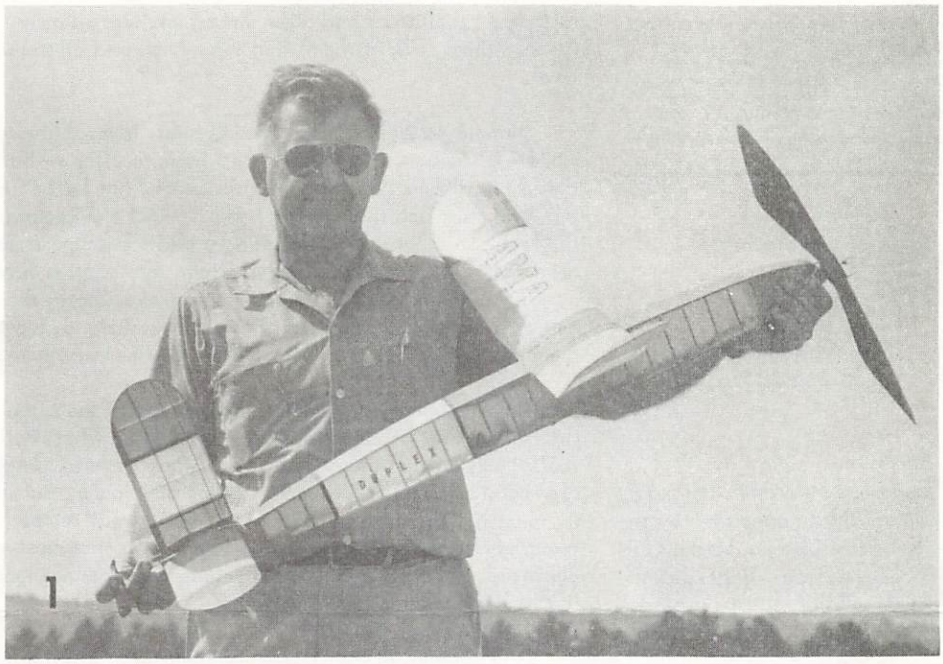
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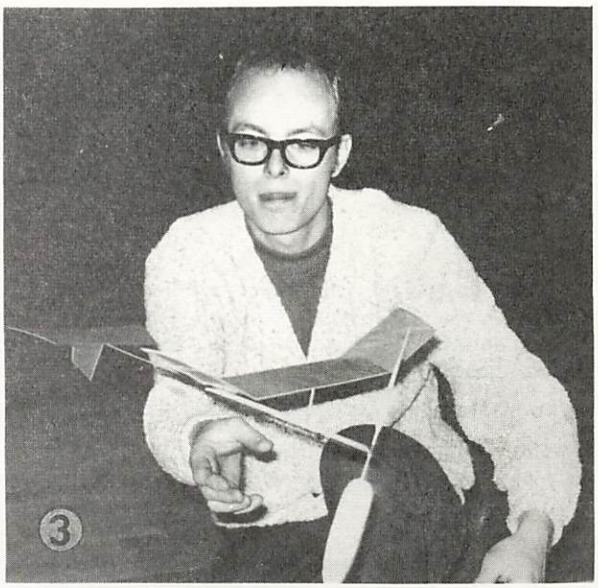
FREE FLIGHT

nFFS

THE NATIONAL FREE FLIGHT SOCIETY DIGEST







VOLUME IV NUMBER 1 DECEMBER - JANUARY 1969 TERN TALK

DEDICATED TO THE INTERESTS OF FREE FLIGHT MODELING

EDITORIAL AND SUBSCRIPTION OFFICE: 1333 South Franklin Street, Denver, Colorado 80210, Phone (303) 733-3874 — Editor M.W. GIESKIENG, JR. — Subscription Manager ANN GIESKIENG

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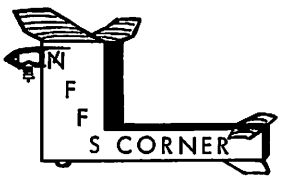
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The opinions expressed in this publication are those of the authors and do not necessarily reflect the official views of the National Free Flight Society.

PERDUE AND POLANSKY IN NFFS KEY SPOTS



The "Tennessee Gadfly" Jim Perdue and Lee "Wizard" Polansky, from Sacramento, California, have been unanimously appointed by the Board of Directors to fulfill the unexpired directorships vacated by Bill Gieskieng and Chuck Broadhurst. (Bill became Free Flight Digest editor and Chuck assumed the Executive Directorship.) Jim replaces Bill as Director-at-Large and Lee follows Chuck as Western Director, terms will expire in 1970.

NFFS ELECTIONS

Election time coming soon. Are you as confused as I am how it's handled? Well "Busybody" says that NFFS has five directors and that terms run two years. But she points out, their terms do not coincide.

This year the offices held by Bob Stalick (Director-at-Large) and Pete Sotich (Midwest Director -- and Chairman of the Board) are expiring. Who do you get to vote for? Well, right now potential candidates are being investigated by two nominating committees. Chairing the Midwest selection committee is Bob Dunham of Oklahoma. . . working with him are Hugh Langevin from Minnesota and Bob Herndon from down Texas way. Michiganian Hardy Broderson is heading up the At-Large committee composed of Ed Whitten from New York and John Warren from California.

These men are spending a lot of time and effort to see that NFFS members have a group of top-notch people to choose from. Needless to say, be sure to vote when the time comes. Show 'em you are interested in what's going on.

Did you see in AMA's monthly mailing for mid-January the statement that NFFS has asked the AMA Contest Board to reduce engine runs and maximum flight times at the National Championships?

That wasn't the complete story! NFFS was only interested in AMA having the flexibility to shorten engine runs and max flights in bad weather, particularly when high winds prevail.

At Olathe last year literally hundreds of flights went off the NAS due to the five minute max and the very windy conditions. A three minute max, for example, would have greatly reduced the off-station flights and thereby exposed private property to far less trespassing.

It seems that there's more to free flight than just driving to the flying field, nodding to the boys, putting in your flights, making your maxes and driving home with a box full of trophies (or "pots" as our English compatriots call them.)

As much as model aviation is concerned with talking about models and how best to build and trim them, there is still another aspect that accompanies any complex enterprise. Yep, you guessed it: Politics. Modeling is not all just fun and games. . .someone has to set up the contest and run it. Someone has to determine rules and regulations -- tend to all the dismal chores that must be done. We all squawk about rules and regulations and often swear, perhaps silently, at decisions (or sometimes lack of them) that "They" make to clutter up our modeling lives.

Newsletter editors, here and abroad, bemoan the lack of pure modeling subjects that their papers have to offer -- but are amazed that there always seems an abundance of "hot letter" material from those for this and those against that. What I'm getting at is, besides the "fun" stuff that makes modeling a perfect escape from life's drearies, the Digest, as "the voice of free flight" has another function. . .that of being a focal point for modelers to make known their wants and needs. . .a forum for differing views. . .a means to give hearing beyond the individual's circle of friends or fellow newsletter readers.

AMA is beseiged by many, many requests and although they do their best, they often have no way of judging what really is the current feeling among their members. We all look to AMA Headquarters knowing them to possess not only the wisdom of Soloman, but also his treasury. It comes a little hard for all of us to finally realize that AMA is just a group of hard working, dedicated individuals that must make countless decisions. . .without time or sufficient intelligence reports to guarantee that every action is fully justified.

It is hoped that the Digest can become a rallying point for free flighters. . .to state their likes and dislikes in a manner that will help officers of the Academy to see just what is going on in free flight.

