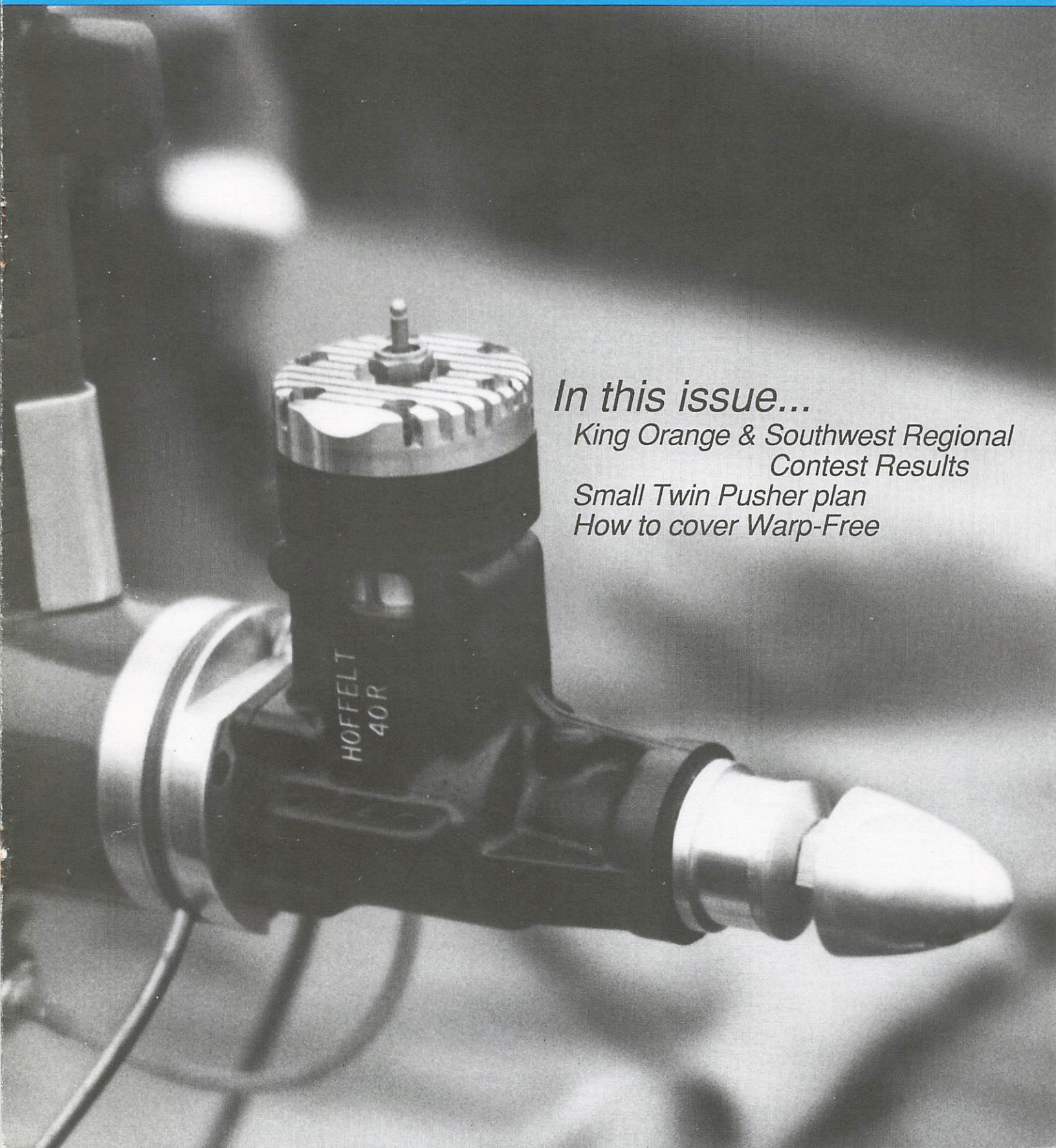
VOLUME XXVI, NO. 3

MARCH 1992

FREE FLIGHT

nFFS

THE NATIONAL FREE FLIGHT SOCIETY DIGEST



In this issue...

King Orange & Southwest Regional Contest Results

Small Twin Pusher plan

How to cover Warp-Free

The National Free Flight Society
is an AMA-affiliated non-profit organization whose purpose is to preserve, enhance, and promote the sport and hobby of Free Flight Model Aviation in all its forms.

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EXECUTIVE DIRECTOR: Hardy Brodersen.

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FREE FLIGHT, the NFFS Digest
Volume XXVI, No. 3
March 1992

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One of the happier moments in an editor's life, is when someone calls up and volunteers to do something. That's exactly what **Ken Johnson** did. The former indoor columnist for *Model Builder*, an indoor flyer since the late 60's, an ornithopter expert and one of the modelers who was in on the founding of NFFS, volunteered to do an indoor column for the *Digest*. Look for his first one in next month's issue.

Each year the US National Aeronautic Association, which calls itself "the nation's aviation record keeper," names its Ten Most Memorable Record Flights.

This year the organization honored such aviation events as the flight which broke the women's hang gliding distance record, the duration record set in an ammonia-filled balloon, and the flight that set a Paris to Houston distance record in a business jet.

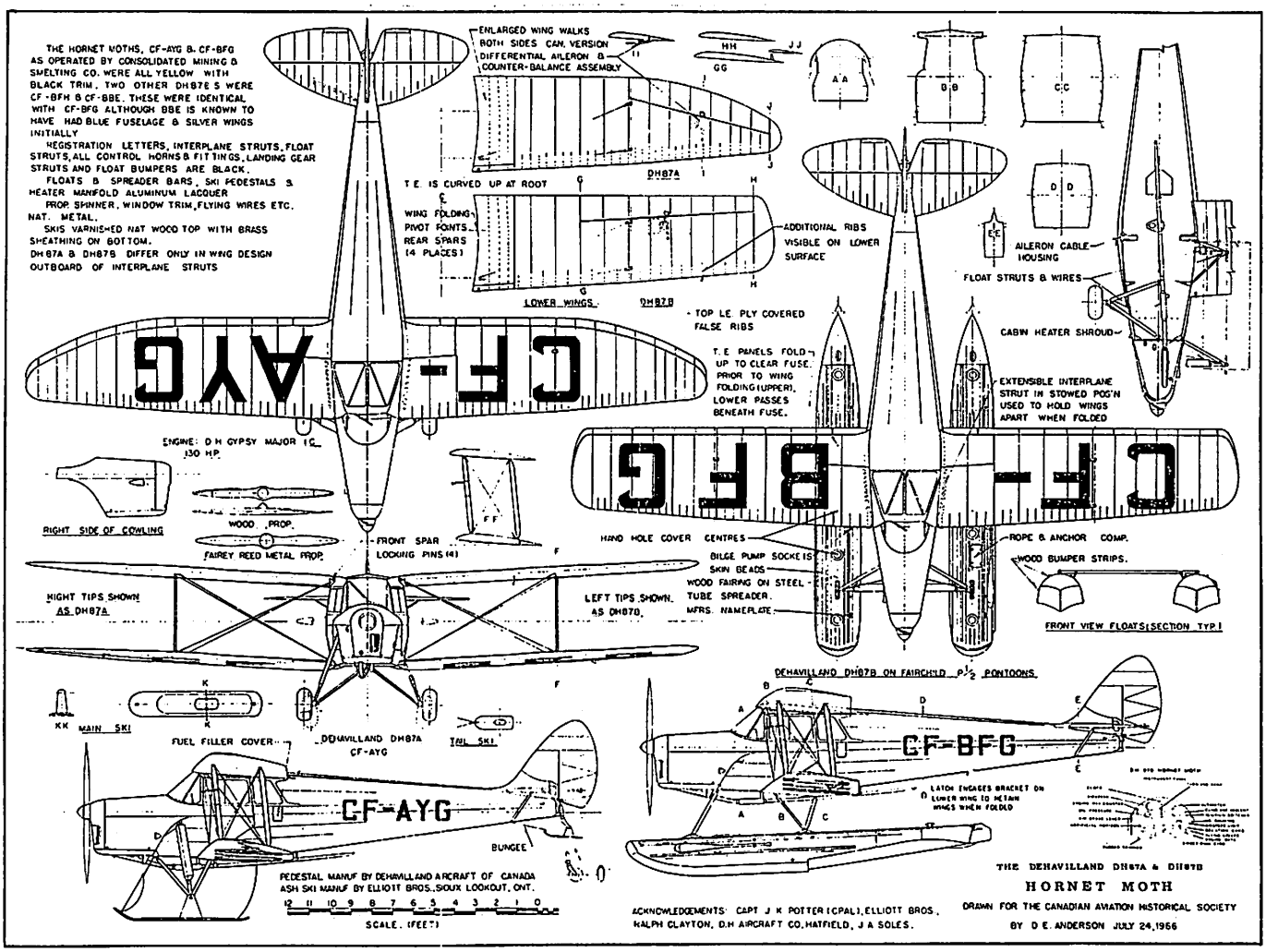
The final record detailed in its news release was the most important from my standpoint: "Using a rubber band-powered model airplane with a variable-pitch propeller, **Robert Randolph** set an indoor model duration record. On May 3, his "Top Cat" model circled the inside of a gymnasium in Loma Linda, Ca., for 32 minutes and 9 seconds."

Bob has been invited to the annual awards ceremony at the Air and Space Museum in Washington, D.C., March 23. **Tom Valley**, who held the same record about 10 years ago, will represent Bob at the ceremony.

Congratulations Bob!

Thanks to **Al Lidberg**, Free Flight CD of the Southwest Regionals contest, and **Jon Ramsden**, CD of the King Orange International for the articles and information on those two contests.

Cover--Sitting on the front of Dave Vincent's Cultured Pearl model is a beautiful engine built by Mike Hoffert originally for control-line combat. Dave, (from Silverton, Ore.), said the engine has a K&B case, but everything else is re-worked. It runs on 50% nitro, turns 25,500 rpm, and uses a Glo Bee plug. Photo taken at the Strat-O-Bats' Misery Meet.



Letters

Hornet Moth

I received several letters about the Hornet Moth all pointing out the same thing--that there were two versions of the wings. Three are printed below--CW

Dear Chris:

I noticed Jerry Bockus' letter to you about the discrepancy in wing shape between the de Havilland Hornet Moth 3-view and free-flight scale plan.

The Hornet Moth was originally produced, for about a year, with the sharply-tapered wing tips shown in the 3-view.

De Havilland then produced a new version, with almost no increased taper in the wing tips. Apparently there had been a problem with violent tip stall with the sharply-tapered tips.

The October, 1971 issue of *Aero Modeller* published an extremely good three-view of both versions of the Hornet Moth, including ski and pontoon equipped versions.

...Anyone wishing to build the model should get the *Aero Modeller* three-view, and a lot of photographs as well.

Charles A. Schaaf
Box 1550
Forks, Wa. 98331

(Charles also enclosed his 100% scale drawing, Peanut-sized sketch of the Hornet, which he might be willing share with other modelers.--CW)

Dear Chris

....De Havilland began production (with tapered wings) in 1935. Sometime in 1936 it was discovered that inexperienced pilots were having troubles with tip stalls. The new, square wings were offered to owners in trade. Of the 165 Hornets built, it is believed that all but five or so were converted to square wings

Oliver Benton,
Signal Mountain, Tenn.

Dear Chris,

...For our (modeling) purposes, the square jobs are a safe bet, but there's always that daring guy who also likes Severskys and Spitfires!

...I did a G-ADUR to a 24" wing span about 15 years ago and got some nice flights...and safe landings with nary a ding.

