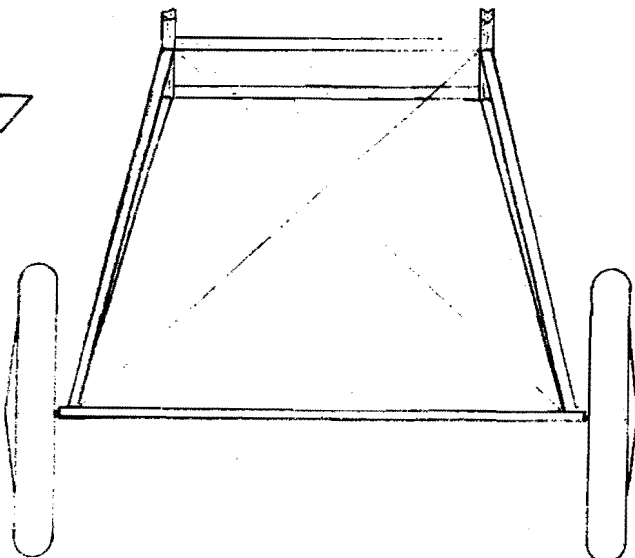
JOE WAGNER







TRUE VIEW  
L.G. VEE



1917  
EULER QUAD

12-90 + D.A.S.

## Contest Calendar

- April 7,.....Western New York FF Soc. & Markham Flyers...1991 CAN-AM Indoor Contest at the Alumni Arena, St. Un. of NY at Buffalo. 8:00 am till 6:pm EZB, Limited Penny Plane, Intermediate Stick, FAC Rubber Scale, FAC Peanut Scale, Bostonian, No-Cal Scale, No-Cal WW ii, Blatter 40. CD Jack Brown, 1446 Red Jacket Rd., Grand Island, NY 14072 or Jack McGillivray, 621 Cosburn Ave., Toronto, Ont. M4C 2V1 Ph. (416) 421-1108. Phone for Jack Brown is (716) 773-5674
- April 21.....1991 Spring Kanone Quest...Lots of FAC "STUFF", CD Dave Smith, 1041 E. Rawhide, Gilbert, Az. 85234 for more info.
- April 28,,,,,,15th Annual Snowbird Indoor Meet at McComb Fieldhouse, Edinboro, Pa. Sponsor Erie Model Aircraft Assn. FAC Scale, FAC Peanut, Hi-Wing Peanut, 7 gram Bostonian, 5 gram No-Cal Scale, WW I Peanut Dogfight, A-6, Blatter 40. CD Vic Didelot, 4410 Lorna Lane, Erie, Pa. 16506 Ph. (814) 838-3263
- May 4-5.....Rome, Ga. Peach State FF Contest. For more info call or write Ollie Benton 409 Brady Point Rd., Signal Mt., Tn. 37377 Phone (615) 886-1293
- May 5.....The Floyd Bennett Field Indoor Revival Intermediate Stick, Manhattan Cabin, Easy B, Limited Penny Plane, Bostonian. CD Don Ross, 38 Churchill Rd., Cresskill, NJ 07626 Ph. day (201) 568-5032 Eve, (201) 568-5272  
This meet will be held at the Blue Nose Hanger at Bennett Field.
- May 18-19.....Annual Mach 1 FF Contest at Courtland, Ala. For more info contact Ollie Benton, 409 Brady Pt. Rd., Signal Mt., Tn. 37377 Ph. (615) 886-1293
- May 19.....E.M.A.A. FAC Contest at Prangmore Aerodrome Millfair Rd., Erie, Pa. Time 10:00 am till 5:00 pm. FAC Scale, FAC Peanut, Hi-Wing peanut, Embryo, HLG, WW I Dogfight, Golden Age Scale, Comet kit/plan scale, FAC Oldtimer, Jumbo Scale. CD Ross Mayo, 6725 Alan Lane, Fairview, Pa. 16415 Ph.(814) 474-5229
- May 19.....Miama Meet #6 at McDill AFB, Tampa, Fla. For more info contact "Doc" Martin 2180 Tigertail Ave., Miami, Fla. 33133 Ph. (305) 858-6363
- May 25.....The KUDZU Flying Corps. 7 FAC events plus ROW. Contact Dave Rees, 606 Walnut Creek Dr., Goldsboro, NC, 27534 Ph. (919) 778-6653
- June 6-7-8-9..The Big Indoor Meet. Johnson City, Tn. AMA Indoor Nats.
- June 8,.....20th Annual Great Lakes Contest at Prangmore Aerodrome, Erie, Pa. 10:00 Am till 5:00 Pm. FAC Scale, FAC Peanut, Hi-Wing Peanut, Embryo, Golden Age Scale, Comet kit/plan Scale, FAC Oldtimer, WW II Combat, Races, HLG, Pioneer Scale. CD Joe Barna, 3517 Kristie Lane, Erie, Pa. 16506 Ph. (814) 833-4589
- June 20-21....FAC Contest at the AMA Nats, Lawrenceville, Ill. See flyer in this issue.
- July 13-14....National Warplane Museum FAC Contest at Geneseo, NY. See flyer in this issue.
- Aug. 10.....E.M.A.A. Picnic Meet at Prangmore Aerodrome Millfair Rd. Erie, Pa. FAC Scale FAC Peanut, Hi-Wing Peanut, Embryo, Golden Age Scale, Comet kit/plan Scale, One Design--Flying Aces Moth, Pearl Harbor mass launch, Races, Jumbo Scale No-Cal Scale. CD Vic Didelot, 4410 Lorna Lane, Erie, Pa. 16506 814-838-3263
- August ?.....date not yet final. FAC Mid-South Champs. Contact Ollie Benton, 409 Brady Point Rd., Signal Mountain, Tn. 37377 Ph. (615) 886-1293
- Sept. 7-8.....Peach State FF Scale Contest at Rome, Ga. Contact Ollie Benton, 409 Brady Point Rd., Signal Mt., Tn. 37377 (615) 886-1293.