DECEMBER, JANUARY! What's going on!

Two months ago Annie and I made some brave talk about catching up with the back issues by March. Well, some corners will have to be cut. The "corners" will be combining four months into two issues -- "Dec.-Jan." and "Feb.-March." ("Feb.-March" should follow this issue by two weeks.)

We hope the membership will agree that it's time to catch up and will sympathize with an expedient solution.

NEWS FLASH: NFFS Directors voted to sponsor "unofficial" events at the Nationals. For the second time, Clipper Cargo, Payload and Coup d'Hiver will be held. (Indoor Flying Scale will be sponsored by AMA.) If you have Willow Grove in mind this year, plan now on taking in these very special events.

CAPITOL CONDORS — OAKLAND CLOUD DUSTERS

Second Annual

West Coast Championships

FLYING SITE: GARDNER FIELD, TAFT, CALIF.

March 15 16

This will be a BIG one. Not much time left, so better call →

FOR MORE INFORMATION, CONTACT
CHUCK BROADHURST
3818 El Ricon Way, Sacramento, Calif. 95825
Telephone: (916) 483-4158

NATS

Results of Nats Planning Conference
February 18-19, 1969
Willow Grove Naval Air Station (Penn.)

(Courtesy Pete Sotich, and AMA Hdqts.)

Official dates - Monday, July 14 through Sunday, July 20

Indoor Events - Lakehurst Naval Air Station, New Jersey
Rubber classes - Monday, July 14 - 12 noon to 8:00 pm
HLG & Flying Scale - Tuesday, July 15 - 10am to 5pm
(Flying Scale will be official AMA event with sponsored trophies)

Outdoor Events - Wednesday, July 16 through Saturday, July 19
(8am to 5pm)
Sunday, July 20 (8am to 1pm)
(basically the same flying site layout as at '65 Willow Grove Nats)

SCHEDULE

Wednesday, July 16 - B Gas, Nordic Towline Glider, Flying Scale
Thursday, July 17 - 1/2 A Gas, Wakefield, Helicopter
Friday, July 18 - A Gas, Rocket Power
Saturday, July 19 - FAI Power, Hand Launch Glider
Sunday, July 20 - C Gas, Unlimited Rubber

SPECIAL INFORMATION

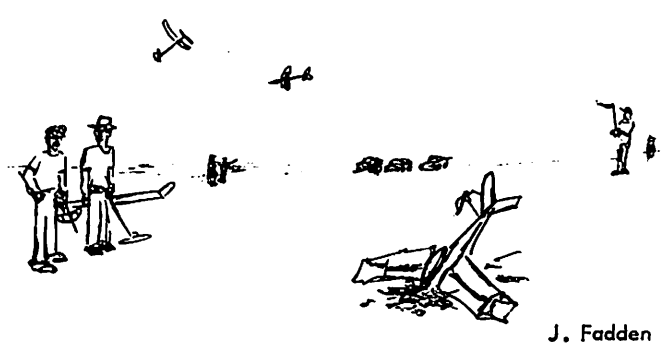
1. Five flights in FAI events, no rounds.
2. Three minute maxes in all events, except two minutes for HLG.
3. Flyoffs retain same maximum flights, engine run reduced two seconds each extra flight.
4. Retrieving system available for models going off station. Models will be returned to individual launching area during contest. After 5pm models will be turned over to AMA Headquarters, Hanger #80.
5. Camping site will be available.

"For the first time in many years, there will not be any full scale air show. On Sunday afternoon, July 20, there will be a model airplane show which will run from 2pm to 4pm, the show will be preceded by the Jim Walker Stunt Finals at 1pm.

"The model show will be under the direction of Johnny Clemens and will feature actual demonstrations of all type models -- free flight, control line and radio control. A possible attraction may be Capt. Dick Schramm as the flying professor in his Piper Cub as this type performance can be flown so that every maneuver will be in full view of all spectators. Age group champion and national champion awards will be made at the conclusion of the show.

"Once again youth will be featured as part of the Nationals with daily Delta Dart competition as well as a special competition for AMA-U.S. Navy-H.I.A.A. Regional winners."

Registration - Advanced entries $10.00 (cutoff date, Sunday June 15) Forms available April 15. Send stamped, self-addressed envelope to AMA, 1239 Vermont Ave. N.W., Washington DC 20005. Basic late registration fee $25.00 - Monday, July 14 and Tuesday, July 15 at Willow Grove NAS only. No registration whatsoever at Lakehurst NAS.



J. Fadden

Yah, that's what you call compressionistic art.

Help!

Do you have something for the Digest?

Of course, we would like 3-views with full size airfoils. If you have a real going bomb, how about letting Don Farnsworth (NFFS full-size plans draftsman) draw it up for the plans service.

But if you don't have any designs you're willing to part with, let us in on the latest gimmick or strategy. . .an unusual feature that you use in building or flying. In other words, let us have the kind of dope that you look forward to reading yourself.

If you like tech articles, fine! Send us one, or two or three. If psuedo tech is more your line, great! There's always room for "modelers' talk. If your wife wants to do an essay on "how modeling is the curse of my life," send it. . .as long as she's cursing Free Flight the Digest is interested.

Photos are always welcome. We need big bold action shots in particular. Many flyers have good shots and don't even know it! Send the negative and we can blow up that little snapshot into a monster close-up. But don't forget a caption. . .stick it on the back with a piece of tape. A good picture is nice but it helps to have a story, tell what's happening and what the flyer is famous for, etc. and if credit is due, please give the photographer's name. If you expect the print back, write "return to. . ." on the back. (Negatives will be returned.) Almost any sized photo can be used. . .but big ones reproduce best.

Don't forget that you can help by asking. If you have a question about free flight, chances are that someone else has the same problem and to see your question answered will help him. Specifically, Al Vela has volunteered to answer questions concerning FAI Power. If you have a question, let's hear from you.

If you've something to say, there's the "Soap Box" "Sound Off" and "Hot Fuel Seat" to carry your messages. (Just keep it short and neat.)

COVER PHOTOGRAPHS

(1) Major Richard F. Heyn, Massachusetts, holds his Chester Lanzo designed, "Duplex." "Duplex" is a fitting name because this "old timer" could be flown in two classes. As shown here it is ready to go in the Stick Class. With the simple addition of a removable pylon -- to increase cross section -- it qualifies as a Cabin. Lanzo's old design may look strangely proportional -- to eyes used to looking at stretched out Wakes and Unlimited Rubber ships -- but it is still a goer. Herb Franck photo.

(2) The whole "thing" of free flight is summed up in young Jerry Rupe's facial expression as he launches his Pilutus Porter: will it? . . .or won't it? In this case it does it! Jerry built this little jewel from MAN plans by Walt Mooney. Put together in 1967, it's on the third covering job now. When new and light, best time in small gym was 42 seconds. . .recently won third place with scale points plus flight time. Photo by Charles Teed, Grand Junction, Colorado.

(3) George Batiuk, Jr. tests for thermals by sticking out tongue. Air must taste just right 'cause there it goes. EZB's are great fun -- even a novice can turn in flights of over three minutes (record is over 14 minutes, held by Jim Richmond) . . .and probably gives the greatest amount of performance for the least effort of any free flight model. (If you would like a free EZB plan, send a stamped, self addressed envelope to Annie.)

George is an excellent Nordic flyer -- likes rubber events and HLG, but dislikes engines -- would rather tow a Starduster than VTO it. Batiuk, Sr. is a familar figure in winner's circles in southern California. Brother Tim is no slouch either -- holds a HLG record. Photo by Mike DesJardins.

