THE

SCATER

published by Southern California Aero Team

No. 43

January 1966

President: Bill Bogart
Editor: Bill Hartill 7513 Sausalito Ave. Canoga Park, California
Subscriptions: Bob Wiehle 7939 Wish Ave. Van Nuys, California

$2.00 per 12 issues

U.S.A. F/F Team Selection Plans

Important news to the 69 team semi-finalists is that some plans have now been made to set up the central fly-off to pick the top 9. Floyd Miller, 1313 Brookridge Drive, Columbus, Ohio has been appointed CD and he has sent out a memo to all contestants. It looks like Floyd is really pitching into this thing and we know he will do a thorough job.

Location: Bong Field, Wisconsin (Between Burlington and Kenosha on Rt. 43, about 75 miles from Glenview N.A.S.)

Dates: Sat., Sun., and Mon. July 23, 24, and 25. (the Glenview Nats start the 25th.)

All three events will be flown concurrently, five (two hour) rounds on each flying date, a total of fifteen rounds per event.

Processing will be conducted in Burlington, at the Rainbow Motel, located ½ mile (8½ miles from Bong Field) northeast on Wisconsin -36. Processing will take place on the day, or evening, before each days flying. Two models can be processed for each day, meaning as many as 6 models could be used for the 3 day contest. (per event) The new FAI rules will govern, including those adopted for international class meets. These changes are: Max. rubber wt. 40 grams for Wakefield. Contestant towing beyond timers view of model and pennant will be charged with an attempt in Nordic. In power user of glow type engine must use standard fuel supplied by CD. In all events, the contestant must be in a designated flight area when launching (or starting tow

This area shall be 50 meters along wind line by at least 100 meters perpindicular to the wind line.

Floyd Miller has made a very sincere, heart warming, emotional appeal for help to time, process etc. Statistics: 480 models to process 390 rubber motors to weigh (that doesn't sound right, Parmenter & Patterson will have more than that!), 405 towlines to check, 405 issues of fuel to inject, 1200 models to weigh and 1200 official flights to time.

Floyd has prepared a list of 25 motels. If you are interested in helping this worthy cause and participate in what will be the greatest FAI contest ever held in the U.S.A., contact Floyd and he will sign you up and make reservations for you.

There is no question that this contest is shaping up as a real block buster, and though the "central" location means a lot of travel for all of us there isn't any adequate alternative to man to man competition. So after it's all over don't cry that you didn't decide to go. Start planning now. Make the scene!

Bong field is not a real base or airport. It is what was left, after construction of an airfield was started but abandoned by the Air Force although I believe it is still the property of the Air Force. There is a 2½ mile runway and parallel taxi-way unpaved consisting of just a course grevel base. It is cut up with ditches to prevent drag racing. Large cast iron drainage pipes stick up out of the gravel here and there. The remainder of the field is overgrown with high weeds of varying denseness. Surrounding the field are farms and some woods. Crops include corn, beans etc. Some of the farmers have encroached onto the edge of the field. You can't land a full scale plane on the field but you can drive on it. (not too easily off the runways and access roads) If it rains the place turns into a bottomless pit. George Reich's station wagon is still buried out there somewhere.

The following is a list of the contestants. This will give you an idea of the stature of this meet and also indicate to Europe why it is so difficult for us to settle on just 9 guys.

Name	Events	State	Name	Events	State
Andrade, A.	W	Calif.	Lenderman, J.	W	Calif.
Andrews, D.	W	Texas	Atkinson, C.	N	Okla.
Bales, D.	N	Indiana	Bilgri, J.	P	Calif.
Champine, R.	W N	Virgina	Cherny, R.	P	Calif.
Cole, H.	N	Calif.	Davis, D.	N P	Missouri
DesJardins, M.	N	Colo.	Dolby, E.	W	Arizona
Duffield, R.	W	Wash.	Dunham, R.	P	Okla.
Elder, R.C.	N	Fla.	Fries, C.	P	Missouri
Frost, A	W N	Missouri	Galbreath, D.	P	Calif.
Gard, J.	N	Missouri	Gieskieng, B.	P	Colo.

