THE SCATER

published by Southern California Aero Team

February 1962 (11)

President-Jim Trego; Secretary-John wordin; Editor-Ken Sykora, 6717 Wilkinson, Apt. 205, North Hollywood, California

HOW TO BE AN EXPERT BEGINNER

Much of our current mail comes from FAI-FF beginners. For their benefit we'll toss out some ideas this month on basic approach.

After reading countless introductions to books called, "How to Build Model Airplanes, for Fun and Profit," we're a little tired of the "painless" approach. So here's our introduction (to a book in progress to be titled, "The Backbreaking Way to Build Models").

INTRODUCTION

1. Seeking the "Answers": There's no sure-fire formula for designing, building, and flying successful FAI-FF models. The variables are too numerous. However there are COUNTLESS possible combinations for success.

2. Places to Look: Where do you look for these numerous approaches? There's written material. Frank Zaic and others have published many technical books on this nutty problem. Also there are model magazines (of sorts) and national and local model clubs. And there's usually a capable FAIer on your local flying field who'll answer your questions. As a last resort there's that nice lady down at the corner candy store who sells penny gliders. (She won't have technical info., but she'll sell you a candy bar, pat your troubled head, and encourage you to struggle on.)

3. The Shocking Discovery: O.K., so you read, watch, ask and listen, and whee!...you start learning things! Then the axe falls. You begin to notice that much contradictory information is gathering in your head. Now you're really beginning to learn. And your next step is...

4. Personal Selection: Once you see there are many ways to skin this FAI cat, you should take the important step of selection....i.e. PICK THE THINGS YOU LIKE. Sounds unscientific; but it sure works! Too many beginners err by constantly "hop-scotching" from one approach to another (usually just because "this-year's-winner" found it effective). Sure you can learn much from these top flyers. But remember...they didn't just copy "year-before-last's winner". They've carefully selected and perfected their own approaches. And that's what you should do. It's not simple or easy...but it can be both fun and rewarding!.

So when you like a certain airfoil, or construction method, or trimming gimick...by all means adopt it. Get "comfortable" with it, and press it to its full potential. Don't worry if it isn't the "latest technique" being touted by some "expert". Concentrate on you, and leave the "way-out" experiments to the "experts". By and large, what you like will work best for you. (And if anybody kids you about your choice, chances are a little research will reveal that some expert sometime, somewhere, has used it very effectively!)

5. Practice: This is the real "giant-killer" for your competition planning. Once you've established your basic approaches the rule is: practice, practice, practice. Fly your model, learn its capabilities, and try for its top potential on every flight. (A very successful Wakefield flyer we know has these words penciled in his tool box: "Make Every Flight Count!" That's sage advice for beginner and expert alike.)

6. Patience: The five preceding ideas won't insure you a win everytime. There's still the luck element (more or less) in any free flight competition. But a little patience will get you over this hurdle. And remember: the better you get at the basics, the less luck you'll need!

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That's it. If you apply enough personal effort on these six points you'll win contests and the mags will tag you an "expert". But by that time that won't be as important as it may now seem, because you'll have made a much richer discovery...Prizes and fame are fine; but they can never compare to the very personal satisfaction and private pleasure of building and flying model airplanes...really well!

TWO WINNING GLIDERS FROM SWEDEN

(Ed. note: Last month we received a very good non-commercial technical magazine from Sweden, MODELLFLYGNYTT. We thought readers might enjoy seeing two of the top A/2's from that country so we have reproduced them from Peter Wanngard's original drawings in MODELLFLYGNYTT. These ships won first and second place respectively in the 1961 Swedish Nationals...and from what we've seen of the caliber of models produced over there we'd say this makes them well worth study and consideration. Here are the English translations Wanngard supplied:)