HALIFAX TAILLESS POSTAL CHALLENGE

reported by Ed Whitten
NFFS Small Field Events Chairman

John Pool, one of England's foremost proponents of tailless models, writes telling us about their next international postal in April:

"The Halifax Tailless Challenge is not in fact run by the Halifax Club. We have a corresponding circle of Tailless modellers, adding up to about 40 persons and we call ourselves the 'Tailless Group.' That's not quite true -- we have Ed Turner from Texas, two Swedes and a New Zealander on the list as well.

"The 'Halifax' Trophy was conjured up by an enthusiast at Derby in gratitude to those few of us (three) at Halifax who have kept Tailless interest alive through the lean years since the one and only Tailless Comp was taken from the National Comp Programme. You'll see it's back on now.

"The next international is scheduled for all April, 1969. Briefly, we allow 250' towlines, 30 second engine run, and unlimited rubber. Any number of flights within the month to count -- best three consecutive to count, and if there are three maxes the next one is the fly-off. Prizes for Top Overall (brief tenure of the Halifax Shield), Top Rubber, Power, and Glider, Top FAI, Most Flights, and a Sealed Time Award. You'll see we've aimed to encourage others than the winners. (Like Coupe d'Hiver, you may enter as many times as you have models.)"

From John's bulletin "Tailless News" we learn 56 entered last Spring's event, with 48 in England who paid and seven overseas gratis. Times turned in ranged from very creditable three flight total of 7:58 (three minute maxes) on down. Models were gas, rubber and towline -- from the winning 116" plank towline to light-weight rubber and 18" power saucers. Unlimited flights tended to "encourage a lot of flying."

Last year Ed Turner was the only USA entry. What about some more of us taking a crack at it this Spring? Write immediately (time is short) to John Pool, 3 Rothwell Drive, Savile Park Road, HALIFAX, Yorkshire, England, to receive the latest complete instructions.

But be careful! John says, "Tailless is almost a disease. You build one. . .if it has some success, you are hooked. Before very long you are thinking about another class of Tailless, especially with the all-in-one rules."

Ed Whitten
New York City, New York

"WE FLEW IN THE WINTER NFFS MINI-POSTAL"

from the Star Skippers publication

We flew again on January 25th. The weather was awfully cold and windy. We took a model box out to be used as a "retrieving box" but we had to turn it into a model airplane hospital for cementing the planes back together.

My wing folded every flight; Garrick (Leonard) was holding his model to be wound and the wind blew off the stabilizer; Willard's (Moore) boom broke in tumbling along the ground; and David's (Hansen) wing needed gluing all the time. We sometimes even took the wings off when we wound the AMA Racers, which meant they were never perfectly adjusted. We flew the gliders earlier and they didn't have so much trouble as it wasn't so windy.

David froze and had to go back to the car. We all warmed up in the car eating lunch before flying our rubber jobs.

We made a few new club records, like in glider where I broke the Jetco "18" record held by Garrick; and David tied it. And I raised my best rubber time outdoors from 153 to 170 seconds.



Richard Whitten (age 10)
Flying Dutchmen Club
New York City, New York

HAND LAUNCH GLIDER

by Paul McIlrath

In response to your recent request for contributions (I assume you didn't mean cash) here is an idea which may interest gadgeteers -- an automatic elevator tab for HLG

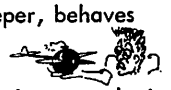
Tab gives DOWN during launch, for hi-speed, no-loop climb, and then is pulled UP at the top of the climb (hopefully) for quick transition and stable glide. Timer idea was stolen from Henry Struck in the '40s. Adjustable elevator stolen from Wright Brothers -- 1903.

I've used variations of the scheme several times since 1949. It is not a perfected system. Timer needs development before it will be reliable enough for contest use. But theory is sound and results are promising.

TYPICAL FLIGHT PROFILE:

1. Creeper wire pushed full REAR -- tab forced down by spring -- countdown begins.

2. Tension rubber pulls wire slowly forward thru creeper -- flyer grips model, watches creeper, flexes muscles, checks wind direction, watches creeper, bites lip, watches creeper, behaves generally like a man holding a lighted firecracker.



3. At appropriate countdown number, flyer begins natural wind-up and throws.



4. HLG javelins up in trajectory characteristic of Zero-Zero adjustment -- at top of climb creeper wire contacts control horn -- pulls tab UP.



5. Model makes smooth transition to glide circle. Any stall is dampened out quickly because glider now has decided decalage.

6. Model enters thermal.



7. Modeller rubs throbbing elbow, but smiles, glad that the flight is an OFFICIAL.



NOTES:

1. Make tab small (maybe 10% of stab) for non-critical adjustment. When tab is on left half of stab only, it also acts as auto-rubber/aileron during climb, counteracting glide circle adjustment.

2. Force wire thru creeper -- don't drill or slit rubber. Locate stop, spring, and horn close together or tab will twist under loads. Make tension rubber long in comparison to wire travel for uniform creep rate. Try for travel of around 1/8" per second.

3. Glider can be balanced further forward than normal for quicker stall recovery. DOWN tab will prevent loops in launch.

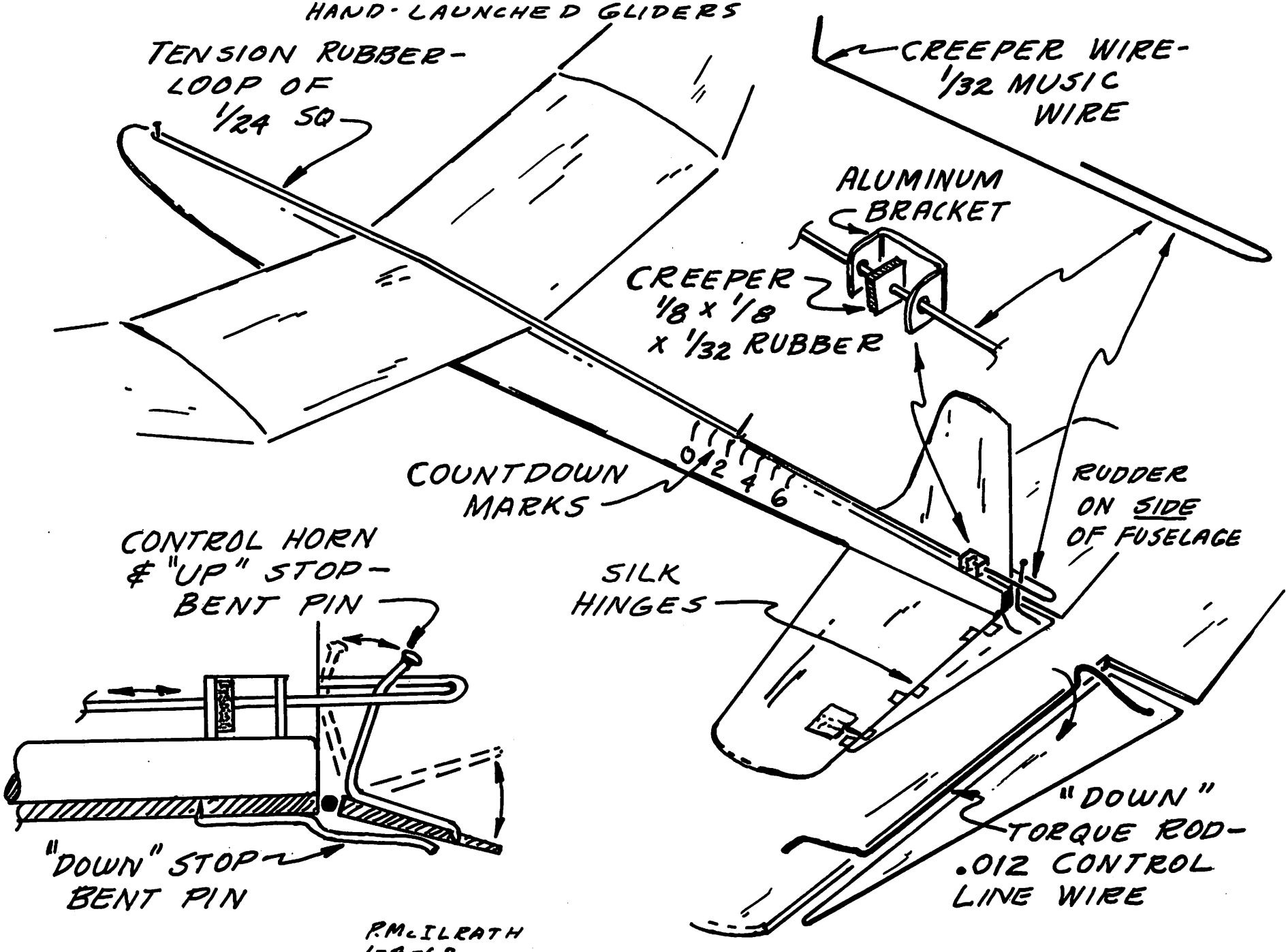
4. Don't panic and hurry your launch. Try to time the start of your natural wind-up so tab goes UP at best time.