Name	Events	State	Name	Events	State
Guinotte,G.	W	Wash.	Harps,H.	N	Ohio
Hartill,W.	N P	Calif.	Hutchinson,D.	N	Calif.
Ingersoll,N.	N	Utah	Jepson,S.	P	Neb.
Johnson,W.E.	P	Ala.	Kimel,S.	W	Calif.
Kothe,H.	W	Colo.	Kozak,B.	W	Ohio
Krus,D.	P	Mass.	Kutkuhn,J.	P	Pa.
Langenberg,B.	N	Arizona	Langevin,H.	N	Minn.
Littleton,F.	W	Texas	McDonald,D.	W	Pa.
McLaughlan,T.	P	Fla.	Montplaiser,C.	P	Pa.
Nelson,R.C.	P	Fla.	Norton,S.	N	Calif.
Park,W.M.	N	Virginia	Parmenter,F.	W	Texas
Patterson,J.A.	W	Calif.	Pearce,F.T.Jr.	W	Texas
Perkins,C.Jr.	W	Kansas	Perkins,C.III	N	Kansas
Phelan,C.	P	Ill.	Reich,G.	W	Ohio
Robinson,J.	P	Ohio	Sifleet,R.	W N P	Md.
Simpson,N.G.	N	Texas	Simpson,R.	W	Calif.
Spearman,F.	P	Ill.	Spence,H.L.	P	Texas
Stiles,D.	P	Mich.	Stress,L.	N	Mich.
Struck,H.	W N	Conn.	Thompson,E.	P	Calif.
Torrillo,J.	W	Calif.	Trego,J.M.	N P	Calif.
Van Nest,R.	N P	Calif.	Wagner,J.	P	N.Y.
Walker,K.	N	Calif.	Wallace,D.	W	Ohio
Walters,J.J.	N P	Wash.	Willis,L.R.	W N	Ohio
Wilson,D.	N	Mich.	Xenakis,G.	W	Texas
Sarinopoulos,G.	P	Okla.			

Attention U.S. Magazine Editors: If you don't get reporters and photographers up to Bong for this one you are out of your skulls.

Floyd Miller is going to take aerial photos of the site, make maps, check crops, and line up all sorts of niceities. He promises perfect weather and then goes on to describe likely conditions as dry, hot, sunny and a few small thundershowers with variable and light to moderate winds. That ought to cover any eventuality! We will include more news on this affair when it becomes available.

Wing Building Jigs

First description is by Bob Van Nest of SCAT.

"The idea of going to the trouble to make a jig on which to build undercambered wings started in the SCAT club about late 1960 or early '61. Bob Wiehle and Jim Patterson should receive proper credit here, as they were probably the first to actually do anything about it and build a sheet covered box type jig. I borrowed Wiehle's to build my first Lindner glider in 1961. The advantages of the jig are that it provides a perfect bottom camber that requires only finish sanding. All wings built from it will come out the same. And it is portable.

The first jig was not quite deep enough to be completely warp free and if not placed on a relatively flat surface, could turn out a slightly warped wing. The extra depth shown on the sketch solved the problem.

The clamping step during assembly and gluing is the key to a flat building jig. A table saw with extension table is an excellent clamping surface. The surface that you pick and the size of your clamps will determine the size of the small blocks on the corners of the long sides. They are temporary and should be removed after the glue joints dry.

The optional bottom sheet is good insurance for a completely stabile, twist free unit.

Howard Timlin, of Reno (transplant from San Antonio), suggests that a second layer of the 1/8 plywood, contact cemented to the first layer, helps keep the sheet from buckling between crosspieces when you hammer pins into it. Also, it aids by saving you bent or misplaced pins from sliding off the heads of the finishing brads. I haven't tried this yet but I'm due foe a new building jig soon. Jigs for flat bottom wings are easily made this way, except that you use ½ or 3/8 pine drawer stock for the whole thing, including the top. Drawer stock can be had in up to 12 in. widths, I believe. I managed to find 9 in. wide stock for my flat bottom jig. It's not cheap but Cusick and I think it's worth it. We've been using the 4 jigs we have for some time now and the wings are still coming out flat.

There are about 8 or 9 of these things for various airfoils and in several sizes floating around, on loan, amoung the SCAT members. Mine are in almost constant use helping me get ready for the FAI Central Semi-Finals this summer."