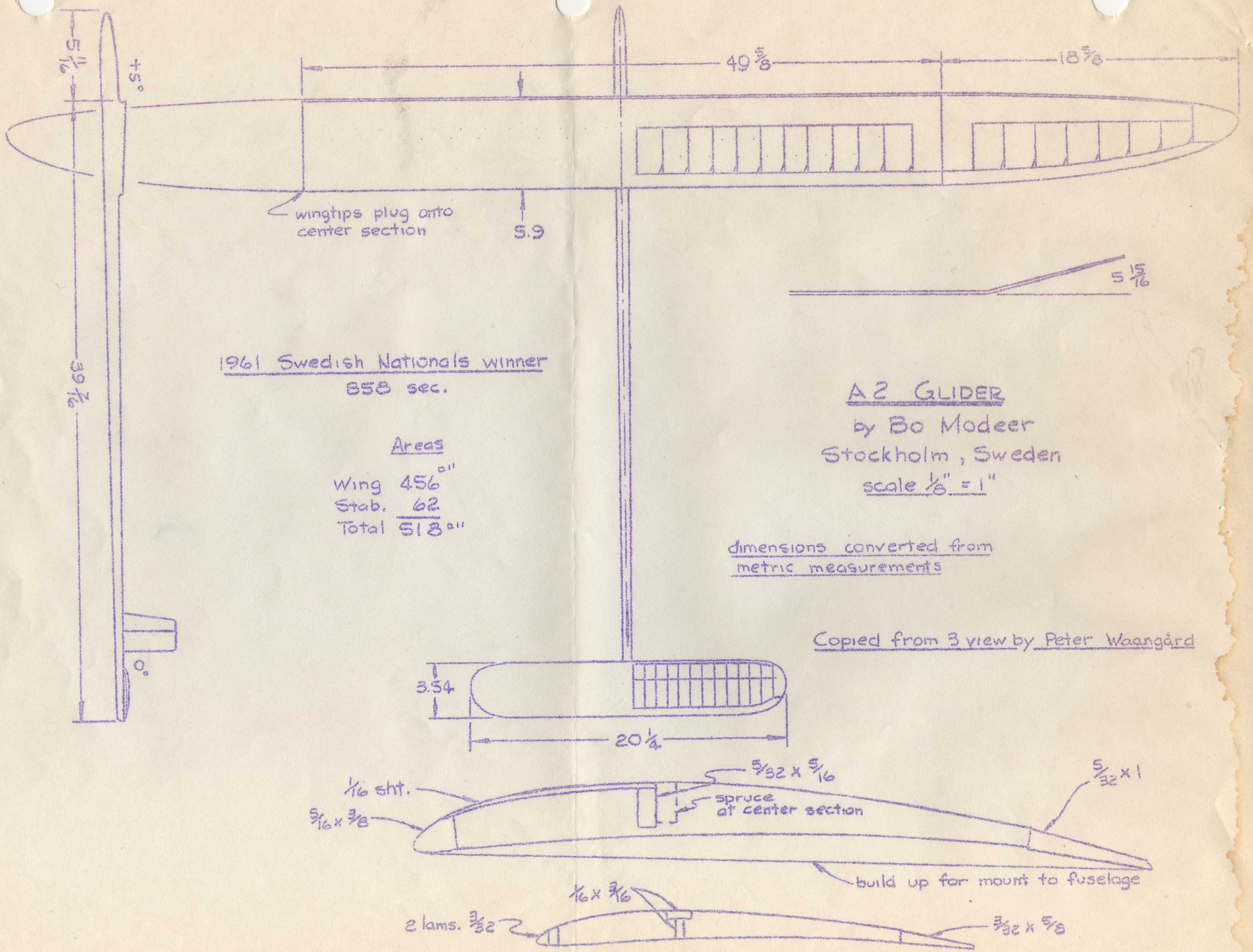
Bo Modeer's A/2: Bo Modeer has for many years been one of the leading A/2 flyers. With this model he has won every contest he has entered except for the World Champs. Among the victories, the Swedish championship may be mentioned.

Knut Andersson's A/2: The most striking feature of this model is the "polydihedral" of the wing which Knut uses with very good results. Knut is one of the veterans of the A/2 field and this year he represented Sweden in the Nordic countries free flight Champs.

NEWS FROM THE READERS

The paid up list as of this month stands at:

RUSS SCHEIDLER, Mpls, Minn.
EDWARD SANNA, Northampton, Mass.
AL SCHAEFER, San Jose, Cal.
JIM MOSELEY, Yorks., England
FRED MORTON, Hayward, Cal.
LLOYD HEMINGWAY, San Diego, Cal.
MIKE PRESTON, Saratoga, Cal.
JACK ELROD, Ft. Worth, Tex.
[illegible]H TUCK, Ontario, Canada
[illegible]L CULLEN, Syosset, N.Y.
TEM JOHNSON, Kansas City, Mo.
JOHN WORTH, Hampton, Va.
BRUCE SHAFFER, Bloomington, Ind.
DREW MORRIS, Plainview, N.Y.
ED HOPPER, Baltimore, Md.
WALT TAYLOR, Knoxville, Tenn.
BOB HAWKINS, Peoria, Ill.
LeROY GRANT, St. Paul, Minn.
HENRY LANINI, San Jose, Cal.
GEORGE VASLOS, King of Prussia, Pa.