Paul N. McIlrath
Cedar Rapids, Iowa

Although Paul's auto-gimmick may make purists shudder, it offers some interesting possibilities. Perhaps the device would be better suited to operating a wing flap than an auto stab. By depressing the rear of the wing a few degrees, the performance could be increased sizably, and three results could be achieved simultaneously. One, climb, would be maximized. Two, sinking rate could be decreased, especially on a heavy, high climbing design. Three, the more cambered section in conjunction with a slightly forward CG would have quicker recovery from dives and should circle in thermals without spinning. As Paul says, it's not fool proof now, but with a little work and ingenuity most of the "bugs" can be eliminated. If you give it a try, let's hear about your success or failure.

THERMALIZER

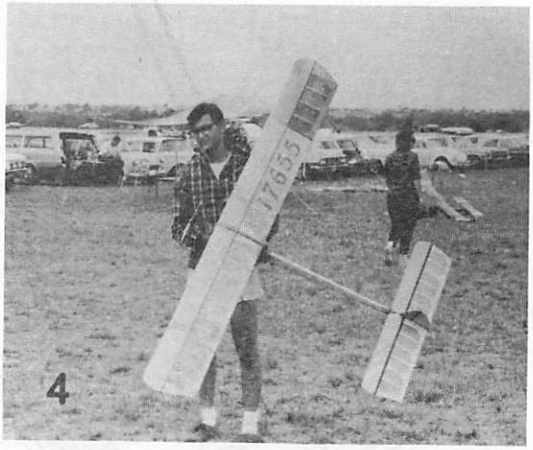
AUTO-STABILIZER FOR HAND-LAUNCHED GLIDERS



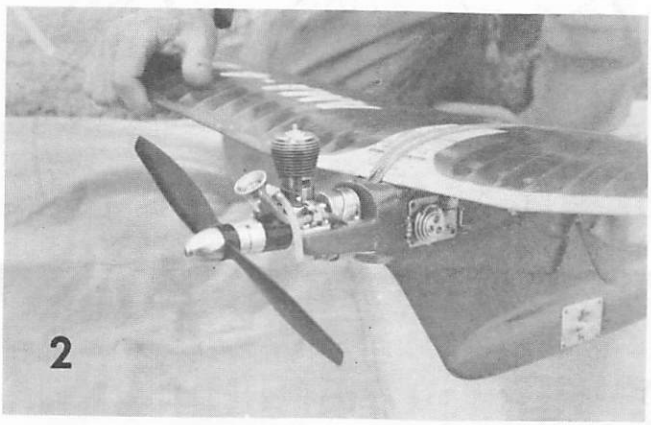
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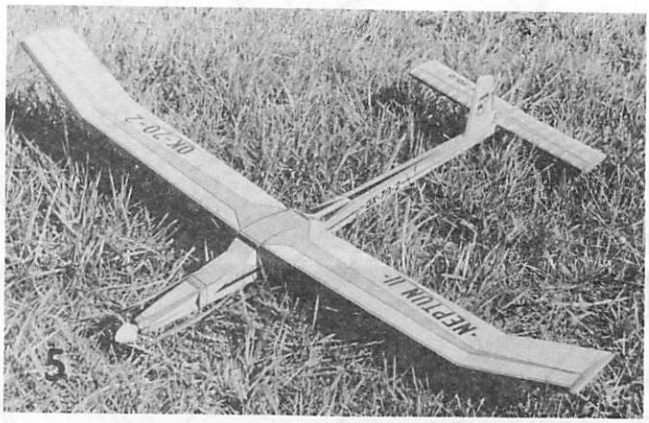
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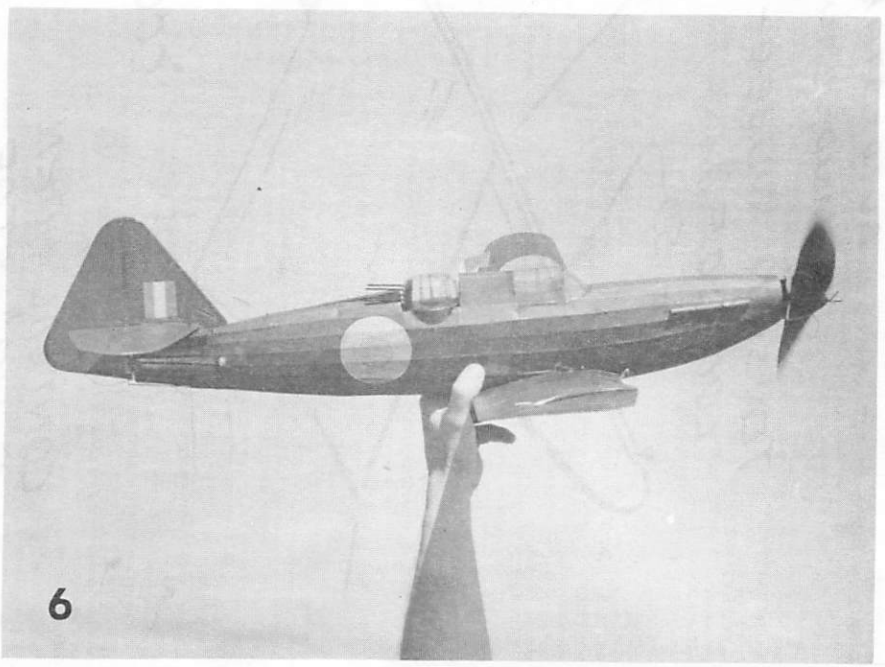
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PAGE 6 PHOTOGRAPHS

(1) Mike Gaze, transplanted Englishman, gleefully packs the winds while wife sets herself for the worst. Mike is a member of the Dallas Cloud Climbers and likes to speak out via Casey Hornbeck's lively newsletter, "Splatter." I'm not sure what the design is but it looks like it can take Texas brick lifters in its stride. Photo by Chick Frierson.

