FLYING ACES

ISSUE #92-18 JULY-AUG. 1983

How do you like the cover drawing? Bob Rogers from Oklahoma did this one some time ago and we just ran across it in the GHQ archives, pretty neat is she not, skysters. Would be nice if Bob could find some time to do more of this kind of thing for the newsletter. Do you hear us, Bob?

We have received some questions on what is Golden Age/Old Time Scale. We here at GHQ define both as being in the same period. That is, that a model built from a kit plan or a published plan before the year 1942 is eligable to fly in these events. There it is, get to the workbench.

Another question was on the rule about foam construction. We did not mean that you could not use foam in certain areas of construction, such as pilots, exhausts, wheels, spinners, etc. What we won't allow is a model that is done of all foam. It must be built up in the conventional manner to be legal in FAC events. However, it would be permissible to fly an all foam model in No-Cal profile scale only, this we think is entirely fair.

One other question was as to the color of the Comper Mouse? From the Magazine photos we have, it looks like she was all-over red, and she did not have any registration numbers or letters on her. Is someone going to build a model of her ? We think it has good possibilities as a rubber scale ship.

Don't forget the "Big Bash" for next year, FAC Nats Mark IV, at Detroit, Mich. It is not to early to get started on building your dream ship for this contest of contests. Let's make this the biggest one yet!

EFF--A--CEEE!!!

Lt. Col. Lin Reichel, CO. FAC

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3301 Cindy Lane
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Flying Aces Club-GHQ,

I would like to ask a couple of dumb questions that perhaps you would be kind enough to answer? Having received your newsletter for a couple of years now--and it simply the best there is--I amstill not savvy to a lot of things that must be painfully obvious and transparent to FAC members in general.First of all (I blush at the thought of asking!) am I a member of FAC? Please answer immediately; I can't stand the suspence! Or am I just "receiving the newsletter?" Seriously, there are a lot of things like that about FAC that seem to be inside knowledge, and that never seem to be explained in the ongoing newsletters I have seen.

Someone would certainly do me a service to explain some of the shoptalk; "Kanone" and "Hung", for example. Let's "FAC" it, you guys, someone had to explain it all to you once. And how about all that rank? Could you do an "FAC History" or a"Hung Mythology"? Or at least publish your FAC bylaws and list of members (with rank and serial numbers)? If not addresses, at least put into your list some geographic information about the members (state at least, or city and state)--it would be great to know who's who in the FAC.

FAC appears, to me, to have a life of its own, which is somewhat "larger than life," like that which a great work of literature enjoys in complete independence of its author, publisher, or followers---think of Shakespeare's works or some other literature you admire (Bill Barnes?? Tom Swift? Dracula? Mother Goose?). These things live on because of their inherent quality. What I mean is, FAC has a kind of "formula" that is compelling, interesting, and enjoyable. Take the scale free flight emphasis, for example. This is, by itself, interesting enough, but FAC has placed it in a fantastic setting that lifts it far above the ordinary, even to literary heights. I say literary because FAC works half in a fictional setting, quite an appealing one too. This fictional FAC world has for a setting, a nice mixture of lighthearted paganism, fickle fate, and nostalgic aeronautical hero worship (be it aircraft or airmen as the heros). And there's all that pseudo military victory lore, complete with medals and rank! But at the same time the club has solid roots in a genuine love of and dedication to what W.C. Hannan calls a fragile and beautiful art form, the flying stick and tissue rubber powered scale model airplane.

I believe FAC is something like one of those "living National treasure of Japan", skilled and talented artists, composers, craftsmen, and the like, whose work is so good and so historically important that, like national parks, they have become national treasures to the nation.

Well, perhaps my enthusiasm strains the comparison a little, but the point has been made; FAC has become something more than a local club interested in flying model airplanes. It is clear that the FAC Club news contributers, at the very least, love it and have a wonderful time with it, and have elevated FAC to its present place of more-than-local importance. I admire that and congratulate everyone in FAC for it. Someone has done quite a job to create the FAC image and to sustain it. I wonder if any one person is even aware of all the elements in that image? Are you conscious, for example of how effective is even so simple a device as the"EFF-A-CEE" cheer at the end of some articles? And that capricious HUNG! Whose invention is he? And do libations of rubber lube help win his favor or does he accept only clear dope or acetone?

Please answer!

Sincerely,
Frank Anderson

GHQ's answer to Frank Anderson,

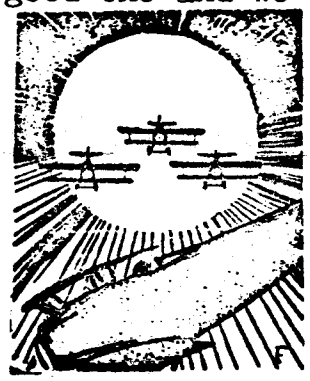
Dear Frank and other FACers not in the know,

There have been several of you out there in FAC Land that have inquired from time to time about some of our unique,and maybe silly,sayings and stories. We do appriciate hearing from you, but sometimes it is hard to keep up with all the correspondence. I think Franks letter sums up what most of you ask GHQ. We will now try to answer Frank. First of all, Frank, don't blush because you don't know the answers, we here at GHQ don't know what we are even talking about sometimes. But that is what makes this whole hobby of ours so much fun, I think!

We really like your statement about the newsletter being the best there is, we think so too, Haww! You certainly are a member of the FAC! Your nine bucks a year makes you that. Ah, and HUNG, the "GREAT GOD OF THERMALS", is that jolly fella in the sky who likes to snatch your best ship away from you just when you have her all trimmed out to get yourself one of those "Kanones".

A Kanone is chalked up everytime you win an FAC event at a contest. Have the Contest Director send in the results to GHQ so we can credit them to the list. Everyone starts out as a Leutenant and for every five wins you get a promotion. The "Kanone list is updated and appears in the newsletter once a year. When you reach 16 Kanones you are awarded the much coveted "Blue Max Medal".

Your idea of publishing the names of the clubsters is a good one and we will begin to do that as space allows us. Just names and states is probably what we will give you. Then you can see who is in the club and find that there are members all over world that enjoy the Flying Aces concept of rubber powered model aircraft.



We sure like to hear the words of praise that you shower down on us, but if it were not for our dedicated contributors we would not have a newsletter. The newsletter simply cannot survive without them. May Hung thank them with many more "Kanones".

I do suspect that libations of rubber lube do help to win his favor, and he does not only accept clear dope and acetone, he will take anything that flies well!

There you have it Frank, I hope that this has helped explain some things to you and now you can go out and get some of those Kanones!

Build--Fly--Win
EFF--A--CEE--!!!!

Lt. Col. Lin Reichel C.O.FAC

FAC MEMBER LIST:

Dave Stott, Connecticut
Bob Thompson, "
Adrian Comper,Penna.
Jesse Davidson, N.Y.
Charles H. Grant, N.H.
Joe Archibald, N.Y.
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John Pond, Ca.
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Bill Hannan, Ca.
Dave Linstrum, Fla.
Bill Northrop, Ca.
Bob Peck, Ca.
Bob Rogers, Okla.
Fernando Ramos, Ca.
Ken Sykora, Ca.

**********BYTE SIZE**********

5.

Mumbo Jumbo #6 from the Glue Guru

Salutations disciples! Today we shall meditate on the choice of model size within the Jumbo range. How big shall one's intended be? This is not an arbitrary decision; for in this valley of tears, a disadvantage accompanies every advantage. As it is written, he who has two penises makes much water.

To sort out the various considerations, let us divide all Jumbos into three size categories, of say 1, 1 1/2 and 2 inch scale, where 1 inch represents the smallest or entry level size, and 2 inch represents the extreme boundary of what can be flown today. At 1 inch scale, the typical light plane or WWII fighter will span roughly 3 ft.; at 1 1/2 inch, roughly 4 1/2 ft.; at 2 inch, roughly 6 ft. Now let's assume that we've built all three versions of the same configuration. How would they differ?