These FAC events will be flown at the AMA Indoor Nats at Johnson City on June 8, judging will be on June 7 from 12:30 to 5:00 PM. Hi-Wing Peanut, Peanut Biplane, Peanut WW I Combat and Golden Age Scale 24" max span. Cost \$3.00 per event. CD Jim Miller, 827 Yorkhaven Rd. Cincinnati, Ohio 45240. Jim is looking for a couple of good men to help him. If you can do it he will greatly appreciate it.

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## Peanut & No-Cal Scale Postal Meet

This contest is over on April 30th so get your times in as soon as you can Skysters. Entries postmarked after May 1, 1991 will not be accepted. Remember we have four "Wings" or events. Everytime you fly your model time it and send the time in along with the name of the model and what "Wing" you flew it in. Enter as many times as you wish with as many different models as you wish. Every time you better a score with a particular plane send it in. Contest times are also accepted. Winners will get another "Notch" on the "Kanone" list and plan prizes as well. BUILD--FLY--WIN--EFF--AAA--CEEEE!!!!

### OUTDOOR PEANUT

PILOT	AIRCRAFT	TIME
1. Carl Loehle	DH-6	117sec.
2. Dave Stott	Fairchild 24	94 "
3. Gene Smith	HE-100	72 "
4. Dave Stott	C.R. Courier	57 "
5. Paul Herbst	Miles M-18	44 "
6. George Bredehoft	Bell P-39	25 "

### OUTDOOR NO-CAL

PILOT	AIRCRAFT	TIME
1. Mark Fineman	Republic XP69	158sec.
2. Claude Curry	Fike	119 "
3. Gene Smith	Bearcat	112 "
4. Dave Linstrum	Day.Wrt.racer	108 "
Bob Thompson	Goodyear F2G	104 "
6. Dave Stott	Gwinn Aircar	81 "
7. Walt Leonhardt	Cougar	46 "
8. " "	Piper J-3	43 "
9. " "	Farman 190	31 "
10. Geo. Bredehoft	P-38	30 "

### INDOOR NO-CAL

PILOT	AIRCRAFT	TIME
1. Don DeLoach	Brewster SB2A	235sec.
2. Russ Whitford	Day.Wrt. racer	184 "
3. Dave Linstrum	Cassutt Racer	165 "
4. Gene Smith	Mig-3	146 "
5. Steven Whitford	Maule M-5	140 "
6. Tom Nallen Jr.	Piper Skycycle	140 "
7. Ed DeLoach	Junkers JU-160	106 "
8. Padre Anderson	Taylorcraft	95 "
9. Walt Leonhardt	Piper J-3	39 "
10. " "	Cougar	39 "
11. " "	Farman 190	37 "
12. Jerry Bockius	Day. Wrt. racer	35 "

Steven Whitford is 9 years old.

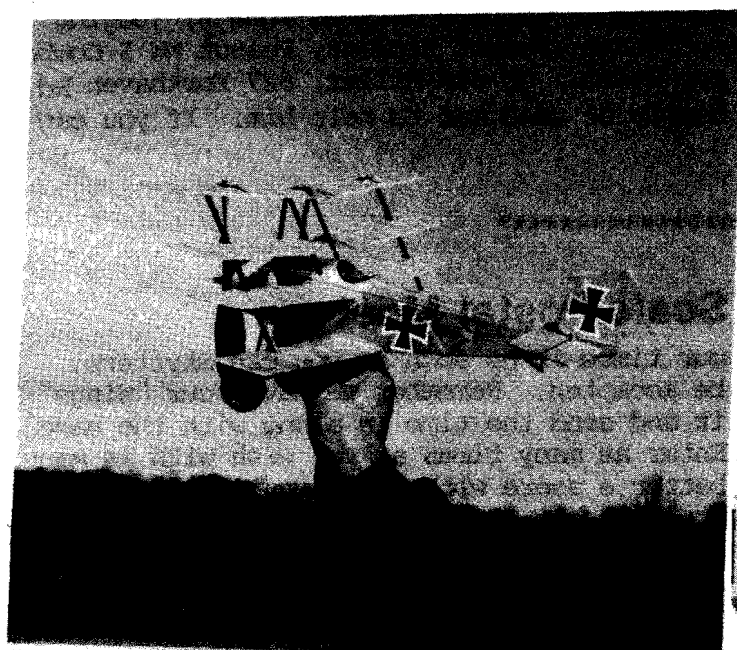
### INDOOR PEANUT

PILOT	AIRCRAFT	TIME
1. Don DeLoach	Voisin	95sec.
2. Walt Eggert	Gere Sport	66 "
3. Gene Smith	HE-100	65 "
4. Randy Boston	Lacey	61 "
5. Walt Eggert	Farman Sport	55 "
6. Bob Bender	S.D. 14bis	52 "
7. Stan Fink	Euler D-2	45 "
8. Ross Mayo	Bristol Scout	32 "
9. Richard Fiore	Piper Vagabond	31 "
10. Walt Leonhardt	Cougar	27 "
11. John Koptanak	SE-5	26 "
12. Stan Fink	Fokker D-8	23 "
13. Lloyd Roseneear	Pietenpol	16 "
14. Stan Fink	Gee Bee Y	10 "

\*\*\*\*\*

### S.O.S.--S.O.S.--S.O.S.

John Bell, 650 Pine Crest Dr., Largo, Fla. 34640 is looking for any info for the Rearwin Speedster with the 90 HP Cirrus engine. He would appreciate any photos, three-views or anything else you may have on it.