A small boy watching me fly it took it upon himself to retrieve it for me.

I just stood there, paralyzed, as the little guy tripped, fell on all those wings, and flattened my Moth.

His mom asked, "can we pay to get it fixed?" She was so upset and the kid so innocent that I told her I had two Moths at home, exactly like the pulverized one in my shaking hands.

A nice ending to the story is that the little boy who loved planes so much, did build gliders, ROGs, a few other rubber jobs and now flies RC.

When I moved from Pennsylvania, I was told that he was in Air Force ROTC and was going to apply for flight school and active duty.

I wish I still had his name and address because I could use a guy to chase my models now!

Stan Stein
Wolfeboro, N.H.

Oliver,Stan and Charles all sent a copy of the Aero Modeller *article and the accompanying 3-view--CW)*

Correction

Dear Chris:
There is a significant error on page 18 of the December *Digest* on "Managing the C of G"

NP = 0.4 + 0.25 x TVo
should be:
NP = 0.25 + 0.4x TVo

I looked this up in Bill Bogart's original article in the 1980 *Symposium*. It should be cleared up because it does make a difference.

Gil Morris
Columbus, Ohio

(Thanks Gil--CW)

Model Boxes

Dear Chris;

How about an article on model boxes?

I'd like to know what our team members use for air travel. Do they check them through as luggage, get a dispensation to "carry on", etc.?

Perhaps an FAI team member could describe their box, how they transport their tools, etc.

Bob Klipp
St. Louis, Mo.

(Good idea. Anyone out there who has info on their model boxes, transportation tips, etc., send them along. Bob, by the way, runs the NFFS plans service--CW)

Coldblow CO_2

Dear Chris,

The "Coldblow" plan (January *Digest*) was shown with no scale to work from. The span is 19", so enlarge the *Digest* plan 2.2 times.

I have a supply of plans which I will mail to anyone for my cost--$2.50 post paid. Thanks for publishing it.

Charlie Sotich and Ed Konefes' method of determining the rotation direction of the prop on a CO_2 motor using a length of thread is for wimps and sissys.

Real men use put their tongues into the upper quadrent of the prop arc. If the prop hits the right side of your tongue, launch it. If it hits the left side, stop the engine because it is turning clockwise.

Ed Toner
52 Newbury Rd.
Howell, N.J. 07731

(Ouch! Does that mean that real men who regularly fly CO_2 are always on a liquid diet? Or just speak with a forked tongue?--CW)

Cuban F1B Flyer

Dear Chris

My Cuban contact, Lorenzo Daniel Paz wrote to me at the end of the year and provided me with four pencil drawings of F1A towline gliders designed in Cuba, even one by Eugene Verbitsky while he was on assignment there in the early eighties!

They might not necessarily be current technology but are of interest in general.

Daniel mentions that because of Cuba's economic isolation with the U.S. and Europe, they have no idea if there was a World Champs, and if so, where and who won what events!

Since he is primarily a Wakefield flyer currently, he mentioned that they are in desperate need of rubber of **any** quality, just so they can test fly and enter in an occasional Cuban contest.

If any NFFS members are willing to donate some of their rubber of the appropriate size, Daniel states that they would be eternally grateful. They can either send it to him directly or mail it to me and I will bulk ship it by surface mail to Cuba. His address is:

Lorenzo Daniel Paz
Chicho Torres #605 % 3a y 5a
Rpto. Barbero,
Ciego de Avila, CUBA
C.P.-65200

Fred Terzian
San Jose, Ca.

(Fred is the man who distributes the NFFS publications--CW)

From Terry Thorkildsen

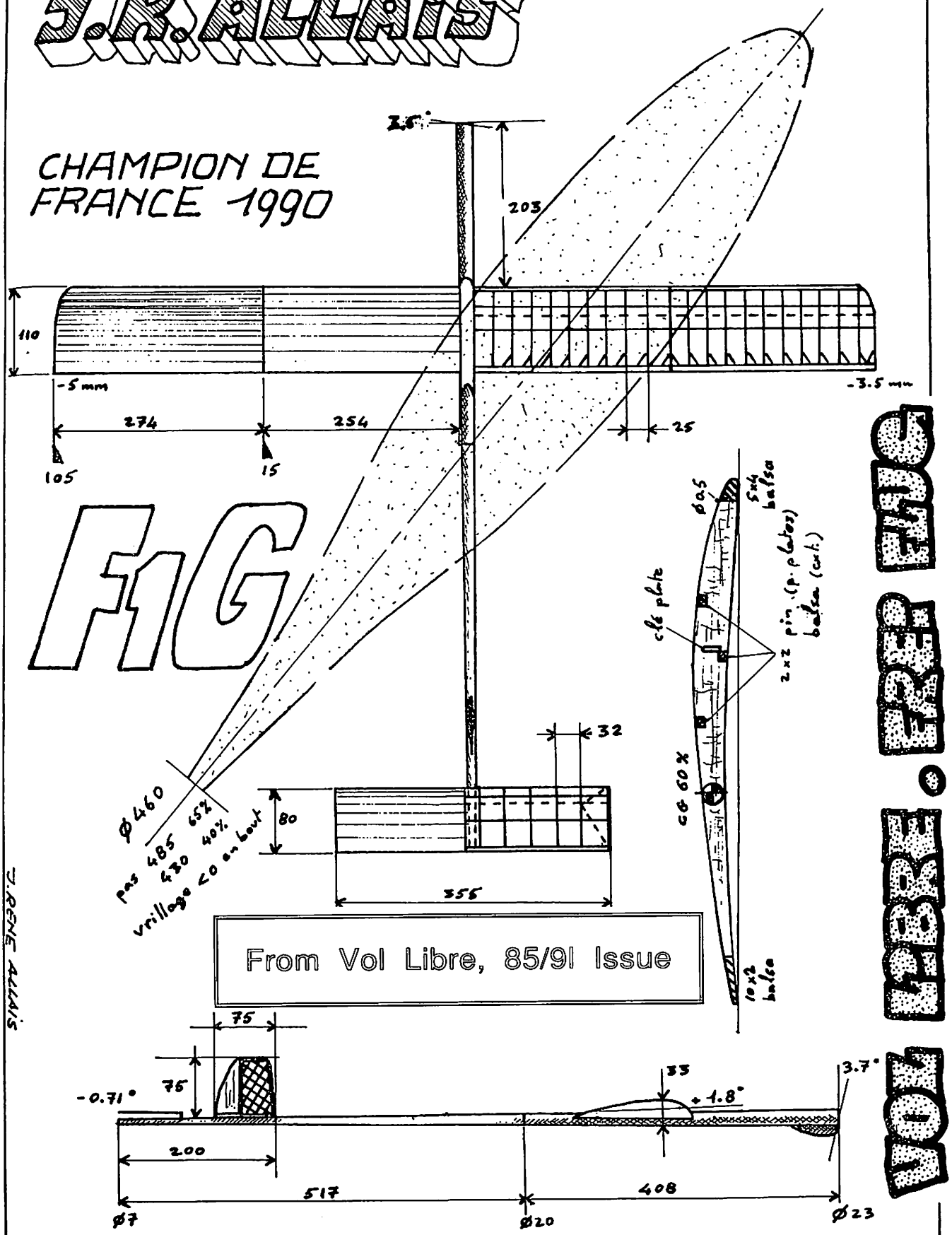
Wing Cocking

When you are at the flying field and need more wash out or wash in, one way to get it is to cock the wing with respect to the pylon. It is always nice to build in the correct amount of wash in or out, but this fix can work. If you don't think think so, just slowly rotate your wing while you are looking at it straight on, and you will become a believer.

I had a key move on a D Gas ship after I hit a bushy vine at Fresno last year, but it went unnoticed since the rubber bands were still in place. After I spent a few flights retrimming it, I finally figured out what was wrong.

J.R. ALLAIS

CHAMPION DE FRANCE 1990



From Vol Libre, 85/91 Issue

J. RENE ALLAIS

VOL LIBRE • FFVL

An America's Cup Contest

Southwest Regionals

By Al. Lidberg, Free Flight CD

ELOY, Ariz.---After what felt like months of rain and cold weather, the Southwest Regionals (SWR) contest was blessed with an outstanding weekend.

Driving to the site each day from Phoenix in very strong cross winds, made everyone think that the day was better suited to some indoor activity.

But at the field, just three miles off the highway, the winds were much calmer. In fact, winds at the Toltec Road site wouldn't support a kite until late Sunday afternoon.

The heavy dose of rain held the dust down to reasonable levels, without leaving mud bogs behind.

At the insistence of West Coast FAI flyers, we requested that the SWR be designated an America's Cup contest. Modelers fly for points in selected contests, with a limitation on how many points can be accumulated from any one location.

The FAI portion of the SWR appears to have drawn the interest of many new flyers.

Entries for the whole free flight side of the contest were up, with 56 modelers this year, compared with 39 for last year.

Highlights:

- Terry Kerger stopped flying in B Gas a little early when he realized that he had won, but was still almost 20 max flights away from the record. (Last year, Terry had to stop one flight short of the record due to darkness.)

- Bob White (who is pretty good at flying rubber models) advising Shig and David Saimo from Sedona, Ariz. about P-30 models. The CD's chief helper, Annie Lidberg, was trying to get Bob's attention in hopes of learning some modeling "secrets", but was unsuccessful.

-The junior flyers, some who had never built a model before, having a great time with the Delta Dart/AMA cubs.

This year we had five juniors building and flying. While none of the Darts flew away, many of the flights were of bragging quality, and we hope will encourage their builders to construct a few more models.

The winner of this event, Matt Price, went home to Flagstaff, Ariz. with a batch of four more Darts to seed the area.

As might be expected, most of the other modelers up that way are RC oriented, but an interesting statistic may indicate that model building could be more popular. According to a survey, Flagstaff has more VCRs per capita than any other city in the country. It sure sounds like a good hobby shop and an active club could make some headway there.

By the way, Matt's father claims to have some connections with the management of the

Southwest Regionals
Free Flight Results
18 - 19 January 1992
Eloy, Arizona
(Flown as Cat. II)

	1/2A Gas 10 entries		A Gas 8 entries		B Gas 7 entries	
1st	D. Donnelly	1021	T. Thorkildsen	1214	T. Kerger	1620
2nd	J. Summersett	830	D. Donnelly	996	A. Harlan	1411
3rd	J. Epley	714	M. Mace	843	T. Thorkildsen	1023

	C Gas 7 entries		D Gas 4 entries		.020 Replica 7 entries	
1st	T. Kerger	1260	M. Mace	885	J. Murphy	720
2nd	T. Thorkildsen	1258	T. Carman	869	L. Kear	510
3rd	L. Fry	1080	J. Summersett	804	C. Atkinson	471

	1/2A Nostalgia 7 entries		A Nostalgia 3 entries		BC Nostalgia 3 entries	
1st	J. Jackson	900	J. Epley	675	J. Summersett	1260
2nd	T. Carman	771	J. Summersett	486	T. Carman	1080
3rd	J. Dahlke	503	L. Fry	405	L. Fry	167

	Old Time Gas 2 entries		A-1/Coupe Combined 8 entries		Hand Launched Glider 6 entries	
1st	J. Jackson	330	Bob White	871	F. Roberge	396
2nd			Bill Gibbons	598	K. Kear	224
3rd			W. Smitz	571	D. Donnelly	192

	Mulvihill Rubber 10 entries		P-30 Rubber 11 entries		JR Delta Dart 5 entries	
1st	D. Smith	1080	C. Mather	1040	Matt Price	
2nd	Bill Gibbons	1027	Bob White	334	Annie Lidberg	
3rd	C. Mather	951	D. Walters	328	David Saimo	

	Wakefield Rubber 13 entries		A-2 Glider 9 entries		FAI Power 7 entries	
1st	Earl Boteler	1260	Jim Parker	1500	Ralph Cooney	2040
2nd	Bob White	1256	John Cole	1472	Doug Joyce	1960
3rd	Jim Quinn	1252	Pierre Brun	1243	Randy Archer	1954

OPEN Sweepstakes	JR/SR Sweepstakes
Jim Summersett	Lance Bays

NAU dome, so there may be some chance to fly inside that large structure!