Performance

There are two types of performance to consider - flight realism or that which satisfies the soul and, quite separately, flight time or that which wins contests. Flight reality improves steadily with increasing size and weight. At 1 inch, erratic movements in the air and silly landings are the rule. At 2 inch, the smoothness of flight is impressive and the landing gear will actually rumble as the great bird settles in.

Flight time is largely independent of size. Current "good" Jumbo performance is about one minute, dead air, at any of the listed scale ratios. Now this seems odd, for aerodynamics improves as size increases and we might expect the larger Jumbos to do better. In practice, the difficulties of handling heavy motors tends to result in underpowered models as size increases. A second factor reducing performance in the bigger model is the inherent tendency for structural weight to increase faster than wing area. In other words, the big ones tend to have a higher wing loading than the small ones. The combination of insufficient rubber and extra wing loading exhibited by the big ones just about offsets the gain in aerodynamics, resulting in essentially constant flight time right across the board.

Cost

Assuming that you are hewing your own timbers from Sig Contest Grade stock, the material cost exclusive of glue, will run about $5 for 1 inch, $10 for 1 1/2 inch and $20 for 2 inch. A motor will cost about $1 for 1 inch, $2 for 1 1/2 inch and $3 for 2 inch. Glue cost, while insignificant if you use white glue for 1 inch, can become considerable if you use instant glue for 2 inch and tend to work in a stop and go fashion. I've just been through $12 worth of instant glue in connection with a single Jumbo. Regretably, much of it died in the bottle.

Rubber

You can anticipate using 6 to 10 strands of 1/4 Sig for 1 inch, 10-16 for 1 1/2 inch and 16-24 for 2 inch. Now there's a catch here, for the average man, equipped with a typical converted drill type winder, will find it difficult to cope with more than 14 strands. The cheap winder's plain sleeve bearings and crudely fashioned gears require a high level of torque simply to overcome internal friction. If you intend doing something serious at the 1 1/2 to 2 inch level it will be best to purchase or make a ball bearing winder of the type used by the Wake and Unlimited crowd. If you are reluctant to acquire a special winder, choose a scale that will limit the prop diameter to about 16 inches. Something like 12 strands will then do the job, and 12 strands are readily handled by standard winders.

Loading Gear

At the 1 inch end of the size range, a landing gear is optional, at 1 1/2 inch a landing gear is a very good idea and at 2 inch a trike configuration is worth serious thought. While the landing speed of all these models should be roughly the same (regulated by the maximum allowable wing loading of 0.75 grams /sq.inch) the larger models will have much more momentum and kinetic energy to dissipate in the landing process. This is particularly

evident on a windy day. Given a downwind landing, the 2 inch model can experience a landing run on bare ground of 25 feet or more. Should it meet with a pothole or muddy spot, a nose over accompanied by prop damage is likely. Again, the trike is worth thinking about in large Jumbo - maybe these RC people know something, after all.

To reduce the nose over possibility, it is useful to move the main wheels forward on a tail dragger. About one inch of forward displacement will help enormously. The trick is to get as much forward motion as possible without offending the eye.

Obviously the nature of your home field must be taken into account in connection with the landing gear decision and model size is but one consideration.

Portability

The 1 inch can be assembled and glued into one piece and still go easily into any car. The 1 1/2 inch is best designed with a removable wing. The 2 inch will probably require further disassembly (wing into halves, removable tail, etc.) as a function of your car size.

Discussion and Summary

In general, the smaller model emerges as the most practical. The large Jumbo has only one strong plus - a more realistic flight mode. Partial support for this view has been given by the father of us all - Earl Stahl.(Air Trails Classic Flying Models. Vol 2, No 1, Spring 1978) Earl notes, "...a flying scale model having a wing span of 28 to 40 inches with an area of 125 to 175 sq.in. is best. A ship of this size is adaptable to strong realistic construction and at the same time it is large enough to employ an efficient wing section and effective propeller. Unlike the mammoth scale [models] of near-gas-model proportions, these medium size models are easily handled when winding and flying".

From the strictly practical point of view, Earl is right. Still, something has been left out. After all, if we were overly concerned with the practical, we wouldn't be flying toy airplanes.

No, we are engaged in this hobby for reasons having nothing to do with the practical and a great deal to do with romance and fantasy. Thus practical advice, no matter how sound, has its limits. Is it really useful to direct mountain climbers to stay with sand dunes, thereby reducing costs and possible injuries? I think not.

Consider the giant (2") model. Fragile of wing, cumbersome in transport, drooling lube from endless strands of rubber - in all, a hopelessly impractical beast. Yet once aloft, the monster becomes an airplane. In final descent, the already flat glide becomes still flatter as ground effect comes in. Touching the grass, those huge wheels trundle on for many yards as the momentum is slowly paid off. Finally the plane stops, with the prop ticking over in the breeze -

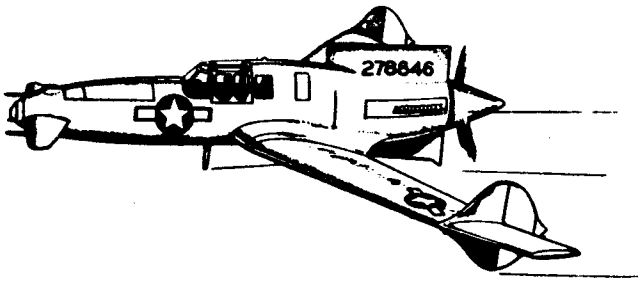
Giant Jumbo, anyone?

****

The revealed truths concerning performance prediction (Glue Guru #5) have been seized upon by the Glue Guruess, a well known computer buff. For other followers of the flickering lights, she offers a complete program (for the VIC-20) that will not only predict performance for given values of G (glide ratio), W (total weight including rubber, in grams), S (wing area, sq. in.) and R (rubber weight, grams), but will automatically offer a cascade of flight times as a function of steps in R. To those of you who prefer enlightment in electronic form, put aside those stupid TV games and reflect upon the following; for buried within is the secret formula for winning any contest!

```
MODEL AIRPLANE FORMULA
10  PRINT "CLR HOME"
20  FOR I=1 TO 6
30  PRINT
40  NEXT I
50  PRINT "MODEL AIRPLANE FORMULA"
60  PRINT "**********************"
```

```
 70  FOR Z = 1 TO 1000: NEXT Z
 80  PRINT " CLR HOME"
 90  INPUT "MODEL";M$
 95  PRINT
 96  PRINT
100  INPUT"G";G
110  INPUT"W";W
120  INPUT"S";S
130  PRINT
140  INPUT "LOWEST R=L"
150  L=7*W/100
160  INPUT "HIGHEST R=H"
170  H=W/3
180  PRINT
190  INPUT"WHAT STEP FOR R";P
200  PRINT
210  DEF FNT(R)=51.15*R*G/(W*SQR(W/S))
220  PRINT
230  PRINT TAB(2);"R";TAB(11);"T"
240  PRINT "----------------------"
250  FOR R=L TO H STEP P: PRINT R;TAB(10);INT(FNT(R))
260  NEXT R
270  INPUT "MORE(Y/N)";A$: IF A$ = "Y" GOTO 80
280  END
     RUN
```



(Note: The maximum reasonable range for R relative to W is R=7% W to R=W/3)

The above program will result in the following SCREEN DISPLAY:(▒ is cursor)

```
MODEL AIRPLANE FORMULA
**********************

MODEL? ▒                        (type in name)

G? ▒                            (type in value)

W? ▒                            ( "        "  )

S? ▒                            ( "        "  )

LOWEST R= L
HIGHEST R = H
WHAT STEP FOR R? ▒              (type in desired step -or increment- for R)

 R        T
**********************
---       --                    (scroll will appear on screen giving various
---       --                     R and corresponding T values)


MORE(Y/N)? ▒                    (if you type in Y program will return to line
                                 80 to clear the screen and proceed through a
                                 a possible new set of G,W,S and corresponding
                                 R and T values)

                                (if you type in N program will end)
```

