THE

SCATER

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REDUCED RC COVERAGE

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Dick Kowalski Detroit Michigan

Dick sends us an interesting letter which presents a challenge for the re-examination of A-2 competition and team selection.

Dick had the good fortune of having Max Hacklinger as a house guest while he was studying at the University of Michigan. Needless to say modeling was their center of discussion and one area that they dwelled on was the "relatively poor U.S.A. perennial showing in A-2 at World Championships." One theory they advanced was that the typical U.S. model was not suited to Continental weather conditions possibly as a result of its evolution in comparitively windy and turbulent conditions that seem to prevail in much of our country. Also, approaching the situation from a purely scientific point of view it doesn't appear that the state of art in the area of pure glide or Austria Valley type airplanes is very well advanced in this country.

Max claims that in Germany many modelers have A-2's that are in the 3½ to 4 minute category in winds up to 10 mph.

Dick then goes on to suggest that our team selection should be done in morning and evening calm to give the edge to the pure glide type airplane.

Well we don't agree with this line of reasoning for several reasons.

First of all just how badly has the U.S.A. done? In 1965, terrible, in 1963 at Wiener-Newstadt Austria, a poor 15th place but the Austrians on their home grounds were 16th. What does that prove? In 1961 at Leutkirch the U.S.A. was 5th, ahead of Austria, Germany and a lot of other "Austria Valley type countries."

In 1959 the U.S.A. was again 5th ahead of Austria, Germany, Czechoslovakia, Switzerland etc.

In 1957 we won 10th place but again beat Austria. In 1956 Austria managed to beat us. (they were 15th and we were 16th) All our models were proxy flown. The individual winner certainly did not confirm the utility of the "Austria Valley" type model Remember the Brems A-2?

This record doesn't seem to indicate any trend although since U.S.A. and Austria seem to be running neck and neck according to Dick and Max this would indicate the typical Austrian A-2 is not suited to Continental weather conditions. Ridiculous.

Next it is not clear what Max and Dick mean by "Austria Valley" conditions that produce 3½ to 4 minute flights. They don't really claim that this is dead air. If so what difference in net effect is there between a weak lift condition and a stronger thermal? Both will result in a maximum.

We think that there is a lot more to the design, construction and flying of A-2 Nordic gliders than is suggested by Dick's observations. There are a lot of good Nordics and fliers in this country and of course there are poor ones also. A lot of good ideas, and high performance designs do not get the attention they deserve because of our geographical separation and poor communication in our modelling press. Sometimes the good stuff rises to the top and sometimes it doesn't. Our national average is improving but so of course is the competition.

It is our feeling that it would be a mistake to bank everything on one particular sort of weather condition. This is a situation impractical to achieve in World competition.

Comments anyone?

Wakefield by Bengt Johansson - Akm, Sweden

As everyone now appreciates, the Swedes are pretty good Wakefield fliers. As you may recall Bengt placed 3rd with flights of : 180 - 180 - 180 - 180 - 180 - 240 - 300 - 196 and his team mates placed 4th and 5th. The thrilling finish by young Koster tended to overshadow this very convincing Swedish performance.

We feel very fortunate therefore to have some interesting details from Bengt:

"I send you enclosed one (I am afraid) not very good copy of the plans of the ship I used at the seven first rounds at Kauhava. Perhaps it might be of interest to you. (Ed. Note: Eighth round was flown with reserve model).

This plane is the second in a series. The first one is the one I used as a reserve at Kauhava. The differences are not very large really. The first one has an all round fuselage, a litte higher pylon and a few structural differences.

Some building and flying hints.

The wings: These turned out a little heavy but this depends mainly upon the fact that I used a little too thick silk, that took up too much dope. By use of a thinner grade the weight can be decreased with something like 10 - 15 percent. Not only the leading edge sheeting but also the leading edge itself and the main spar is thinned down towards the tip. The first four ribs are made from 1 mm plywood, the rest alternatively 1 and 1.5 mm balsa. A 1 mm sheet 1 x 100 x 1000 mm should not weigh more than 15 grammes. The tips have a natural wash out by sanding down the underside of the outer three ribs.

