THE

SCATER

published by Southern California Aero Team

(4)

JULY 1961

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MORE ELIMINS, FOR BETTER TEAMS?

Gave you guys a rest last month. Now its time to get you to do some thinking again!

Now's a good time to reflect on the recent trials which selected our American FAI FF Teams. Are there weaknesses in the system?...and, if so, can they be corrected? We think YES, to both questions.

We certainly don't object to the present system of multi-Elims followed by three major sectional Semi-Finals. This is a big country and doing it by sections is the only fair way (some Elims qualifiers still must travel many miles, but think how rough a single Semi-Final would be!...1,000 or more miles one way for the big majority!)

O.K., so the basic system is fine...our beef is the depth to which it's carried. Let's take a Test Case (not uncommon, we're sorry to say): Some johnny-come-lately (call him Sloppy Joe) throws together an FAI ship the night before the Elims, just for a lark. Next morning he takes it out, finds a little lift here and there, and he's qualified! (Just for fun, let's also assume his "quickie" breaks into several pieces upon DTing from the last flight). O.K. so the night before the Semi-Finals he decides, what the heck, might as well give it a go...so, quick-like-a-bunny he slaps the pieces together (ship has not been out of the trash box since returning from the Elims) and he's got a piece of crud even worse than it was before.

(Now here, you may begineto disbelieve, but this we've seen). He arrives at the Semi-Finals, plane flies pretty bad, but he has a real run of luck, finds just enough thermals when they count, and BINGO! Here's a guy who's built one FAI model in his life (a piece of junk on its last legs) really isn't too interested in the whole thing...and he's a TEAM MEMBER, about to fly for the USA against some of the toughest, best prepared competition in the world!

Now, if you can take it, here's the kiss-off. By now Ole' Sloppy is kidding himself that this FAI jazz is a snap. Ah Ha! But just to cinch it, he puts a couple more wraps of tape around where the fuse came apart the last time. He arrives at the Finals...and then a funny thing happens. Ole' Sloppy's luck just plays out. After two rounds he's standing 68th, and after five, he's dropped two more places. (If there are still disbelievers among you, try this: there are a healthy bunch of names that appear consistantly as Elims qualifiers and many of these have made several Finals Teams. These guys always place well up in the top half of the Finals. Now compare this with Team Members who've had poor or nonexistant Elims records... only a fraction ever get near the top half!)

O.K., now quite banging your head against the wall, you serious guys. There may well be a solution. What if we put a joker in the deck? Namely the factor of consistancy. It works like this: we have two years before the next Semi-Finals. Just suppose there were six Elims during these two years, with eight rounds in each. To qualify for the Semi, the flyer would have to be in the top 20% (based on 48 flights in six Elims.) He could miss some of these Elims, if he thought he could build up his total in others.

We think this would play hob with the fly-by-night Sloppy Joe's, and give us a Semi-Final group of serious, active FAI'ers any one of which would be a strong potential winner at the Finals. What do you think?

NEWS FROM THE READERS

Here are the names which have reached the top of the big big stack on our desk. Thanks for the kind words, fellows; and, remember, please keep those plans and technical topics coming in for publications.

RAY FRANDSEN, Mpls, Minn.
CORKY WALK, St. Paul, Minn.
DARYL MONSON, St. Paul, Minn.
CLYDE WHITE, Mpls, Minn.
ED VESELSKY, St. Louis, Mo.
BOB AXSOM, St. Charles, Mo.
ART FROST, St. Louis, Mo.
JOHN GARD, St. Louis, Mo.
BILL MILLER, Westminster, Cal.
STEVE JEPSON, Des Moines, Iowa
STEVE KASPRZAK, Queens, Village, N.Y.
GERRY RITZ, Chicago, Ill.

RAY FRANDSEN is a member of the Mpls, Model Aero Club, a hot group in the Twin City area. Tells us we will be receiving their publication the "Minneapolis Modeler." We've heard about this paper, and look forward to getting it. May contain some good FAI dope we can pass along. Thanks, Ray.

ED VESELSKY writes to tell us things are moving right along in St. Louis...his group is going strong in Nordic, and says they got some useful info from Wordin's towline test bit. That's the purpose of this rag, Ed, glad you could use it. And as for that poor showing in Power at Tulsa, don't let it bug you, Ed, that's been a real tough league for more years that we can count!