Glue Guru Gnomics

There was a lady Dornier modeler, who took no sass
From rubber scale CD's,no matter how crass
When crossed by Thompson
She decked him with a sponson
And proceeded to shove all 12 props up his mass

THE SOCIETY OF ANTIQUE MODELERS

Niagara Frontier Chapter No. 48

WESTERN NEW YORK SAM CHAMPS HOST SAM 48 NIAGARA FRONTIER CHAPTER

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020 REPLICA
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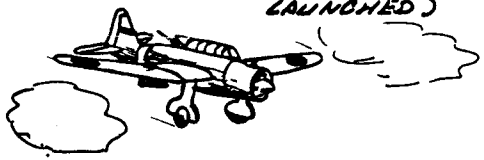
2) F.A.C. RUBBER SCALE
3) F.A.C. PEANUT SCALE
4) EMBRYO ENDURANCE
5) WWII COMBAT - MASS LAUNCH



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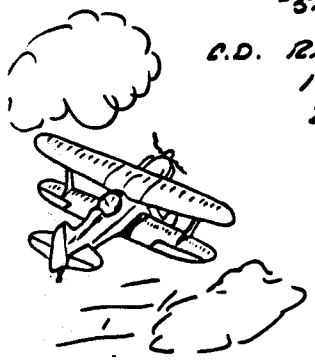
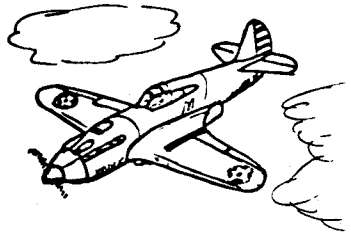




LIVING IN THE EARLY DAYS OF AVIATION

By Colonel (Hon) Adrian Comper

In 1933 when the Comper Mouse, the subject of the last two issues of "The Flying Aces", first flew, Adrian, after the financial struggles of the Great Depression separated him from his brother Nick, was already at the instigation of others established in Pittsfield, Massachusetts, designing and manufacturing (of all things unrelated to aircraft!) surgical operating tables and allied hospital equipment - a field that surprisingly had for him an intense appeal. Thus, without direct activity in Nick's company, this story must continue from facts elicited from family correspondence from England and the printed media.

Moving the Comper factory from Hooton near Liverpool to the new plant built for the company at London's Heston Airport must have had its slender capital streched to the limit. Further, once settled at Heston, extra costs resulting from inadequate labor-saving fixtures and jigs, and the resultant time lost in completing and readying the first two or three Mouse for trials, doomed this sophisticated newcomer long before expected sales could, as hoped, save the company from disaster.

With new blood on the board Nick had already lost managerial control. Then, before the Mouse had its chance in the marketplace, the new Managing Director (President) who had succeeded him, forced Nick and his supporters on the board to resign. Thus in 1934 the Comper Aircraft Company ceased to exist; subsequently the new board formed a company with another design staff and some years later went out of business.

Nick, 37 years old and with all he had accomplished in the eleven years since, at the age of 26, he flew his first design, the CLA2 in 1923, did not lose heart as will be seen later.

At this point it may not be inappropriate to reason why so many firms with promising futures fail. Generally, and this includes Comper, its the same old tale - so anxious to get started that the fundamental business guidelines are brushed aside. Instead, this happens:

1. Optimistically starting the venture with inadequate capital.
2. No long-range planning from the outset; no market research.
3. Over optimism in timing actual delivery to customers, thus delaying by then the much needed income from sales.
4. Of the utmost importance, trying to meet the string of unanticipated money problems without an experienced and tough financial man on the board of directors who demanded regular and formal board meetings.

When the Comper Company started in 1929, the Swift (amoung its design attributes was simplicity of construction) was an immediate success. Its appearance, outstanding performance and maneuverability attracted unusual attention at air meetings and races all over England, especially in view of the fact that it was powered by only the 40 hp delivered at full throttle by its horizontally opposed two-cylinder ABC engine. Later, when fitted with the 65 hp Salmson radial, or the Pobjoy giving 70 hp and in an alternative model 80, or the 90 hp geared Pobjoy, sales rapidly expanded. Then came the Swifts with the D.H. Gipsy engines, the Gipsy Major Special of 146 hp giving a top speed of 185 mph.

The fuselage consisted of three separate sections bolted together - engine and bulkhead section, wing and cockpit section, and rear fuselage section with elevator and rudder. Consequently, owners could quickly change type of engine, the only adjustments between the wing and cockpit section being throttle control, petrol and oil feeds.

(To be cont.)

10.

WHERE ARE THEY NOW

Vignettes of What Happened to Those Famous Modelers of the 1930's

Waybyrd Stule

Outdoor Rubber

Waybyrd "Birdie" Stule left his mark on countless model airplane meets from Virginia to Oklahoma, and on scores of other outdoor functions too numerous to mention.

Waybyrd's surly nature was thinly disguised behind a veneer of obstinate tenacity. He was noted for having the most twin pusher designs rejected by the magazines; an achievement recognized at the 1934 Annual Calhoun County MAC dinner when he was presented with a full-size plan for an outdoor tractor. Recalling grubby activity on one of daddy's farms, "Birdie" made the oft-quoted remark, "It don't look like no tractor to me." Little did they know at the time, but this was the turning point in the life and times of airplane modeling in Calhoun County.

"Birdie" built the outdoor tractor, changed the color scheme, the diameter of the wheels, and renamed it "Pigeon", an original "Birdie" Stule. Thus armed, he competed for the prestigious G&G* trophy in 1935.

Nephew of Senator Byrdway Stule, "Birdie" made the national scene in 1935 when Uncle Byrdway threatened a Senate investigation because a certain model magazine refused to publish plans for the "Pigeon", Birdie's" 1935 G & G trophy loser. The ruckus quietly subsided when the magazine editor explained that they had published the exact same plan a year and a half previously. The sullen Waybyrd contributed nothing to this.

The winner of the 1935 G & G trophy, Nellis "Knickers" Knowall, received scant attention in the model airplane press because of the uproar over the Stule "Pigeon". Nellis apparently hit the skids into oblivion.

While "Knickers" Knowall was apparently hitting the skids into oblivion, "Birdie" Stule was winning contests - in Calhoun County. This was possible because there were so many Stules in Calhoun County - they owned all the good flying sites; then, at the Senator's "suggestion", the Inverse Time Duration (ITD) rule was used. This administrative decision virtually assured a win for "Birdie" at every contest, since his flight time totals were close to minus. This system reached an all-time high when, with Nellis "Knickers" Knowall looking on through the wire fence, "Birdie" tossed out of his car a cardboard carton containing a dismantled "Pigeon". The carton was clocked at 1.5 sec's; another win for "Birdie".

The Inverse Time Duration rule was finally outlawed in Calhoun County by the Legislature. The bill was introduced by Nellis "Knickers" Knowall, who really hadn't hit the skids into oblivion; only into politics. Thus began the "legislate-to-win" rules-change process we have today.

W. Summersuit Vaughn
1983

* G&G = Grits and Greens Trophy.

