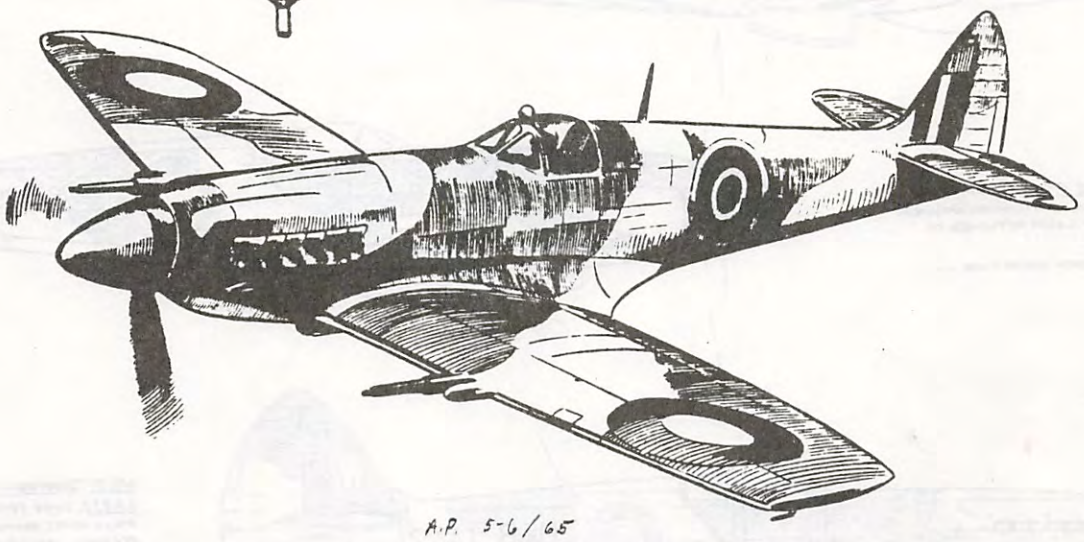
CROSSWINDS

75



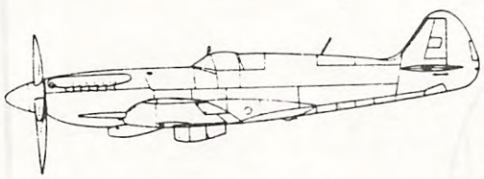
A.P. 5-6/65

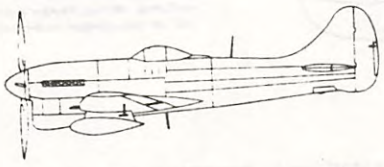
ARGOTECH

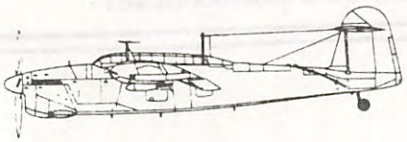
RM 2465B

23555 EUCLID AVE.

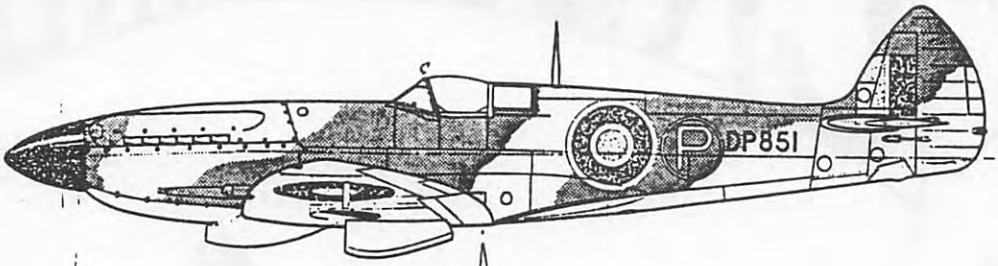
CLEVELAND, OH 44117





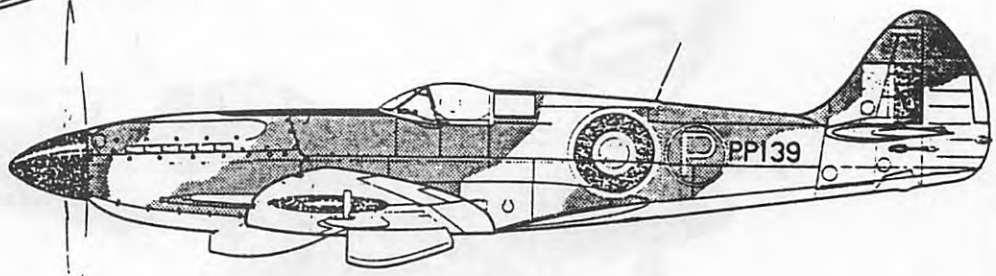


2



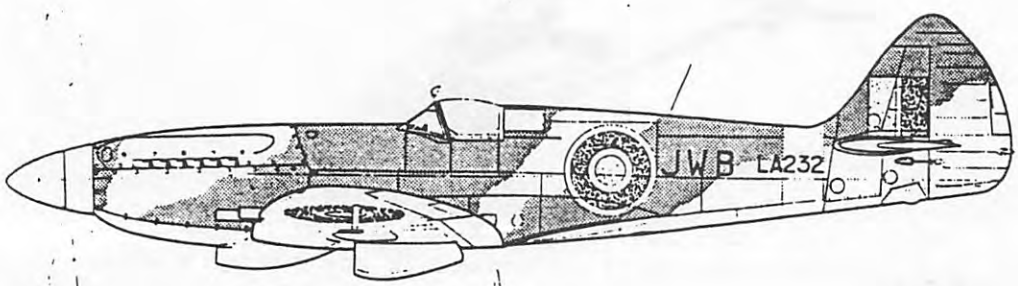
Mk. 21
FIRST PROTOTYPE DP851, early 1943
FOUR-BLADED PROPELLER, 'C'-TYPE ARMAMENT & STANDARD WINDSCREEN.

CAMOUFLAGE PATTERN IS APPROXIMATE.

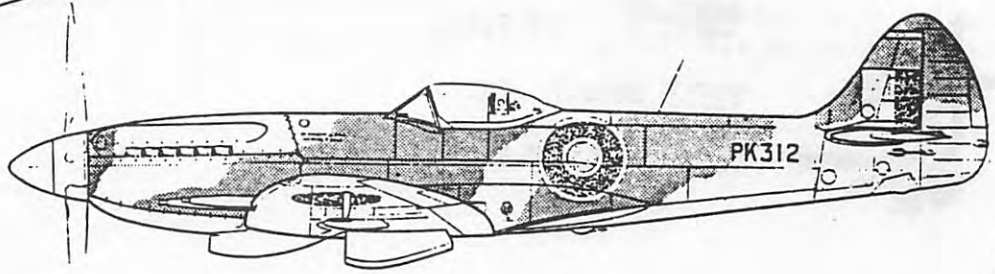


Mk. 21
SECOND PROTOTYPE PP139, Autumn 1943
FIVE-BLADED PROPELLER, FOUR-CANNON ARMAMENT & CURVED WINDSCREEN (LATER RETURNED TO STANDARD).

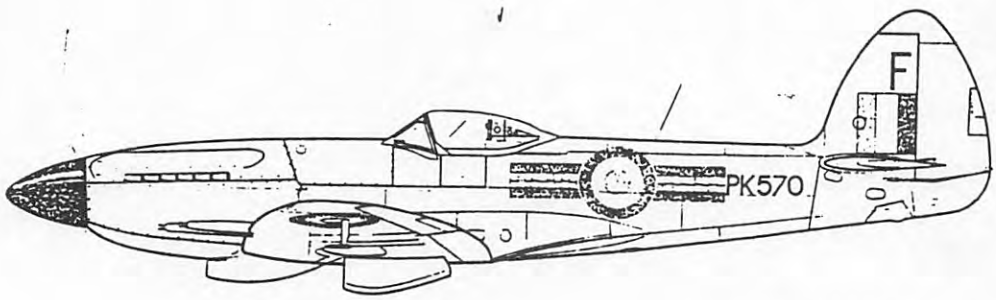
TEMPORARY FIN EXTENSION SHOWN THUS: - - -



Mk. 21 (Supermarine Type 371)
LA232, circa 1946
ROLLS-ROYCE GRIFFON 85 & CONTRAPROPS: PERSONAL MACHINE OF AIR VICE-MARSHALL J.W. BAKER, COMMANDER OF 12 GROUP.



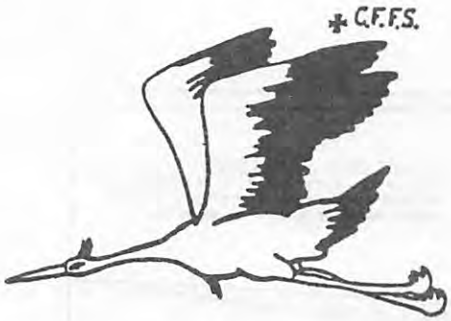
FIRST PRODUCTION Mk. 22
PK312, March 1945
LATER FITTED WITH SPITEFUL-TYPE TAIL



Mk. 22 PK570, 603 (City of Edinburgh) SQUADRON, circa 1948
NATURAL METAL FINISH & EARLY POST-WAR USE OF SQUADRON MARKINGS.

0 1 2 3 4 6 8 10 ft

SUPERMARINE TYPE 356: SPITFIRE Mk. 21 & Mk. 22
PROTOTYPES & PRODUCTION VARIANTS





EDITOR:
Gordon J. Roberts
5539 Hilltop Oval
Parma, Ohio 44134
(216) 749-4817



CROSSWINDS

THE JOURNAL OF THE CLEVELAND FREE FLIGHT SOCIETY

NO. 75 THE SPITFIRE REVISITED

EDITORIAL COMMENT.

As you will see in the top right hand corner, I have moved since issue #73 was prepared. After five operations in 2½ years on her right ankle, Helen decided to call it quits and retire, which involved our move back to my condo in Parma. She is getting about very well now and the problem seems to be fixed. However, my various bits of paper relating to this issue went into one of the many cardboard boxes and it was a while before I could get back to it.

The Spitfire issue apparently "got to" a lot of people and I had some interesting correspondence, some of which I will share with you. Peter Mann, of Guelph, Ontario, raised two points. The first queried where the Spitfire ranked in the beauty stakes if we considered all fighters including the biplanes, for example the Fairey Fantome, the Avia 534 and the lovely Hawker Biplanes. The decision has to be an individual one, but I'm still committed to the Spit. It is a harmonious entity and aerodynamically superb to my eyes. The second point was the interesting one about the almost unknown master-mind behind the Spitfire development story. As you know, Reg Mitchell died as the prototype Spitfire was approved for massive construction, leaving behind him the enormous problems of continuously adapting the design for different armaments, ever more powerful engines, suiting it for its multiplicity of roles, working on the aileron problems, strengthening the airframe, adjusting fin area and so on almost "ad infinitam". All this work was handled superbly by Joe Smith. Peter therefore had a valid point in saying that production Spitfires such as the Mark XIV were largely the brainchild of Joe Smith--for example the nose had been lengthened to take the Griffon engine, the fin area had been increased to compensate and the underwing coolers had been enlarged. However, the original creation had been Mitchells, while Joe had subsequently adapted it; two different types of genius, if you like, and it is so fortunate that we had Joe to carry on the good work. By the way, the Arco-Aircam #8 is now out of print, so if you haven't got it, start looking now. I was fortunate to find a copy for Peter to fill out his archives.

Harry Robinson wrote from England. He really knows his Spitfires and he took me to task for some bits of poetic license I took in my write-up. He sent some beautiful 3-views of the Marks 21, 22 and 24 which I have shrunk down and am including in this issue. As he so rightly pointed out, there are quite noticeable differences between the various Griffon Spitfire Marks. However, armed with a 3-view of the Mark one wishes to build, adapting the plan airframe should not be a big job. I have pursuaded

ARMEMENT
4 CANONS HISPANO Mk II
À COMMANDE PNEUMATIQUE

GROUPE MOTO-PROPULSEUR
MOTEUR ROLLS-ROYCE GRIFFON 61 DEVELOPPANT 2 035 cv À 2 750 tr/mn ET ENTRAINANT UNE HÉLICE ROTOL DE 3.353 m DE DIAMÈTRE.

PERFORMANCES

VITESSE MAXIMUM	AU SOL	626 km/hr
	À 5 600 m	734 km/hr
	À 7 600 m	763 km/hr
VITESSE ASCENSIONNELLE		25 m/sec
PLAFOND NORMAL		13 100 m

AILE ORIGINALE (Mk. I-XX)
UN SEUL CAISSON RIGIDE EN TORSION ENTRE LE LONGERON ET LE BORD D'ATTAQUE ÉPAIS ET CHAUDRONNÉ.

AXE AVION

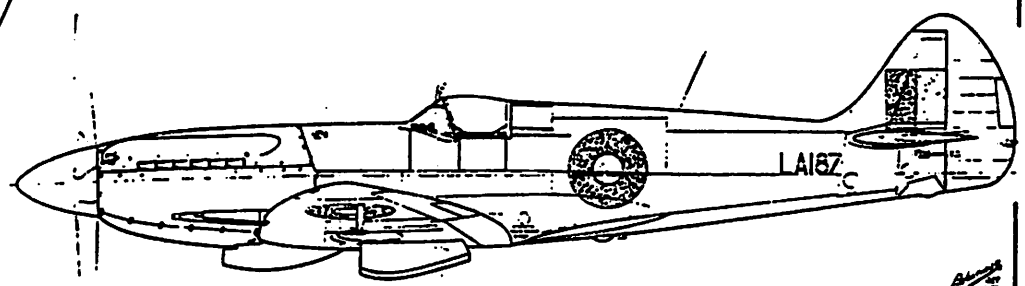
AILE DU TYPE 356 (Mk. 21, 22, 24)
CAISSON EN TORSION DU BORD D'ATTAQUE RETENU: SIX CAISSONS AJOUTÉS DERRIÈRE ET AU DELA DU LONGERON PRINCIPAL.

TRAIN GAUCHE SORTI

CARACTÉRISTIQUES

ENVERGURE	12 243 m
SURFACE	23 077 m²
LONGUEUR	9 957 m
ENVERGURE DU PLAN FIXE	3 200 m
POIDS VIDE	3 140 kg
POIDS TOTAL	4 165 kg

0 1 2 3 mètres



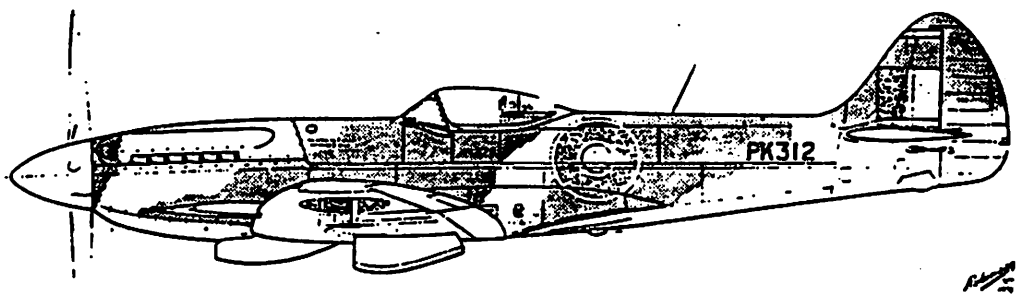
SUPERMARINE TYPE 356: SPITFIRE Mk.21
PREMIER AVION DE SÉRIE LA 187: Février 1944

LE GROUPE MOTO-PROPULSEUR, L'ARMEMENT ET LES PERFORMANCES SONT SEMBLABLES À CEUX DU Mk. 24.

CARACTÉRISTIQUES

ENVERGURE	11 252 m
SURFACE	23 631 m²
LONGUEUR	10 033 m
ENVERGURE DU PLAN FIXE	3 962 m
POIDS TOTAL DÉCOLLAGE	5 147 kg
POIDS TOTAL ATTERRISSAGE ET TOUS VOLS	4 218 kg

0 1 2 3 mètres



SUPERMARINE TYPE 356: SPITFIRE Mk. 22
PREMIER AVION DE SÉRIE PK 312: Mars 1945

Harry to make a table showing the differences, so that this information will be on file for all time. This will entail quite a bit of work and it will probably not be forthcoming in time for this issue, but when it does come in, we will put it in the next issue of Crosswinds. Antoher thing Harry debated with me was the question of the wing shape on the later Marks, and I think we still disagree. The differences are only apparent over the outboard 3 feet or so, but they do alter the feeling one gets as one looks at the drawings. As far as I'm concerned the Mk. 21 is an ugly brute--the extended, pointy tips destroy all harmoniousness (if there is such a word!). The Mk. 24 tips are much better, squared off a little, but not objectionable, but also clearly not elliptical. The Mark 21, by the way, did see a little action in WWII.