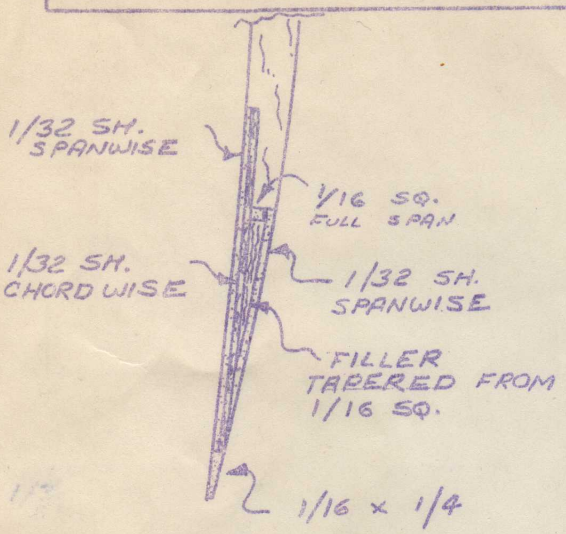
JOHN WORDIN, our SCAT member who is currently "marching through Georgia" (put down them rocks, Rebs! He's with Lockheed, not Sherman!) sends along a newsy letter. He's been chatting with GEORGE PERRYMAN, that old master of the "bent tail" school. (Get George to send along some drawings, John, they have always been good for some real fresh ideas). John's also learning enough German so he can translate a fine tehhnical book he's uncovered, "Aerodynamic das Flugmodells", by F. W. Schmitz. Though most of the stuff dates from '38 and '39 John says there's some real meat here, and we're sure to have some interesting reports from it by this hard working modeler writer. John wraps up his letter with a plite poke at AMA's "Model Aviation" namely, he wonders why they can't identify the modelers on the June cover when their AMA numbers are showing (beats us, Johm, we always thought they kept records of who held what number...but you know how it is with them government agencies!

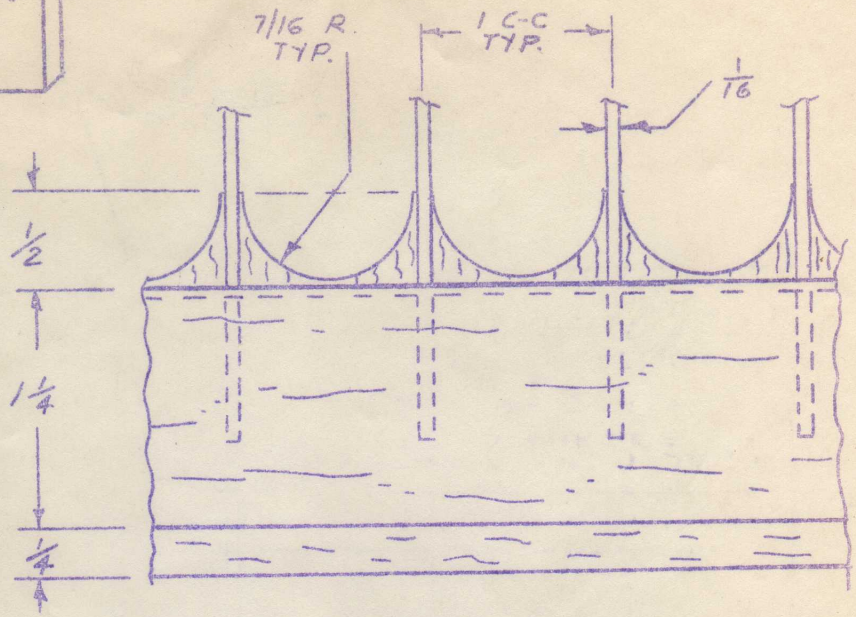
TANDARDIZED PROP BLOCKS, by Bob Hatschek