1961 Swedish Nationals winner
858 sec.

Areas

Wing	456 sq in
Stab.	62
Total	518 sq in

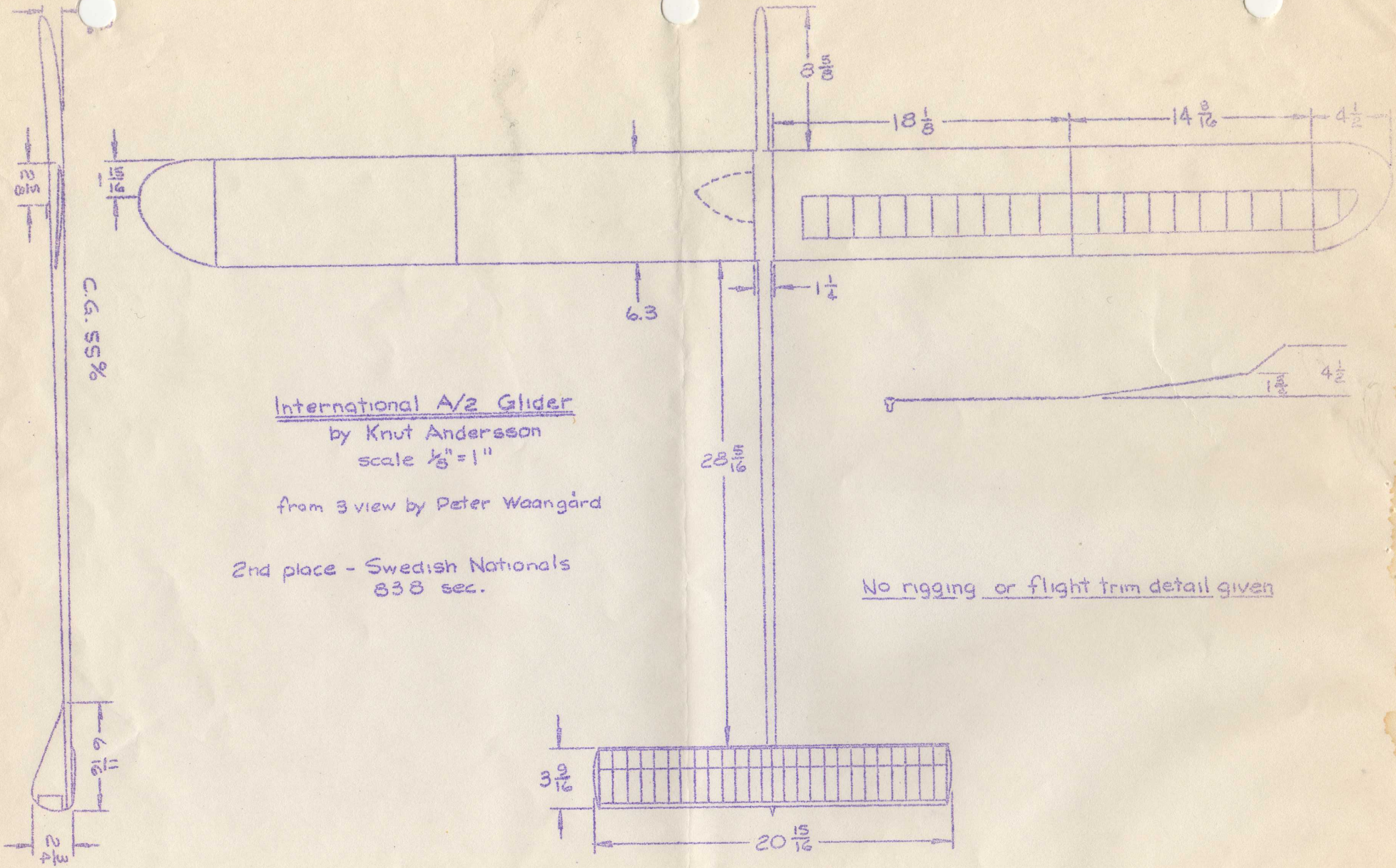
A2 GLIDER

by Bo Modeer
Stockholm, Sweden
scale 1/8" = 1"

dimensions converted from metric measurements

Copied from 3 view by Peter Waangård

Custer Jan. 62

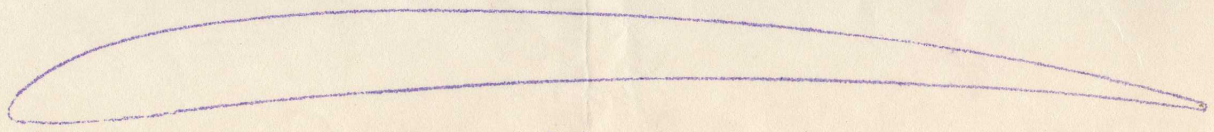


International A/2 Glider
by Knut Andersson
scale 1/8" = 1"

from 3 view by Peter Waangård

2nd place - Swedish Nationals
838 sec.

No rigging or flight trim detail given



Wing Airfoil

Cusick - Feb. '62

Long time friend from Ft. Worth, FRANK HUFFMAN, writes us some kind words and sends along a very welcome contribution. Thanks, Frank! As our Swiss banker says, "praise is fine, but it won't buy money!"

DOUG WILSON of Hudson, Canada, sends along a long and newsy letter of FAI activities up that way. Thanks, Doug. Please keep the info coming.

AL SCHAEFER of San Jose says that for a dollar the SCATTER is next best think to a kiss from an old maid...(Ed. note: How old?)

JIM MOSELEY sends greetings from snow-bound England. Says he'll be happy to correspond with like-minded FAIers and we'll supply his address to any interested readers. He closes with a wish for more power to our arm. Thanks, Jim, but just remember...we're just the arm...you and our other readers are the power!

WHICH PLANE OR DELIBERATION UPON JUSTIFICATION (HUH?) by Bill Bell (Florida)

(Ed note: Since these winter months are a good time to sit around and philosophise about modeling, we thought you'd enjoy this guest editorial by Bill Bell. It first appeared in JACS YACS, a newsletter from the Ft. Worth Texas area.)

I've got a couple of fairly radical looking airplanes this year and it could present quite a problem. If they fly decently, I'll have to justify the design somehow. Research into the whys of a model is a good winter project if you can force yourself to fix some of the variables that present themselves. To list a few: 1.-Weather and thermal conditions; 2.-Various and sundry warps; 3.-The angle of attack at which the model glides; 4.-The efficiency of the stab.

But then its the variables that have us hacking out new models and trying to become thermal sniffers. You can't fix some of these factors and a badly designed model in a thermal is better than a dream model in a downdraft, ANYTIME!

If we ever actually got to the point that everything we designed worked exactly right and consistently so, then I for one would probably take up some other sport. For the big kick is in the pursuit of "THE ANSWER".