Dave Pishnery has built a Mk. XIV from the plans but has done the bubble canopy version with the cut-down rear decking. I have persuaded him to let me publish the formers for this modification in this issue to help you if your ambitions lie in this direction. Dave said his model went together very easily, as did mine, so the plans seem to be OK.

Jack McGillivray of Toronto has used the peanut version as the basis for one of his inimitable lightweight masterpieces. It flies magnificently--just like its on rails! Of course, anything that Jack builds is amazing, but getting a model of this type to fly for almost 2 minutes has to be almost unbelievable!

It is now 50 years since the prototype Spitfire flew, and in celebration both the D. C. Maxecuters and the Cleveland Free Flight Society are running Spitfire competitions. There have to be a minimum of five models present before the competition can be run, so lets get cracking! The models can be of any Mark and of any constructional type, including No-Cal. As one of these would be the easiest option, I have drawn out (and constructed) a clip-wing Spitfire XIV No-Cal and the plans are included here. I have put in several unusual features which you can omit if you want, and build a "conventional" model. The new features comprise (a) a triangular motor stick for best strength and (b) conventional double covering on the wing. These are included for a purpose. Indoor No-Cals usually have a motor stick about 1/8" x 1/4" and single covering on the very flimsy wing. Outdoors in a breeze these are very temperamental models prone to bending and flexing. The use of a large triangular box of light 1/32" sheet leads to great fuselage rigidity, while the double covered wing is very strong and warp-resistant. This model should be much more consistent than the normal No-Cal, though of less ultimate flight potential--but that's not the name of the game outdoors!

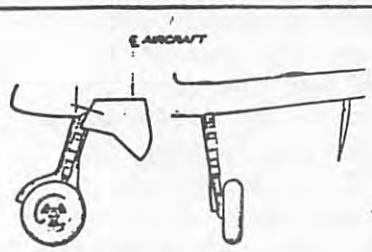
We are also running a copy of the old Earl Stahl Spitfire plan (of indeterminate Mark number!) if you want to get into Golden Age.

That's all on the Spitfire for this issue. There is a common misconception that Spitfire models do not fly well. This is not true, and its 50th anniversary year is an appropriate time to lay that myth to rest! Good flying, and I will see you at the Nats.

FAIREY BARRACUDA

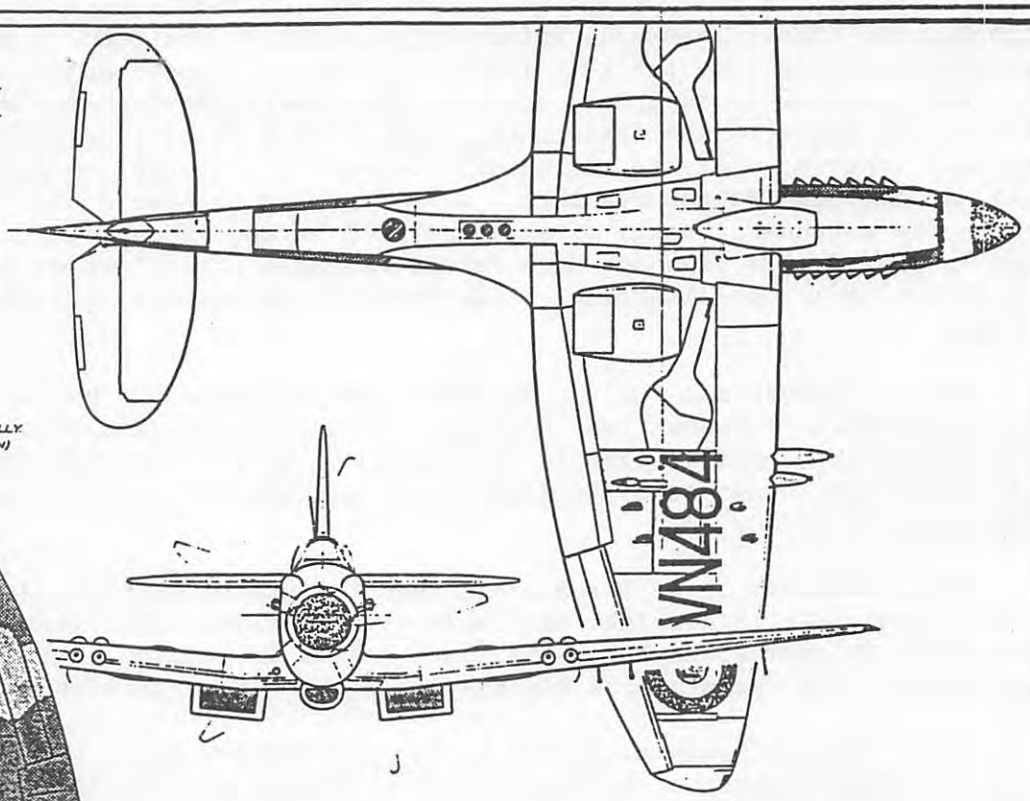
No-Cal

The December 1973 American Aircraft Modeler featured a 35" wingspan , semi-scale version of this airplane. Through the magic of the Minolta Copier I enlarged the magazine plan to about a 16" wingspan and traced the outlines to produce this no-cal version. Use your favorite light construction technique and lets see at least one of these at the Brook Park Contest next February. Mike Zand

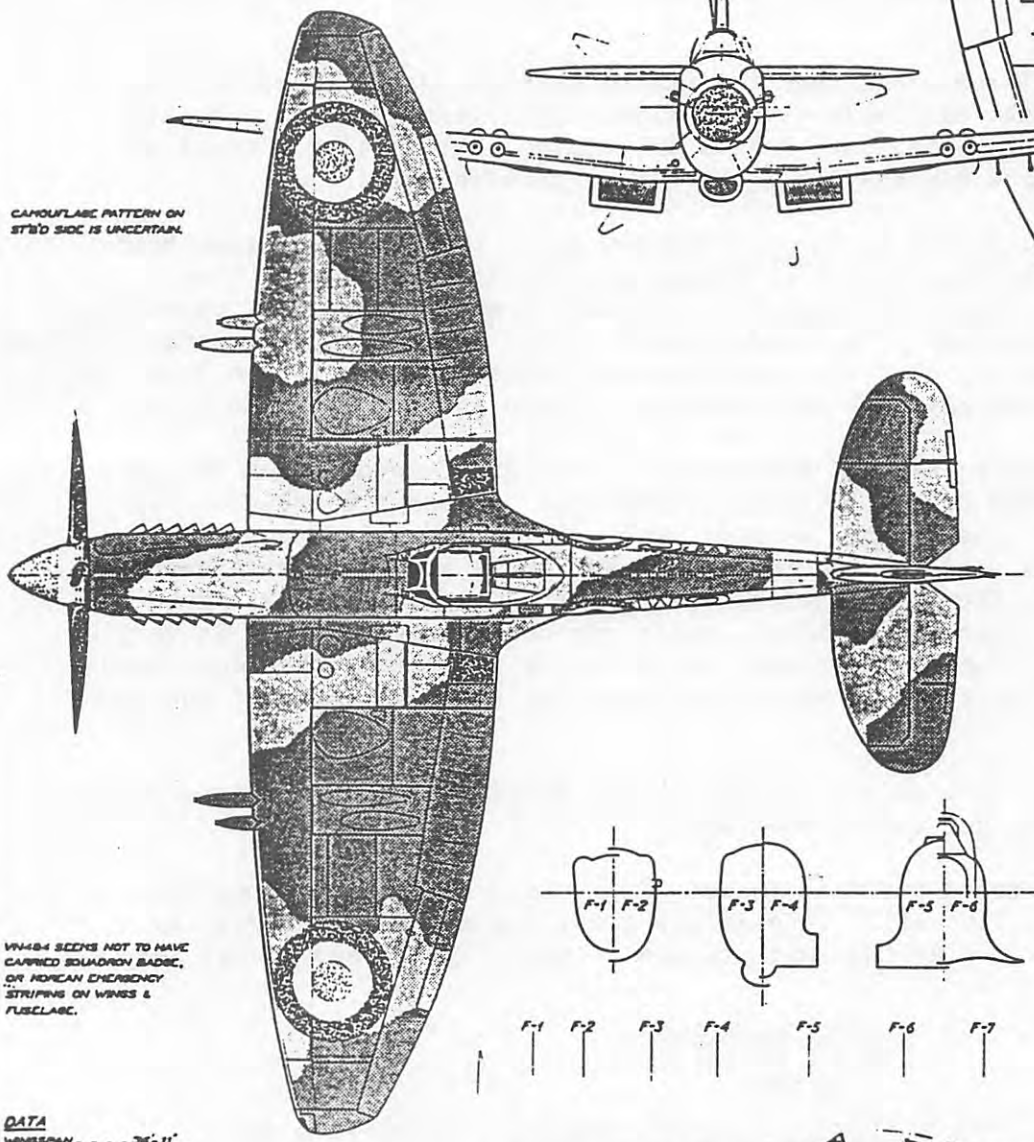


PORT UNDERCARRIAGE EXTENDED:
NO LOAD

ARMAMENT
HISPANO Mk. V SHORT BARREL CANNON, FIRED ELECTRICALLY.
(MOST Mk. 24 FITTED WITH EARLIER LONG-BARREL CANNON)



CAMOUFLAGE PATTERN ON STBD SIDE IS UNCERTAIN.

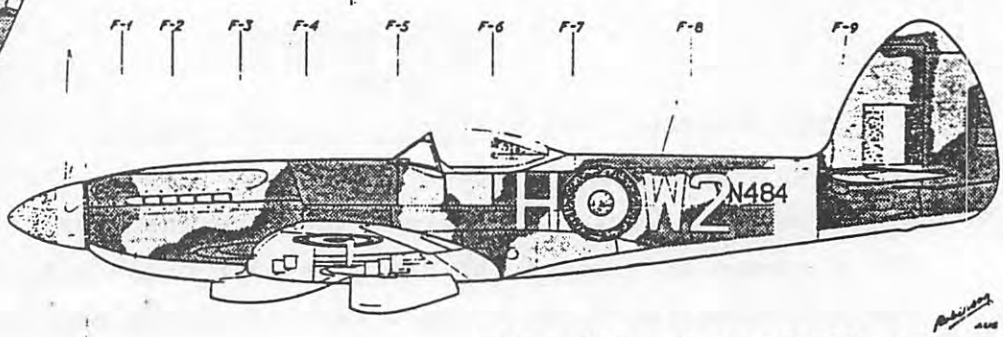




WING SECTION ON ℄ RADIATOR

COLOURS
CAMOUFLAGE: DARK GREEN & DARK SEA GREY
UNDERSIDE: MEDIUM SEA GREY

VN484 SEEMS NOT TO HAVE CARRIED SQUADRON BADGE, OR KOREAN EMERGENCY STRIPING ON WINGS & FUSELAGE.



DATA

WINGSPAN	36'-11"
MAX. CHORD	6'-4"
WING AREA	242.6 ft²
OVERALL LENGTH	32'-11"
WHEEL TRACK	6'-6"
TAILPLANE SPAN	13'-0"
TOTAL WEIGHT: TAKE-OFF	12 150 lb
TOTAL WEIGHT: ALL FLYING	10 150 lb
TOTAL WEIGHT: LANDING	9 650 lb

0 1 2 3 4 6 8 10 ft

AUG 1971

SUPERMARINE TYPE 356: SPITFIRE Mk. 24

VN484, 80 SQUADRON, KAI TAK (HONG KONG) Aug. 1949–Sept. 1951

CROSSWINDS
THE JOURNAL OF THE CLEVELAND FREE FLIGHT SOCIETY

No. 75



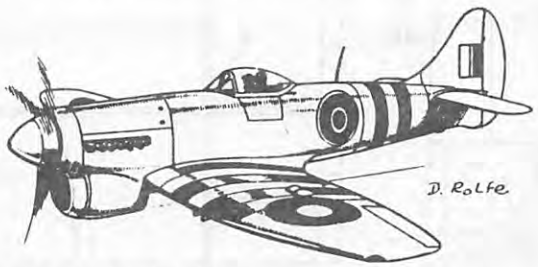
EDITOR:
RUSS BROWN
4909 N. SEDGEWICK
LYNDHURST, OH 44124
PH (216) 382-4821

Address label numbers below 75 are your reminder for $10 contributions to CROSSWINDS. Thanks for the support!

FLAT HATIN' AFTER FAC NAT'S V

Indoor action is heating up, and it's time to heat up newsletter activity too. CROSSWINDS flying season shut down came real early in '86. Both Dave Pishnery and Gordon Roberts moved within the area. A double distress of father Brown's passing at the time of the Randall Mall Show, and the year and a half long TRW anti—takeover sale of the Thompson Products Tapco Plant destabilized concentration at Russ Browns'. Tapco is ARGO-TECH now. Another loss of Nancys' mother Dec. 27 ended the year with sadness. Bring on 1987. Three Profile WW II Era plans are featured for indoor and outdoor flying. CROSSWINDS No. 75 continues the Spitfire 50 years anniversary theme with Gordon Roberts' Mk 14 clipwing No. Cal profile plan. Aero historian and air racer enthusiast Harry Robinson adds to our appreciation of the evolution of Spitfires with drawing detail. Light Spitfires fly well. A Mark V in Russky winter color tissue was a worth-while project at Blue Fox Base here.

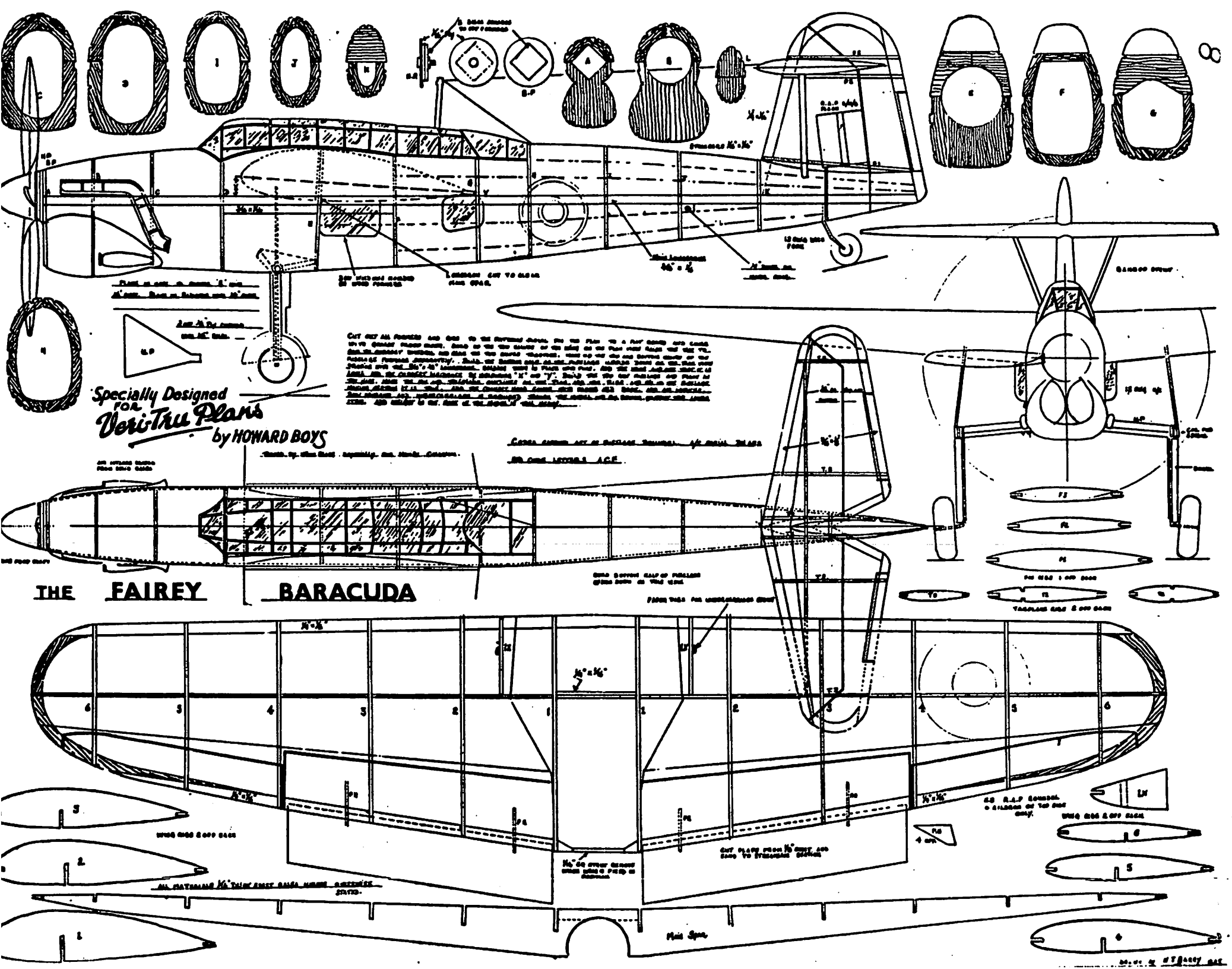
Mass launch combat with Profile WW II No. Cal's was suggested at a recent GHQ contest at Prangmore Field. Swell; double use in No. Cal events should inspire builders to go WW II. CFFS will add Profile WW II Combat in '87 contest action. Choose your wepon!