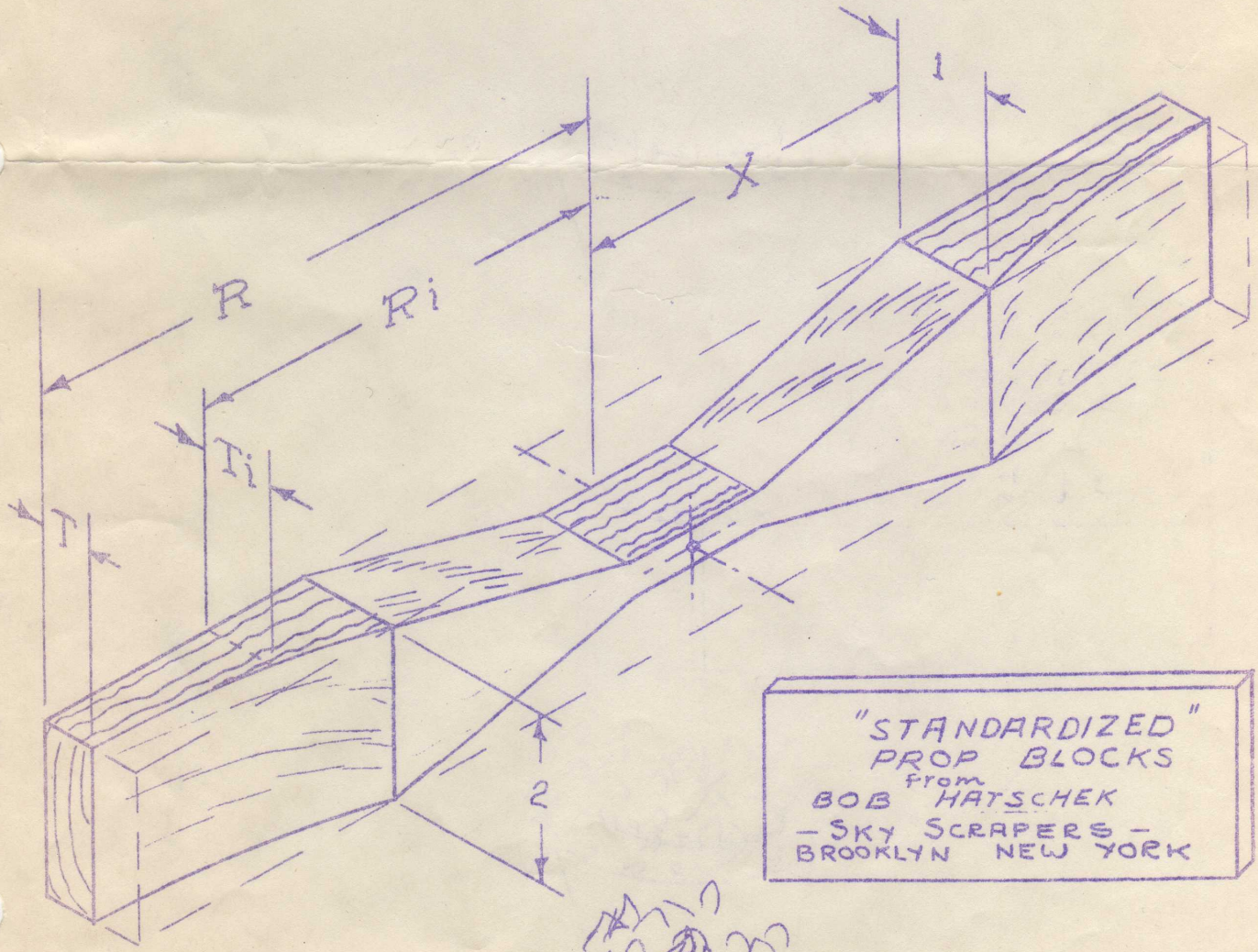
(This article was prepared for the Brooklyn Sky Scrapers publication, THE CONTEST FLYER)

(Ed. Note: Countless times we've heard Nordic and Power men say, "Gee, Wake-

T. E. CONSTRUCTION
DICK COLONNA
HAMPTON VIRGINIA







"STANDARDIZED"
PROP BLOCKS
from
BOB HATSCHEK
— SKY SCRAPERS —
BROOKLYN NEW YORK



field sure looks like fun, but I'd never get that prop right!" After publication of this fine article, let's have no more of that jazz from any SCATTER readers!)

HATSCHEK SPEAKS: I like rubber jobs! Wakefield or Unlimited doesn't matter-- there's just something about a nice fast climb without noise that appeals to me. Maybe I'm just old fashioned. But it 's a sure thing I'm lazy. Which brings me to "standardized" prop blocks.