- Finally got to attend the MECA (Model Engine Collectors Association) Collecto and the SWR dinner this year. In the past the Collecto always took place during the contest and either off-site or near RC/Old Timers.

This year, the Collecto started when Saturday's flying ended, and the dinner started after that, with both located at the Casa Grande Holiday Inn. Evidently this arrangement proved to be as popular with others as well, for the usual dinner crowd of 30-35 became 75 for 1992!

At the Collecto, there was the usual spread of fairly high priced engines, but I didn't see many dollars changing hands. I put out some plans and the prototype models to see what interest there might be for scale models and plans.

Seeing that another table had a pile of catalogs with a few dollar bills laid on top to encourage others to put down a buck for the catalog. I did the same. In about 20 minutes I looked back at the pile to see that half of the catalogs were gone, along with the dollar!

-Also, at the dinner our Texas companions told us about one entrant, who they described as the world's oldest crop duster. His cards read "Aerial Applicator". When asked what the difference is between an aerial applicator and a crop duster, he said, "A crop duster doesn't have an air conditioner in the cockpit!".

-The FAI side of the contest was called the "Randy Archer Invitational", so Randy was called upon to present the awards for those events. Doug Joyce had flown his canard models in FAI Power and managed to take second place. For those of us who had never considered a canard as a high performance model, this was quite an experience to see.

-This was surely the largest turnout for free flight in many years. We may have arrived at a workable combination of events to bring out a fair size group of flyers. However, we'll have to try to remember to add Old Time Rubber back on to the list as a number of flyers missed that event.

As usual, the out-of-state flyers made the SWR worth while. As you may be aware, most of the events cannot be supported, in terms of entry numbers, by local Arizona flyers.

With the support and participation of the out-of-towners, the local guys get to fly a wide variety of events.

So, **thanks** for coming to the SWR from California, Arizona, Utah, Nevada, Texas, Oregon and wherever else I missed!.

We hope that all who attended will be back next year and that you will bring even more flyers!.

Two Modeling Videos Available

The first video is about the Skyscrapers MAC, an East Coast club. Among other things, has original 'antique scenes' of big contests held at Creedmore, Long Island. A good addition to your library.

The second is an R/C instructional tape, that can be used to promote modeling. Called "Plane Talk," the information in it is applicable to free flight. There are four half-hour segments and it has been shown on a local New York TV station and could be shown on local TV station.

Order both directly from the producer/photographer: Alan Arbiss, 94-20 66th Ave, Forest Hills, N.Y. 11374. The price for each is $25 plus $3 P&H.

(I have viewed both of these and the quality and content is good--Tony Italiano)

Indoor Flyers Attention!

The 1992 US Indoor Championships is expected to be one big bash. Make your plans to attend and fly in this most fabulous Dome at East Tennessee State University, Johnson City, Tenn., June 4-7.

You will see a great spectacle of event diversity, ranging from Mini-Stick to to scale to F1D. This will be a chance to rub shoulders with experts and novices from various parts of our globe. Our Canadian and English friends will give you a challenge.

Last year's EZB winner, Laurie Barr from England, plans to be attend.

"Bernard Hunt and I, plus wives, hope to go back to Johnson City in 1992 with a bigger party of British indoor flyers, as it is a great holiday, and the evenings very enjoyable.

"The spectacle of 100 or more indoor models in the air at the same time is a sight you won't forget. Scale buffs also have a good time, and we hope to see some of you there---"

If such august modelers are so enthused, why don't you get your models together and attend? The dome at ETSU is a dream come true--make use of it while you can.

For details write: USIC, 4200 Royalton Rd., Brecksville, OH 44141. enclose a #10 SASE

Tony Italiano, NFFS president

Products for free flighters
New For You.....

By Bill Darkow

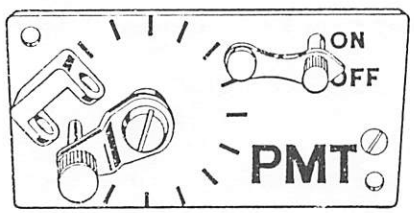
***Psst! All you CO-2 fans.** Wanna know what the latest accessories are and where to get them? An SASE to Daniel Baird, 3529 Koon Lane, Knoxville, TN 37931 will get you a copy of his new 3-page photo-illustrated catalog.

It features all kinds of essential goodies like fill valves, charger adapters, repro Campus tanks, removable tank charging systems, radial mounts, and a tank charger that uses the 12 gram long body capsules instead of the costly 8 gram ones.

Other products to come: tank lid "O" rings for Brown and Telco motors; adjustable pitch and folding blade props. All that for a stamp and an envelope!

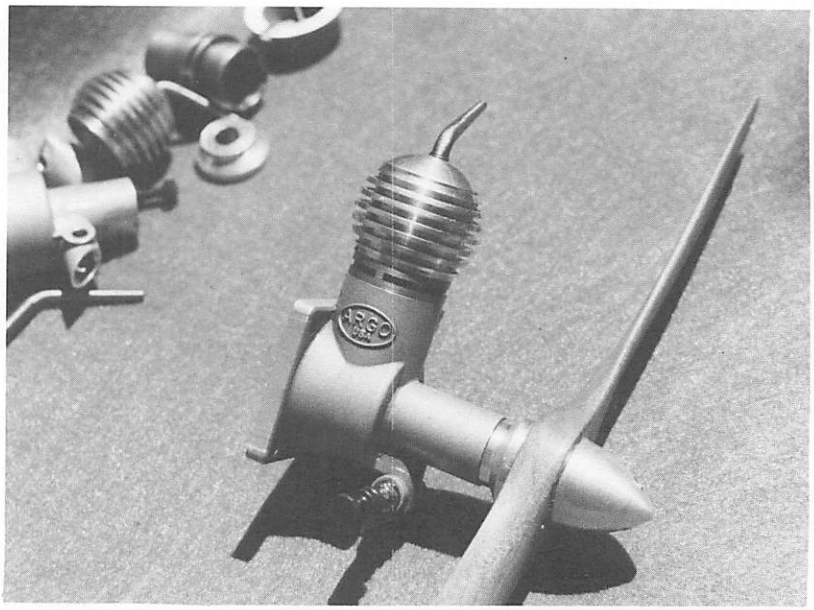
***Gummi-banders attention!** Superior Props of 2412 Tucson Ave., Pensacola, FL 32526, Phone: (904) 944-1972 offers a very superior selection of front-end accessories in their illustrated 12-page catalog that just fits into a business envelope.

Superior's newest item, an adjustable pitch, free-wheeling prop, just made in onto the last page. As a get-acquainted offer, Ed Wickland will give you a free-wheeling prop (up to 9"dia.) with your first order.



***Starline** is at it again! Their newest catalog #3, in addition to a host of unique and interesting items for the Free Flight flyer, features the new Starline Pinch-off Timer.

The best feature of this timer is the "Snapper" action at the end of the run which assures a positive pinch-off. Timer provides up to a 30-second run for SAM events. Timer - $19.50 plus $1.95 postage. Catalog $1. from Starline International, 6146 E. Cactus Wren Rd., Scottsdale, AZ 85253.



Diesel! Diesel! Diesel! To meet a growing demand for a competitive diesel in Nostalgia and Old Time free flight, John Targos of Argo U.S.A. is producing the "Argo Elfin", a repro of the 1949 English Elfin 2.49cc, (pictured above).

Each 4.5oz engine is individually hand-built and swings a 9x4, 9x5 or 10x4 prop at high rpm.

To check operation and easy starting, each engine has two 1.5oz. tanks of fuel run through it before delivery. It is also guaranteed against defects in materials and workmanship for 90 days from purchase.

The engine recently won five of the top 10 places in Old Time F/F Cabin and Pylon at the 1991 SAMCHAMPS. Now you can have one of these winners for only $130 plus $7.50 shipping from John at 3229 Dianora Drive, Palos Verdes Peninsula, CA 90274.

*Scotland's **Joe Maxwell** must be a busy man. He has a new catalog out that features a number of items for the competitive flyer.

Things like machine-cut ribs, any size cut from quarter grain balsa; trailing edge sections, from hard or medium balsa, straight grain spanwise, quarter grain chordwise, can be cut tapered; mahogany form blocks for both indoor and outdoor props.

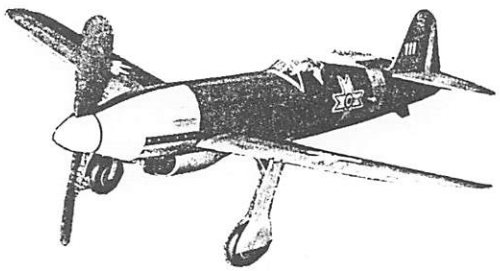
For a complete list, get Joe's has a new catalogue available for two $1 bills. Send to: Joe Maxwell, 14 Upper Craigs, Stirling, Scotland FK8 2DG.

***New from A.A. Lidberg** model plans service is a mini-series of Old Timer replicas: An 18" span Buzzard Bombshell, a 20" New Ruler and a 19-1/2" Sunduster. The models are offered as semi-kits which means plans plus printwood for CO-2, electric or rubber power.

New For You (Con't)

These kits are priced at $6.90 each, including postage, and sent in a flat envelope with folded plans and cardboard stiffener to protect the wood. As an introductory offer, get all three for only $21 with postage and special mailing box included.

'Nother neat new rubber-powered scale model by Al Lidberg's model plans service is a one-off, in-line engine version of the I.A.R. 80A, a Romanian WWII fighter. At 1"=1' the model spans 34-1/2".



Model features; keel, formers and stringer body construction, knock-off wing, removable landing gear, detailed building instructions, 3-view with data, color and marking info, 81/2" x 11" color sheet with insignia, instrument panel and other markings and 30" x 42" blackline plans.

Plan, color markings and detailed text with references - $8 plus 15% postage in U.S./ Canada; 25% postage overseas. 614 E. Fordham, Tempe, AZ 85283.

A Tip from Terry Thorkildsen

Same Prop

To insure that your newest engine is really better than your old ones, you should always run it on the same prop. I use the same Cox grey 5x3 for all my 1/2A's and that why I know what I really have for comparison. I also paint the center of the prop hub with white paint so it doesn't get mixed up with my other props

OAKLAND CLOUD DUSTERS

THIRD ANNUAL

NORCAL FREE FLIGHT CHAMPIONSHIPS

APRIL 25 & 26, 1992

Waegell Field, Sacramento, CA

Category II--An America's Cup Contest
$500 in Prizes, Trophies to 3d Place

FAI Events: Glider,Wakefield, Power, Coupe, F1H (Glider), F1J (Power)

AMA Events: A & B Gas + Electric, 1/2 A, P-30, HLG, Mulvihill, etc.