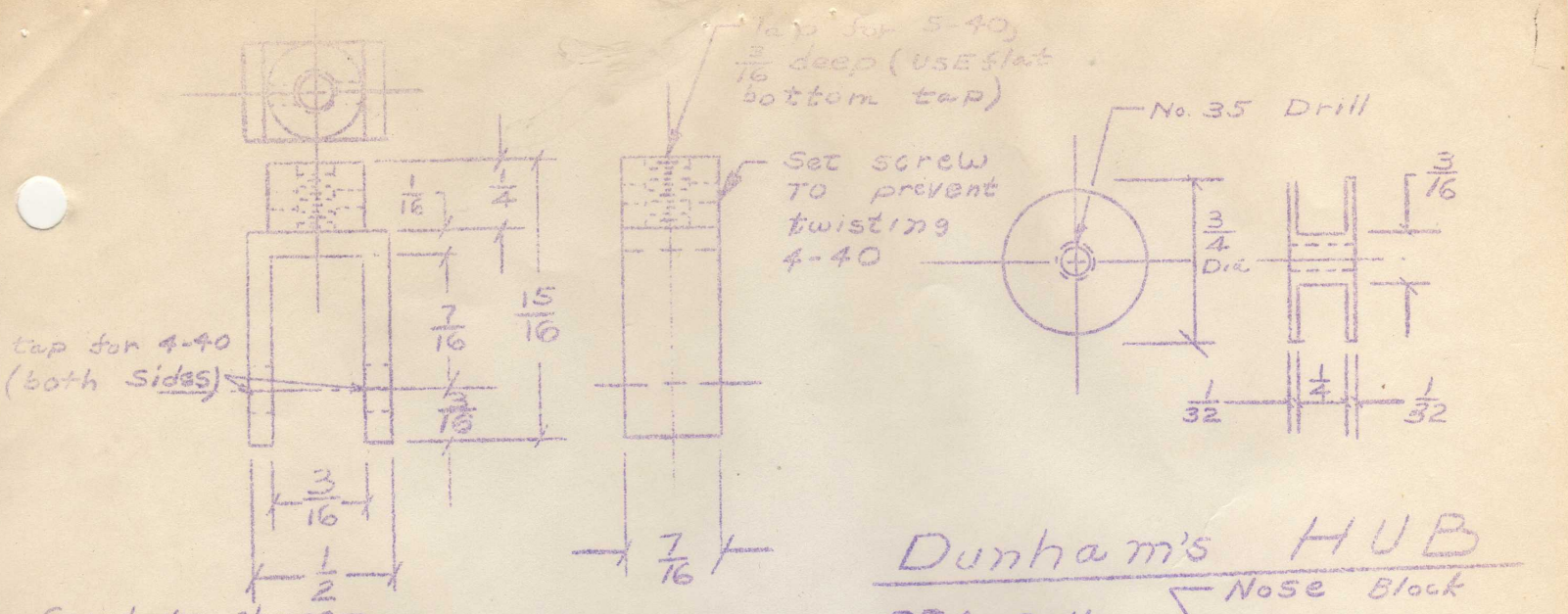
(Ed. note: Well worded Bill...say, we hear a rumor that your wife's success in Nordic is largely due to her famous towing technique called the "Betty Bend". Any truth in this????)

WAKEFIELD PROP SHAFT ASSEMBLY, By Bob Dunham (Tulsa, Oklahoma)

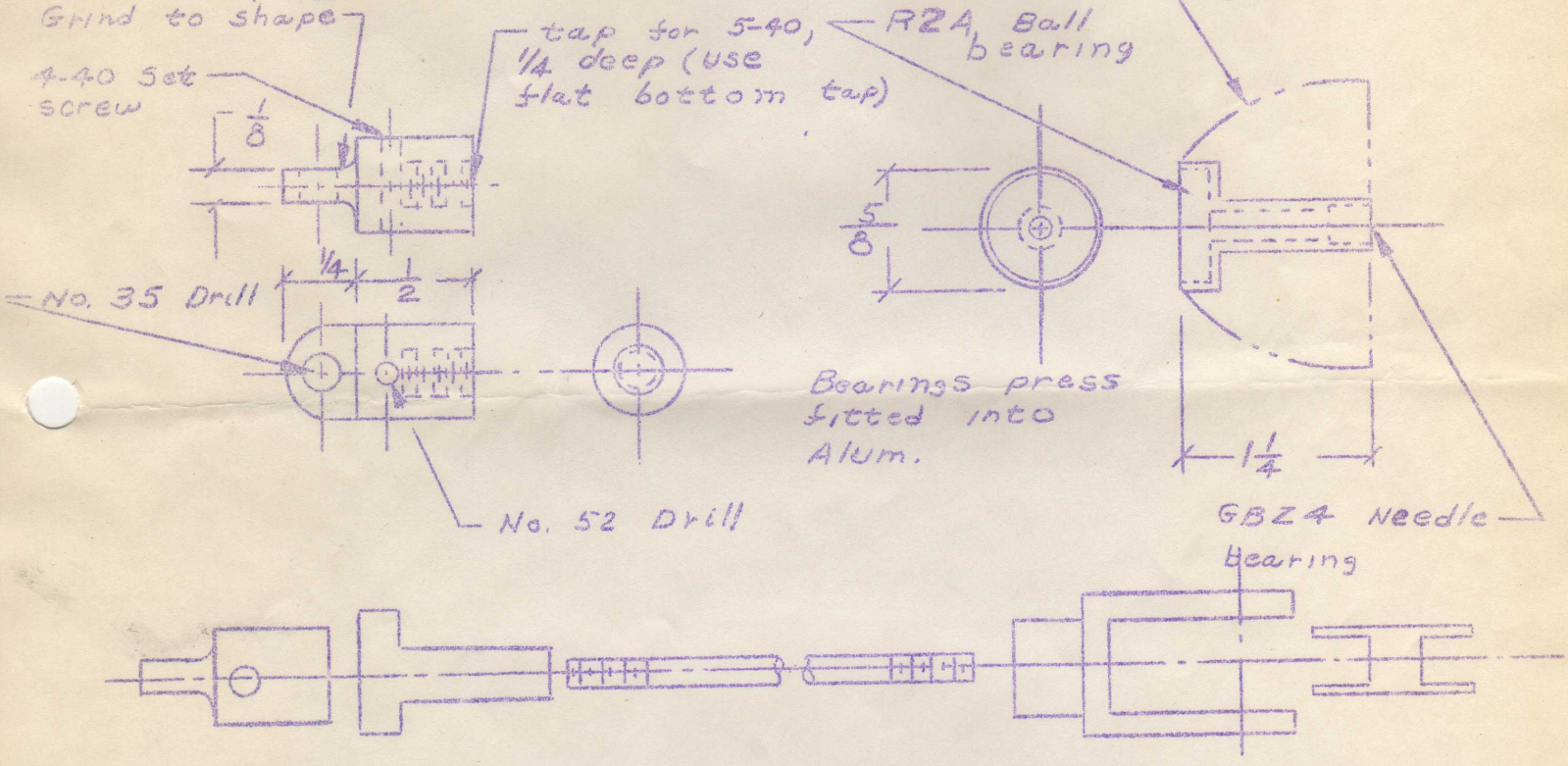
(Ed note: Bob Dunham is one of the top Wakefielders in the Midwest. He was 5th in the '54 Finals. In addition to being an all around good builder he has a way with detail design that is both effective and straightforward. So when he sent us drawings of his adaptation of George Reich's Wake. hub, we thought it would be of interest to many readers.)