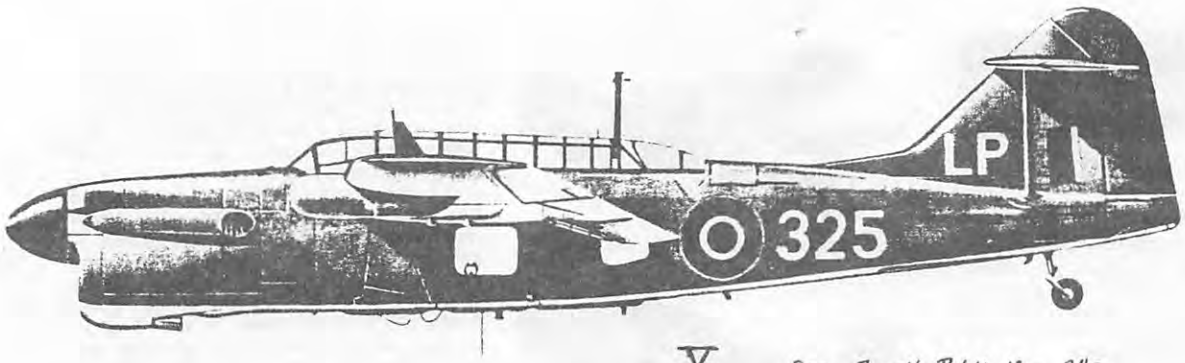


HAWKER "TEMPEST V"

Dave Pishnery likes the Griffon Mk 14, but he also likes the agressive, fast, and powerful Hawker Tempest Mk. V. Dave adds the Tempest V No. Cal. plan for another flat fighter. Color and marking data is available in issue No. 48 including Dave's 20 3/4 inch wingspan Mk V, and Eric's Heinkel 100 Peanut plan. Back issues are $3.

Mike Zand completes the flat pack of all English profiles with a Fairey Barracuda Mk. V. Barracuda Mk. V production aircraft first flew Nov. 22, 1945, just after WW II. Keep trying 'till you get it right. With the longer Griffon engine, extended 52.5 ft. wingspan, and enlarged fin, the Barracuda performance was restored to near Grumman Avenger speed. Or, about equal to the prototype Barracuda! It was faster than a Ju 87 Stuka for example. But let's not blame the Hawker designers. The Barra' torpedo and dive bomber was ordered with a new design RR Exe sleeve valve engine that was soon cancelled. Misery bit the Barra' like a lamprey. Too much airframe for the substitute low 100 octane Merlin engine, more weight, and a bad case of dirty skin made the Barra' more of a puffer fish than a nasty predator. A combat ready Barracuda II wing bristled with external details on both upper and lower surfaces. Add the equally prominent fuselage masts, lower bay windows, tail hook, tail wheel, torpedo mounts, bomb hangers, dinghy door, external line, handles, sight, stacks, oil cooler intakes, etc., and the beast is in combat fatigues uniform. The Tele Air Gunners were ordered NOT to open the canopy in combat to save speed. The high strutin' stab and under wing air fence lee boards were necessary to cure air brake/ flap turbulence. Profile Publication 240 had 3-views in sea and slime over sky camouflage. All this draggy detail your scale judge will look for is over compensation for the high shoulder wing and retractable main landing gear that may attract FAC WWII combat fliers. But ughly is only skin deep when it's your skin 'Nes Paw?


Specially Designed
FOR
Veri-Tru Plans
by HOWARD BOYS
THE FAIREY BARACUDA



V See Profile Publication 240

Earl Stahl hooked us into this fish story with a striking Barracuda I plan at 15 inch wingspan in Oct. '44 M.A.N. The rounded tips are the appropriate shape for WW II use. Now, Al Hunt at Box 726, Dunbar,W.Va 25064 offers a 25 inch 'span enlargement,* plan # ES 12 E for $3. Add $2 for Al's plan list and get the $2 back when you order, Add 20% P&H to the $5 minimum order. Al shows ES12 as 18 inch span for $2.50. With a profile fuselage, this will clip the useful wing to near 16 inch No. Cal size. Clip at root end.
* 32"w/s also.

On the Western Front, Scale Staffel Editor, and active FAC enthusiast, Tom Arnold adds a Barracuda 3-view to the Great Noses Dept. series of stimulating subjects. Send a mere $7 to Scale Staffel, C/O Bob Womack, 345 Niblick Dr., La Mesa, CA 92041 to enjoy a year of newsletters. Jim Alaback recently provided the first of a series of small kit plans. A Dart GK plan stimulated an exchange of data from the Fox Hole to Jim and to Carlo Godel at 5726 Case Ave. North Hollywood, CA 91601. Carlo drew the VELVIOLI collection of 3-view drawings that includes International flavors and the aerobatic clip-wing Dart flown by Rod Joeclyn. Send a self addressed and stamped envelope to Carlo for the plans list. Meanwhile,back at Scale Staffel, Jim Alaback adds the Comet 5 cent Kit 10" SECURITY SPORT. But back to the Barracuda before it gets off the hook. Tom adds suggestions for WW II use. Much of the external detail shows on Tom's 3-view. Your scale judge will look for it also!

Just-in-time for the CROSSWINDS Barracuda bit, Alan Carr, U.K. Editor of SCALE FLIGHT NEWSLETTER, sends over a 10/27th inch reduction of a BARRACUDA plan by Howard Boys. The thick wing is a prominent feature. The thin , flat leading edge construction here will sharpen up the leading edge air entry enough for performance. Add arches or A frame mid wing bay tie spars to make room for the rubber motor. The one piece wing construction will be more crash resistant and maybe easier to trim than two root rib mounted panels.

FAC NAT'S V

Every even numbered year over 100 flying scale enthusiasts get together for the FAC NAT'S family reunion. And each year we are rewarded with an outstanding assembly of friends and flying fun. Three days at a FAC NAT'S is awesome, but I wish we could hang in there for a whole week, so we could meet more of the far flung entrants and first timers. So mutch to see. Good photo coverage ran in FLYING MODELS by Earl VanGorder, Model Builder by Fernando Ramos, and color pix by Bill Noonan in Model Aviation. FLYING ACES CLUB NEWS and MAX FAX add much more to the identification of models and fliers at Geneseo, NY. Western USA fliers included Tom Arnold, Editor of SCALE STAFFEL NEWSLETTER (above). Tom's description of FAC V in SSN is another enthusiastic text worthy of relay distribution. We thank SCALE STAFFEL and SS readers for sharing Tom's words. Above all, we are indebted to Bob Clemens, Vet and Kathy Thomas, all the WNY team, and the Geneseo Warbirds Museum for a fantastic show. We hope to be associated with this action at least one more time soon! Good show guys! Several CFFS and ERIE EMAA clubsters went back to Geneseo for the Fall Air Show. Another memorable bit of action to keep in mind for '87. But bring a camera, and remove the lens cap. Haw-aw-aw-w-w-w. See you there. The B-17 is real, and not left on the field from V.

10

Technical Gen...

from page 11

Tailless Trainer

Will you please publish a photograph and details of the tailless monoplane registered D-IQVI which was flying in Germany in the mid 'thirties. I do not know what its designation was.—R. GUNTHER, LUCERNE, SWITZERLAND.



Gotha Go 147

● The aircraft to which you refer, Mr.. Gunther, was the Gotha Go 147V1 built in 1935 as a prototype short-range observation and gunnery training monoplane. Carrying a crew of two, the Go 147V1 was powered by a single air-cooled Argus As 10 engine of 240 h.p., and it was proposed that armament should comprise one fixed forward-firing 7.9-mm. MG 17 machine gun and a hand-operated MG 15 machine gun in the rear cockpit. The Go 147V1 had a maximum speed of 137 m.p.h. and a service ceiling of 18,040 ft. Empty and loaded weights were 2,083 lbs. and 2,525 lbs., and overall dimensions were: span, 40 ft. 2¼ in., length, 19 ft. 5 in., height, 9 ft. 8½ in. A second prototype, the Go 147V2, was under construction, but the poor flight characteristics of the first prototype led to the abandonment of further development, the second machine not being completed.

Fairey's Barracuda

I shall be glad if you will publish some photographs and details of the Fairey Barracuda which I believe was used as a torpedo-bomber during the latter part of the war.—P. E. HAYNES, CHEAM, SURREY.

I would be obliged if you could publish general data and photos of the Fairey Barracuda strike aircraft of W.W.2.—I. K. COTTEE, MAPPERLEY, NOTTINGHAM.

● The first monoplane torpedo-bomber to enter service with the Royal Navy, the Fairey Barracuda was designed to meet the requirements of Specification S.24/37,



First prototype Barracuda



Barracuda II (Air/Sea Rescue)



Barracuda II paratroop transport



Barracuda T.R. III

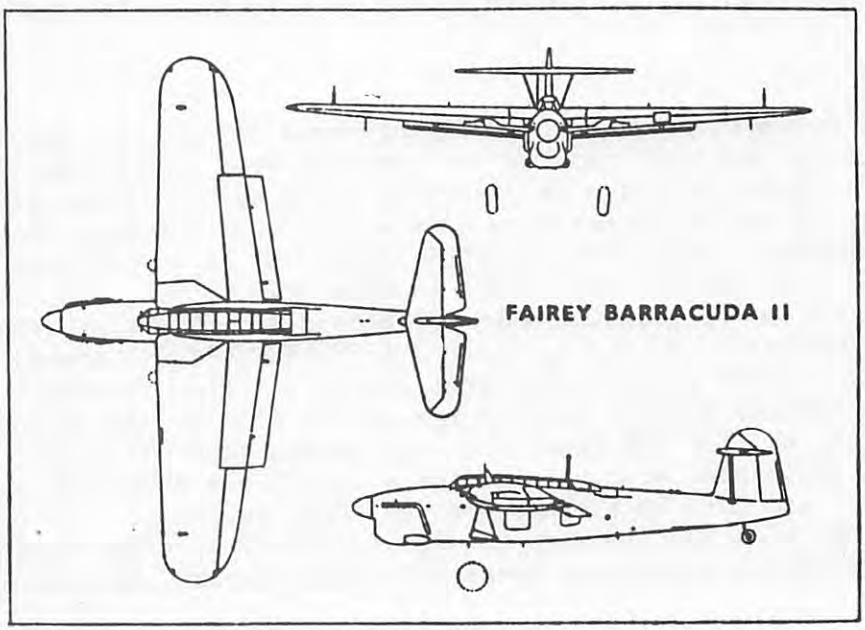


Barracuda V

and was originally designed around the Rolls-Royce Exe engine. With the abandoning of the Exe, the design was revised to take the Rolls-Royce Merlin, and powered by a 1,300 h.p. Merlin 30, the first prototype Barracuda (P1767) flew on December 7, 1940. The first prototype was originally fitted with a low-set tailplane, but this was later raised high on the fin as was also that of the second prototype (P1770). Like the prototypes, the production Barracuda Is were powered by the Merlin 30 engine, and deliveries of a small production batch (commencing P9642) began in September, 1942.

The Barracuda II differed from the Mk. I principally in having a 1,640 h.p. Merlin 32 engine driving a Rotol four-blade airscrew and ASV Mk. IIN radar. The Barracuda II was built in larger numbers than any other version, and apart from those delivered by Fairey's Stockport factory, Boulton-Paul produced 692, Blackburn produced 700 and Westland built 18. Carrying a crew of three, the Barracuda II was a shoulder-wing cantilever monoplane and featured externally-mounted Fairey-Youngman flaps which could also serve as dive brakes. An 18 in. torpedo was carried externally, and bombs, depth charges or mines could be carried underwing. Defensive armament comprised two 0.303-in. Vickers K gas-operated machine guns in the rear crew position. Overall dimensions were: span, 49 ft. 2 in.; length, 40 ft 6 in.; height, 15 ft. 5 in.; wing area, 367 sq. ft. Loaded weight was 13,916 pounds, and maximum speed was 199-220 m.p.h. In 1944 several Barracuda II's were modified as paratroop transports, carrying four troops in underwing containers and an equipment container under the fuselage, while others were converted for the air/sea rescue role with an airborne lifeboat under the fuselage.

The Barracuda T.R.III was generally similar to the Mk. II but fitted with ASV Mk. X radar in a bulge beneath the rear fuselage for anti-submarine duties. One Barracuda (P9976) was fitted with a 1,850 h.p. Rolls-Royce Griffon 7 engine, production of this version being proposed as the Barracuda IV. However, with the later Griffon 8 engine installed, increased wing area and a larger fin, this aircraft became the prototype of the last production variant, the Barracuda T.R. V. Subsequent prototypes and production examples of the Mk. V had the 2,020 h.p. Griffon 37 engine, and a small production batch was completed. The Barracuda V carried a crew of two and an 18-in. torpedo or a 2,000-lb. bomb load. No defensive armament was carried. Maximum speed was 253 m.p.h. at 10,000 ft., and 232 m.p.h. at sea level; initial climb rate was 1,400 ft./min.; service ceiling was 24,000 ft., and maximum range was 1,120 miles at 170 m.p.h., and (with 2,000-lb. bomb load) 600 miles at 163 m.p.h. Empty and loaded weights were 11,430 lbs. and 15,250 lbs., and maximum overload was 16,000 lbs. Dimensions were: span, 53 ft. 0½ in.; length, 41ft. 1 in.; height, 13 ft. 2½ in.; wing area 435 sq. ft. A grand total of 2,582 Barracudas of all types was built.



Courtesy RAF Flying Review

MUSINGS BY THE EDITOR

FLIGHTLINE



BY TOM ARNOLD
325 F AVENUE
CORONADO, CA 92118

The only way a man can die with a clean conscience and a light heart now is to know he had attended a Flying Aces Club Nationals. No matter the dissipation of his old age of the misspent years of his youth, it's all redeemed by walking the grassy fields in the company of the True Brethren of the Right Rubber Stuff at a FAC-NATS. If you still wanted to indulge in a bit of dissipation, the parties went on every night until only the fear of oversleeping the next day drove you to bed.

The editor left Southern California for Geneseo, New York and helped form the West Coast contingent of modelers consisting of Bill Noonan, Fernando Ramos, Bob Wetherell, and Ferrel Papic. Arriving in Rochester, New York, we drove about 40 minutes through some of the prettiest rolling countryside that God made, to end at Geneseo and the State University dorms there. Geneseo is a charming small college town that looks like it came straight out of an American painting by Norman Rockwell. The green trees, tall grass, and wide open fields, all brought tears to the eyes of the Southern Californians. "Surely this is where modelers' heaven is located", we thought. Checking into the dorms, we first attended the Friday night indoor contest at the huge gym and got a chance to renew old acquaintances and see some pretty impressive indoor flying. Shaking hands, checking in, trying to find out what all was going to be in the air the next day, looking at the indoor models, getting introduced around -- all occupied that whole evening. Walking out into the warm, humid summer evening, we started to seriously worry about a strange phenomenon to occur the next day -- thunderstorms! The evening was spent walking up and down the halls, peeking into rooms while flyers unpacked all manner of craft. The biggest topic of conversation was shipping techniques, and examples of boxes ranged from the sublime to the ridiculous. Some had elaborate jigs to hold models internally, some had rubber band suspensions, some were beautifully constructed of plywood like a fine cabinet, some were cardboard boxes, and amazingly -- they all worked. The prize for sheer ingenuity had to go to Fernando Ramos who packed a beautiful gas Bucker Jungmiester of about 30" span in a plywood box, completely filled with 2 garbage bags of styrofoam "worms".