A-B-C-D Nostalgia SAM Events

For Further Information Contact

Bill Vanderbeek
13300 Simon Lane
Los Altos Hills, CA 94022
1-415-949-3366

Jim Persson
3749 Gettysburg Ct
Pleasanton, CA 94566
1-510-846-3999

Dick Douglas
5303 Calderwood Lane
San Jose, CA 95118
1-408-266-3598

Don Wrench
1-510-483-9603

Fred Terzian
4858 Moorpark Avenue
San Jose, CA 95129
1-408-725-1065

Weather Info:
Sacramento Area
1-916-443-4949

All FAI events start at 8:00 a.m. Saturday and 7:00 a.m. Sunday
AMA events begin at 8:00 a.m. each day

New Balsa Source

The latest issue of *Aero Modeller* contained a short article on a new brand of balsa being sold in England, called "Artmill Balsawood". It is apparently of very good quality.

The most noteworthy thing was that it's grown on plantations in Papua, New Guinea, and processed in Australia.

This seems like a good development for modelers. Ecuador has had a monopoly on balsa production for many years. New sources may help keep prices down and prevent shortages.

Chris Matsuno, from The Turbulator, newsletter of the McDonnell Douglas Free Flight Club, January issue.

Palm Bay, Florida, Dec. 28- 30

King Orange International

By George Jamieson and Jon Ramsden, CD

Statistics

Total contestants: 103, events entered - 386
Number of Juniors/Seniors - 34.
Most popular events: HLG 22, 1/2A Gas 21, P-30 18 Mulvihill and Wakefield each 15, A-Gas 15, 1/2A Nostalgia 13, Slow Open Power 12, and Dawn Unlimited Rubber 11.

Weather report: After mid-mornings, somewhat windy every day. Not too much to fly in, but as is sometimes the case, chasing was part of the participating game. Fog on Sunday delayed the Dawn Unlimited Rubber event -- but it got flown, in the fog with some beautiful ghostly flights only just visible at altitude.

Results

Glider

HLG	Jim Bayly, Bill Neighbors, Art Ellis
OT HLG	Jim Bayly, Terry Rimert, Dan McCall
Catapult	Bill Avera, Vic Nippert
Dawn Open Glider	Dave Platt, George Jamieson, George Perryman
A-1	Jim Bayly, Blaine Miller, Vic Nippert
Open Glider	Phil Bayly, George Jamieson, Dave Platt and George Perryman tied

Rubber

Dawn Unlimited	Ed Konefes, Dave Fogarty, Jerry McGlashan
Dawn P-30	Art Ellis, Norm Tierney, George Perryman
P-30	Wayne Trivin, R. Zabelka, Wayne Brock
Ot Cabin, Small	Vic Nippert, Ed Konefes, Joe Macay
OT Cabin	Large Tom McCoy, Ed Konefes, George Perryman
OT Stick	Small, Richard Thompson, Wayne Trivin, Jack Safford
OT Stick, Large	Ed Konefes, Tom McCoy, Jack Safford
Coupe	Ed Konefes, Chuck Markos, Frank Paramenter
Mulvihill	George Perryman, Dave Platt, Ed Konefes
ROW	George Perryman, Ed Konefes, Sandy Downs

Power

1/2 A	Mark Valerius, Chuck Markos, Charlie Stiles
1/2A Nostalgia	Bob Schuettler, W. McFarland, Randy McFarland
A	Bucket Johnson, Russ Snyder, Ed Hopper
OT A	Bob Shakespeare, Elmer Jordan, Ben Cleveland
B	Russ Snyder, Mark Vaierius, Frank Parmenter
OTB	Elmer Jordan, Wayne Cain, Les Alonzo
A/B Nostalgia	Bill Hale, Dave Platt, Bob Schuettler
C	Bob Perkins, Mark Valerius, Russ Snyder
OTC	J. Hartmangruber, Elmer Jordan, Wayne Cain
C-Nostalgia	Bob Shakespeare, Phil Bayly
D	Bob Perkins, Dave Platt, Russ Snyder
.020 Replica	Bob Nichols, Ben Cleveland, W. Burris*
Slow Open Power	Bill Hale, Tom Kirsch, Dave Platt

*Mr. Burris flew from a wheelchair and was pushed by his wife for retrevals. What a champ! He received a special $50.00 award primarily for guts.

Texaco Results.

1/2 A	Pete Strayer 1800, David Dobbs 1171, Norm Rosenstock 576
A Texaco	Norm Rosenstock 2761. Bill Robinson 2679. Pete Strayer 2540.

Those good times resulting from each of the first three placers maxing their first two flights, then putting in third flights. This was Norm Rosenstock's return to the "wars" after having had some "pretty good" surgery. Way to go Norm!

FAI Events

KOI Decides America's Cup Winners in Glider & Wakefield

Information taken from a newsletter article by Jim Bradley, FAI events director

PALM BAY, Fla.---F1A Glider flyer Jim Bradley and F1B Wakefield flyer Dan Tracy both wrapped up their respective America's Cup titles at this contest.

Bradley placed first in his event and Tracy second in his. Tracy's rival, Ed Williamson was also at the contest but placed down in the standings.

(For a complete run-down on the America's Cup see story on page 14)

This year 30 people flew in the three FAI events (Nordic, Wakefield and Power), a much larger turnout than last year.

Bradley believed that two things contributed to this excellent turnout: the best flying field on the East Coast and the fact that the America's Cup winner would be determine in two of the FAI events--F1A (Nordic) and F1B (Wakefield).

Canadians Jim Brooks and Jerry McGlasham came to fly F1B. Dan Tracy and son Adam, who also fly F1B, came all the way from Seattle.

The first round started promptly at 12:30 on Saturday and right away it was apparent that the air was going to be tricky. The wind was blowing eight to 10 mph and there was cloud cover.

At the end of Saturday competition with three rounds flown, only one F1A flyer had not dropped a max. F1B and F1C fared a

FAI Con't

little better, with six in F1B and three in F1C still maxing.

Sunday started with fog delaying the start of the fourth round until 9:30. This round was flown with extended maxes in F1B (3:30 min) and F1C (4 min). More than half the F1B competitors made the max and three of the five F1C flyers.

Mirec Hrycak, a power flyer, had a max made but discovered that he had set his timer in the wrong grove when his model DTed early at 3:20.

Bob Gutai also had a bad flight which left only Charlie Stiles still maxing out in F1C. Charlie was flying his first ever F1C power model and had put it up for the first time on the Friday afternoon before the contest.

Given a few more years experience and you are going to see Charlie's name near or at the top of the list at the Team Selection Finals.

In **F1A** Matt Gewain and Bradley were having their usual tussle with Bradley holding a good lead up to the seventh round when he dropped a max.

In **F1B** at the end of that round there were only two people still maxing out, Rex Hinson and Dan Tracy.

Because of the late start in the morning, it was decided that Wakefield would end after the seventh round and proceed to a flyoff.

By gentlemen's agreement both launched at the same time. Rex won the flyoff by a mere four seconds, but neither flyer made four minutes.

F1A and F1C went to the eighth round because the top people were so close. However that round did not alter the position of the contestants.

KOI FAC Facts

Jumbo Scale	1st. Dr. John Martin, Messerschmitt 2nd John Tudor, Bellanca 3rd. George Perryman, Puss Moth
Embryo Endurance	1st Jim MIller, Eaglet 2nd. Dean McGinnis, Beat George 3rd. Vic Nippert, Twin Fin Terror
Peanut Scale	1st Jim Miller, Voison 2nd Doc Martin, Waco F. Hydro 3rd John Tudor, Dayton Wright Racer
Thompson/ Greve	1st Doc Martin, Hosler Fury 2nd Jim Miller, Hosler Fury 3rd Joe Hurdle, Heath
Rubber Scale	1st Jim Miller, Currie Wot 2nd Doc Martin, Astra 3rd Joe Hurdler, Macchi 205
Golden Age	1st Doc Martin, BMW 20B 2nd John Tudor, Howard 3rd Jim Miller, P.A. M.A.
WWII Mass Launch	1st Joe Hurdle, Macchi 2nd Wayne Brock, Heinkel 3rd. Dean McGinnes, F4F Wildcat
Old Time Rubber	1st Vic Nippert, Victory 2nd Joe Hurdler, Godl Start 3rd Wayne Brock, Sparky
WWI Biplane	1st Joe Hurdle, SE5 2nd Jim Miller, DH-6
No-Cal Scale	1st Jim Miller, AVI 205 2nd Joe Hurdler, Bearcat 3rd Vic Nippert, Piper L-4
Power	1st Vic Nippert, Avro 560 1st Wayne Brock, Piper PA-20 3rd Joe Hurdle (model not idenfitifed)

High Point Winner - Mark Valerius with 1922 points out of a possible 2160. Dave Platt was second with 1831 points, and George Perryman third with 1655 points.

Special Awards - The ROW Catfish Trophy was retained by George Perryman; the Dawn Unlimited Glider Trophy was retrained by Dave Platt; and the Dawn Unlimited Rubber Trophy was won by Ed Konefes.

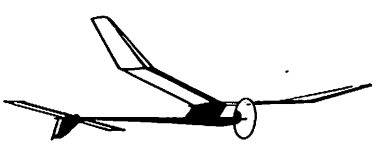
The "Door Prize" - $50 prizes went as follows: Saturday - Mark Valerius; Sunday - Bob Shakespeare; Monday - Chuck Markos.

And the **Press-On Regardless Award** of $50 went to W. Burris of Penn Yan, NY (for flying from a wheel chair)

FAI Results

F1A (Nordic): Jim Bradley 1354, Matt Gewain 1278, Dan Abel 1090
F1B (Wakefield): Rex Hinson 1432, Dan Tracy 1428, Jim Brooks 1235
F1C (Power): Charlie Stiles 1472, Bob Gutai 1464, Mirec Hrycak 1460

(Nine flew in Nordic, 15 in Wakefield and six in Power.)



SMALL TWIN PUSHER
Very similar to one built and flown
by Hewitt Phillips (age 11) in Mar. 1930

Attach wing and tail with thin rubber bands

Fuselage A-frame: 1/8 x 1/4 hard balsa
Wing and tail spars 3/32 x 3/16 hard balsa
Ribs 1/16 square