On my '61 Wakefield I used George Reich's prop shaft assembly (published a few months back in M.A.N.) and I like it very much. It involves considerable semi-precision machine word but when the rig is assembled it results in a true running, almost vibrationless set-up.

The drawing shows the component parts needed. Although Reich suggests certain heat treatment of the winding piece, I did not do this and have had no trouble. Since Reich's article did not give any dimensional info on his particular unit, I thought some of your readers might like to duplicate it, but would be hesitant without additional information on one that had been

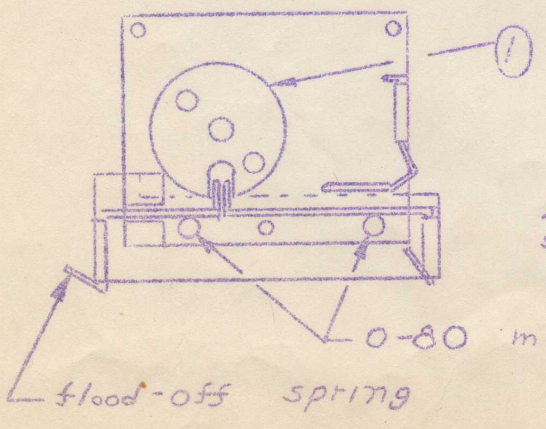


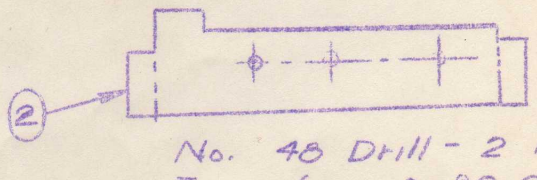
Dunham's HUB



PAUL'S FLOOD OFF SYSTEM

by R.O. Paul
Brooklyn, N.Y.





No. 48 Drill - 2 Holes
Tap for 0-80 Screws
Flat pattern full size

Wordin Feb '82

put together successfully.

In order to keep the assembly tight I have used a liquid called "Loc-Tite" on all the threaded joints. This fluid sets up in 3-4 hours but can be disassembled and reassembled without harm to the threaded pieces. Nice thing about this rig is that the various pieces can be used over and over again on different ships. I hate to bend hooks more than anything and the 1/8" dia. shaft doesn't do much bending even on the hardest landings.

If there would be sufficient number of people interested in this (15 or 20) complete sets could be supplied for about $10.00 each and would consist of the following:

1 winding piece w/o cross wire
1 Aluminum Yoke piece
1 Aluminum bobbin
1 bobbin screw
1 shaft (3" lg. threaded on end only)
2 set screws 1/8" long
1 set screw 1/4" long (prop tensioner)

It would be necessary for the buyer to thread the other end of the shaft and file flats on shaft for set screws. Length of the shaft and location of flats would depend on each individual case for folding location. If buyer would specify length of shaft required both ends could be threaded.

With this kind of arrangement there is the necessity to have it running in a good ball bearing set up. I have used the arrangement shown and find it superior to just cementing the bearings to the front and rear of the nose block. By having them press fitted into an integral aluminum piece it assures proper line up and they can be lubricated without danger of oil soaking the nose assembly and eventually loosening. I have used New Departure R2A ball bearings, in the front with Torrington GB24 needle bearings in the rear. These could also be supplied for approximately $5.00 each, including bearings, or $2.00 each without bearings. This would also be in quantity of 15 or 20 units.

These prices may sound high, but believe me, the first ones I had done for my own use, cost much more. If there was not sufficient quantity, money would be returned.

FLOOD-OFF/AUTO-RUDDER TIMER CONVERSION by Dick Paul (Brooklyn, N.Y.)

(Ed. note: This a conversion for the Tatone timer which makes it a flood-off/auto-rudder activator. Here's how it's done: Remove the old winding indicator and replace it with a .75" diameter dial of 1/32" aluminum (1. on the sketch). The open slot is .12" wide and deep enough to clear the releasing springs.

Make the fitting (2. on the sketch) from 1/32" aluminum and springs from 0-40 wire. Bend the ends of 2. over springs to form hinges. A slot is sawed in the tubing guide to clear the floor-off spring. There is a 3 second interval from flood-off to auto-rudder activation for good transition from power to gliding flight.)

If you like, Dick says he will convert any timer sent to him for $1.00. A postcard to us will get you his address.

FROM THE NOTEPAD

*****With typical British lack of fanfare, two groups in England (Southampton University group and Hatfield M.P.A. Club) are conducting experiments with

sailplane-type man-powered aircraft. Both planes have made short flights (entirely propelled by a man-powered propeller). What we think makes this important to our readers is the fact that these ships (one of them cruises at 20 mph) are operating near model speeds. Therefore it is possible some facts that these experiments reveal (on airfoils, etc) just might be useful for model applications. If you'd like to read up on these ships we can recommend two English publications for a starter: FLIGHT for 7 December '61 and AIR PICTORIAL for January '62.