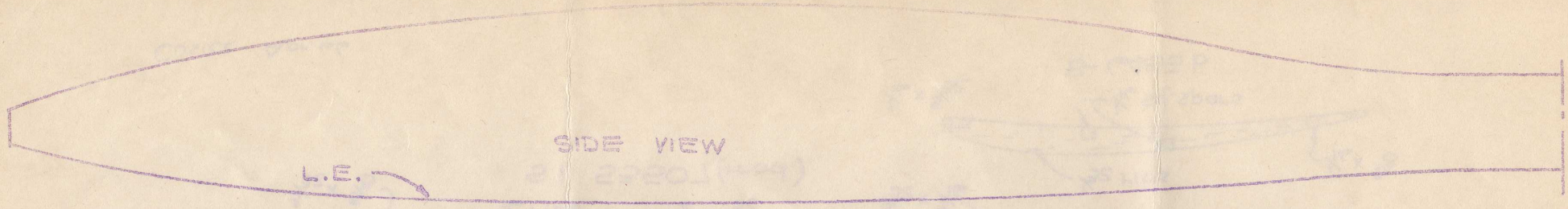
The fuselage: This is of course built on a form. It is strenghtened about five centimeters with glass fibre in the nose and at the rear motor peg. There are two layers in the nose. The pylon has a 1 mm hollowed out plywood keel with two five millimeter sheets on each side. It is glued directly on top of the fuselage.

The propellor assembly is rather clearly shown on the sketch. This type of stop is very good as it does what it is intended to namely makes the propelor stop dead. (Ed. Note: This is the "Montreal Stop") The "spinner" is removable so that the propellor can be substitued.

I have not very much time to build and fly due to my everyday job, so I need safe and sturdy models and I think this one is both. It can stand a lot of abuse due to it's strong wings which have been achieved with the leading edge sheeting and silk covering as well as flexible wing fastening. I also always keep my wings and stabs in jigs. Through these precautions I can take my models at competitions and fly without any previous trimming flights should it be neccesary and still have more than a 90 percent chance that everything goes OK.

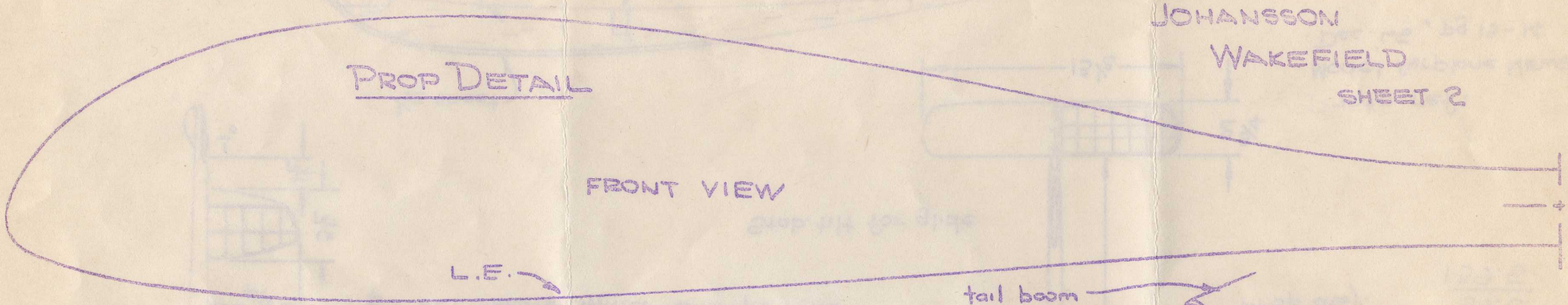
The model might look like a still weather model, but the fact is that it flies in all kinds of weather. At the 1965 "Winterchamps" for example the 6th and decisive round was flown in almost complete calm while THE TEAM ELIMINATIONS and the real CHAMPIONSHIPS 1965 were flown in mildly speaking half gale. It is neccessary however to adjust the incidence of the stabilizer for varying weather conditions. It is rather critical on the different settings. Even the down-thrust may have to be altered under extreme conditions. Another must is the best quality of rubber. The potentials of the propellor, for which credit shall go to "Mr Itoh" Jan Olle Akesson can only be utilized with powerful motors.."