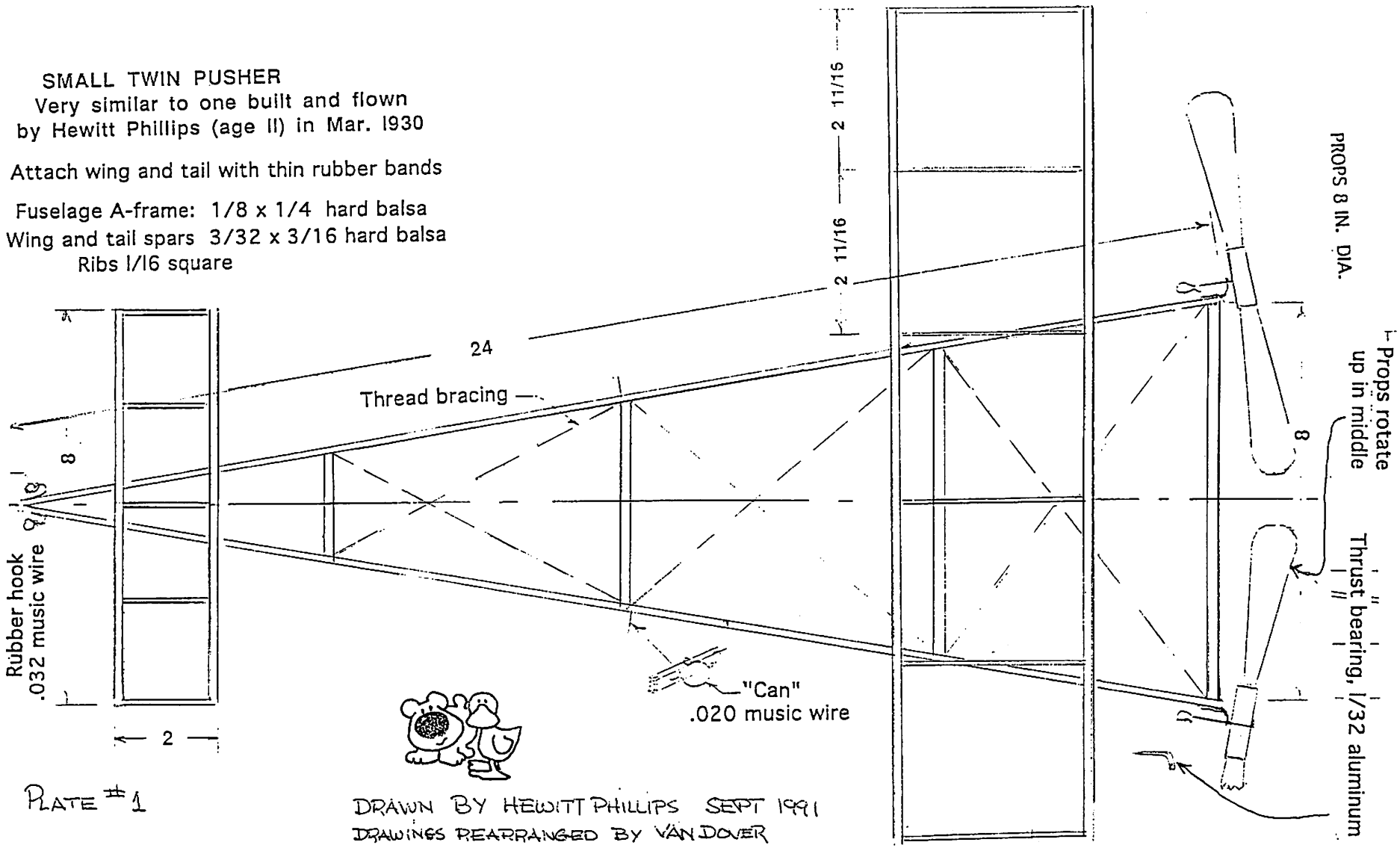


PLATE #1

DRAWN BY HEWITT PHILLIPS SEPT 1991
DRAWINGS REARRANGED BY VAN DOVER

SMALL TWIN PUSHER
Very similar to one built and flown
by Hewitt Phillips (age II) in Mar. 1930

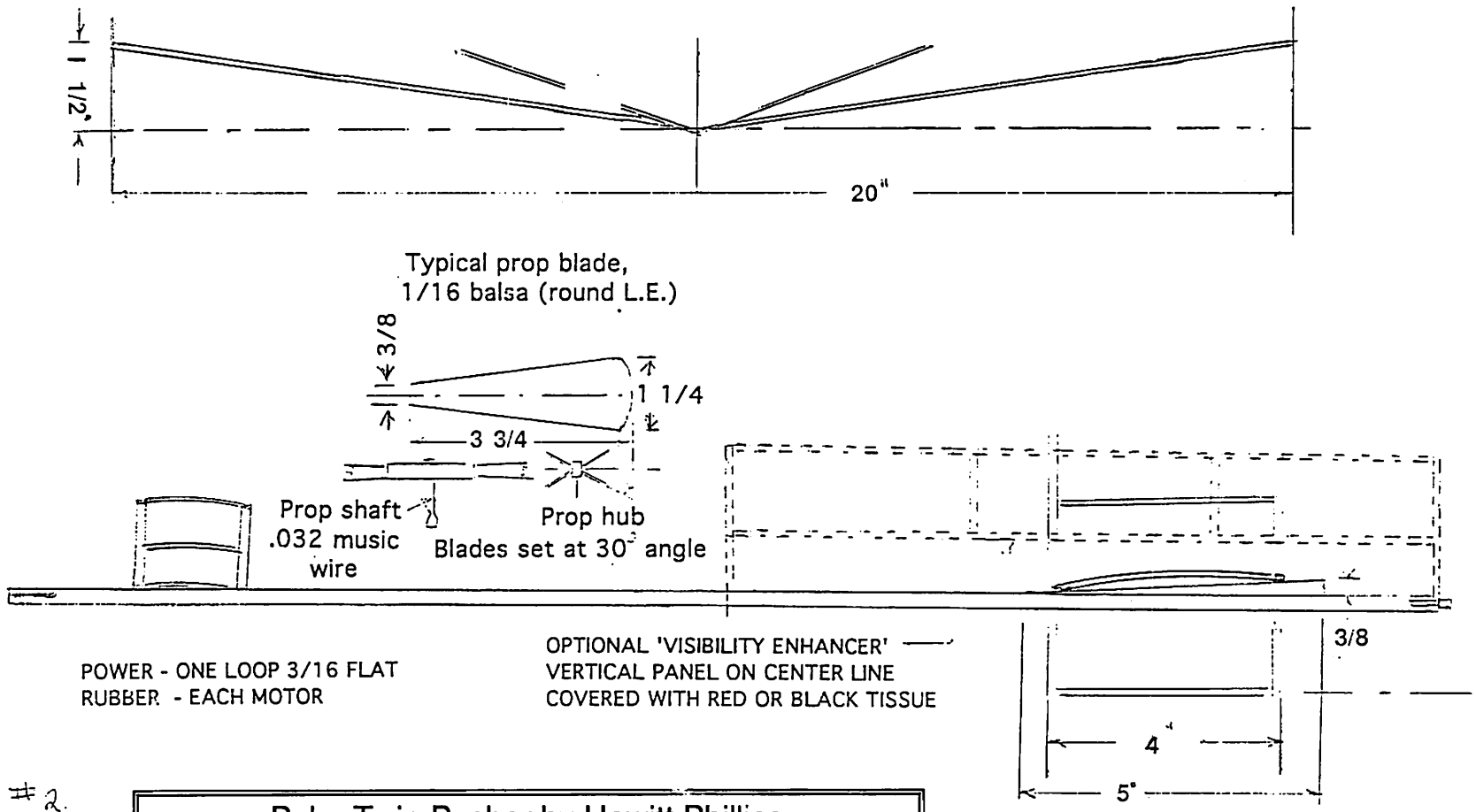


PLATE #2.

Baby Twin Pusher by Hewitt Phillips

This is a small twin pusher designed by Hewitt when he was 11 years old. It was the first model he got to fly well...I saw this model make it's first test flights at Bill Saunder's farm and it does go up. If you build it, add the visablity fence. It helps as the model get further out there and the eyuesight begains to fail.

--Abram Van Dover, editor, Brainbuster Free Flight Club, newsletter, January issue.

(Hewitt is also the Digest *technical contributing editor.)*

1991 America's Cup Results

By Al Hotard, America's Cup Administrator

The 1991 FAI Free Flight America's Cup winners are: Jim Bradley, Nordic, Dan Tracy, Wakefield and Norm Poti, Power. The three had the highest scores in a series of 19 contests across the US and Canada.

Nordic was a hard-fought battle between Jim Bradley, Canadian Peter Allnutt and Matt Gewain, coming down to the last contest, the King Orange International, when Bradley won.

The King Orange International also determined the Wakefield winner with Ed Williamson one point ahead of Dan Tracy at the start of that contest. Dan came in second in the contest, and beat Ed.

Power was a free-for all. Five perennial competitors--Norm Poti, Bob Gutai, Dale Mateer, Gil Morris and Ed Keck, all "Easterners," flew against each other with Norm coming out on top.

In all, a total of 134 flyers scored points in the America's Cup competition, 45 in Nordic, 52 in Wakefield and 37 in Power. There were 19 America's Cup contests, with one disallowed (the Sierra Cup).

"If you want to know what it takes to seriously try for the America's Cup, get out a map, and track Bob Gutai's travels from his Allentown, Pa., home to the eight contests he flew in, coast to coast," said Al Hotard, the Southern California Aero Team coordinator for the America's Cup.

Scoring Notes:

Highest five scores count - only two from one site. Scoring to five places = 25-20-15-10-5...(If only four entries + 20-15-10-5...etc.) Bonus points based on entries: 1-5+0, 6-10 = +1, 11-15 = +2 and 16 or more = +5....

Foreign entries dropped - Americans & Canadians stay put. "Entry" means made one official flight.

L.H.= Lost Hills G=Galeville

MM	Max Men 14 RNDR-LH
NCFFC	No. Calif FFC - Sacramento
SSSM	Skyscrapers Spring Meet-G
FFC	US Free Flight Champs-L.H.
WFAI	Western FAI Chal-Harts Lake Prairie
FFF	Fiesta Five Flags-Pensacola
OFFN	Outdoor FF Nats-Lawrenceville
EFFC	Eastern FFC-G
FAII	FAI invit. Bong
ICA	Intra City FAI-Wright Pat
MMM	Magnif Mntn Men-Denver
OFFC	Ontario FFC-Camp Borden - Canada
CAC	Canada Autumn Cup-Camp Borden, Canada
AC	Autumn Cup-Seguin
SSIC	Skyscraper Intl Chall-G
CFAI	Calif FAI - LH
SC	Sierra Cup -SACR (Invalidated)
PC	Patterson Chall-LH
KOI	King Orange Intl - Palm Bay,Fl

1991 America's Cup Final Scoring

F1A Nordic:

1.) Bradley, J.	SSSM 26, FFF 25,ICA 21,AC 26, KOI 26	124 *
2.) Allnutt, P	MM 25,FFC 30,OFFC 21,CFA I7, CAC 26	102
3.) Gewain, M	MM 30,FFC 20,WFAI 26,CFAI 22, PC 17, KOI 21	99
4.) Markos, C	OFFN 20,ICA 26,FAII 15	61
5.) Diez, H	NCFFC 16,FFC 15, CFAI 27	58
5.) Schlossberg, A	SSSM 21, EFFC 15, OFFC 6, SSIG 10, CAC 16	58
6.) Parker J.	NCFFC 26, CFAI 17, PC 12	55
7.)Brun, P.	NCFFC 21, FFC 25, WFA I6	52
8.) Horak, L	MM 20, OFFC 26	46
9.) Farkas L.	OFFC 11, CAC 21	32
10. Murphy, J.	OFFN 10, MMM 10, AC 11	31
10.) Nippert V.	SSSM 16, SSIC 15	31

F1B Wakefield:

1.) Tracy, D.	MM30, WFAI 20, ICA 26, KOI 22	98*
2.) Williamson, E.	FFF 20, MMM 30, AC 27, KOI 12	89
3.) Brooks, J.	SSSM 22, OFFN 10, SSIC 30, KOI 17	79
4.) McGlashan,J.	SSSM 27, EFFC 16, OFFC 5, SSIC 25	57
5.) Ghio, W.	NCFFC 26, PC 30	56
6.) Matsuno, C.	ICA 21,FAII 26	47
7.) Hotard, A.	CFAI 15, PC 30	45
8.) Tracy, A.	WFAI 25, MMM 15	40
9.) Hinson, R.	FFF 10, KOI 27	37
10.) Batiuk, G.	FFC 20, PC 15	35

F1C Power:

1.) Poti, N.	OFFN 26, ICA 25, FAII 25, OFFC 21, CAC 20	117*
2.) Gutai, R.	MM 17, SSSM 25, OFFN 11, EFFC 21, OFFC 16, CFA I17, CAC 25, KOI 21	109
3.) Mateer,D.	FFF21,ICA20,FAII 20,OFFC26,CAC10	97
4.) Morris,G	SSSM20,OFFN21,ICA10,FAII 15,OFFC6,SSIC26	92
5.)Keck E	SSSM15,OFFN16,EFFC26,OFFC11,SSIC16,CAC5	74
6.) Simpson,Rog	MM 27,NCFFC15,PC27	69
7.)Hrycrak,M.	EFFC6,SSIC21,CAC15,KOI 16	58
8.) Archer,R.	MM12,FFC26,CFAI 27,PC12	53
9. Sifleet,R.	EFFC16,PC27	43
10.)Achterberg,M.	NCFFC10,PC27	37

Nostalgia

Warp-Free Surfaces Made Easy... The Old Fashioned Way!!!