(2) Magnificent Mountain Man and Model Museumer Bob Schliem's Class A gadget wagon. . .(TD .15 Ephemeris.) Take a look at that modified tatone timer with three functions. Also check over machined venturi and multiple goodies. Bob had trouble trimming the ship and added auto stab and rudder. Three stage auto rudder is unique in that it kicks over far left -- cranking ship over on its left wing -- then immediately returns to a moderate left setting for glide. It makes for a very spectacular and efficient transition. When normal auto rudder was tried, the ship would roll too far and end up on it's back! Kicking the rudder far over then backing off immediately does the trick.

Bob's eldest daughter, Cathy, looks down her pretty nose at auto devices, says flatly "that's not free flight." Cathy and her younger sisters Debra and Patricia fly regularly in competition and beat the boys. (For a switch, the girls got their father reinterested in free flight.) Bob doesn't worry about competition -- prefers to experiment and build engines, tracking devices, starters, etc. . .enjoys flying old timers in "fun" meets.

(3) Brent Meyers, second place winner in Senior Clas A Gas, seems quite pleased with his Witch Doctor. Brent lives in the heart of Witch Doctor country (Oklahoma of course) and is an active Tulsa Glue Dobber. Photo by Jim Clem.

(4) Another Texas flyer, Nick Jones. Nick is a fine competitor and has moved up from a rank beginner to become a perpetual threat in any event. . .will soon have to give up the contest circuit and put in time with the Navy. Just guessing, I would say the ship is a "Texan" design. Chick Frierson photo.

(5) Tim Dannels, editor of the "Engine Collectors Journal" passed on this photo of a fine Czechoslovakian Coupe d'Hiver. It's called the Neptune II but I don't know if Kovetaslav Duda is the builder or the model club.

(6) Boulton Paul Defiant caught mid-air by the "Amazing Colossal Man." Earl Thomson of the Connecticut Flying Aces built this beautiful model. Flying Scale is great fun but takes a different kind of "know how." If you are a "scale nut" send $2.00 to Harold Osborne, 1932 Conejo Lane, Fullerton, California 92633 for a subscription to "Scale News and Views" edited by Fernando Ramos. It's the "voice of flying scale."

2nd Annual Symposium News

NEWS FLASH: Dick Lyons on 717 Thomas Court, Libertyville, Illinois, has been appointed "Business Manager" for the coming Symposium. Dick has a lot to accomplish within the coming months and when things settle down we will get a progress report from him.

★ Another Dick: Symposium Editor, Dick Mathis, asked the Digest editor to pose a few points for him. So reader, this is what Dick is after:

He needs contributions! Please don't wait until the last minute to submit your paper. Not only is Dick interested in the purely technical side, he is also looking for material from practical-minded modelers. If you have a subject in mind but don't know if it belongs in the report, send the general idea to Dick and let him decide. Don't forget, it is not necessary to be at Willow Grove to present a paper.

The annual report has terrific possibilities and a great future especially if those who have the talents and skill will rise to the opportunity. Dick doesn't have the time to search you out. Let him know you are interested, NOW! (Address on last page.)

One of the most popular articles ever appearing in the Digest was former Executive Director Mike DesJardins' summary of Nordic Data. San Valeer, Tom Hutchinson adds clarity to Mike's findings.

If you are not familar with the Tail Volume Coefficients, shame on you! -- that's the price you pay for not supporting Frank Zaic's Year Books. (Tvo is explained in a manner legible to a layman in the '59-'61 Year Book, also January '59 Model AirplaneNews. If you haven't got the '59-'61 Year Book, order direct from Frank Zaic, Box 135, Northridge, California 91324, price $5.00.)

TOM HUTCHINSON'S GRAPH

. . .I plotted the Tail Volume Coefficient vs CG Location Data in Mike DesJardins' Digest articles on Nordic Design and came up with a design chart which looks useful.

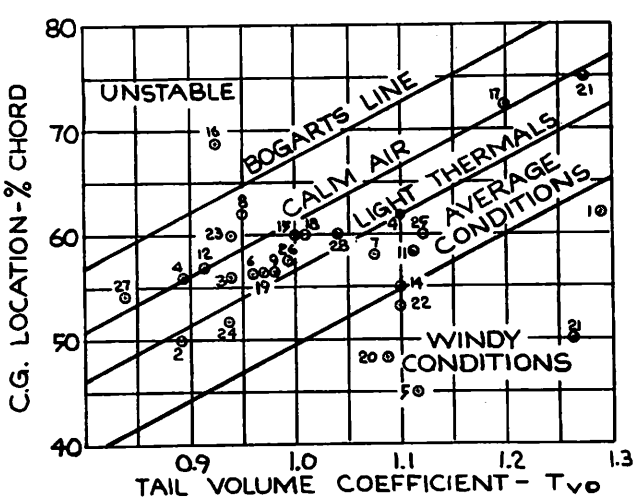
The plot showed that most of the designs clustered in three or four regions, which to me indicated the type of conditions each was designed for. The upper line in the graph is the one used by Bill Bogart in his initial plots (covering all types of models) and can be considered as the initial criteria for stability (only one design fell to the unstable side of this line.) Then, from a knowledge (?) of the flight characteristics of some of the designs and the clustering observed, the other lines were drawn parallel to Bogart's. The regions thus formed are rather arbitrary, but can seem to indicate the relative amount of stability obtained with a particular design.

The chart can be used for initial design, to locate the proper CG location for a given configuration and weather conditions, or to determine the proper length tail moment for a predetermined CG location. It is also useful for determining the amount of reserve stability in an existing model and just how far back the CG can be moved before stability problems arise.

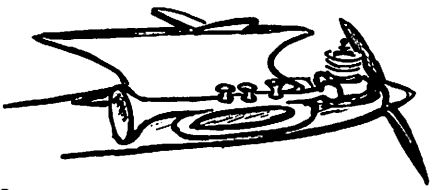
If you look closely at the chart, you'll notice that point 21 is plotted twice. This was a model with variable CG position. At a 75% location, it is near the dividing line between the calm air and light thermal regions, but still has some margin. At the 50% location it would be deep in the heart of the windy weather region.

The numbers in the chart refer to the designs listed in Mike's table, in the order listed (#1 is Floridian, #2 Nor'eastern, etc.) See the July and August 1968 issues of the Digest.

Tom Hutchinson
Pasadena, California



A/2 DESIGN CHART
(BASED ON DES JARDINS DATA, JULY DIGEST)



HOT ENGINES

Some time ago I got a note from fellow Power flyer Carl Fries. In the note Carl advised me to drop everything and contact one George Aldrich of San Antonio, Texas. Carl wrote that George is one of the best engine men around and that he was handling not only the famous Miebach tuned Super Tigre, but was setting up engines for those that needed help. I sorta gulped when I read that Fries' piped Tigre was turning a Rev-up 7-1/2 x 3/4 well over 22,000 rpm!

Why did Carl tip me off to this bit of "hot news"? After all I am a competitor and he doesn't help himself by helping me. . .or does he? Well, this is the story: Carl has been a one man "publicity committee" for George's brand new engine service and has been the one "spreading the word."

Carl sincerely feels that the "hoarding" of engine secrets has brought nothing but harm to the FAI Program and he wants to see, "A hot engine for everyone in 1970 -- a Finals where flying skill and the best design are the deciding factors. . .not a contest determined by the hottest engine." Carl may have something there.