*****The Skymaster Co. of Jamestown, N.Y. has come up with what they claim is a jim-dandy custom jig for model building. It consists of a 36" by 15" steel worktable and 30 little magnetic blocks. It's called Magna-Jig and is supposed to be much better than the dull straight pins and warped piece of pine board we've been using for thirty years. Could be...'course you want to be careful and not forget and try to hammer a pin into this! Boy! Would that wake the neighbor's baby!

"DRAFTEE DIP" WAKEFIELD by Charles Sotich (Chicago Prop Nutz Club Design)

(Ed. note: Guess we're on a beginner's kick this month...what with the editorial theme, and now this simple Wake. However, when we ran across this design recently we were struck by the simple, straightforward approach; and, after we'd checked into its contest record, we were sure many of our readers would like to have a detailed look at it. Any "non-Wakefielder" should be able to tackle this ship and get it to fly well.)

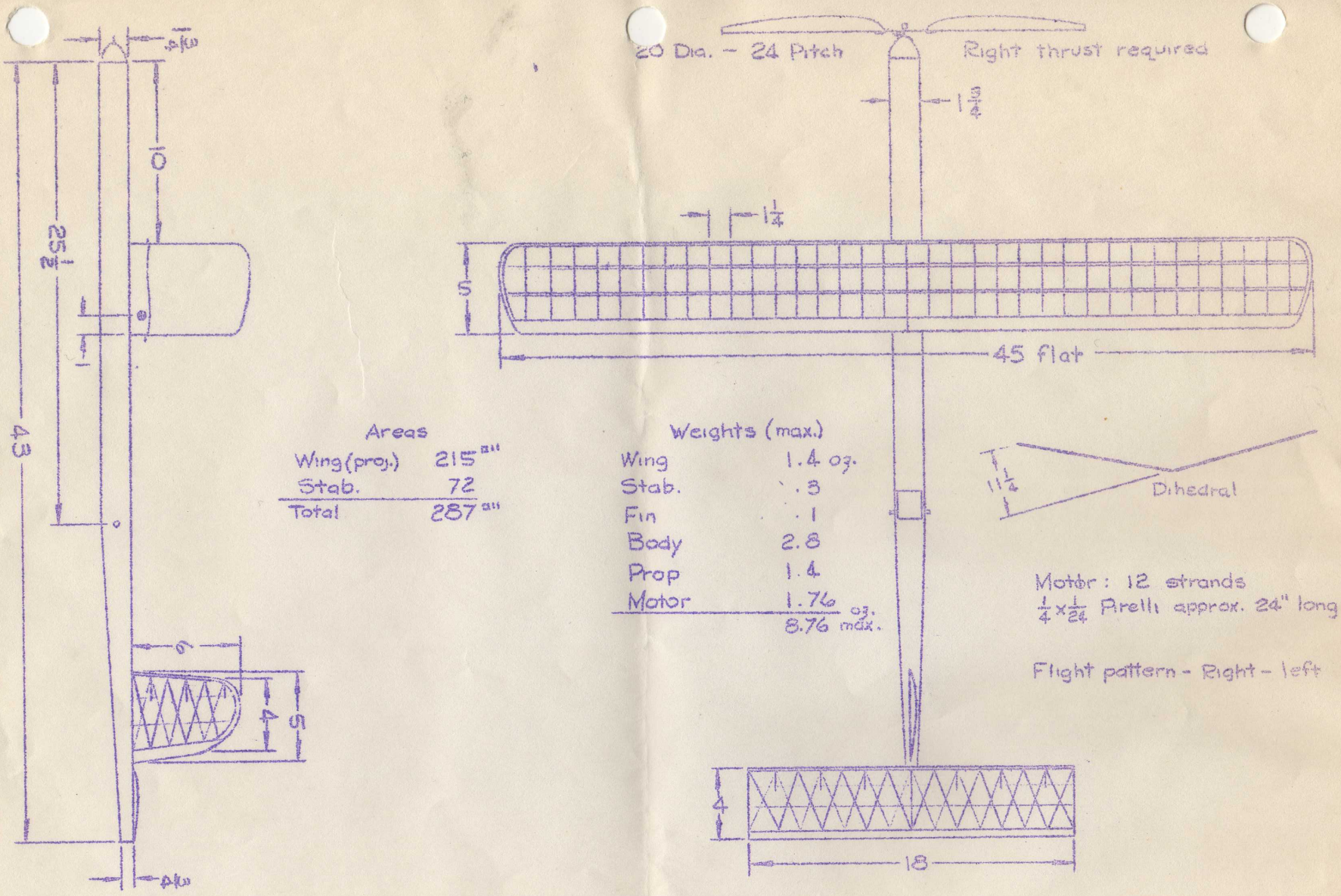
This Wakefield model was designed to give the modeler lacking experience with rubber powered planes a model that will be: 1) Simple to build, 2) Easy to trim, 3) be able to stand some abuse, and still put up a good showing under normal (?) contest conditions.

The model shown in the drawings is a development of my 1958 model. It has a few changes, but nothing really significant. The "tip" dihedral used on the early models has been changed to "V" dihedral. I have used "V" dihedral on all my rubber models since 1959 to simplify construction. It is easier to spot warps with this type, too. I don't think dihedral effects performance since all types have been used effectively on a variety of good flying models.

Since '59 I have been using the type of stab construction shown on the drawing. It's a simple way to get a light, warp-resisting surface. (I'm not convinced there is any actual warp resistant construction technique.) Frank Spearman of the Illinois Model Aero Club originated this method. Sliced ribs are used (for lightness) and they are glued diagonally across the spars. The top and bottom rib pieces are set at opposite angles to each other to help them resist twisting.