By Ralph Prey, Nostalgia Contributing Editor

Much has been written in newsletters and magazines about the use of the plastic coverings vs silk and tissue on wings and stabilizers.

Yes, you can use the plastic coverings on Nostalgia models.

But please don't ask if it's OK to use carbon fiber roving glued to the top surface in geodetic pattern to stiffen the wing in torsion, Or if is it OK to add geodetic braces so long as it doesn't touch the upper and lower surfaces of the covering.

I'm told some have done this, and naively the CD let it go for reasons best known to himself. A classic example is the use of Micafilm on a Top Banana wing. Some experienced flyers seem to get away with it in their trimming techniques, and are careful to keep the nose up high when they launch.

But for most of us, it is tempting fate to use the plastic coverings which will invariably result in wing twist under power. Then the inevitable nose down, speed, speed build up and flutter, ending in a crash.

Silk & Tissue My answer to all of the above is simple. Do what the original designer did... use either silk or tissue. Only this time double cover the wing with tissue.

Yes, you read correctly... double cover with tissue. Not only will this second tissue cover give you a tremendous increase in torsion rigidity, it will greatly add to the puncture resistance of the covering.

As for weight, the second tissue cover adds very little. Besides, the majority of the weight is forward of the CG which will help shorten the nose moment which will give a better transition...another plus

What's even more significant, the second tissue cover will lock in any wash-in that you build into the right wing. And it will also help in trimming the model because you will not be fighting a constantly changing plastic tautness due to the heat of the day.

Once trimmed, it will be set for good, and you can fly official flights without having to re-trim for the days weather conditions. Also...the CD will OK your model with no questions asked.

You'll be 100% in compliance with not only the printed Nostalgia rules, but also the intent and concept of the Nostalgia event. You'll save the NFFS Nostalgia Committee reps answering questions which you already knew were in the grey area, and anticipated a "No go" before asking the question.

One tip on double covering if you have never done it:

Cover as usual with the first coat of tissue. Then dope two thin coats of nitrate thinned 50% with thinner of the same brand. Then apply the second tissue cover to only the leading and trailing edges and root rib and tip or dihedral rib. Then water shrink the second tissue cover using a very fine mist. Don't overkill with water.

When the second tissue coat dries, apply thinner very carefully only to the open tissue areas. Use very sparingly, with a flat sided, one inch hair-type brush. If you are careful, the thinner will wick the second cover onto the doped first cover with no air pockets.

If you have an undercambered wing again, do not apply the thinner to the rib/tissue glued area. Why? Because like the leading and trailing edges, the thinner can soften the glued area and cause a slackening of the second tissue resulting in a wrinkle.

Once the second tissue cover has been doped to the first tissue, covered with the 100% thinner, and is thoroughly dry, you can continue doping the covering using nitrate dope thinned 40% for several coats, followed up with two coats of Butyrate to fuel proof.

This method will stiffen up a Banana wing or a Ramrod wing like nothing else you've ever tried, including geodetic, D-tube, sheeted you name it "No go's".

(Credit for the double covering method must be given to Jack Moreland, of Jack's Models, kit manufacturer of the Satellite series models.

He has used this method for 25 years on his Ramrods and all his AMA Satellites with no wing flutter problems. He is careful in picking the balsa wood to compensate for the slightly added weight of the second tissue cover and still weigh equal to a single covered model. Proof it works are the trophies he wins!)

Moral of the story...don't argue with success and hey, let's face it, tampering gimmicks as I call it, with construction changes result in more problems than they are worth. Go use 'em in your AMA models, but don't even think about it on a Nostalgia model.

The key work in Nostalgia is to recreate the design, and not re-design the design. Do that and we'll all have more fun flying 'em.

***

Meet the US Free Flight Junior Team...

By Chris Weinreich

(This is the beginning of a series of profiles on the members of the US Free Flight Junior World Team who will be going to the World Junior Champs in Czechslovakia this August.--ed)

F1A (Glider)

Jody Miller, 14, of Orlando, Fla. , is no newcomer to modeling. He said he has been doing it since he was "three or four" with the guidance and encouragement of his father, Blaine. However he has only been flying F1C since last July.

He is being coached by his father and Jim Bradley, nationally known glider flyer also from Orlando, who won the 1991 America's Cup title in glider.

He used three of Bradley's older designs to win a position on the team and his father is now building one of Bradley's designs for him to use in the World Champs competition.

(FAI competition, unlike AMA, does not have a builder-of-the-model--ed).

"In fact my father has just completed the model and we're going out and practice with it tomorrow," Jody said.

Since F1C is more physically demanding than the other two FAI categories, Jody is going to start running to get in shape.

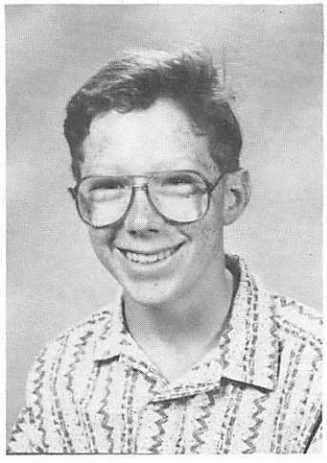
What does he think about competing in the World Champs?

"I'm excited. It's going to be great!" he said.

Scott Robbins, 14, of Los Gatos, Ca., has been flying models for several years. He started out in indoor and then went on to outdoor. His father Herb, is a well-known California modeler.

He is flying Czech Mates, a Horak and Allnutt design, which he says are very good thermaling models. Two of his models were built in China and he and his father put together a third.

"I've been practicing when ever I can, and going to as many



meets as possible, " he said.

While he doesn't have a specific coach, he said he does get a lot of help from other Nordic flyers at those contests.

"I was at the Max Men International at Taft yesterday, and Matt Gewain gave me a lot of pointers," he said. *(Gewain is the Junior Team manager--ed.)*

"It's great to be going to the Junior World Champs, I'm really psyched up about it."

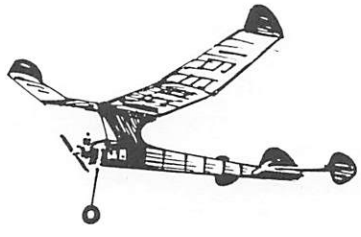
F1B (Wakefield)

David Fee, 17, from Oceanside, Calif., will be flying a model of his own design in competition.

"It resembles a Jim Clem design but the airfoil and wing platform are different," he said. "and it uses a red cedar prop which is stiffer than balsa and a lot more satisfactory."

He plans to build two more planes before the World Champs in August.

He's been flying "ever since I can remember" with his father, Bill, who also flies Wakefield. In fact his father, along with Jim Clem, is coaching him. Right now he flies about once a week at



fields about 40 miles away from his house.

He got into Wakefield three years ago because of a flyer from AMA.

"It was about trying out for the the Junior Team and I decided to compete in Wakefield." he said. "Up until that time I had been flying other categories, like P-30."

Matt Gewain Junior Team Manager

Matt Gewain, well known F1C Nordic flyer, has been named manager of the Junior FAI Team. Gewain, and the 8-member Junior Team will go to Czechoslovakia, in late August to compete in the Junior World Champs.

Scheduled to go also are Matt's wife Gail, and Bob Waterman, an FIC flyer, who will coach power.

Junior Team Fund Update

Bob Waterman, the man in charge of the fund raising for the Junior Team, said that contributions to the Junior Team now total about $13,500.

That's $7,500 short of the $21,000 needed to send the team to Czechoslovakia this summer.

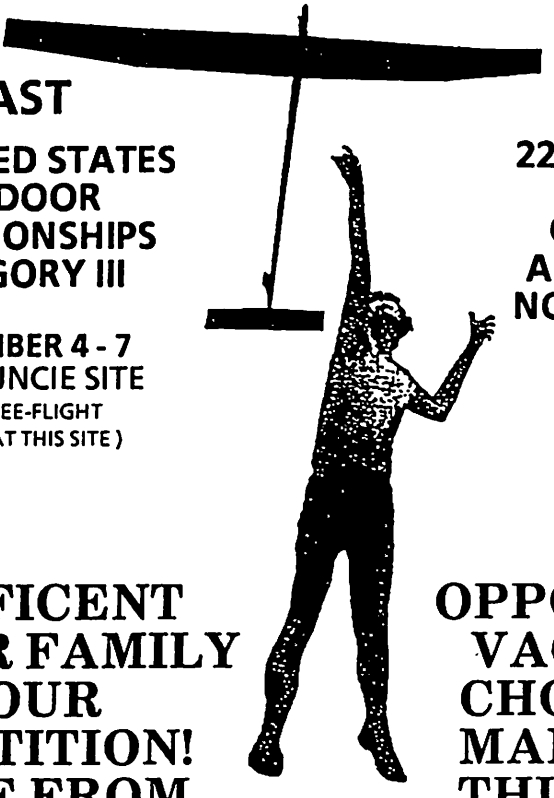
If you haven't contributed, or want to contribute again, make your check made out to the AMA and send it to AMA headquarters noting that the contribution is for the 1992 Jr. FAI Free Flight Team.

AMA's address is: 1810 Samuel Morse Dr., Reston, Va. 22090.

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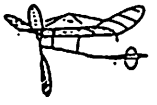
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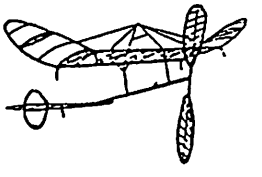
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Competition Strategies

By Gary Buddenbohm

(Taken from the Thermal Thumbers Newsletter, May 1991)

The reasons for becoming a free flight modeler are undoubtedly as numerous as the kinds of planes we fly. Ultimately, I can't imagine any reason greater than the pleasure and sense of accomplishment that comes from watching a successful model soaring off into the big blue.

Competition plays a big part in our hobby, and most free flighters try their hands at the contest circuit sooner or later. While is is always fun to fly, it is also fun to win. (The best prize I ever won was the right to gloat for thirty days!)

What follows is an outline of the strategies I try to use for serious competition. Hopefully, these ideas can help anyone perform their best at a contest. At worst, they are food for thought.

First is the plane itself. Whatever categories you intend to compete in (P-30, OT Rubber, 1/2A, etc.), try to have your models done well ahead of time. Showing up at an event with an untrimmed or poorly trimmed plane is one sure road to last place and endless frustration.

Once your models are done and the basic trimming has been accomplished, don't stop there. Try to fly the plane under all the different conditions you may see at an actual contest. If you only fly your new pride and joy under "perfect" test conditions, you may find event a moderate wind will upset or radically alter the plane's flying abilities.

You should also fly the plane often enough to really familiarize yourself with that particular model.

Learn the best launch angle, whether it is better to launch straight into the wind or a little to the side, etc. You're out there on a given weekend flying anyway, so why not make your goal to fly your plane the best way possible?