Top and Bottom left; Two views of Dave Stott's beautiful 1917 Euler Quadraplane. Plans in this issue. Dave says she's a good flyer. Photo by Dave.

Top Right; Last fall GHQ visited the Detroiden Geschwader for one of their meetings and they sure put on a good Shindig. Ice cream and cake, etc. That's Lin Reichel, CinC-FAC, on the left with Vic Didelot in the middle and the Geschwader Prexy Paul Boyanowski on the right. Photo by Pres Bruning and the cake was by Gina Boyanowski. We sure had a good time Clubsters. Let us know when your going to have refreshments like that again and we will be there.

Bottom Right; Tom Hallman sent us this picture of his new Mig-3. She has a wingspan of 26 inches and weighs in at 24 grams. She should really chew up some ozone!

Mumbo Jumbo #44 from the pen of the Glue Guru

Salutations, disciples! Today we shall ponder an aspect of spiral stability mentioned furtively if at all by most practicing gurus - the matter of diagnosis. How can you be certain that you really have a spiral stability problem?

Your first reaction will be to guffaw even as you slap your knee. Haw! Surely anybody can spot the slightly fast, slightly nose-down turn becoming ever tighter, ever faster, even more nose-down until... Who has not stood open mouthed in horror as the nightmare formed right in front of his eyes? At any FAC contest the full spectacle is freely offered to every spectator until we reel away in nausea. How can it be suggested that some lack of certainty exists? Feh!

Certainly the spiral dive crash is real enough. The issue is not one of basic identification but rather of sorting the basic happening into one of two sub-categories - true spiral instability versus improper trim effect.

Why does it matter? Unless the event is properly classified, a mistaken therapy is likely to be administered; a therapy that can't possibly work, for trim error and true spiral instability are quite different in cause and cure. Only the crash is similar. For example, if your model spirals towards the left under power, it is likely suffering from incorrect trim. If so, increasing the dihedral is not the correct solution. Instead of a messy rebuilding job, just a slight increase of thrust line offset may well set matters aright. Yet that very same spiral to the left just might be an indication of true spiral instability. How do we tell one from the other?

Here's our first acid test: if matters improve in glide, as compared to flight under power, the odds are that the difficulty is one of power trim.

Why? When in glide, our models experience a larger lift coefficient, as compared to powered flight. Spiral stability worsens as the lift coefficient is made larger. In other words it is intrinsically easier for any model to experience instability in glide than when under power. A model acting in reverse fashion - worse under power - is unlikely to possess a serious spiral instability problem. Therefore the bad flight Characteristics under power probably reflect bad trim.

In making the determination of where matters are worse (power or glide) it is assumed that there really is a glide. A two second dive into the weed patch doesn't count. There must be some respectable interval of gliding, hopefully 10 seconds or more, during which the model truly experiences equilibrium. More glide time permits a more certain inspection.

Why is this useful? Try this example. I once had a jumbo Moth Minor (64") that went well. I flew it actively over a two year period, mostly near dawn to avoid thermals. If ever I knew a model it was this one; it was as stable and trouble free as I've ever had. One day I flew it at a NATS where thermals proved strong. As the model wound through a three minute flight, its first ever, I realized that the glide circle was ever so slightly tightening, the nose was moving downwards...in short, it was starting a spiral dive - its first. Odd indeed. Here I had a background of at least 100 flights at the 55-70 second level with never a difficulty and yet at the three minute point...aargh! How come? The MM was just barely unstable in glide, or in the language of stability, it "diverged slightly" such that only if given plenty of time in the air would the instability come out. All previous flights had been too short for the truth to emerge.

However the Moth Minor situation can properly be regarded as unusual. Ordinarily 10 seconds or so of glide will permit a fair judgement.

Now let's assume that the glide portion is even worse than powered flight. What then? Apply the second acid test: if the model will spiral dive in either direction, or in both directions during a single flight (spiral, recover, opposing spiral) the model is truly spirally unstable. No amount of fiddling with trim will ever improve matters. Prepare for surgery.

Yes, as it is written: a warped model always spirals in the same direction, but a spirally unstable model couldn't care less - any old direction will do fine. If you have one that's quite fussy about direction you may well effect a cure by removing the warp or even introducing a counter-warp.

14. Now let's assume that the verdict is spiral instability and you are about to resort to the knife. How much of a change should be introduced into dihedral (larger) and/or vertical tail area (smaller)? I've found it best to employ a bit of both rather than to concentrate upon one or the other. Somehow there's less of an affront to the eye if change is parcelled out. As for the amount of change, two degrees more of dihedral and 20% less vertical tail area should change things dramatically for the better. However the final answer depends on both your eye and the extent of the instability as well as a great many other factors. There is no known method of working out the necessary change in advance of good old cut and try. As it is written: with dihedral, as with wine, women and song, who is to say how much is enough?