The next morning dawned warm, humid, and a high, bright, overcast. After a quick breakfast, we drove 5 minutes to the site, and what a sight! It was a real, live, honest-to-goodness grass runway airport bordered by oat fields and knee high grass. The airport was the home of a new WWII aviation museum that boasted a B-17, BT-13, C-45 and various others. The control tower was a 50' high open wooden platform that was imposingly labeled "FAA Control Tower", and as far as all could tell, as long as no one was on it -- it was safe to land. A neat, well-tended building housed the museum and also served as the scale judging area. Soon cars pulled up and formed a huge semi-circle around the tall grass test area and awnings blossomed all over. The grass was soaking wet from dew, but it was like the cushion of an angel's arms when it came to test flying. Testing was so sweet and benign as compared to the demolition derbies of Southern California, that you were truly not afraid to stretch your plane's limits to the max. Blown motors were really the only serious danger. The field began to dry out as the morning progressed and no more was it necessary to dry out an airplane in a running car with the heater on. The wind was amazing -- it was non-existent. The true abilities of airplanes and builders were shown without the curse of a slap-happy wind that usually makes a mockery of everything. By noon the sun had burned off the overcast and we were blessed with blue skies and passing, puffy clouds that provided relief from the heat and spectacular photo backgrounds. The local auxilliary of the museum provided an unlimited supply of ice cold sodas and food for all and a trip for chow was a great excuse to wander around the full size airplanes.

The premier event was the FAC Rubber Scale and the day saw some truly spectacular airplanes in the air. The contestants really miss a lot of the airplanes if they have to spend a lot of time trimming, and it is a great incentive to come with a box full of airplanes ready to fly with no fiddling around.

All kinds and all sizes were flown. There were early birds, home builts, Golden Age, WWII and WWI, multi engines, racers, crop dusters.... the list is endless. While rubber was the biggest power source, CO_2, electric, and diesel/gas were also represented. Big ones, little ones, orange ones, red ones, camouflaged ones, grey ones, blue ones, ones with checkerboards, ones with polka dots, ones with shading.....the colors were endless. The central flying area was like a continual fountain of airplanes that just constantly geysered them up into the air. Airplanes would do everything from climb straight up out of sight, to spend their whole flights at shoulder height, playing dodge 'em with cars. The regular cry of "Heads up!" was a splendid opportunity to closely examine an oncoming Caproni or the underside of a Corsair. One Tiger Moth played touch and go with the roofs of 3 cars before an impassive motorhome ended its playfulness. A P-47 insisted on doing a series of wing-overs and loops that translated into a spectacular climb consisting of sequential immellmans. The plane's pilot tried for an hour to get it to do it again for an official, but to no avail. With only 3 timed flights allowed due to the number of contestants, the wisdom of a well-trimmed, consistent model was very apparent. But even those with erratic individualists for models got some good times. As you would look over the vast expanse of fields, there was always a number of distant torsos wading through the forgiving oat fields, retrieving their models. In spite of the height of the oats, very few models were lost, yet it was a true life-saver for countless flyers.

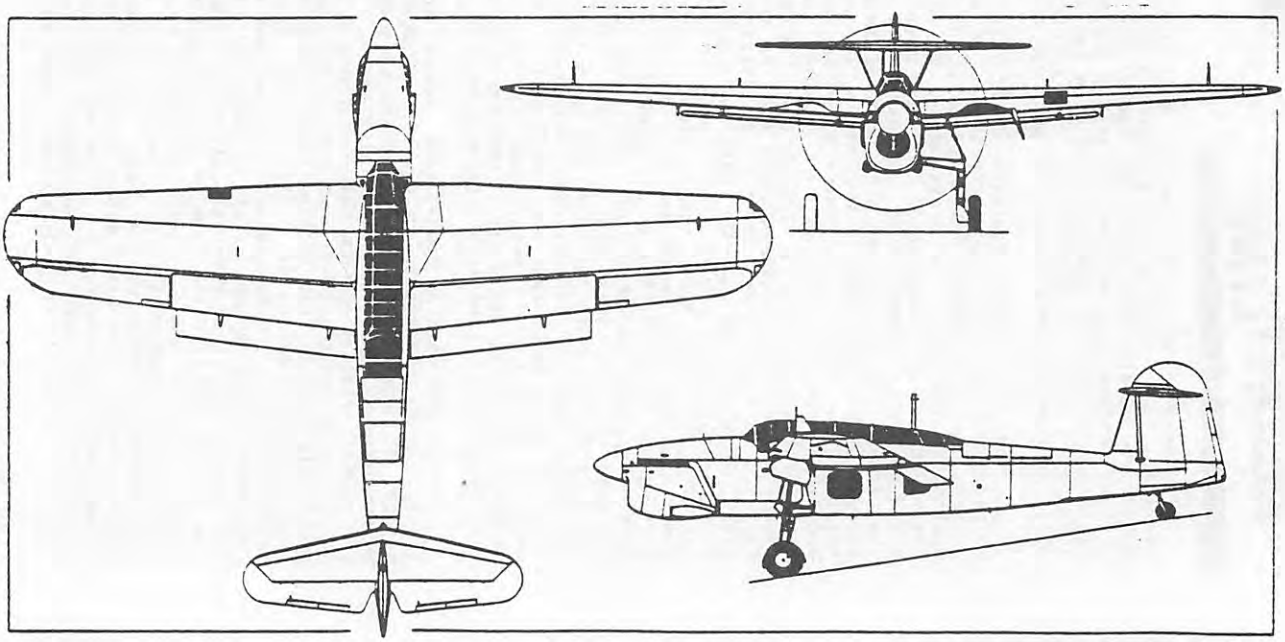
Mass launches were the usual mixture of fun, cheers, and hard-ball strategy. The number of the contestants required at least 3 heats to start the elimination process and a friendly rain shower wrinkled enough tissue in WWI to create the sight of numerous mechanics shedding shirts to protect airplanes and pilots doing sun dances prior to their heats (wets!). Mass launches brought out cheering sections for favorites and lots of humor to keep things on a light plane. How serious can you take anything when a late contestant and his mechanic come running across the field and winding his airplane, yelling, "Wait! Wait! Don't start! 54, 55, 56, 57, 58, 59, 60, and another, and another, and another, one more, one more, one more....." Unhooks his winder, puts the nose block in and launches all on the run right through the line of other contestants. His strategy was to make the competition die laughing -- and it just about worked.

THE PLAIN DEALER, SATURDAY, DECEMBER 20, 1986



Great Noses Dept. Courtesy SCALE STAFFEL

Not noted for it's graceful handling, yet used for both dive bombing and torpedo attacks during WWII, the Fairy Barricuda is a great subject for a mass launch. A roomy fuselage, high mounted wing, long nose, extra wing area in the form of flaps, and room to swing a big prop if you want to R.O.G. are all pluses. A painless way to drop the rubber motor below the wing spar is to use one of the Bentom gear boxes to boot.



In the middle of one of the mass launches, a jumbo spitfire quietly putteredthrough the swirling mass of planes looking for all the world like a hawk serenely gliding through a flock of sparrows and then it quietly returned back over the cars to the test area.

One of the most satisfying view points was achieved by the editor when he picked a soft patch of grass, stretched out on his back and watched the blue sky, white clouds and small airplanes come and go out of his field of view. It reminded him of a small boy many years ago who had inhabited his body when life was a lot less complex.

The day finally ended as cars packed up and headed back to the dorms for the banquet festivities. A cool shower to wash away the sweat and it was a hungry bunch that met for some cold beers before the meal. Tables were set out for models and it was a great time for some close examinations and swapping of building and finishing techniques. On display was Dennis Norman's fabulous 50" span rubber powered Lancaster from the last PAC-NATS which was still just awe-inspiring in its scope of workmanship, flying ability and achievement. The crew figures themselves are works of artistic sculpture that deserve a place in an art gallery. They are even more incredible when you find out they are carved at 1/2" scale from styrofoam! To give an idea of the exquisite detail of the figurines, the individual fingers are carved on small hands clutching control wheels and machine guns. If that was not enough to see it again, beside it at the same scale was a beautiful B-17 done in the same fine detail, also rubber powered. For those who are wondering about the power -- both planes take 1000 winds (Lanc) and 800 winds (B-17) and while the B-17 was still being test flown, the Lancaster gets 30 seconds +.

The banquet was its usual irreverent affair with the audience helping the beleaguered MC, Bob Clements, with unsolicited comments, constructive criticism, and observations, usually no matter if he wanted them or not. Awards, speeches, prizes and finally our own Bill Noonan wound up the evening with slides on his recent modeling holiday in England.

Back at the PAC Barracks (as the dorms were now named), the bull sessions, Miller Lite tasting contests, and repairs started in earnest. All lasted till late, becoming more rowdy, undisciplined, and worthy of the high standards of PAC. However, the clown who kept insisting that "tomorrow is a big day, fellows", and "got to get our rest", and "let's get a good start tomorrow", did deserve the tennis shoes hot stuffed to the floor. Just because it was his room was no reason to get antsy.

The next morning was indeed ominous. Breakfast found PAC'ers looking at wind blowing through the campus trees, dark clouds laced with lightning on the horizon, and really humid air. The midwesterners really got nervous and kept mumbling words like "twister" and "tornado" and kept asking where the basement was. At the field, it appeared as if the worst fears were coming true, as a black, angry line of clouds began moving toward the field. Lightning split the air and a cold wind came up bringing swirling, boiling clouds right over our heads. The Texas flyers were really jumpy by now, and the California crew was going nuts trying to get camera shots of lightning and clouds. It all ended in a couple of drops of rain as the whole storm front then slid past us, and soon disappeared over the hills, bringing a hazy sun in its wake. Cheating death again, the airplanes once more began their rise into the air, only now the power scale types were out in force. CO_2 jobs puttered overhead, and the buzz of the few gas and diesel types came at increasing frequency. The oat field was the haven for gas airplanes and it saved a number from violent wing-overs on the ground. Fernando Ramos flew his very nice Bücker Jungmeister with pendulum controls and it was a real kick to see it motor around gently picking up a wing both one way, then the other. The big silver and red Jungmeister was a real achievement. Bill Noonan had a CO_2 Martinside Semiquaver that performed as nice as it looks, and a superbly crafted Latecoere that tied for highest scale points. Neatness and fine execution of a few crucial details are Bill's hallmark and they are really done well.

Bob Wetherell of San Diego flew his green geared Avno Avian that performed so well at our annual and attracted quite an interest in his airplane with its geared prop.

The jumbo flyers were up on this day and a few were really note worthy. One that attracted quite a crowd was (get this) a 1/4 scale Lacy powered by rubber! This huge thing flew just like the peanut version -- slow and gentle. Rubber constraints kept it from a high time, but the size was amazing. A black P-82 was seen boring holes in the sky along with Don Srull's P-13 flying wing. Jumbo J-3's were there and a raft of others, but the most spectacular to see fly, of course, was the Lancaster and the B-17.

One of the appealing things about the PAC-NATS is while you are surrounded by truly magnificent models that show great craftsmanship and great flights, there are still a goodly number of plain old beat-up hackers, too. There were a lot of war-weary models who'd seen better days but had finally reached that point where all the warps cancelled each other out, and now they were flyers but not lookers. With layers of nose shims, busted stringers, baggy wrinkles, and patches, they were flown with the best and their pilots had even more fun as they weren't sweating the loss of a hundred hours of labor.

The editor actually hung in a few heats of the WWII mass launch with a Do 335 but the PAI in its innards finally got tired and quit working for the day. It is truly amazing to see the energy that gets pulled out of a motor on these mass launches -- there's a real strategy in flying them.

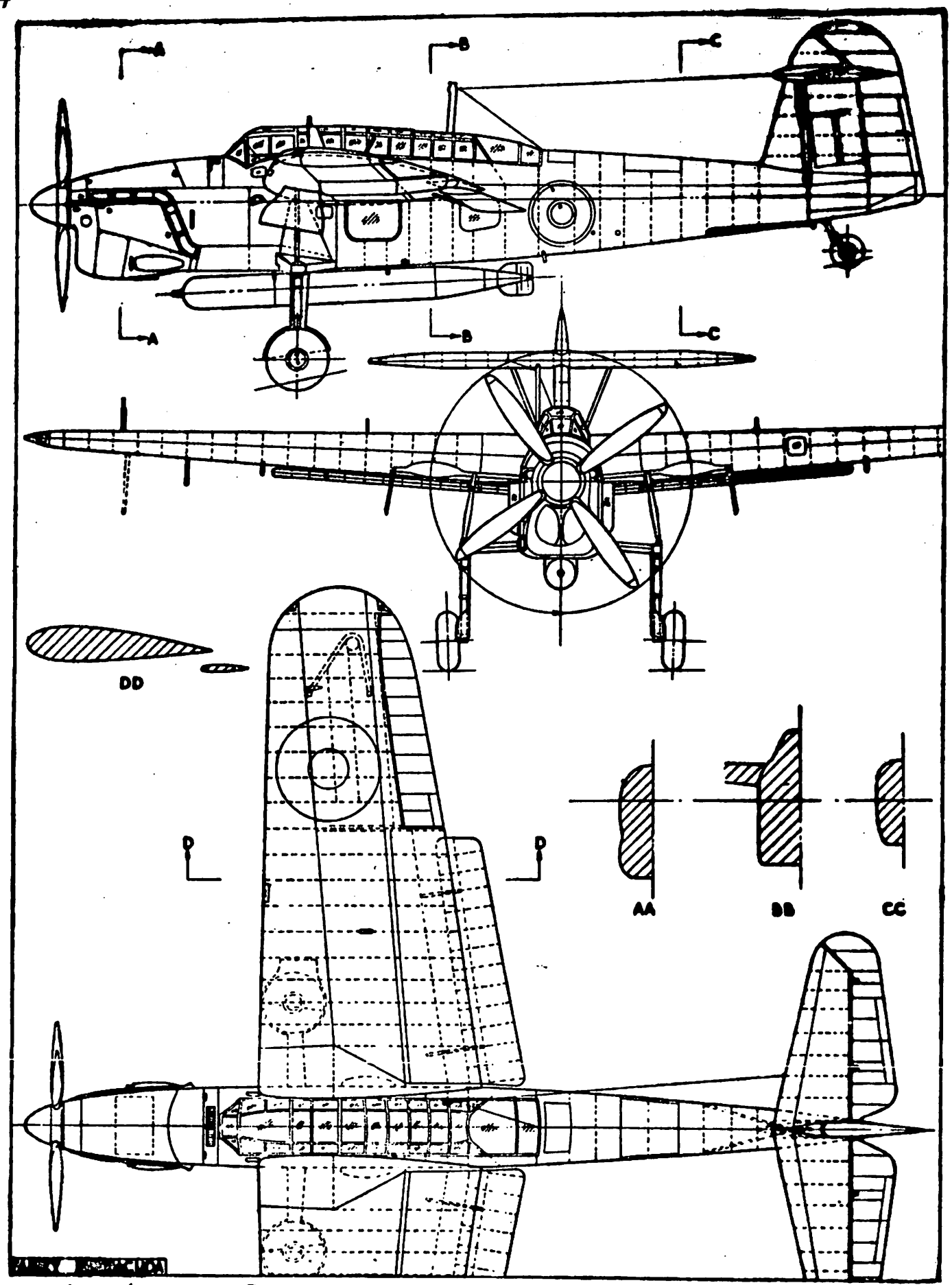
At the end of the day, a tired and spent crowd gathered at the announcement tent for the day's awards. There were 106 contestants plus the usual families and observers (observers even got their own official contest badge!) and lots of whistles and clapping went around for all. A really pleasant surprise was the awarding of the prestigious Earl Stahl award to San Diego's Bob Wetherell for his CO_2 Aeronca C-3. The award is given for the meet's most unique/best/well-crafted/ambitious/or-whatever-the-judges-like model, and Bob's plane really impressed them, and rightly so. The award is a glass-faced case with a background collage of Earl Stahl's plans and a mounting of Earl's original drafting instruments he used in creating his plans in the '30s. Each NATS the winner passes it on to the next man selected and we are very proud Bob should be selected.

With that, the PAC-NATS Mk V was history and within an hour, the field was completely quiet and empty, save the trampled grass. It was fitting that at that sunset moment, over the trees with flaps and gear down and engines rumbling, came the museum's B-17 to finally park on that flattened grass.