Progress in prop design over the years has been steady and has constituted the major improvement in overall rubber design. (Here we give a deep bow to the speed flyers, who are responsible for "popularizing" an understanding of propeller pitch and diameter in the hobby). In order to improve rubber model performance, it has been necessary to try different props, generally props carved out of different sized blocks.

But most hobby shop proprietors give you a fish-eyed stare when you ask for a 1-3/16 by 2-9/32 by 21-1/4 inch block--preferably 8-pound stock-- and with the annular rings about tangent to the front surface. Do you blame them?

After getting some 20 years of fish-eyed stares and countless lousy blocks, it finally occurred to me that I ought to conform to the way balsa peddlers cut wood in nice even sizes. If I could standardize and still be able to alter prop design, I could buy a choice piece of wood whenever I saw it, keeping a hoard in the workshop instead of wasting time and gasoline chasing all over the city every time I dreamed up a new layout. So I did.

Blocks of 1" by 2" are about as standard as you can get--and I now have them all over the basement.

The following system enjoys a couple of other advantages, as well. It enables you to carve a prop with perfectly helical pitch--which we assume is your objective--without large scrap losses as in the "full X" type and without waiting for hub glue joints to dry as in the diagonally sliced "Bilgri" style, though both of these will also give you a good, helical prop.

First step is to decide on the diameter and pitch you desire. We can't help you there, but once your decisions are made, here's how to design the blank to fit into a standard 1 X 2 block.

To determine the front view of the prop blank, you must only calculate how far from the center of the diagonal lines must intersect with the sides of the 2" wide lumber. We call this dimension "X" and it can be simply determined by the equation:

$$X = \frac{Pitch}{Pi}$$

It's that simple. For any given P, on a 1 X 2 block, there is only one value of "X" that will give you the proper fron view.

The side view is a little trickier, but not much. Since the X gives you a perfect helix as far as it goes, the side view must be designed to provide the rest of the helix--and with the same pitch. The correct side view for this is a hyperbola determined by the equation:

$$Ti = \frac{X}{R_i}$$

Here T_i is the block thickness, front to back, for any given distance R_i from the axis. It is obvious that at $R_i = X$, $T_i = 1$. Voila--the thickness of our standard blocks! At the tip, where $R_i + R$, T will equal X divided by R.

And at any intermediate point between X and the tip, the thickness also equals X divided by the distance of that intermediate point from the shaft. Practically speaking, it isn't necessary to plot any more than three or four points, including the tip itself, as the curve can easily be drawn.

Now let's try it with numbers, say we decide on a diameter of 24" and a pitch of 24". Substitute 24 for P in the equation:

$$X = \frac{P}{Pi} = \frac{24}{3.142} = 7.64 \text{ inches}$$

For the side view, let's plot it at $R_i = 10$, and at the tip. Substitute:

$$T_{10} = \frac{7.64}{10} = .764 \text{ inch}$$

and at the tip:

$$T = \frac{7.64}{12} = .636 \text{ inch}$$

Now just draw a smooth curve from the front edge of the block at 7.64 inches from the center, through a point .764 inches from the rear face at 10 inches out on the block, to a point .636 inches from the rear face at the tip.

Duplicate this curve on both sides of both ends of the block, saw out your blank and start whittling that 24-24, brother.

Values of "X" and "T_i" for Standard 1 X 2" Prop Blocks(All values in inches)

		T_i										
P	X	R=5	R=6	R=7	R=8	R=9	R=10	R=11	R=12	R=13	R=14	R=15
10	3.18	.637	.530	.455	.398	.353	.318					
12	3.82	.767	.638	.547	.478	.425	.382	.347				
14	4.45	.890	.743	.637	.557	.495	.445	.404	.371			
16	5.09		.849	.728	.637	.566	.509	.462	.423	.391		
18	5.73		.957	.820	.718	.638	.573	.521	.477	.441	.410	
20	6.37			.910	.796	.708	.637	.579	.530	.489	.454	.423
22	7.00			1.00	.875	.788	.700	.636	.583	.538	.500	.466
24	7.64				.955	.850	.764	.693	.636	.587	.544	.508
26	8.28					.920	.828	.751	.689	.636	.590	.551
28	8.91					.992	.891	.810	.741	.684	.636	.593
30	9.58						.958	.869	.796	.735	.683	.636
32	10.20							.930	.850	.788	.730	.681
34	10.80							.984	.900	.833	.772	.721
36	11.50								.960	.886	.822	.769

(Ed. note: Hatschek knows whereof he speaks...he was second in the seven-man flyoff at the '59 Wakefield Finals.)