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## Airmail Pals

Lin,

I just sat down to write to you for clarification of Pioneer Scale scheduled for Geneseo July 13-14. As I read the rule over, it dawned on me that in one deft stroke the Voisin curse had been lifted. Thank God for clear thinking. We are excited about the meet and look forward to seeing all the Gang again.

Tom Nallen

Dave Stott also wrote and expressed his happiness with the Pioneer Scale event. Thanks Skysters, it sure is nice to know that some of the clubsters think the same as we do here at GHQ.

Dear Mr. Reichel:

This is in response to your Jan/Feb issue of Flying Aces Club Newsletter. You have reprinted an article by Jim McNeil in which he has stated that the fee for the AMA Renaud Memorial Research Library research is \$0.50 or \$1.00. Sorry, but it is a little higher than that. The library fees are:

- 1) reprints of articles.....first article is free then \$2.50 for each add. article.
- 2) Researching a subject.....\$10.00 per subject.

The AMA/Lee Renaud Memorial Research Library now has over 30,000 publications on aviation and has over 5,000 aircraft (either full scale or model) on file. The library has become a fully recognized aviation research center.

If anyone needs information, please have them contact me at the AMA Headquarters.

Sincerely,

Georgiana G. Apple

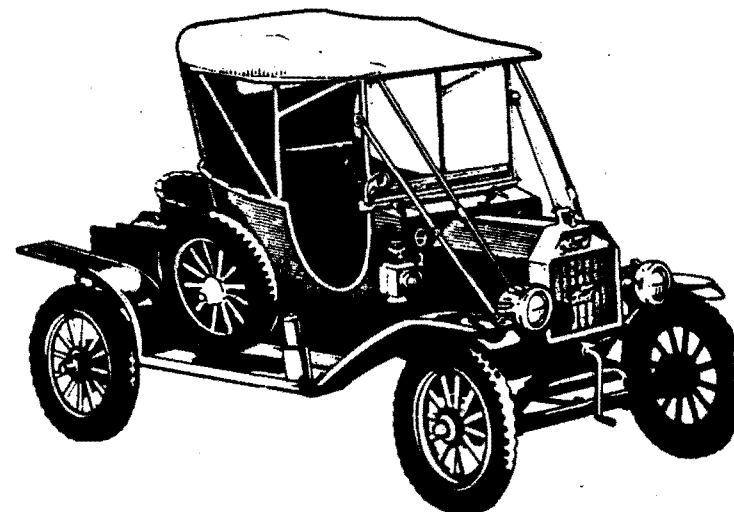
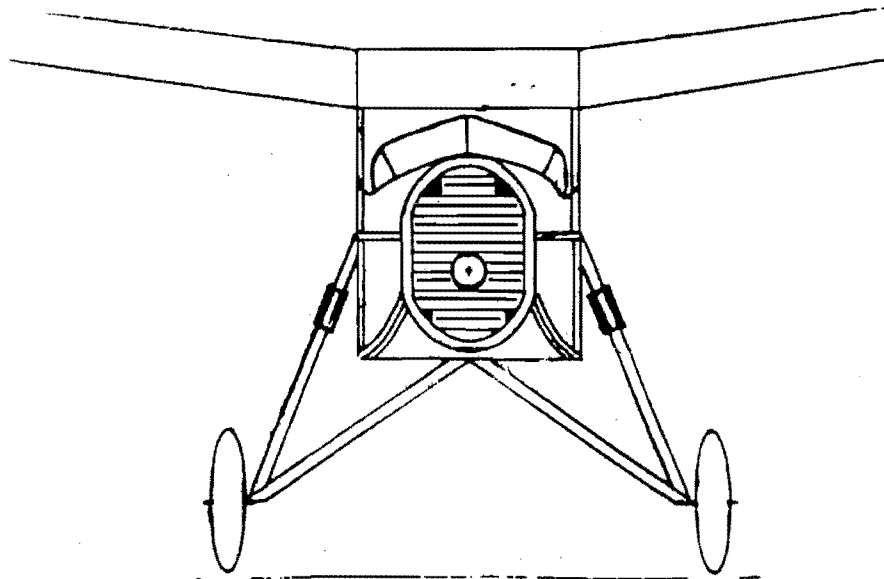
Librarian