Scale Staffel dues are $10.00 per year. Associate membership (Newsletter only) is $7.00 per year. Make checks payable to Scale Staffel, C/O Bob Womack, 345 Niblick Dr., La Mesa, CA 92041

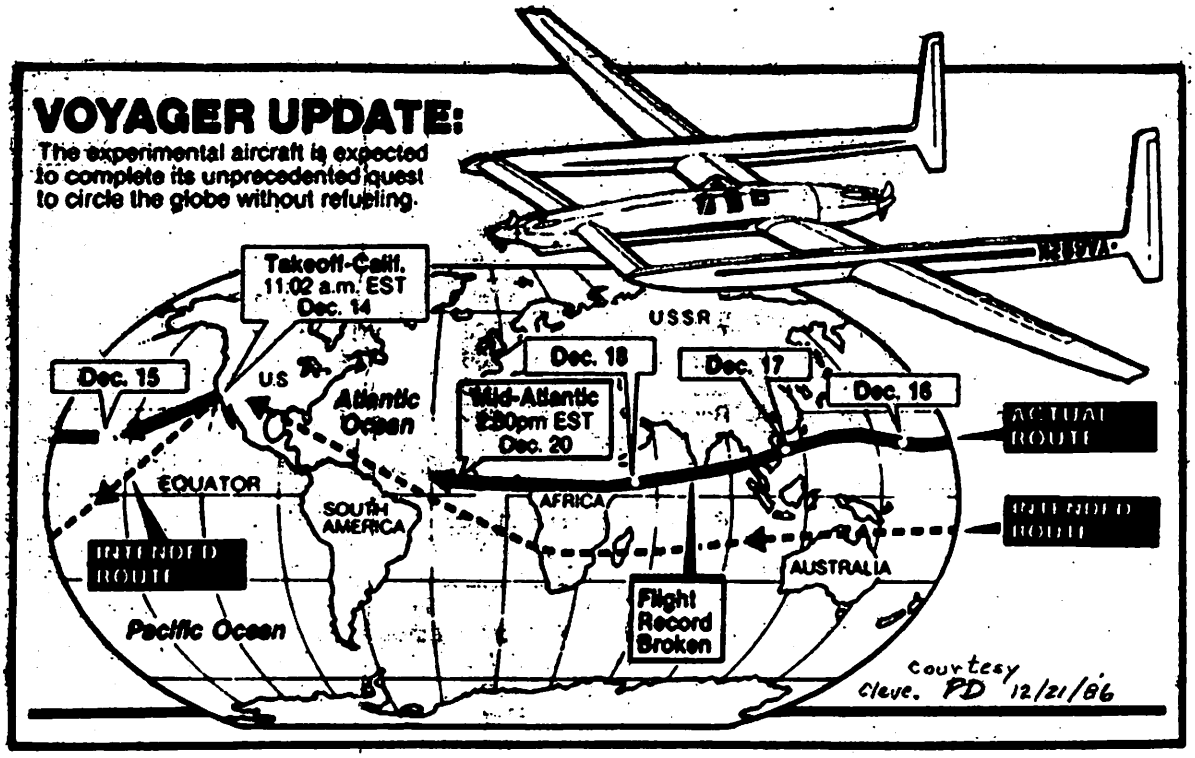
▼ ▼ ▼

Address any club or newsletter correspondence to newsletter editor Tom Arnold, 325 F Ave., Coronado, CA 92118
Please notify us of any address change immediately so we can keep your newsletter current. Thank you.



Courtesy Aeromodeller Plans MAP

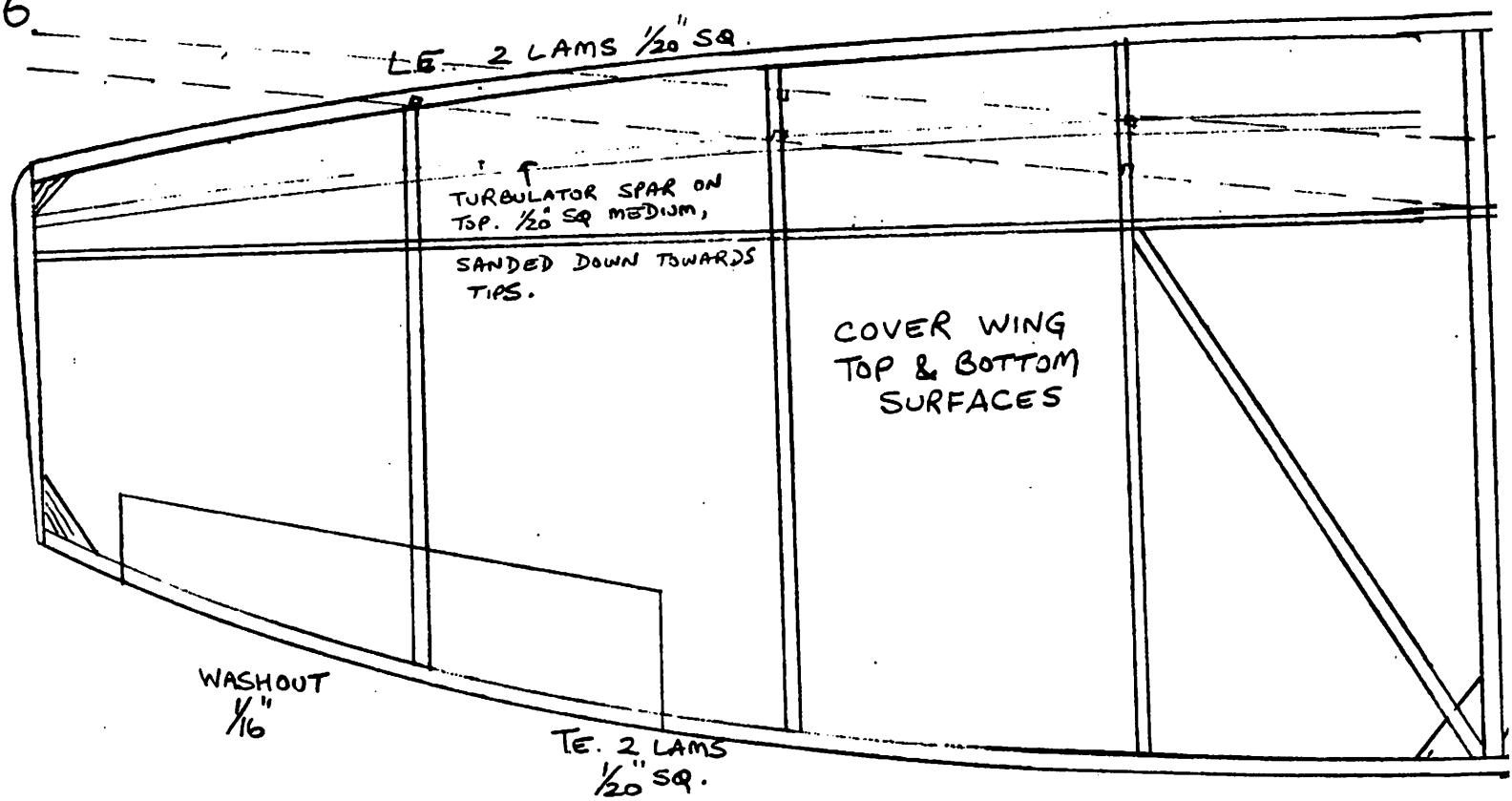
FLAT HATTIN' ON THE FORKTAIL ODYSSEY

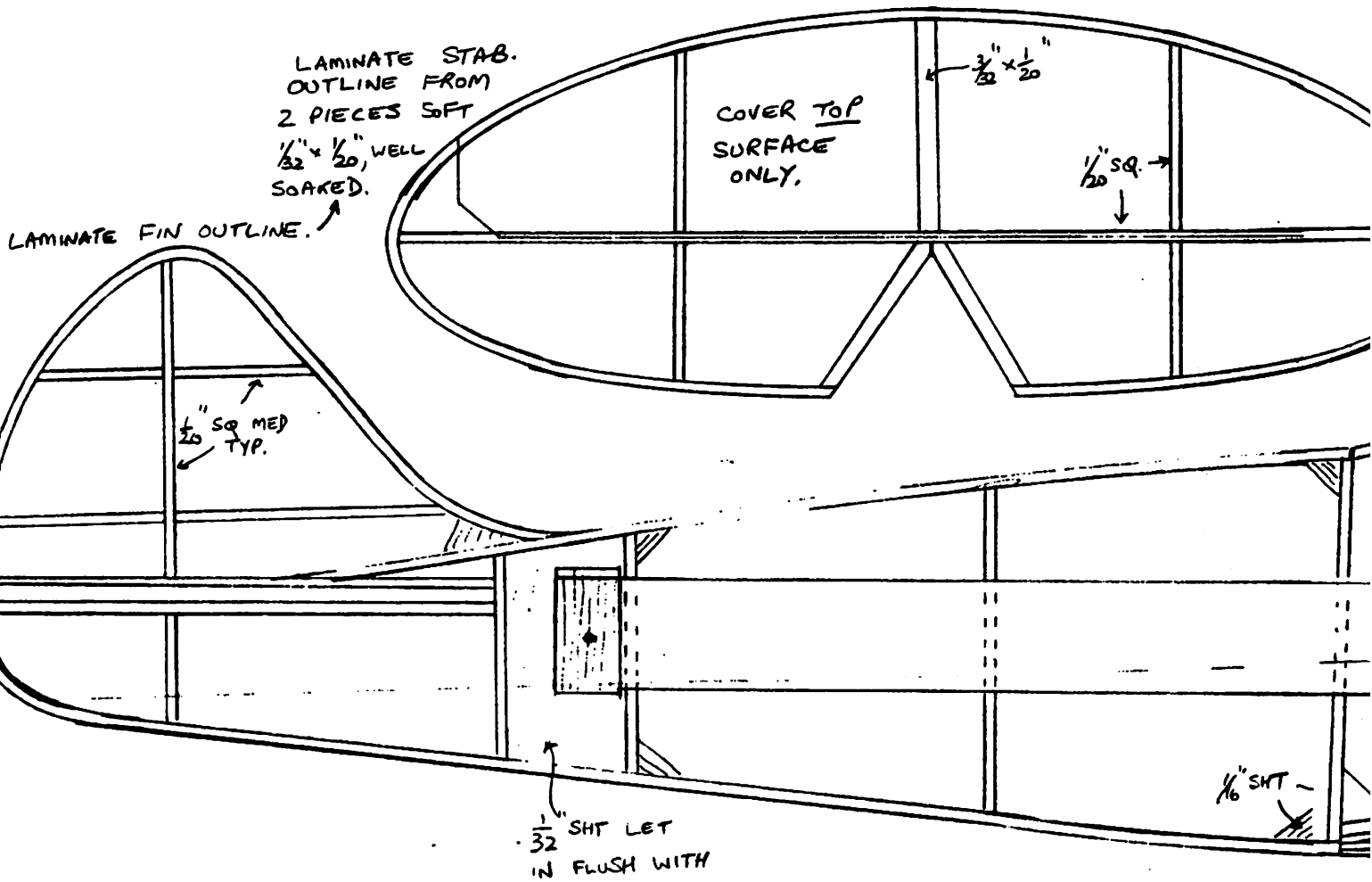


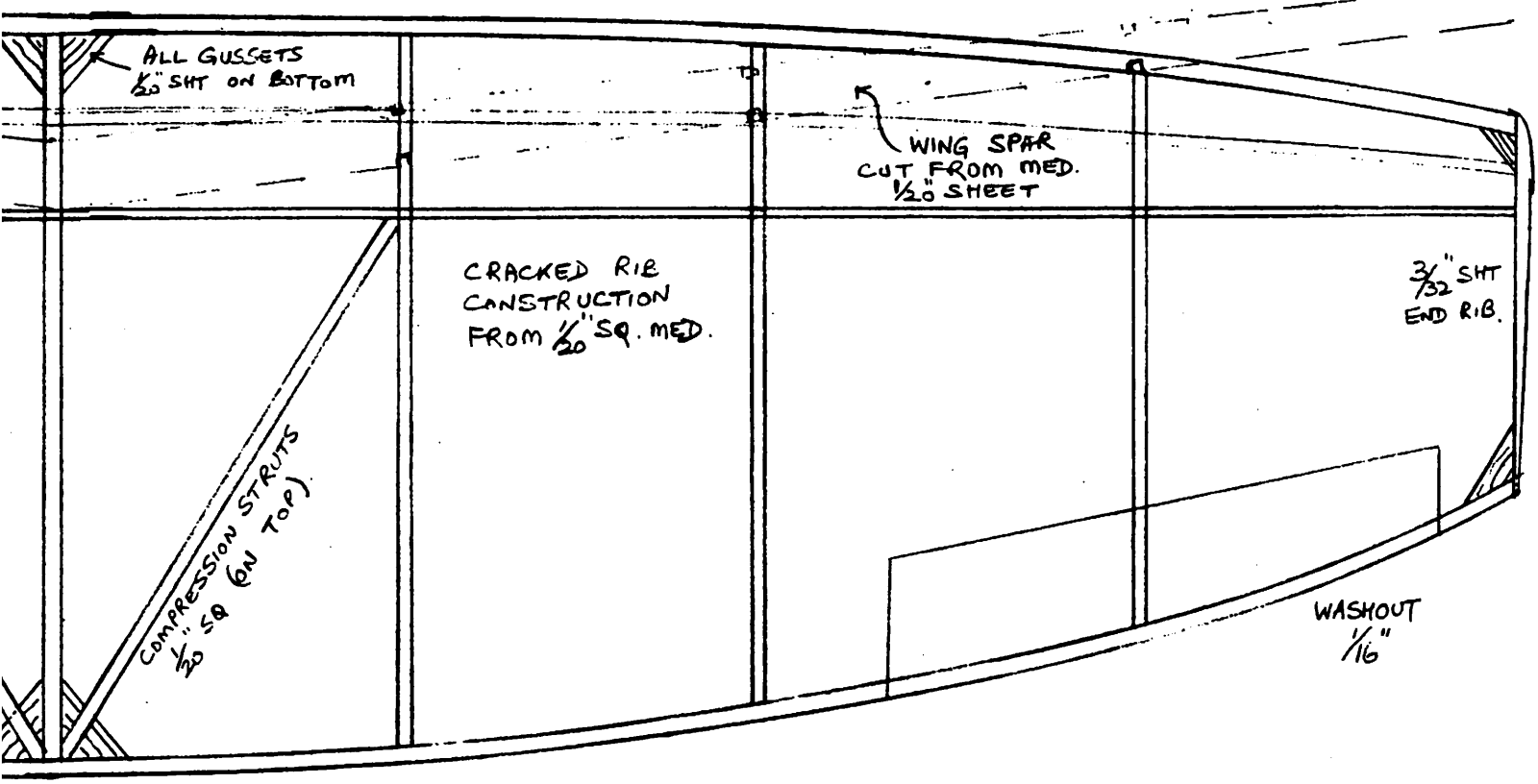
The Rutan crosser Voyager designed by Bert Rutan, and well flown by Dick Rutan and Jenna Yeager was THE biggest flight since Charles Lindbergh's NYP flight of 1927. The Voyager odyssey combines designer aero arts and crafts, inspiration, planning, testing, good luck, skill, and high tech thermal teamwork. The Smithsonian National Air and Space Museum will need to save room for the push-pull P-38. Before sanding off about a foot of blue foam tip, the Voyager wing spanned 110.8 feet, with about a 3.9 max. chord at the pod. The mean aft wing chord may be about 3 feet with the wing taper. This equates to a 36 inch Jumbo Scale model with a yard stick wing. In Peanut Scale proportions, the 13 inch span wing will have a 3/8 inch chord. Bert sure crossed up the model fliers with this high A/R wing shape. Ah, but any thing that looks like a P-38 is great, 'Nes Paw?

R/C WARS

Anti-Radio Radio Control Models arethe latest thing in $5000 robots to enlist as Marines. From the halls of Montezuma (Iowa?), to the shores of Tripoli, the USMC will fight it's battles using Ex-Drone deltas to make noise. The Ex-Drone is a chain saw delta designed and built by RPV expert Maynard Hill of Johns Hopkins and now H-Cubed Inc. Maynard Hill is well known for model record flights and as the inventor of the atmospheric voltage altitude detector autopilot. The expendable 42 pound drones' mission is to fly a jammer for up to 4 hours, while dithering to and from a signal beacon dropped at the target. Other potential use for the Ex-Drone is as a radio signal relay, or eye-in-the-sky. The Sachs-Daimler chain saw engine is programed to shut down over the target when out of gas. It may keep jamming 'till smashed off,if it lands soft. Builder of model rules do not apply, and AMA insurance is secondary coverage at best. Maynard flies up-side down after hi-start to hide his AMA number from view, or to sand off excess fin balsa while landing. Or was it to land on the muffler to get more noise? Take your pick and blame Maynard for lost TV in MAX-FAX sector, MD. To the best of our knowledge, Maynard has no plan to fly a drone to a round-the-world non-stop model record. A flight over the IRS computer by April 15 will do. Test flights may be in the range of Quantico, Va. This UFO is not to be confused with an Al Schanzle Jumbo, which is inclined to dither only down wind. While the Marines take on IRS, I'll send a donation to MAX-FAX for another well spent $10 or $11 for overseas. MAX-FAX Editor and red X er is ALLAN SCHANZLE at 20008 Spur Hill Dr. Gaithersburg, MD 20879.