SCAT FAI TRAVEL FUND

We're happy to report that the 1961 SCAT FAI Travel Fund was a real success! The final total was $200.00! and it will go to Jim Patterson, of the Wakefield team. We're sorry the A/2 and Power winners did not hold shares, so that this fine total could have been split three ways. However, after hearing Bill Hartill's impassioned announcement of the Fund at the Fresno Semi-Finals, we can only say "he told you so!"

1961 WEST COAST TEAM WAKEFIELD, by Jim Patterson

(Ed. note: This model is a good example of what an FAI power "specialist" can do when he really puts his mind to trying another type of model. Jim has been on past U.S. FAI Power teams, and has always considered gas his "trump card". However, a couple of years ago he started a serious personal campaign in Wakefield. A lot of hard work, several models including this ship, and Jim's trip to Germany in August, are the results.)

Patterson's Notes:

This model is more or less a "take-off" of Benedek's '58 design which got me started in Wakefield two years ago. I have to give Bill Hartill credit for shedding light on my rubber model ignorance, (even though he did burn off the rear third of my first model while lighting the fuse one day!)

The main deviations from Benedek concern the wing and propeller assembly. The wing, made "Fireball" fashion from 1/32" sheet, employs a section that Joe Bilgri "smuggled" out of France in 1959, (with the claim, "everyone in Europe is using it.") Even now the drawing rests securely in Joe's billfold, between his AMA and ABC cards. Bob Wiehle ran out the coordinates and found it to be a M.V.A. 362.

The prop is made a la Zurad and permits pitch adjustment as well as blade replacement. The shaft rides on two 3/8" ball races mounted in a dural case similar to a McCoy front end. Pitch is 29" and diameter is 19".

The fuselage is made from 1/16" sheet balsa, double silked. Motor length is 26"; both 12 and 14 strand motors have been used, depending on the thickness of rubber available. Prop run is about 40 seconds.

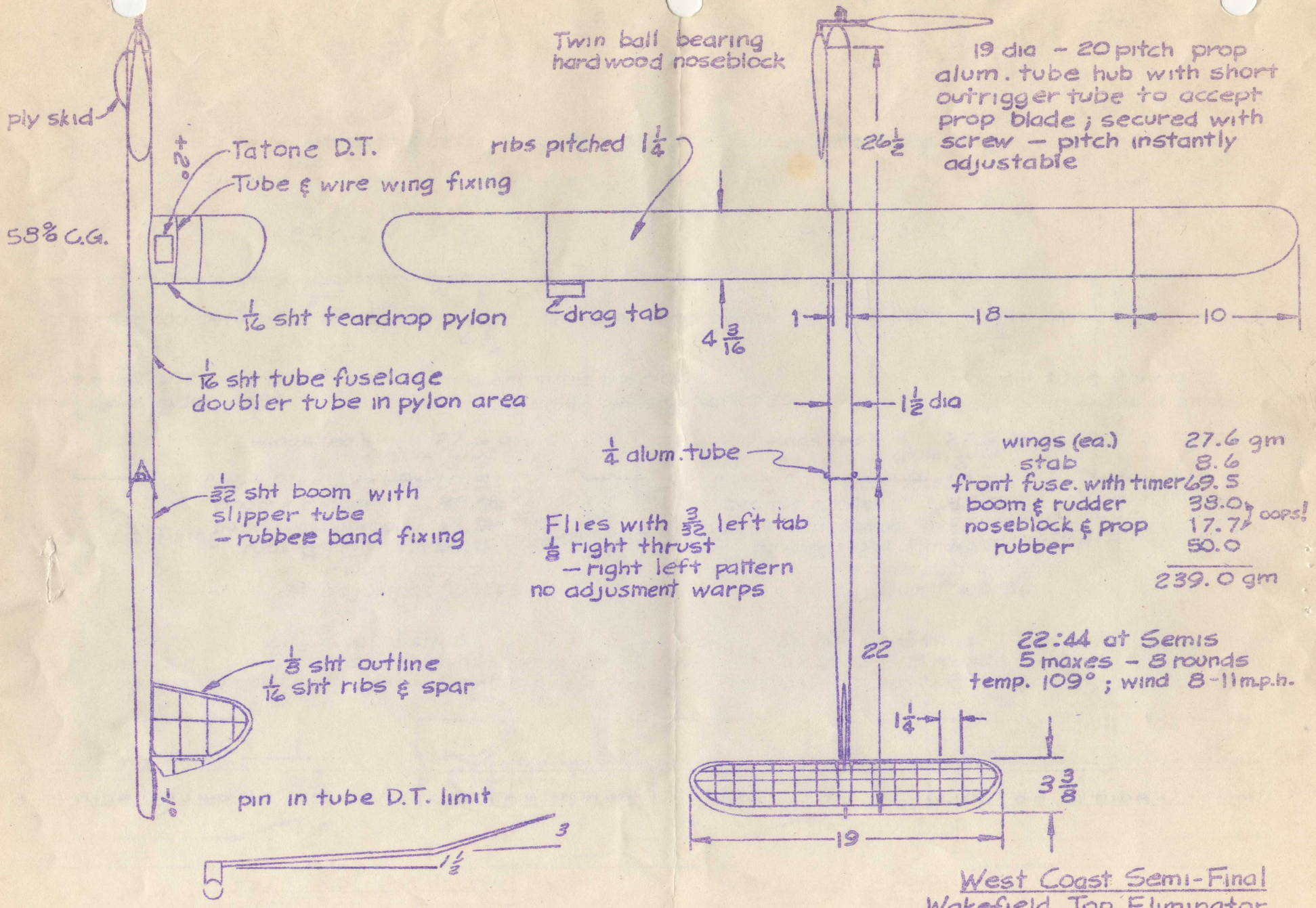
Flight trim is right thrust and left warps to give the model a right/left pattern.