This series of models has done very well in most of the contests entered. To site a few wins:

1st -- 1958 Nats - Glenview, Pa.
1st -- 1959 Chicago Wakefield Eliminations
5th -- 1959 Nats - Los Alimitos, Cal.
1st -- 1960 Nats - Dallas, Texas
2nd -- 1961 Chicago FAI Invitational Contest
2nd -- 1961 Inter-City FAI Challenge, Lansing, Mich. (Detroit, Cleveland, and Chicago)



Areas	
Wing (proj.)	215 sq in
Stab.	72
Total	287 sq in

Weights (max.)	
Wing	1.4 oz.
Stab.	.3
Fin	.1
Body	2.8
Prop	1.4
Motor	1.76
	8.76 oz. max.

Motor: 12 strands
$\frac{1}{4} \times \frac{1}{24}$ Pirelli approx. 24" long

Flight pattern – Right – left

THE DRAFTEE DIP

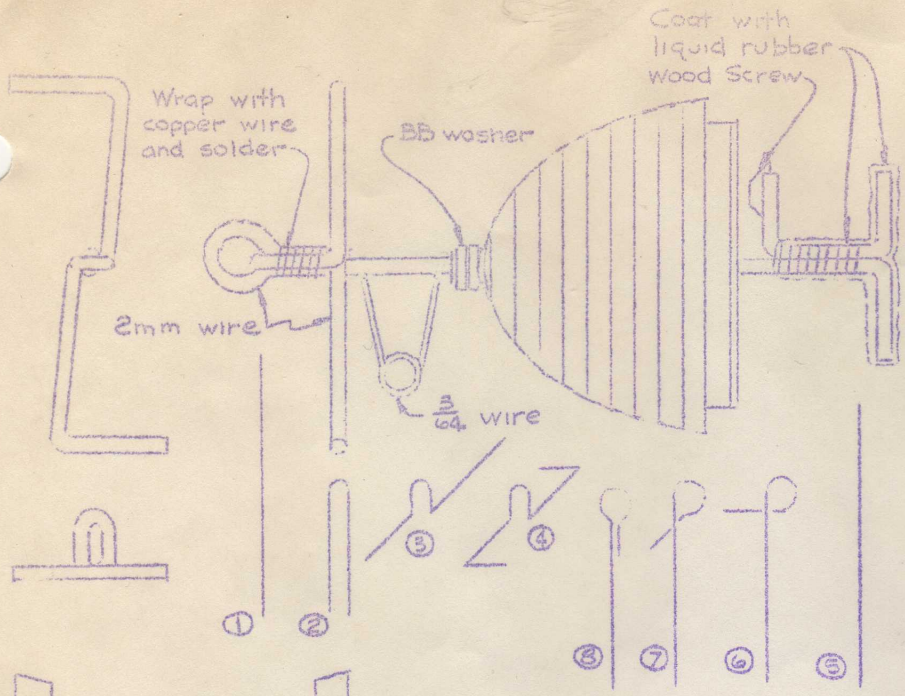
50 Gram Wakefield

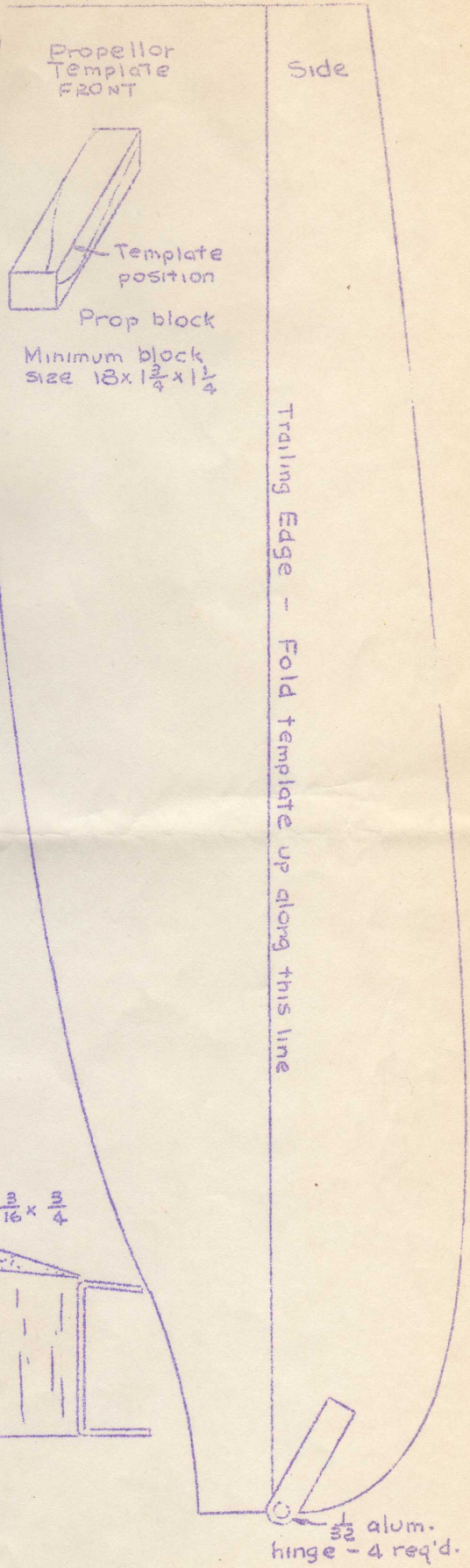
A Prop Nutz Club Design

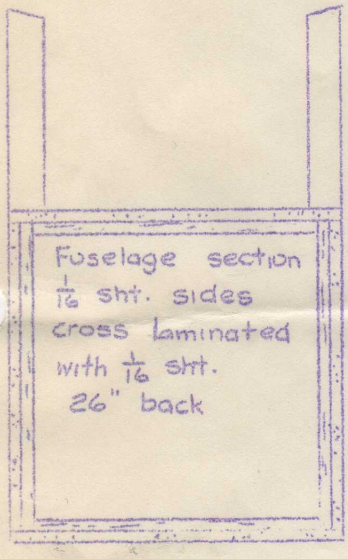
Scale $\frac{1}{8}$" = 1"