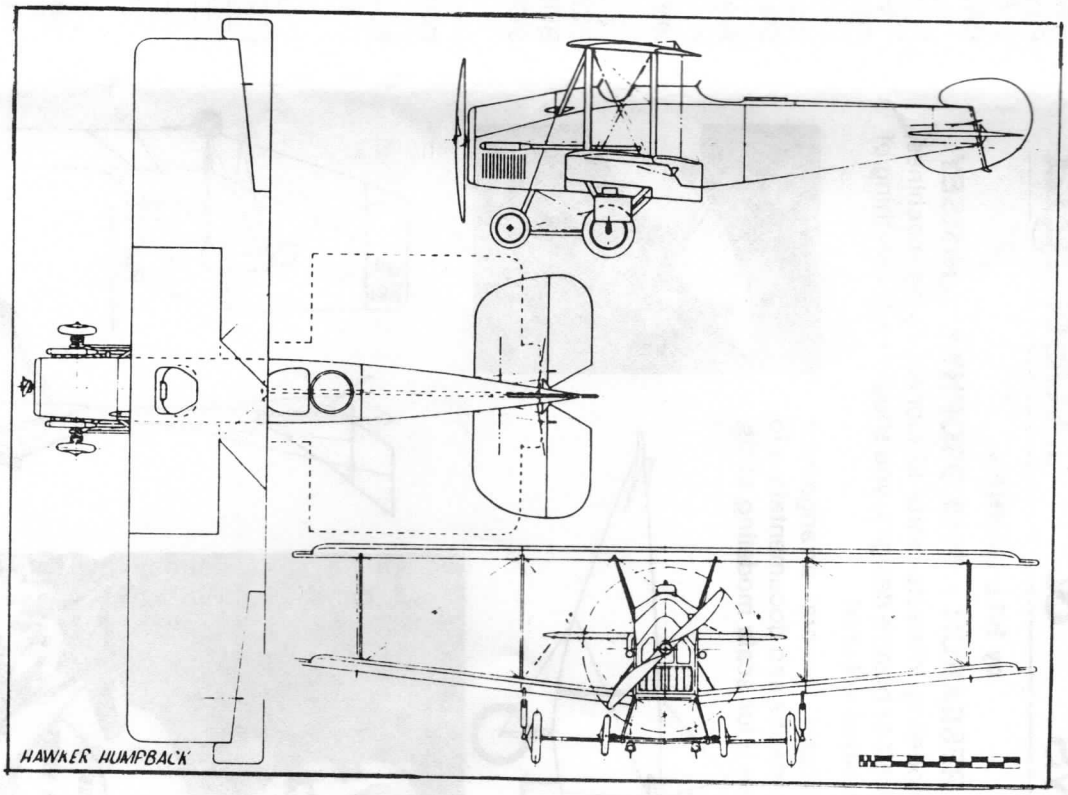
THE HAWKER HUMPBACK

Here it is, gang! You all remember the Westland Whoopee, the Seed and Regrist Garsnasher, the Blackburn Bland, the Gloster Grommet, and the Blackburn, Blackburn, those built-in headwinds with miles of wire, the forests of struts, the acres of fabric, right? Well, here's one from the builders of those sleek fighters, the Fury, Hurricane, and Tempest. That's right, skysters, it's the good old Hawker Humpback!

No, it's not from one of Captain DeBris' epic test flights, and it wasn't designed by Captain Frank DeB. Scott, notorious for his set of angled French Curves. Since it was never flown by DeBris, was it really real? Well, in a way it wasn't. Apparently, nerve and money folded before they could nail down two identical sides on that big sheet of wax paper on the floor of the shed.

The Humpback was a 1920 design project for a three-seat Fleet spotter, reconnaissance aircraft whooped up by the Hawker drawing office. It might have competed with the Avro Bison. The designer is unknown to this day, but could have been the mysterious Captain Thomson, rumoured to have been a club-mate of Captain Sloven-Lee. Perhaps some of you sleuth-type readers could unravel this mystery.

Well, clubsters, who'll be the first on your block to build a flying scale copy of the Hawker Humpback?



SCRAPBOOK of SCALE

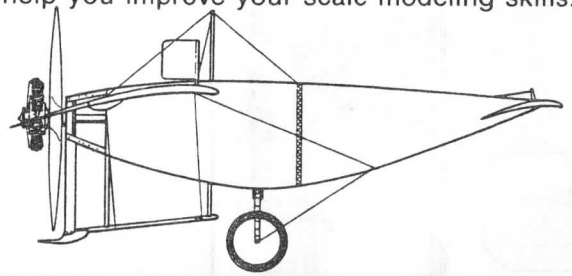
3-Views & Nostalgia

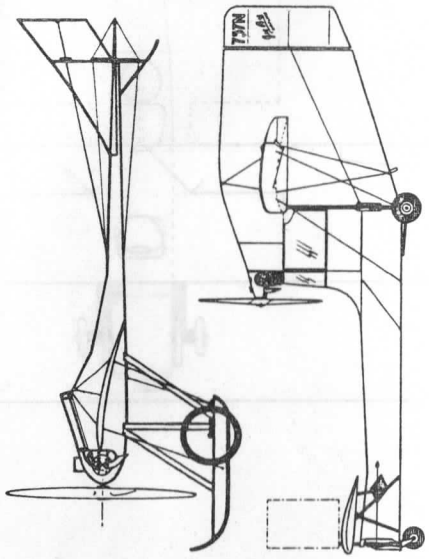
by BILL HANNAN

HISTORY • RESEARCH • PHILOSOPHY • WHIMSEY

Whether your modeling interests relate to pioneer flying machines, Golden Age aircraft or bizarre designs, you should find something of interest in this unique volume!

Featured are articles, general arrangement drawings, photographs and documentation to help you improve your scale modeling skills.





This new book contains a selection of articles culled from the work of Bill Hannan, dating from 1964 through 1983. Much of it originally appeared in the following publications: **American Modeler, Model Builder, Sig Air-Modeler, Model Retailer, R/C Sportsman, Model Helicopter News, Flying Models, Popular Rotorcraft Flying, Sport Flying, Aeromodeller** (England), **Scale Models** (England), **World War 1 Aeroplanes,** the **Cross & Cockade Journal,** and **le fanatique de L'AVIATION** (France).

Included are a dozen 3-view drawings of fascinating aircraft suitable for scale modeling, including obscure pioneer monoplanes, a Golden Age racer, a biplane, a triplane, two canards, an Autogiro, a Gyroptère, and three different Farman Mosquitoes. Countries of origin represented are: England, France, Germany, Spain and the United States of America.

Added attractions are ready-to-use construction drawings for a simple catapult glider, a rubber-powered profile, and a Peanut Scale model.

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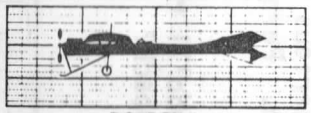

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MODEL AIRCRAFT WEATHERING

By Mike Midkiff

There is nothing like a weathered finish to give a model that personality and character which seperates it from other models. Unfortunatly, weathering can be as easily over done as not done at all. Some aircraft look great with a weathered finish-others, don't waste the effort. Most military aircraft look good and take on a unique character when the weathering is done right.

Weathering tends to show up better and be more satisfying applied to a spray-painted finish. Some obvious weathering looks good on colored tissue models, but the more subtle weathering is lost on a colored tissue model.

The generic "weathered look" can mean any one or combination of these exterior visual conditions;

Panel lines with paint chipped primarily caused by movement, handling, and air flow.
Hinge lines are subject to air flow and shading variations due to changes in contour.
Fading due to sun and or salt water spray.
Exhaust stains and burns.
Gun smoke.
Scuffing and scraping due to walking on, stepping or handling.
Chipped paint around rivits due to removal and air flow.
Oil and fuel spatter and staining.
Taped over seams- -shreded tape or paint lifted due to tape removal (it happens to full size aircraft too).

The main ingredient in a good weathered finish is the use and interpretation of many photos. Pay particular attention to close ups of the cowling, wing leading edge, cockpit, flaps, ailerons and wing walks. Notice how sometimes the color subtely changes between the wing and aileron. Look at the wear on the leading edge. See how the exhaust fans out and fades.

The application of these weathering features are what capture the essence of the aircraft. After all isn't that what scale modelers are striving for?

Let us look at a typical approach to apply weathering;

1. Complete the color scheme, including insignia and the like.
2. Draw on the various lines. Keep in mind that these lines represent shadows,due to butt up or overlap of sheets or forms. The line which represents the typical stab/elevator seperation is really a shadow which fades to represent the convex surface of the leading edge of the elevator. Fabric covering will sometimes show highlights and shadows which represents fabric over structure. The structure will cause a highlight and next to it a shadow. This can be reproduced by a grey line and next to it a black line. This gives an impression of 3-D fabric sag.
3. Highlight certain areas, for instance the leading edge of wing, stab and fin, also the ailerons with a light dusting of grey, using an airbrush. Just a hint, no more. This represents fading and wear.
4. Represent paint chipping along panel lines by using a tooth pick point dipped in light grey paint and applied like a fountain pen in small amounts at intersections of panel lines. Chipping will occur around engine flaps, access panels, canopy frames and panel edges which receive severe slip stream, scuffing will occur on and near wing walks, foot steps and cockpit sides.
5. Duplicate engine exhaust, oil spatter and gunsmoke. Dark grey paint in an airbrush will duplicate this nicely. Direct the spray toward the rear and don't over do it.