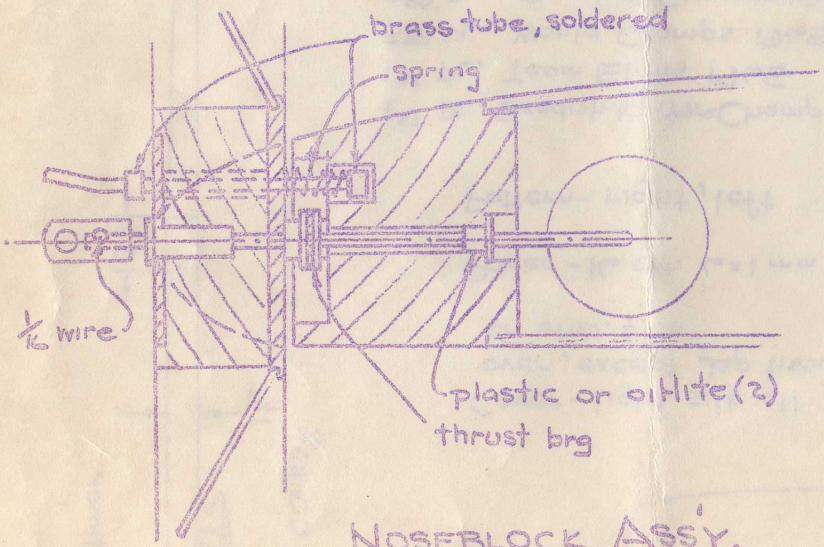
Scatter thanks Bengt Johansson for this information. The plans pretty well take care of the details and we wouldn't want to attempt a



JOHANSSON
WAKEFIELD
SHEET 2

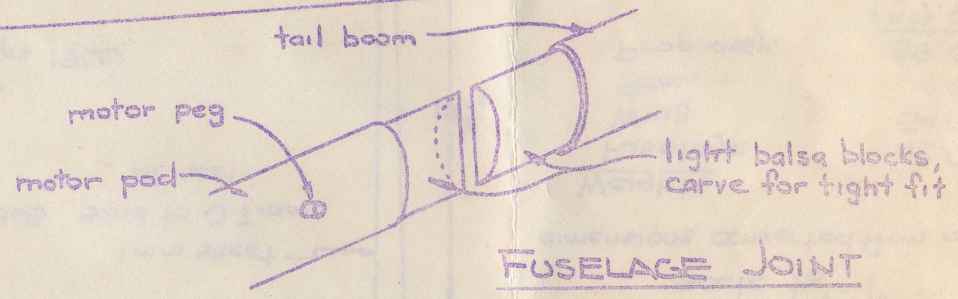
PROP DETAIL



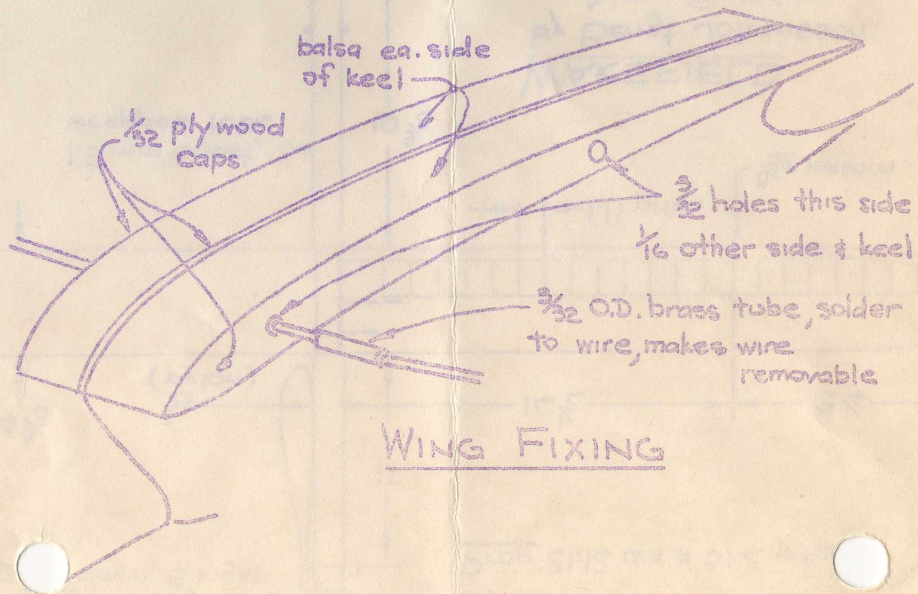


NOSEBLOCK ASS'Y.