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## Contest Calendar

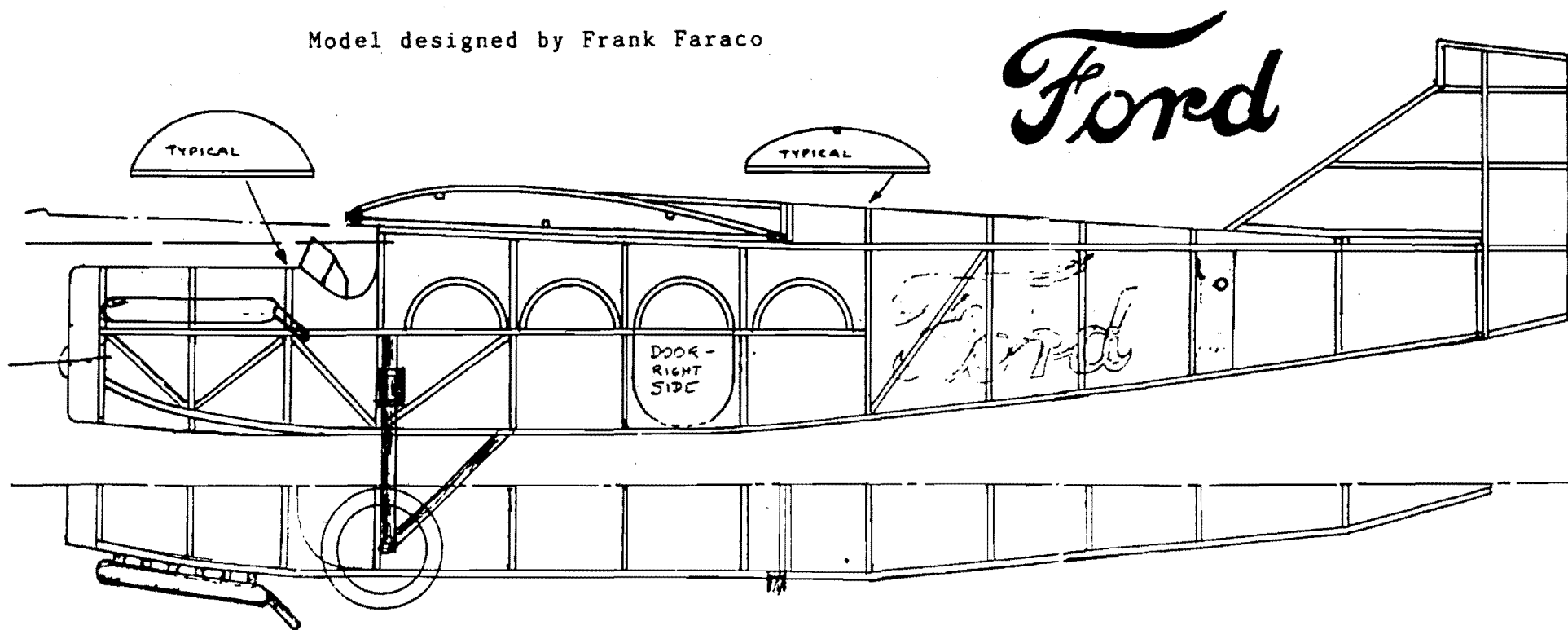
April 21....Spring Kanone Quest...Cactus Squadron, FAC Scale, Peanut, Embryo, WW I, WW II, Multi-engine, Thompson Race. Contact Dave Smith, 1041 E. Rawhide, Gilbert, Az. 85234

April 28....15th Annual Snowbird Indoor Meet at McComb Fieldhouse, Edinboro, Pa. FAC Scale, FAC Peanut, Hi-Wing Peanut, 7 gram Bostonian, 5 gram No-Cal Scale, WW I Peanut Dogfight, Blatter "40", A-6 any plan...there are several. CD Vic Didelot, 4410 Lorna Lane, Erie, Pa. 16506 Ph. (814) 838-3263



## FORD 2-AT AIR TRANSPORT

Model designed by Frank Faraco



# HOBBY COUNTER

NEW KIT FROM BELL MODEL AIRCRAFT CO....The North American P-51A Mustang kit is now available and ready to be shipped. The kit contains the usual fine material such as the best tissue available, contest grade balsa, decals, molded canopy and some pre-cut parts, and a plastic propeller. A five-view is included and the model is done in 5/8" to the foot scale. Wingspan is 23 5/8". Price is \$21.95 plus 15% postage. Their first kit is still available of the Taylorcraft, clipped wing version, with all of the usual goodies inside. Price for this kit is also \$21.95 plus 15% postage. Send your order to; Bell Model Aircraft Co., 650 Pine Crest Drive, Largo, Fla. 34640, USA Phone (813) 584-4003  
If you don't have their catalog of kits and plans send for one. Include a \$2.00 for it.

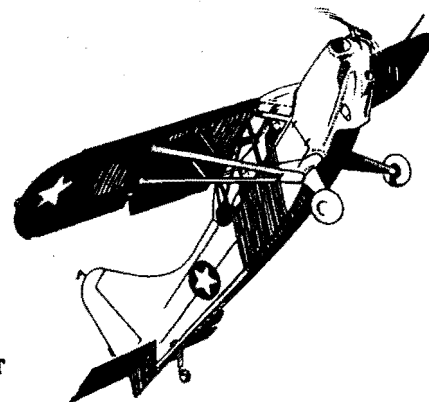


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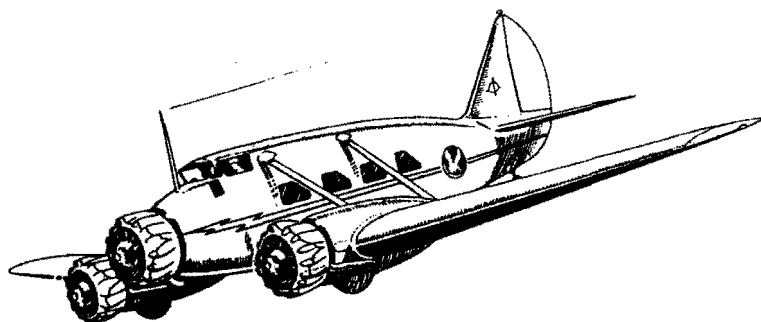


The video of the FAC Nats is still available as well as the tape on Hange Flying With The Flying Aces. To get yours send your order to Dean McGinnes 1503 Clairdale Lane, Lakeland, Fla. 33801. Both tapes are \$22.95 each, postage included.