The editors' experience with wing jigs may also be of interest. Back around 1959 or so I was using the following technique:



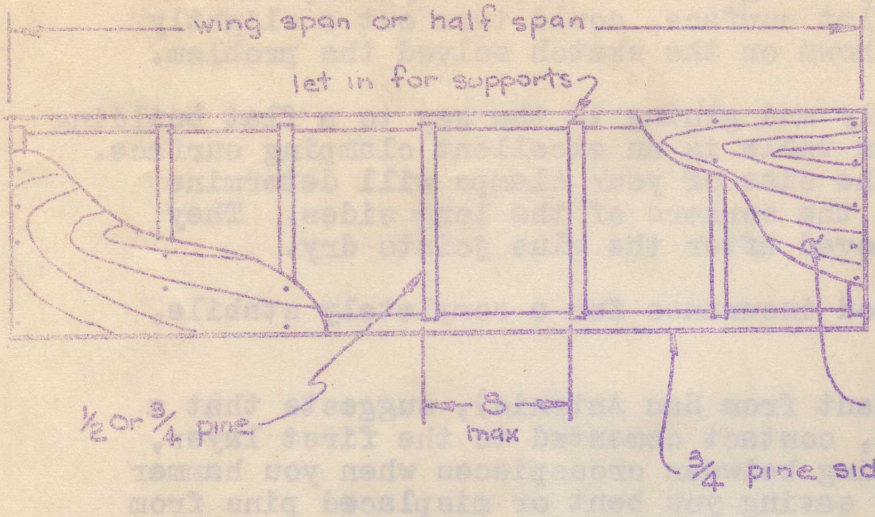
Rails are cut from pine with the correct angle of the leading and trailing edges. They are placed on a flat board (or reasonably flat board) nailed down and carefully shimmed so that they are exactly parallel both horizontally and vertically. Position of the leading and trailing edges and ribs are laid out on the rails. After building everything you can from the top, turn the wing over and place on two other rails that match the top surface angles.

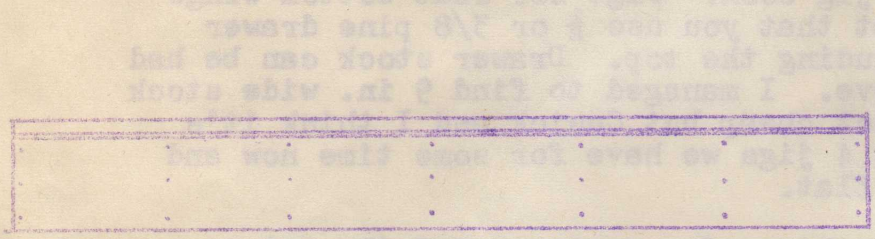
WING BUILDING JIG

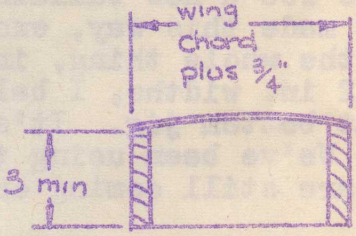
by Bob Van Nest (SCAT)

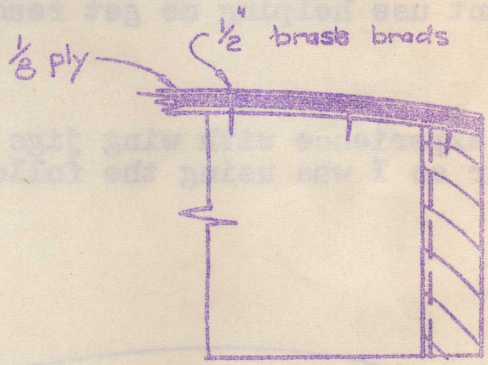
Sunland, Calif.

No Scale

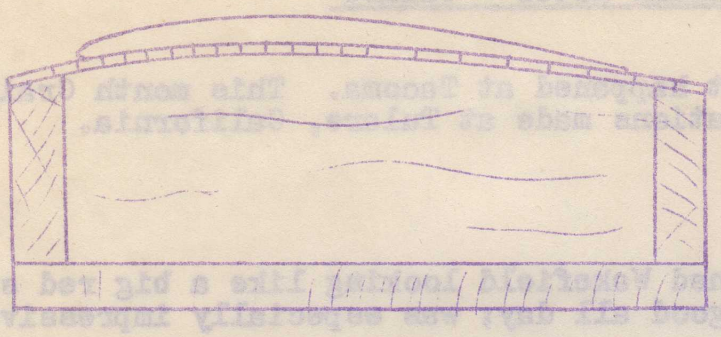








This method was replaced with the type of jig described by Bob Van Nest. I didn't like the sag in the 1/8 " mahogany plywood between ribs so I plank the surface with strips of ¼" thick white pine.