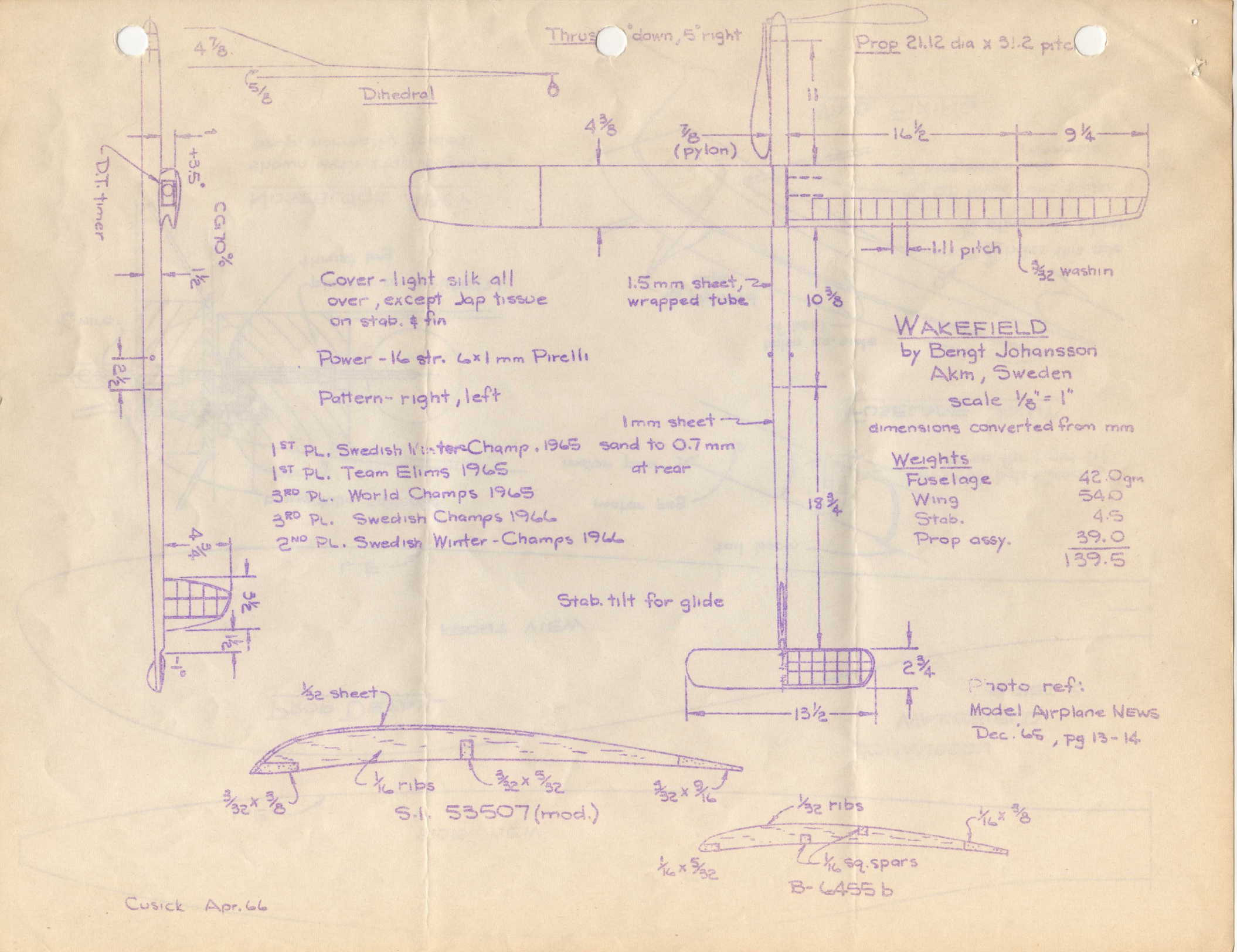
shown with stop engaged, prop. normally folded



FUSELAGE JOINT



WING FIXING



WAKEFIELD

by Bengt Johansson
Akm, Sweden
scale 1/8" = 1"
dimensions converted from mm

1ST PL. Swedish Winter Champ. 1965
1ST PL. Team Elims 1965
3RD PL. World Champs 1965
3RD PL. Swedish Champs 1966
2ND PL. Swedish Winter-Champs 1966

Weights

Fuselage	42.0 gm
Wing	54.0
Stab.	4.5
Prop assy.	39.0
	139.5

Photo ref:
Model Airplane News
Dec. '66, pg 13-14

Cusick Apr. 66

critique of such a fine airplane.