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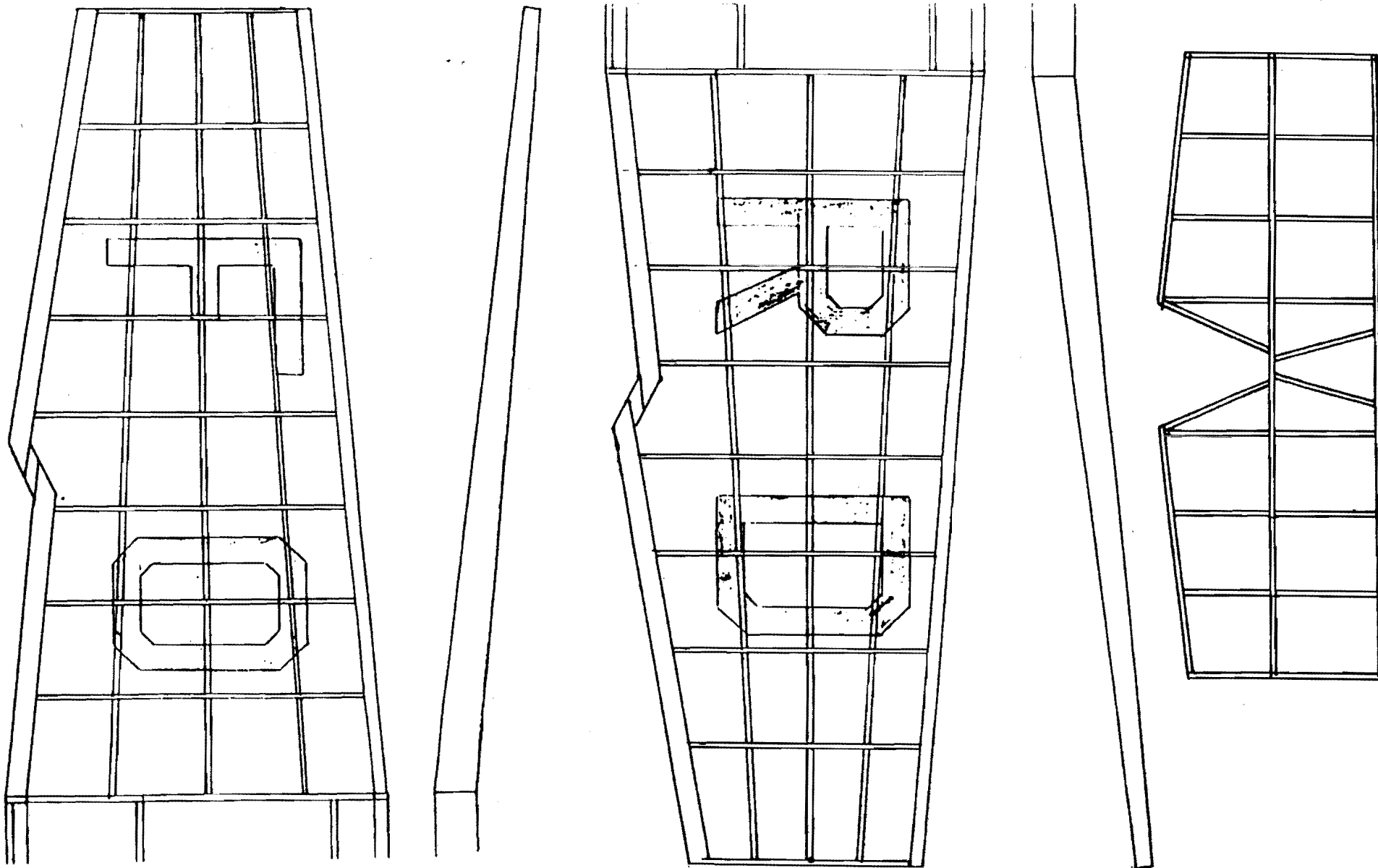
### NEW PLAN BY AL LIDBERG

Rubber scale plan of the Miles Mohawk in 1" = 1' scale. wingspan is 35". plan is a crisp black line print, with a 3000 word how-to text plus a 3 view and an assortment of drawings and photos for scale references. Price is just \$6.00 plus postage of \$1.50. Add an extra dollar for Al's great catalog. Send to; A.A. Lidberg, Model Plans Service, 614 E. Fordham, Tempe, Az. 85283

\*\*\*\*\*

When ordering from the FAC Newsletter please tell them you saw their add here. Thanks!





Model should have 1/8" washout in both tips. Rudder was glued in place only at the stern post of the fuselage. This allows for minute adjustments at the leading edge of the rudder, held in place by a small balsa wedge. My model is quite rudder sensitive. Also on my model it was important to fill in the cockpit opening with thin sheet balsa (bottom and rear bulkheads) to keep air from rushing into the fuselage. Color is all-over silver with black lettering. Exhaust pipes and mufflers were painted with Metallic Steel enamel.