FAI Power is not like speed where the winner needs to squeeze out a tiny fraction more -- in FAI Power the important thing is that the engine one uses must be roughly comparable to the competition's power plant. . .five or ten per cent differences are not all that vital but one can't give away thirty to forty per cent and expect to have an even chance. Unfortunately the average untuned engine available through a hobby shop just can't compete with any fairness. . .in fact the situation is beyond a question of fairness -- it's pathetic!

Ever since the straight fuel rule I have seen flyer after flyer discouraged and disgusted because no matter how well conceived and crafted the aircraft, his stock engine just couldn't hack it. Some bought engine after engine. . hoping to finally land a good one.

■ Let's let one of NFFS's founding fathers, "Uncle" Carl Fries give his views (adapted from a letter to the editor.) ". . .the only axe I have to grind is one I would use to 'stunt the growth' of those near-sighted types who would hoard engine secrets at the expense of their fellow Power FAIers. I believe that it is as a public service to the AMA-FAI Power program to give to all flyers a source where they can purchase competition engines.

"Even though George Aldrich is an avid free flighter and a Charter member of NFFS, his name may be relatively 'unknown' among free flighters. However, George is world renown among the U Control clan -- his famous 'Nobler' has been the winningest stunt design ever. But as outstanding as George has been as a stunt flyer it is his speed flying experience that has given him the special know-how that can help all of us.

"George is no 'secret keeper' -- his engine rework methods are detailed in the latest Aero Modeller Annual. If you are a machinist and can duplicate his technique, fine. If you are strictly a balsa butcher and need engine help, then George can help you too! Of special importance is that Aldrich will provide, with each reworked engine, specific data to help guide you in its use. Just think! With a guaranteed rpm working up front you don't have to stand on the sidelines drooling over the hot-shot's skyrocket-like climb -- you will have the potential to mix it up with the best! With your engine problems largely solved you can then spend your major efforts on trimming techniques, thermal spotting and DESIGN perfection!

"And why not? After all, isn't this what we are supposed to be striving for: improving our flying skills and upgrading our favorite design? It's great to know that you have 22,000 plus working for you up front because there is literally hundreds of other things to be attended to elsewhere -- from propellors to auto-rudders, there's plenty of room for improvement and we can keep busy enough innovating and perfecting.

"I believe George's engine service will mean a lot to the future growth of FAI Power -- not only to those now flying but to many adept AMA event power flyers too. (These are really the 'newcomers' we are looking for.) I have met many AMA flyers who have wanted to 'break in' to FAI Power but were scared off by the cost. . .meaning that not knowing whom to turn to for rpms, it was a chancy proposition and it was possible to lay out over a hundred bucks with no guarantee that they would finally come across an engine that would 'put out.' Now for a modest fifty bucks or so (plus no wasted time on wild goose chases) they can have the finest Tigre up front -- and it's a one time purchase. . .no guess work involved! It's great! Suddenly the engine 'fear complex' is eliminated and the newcomer finds he to can have an outstanding climb (consistent with good design and good sense, of course.)

"One suggestion: get your order in now while Aldrich has time to turn out a 'hot engine' for you. Don't wait until contest time and then expect service at the last possible moment. These fine engines take time and it's strictly first come, first served." ■

The only problem with Aldrich's engine service is that the selection of engines is so broad that you are likely to feel like a kid in a candy shop trying to make up your mind what "goodies" you want. There just isn't room to reprint all the combinations possible and I would suggest that you immediately write George for a price listing.

If it means anything, the engine I selected is a ABC front rotor Tigre with the Cox head adapter taking a standard plug. (ABC stands for Aluminum piston, Brass liner, Chrome plated.) According to George the ABC feature is worth its weight in gold, besides slightly higher rpm it offers extreme durability. George wrote that on several occasions pure nitro was run, by mistake of course, in a speed engine and when the engine was dismantled for inspection, no noticable signs of damage could be detected!

If you have a sick Tigre that you want resurrected, George can fix it up for $20.00 without pipe. (At this writing he doesn't have enough pipes to take care of the older engines or to supply individuals pipes alone, but if you have your own or an E.D. pipe and a fitted manifold he can tune it for your set-up.)

Another service that can be obtained are custom made Cox head adaptions that can help your better Tigres. . .cost is reasonable and it should help. Check his price list.

--continued next page--



I thought pipes were illegal in AMA events!

OK, you may say, the sooped up Super Tigres are fine for those that have the money but it's still too much for me to afford so I'll just stick with hand launch gliders. Nope, there is still another way to get a power ship flying with a minimum expenditure. As fine as the better Tigres are, there is a domestic engine that can do the job. . .so you can't use expense as an excuse.

Shortly after the straight fuel ruling, John Brodbeck, the man behind K&B engines, made it possible for concerned flyers to order a specially fitted and tuned engine to cope with straight fuel. These engines, known as the K&B Alcohol Factory Specials, have been a real boon to FAI flyers across the country. In Denver, for instance, these nominally priced engines have been far superior to any stock Tigre purchased, and must be given credit for saving a miserable situation.

Most of these engines are set up by Jim Nightengale. . .a well respected speed man. Since they take a large amount of time to hand fit and run in, it is completely out of the question for these engines to be supplied through hobby shops. They are provided as a favor to FAI flyers and must be ordered direct from the factory. (Price, $25.00) It takes time for Jim to fit them in with his other duties so be prepared for a wait.

The K&B has a slightly shorter stroke than the Tigres so should be fitted with a slightly smaller prop to take advantage of its higher peak rpms for maximum horsepower. The rear venturi poses some installation problems but these can be neatly solved by using the Van Nest/Cherny half pan mount. (Write for address.)

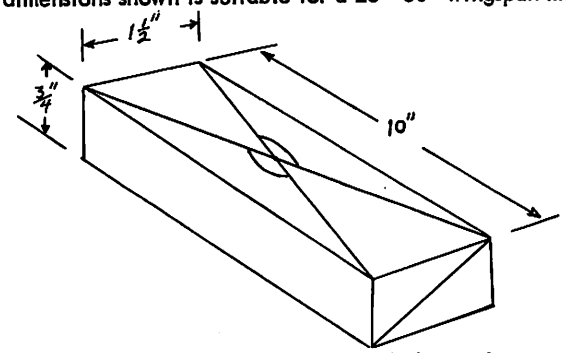
So for fine engines, the two addresses to remember are:

George Aldrich
3219 Shady Springs
San Antonio, Texas 78230

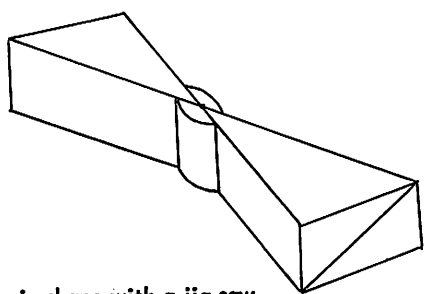
K&B Manufacturing Company
12152 So. Woodruff Avenue
Downey, California 90241
Attention: Jim Nightengale

BEGINNER's PROP

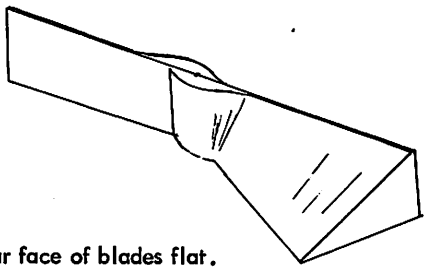
In rubber powered models the prop is the one thing that causes more models to go uncompleted than any other. We are going to show the neophyte prop-carver a simple prop and how it's done. This prop in the dimensions shown is suitable for a 26"-30" wingspan model.