OK, the big day has arrived! You're all signed in, and your planes are ready. What now? If your sole goal is to enjoy yourself, then by all means fly at your own pace and have a good time! There is certainly lots to see and do at any major contest. More than once I have gone, not to fly, but just to watch, and I've always had fun.

Showing up at an event with an untrimmed or poorly trimmed plane is one sure road to last place and endless frustration.

However, if you want to "go for the gold," now is the time to engage in a little strategy.

Quite a few major contests open fairly early, before any thermal activity has a change to build up. If you are familiar enough with your model, you will have a "dead air" time, the flight time your plane is capable of when it is not in a thermal or down air.

For example, my P-30 is capable of a "dead air" maximum of 2:15. Needing only two minutes for a contest flight, I will often put my first three maxes up as quickly as I can in the calm morning air.

The advantage is that I can now relax and wait for thermals with the whole day basically untouched, plus the calm conditions common to the morning make for easy chasing.

Needless to say, if you have a brisk wind blowing in the morning, it's best to wait in hopes of better conditions.

Thermals Next comes thermal flying. The art of detecting and flying in thermals is a subject that would require more room than this newsletter can provide, but I will try to cover some basics.

The methods of finding a thermal are by feel, with the use of fluffies (dried cat tails), with the use of a mylar streamer on a tall pole, with the use of a thermistor, and best of all, by spotting another model already in a thermal.

While you should practice finding a thermal on your own using one or more of the aids listed above, for contest strategy I'm going to cover the sure fire method of "piggybacking" off other models.

First, you must position yourself downwind of other modelers. Be sure to be far enough away that you have plenty of time to observe a model in flight and satisfy yourself that the plane is in a thermal.

When in doubt, DON'T LAUNCH!

Once you are sure you have spotted a plane in a thermal, you must get under it before launching your own model. If a plane is 50 yards to the right and riding high, that doesn't mean there is a thermal where you are standing. You must get under it to be sure of the same air. If you can't get there, DON'T LAUNCH! If the model gets downwind before you are sure it's in a thermal, DON'T LAUNCH!

Sometimes it simply isn't practical to "piggyback," so it will pay you to learn to use other detecting methods.

In my opinion, you will be better off learning to use one or two of the aids well rather than have one of everything and use them haphazardly. Remember,

Competition Strategies Con't

practice makes perfect, so spend at least some of every flying session trying to find and fly thermals. Regardless of which method you use to locate a thermal, try to use care in selecting when to launch.

Remember you don't want to launch when you think there is a thermal. You want to launch when you know there is a thermal.

> ...if you are really serious about trying to win, you should be willing to risk your plane's destruction or loss...To a serious competitor, the model itself is only a tool which is used to score a max.

It is always best to get your flights in as early as conditions allow. You don't want to put yourself in the position of needing two maxes to win when there are only 1

But be cautious. It won't do you any good to try and catch a thermal before there are any.

Try to establish a regular routine for yourself when flying. Preparing your models the same way each time and having an order of operation (e.g., first install the fuse, then check the trim, next wind the rubber, etc.) will help eliminate costly mistakes.

Also, try to pace yourself. Flying steadily and methodically will put more and better times on the scoreboard than rushing about at breakneck speed, running out on to the field only to discover you have forgotten something important. Like, say your plane.

It is important to take at least as much care of yourself as you do your models. Make sure you have plenty to eat and drink. When you get tired, stop, sit down and kick back for awhile. Enjoy watching all the other models get sucked into the sky. When you are ready, put your plane into another "boomer" and jot down another max.

Trying to fly when you are hungry and tired and thirsty is no way to run a contest. After all, we do this because we enjoy it, not because life or death is at stake.

Last, if you are really serious about trying to win, you should be willing to risk your plane's destruction or loss.

Sound crazy?

To a serious competitor, the model itself is only a tool which is used to score a max. Saving the model may lose you the prize.

Risking the plane means things like flying in a strong wind if you have to, or putting the model in a thermal so strong that it may carry the plane farther than you can chase it. It can also mean things like winding a rubber motor right to the edge of breaking, or throwing a hand launch glider as hard as you possibly can.

(Con't on Page 23)

1992 World Cup Contest Schedule

The following is a list of competitions nominated at the 1991 CIAM Bureau meeting

Feb.	15	Pori, Finland	Bear Cup
	15-16	USA	Max Men
Mar.	21-22	Norway	Holiday on Ice
April	11-12	New Zealand	Kotuku Cup
	16-20	Australia	4th Pacific Champs
	22-28	Australia	Australian Nationals
May	29-31	Hungary	Puszta Cup
June	7	France	Criterium Cambrai
	13-14	Belgium	Pampa Cup
July	4	Spain	Campeonato Castilla
	4-5	Yugoslavia	Pan Cup
	11-12	Hungary	Voros Jeno Mem.
	11-12	Sweden	Scania Cup 1992
	11-15	USSR	Antonov Cup
Aug.	1-2	Spain	Alicante
	1-3	Romania	Open Int (pre E/Ch)
	20-23	Poland	Gliwice
	21-23	France	Poitou
	28-30	Czechoslovakia	Sezimovo Usti
Sept.	5-6	Germany	23rd Eifel Cup
	12-13	Germany	1st Bodenland Cup
	18-20	Sweden	Autumn Max
Oct.	17-18	USA	16th Sierra Cup
Dec.	29-31	New Zealand	NZ Nationals



Canadian Bruce Mathews shows off his biplane, a pre-WWII design with a profile fuselage. He is sponsoring a new sport event called "Small Classics." The models have 26" span or less, and fall under SAM rules. No handicap, 90 second flight.

Final 1992 World Cup Results

F1A

1. Jan Vosejpka	CS	65	PM-1	MS-1	GL-3			
2. Sergei Makarov	USSR	57	PT-1	BN-1	AN-8	PA-13		
3. Rodney Lewis	NZ	55	NI-2	AC-2	NC-3			
4. Pieter de Boer	NL	50	HL-2	CA-3	MS-3			
5. Stewart Cox	NZ	50	NI-1	NC-1				
6. Michael Holmbom	S	47	AM-2	HL-3	BN-4			
7. Cenny Breeman	NL	44	CA-1	EF-5	MS-6	BN-13	PT-6	
8. Peter Allnutt	CAN	40	MM-2	SR-2				
9. Lars Larsson	S	37	FC-2	AM-6	MS-7			
9. Alexander Maximov	USSR	37	AM-1	AN-6	CC-12			
11.Matt Gewain	US	37	MM-1	SR-4				
17. Randy Weiler	US	30	SR-1	MM-10				
36. Robert Isaacson	US	20	MM-5	SR-5				
42. Andrew Barron	US	19	PA-5	SR-6				

F1B

1. Alex Andrjukov	USSR	75	PM-1	PT-1	EF-1	BN-10		
2, Roger Ruppert	CH	70	PA-1	BN-1	MS-2	PM-2	CC-4	
3. Bernd Silz	D	60	MS-1	CC-2	PT-3	PZ-7		
4. Igor Vivchar	USSR	54	BN-1	EF-2	PZ-6	PA-8	CC-8	AN-12
5. Andrei Khrebtov	USSR	52	CC-1	PZ-3	AN-4			
6. Bror Eimar	S	50	HL-1	AN-3	PA-5	AM-6	FC-11	
7. David Ackery	NZ	50	NI-1	NC-2	AN-10			
8. Bernhard Sauter	D	47	BN-1	MS-4	PZ-5	PM-10		
8. Arno Hacken	NL	47	CA-2	MS-3	BN-4	EF-11		
10. Russel Peers	GB	45	PA-2	CA-3	PM-5	EF-6	PT-9	
13. Walt Ghio	US	35	SR-1	PA-6	MM-14			
19. Bob Tymchek	US	32	SR-2	MM-4				
30. Dan Tracy	US	25	MM-1					
34. Norm Furutani	US	23	SR-3	PA-7				

F1C

1. Claus P. Wachtler	D	70	EF-1	BN-1	PA-2	CC-4		
2. Eugeny Verbitsky	USSR	65	PM-1	AN-2	BN-2	EF-6	PA-9	
2. Alain Roux	F	65	CA-1	PM-2	EF-2	BN-7	PT-9	
4. Randy Archer	US	62	PA-1	SR-1	MM-4			
5. Gunnar Agren	S	60	FC-1	HL-2	AM-3	PA-12		
6. Marek Roman	PL	52	GL-1	CC-3	EF-4	PA-6	PM-12	
7. Jan Ochman	PL	50	CC-1	BN-3	GL-5	PA-7	PM-7	
			PZ-11	EF-12				
8. Ian Weston	NZ	50	NI-1	NC-1				
9. Phil Ball	GB	47	HL-1	CA-3	PM-8	EF-9		
10. Roger Simpson	US	40	MM-1	SR-3				
10. Dennis Tristram	NZ	40	NI-2	NC-2				
15. Bob Gutai	US	35	SR-2	MM-3				
29 Bob Waterman	US	20	SR-4	MM-7				
35. Doug Galbreath	US	18	MM-5	SR-7				
35. Ken Oliver	US	18	SR-4	MM-9				

1991 World Cup Contests

MM-Max Men International	US
FC-Open Nordic Champs	Finland
NI-North Island Champs	New Zealand
HL-Holiday on Ice	Norway
AC-Australian FF Champs	Australia
CA-Criterium of Cambrai	France
PZ-Puszta Cup	Hungary
CC-Chrudim Czechoslovakia	Czechoslovakia
PM-Pampa Cup	Belgium
MS-Midsummernight Trophy	Netherlands
PA-Pan Cup	Yugoslavia
AN-Oleg Antonov Cup	Russia
GL-Gliwice	Poland
PT-Poitou	France
EF-Eifel Pokal Zulpich	Germany
AM-Autumn Max	Sweden
SR-Sierra Cup	US
BN-Freiflugwettbewerb Bern	Switzerland
NC-NZ National Champs	New Zealand

Humor

Another in the series...

Great Literary Selections

By Grant Carson

Riders of the Purple Mesquite

As it might have been written by Zane Grey

Nine Finger Jack tied up his pinto, sallied through the swinging doors of the saloon, walked to the bar, ordered whiskey, tossed a quarter to the barkeep, wiped the alkali dust from his lips and downed the red eye neat.

The saloon became deadly quiet. The piano player stopped in the twenty-third bar of "Buffalo Gals, Won't You Come Out Tonight?", and took cover behind his piano. Fast Eddy folded a hand with three aces and excused himself.

From a corner table came the drawl of Texas Jim. "Jack, I think you're in Lazy Eight territory now." The sheriff sidled out through a side door,.

They met in the dusty street. Women and children scurried for cover.

"All right, we're agreed," said Texas. "P-30 mass launch. First one down clears out."

***

Tom Swift and his Model Flying Machine

As it might have been written by Edward Stratemeyer

"NO, of course it's not an ornithopter," said Tom Swift, unflapped.

***

*A word from the author, **Grant Carson**. "...I do write occasional, serious articles for professional magazines. I am a retired Navy captain currently employed as a manager of software development for McDonnell Douglas..."*

Much of his work appears in the Thermal Thumbers newsletter. He says he is trying to raise the one page, humorous newsletter article to an art form. He may have succeeded--CW

Editor's List Established

Sympo Continuity

For years now, the NFFS has scrambled to find a Sympo editor each year so that the Sympo could be published before the Nats. Somehow, its efforts have always been successful and though sometimes late, the Sympo's publication continuity has been maintained.