LE. 2 LAMS 1/20" SQ.
TURBULATOR SPAR ON TOP. 1/20" SQ MEDIUM, SANDED DOWN TOWARDS TIPS.
COVER WING TOP & BOTTOM SURFACES
WASHOUT 1/16"
TE. 2 LAMS 1/20" SQ.


LAMINATE STAB. OUTLINE FROM 2 PIECES SOFT 1/32" x 1/20", WELL SOAKED.
LAMINATE FIN OUTLINE.
COVER TOP SURFACE ONLY.
3/32" x 1/20"
1/20" SQ.
1/20" SQ MED TYP.
1/16" SHT
1/32" SHT LET IN FLUSH WITH PORT SIDE OF FUSELAGE. MOTOR TUBE REINFORCING PIECE GLUES TO THIS.



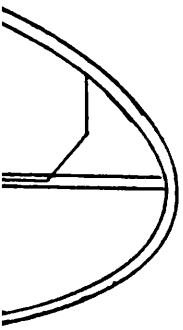
CLIP-WING SPITFIRE XIV

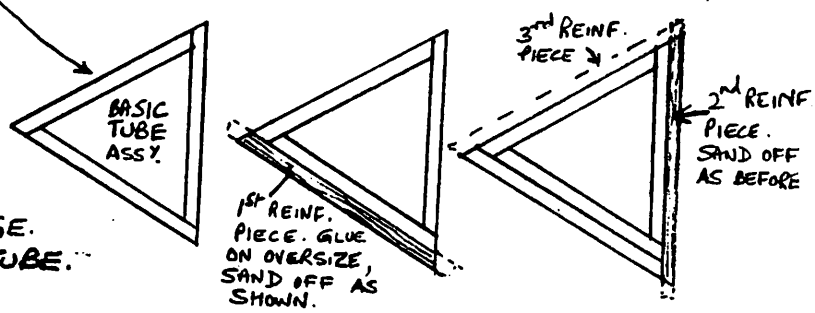
NO-CAL SCALE

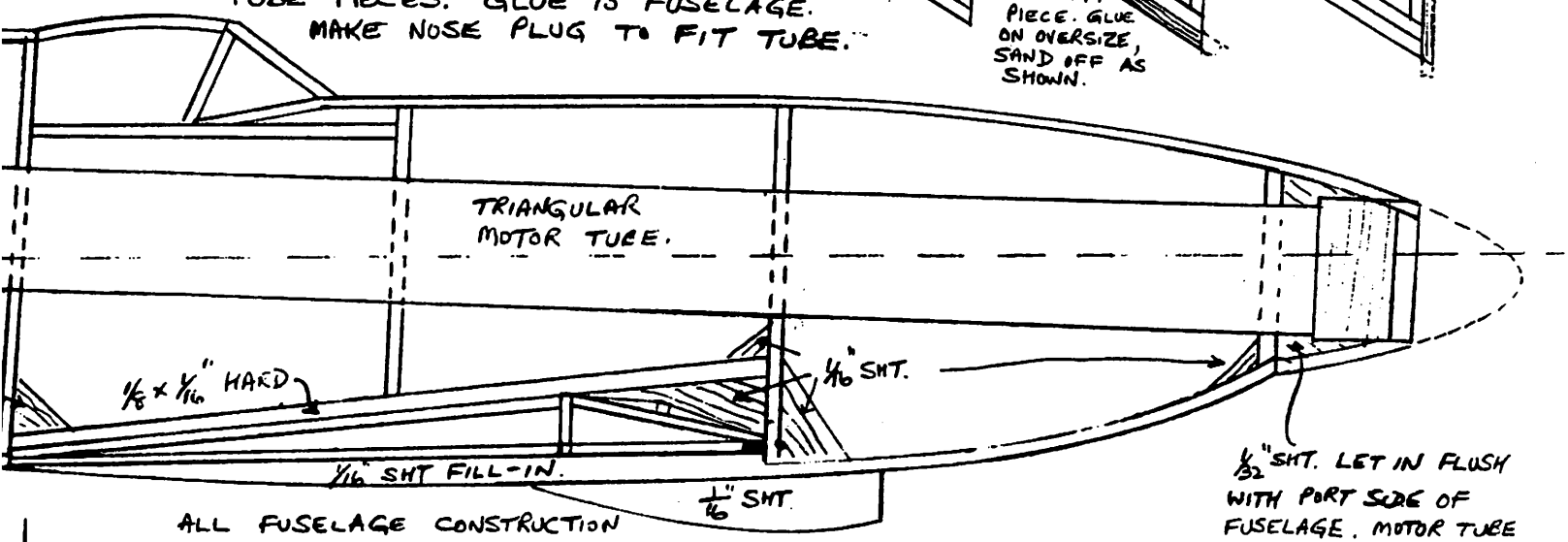
by GORDON ROBERTS, CFFS.

MOTOR TUBE

CUT 3 PIECES OF LIGHT 1/32" SHEET 5/8" x 12". CHAMFER EDGES TO ABOUT 60° ANGLES. ASSEMBLE TO FORM TRIANGULAR TUBE USING SMALL SPOTS OF HOT STUFF. WHEN OK, RUN HOT STUFF ALONG EACH EDGE. GLUE REINFORCING PIECES OF 1/32" x 1/2" AT FRONT AND BACK, GRAIN AT RIGHT ANGLES TO TUBE PIECES. GLUE TO FUSELAGE. MAKE NOSE PLUG TO FIT TUBE.







1/32" SHT. LET IN FLUSH WITH PORT SIDE OF FUSELAGE. MOTOR TUBE REINFORCING PIECE GLUES TO THIS.

ALL FUSELAGE CONSTRUCTION FROM MED. HARD 1/16" SQ EXCEPT WHERE NOTED. COVER PORT SIDE ONLY.

FLYING ACES Nats mk V

JULY 19/20 1986 GENESEO, NY

August, 1986

To all FAC Nats V Contestants and Sponsors:

Like so many enjoyable events, the FAC Nats Mk. V seemed to be a long time coming in return for vanishing into memory all too quickly. From the much-appreciated letters of thanks many of you took the time to send us, we know you had a great time.

We both believe strongly that model airplane meets should be held with only one thing in mind: the benefit of the contestants. That philosophy stayed with us from the earliest days of planning the Nats right through that final Sunday afternoon. Please consider this mailing, which includes a complete listing of final standings in all events, as our way of saying "Thank you" in return to each of you who took the time and effort to join us for FAC Nats Mk. V. It was our pleasure to have you here.

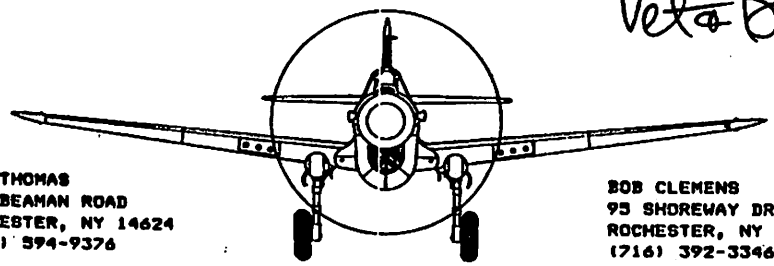
We can never thank Vic Didelot and Russ Bjorn enough for their herculean efforts as scale judges both days. Hundreds of models! Fantastic job, Russ and Vic!

Some of you are not members of the Flying Aces Club. That's OK, but we think you're missing a lot. All it takes to join is to send $9.00 to Lin Reichel, 3301 Cindy Lane, Erie, PA 15606. That'll get you a year's worth of the fabulous FAC News. That's all there is to it.

The best in aeromodeling to you all, and remember: the FAC Nats Mk. VI will be here before you know it!

Best regards,

Vet & Bob



VET THOMAS
11A BEAMAN ROAD
ROCHESTER, NY 14624
(716) 594-9376

BOB CLEMENS
95 SHOREWAY DRIVE
ROCHESTER, NY 14612
(716) 392-3346

FLYING ACES SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
1.	Don Srull	Voisin	59	117	40	81.75	180.75
2.	Don Srull	Lippisch P13	67	120	35	82.5	174.50
3.	Allen Lawton	Tony	55.5	120	10	82.5	148.00
4.	Dave Rees	Nicholas-Beazley NB3	56	106	10	79	145.00
5.	Dave Rees	Cant 1007 trimotor	58	45	40	45	143.00
6.	Dave Stott	Cunningham-Hall PT-6	57	65	15	62.5	134.50
7.	Dennis Norman	Fokker BII	49	78	15	69	133.00
8.	Paul Stott	Bellanca racer	47	46	40	46	133.00
9.	Richard Miller	Consolidated PT-1	35	120	15	82.5	132.50
10.	Mike Midkiff	Myrt	59	60	10	60	129.00
11.	Vance Gilbert	Lockspeiser LDA-01	52.5	56	20	56	128.50
12.	Jim Miller	Bleriot VII	51.5	74	10	67	128.50
13.	Dave Stott	Curtiss Falcon	59	54	15	54	128.00
14.	Ferrell Papic	Rutan Quickie	52	35	40	35	127.00
15.	Gordon Roberts	Fleet biplane	47	69	15	64.5	126.50
16.	Allan Schanzle	Potez 230	49.5	73	10	66.5	126.00
17.	Bill Anderson	Bleriot	53.5	64	10	62	125.50
18.	Emerson Elwell	Fleet biplane	53	56	15	56	124.00
19.	Pres Bruning	Martin B-26 Marauder	51	47	25	47	123.00
20.	William Anderson	Bleriot VII	53.5	64	10	62	125.50
21.	Paul Spreiregen	Puss Moth	48	81	0	70.5	118.50
22.	Rolfe Gregory	Fairchild 24	57.5	62	0	61	118.50
23.	Dennis Norman	FW-190 D9	49	59	10	59	118.00
24.	Henry Frautschy	Grumman F4F	54	57	5	57	116.00
25.	Phil Cox	Curtiss Robin	53.5	64	0	62	115.50
26.	Mike Midkiff	1 1/2 Strutter	57.5	43	15	43	115.50
27.	Rolfe Gregory	Siemans Schuckert	49	60	5	60	114.00
28.	Tom Hughston	Curtiss Robin	44	73	0	66.5	110.50
29.	Pat Daily	Douglas O-43	52.5	54	3	54	109.50
30.	Richard Kohfield	Junkers P40	55.5	44	10	44	109.50
31.	Greg Thomas	Wittman Tailwind	58	51	0	51	109.00
32.	George Meyers	Curtiss SOC-3	49	45	15	45	109.00
33.	Ross Mayo	Heinkel HE-100	48	50	10	50	108.00
34.	Don Steeb	Alco Sport	55.5	52	0	52	107.50

FLYING ACES SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
35.	Bill Noonan	Latecoere 28	59	48	0	48	107.00
36.	Pat Daily	Boeing F3B1	46	44	15	44	105.00
37.	Mark Fineman	Spitfire Mk IX	53.5	41	10	41	104.50
38.	Tom Arnold	Dornier DO-335	49.5	44	10	44	103.50
39.	Jack McGillivray	DH Sea Hornet	52	20	30	20	102.00
40.	Paul Helman	Cessna 1911	54	42	5	42	101.00
41.	Ralph Kuenz	Albatross DV	51	35	15	35	101.00
42.	Bob Thompson	Mitsubishi Kaugore	48	42	10	42	100.00
43.	Jack Humphries	Mustang I	44	45	10	45	99.00
44.	Walt Eggert Sr.	Fokker D-VII	45	39	15	39	99.00
45.	Bob Thompson	Junkers Stuka JU-87	53	36	10	36	99.00
46.	Ted Russell	Ryan ST	50.5	36	10	36	96.50
47.	Greg Thomas	P-51B	38	48	10	48	96.00
48.	Pres Bruning	Savoia SM-84	52.5	29	14	29	95.50
49.	Richard Bennett	Reggiane Re 2005	44	39	10	39	93.00
50.	Ralph Kuenz	Curtiss OC2	53	24	15	24	92.00
51.	William Bell	Boeing F4B4	53.5	22	15	22	90.50
52.	Walt Eggert Sr.	Fairchild FC-1	55	35	0	35	90.00
53.	Walt Eggert Jr.	Fairchild FC-1	56	34	0	34	90.00
54.	Paul Stott	Cessna C-34	44	44	0	44	88.00
55.	Walt Eggert Jr.	P-47	50	28	10	28	88.00
56.	Vet Thomas	Clipped-wing Cub	57.5	29	0	29	86.50
57.	Jack Moses	Albatross DVA	50	21	15	21	86.00
58.	Harvey Hopkins	Boulton-Paul Defiant	53.5	22	10	22	85.50
59.	Bob Clemens	Cranwell CLA-3	57.5	25	3	25	85.50
60.	William Passarelli	Fike E	55.5	29	0	29	84.50
61.	Paul Spreiregen	Fairchild 24	28	56	0	56	84.00
62.	Andrew MacIsaac	Eaglet	47	33	3	33	83.00
63.	Vic Nippert	Stinson 108	47	36	0	36	83.00
64.	John Low	Fleet Model 2	42	25	15	25	82.00
65.	Chuck Schobloher	Stinson 108	50	32	0	32	82.00
66.	William Bell	Douglas Y10-43	50.5	28	3	28	81.50
67.	Paul Weigand	Mister Mulligar	53.5	26	0	26	79.50
68.	John Morrow	Bellanca Scout	56.5	20	0	20	76.50

FLYING ACES SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
69.	Richard Miller	Cessna C-34	29	40	0	40	69.00
70.	Daniel McDonald	Ord-Hume		62		62	62.00
71.	John Low	Fairchild 24D	31.5	27	0	27	58.50
72.	Bob Young	SE5a		29			29.00

PL- Place SP- Scale Points BF- Best Flight FP- Flight Points

MASS LAUNCH EVENTS

WW I PEANUT COMBAT

1. Henry Frautschy	Fokker D-VII
2. Allen Lawton	Fokker D-VII
3. Bob Leishman	SE5a
4. George Meyers	SE5a
5. Bob Thompson	SE5a

THOMPSON TROPHY RACE

1. Mike Midkiff	Travel Air #13
2. Dave Rees	Cessna CR-2
3. George Meyers	Laird-Turner
4. Jack McGillivray	Hughes 1B
5. Mark Fineman	Cessna CR-3

GOLDEN AGE

1. Paul Helman	G & H Gadfly
2. Don Srull	Alco Sport
3. Bill Anderson	Bellanca Aircruiser
4. Mark Fineman	Monocoupe
5. George Meyers	Leopard Moth

GREVE TROPHY RACE

1. Dave Rees	Caudron
2. George Meyers	Suzy
3. Pres Bruning	Chambermaid
4. Dave Stott	Haynes Mystery
5. Ferrell Papic	Caudron

WW I COMBAT

1. Pat Daily	Fokker D-VII
2. Don Srull	DH 6
3. Rowland Hoot	Fokker D-VII
4. Dave Rees	Roland Walfisch
5. Bruce Price	SE5a

WW II COMBAT

1. Allen Lawton	Tony
2. George Meyers	Grace
3. Don Srull	Caudron
4. Ross Mayo	Heinkel HE-100
5. Gordon Roberts	B-P Defiant

FAC PEANUT SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
1.	Jack McGillivray	Yugoslav 45T	55	109	30	79.75	164.75
2.	Jim Miller	Santos-Dumont 14bis	52	86	30	73	155.00
3.	Juergen Kortenbach	Langley Aerodrome	52	38	45	38	135.00
4.	Allen Lawton	Folkerts SK-3	54	89	5	74.5	133.50
5.	Bob Thompson	Langley Aerodrome	51	33	45	33	129.00
6.	Don Steeb	Wright Flyer	54	23	50	23	127.00
7.	Jim Miller	Waco SRE	51	60	15	60	126.00
8.	Ken Groves	Bristol Scout	49	62	15	61	125.00
9.	Phil Cox	G & H Gadfly	54	60	10	60	124.00
10.	Bob Thompson	Wright Flyer	50	24	50	24	124.00
11.	Gordon Roberts	Folkerts SK-3	51	65	10	62.5	123.50
12.	Dennis Norman	P-51D	54	57	10	57	121.00
13.	Walt Eggert Sr.	P-47N	50	60	10	60	120.00
14.	Greg Thomas	Lacey M-10	55	66	0	63	118.00
15.	Dave Rees	Monocoupe 110	57	58	0	58	115.00
16.	Walt Eggert Jr.	P-47	50	51	10	51	111.00
17.	Gordon Roberts	Andreason	49	55	15	55	109.00
18.	Don Steeb	Fike E	52	56	0	56	108.00
19.	Steve Buso	Lacey M-10	53	54	0	54	107.00
20.	Dennis Norman	Chester Goon	52	42	10	42	104.00
21.	Bob Leishman	SE5a	46	42	15	42	103.00
22.	George Meyers	Chambermaid	54	44	5	44	103.00
23.	Paul Helman	Burgess-Curtiss	58	40	5	40	103.00
24.	Ted Russell	Nesmith Cougar	55	45	0	45	100.00
25.	Pres Bruning	Chambermaid	56	37	5	37	98.00
26.	William Ceresa	Wee Will Jr.	54	34	10	34	98.00
27.	Dave Rees	Caproni	56	28	10	28	94.00
28.	Doug Buchanan	Heinkel HE-100	44	40	10	40	94.00
29.	Ferrell Papic	VW Racer	53	35	5	35	93.00
30.	Walt Eggert Sr.	Pietenpol	55	34	3	34	92.00
31.	Jack Moses	IS-4	52	32	5	32	89.00
32.	Mike Midkiff	Hergt	54	28	5	28	87.00
33.	John Low	Civil SE5a	45	25	15	25	85.00
34.	Michael Nassise	Nesmith Cougar	37	36	0	36	73.00

FAC PEANUT SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
35.	Andrew MacIsaac	Nesmith Cougar	46	23	0	23	69.00
36.	Emerson Elwell	Stinson 125	34	31	0	31	65.00
37.	Daniel McDonald	Ord-Hume		60			60.00
38.	Richard Kohfield	Jodel		42		42	42.00
39.	Richard Bennett	Reggiane Re2005		39		39	39.00
40.	Dave Stott	Sopwith Triplane		39		39	39.00

PL-Place SP- Scale Points BF- Best Flight FP- Flight Points

IN APPRECIATION. . .