6. Study the photos and reproduce any other discoloring, chipping or highlighting which is representative of the aircraft.
7. After all that handiwork is complete, spray a light coat of clear over everything to lock in place and prevent smudging.

REMEMBER;
Don't over do, work from photos, weathering is an art form and must be developed as a technique. Don't let this scare you, it really isn't as hard as it may seem. With a little practice you to can create the model of your dreams.

****

Nikitin-Schevchenko IS-4 Peanut

Mark Fineman

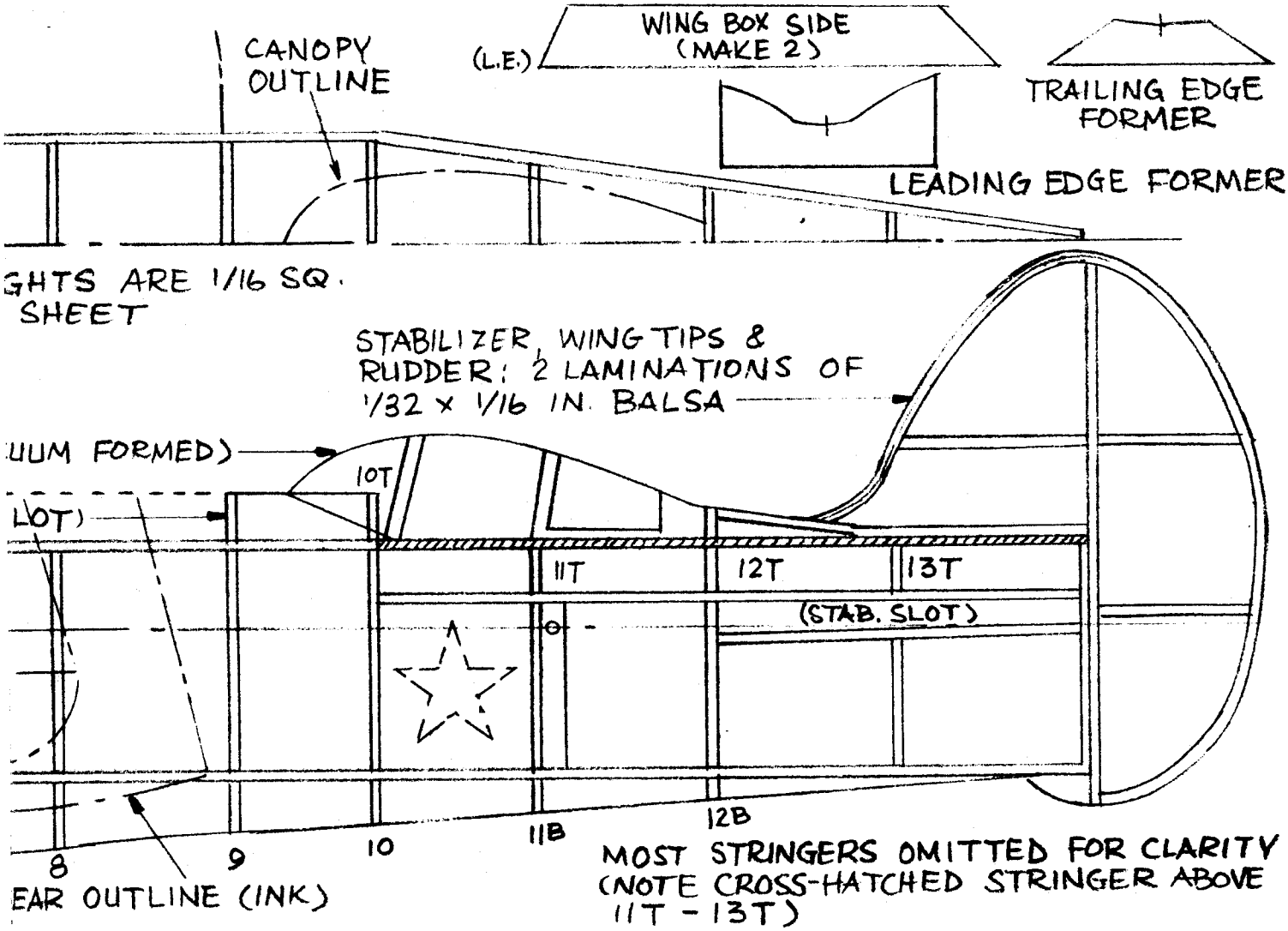
The IS-4 has to be the winningest plane I ever flew. Its bigger brother, the original 18 inch span version that appeared in the November 1981 Model Airplane News, has won several WW II combat events and the peanut version shown in the accompanying plans is even better. This year alone it won the FAC outdoor peanut postal contest (better than three minutes) and then won an indoor contest with a top time of 60 seconds. I use a different prop assembly indoors with larger, sheet blades. It has flown so much and so well that it will soon be due for recovering. All that rubber lube has made it rather soggy.

For those unfamiliar with the plane, it was an experimental Soviet fighter that could lower a second wing to become an instant biplane, or retract same to be a shoulder wing monoplane. A detailed reference and 3-view drawing can be found in Soviet Air Force Fighters Part 1 by Green and Swanborough (Arco Publishers). Needless to say, it was not a great success -- but its proportions make for a fantastic model airplane!

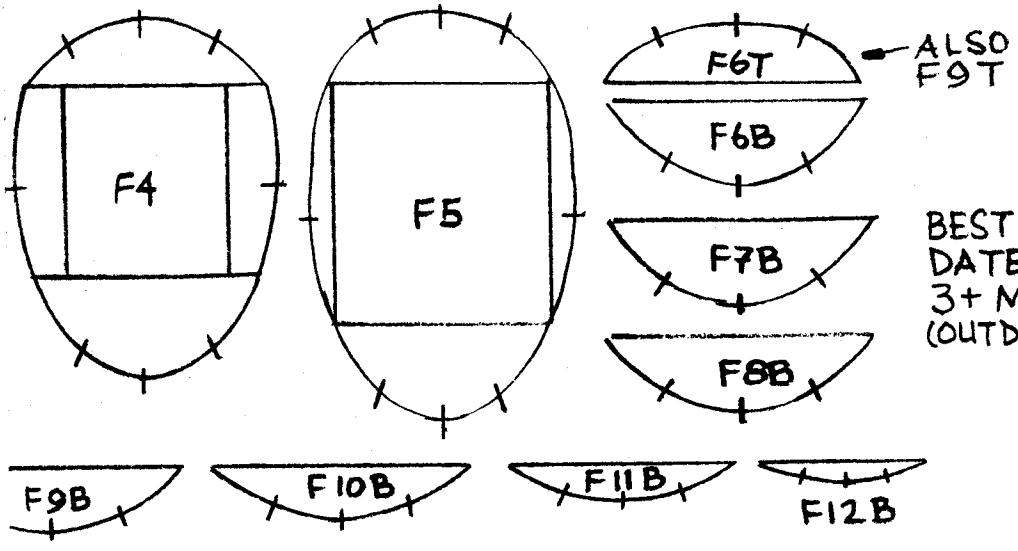
The peanut was originally just a photo reduction of the larger plan but there are some important changes in wood size and construction that I incorporated and are now in the accompanying plan. The only tricky part is building in the gull part of the wing. The sketches should explain everything, but in essence you first make two conventional wing panels, then glue them together with the proper dihedral angle. After that a built-up "wing box" is incorporated into the wing, and portions of the spar and leading edge are carved away. Add a center stringer, some scrap balsa at the box corners to blend with the fuselage contours, and the wing, gull shape now built-in, should mate perfectly with the fuselage slot.