One question arises however: the airfoil used looks like it might be on the critical side, with a lot of thickness and curvature well forward on top. The sharp L.E. may make it self turbulating but is it enough? Koster's airfoil looks a little like it and uses a surface thread turbulator. Could it be that the sensitivity to varying weather might be traced to the airfoil? Comments anyone?

How To Cut Out Stuff Bob Van Nest Scat

This fixture in our 3 view uses a household power tool that some of you may have in your workshop. I got mine originally to help build furniture for my home. A little thought turned up a use in building models for the router and a fixture to help the router do this job. The fixture will turn out any number of parts with complicated outlines, all exactly like the preshaped pattern and all exactly like each other. It can be used on any kind of wood, including balsa and even thinner gages of aluminum sheet. It can be used to cut out pylons in any thickness the cutting tool will handle, root ribs and tongue ribs for Nordics. It will slot tongue ribs. Firewalls and motor mounts for power; rudders and plywood sub-fins. It can take on aluminum wing tongues too.

As the three view shows, the work surface is about a foot square, however, you can make it any size you like. The part to be made is placed under the pattern, which has the exact shape as the part you want to make. This way the stylus (called pin on 3 view) will run on the edge of the pattern and the cutter works on the part blank. The part is held under the pattern with double sided tape or a small brad through the pattern which goes a small distance into the blank. Plywood pylon cores for my power models take about 20 minutes to shape the pattern and about 1½ minutes each for the rest, as many as I need. And I still have the original pattern for the next time. It can be used indefinitely. It's a fantastic time saver when you're building a number of the same design.

It isn't a good idea to stack parts to be cut out with this thing, as most routers turn over 20,000 RPM and things could get hairy if the bottom piece slipped out of line.

Even if you have a router, this may look like a lot of trouble to go to. It isn't difficult to put one of these fixtures together and every minute will have been well spent every time you fire it up to cut out parts.

Chickitty Yackel FAI Power - Bill Hartill

This ridiculous thing enabled your editor to qualify in the Team

selection semi-finals last fall, which in turn permitted said editor to continue on and finally blow it this year at the final team selection fly-off at Bong. (Report on Bong next month) But then I get ahead of myself.

This airplane was not designed, it happened. Rear fuselage came from "Yakkity Yak" (see F.Z. Yearbook 1959-61 pg. 66.) Front of fuselage came from "Chicken Little." Fusion of the two (more or less) occurred just behind the pylon. The wing and stab came from "Chicken Little" ("Chicken Little" was another one of my secret designs)

Somewhere along the way the wing got all sort of destroyed. This was a week before the last chance team eliminations. (not to be confused with the quarter, or was it semi-finals?) So, the wing you see on the plan was built on rather short notice.

That Saturday was spent at Tulare checking it out and it went great. Finally on the last flight decided to adjust the rudder. One turn of the adjustment screw didn't seem to move the rudder much, nor did two turns. So why not 4 turns? OK

Beautiful climb full 10 seconds run. Straight up 6 seconds, straight down 4 seconds. Ugly scene. Do you people know how hard the adobe soil gets out here in the summer? You can't even drive a nail into it.

After searching and scraping we found most of the fragments (thats right sonny, no spare airplane) and brought the basket load back to the motel.

It took until midnight to glue all the pieces back together, using magic mending tape on stuff that wouldn't glue.

Miraculously on the morrow it flew and pretty good too, which was good enough to qualify. Lesson? Never throw anything away!

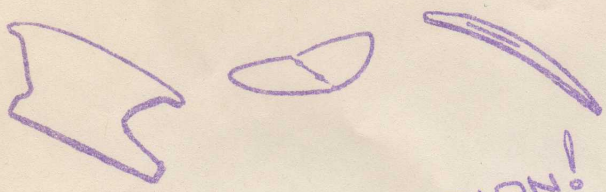
A few weeks later we flew at the Tacoma, Washington Semi-Finals and everything went fine. (see Dec.'65 issue)

This layout gives a steep climb, rolling left and turning right. Washin is given to right wing by using a piece of 1/8 x 1 T.E. stock 4 inches long attached under wing T.E. at dihedral break.