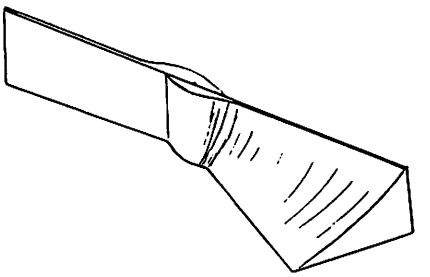
(1) Lay out basic block from hard "c" grain balsa as shown.



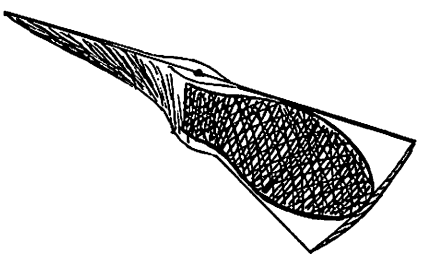
(2) Saw out basic shape with a jig saw.



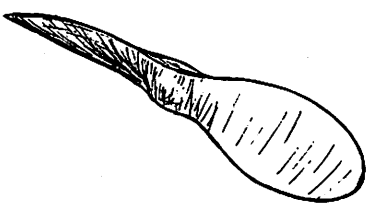
(3) Carve rear face of blades flat.



(4) Carve in undercamber on rear face. (Optional, rear face can be flat.) Use blade with curved tip. Finish with sandpaper wrapped around section of broom handle about 4" long.



(5) Layout finished blade shape using paper template to assure both blades being identical. Carve front face of blade after rounding the blade tips.

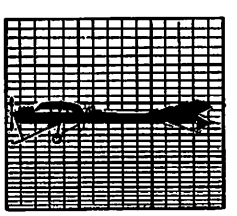


(6) Sand complete prop with 280 sandpaper, working down to 400 sandpaper. Balance finished prop by spinning on prop shaft and sanding the heavier of the two blades until balance is achieved.

If you desire you can reinforce the center section of the prop with fiberglass, silk or your favorite material. Finish the prop with your favorite finishing material, dope, Hobbypoxy, etc. Re-balance the prop by applying extra finish to the lighter blade.

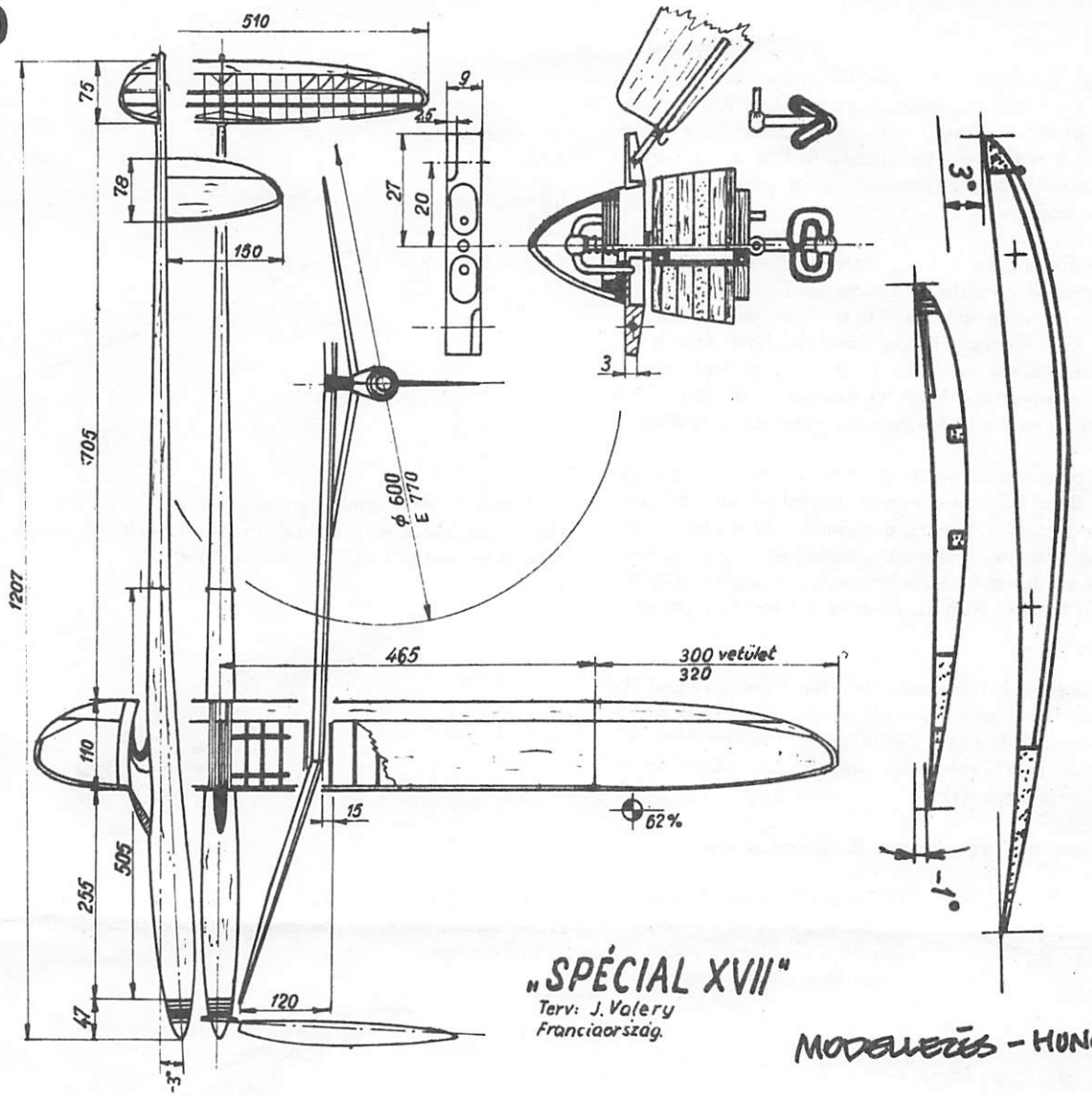
Lawrence Air-Istocrat's Newsletter
November-December 1968 issue
Walt Leonhardt, editor

Check Bill Hannan's new address at right. If you like flying scale, or the unusual -- like Gyros, be sure to send 25¢ for his new brochure. . .he offers some real goodies that will have you itching to build.



GRAPHICS

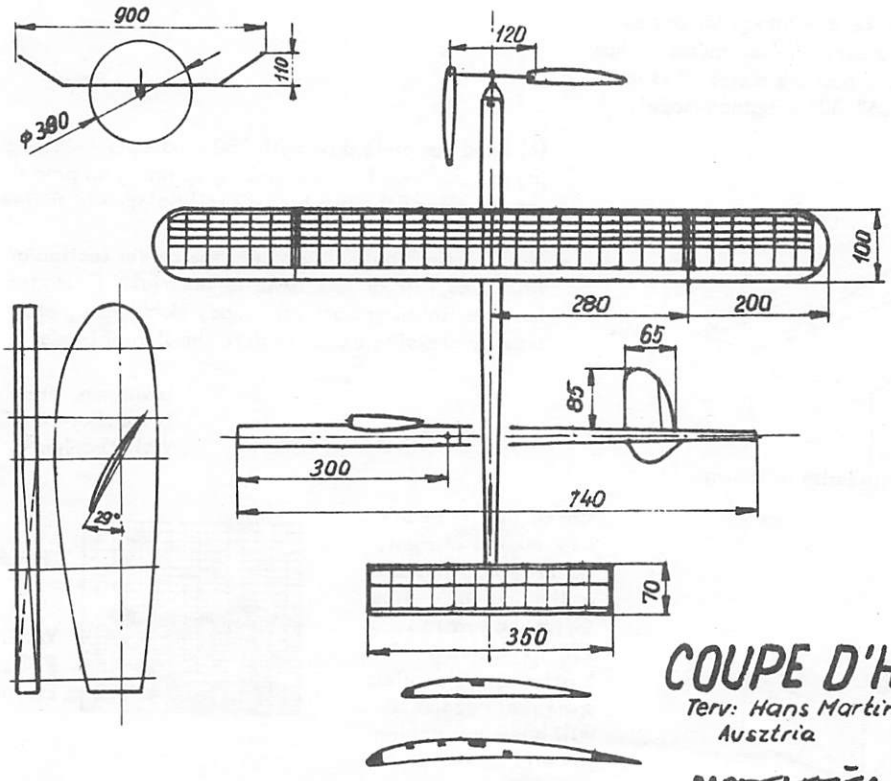
W. C. Hannan
P.O. Box 1596
Escondido, Calif. 92025