The key to good structure is accurate cutting of the ribs all to the same dimensions and square. A good table power saw is essential. The contour of the ribs can be easily made using a disk sander. It is quicker and more accurate than a jig saw.

I make my jigs 48" long around 8" wide and 3½ to 4" deep. Material is white pine 3/4" stock. I shop around for choice looking white pine shelving material and pay 9 cents a foot when it is on sale. You have to use sections of it that are free of big knots.

Planking for the top is ripped from the same material. Make the strips narrower where the curvature is greatest. Cut the strips with a slight angle and they will fit together better on a curve. I assemble the whole thing with water mix Resorcinal glue and finishing nails. The top planking is sanded to a smooth contour. Entire jig is given a coat of laquer sanding sealer.

Sometimes a jig can be used for a different airfoil than what it was designed for by moving closer to the leading or trailing edge. For this reason it is a good idea to make the width several inches greater than the wing cord.

Scat Annual Banquet and Election of Officers

A wild time was had recently by the Scat club and wives at the "Fez" a middle-east supper club here in Los Angeles. Food was authentic and the belly dancers spirited. None of them knew George Xenakis though.

Pierre Brun and his wife combined the Banquet with their first wedding anniversary. Each Scat wife recieved an official Scat uniform complete with a Scat Bird silk screened on the seat.

Newly elected President of the Scat Club is genial Bill Bogart. Already Bill is taking a firm hand in pulling our club activities together in a way that promises bigger and better things. For example

a move is now underway to try to find our club by-laws.

West Coast Selection Semi-Finals Notes - Tulare

Last month we described what happened at Tacoma. This month Craig Cusick fills in with observations made at Tulare, California.

Tulare Notes

1. Wakefield
"Van Nest's Patterson designed Wakefield looking like a big red spider. The 61 x 3 15/16 wing flew good all day; was especially impressive during the morning rounds.

2. Wakefield
Dick Gildersleeve's Wakefield (Kathryn Too) was returned to the Scat tent with the trailing edge and one spar the only longitudinal members still intact on one wing. Bob Wiehle gave Dick an assist with the rebuilding job on the injured wing. The repair held for the rest of the contest. That's a bunch of spar splicing, too. Dick's perseverence earned him a 7th place in Wakefield.

3. Misc.
Cusick fell off the back of Van Nest's Honda again. They hit a bump during the chase. When Craig came down the Honda wasn't there. "Barney" Van Nest was at the throttle.

4. Wakefield
Howard Timlin of Reno and Roger Gregory of King's Beach, Calif. (Lake Tahoe area) showed up at Tulare for Wakefield with two unusually designed Wakefields each. Not the same design but very similar, the models featured swept back leading edges on the elliptical wings and stabilizers. Fins were swept also, in the Saturn or Solar power model tradition. Fuselages were diamond in cross section and very small. Extremely long tail moments and low pylons. Construction and finish on both mens models were something to behold. Excellent framework workmanship and beautiful dye and tissue trim. Noseblock assembly and propeller blade finish and workmanship were most noteworthy. Both Roger and Howard use 16 strands of Pirelli and 22 dia. by 27 pitch props. Blades are designed to flex for power burst and max blade width is about 1 3/4 in. Roger made 6th place with his model and Howard 9th or 10th with the same model that won the Wakefield event at the 1965 Los Angeles Hobby Association AAA Contest last May.

5. Misc.

Fred Hover, contest director arranged breakfast at a local motel for 5am to see that modelers were fed before each days competition. This worked OK Saturday morning. Attendance fell off Sunday morning, leaving the chef with quite a bit of extra food, so the breakfast was discontinued Monday

Wakefield
Brown, a flying partner of John Lenderman, led the Wakefield event most of the day. He was flying for his 7th round max when the model, after folding it's prop, centered itself in a beautiful thermal and tightened up its glide circle so much that it finally spun all the way to the ground, destroying the model.

7. Wakefield
John Torillo, the eventual Wakefield winner had a nice flying, long tail moment ship which showed a powerful climb, almost no cruise... just up and fold. The glide was also excellent with the bouncy trim on the long model. Stan Kimel, right behind John in Wakefield, flew his three panel winged model in most consistent fashion. You don't seem to notice these guys who quietly put up the maxes, until they've skunked you in the eighth round.