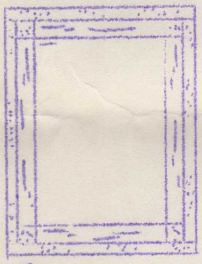
from drawing by Charles Sotich

Cusick – Feb 62

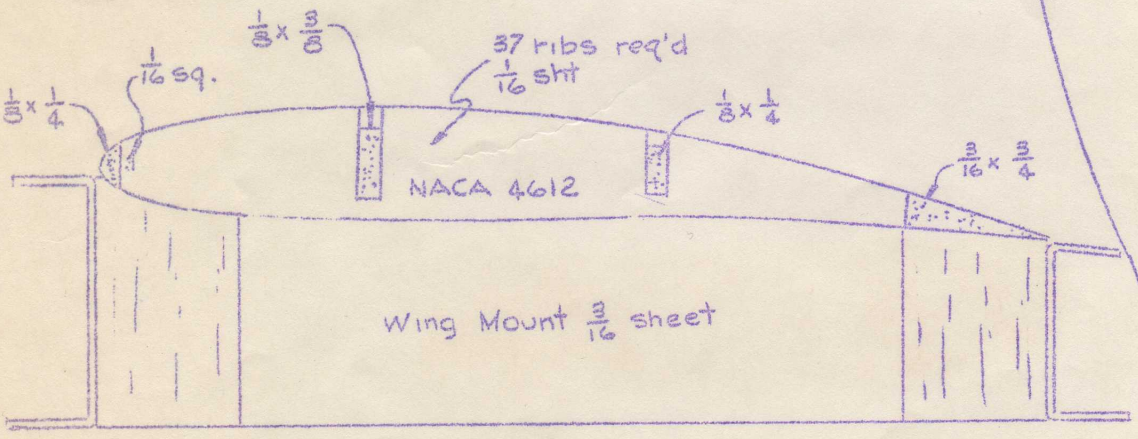


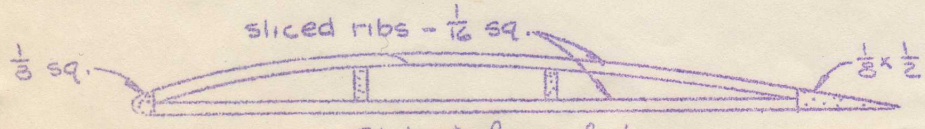






3/32 sq. longerons and cross members (2" spacing) in rear fuselage





Stab. & fin airfoil
Center and tip ribs 1/8 sht.

DRAFTEE DIP

50 GRAM WAKEFIELD

Cusick-Feb. '62

I have done very little "dead air" flying with my Wakefield models. My guess is that they are only good for about 2-1/2 minutes. Under normal contest conditions, however, where there are usually many thermals, this has not been a serious handicap. I've even beat Gerry Ritz and his 3-1/2 plus jobs a few times!

PICTURES, YET!

This month we decided to give all you readers a break and let you have a look at the one and only, "unwashed 14" who make up the SCAT club. The nice printing job (you should have seen the original art they had to work with!) was done by Varigraphics Company of Canoga Park, Cal. Thanks, gentlemen!

(Ed. note: If any of these pictures look familiar, maybe you've been browzing in your local post office lately???)

AN ANNOUNCEMENT: by Jim Trego (SCAT president 1962)

At a recent stated meeting of the Southern California Aero Team, a motion was made and passed by a majority of the members present to resign as of March 1, 1962, from the Southern California Free Flight Association. The difference of interest and aims between SCAT and most other clubs in the area prompted this move.

We wish the Association luck and success in whatever they might do on behalf of free flight flyers in Southern California.

COMING NEXT MONTH

A slick Power ship from the East Coast...Tor Borthne, teenage member of the '61 Norwegian A/2 Team will show us his new glider... Bob Van Nest will provide working drawings of his clever "Two-Timer", a one-thumb triggered fuel-off/auto-rudder device...and, (your guess is as good as ours) other stuff.

LATE FLASH!!!!OFFICIAL WORD ON U.S.A. TEAM SELECTIONS...(OR, HERE WE GO AGAIN)

Just as we went to press (an impressive newspaper term meaning, in our case, the editor had his hand on the ditto machine switch) we received official word (we hope) from Gerry Ritz, ICC-FF Committee Chairman, of the Team Selection System to be used for USA qualifications. Here 'tis:

1962-63 INTERNATIONAL U.S.A. FREE FLIGHT TEAM SELECTIONS

Local Qualifying Trials:

1. Number of competitions--3 (Separate entry fee for each trials)
2. Flights per event--5 (All flying to be scheduled rounds system)
3. Qualifying Trials Dates:
   First Trials--June 9-10, 1962
   Second Trials--July 7-8, 1962
   Third Trials--August 11-12, 1962
   (All three events, Wake, Power, and Nordic flown in each trials)
4. Qualifying Times:
   Wakefield - 13 minutes
   Power - 13 minutes
   Nordic - 12 minutes