My IS-4 is generally powered with two loops (four strands) 1/16 FAI, 17 inches long. Why not just a loop of 1/8? Simple. If one loop of the 1/16 should break, it won't blow up the fuselage the way a single loop is inclined to do. You will need some right- and down thrust. And don't expect this plane to fly like a (puke!) Fike or Lacey. The IS-4 peanut should rocket straight up - and up - and up. It has a very nice glide and should have no trouble regularly putting in times in excess of a minute. The more astute observers in the audience have no doubt noticed the strong resemblance between the IS-4 layout and that of a Chambermaid

By the way skysters, if you should happen to build one of these little fighters, how about sending me a photo? Ohio FACer Dan Briehl has done about as well with his IS-4s as I have, so there must be something good lurking within it.



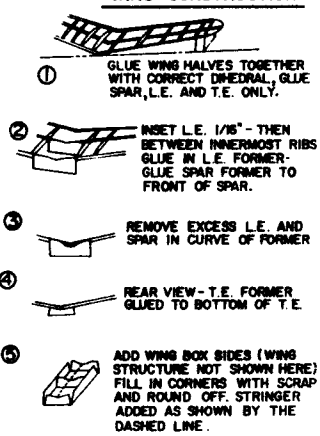
MOST STRINGERS OMITTED FOR CLARITY (NOTE CROSS-HATCHED STRINGER ABOVE 11T - 13T)

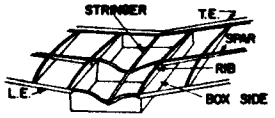


PROPELLOR - 5 1/2 IN. "NORTH PACIFIC", OR EQUIVALENT

BEST TIME TO DATE - 3+ MINUTES (OUTDOORS)

WING CONSTRUCTION





COMPLETED WING BOX ASSEMBLY
FILLED CORNERS OMITTED FOR CLARITY

WWII SOVIET EXPERIMENTAL FIGHTER
NIKITIN-SCHEVCHENKO IS-4
BY MARK FINEMAN
PEANUT SCALE
MAY 9. 1983

GHQ FAC PICNIC MEET

Aug. 20, 1983 Time; 10:00 am till 5:00 pm Prangmore Aerodrome

Events;

1. FAC Scale
2. FAC Peanut
3. Embryo Endurance
4. FAC Power Scale
5. Thompson/Greve Race
6. WWI Dogfight
7. Hand Launch Glider
8. Old-Time Rubber Scale
9. 020 Old-Timer Replica
10. Old-Timer Rubber

Old-Timer Rubber must have a max. wingspan of 36 inches, have a landing gear and no folding props.

As this is a picnic meet, why not bring the whole family? We plan to have enough food and drinks, but if you care to bring something with you,you may do so, although it is not necessary. If there are any questions, please get in touch with the Contest Director. Hope to see a great turnout for this one.

If you have not been to Prangmore Aerodrome before, there is a map in the last issue of the newsletter.

You may wonder why a picnic meet? Well this is the way we can thank you for the great support you have given the Erie Model Aircraft Assn. at our meets.

****

Prizes to be kits/merchandise. Entry Fee, $3.00 first event, $1.00 each add. event. Max fee $6.00 Jr/Sr $2.00 flies all.

Contest Director; Lin Reichel 3301 Cindy Lane Erie, Pa. 16506
ph. 814-833-0314

****

Contest Calendar

Aug. 6 Oldtimer meet, Grand Island, N.Y. Flyer in this issue.

Aug. 14 CFFS Scale Races Scramble at LCCC Lorain, Ohio 10:00am-5:00pm. FAC Peanut, Fac Scale, OT Kit/Plan Scale, Co/2 OT Replica, Post War Race, Greve/Thompson Race, All Fly, CD Tom Majestic 3273 W. 129 St. Cleveland, Ohio 44111 Ph. 216-251-4176

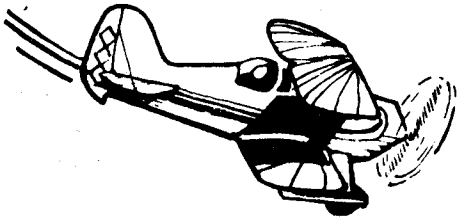
Aug. 20 EMAA Picnic Meet, see above.

Aug. 28 Cloudbusters Annual Scale Meet at Detroit Mich. Flyer in this issue.

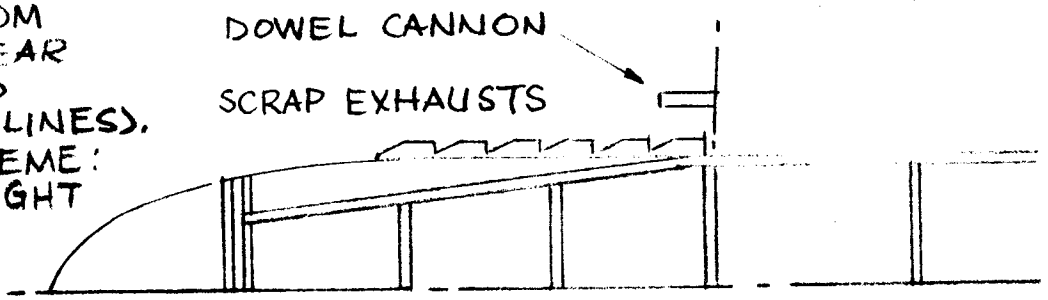
Sept. 11 Canton, Ohio FAC SCALE Meet.

Sept. 18 Greater Storkville FAC at Lorain, Ohio. 10 am--5 pm. GHQ Peanut, FAC Scale, FAC Power Scale, No-Cal & 3/4 Schneider Cup Profile, Embryo, Post War Handicap Race, Greve Race, Thompson Race, WWI Biplane Dogfight WWII Combat. CD. Dave Pishnery 29323 Grand Blvd. Wickliffe, Ohio 44092 ph. 216-943-2640

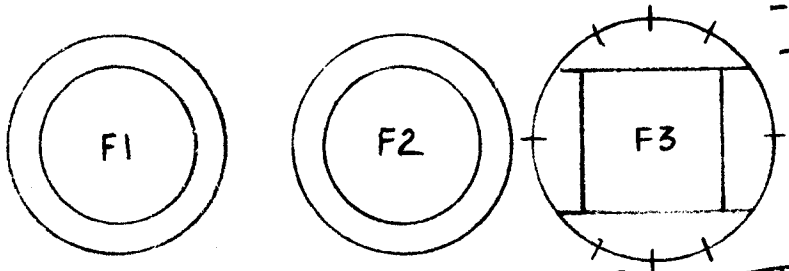
Sept. 10 DC Maxecuters '83 Summer Fun Fly 9am--6pm. FAC Scale, FAC Power Scale Mas Launch events--Races, WWI, WWII,Golden Age, Bill Winter Design. CD. Allan Schanzle 8311 Exodus Dr. Gaithersburg, Md. 20879 ph. 301-840-9883

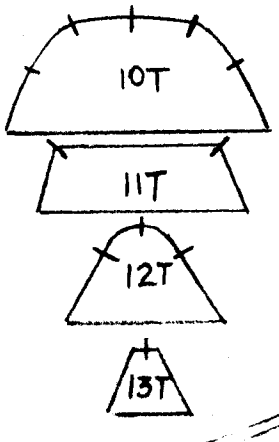


NOTE - FOLDING BOTTOM WING AND LANDING GEAR SHOWN IN RETRACTED POSITION (INKED OUTLINES). PROBABLE COLOR SCHEME: MED. GREEN UPPER, LIGHT BLUE BELOW, RED STARS.