8. Power
Doug Galbreath flew his elliptical surfaced Power model to a fly-off with Sandy Norton. Doug's low pylon, downthrusted ST G-15 model carried the elliptical fin behind the stab, part of the area above and part below the fuselage. Doug said it went best if he could launch banked into a natural right corkscrew. This is the way it flew, about 1-1½ turns in 10 seconds. Still got highest on the field, along with Sandy Norton.

(SELIG)

Power Misc.
Doug Galbreath was showing a beautifully built German timer which could serve four functions. Engine shut off, auto rudder and stab and dethermalizer. It had three mousetraps and a plunger bar arrangement for DT. Weight is about double that of one Tatone DT timer. Comments must have been favorable from those who saw it, as Doug is importing them. Don't know cost to U.S. customers yet, though.

10. Power
Sandy Norton's Power model had a beautifully smooth and fast one-quarter turn climb pattern. The climb speed was impressive and more so in that the model had undercamber in the wing airfoil. The airfoil top camber hi-point was about 35% back and top camber thickness was about 9% above the baseline. The undercamber appeared to be about 1 or 1½% at 50% and the leading edge was swept up from the base slightly in the trend becoming popular for smooth climbs. The model's glide was excellent and this is what determined the winner in the first fly-off round, as both Galbreath's and Sandy's Lipstick III (Vela designed) gained equal altitude in the climb.

11. Power
Doug Galbreath was said to have put up nearly 100 tests flights the day before the Power event, checking out his climb and launch. No glide to speak of... just up, DT and catch it. Bob Wiehle, also at the field a day early, says this is no bull. He counted 90 of them himself, before he gave up. Bob Cherny was on hand helping Doug catch the model. Those RAI Power models land hard and the Tulare turf is hard too. Craig Cusick knows. He stacked a Saturn (overanxious) power-on straight down and didn't get down a ¼" into the ground. The model was used up, too.

12 Power
Joe Bilgri did a fine job of flying in the Power event to surprise himself and some of the rest of us by qualifying for the Central Semi-Finals in Power. Actually, if you watched Joe's model fly, it had a damn good climb rate and his models all seem to glide well.

13. Misc.
Don and Darryl Farnsworth also did a fine job of back-up to Fred's directing. Don did a fine job at the PA microphone for virtually all the contest, giving late results, calling late contestants, announcing the ends of rounds, and even posted a notice as to how Patterson, Hartill and Trego were doing in Washington.

14 A/2
Bob Wiehle lost his beautifully built, newest and best flying Nordic in a tremendous thermal - just up and out at about 40 degrees. Spotters with binoculars gave up after 17 minutes. The irony of the whole thing is that Van Nest and Hutchinson were patiently waiting to see who would go up next. Wiehle began screaming, "There it is, I've got it". Don and Bob didn't think it looked just right, so they didn't go. Perhaps fortunately, because Wiehle's dethermalizer did go off at three minutes.

15 A/2
Don Hutchinson retreiving his 2nd place Nordic through 7 foot high, freshly irrigated crops. Had to walk in the troughs between rows to keep the farmer happy. Cusick and Van Nest cheered him on from spotting positions at the edge of the planted area.

16A /2
The Nordic event was characterized by waves of launchings of about 2 or 3 per round. One competitor would tow up into what he hoped was lift approaching, and the others stretched out and waiting, would see what the model did as this first man cast off....then a bunch would go. This piggyback technique was used by nearly every contestant at one time or another during the meet. Bob Van Nest and Don Hutchinson used it for first and second place, respectively. Piggybacking gives a contestant two chances to pick off a thermal, it is allowed by the rules and would be extremely hard to control if it were not allowed. Bob and Don had fantastic patience during the rounds and managed to outwait the weather and other contestants, who determined they could last longer, and eventually towed up ahead of the two SCAT birds. Russ Seeley of the San Diego Orbiteers was one contestant who, notably, did not use the piggyback technique and was doing very well for himself until he broke his model and left himself enough seconds behind to miss qualifying. Russ was usually one of those who towed up first each round and led a bevy of flyers behind him.

17 A/2
It is noteworthy to mention that Bob Van Nest dropped only 4 seconds, in the first round, off a perfect score in winning the Nordic event. This would seem to illustrate his meticulous preparation in the weeks before the contest, and his intense determination to be at least in the group to go to Chicago for the Central Fly-off.