ON TURNING OVER THAT ROCK

The May editorial has drawn considerable reader response (pro and con) and two letters have come from such important people as AMA President Pete Sotich, and "Aero Modeller" Editor, R. G. Moulton. Both these gentlemen admonished us for singling out Czepa as the only active FAI FF'er at the October FAI meeting. Mr. Moulton says there are at least five others, and Pete gave us the names of: R. Cerny, Czechoslovakia; D. S. Posner, England; and R. Beck, Hungary....WE APOLOGIZE, GENTLEMEN.....

Now that we've eaten crow on this point, here's some further info from these two letters which should interest you.

First, Sotich tells us the U.S. did make a proposal on FAI rules. This was: "...an increased power and wing loading, with motor runs reduced in the fly-off. In A/2 glider, a proposed towline reduction to 35 meters."

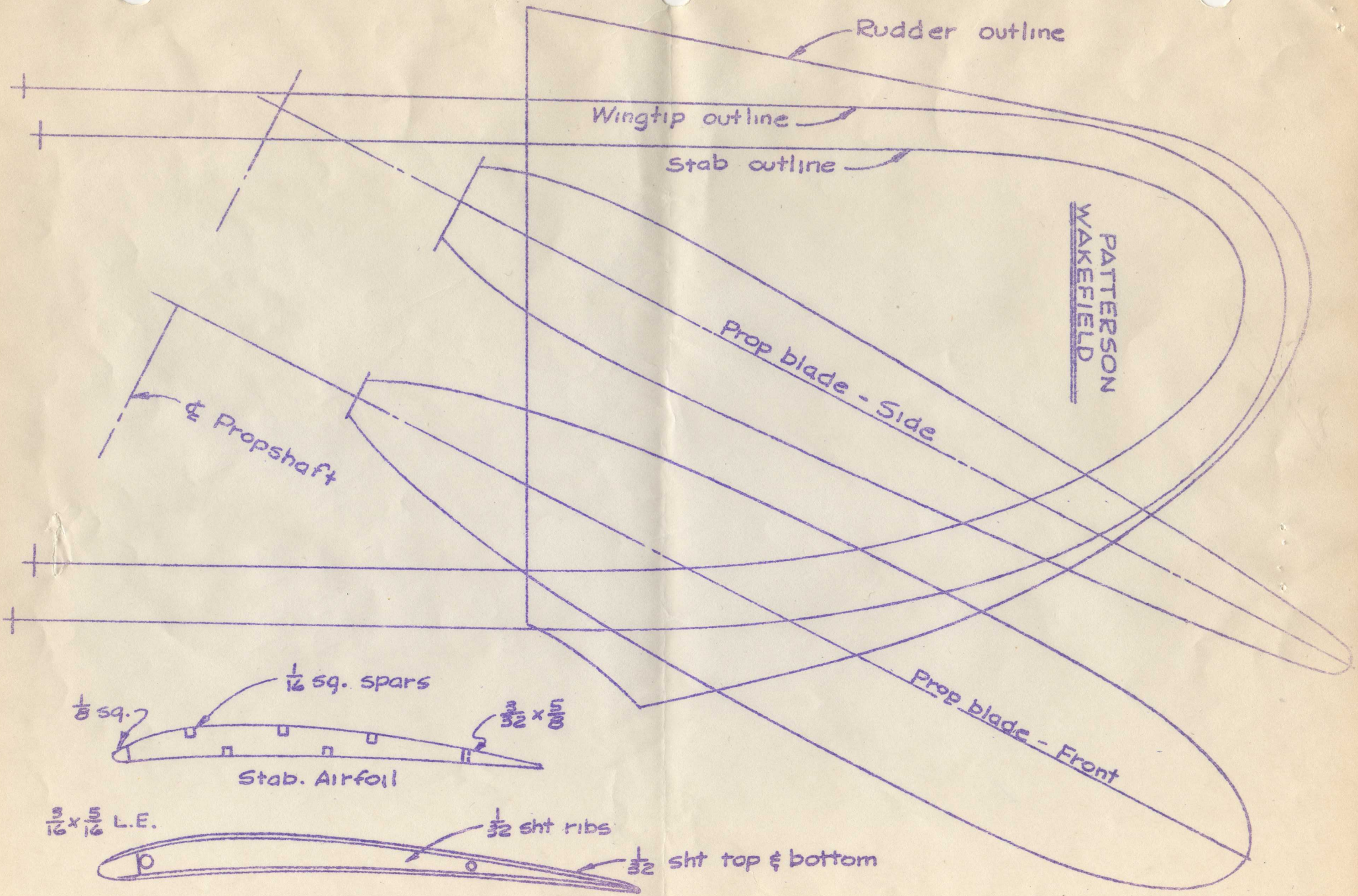


wings (ea.)	27.6 gm
stab	8.6
front fuse. with timer	69.5
boom & rudder	38.0 } oops!
noseblock & prop	17.7 }
rubber	50.0
	239.0 gm

22:44 at Semis
5 maxes – 8 rounds
temp. 109°; wind 8-11 m.p.h.

CUSICK JULY '61

West Coast Semi-Final
Wakefield Top Eliminator
by James A. Patterson



MVA 362

Cusick July '61

The AMA President discovered this info in an English publication. Being a heads-up official, he quickly checked it with AMA HQ, where Tech. Dir. Ehling told him the AMA had made a formal request to the entire ICC-Free Flight committee for proposals. Only one of the four members responded, and the AMA was forced to submit this proposal (quoted above) to FAI HQ.

This looks like the ICC-FF committee is dragging its collective tail, and we modelers are too disinterested or confused to do anything about it.

We don't know what, if anything, can be done about "activating" the ICC committee; but we can certainly offer the SCATTER as a rallying point for FAI modelers in general. Now is a fine time to start planning our next rules proposal, and the way to do it is to poll our ideas into a sound set of suggestions that represents a better cross section than is possible from one section, one group of modelers, or one single individual! These FAI rules proposals have too much effect on all U.S. FAI'ers to have the total responsibility shoved off on an individual, or small group.

Once we've established a majority opinion, we can worry about how to impress the ICC committee with it. (If Kothe, Bilgri, Ritz, or Dolby have any suggestions, we will certainly pass them along to our readers.) If they remain silent, we can only assume that they don't really care about rules problems, and no longer wish to serve on the committee.)

The second bit of information was from Mr. Moulton. He wonders how we obtained information on the "official" Finnish rules proposal before the Official FAI Agenda for the October meeting was released. We got it from the official AMA publication, "Model Aviation." Now, the question is, where did AMA get it, and who there released it for publication? (We have sent a "Feeler" to Finland, and will let you know if we get an answer.)