A big tip of the Flying Aces Club cap to our five generous event sponsors:

For Flying Aces Rubber Scale-

Radio Control Club of Rochester
1633 Creek Street
Rochester, NY 14625

For Flying Aces Peanut Scale-

Walt's Hobby & Craft (Walt Throne)
4300 Genesee Street
Syracuse, NY 13219

For OHQ Peanut Scale-

Peck-Polymers
P.O. Box 2498
La Mesa, CA 92041

For WWII Combat-

Experimental Aircraft Association
Chapter 44
3631 County Line Road
Brockport, NY 14420

For Golden Age Mass Launch-

D.C. Maxecuters
20008 Spur Hill Drive
Gaithersburg, MD 20879

For basic sponsorship, manpower-

Western New York Free Flight Society
2067 Rt. 65
Holcomb, NY 14469

A SPECIAL SALUTE, for the use of their wonderful airfield, goes to:

The National Warplane Museum
P.O. Box 5
Geneseo, NY 14454

Our thanks also go to Peck-Polymers (merchandise certificates), Don Grull (electronic stop watches), FAI Model Supply (rubber strip), and Charles Neely Scale Drawings for their generous donations of merchandise awards to the FAC Nats Mk. V.

Should good fortune and Hung favor you with an award sponsored by one or more of these benevolent donors, take the time to send them a note of thanks and appreciation. In fact, whether or not you took home a trophy, WRITE! Who knows- we may be starting a trend!

GHG PEANUT SCALE

PL	NAME	MODEL	1	2	3	FT	SP	ST	TOTAL
1.	Ken Groves	Fike Dream	82	79	81	242	12	288	530
2.	Walt Eggert Sr.	P-47N	45	52	56	153	12	288	441
3.	Allen Lawton	Folkerts SK-3	47	67	86	200	9	216	416
4.	Juergen Kortenbach	Nieuport 11C-1	49	41	30	120	12	288	408
5.	Henry Frautschy	Upton Baby Ace	39	40	41	120	12	288	408
6.	Walt Eggert Sr.	Pietenpol	64	63	60	187	9	216	403
7.	Gordon Roberts	Andreason	48	55	74	177	9	216	393
8.	Pres Bruning	Chambermaid	34	39	31	104	12	288	392
9.	Walt Eggert Jr.	P-47N	55	37		92	12	288	380
10.	Dennis Norman	P-51D	27	22	42	91	12	288	379
11.	Jack Moses	IS-4	31	82	46	159	9	216	375
12.	Bob Thompson	Langley Aerodrome	24	30	26	80	12	288	368
13.	Jim Miller	Waco 3RE	53	53	43	149	9	216	365
14.	Don Steeb	Fike E	24	57	42	123	9	216	339
15.	George Meyers	Heinkel HE-112	27	43	40	110	9	216	326
16.	Ross Mayo	Nesmith Cougar	42	28	35	105	9	216	321
17.	Richard Kohfield	Jodel	66	54	47	167	6	144	311
18.	Claude Powell	Jodel	34	25	30	89	9	216	305
19.	William Anderson	Chester Goon	32	22	24	78	9	216	294
20.	Vic Nippert	Dayton-Wright	25			25	9	216	241
21.	Michael Nassise	Nesmith Cougar	25	24	27	76	6	144	220
22.	Dennis Norman	Fokker BII	24			24	6	144	168
23.	Dave Rees	Monocoupe	DNF				12		
24.	Mark Houck	Dornier D-1	DNF				6		
25.	John Morrow	Pietenpol	DNF				9		
26.	Paul Helman	Chief Oshkosh	DNF				9		

PL: Place FT: 3-Flight Total SP: Scale Points ST: Scale Total
DNF: Did Not Fly

EMBRYO ENDURANCE

PL	NAME	MODEL	1	2	3	BONUS	TOTAL
1.	John Stott	Eaglet	120	120	120	9	369
2.	Ken Groves	Boss Robin	117	120	120	6	363
3.	Richard Miller	Hornet	120	120	80	9	330
4.	Mark Schneider	M-Bric	115	115	82	9	321
5.	Don Steeb	Original	111	105	95	9	320
6.	Don Srull	Super Nit	83	120	99	9	311
7.	William Passarelli	Prairie Bird	95	84	120	9	308
8.	Daniel McDonald		88	89	120	9	306
9.	John Low	Tutor	120	55	120	9	304
10.	Richard Kohfield	Debut	102	68	120	9	299
11.	Vic Nippert	Twin Fin Terror	112	81	59	6	258
12.	Mark Fineman	X-Z	81	96	63	9	249
13.	Rowland Hot	Prairie Bird	87	65	88	9	249
14.	William Anderson	Debut	61	49	120	9	239
15.	Claude Powell	Mod. Prairie Bird	107	78	44	5	234
16.	Bruce Price	Prairie Bird	57	100	58	8	223
17.	Jack Moses	Eaglet	69	68	74	9	220
18.	Walt Eggert Sr.	Own Design	79	57	62	9	207
19.	Stephen Drpbick	Cruiser	72	120		9	201
20.	Jim Hyka	Debut	107	38	45	9	199
21.	Chuck Schobloher	Sweepo	68	66	53	9	196
22.	Vic Nippert	Twin Fin Persuit	45	74	44	9	172
23.	Michael Nassise	Prairie Bird	55	49	40	6	150
24.	Mark Houck	Prairie Bird	38	43	54	9	144
25.	Henry Kemp	Sorta Korda	44	46	51	5	140
26.	John Market	Special	9	120		9	138
27.	Gordon Roberts	Debut	40	88		9	137
28.	David Narance	Prairie Bird	36	46	45		127
29.	Henry Frautschy	Peabody Pocket	33	29	39	5	106
30.	Bob Clemens	Eyeball	74			9	83
31.	Ross Mayo	Misadventure	66	4	3	9	82
32.	Walt Eggert Jr.	Own Design	66				66
33.	Stephen MacIsaac	Uncertain	56			5	61
34.	Bob Thompson	Pacific Ace	32			6	38
35.	Robert Russell	Mod. Prairie Bird	2			9	11

FAC POWER SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
1.	Allan Schanzle	Tiger Moth	58.5	104	15	78.5	141.00
	Bob Clemens (Tie)	Farman Jabiru	58.5	132	5	82.5	141.00
2.	Don Srull	Bleriot canard	55.5	106	20	79	138.00
3.	Walt Eggert Sr.	Fokker Dr-I	54.5	76	20	68	137.00
4.	Mike Midkiff	Bristol M1-B	57.5	88	5	74	136.50
5.	Allan Schanzle	FW-190	54	118	10	82	136.50
6.	Bill Noonan	Martinsyde Semiquaver	53.5	79	15	82.5	136.00
7.	Fernando Ramos	Bucker Jungmann	53.5	78	15	82.5	136.00
8.	Pat Daily	Ansaldo SVA-5	52.5	74	15	67	135.00
9.	Steve Buso	Monocoupe 90-AF	51.5	154	0	82.5	134.00
10.	Bob Leishman	Pfalz D3	41	88	15	74	123.50
11.	Joe Barish	Waterman Aerobile	33	65	25	62.5	115.50
12.	Ferrell Papic	Taylorcraft	35	99	0	77.25	112.25
13.	Joe Barish	Dayton-Wright	36	82	5	71	112.00
14.	Robert Wetherell	Aeronca C-2	60	51	0	51	111.00
15.	Rolfe Gregory	Luscombe Phantom	53.5	50	0	50	103.50
16.	Bill Bell	Stearman C3-B	55.5	28	15	28	98.50
17.	Walt Eggert Sr.	Air Transport P-2	56.5	33	3	33	92.50
18.	Dan Driscoll	Nieuport 11	48.5	21	15	21	84.50

PL- Place SP- Scale Points BF- Best Flight FP- Flight Points

NEW FAC POWER SCALE RULES IN USE:

For the record, the new FAC Power Scale rules were interpreted at FAC Nats Mk. V as follows:

The *best flight* of each model was FACtored as required in the basic FAC scale rules (full points up to 60 seconds; half points 61 to 90; quarter points 91 to 120). *Bonus points*, if any, were added UNfactored to give the *flight points* shown above (82.5 max). *Flight points* and *scale scores* were then added together to give the *TOTAL* seen in the last column.

FAC JUMBO SCALE

PL	NAME	MODEL	SP	BF	BONUS	FP	TOTAL
1.	Jack McGillivray	DH Sea Hornet	'59	106	30	79	168.00
2.	Don Srull	Lippisch P13	58	82	35	71	164.00
3.	Dave Rees	G & H Gadfly	61.5	101	10	77.75	152.00
4.	Don Srull	Cant 1012	65.5	49	35	49	149.50
5.	Dave Stott	DeHaviland DH-4a	60.5	59	15	59	134.50
6.	Vance Gilbert	Fairchild PT-19	53	73	10	66.5	129.50
7.	Jack Moses	Blackburn Skua	56	60	10	60	126.00
8.	Emerson Elwell	Folkerts Special	58	66	5	63	126.00
9.	Paul Helman	G & H Gadfly	58	57	10	57	125.00
10.	Robert Wetherell	Avro Avian	61	54	10	54	125.00
11.	Dan McDonald	Skeeto	47	73	3	66.5	116.50
12.	Bob Thompson	De Haviland D.H.4	58	43	15	43	116.00
13.	Leon Bennett	Piper J-3 Cub	49	74	0	67	116.00
14.	Mike Midkiff	North American B-25	48	43	25	43	116.00
15.	John Houck	F-82F Twin Mustang	55	31	30	31	116.00
16.	Vic Nippert	Cessna AW	54	55	0	55	109.00
17.	Mark Fineman	Curtiss P-40	56	39	10	39	105.00
18.	Steve Buso	Lacey M-10	60.5	43	0	43	103.50
19.	Robert Anderson	Arado 76	62.5	26	3	26	91.50
20.	Chuck Schobloher	Spitfire	37	36	10	36	83.00
21.	Robert Anderson	Douglas O-46A	53	26	3	26	82.00
22.	William Bell	Taylorcraft BE2-C	43	32	0	32	75.00
23.	Dennis Norman	Avro Lancaster		32		32	32.00

PL- Place SP- Scale Points BF- Best Flight FP- Flight Points

SPECIAL AWARDS

EARL STAHL PERPETUAL TROPHY:

Robert Wetherell - Aeronca C-2

FAC ACHIEVEMENT TROPHY:

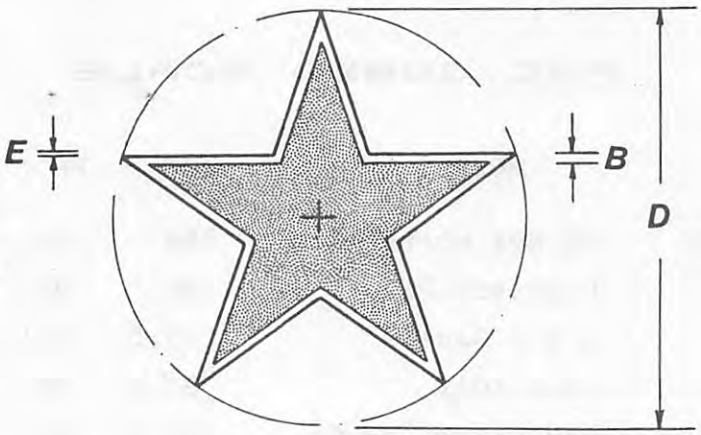
Dave Rees - Cant 1007 Trimotor

FAC GRAND CHAMPION:

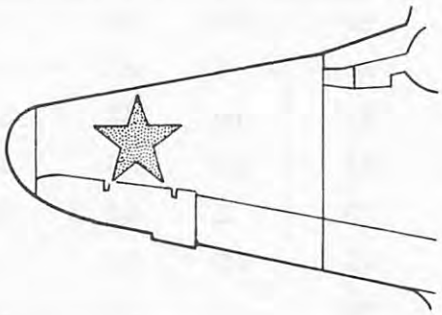
Don Srull

PLATE 21

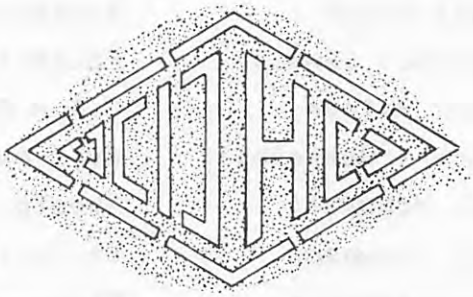
Proportions of Soviet national insignia where 'D' represents the diameter of a circle round the points of the star, 'B' the width of the light border, and 'E' that of the outer, black edge.



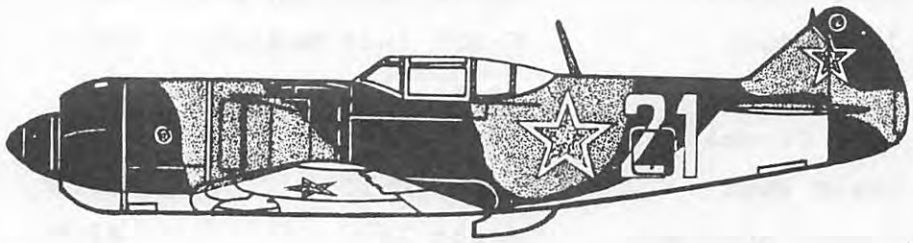
Early war-time red stars often lacked more than a black outline of roughly the same width as the light edge later adopted.

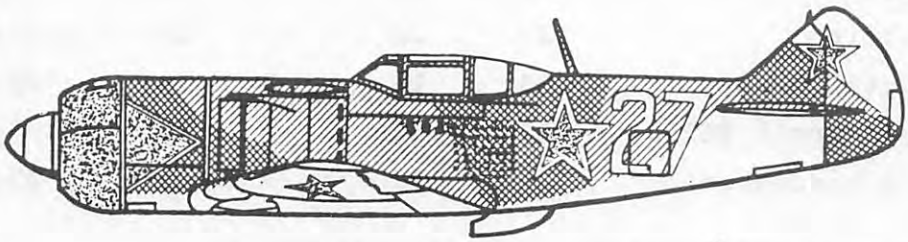


Left: Position of star on wing tips centered at one seventh of the total span and with the leading point, 5 to 15cm from the leading edge. Right: Lavochkin factory mark, of Cyrillic 'FN'.