„SPÉCIAL XVII"

Terv: J. Valery
Franciaország.

MODELLEZÉS - HUNGARY



COUPE D'HIVER

Terv: Hans Martin
Ausztria

MODELEZÉS - HUNGARY

4th W.F.F.A. MEET

by Chuck Broadhurst

It was a great meet!

Had you been present at the Western Free Flight Association's 4th Annual FAI bash at Gardner Field, Taft, California, on November 9-10, 1968, you would have thought so too.

This annual, which seems to get more fiercely competitive each year, drew Wakefield, Power and Nordic flyers from Sacramento to Albuquerque. It produced the most ideal weather conditions anywhere (although the Wake and Nordic flyers felt those wonderful layers of lift should have been just a bit lower.)

The WFFA'ers welcomed a great bunch of flyers from Albuquerque -- John Allen, Buzz Averill, Jim Taylor (of the 1969 Nordic team) and Jon Davis (who holds the Junior Wake record of 19:24.)

Allen, flying his original Wake which he calls "my number three ship," dropped one measly second in seven rounds! He took home the first place trophy. Other top Wake finishers and their times:Bob White, 1209 seconds; Clarence Mather, 1126; Walt Ghio 1121; and Fudo Takagi, 1105.

The fuse on Allen's ship was something to behold! It featured a turned aluminum tube with a threaded, flexible tail boom (it screws off), a torque sensing prop fold mechanism, and a Selig DT timer.The wing is held on with nylon screws. Young Davis (the Junior) posted a 1072 score, which is a great finish in a field of top Open flyers. His Wake was a John Allen design, too.

If the mild November air was deceptive at ground level for the gummy rubber band flyers, it was downright elusive for the Nordic men. The lift was there (at 164 feet), but it was so subtle. You had to be really sharp to detect it. The models that were really trimmed had the edge, for the air (as described by one flyer) was "as close as ever to inside conditions."

Bill Hartill, flying his "ultra" Mojave design took first in Nordic with 1215 seconds. The fuse on Bill's Nordic has the timer, the auto rudder adjustment, and the DT mechanism, all built into the nose. It is very clean.

Other Nordic results: Kermit Walker, flying his Cirrus I, was second with 1197 seconds; Bob Critchlow was third with 1145; Tom Hutchinson" Dragmaster took fourth with 1075; and Walt Ghio was fifth with 1051. Jim Taylor's flashy Nordic finished just out of the money with 1007. Jim's ship features a flexible boom which permits him to build extra light aft of the CG.And it has the fanciest, neatest front end ever (which this reporter forgot to have him describe, but you may have seen pictures of it.)

The power event furnished first class excitement. Not one, but five flyers maxed out. They put in three perfect rounds on Saturday, and four more on Sunday. And then the fun began.

Under the flyoff rules each flyer drew a number from a hat. Five minutes was allowed to get the planes airborne. But the flyers were instructed to fly one at a time (in numerical order) with the No. 2 man not to start his engine until No. 1 had finished his power run. This was to help the timers establish engine runs as accurately as possible.

The first flyoff round just went grand for three flyers. They put their birds into a man-eating thermal, and for them four minutes was no sweat. Even Bud Romak (flying his "Bilgri Raider" with a Miebach G15 with matched pipe and Cox 7x3 1/2 prop, 24,000 rpms!!!) zoomed off into the good air only to have his engine quit after three or four seconds. At that he squeezed out 219 seconds, almost making it into the five minute flyoff round.

Chuck Broadhurst flew fifth. He expected his K&B.15 Special FAI mill to start on one flip (as it had been doing on almost all his previous flights), but it didn't. The glow plug was wet. By the time he replaced it, the thermal was gone. Chuck hit the back side of the thermal and was down in 112 seconds. His modified Eros, which uses auto rudder and auto stab, displayed a remarkable consistency in its power pattern, and especially in its transition from power to glide. He engages the auto rudder a fraction of a second before shutting down the power, and this little bit of extra speed really "grooves" the Eros into its glide.

But back to the flyoff. With Bud and Chuck out of it, three flyers were left -- John Warren, Bob Orth and Bill Hartill. Each made his five minute flight. Warren and Orth made six minutes, but Hartill DT'd early (he made 5:39). The final round saw Warren with an overrun (he was in good air, too) and Orth won it with 290 seconds.

As we said, it was a great meet. It would have been even better if hard luck hadn't struck Sandy Norton and Al Vela. Both were flying Al's new "Twiggy" design. But before the first round, Al temporarily lost his ship and didn't find it until the next day. And Sandy planted himself an "MVVS Tree." Sandy, by the way, is working on refinements to both the "Twiggy" and "Lipstick" designs and says he hopes to have two of each by the time of the 1969 Internats.



Over here, Sandy!

Oops! We almost forgot. The power scores were as follows: Orth, 2450 seconds; Warren, 2160; Hartill, 2139; Romak, 1479; and Broadhurst, 1372.

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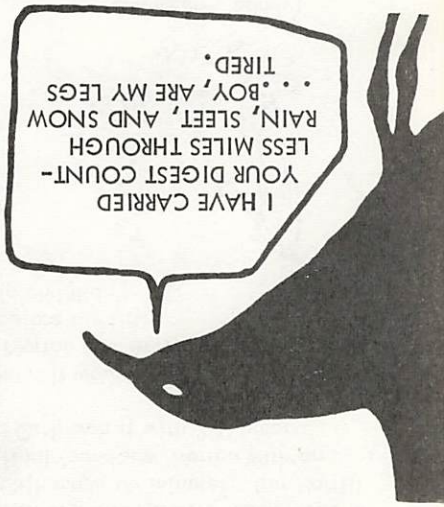
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John Pond, 2162 43rd Ave., San Francisco, Ca 94116
Will Nakashima (MD), 21707 McCoy Ave., Riverside Ca 92508



Now, wait a minute, Henry Fleming and Willard Kehr! I know they do things differently in Tulsa, but aren't you two a little old for the Mini-Postal? (Bob Hanford photo.)



Now this is more like it. Ages ranging from 6 to 11, are front: Linda Haslam, kneeling; Keith Malnar and Warren Bond. The big boys are: Cory Andra and Jimmy Haslam. Their Delta Dart times range from 27 sec. to 37 sec. Get your kids (and neighborhood chums) to fly against these hot shots from Salt Lake, Utah. (Lin Haslam photo.)



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