18 A/2
Steve Houlihan of the San Valeers had probably the toughest luck on the field. He was one of the three or four contestants to take advantage of the light lift near the end of the first round and record 180 seconds. Steve continued to max in the later rounds by running endlessly across the whole field searching out lift for himself. He was doing a remarkable job, when during his tow in a late round, the reel was pulled out of his hand as he leaped to release his model. This, of course, gave him a zero for the round. But what an exhibition of long distance towing he put on. Steve was flying a model of rectangular planform, designed by Tom Hutchinson, editor of the San Valeers Satellite newsletter.

19 Misc.
Weather during the Tulare 1965 Quarter Finals was just about perfect. The temperature all 3 days stayed in the high 70's or low 80's and any wind that came up was not strong enough to discourage flying, particularly in that field. Plenty of chasing area and cooperative farmers for the most part, asking only that we obey a few simple rules when chasing. Thermals started forming late in the first round. This had not been the case in earlier years. This helped the Nordic boys a lot and the Wakefield flyers a bit. Power seemed least affected by any activity in the early rounds. If anything, the downers in mid day hurt the not so high climbers. Mid day thermals were extremely strong and models were reaching incredible height before dethermalizers went off at 3 minutes. In a few cases the DT made no difference at all, and the models continued up and out of sight."