FROM THE NOTEPAD

***Talked with Sam Belcher, of San Francisco at the Fresno Semi-Finals about his hot Super Tiger. Really screamed on a 7X4. Sam says he places a washer made of thin shim stock, behind the front shaft ball bearing. Says there's friction here that no amount of run-in will cure. After this operation he uses plenty of running-in (as much as 12 hours!) Sounds like it's worth looking into for you hot engine tinker guys.

***SCAT Club used a real nice two way radio at Fresno for retrieving. This transmitter/receiver rig is light, about the size of two cigerette packs, made by Globe Electronics, and called "Pocketphone." Is nickel-cadmium powered and can be recharged overnight on standard house current. We used one in the station wagon down wind, other at the launch site. Sure helps in high drift conditions; retrievers know the instant an official flight is launched and the flyer gets the word the minute his ship is safely retrieved. This makes for very efficient, effective retrieving, and sure aids the flyers nerves under contest pressure! Pocketphone retails for about $125 per unit and can be obtained from JIM TREGO'S CRENSHAW HI-FI CENTER, 107 Santa Barbara Plaza, Los Angeles 8, California.

***Ed Turner reports some interesting rpm figures from the midwest Semi-Finals Taken with Conover's Sonic Tax, they were: Bahula (Torp-8X3 1/2--17,200), Conover (OS--16,400), McCormic (Super Tiger--16,100), and Dunham & Goss (Cox--15,200).

***Hot news is the ammouncement of FRANK ZAIC'S new 1959-61 YEAR BOOK. If you haven't heard, the address is: Model Aeronautic Publications, Box 333 Cooper Station, New York 3, New York. This is the best $3.00 a serious FAI'er will ever spend. Nuff' said!

LATE FLASH!

June issue, "Model Aviation," page 5, "CIAM MEETING", implies that individual modelers can now send AMA HQ suggestions for FAI rules proposals they wish added to the October meeting agenda. According to the FAI schedule published in the January issue of AERO MODELLER, page 12, THIS IS NOT SO.

These recommendations had to be in by March. At that time all proposals were given to appropriate FAI Sub-Committees (FF, RC and CL) for study. These committees had to return them to FAI HQ by June, for inclusion on the official Agenda, which is to be published in August. This Agenda will be distributed to all National Aero Clubs (in our case, the AMA) and will contain the only matters which can be discussed and voted on in the October meeting.

What we can do is this: after this agenda is published (if the AMA chooses to do so!) we will have a chance to see what's coming up for voting. Then, we can write the two U.S. representatives, (Good and Ehling) and let them know what we're for and against. This is the only action left to us at this time, as it seems we and the ICG committee have otherwise dropped the ball for this year...(see, "Turning Over Rock" article, this issue).

BUCK FEVER

The mailing list continues to flood in...but the dollar-a-year donations remain a trickle. The problem is mostly in the old, original mailing list. Many of these readers have had a free ride since April, and, although we'd like to send SCATTER free to everybody, the postage and paper people just won't cooperate!

At the present rate of growth we'll soon have no choice but to cut the deadwood. So why not stop "sighting" with good intentions, and give that old trigger a nice steady squeeze to fire that buck that will plug your name on the "paid-up" list.

1961 USA FAI FREE FLIGHT TEAMS

FAI POWER

C. Sheldon, San Jose, Cal.
D. McCormick, Ft. Worth, Tex.
M. Poorman, Baltimore, Md.

WAKEFIELD

J. Patterson, Van Nuys, Cal.
C. Perlins, Mission, Kan.
G. Reich, Cleveland, Ohio

NORDIC A/2

L. Lortz, Tacoma, Wash.
(Mrs.) B. Bell, Ft. Worth, Tex.
J. Daley, Boston, Mass.

F.I INDOOR

J. Bilyi, San Jose, Cal.
C. Redin, Detroit, Mich.
B. Bigg, Washington, D.C.

**********GOOD LUCK**********

COMING NEXT MONTH

Among other goodies, the August issue will feature Peterson's wild 1/2 A FAI, KAMIKAZE!, a "way out" A/2 by Martell, an article on thermals by R. G. Smith; and who knows what else!