BILTMORE VEES  
King of the Twin Pushers

Chapter One

Fate snickered at the Calhoun County M.A.C.'s 1933 Wakefield Regional contest and, after that, aeromodeling in Calhoun County took a nose dive. The term "model builder" began to work its way into Calhoun County jargon - as a form of slurring profanity. Scurvy Wentworth, President of the Calhoun County M.A.C., was only vaguely aware that mothers scurried to get their children indoors whenever Scurvy walked by. Kids in knickers disclaimed any interest in model airplanes. Known model builders received glowering stares from members of the Calhoun City police force. In the PTA, a resolution to remove pictures of the Spirit of St. Louis from the city schools was narrowly defeated. Finally, the chimes clanged in Scurvy's belfry when the department store covered its model airplane department with a black tarpaulin and Universal Model Airplane News was no longer seen at the news stand.

At the next club meeting, which could have been held in a phone booth, the issue of public acceptance (or downright hostility) was discussed. Scurvy had an idea.

"What we need is some good publicity," Scurvy proclaimed.

"We had all kinds of publicity when Claymore Mines was here," growled Swat Twaddle, rubber power speed merchant.

"It was great," groaned Scurvy, "but the wrong kind."

"Let's git them there Boy Scouts to blow up the Orphans' Hospital," Nob Noster guffawed, \*that'll take the heat off us, uh, Ah mean it'll make us look good - haw."

"We got to change our image," wailed Scurvy.

"Change our wot?" Sumpter "Fat Bragg \*\* asked.

"We got to make model buildin' respectable again," Scurvy pleaded. "We got to make the public like us again, an' we got to convince 'em model buildin' is OK an' ...."

"How can we do this?" Biltmore Vees mumbled as he sketched a new twin pusher design on his shirt front. He hoped it would be respectable.

"If them there Boy Scouts wear their uniforms when they blow up the Orphans' Hospital it would be a cinch for us to look good," said Nob.

"What about the Girl Scouts?" asked Swat Twaddle.

"Well, what about 'em?" Scurvy asked.

I mean for blowin' up the Orphans' Hospital," Swat laughed.

"If we was to put on Girl Scout suits an' blow it up we'd be sure it got done right," said Lester Magoon.

"You ain't shaved in five days. How are you gonna look like a Girl Scout?" Biltmore asked.

"We ain't discussin' blowin' up the Orphans' Hospital," yelled Scurvy, "an ..."

"Then why are we discussin' who's gonna do it?" Lester asked.

"That old frame buildin' would blow up real good," Nob drooled.

"Ah told you we was discussin' it," Biltmore jibed at Scurvy.

"Ah got it right here in the minutes," said Glendenning Lamanowitz, III, Club Secretary, perennial CD and ace grits salesman.

"Ah think them Girl Scouts blowin' it up is a great idea," Sumpter joked, and rubbed his hands together in anticipation.

Finally Scurvy turned the discussion around. His idea for a more positive and respectable image for the Calhoun County M.A.C. reached the floor. The club voted to have an indoor model flying demonstration in the Calhoun City High School gym. This would be a great PR event for the Calhoun County M.A.C. They couldn't miss (or could they?).

19.  
The Committee was named, and those stalwart diehards, the flailing remnants of the Calhoun County M.A.C., adjourned to the Down Town Diner to discuss details and procedures for the indoor demo. After gallons of coffee and three donuts, most of the problems were settled. Then, fatigue and fate stepped in. The fortunes of the Calhoun County M.A.C. once again were balanced on that thin line drawn by fate's fickle finger.

Hours later, when the indoor demo committee trudged its way out of the Down Town Diner, fate fumbled on the goal line of achievement. Glendenning Lamanowitz, III, Club Secretary, perennial CD and ace grits salesman, tired and bleary-eyed, left some papers on the table. That contained some of his notes for the minutes of that night's meeting.

The following morning, screaming newspaper headlines informed the world of the model builder's plan to blow up the Orphans' Hospital. Brilliant police work had foiled the conspirators; the ringleaders had been apprehended; more arrests were expected at any minute; Down Town Diner dishwasher discovers dastardly plot; police reserves called out; Boy Scouts implicated; National Guard on alert; Girl Scout leader held for questioning; grit prices plummet.

Scurvy and Glen were unaware of the headlines - they were in jail.

\* One of the surly Noster brothers, and a friend of Chainsaw McGrath.

\*\* Sumpter Bragg had thought the Stout Trophy was an event for tubsters, and had eaten accordingly for a year. His middle name was "Fort", which became "Fat" in local usage.

continued in the next issue.

\*\*\*\*\*

S.O.S.--S.O.S.--S.O.S.

Wanted; Any documentation you can give to Frank Loates on the Consolidated PT-11 trainer. Write to, Frank Loates, 42 Scrimger Ave., Cambridge, Ontario, Canada N1R4V8

Wanted: 3-views of the Citabria and 3-views plus photos of Old Ironsides. Also wanted: any info on Fletner type model. I saw one back in 1937 at Junior Birdmen contest at Marines hanger at Oakland Airport. Bob Meuser, 4200 Gregory St., Oakland, Ca. 94619

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## Postal Meet News

The postal contests for this summer will be the regular Comet kit/plan postal meet and the Pearl Harbor postal meet. The Pearl Harbor meet starts on May 1, 1991 and will end on Dec. 7, 1991. Models of aircraft that were on station on Dec. 7, 1941 from all Pacific countries are eligible. Responsibility of proof is with you!