- STRINGERS, LONGERONS, UPRI
- FORMERS ARE 1/20 (OR 1/32)





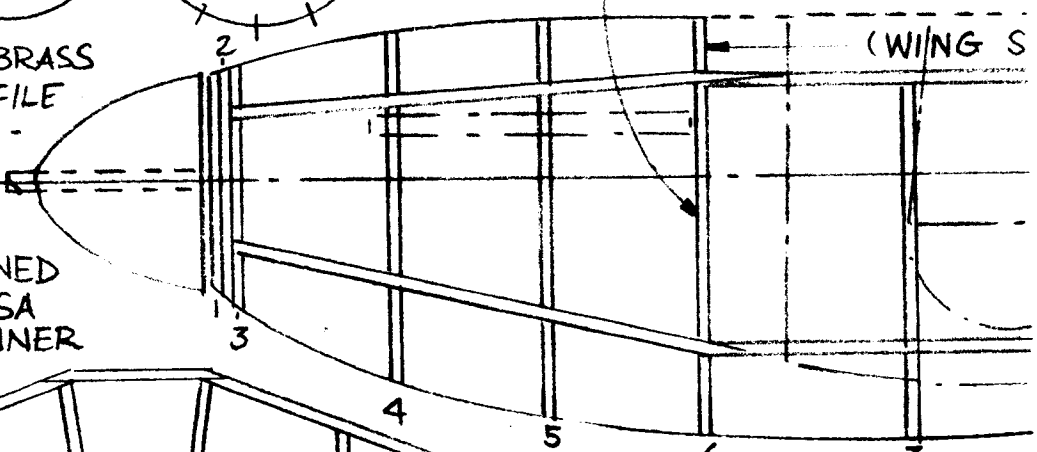
1/16 IN. BRASS TUBE - FILE IN FREE - WHEELER

TURNED BALSA SPINNER

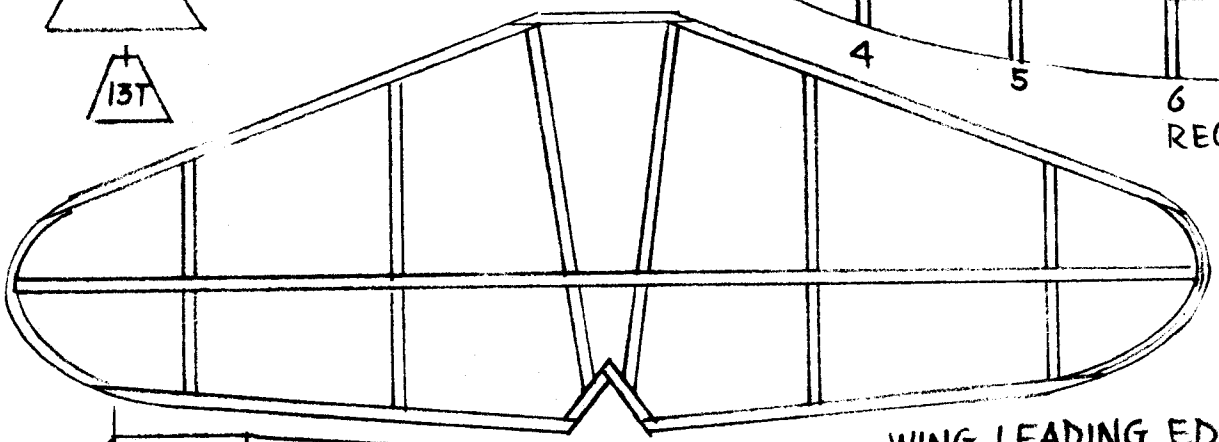
BUTT NOSE AREA SIDE STRINGERS TO F6

(VAC

(WING S

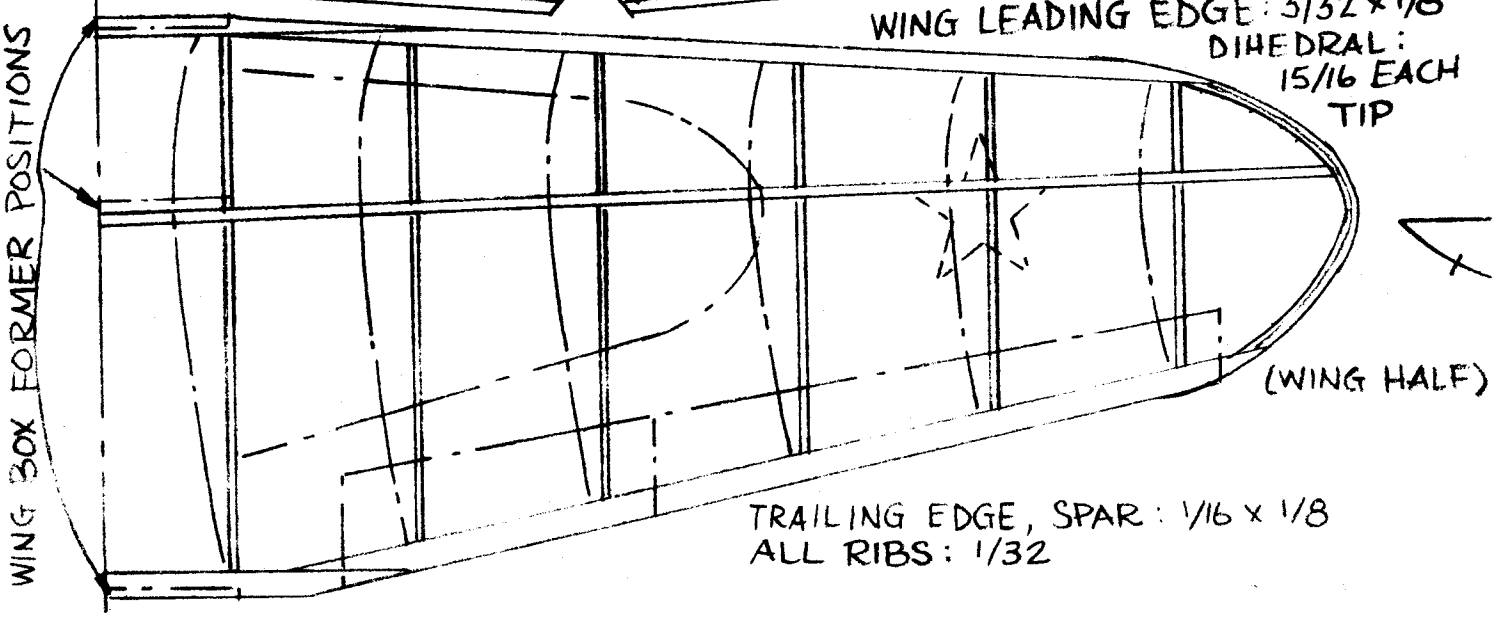


RECESSED WING/G



WING LEADING EDGE: 3/32 x 1/8

DIHEDRAL: 15/16 EACH TIP



(WING HALF)

TRAILING EDGE, SPAR: 1/16 x 1/8
ALL RIBS: 1/32

PHOTO PAGE

Reading clockwise from upper left; Wales Thomas rendition of the Turbo Ag-Cat, looks real nice, how does she perform, Wales?

Peter Baltera holding Dad's (Ed) Focke-Wulf Ta-152, Nice job. Ed says that Peter is just about ready to become an FACer, that's what we like, new blood to keep this hobby alive.

This pic from the spring indoor meet right here at GHQ, shows Ken Groves launching his Beautiful Bucker Jungman at 18" span. She's is a real goer.

Ford 2AT by "Doc" Martin. She does 55 sec. at 9 grams indoors.

Bottom- Bob Clemens museum quality General Aristocrat, real nice performer.