To avoid this last minute thrashing around for editors, we are establishing a five year Sympo editors list. The list will be updated and published in each year's Sympo report and will include the name, address and phone number of each of the future editors. Among the virtues of such a list is:

1. Nobody will get the editor's job dumped on them at the last minute.
2. Each Sympo editor will have ample time to start harvesting his own collection of papers.
3. Authors can key on an editor and a schedule well in advance of the time that they would want to publish a paper.
4. If authors miss their deadline for a particular Sympo year, they can maintain their momentum by shifting their negotiations to a known subsequent editor.

If anyone would like to be considered as a future Sympo editor, please submit your request to the NFFS, including the Sympo year you are interested in and a short description of your qualifications to: NFFS, Box 1104, Birmingham, MI 48012.

Future Sympo Editors:

1992 **Paul Masterman,**
36 Pyrmont Road, Strand On The Green, London England, W43NR, Ph. 011-44-81-995-0386

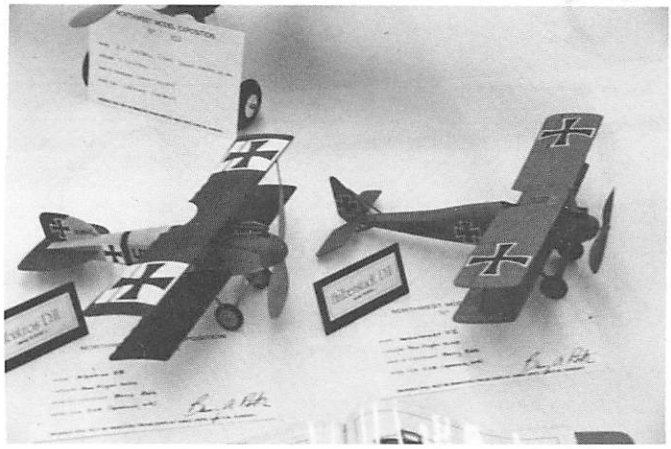
1993 **George Xenakis,**
1288 Oak Knoll Dr., San Jose, CA 95129, (408) 996-0650, and
John Oldenkamp,
3331 Adams Ave., San Diego, CA 92116, (619) 233-4837

1994 **Bob Meuser,**
4200 Gregory, Oakland, Ca. 94619, (510) 531-1595

1995 **Bill Bogart,** 14837 Los Robles Ave., Hacienda Heights, Ca., 91745, (310) 942-5192 work (818) 333-1194 home

1996 Applications being accepted

George Xenakis



Two exquisitely crafted Peanuts by Berry Roth, Spokane, Wa., won first in their catagory at the Northwest Model Expo. On the left is a brown and natural Albatross D II, and on the right, a green Halberstadt.

Dr. Plenny Bates Named Editor of Indoor News and Views

Dr. Plenny Bates, of Cedar Rapids, Iowa, is the new editor of *Indoor News and Views* the newsletter of the National Indoor Model Airplane Society (NIMAS), replacing Frank Kieser, who has suffered a stroke.

Tony Italiano, NFFS president and indoor flyer, will be completing the issue started by Frank and that will be mailed out. The publication will then be in the hands of Plenny. Nine, four-page issues are planned per year.

The newsletter will contain indoor news, contest results, tips, hints, plans, etc. Contributions are encouraged.

Subscriptions are $7 US. Great Britain subscribers please add $1 for first class air postage.

Bates was named editor by Italiano, who allegedly said, "Plenny has a proven record and Cedar Rapids is at the center of world indoor activity."

Bates admitted nothing but local authorities confirmed that he does have a "record" and boasted that Cedar Rapids is the center of eastern Iowa.

Send subscriptions and editorial contributions to: Plenny Bates, INAV, 2505 White Eagle Trail SE, Cedar Rapids, IA, 52403.

Sign Up a New NFFS Member this Month!

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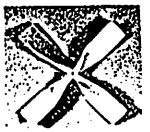
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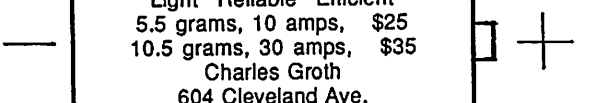




Good Things for advanced aero modelers. Send $1.00 for Starline's new catalogue. 6146 E. Cactus Wren Rd., Scottsdale, Ariz. 85253.

Acculab Electronic Digital Scales: Seven models available with graduations of 1 gm, .1 gm & .01 gm, and capacities up to 5000 gm. All with tare, all have strain gage transducers. Prices start at $99. Most popular is Model 333; has 300 gm capacity, weighs .1 gm or .01 oz, has keypad calibration, and memory. Discount price of $130.50, includes AC adaptor, 200 gm calibration weight, UPS, and 1 yr. warrantee. Send SASE for brochure to: Champion Model Products, 880 Carmen Court, La Verne, CA, 91750 (714) 599-3348.

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From Terry Thorkildsen

Fuses

Have you had a hard time stuffing that fuse into the snuffer tube when you have a fuse a bit bigger than the tube itself? Cut one end at an angle. It will slip right in. Thanks to Terry Kerger for this tip. I hate to think how many times I have fought a stubborn fuse.

A note of caution: don't wet the end you shove into the tube. It can get too wet and go out before it burns through the rubber band.

"Calling all Balsa Bugs"
The Detroit Balsa Bugs will host their 50th anniversary reunion in the Fall of 1992. Interested parties should contact: Joe Macay, 22278 Prosper, Southfield, Mich. 48034. Phone (313) 356-4091

BUSINESS OPPORTUNITY WANTED
Marketing Executive with 27 years experience seeks attractive business opportunity in the model/hobby field. Purchase going company or investor/partnership. Replies confidential.
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NFFS MEMBERSHIP AND RENEWAL APPLICATION

Mail to:
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Make checks payable to the National Free Flight Society

Subscription rates include annual fee of $.50 for membership in the National Free Flight Society. The balance of the fee in each category is for Subscription to FREE FLIGHT, the NFFS Digest. Subscriptions are not available without membership.

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The Bong Eagles

Wisconsin's only true free flight club

By John Lorbiecki, Digest Power Contributing Editor

The Bong Eagles Free Flight club started in 1967, with a core group of modelers that felt the need for a true free flight organization.

NFFS was just beginning and free flight was on the up-surge. Joe McCarthy, Gil Graunke, Tony Italiano, and others started a small group that soon would be the nucleus of the present Bong Eagles. The club has never had any bylaws, any set rules, or anything else but the love of free flight.

At that time, as now, the midwest area free flighters congregated at the Bong Recreation Area, one of the premier free flight fields. The Illinois Model Airplane Club (IMAC), Northern Illinois Model Airplane Club (NIMAC), DeKalb Cloudbusters, and other groups sponsored contests at Bong. Soon, the Eagles were part of the group, sponsoring both indoor and outdoor contests that drew contestants from all over the Midwest.

The field itself provided an area for the FAI semifinals and also the 1967 FAI Finals. I would be willing to bet that there isn't a FF'er in the country that hasn't heard of Bong. So, we had a field, we had contests, and now we have the Bong Eagles.

The Bong Eagles have as strong a group of people as any in the country. A brief examination of the membership is in order.

Being competition orientated in the beginning, the group has had it's share of winners. A strong core of FAI flyers precipitated from this competition. Willard Smitz, multiple team member in Wakefield, honed his skills in local competition. Willard, best known for his Wakefield flying, many times placed or won in all three (!) FAI events at one contest. His favorite was Nordic, but never could get on the team.

Gordie Wisniewski has proven his stuff in the Pennyplane events. His skills and organizing of a weekly indoor session has improved the indoor capabilities of the club.

FAI Power was the proving grounds for Gil Graunke, Bob Whaley, Dick Swenson (of SwenAir engine pans), and John Lorbiecki. These flyers have flown in many contests, with many wins and places in regional and national events.

Modern day power events are being contested by the above flyers along with Greg Henrichs and his father. Greg's latest models are state of the art and have been very competitive.

The old days have not been forgotten. One of the nation's historical modelers and ex-owner of Old Timer Models is Jim Noonan. Jim never fails to show up at a meeting with Ambroid on his fingers and a finely constructed 1900's or later model. His prowess with a knife is something to behold.

There is one guy we haven't been able to convince into holding an office. It seems that he is too busy to work for us. However, we don't push the issue. Tony Italiano already has a full time job supporting the NFFS!! Tony has been an institution with the Eagles and is always willing to help in our activities.

NFFS members don't know how good this guy is. Tony's real love is Nordic and power models, but his NFFS activities slow him to the point that someday we will provide a designated builder for him!! *(Boy, I could use one of those too--CW)*

The glider events are supported by Jim Thornbery and John Lorbiecki. What Jim doesn't win, John does.

Junior members in the Eagles have been active throughout its years. From Mark Heckendorf (and my favorite, his dad, Howard); Kevin Graunke, to Andy Runte, hand-launch glider flyer; Russ Jahnke, P-30 flyer extraordinaire; and our latest, Steve Whitford (at such a young age he has been showing us old guys how to fly indoor), we have had a group that has provided us with the urge to continue the chase.

Each club needs supporting members. The club newsletter started with Joe Adams. His love is old time models, which hopefully he can now complete. The letter was taken over by Russ Whitford, whose, constant experimenting which results in such diverse planes as winning NoCal models to a new hot rod 1/2A.

There are other members that have not been mentioned, but have provided a group that supports free flight the way it should be. If more information is needed on the club, contact Russ Whitford at 215 E. Monticlaire Ave., Milwaukee, Wis., 53217

Competition Strategies Con't

After all, the purpose of a competition model is to score a max in a contest. If it doesn't do that when needed, it is called a sport plane.

Well, I hope I've piqued the interest of anyone who might be interested in competition flying.

Remember, if you have done your best and tried your hardest, you have a right to be proud regardless of where you end up on the score sheet.

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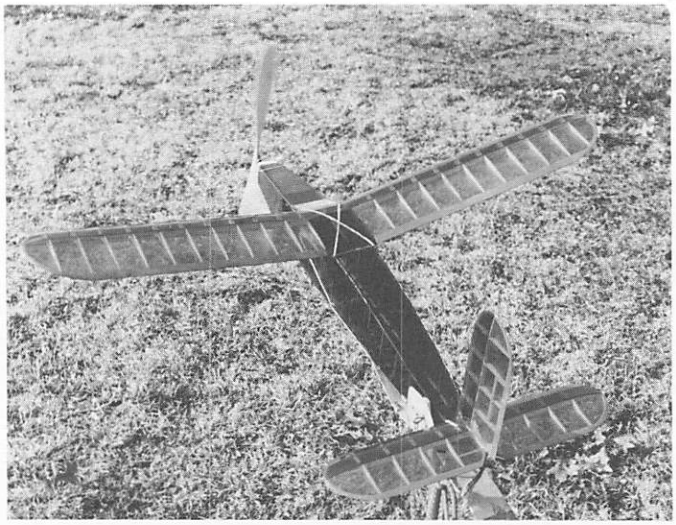
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It was foggy at the King Orange International when the Dawn Unlimited event was held. Contestants must have needed radar to find their models in that overcast. Dave Platt, top, winds the rubber in, while George Jamieson looks on and below, David and Mathew Fogerty have just finished winding.





Above is Les DeVitt's model, a 1938 Frank Ziac design enlarged one and a half times. It looks like it might be a good candidate to compete in the revised Moffett Champs.



Left, George Perryman (who else), holds the prop on his huge (600 sq. in.) Dawn Unlimited model at the King Orange International, Fla. The brave man holding the model while George packed in the turns, is unidentified.