The Comet event is for all models built from a Comet kit or Comet plan are eligible. This contest starts on May 1, 1991 and ends on Oct. 31, 1991.

Enter both contests as many times as you wish with as many models as you wish and every time you better your score with a particular model send it in to GHQ.

GO GET'EM, SKYSTERS!!! BUILD..FLY..WIN!!!

EFF--AAA--CEEE!!!!

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NFFS UNITED STATES OUTDOOR CHAMPS  
FLYING ACES OUTDOOR CHAMPS

June 20-21, 1991

Time 8:30 am til 4:00 pm. Mid-American Air Center Lawrenceville, Illinois

REGISTRATION FORM

Please print

Name \_\_\_\_\_ AMA No. \_\_\_\_\_  
Street \_\_\_\_\_ Jr/Sr \_\_\_\_\_ Open \_\_\_\_\_  
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Entry fee \$15.00 until June 1, 1991.

After June 1, 1991 the entry fee will be \$20.00.

Mail FAC entry fee directly to Lin Reichel, 3301 Cindy Lane, Erie, Penna., 16506

Awards through third place, more places if advance entries warrent.

All Contestants must be members of the AMA or CAAM.

<u>Schedule</u>	<u>Thursday June 20</u>	<u>Friday June 21</u>
	FAC Scale	FAC Peanut Scale
	Hi-Wing Peanut Scale	Jumbo Scale
	World War One Dogfight	World War Two Combat
	Thompson/Greve Race (combined)	Military Bipes mass launch
	Pioneer Scale (before 1914)	Golden Age Scale
	Embryo Endurance	FAC Old Time Rubber
	FAC Old Time Rubber	

All Pioneer Scale models will be flown in the Pioneer event only regardless of size.

FAC Old Time Rubber will have two official flights each day and the three best official flights of the four will be used as your total score. Flyoff to break ties.

Lodging as we have it; Vincennes University dorms, phone (812) 885-4364 ask for Mrs. Pat Konkle or Mrs. Pama Son. We were not quoted any prices.

Mr. K's Motel 407 State Lawrenceville, Il. 62439 (618) 943-5112	Gas Lite Motel Rte. #1 South Lawrenceville, Il. 62439 (618) 943-2374	Shamrock Motel 1303 Cherry Mt. Carmel, Il. 62863 (618) 262-4169
Uptown Motel 511 Market Mt. Carmel, Il. 62863 (618) 262-4146	Town & Country Motel West 3rd Mt. Carmel, Il. 62863 (618) 262-4171	Arvin Motel Outer East Main Robinson, Il. 62454 (618) 544-3102
Quail Creek County Club NE City Robinson, Il. 62454 (618) 544-8674	Traveler's Inn Motel 1801 East Main Olney, Il. 62450 (618) 393-2186	The Holiday US 50 & IL 130 Olney, Il. 62450 (618) 395-2121

As far as we know, these are the only places where you may find a place to stay. All of the motels in Vincennes are booked. So please make your reservations as soon as possible.

NATIONAL WARPLANE MUSEUM FLYING ACES CONTEST

21.

July 13-14, 1991

Time 8:30 am til 5:00 pm. National Warplane Museum Field Geneseo, NY

REGISTRATION FORM

Please print

Name \_\_\_\_\_ AMA No. \_\_\_\_\_

Street \_\_\_\_\_ Jr/Sr \_\_\_\_\_ Open \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Entry fee \$15.00 until June 30, 1991.

After June 30, 1991 the entry fee will be \$20.00.

Mail entry fee to Lin Reichel, 3301 Cindy Lane, Erie, Pa. 16506.

Awards through third place, more places if advance entries warrant.

All contestants must be members of the AMA or CAAM.

Schedule      Saturday July 13

Sunday July 14

FAC Scale

Hi-Wing Peanut Scale

World War One Dogfight

Thompson/Greve Race (combined)

Pioneer Scale (before 1914)

Embryo Endurance

FAC Old Time Rubber

FAC Peanut Scale

Jumbo Scale

World War Two Combat

Military Bipes Mass Launch

Golden Age Scale

FAC Old Time Rubber

Multi-engine (mass Launch)

All Pioneer Scale models will be flown in the Pioneer event only regardless of size.

FAC Old Time Rubber will have two official flights each day and the three best official flights of the four will be used as your total score. Flyoff to break ties.

Notice that we have added a multi-engine event to the Sunday schedule. This will be a mass launch event.

We will be staying in the Ontario Dormitory for this contest and the scale judging will be done in the Ontario lounge area on Friday from 1:00 pm until! If you are not staying in the dorms, then you will be required to take your models to the dorms to be judged. Anyone not arriving until Saturday can have their models judged on the field.

Looking forward to seeing you all there for another GREAT TIME!

I wish to make the following advanced reservations for the above contest.

\_\_\_\_\_ entry fees at \$15.00 each.....\$ \_\_\_\_\_

\_\_\_\_\_ Reservations for double occupancy with meals..... \$ \_\_\_\_\_

(\$115.00 per person)

Total enclosed \$ \_\_\_\_\_

Please note we will be unable to refund cancellations received after June 30, 1991. If you plan to share a room with someone, please indicate their name so we can direct the University to set up the proper room arrangements. \_\_\_\_\_

Your meals at the University will include dinner on Friday July 12, breakfast and dinner on Saturday July 13, breakfast and dinner on July 14 and breakfast on July 15.