****

SWAP SHOP

For Sale; Plans by Mike Midkiff, 3/4 scale Douglas Dauntless, 3/4 Vought Vindicator, 3/4 Curtiss P-40, 5/8 Curtiss SB2C Helldiver, 1 inch scale Laird Super Solution, $5.00 each. Mike Midkiff 7611 Cypress Humble, Tex. 77338

****

NEW KITS; Golden Age Reproductions has announced the addition of two new kits to their line of quality products. They are the Albatross D-5 and the Boeing F4B-4. Both are in the 24 inch span area and feature molded parts and fine decals as well as choice balsa wood. Both kits sell for $8.50 ea. plus $1.50 postage for each kit. Golden Age Reproductions, Box 13, Braintree, Mass.02184

****

PLANS BY DIELS; SAE for plan list, many fine peanut and ½ inch scale plans. latest plans are; Swedish F. F. V.S. J22B and Fairchild XC-31 at $2.50 each postpaid. David Diels, Box 101, Woodville, Ohio 43469

****

ENLARGING; Want your favorite peanut plan (or Other) enlarged? Send to David Diels for information. Same address as Plans By Diels (see Above).

****

FOR SALE; Ignition model airplane engine parts. Send SASE for list to Vic Didelot, 4410 Lorna Lane, Erie, Pa. 16506

****

FLYING ACES PATCHES; Large patch 4x8 inches, small patch FAC Nats 2½x4 inches. Each patch $2.00, specify size when ordering. Flying Aces GHQ, 3301 Cindy Lane, Erie, Pa. 16506

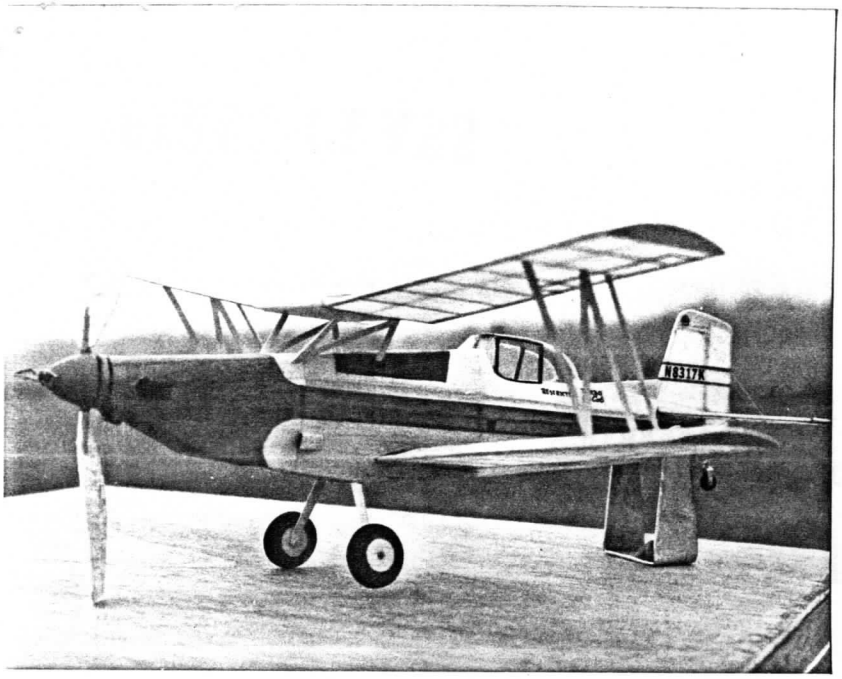
****

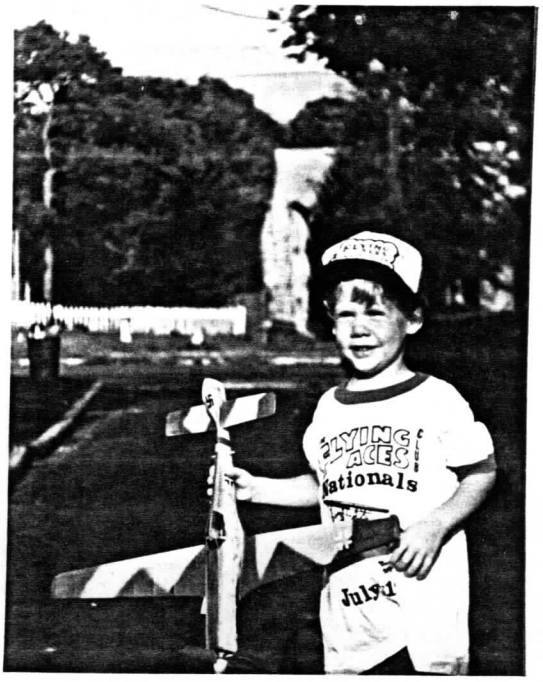
RIGGING THREAD; Butch Hadland (from England) has sent his supply of elastic rigging thread to GHQ. It was just not economically possible to send orders directly from overseas so Butch has sent it to GHQ. Profits will go into the General Fund at GHQ. Cost is $1.00 for 100 feet,postpaid, a real bargain. Send your order to; GHQ, same address as for patches--see above.

****

S.O.S.--S.O.S.--S.O.S.

The newsletter is running short on articles and the plan supply is nearly depleted. If you have something of interest send it in! Let us be the judge as to whether your plans are acceptable or not. In many cases we can get them in shape for publication. See your work in print and share it with the other clubsters. There has to be lots of original designs out there, guys, lets have em!

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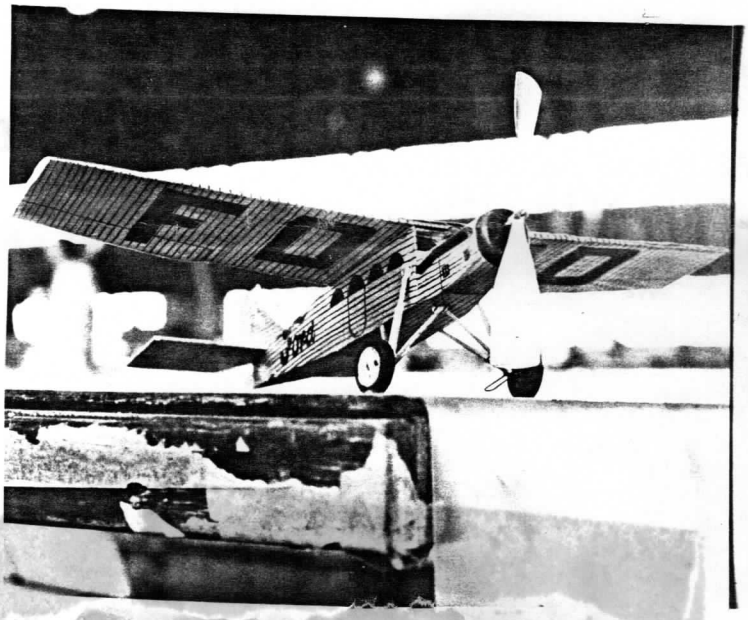
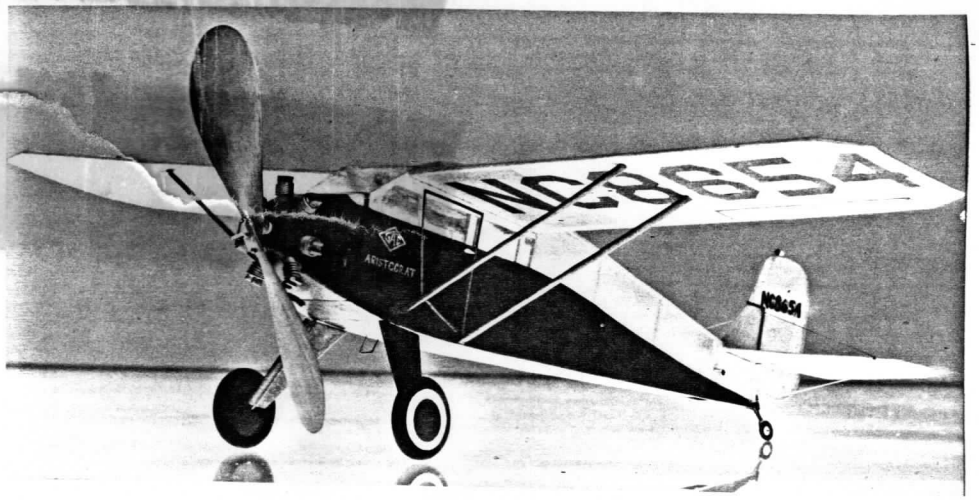
July

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