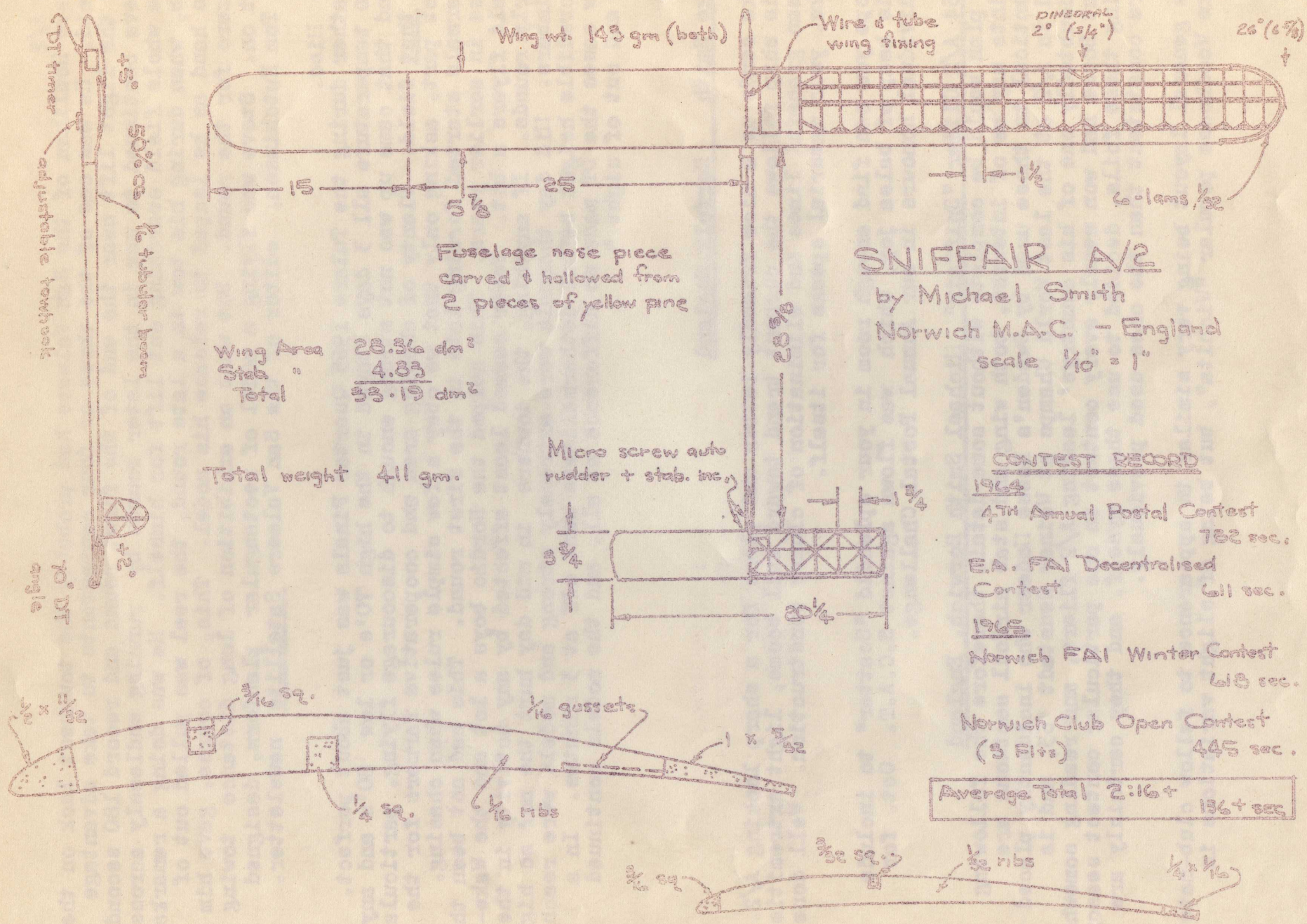
Mike Smith Norfolk, England

Mike sends us a nice friendly letter and plans for a sharp looking A/2. This ship follows the current trend toward tail booms, light extremities, clean graceful lines and elimination of clumsy construction. Well done Mike, your material speaks for itself.

"Hope you can find enough room in your splendid "Scatter" to include this heap of balsa joy, which was flown against S.C.A.T. Oct. for individual honours in our Annual Postal Challenge.

1964 A/2 Glider "Sniffair" Michael Smith Norwich, England
"No plan would be complete without some detail therefore the following points may be of interest, both wing and stab airfoil sections are identical to those used by Sweden's Bosse Hodeer who incidently placed 3rd in A/2 at the last World Champs at Weiner Neustadt '63, and is undoubtedly one of his countrys' leading A/2 fliers, and reading somewhere that Bosse had won nearly every contest in one particular contest season using these foils, decided to use these myself, and they certainly are more consistent than the ones used previously.

The general layout being very similar in appearance to fellow club-mate's Mike Woodhouse popular "Wichita", but being of slight variations in



Airfoil Sections - Bosse Modeer (Sweden)

dimensions, fuselage construction, airfoils etc., however basically it is the same.

Adjustments are made simple by the use of micro-screws on both fin and stab and adjustable towhook with wide range of positions.

The contest record at the moment being in no way impressive, however shows reasonable promise, the best flying weather conditions are to come, we hope! Anyway us English call it summer.

The hardwood nose is something of a swine to hollow and carve, which is made easier by using strong language, anyway it is well worthwhile as it certainly forms a much stronger nose than a balsa version, and obviously does not require quite so much ballast.

Fellow club members were a little optimistic of my use of 16 g wire wing dowels, however these were used for a specific reason, having shed many wingtips off through the wind blowing models over from the upright to the inverted position on tarmac, the impetus of the fuselage doing the rest, decided something must be done about it, so by using these thinner wires, the load of the wings bends evenly in both directions, an aid to towing also. Rumour has it in Norwich club to tan the hides off S.C.A.T. this year at the Postal Challenge, seriously though fellows, congratulations on your LAST great win."

<u>Subscribers Attention!</u>

At long last we are numbering each issue and if we haven't lost count this is No. 43. This should make it easier for you to keep track of us and figure out if you are being gypped. For two bucks we will try to send you 12 issues. Wiehle is going to figure out a system of delinquency notification using the issue no. Tell you about it later. In the meantime send renewals to Bob Wiehle, make checks payable to him and include your Zip Code no. (for U.S.A. subscribers).

SCATTER INDEX - JAN. to DEC. 1965

Wakefield

Ambird	Ernesto Colombo	Jan.
Eleanor Too	Devon Sutcliffe	Feb.
Hothead	Dan Mc Donald	March
Wakefield	Hans Martin	Oct.
Kathryn-too	Dick Gildersleeve	Nov.

Nordic

Osprey	Hugh Langevin	Feb.
Record A/2	Don Hutchinson	March
L'epervier	Pierre Brun	Dec.

FAI Power

Suspence	Hank Spence	Jan.
La Cosa	Al Vela	Feb.

Unlimited

Super Billy Boy	Dick Gildersleeve	Jan.

Articles

FAI Politics	Editor	Jan.
Variable Rib Spacing	Bill Bogart	March
Giant Postal Contest	Mike Woodhouse	March
World Champs Results	Editor	October
Champs Report	Editor	Oct.&Nov.
New Rules	John Worth	Nov.
Altitude Checker	Bob Van Nest & Cusick	Dec.
Tacoma Semi-Finals	Don Zipoy	Dec.