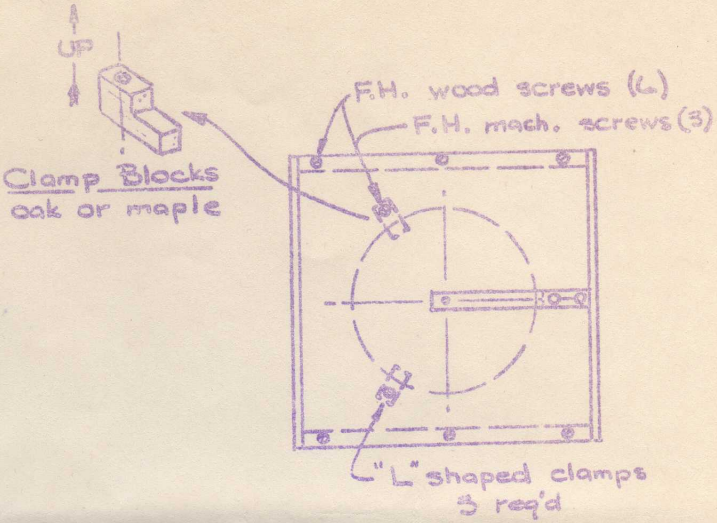
This ship was a patch job which did its duty holding the fort long enough so that your tired editor could get un-eliminated and make reasonable plans and planes for the final team fly-off.

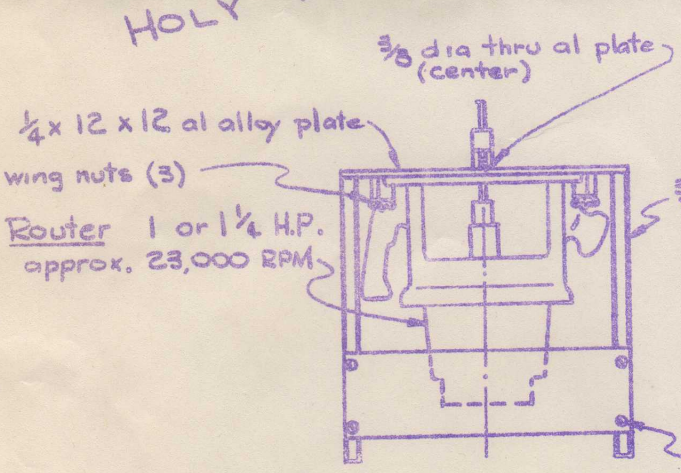
ROUTING FIXTURE

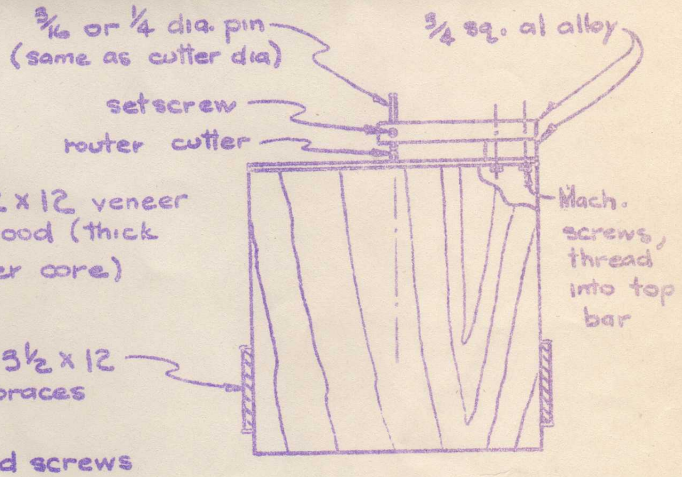
by Bob Van Nest (S.C.A.T.)
Sunland, Calif.
scale 1/8" = 1"



HOLY AUTOMATION!







1967 U.S.A. Free Flight Team

The fly-off to select the U.S.A. team was held at Bong, Wisconsin on July 23, 24, and 25.

Wakefield		Power		Nordic		
John Lenderman	Calif.	Bob Cherny	Calif.	Hugh Langevin	Minn.	
Herb Kothe	Colo.	Doug Galbreath	Calif.	Bob Van Nest	Calif.	(SCAT)
George Xenakis	Tex.	Joe Wagner	N.Y.	Bill Langenberg	Tex.	

More details next month (Floyd Miller, where are you?)