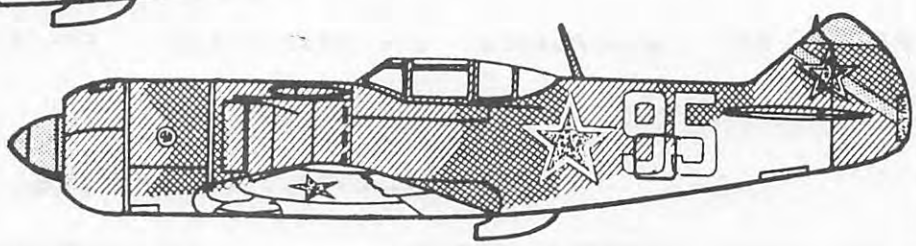
An La-7 in black/grass green/blue finish with La-7 mark on cowl and at top of rudder.

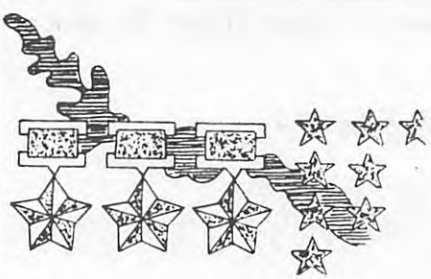




Ivan Kojedub's La-7 in green/brown/blue with red/white nose areas and white spinner with upper fin/rudder.

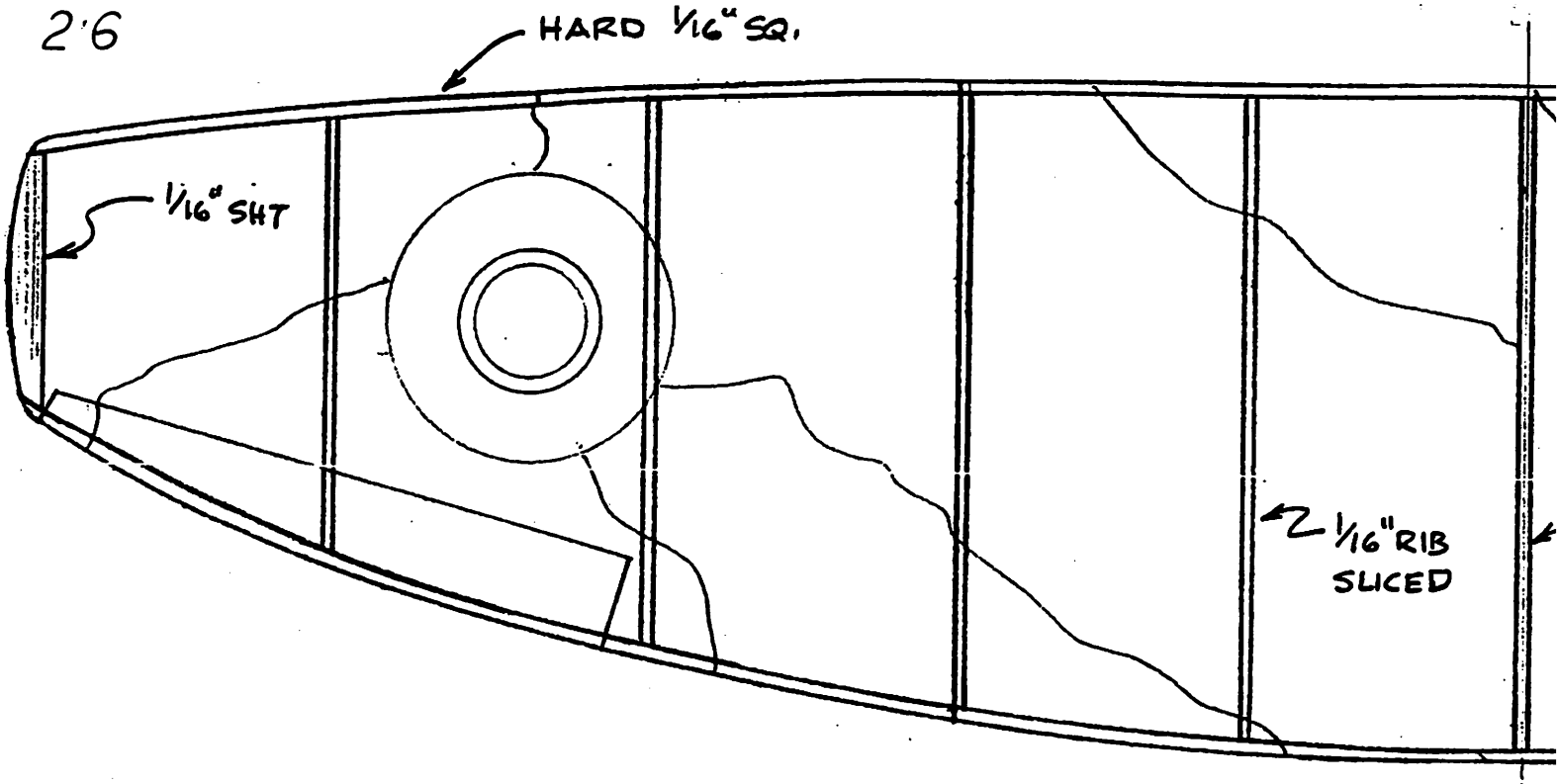
Green/brown/blue finish for an La-7 with yellow spinner, fin/rudder tip and diagonal bar.

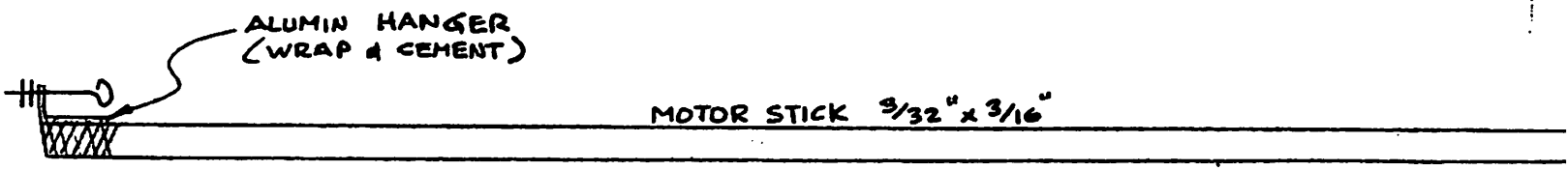


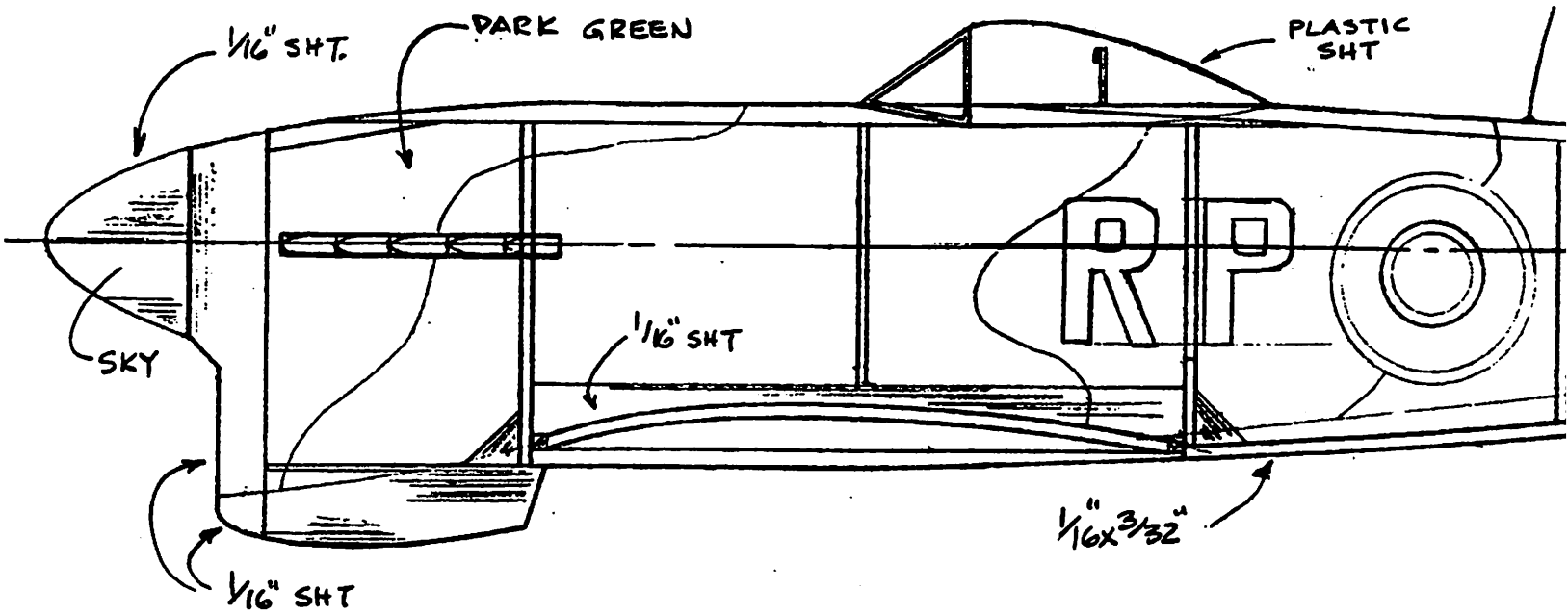


Left: Ivan Kojedub's three 'Hero of Soviet Union' medals in red and gold with 7 rows of 8 gold victory stars and one of 6. Right: White La-7 mark carried on aircraft base colour.









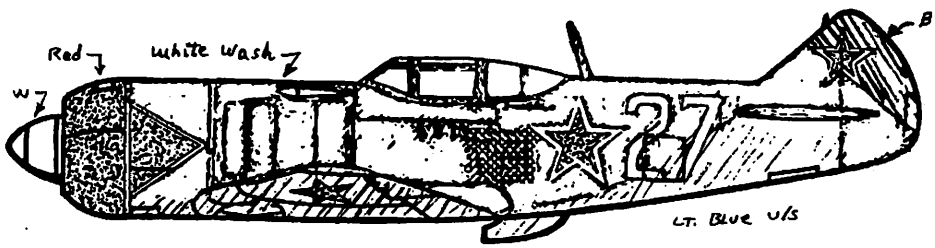
ROLAND BEAUMONT'S MOUNT "RB" STARBOARD, "RP" PORT SIDE

HAWKER TEMPEST MK. V SERIES II
NO-CAL.

FLAT HATIN' ON THE MARKET

Diels Engineering selected a real charmer in the F4B-2 for Dave's first adventure in kits. 'Tween the wars U.S. NAVY markings make attractive models. Let's jump in the box and look it over: Doccumentation and Decals are there for the white tail and black trim 6-F-12, including the Felix The Cat bomber squadron marking. Also ARMY P-12C options. Profile Publication 27 (out of print) has a color view of the subject, showing the black lower half cowl band, and all white tail.
Good drafting and full pattern sheets are characteristic of Dave Diels plans. The Boeing kit includes a template for rigging the top wing angle of attack. Competition fliers will want to lighten construction for FF use. The blunt entry Diels airfoils can be sharpened up with 45 degree slant leading edges placed down at the flat bottom plane. Max thickness at 25 to 30 per cent chord and squared off trailing edges complete the flat bottom airfoil.

Fuselage construction is profile keel type, with split formers. Carve away the interior to lighten and provide more motor wind space. The nose construction is subject to re-work options. Dave ran a reader research questionaire,and the nose work got the most second guesses. Dave will work up an alternate nose plan and send out the factory fix to all kit buyers. How'bout that for takin' care of the customer! The first plan shows the nose drag ring mounted between two big balsa discs at rhe ring front and rear. Multiple stringer spacers round out the ring. The scale judge will be more impressed with efforts to simulate built up engine cylinders and air passage space through the cowl. A fix is to center the discs together at mid-ring, and laminate a solid balsa ring. Add cylinder rounds, and carve out the gaps. The nose assembly could plug into the fuselage to get a larger than 1/2 inch square nose opening. You need a big hole up front to stuff in a 12 to 14 inch long loop of wound up 3/16 inch strip rubber. The 15 inch wingspan Boeing F4B-2 kit can also be flown on CO_2 power, or possibly the VL HY-70 electric pack. A few of the first run kits are still available at $8.95 plus $1.50 ea. p&p. Ohio builders add 6 per cent tax, or .54. Hurry! Dave is working on the Russky Lavochkin La-5FN/La-7 Kit and taking orders for an F8F-2 Bearcat kit at $9.45 & $1.50 shipping. Order from Diels Engineering, P.O. Box 101, Woodville, OH 43469.



Ivan Kojedub's La-7 in winter white/blue with red/white nose areas and white spinner with upper fin/rudder, royal blue.

Look at the La-5FN/La-7 kit for the best Russky fighter of '42 & '43. The radial power and pleasing lines with 400 plus mph speed made the La's the aces choice. Ivan Kozedub racked up 63 kanones in just two years, mostly in La-5's and -7's. The winter whitewash on Ivan's La-7 no. 27 is shown above. Aircraft Modelworld, March, 1986 ran material on Soviet markings. The black and grass green over blue is an attractive camouflage. Dave offers two plans in one. One side of the plan shows the La-5FN with the long over nose intake. On the back side is the La-7 plan with a cleaner nose, and aft lower oil cooler. The kit includes more red stars than you need-don't put any on the top side of the wing. Any use on the Southern front in winter is unknown, so you are on your own if you add red to the top surface wing tips of a whitewash over painted Lavochkin. The 1/24 th scale kit has a 16¼ inch wingspan. Not a bad size; at Jumbo size, the cowl is really big. Dave adds a formed canopy to the kit, and found a sheet of green tissue to add along with a white sheet. This kit is in production at $10.95 plus $1.50.

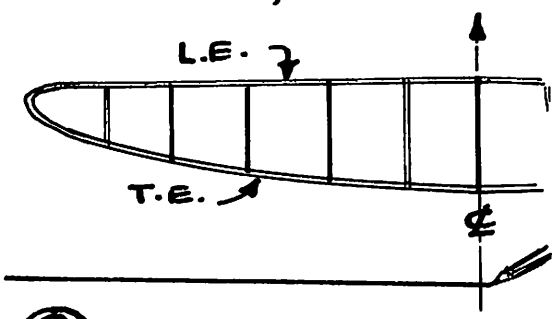
Thanks to all who wrote in looking for CROSSWINDS. I wish Nancy and I hadn't lost parents, and TRW hadn't sold its parents on the market. We are ready to go with 75, and a blessing is that we have Dennis Norman back in action on CROSSWINDS #76.

Uncle Clarky's Building Board



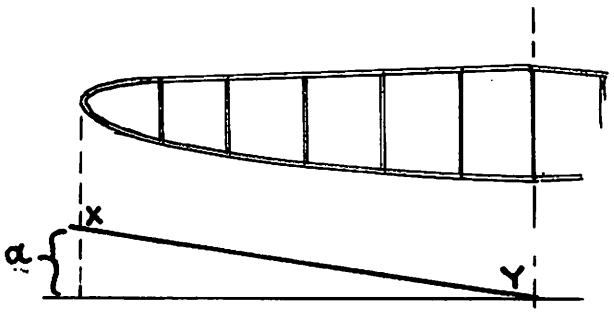
OOPS! DIDN'T HEAR YOU COME IN! LOOKIN' FOR SOME MORE HOT MODELIN' TIPS, ARE YA?

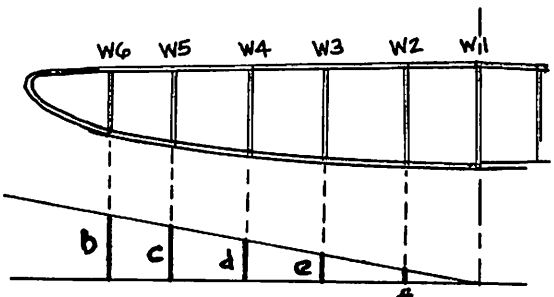
OKEY DOKE -- NO PROBLEM. C'MON OVER TO THE WORKBENCH. SHOW YA A NEW WAY TO PUT WASHOUT INTO A WING. STEAM WARPIN' NEVER WORKED FOR ME, AND THOSE TRAILIN' EDGE SHIMS ALWAYS KEPT SLIPPIN' OUTTA PLACE.



① DRAW A LINE ON YOUR WING PLAN, PERPENDICULAR TO THE WING CENTERLINE.

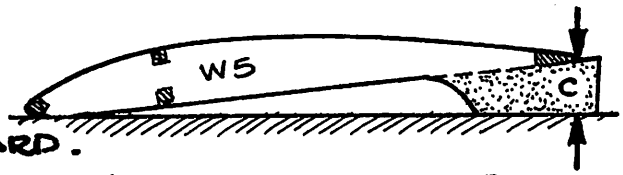
② GIVEN WITH THE WINGTIP, MEASURE DISTANCE "a" EQUAL TO THE TIP WASHOUT YOU WANT. THEN DRAW IN LINE "X-Y".





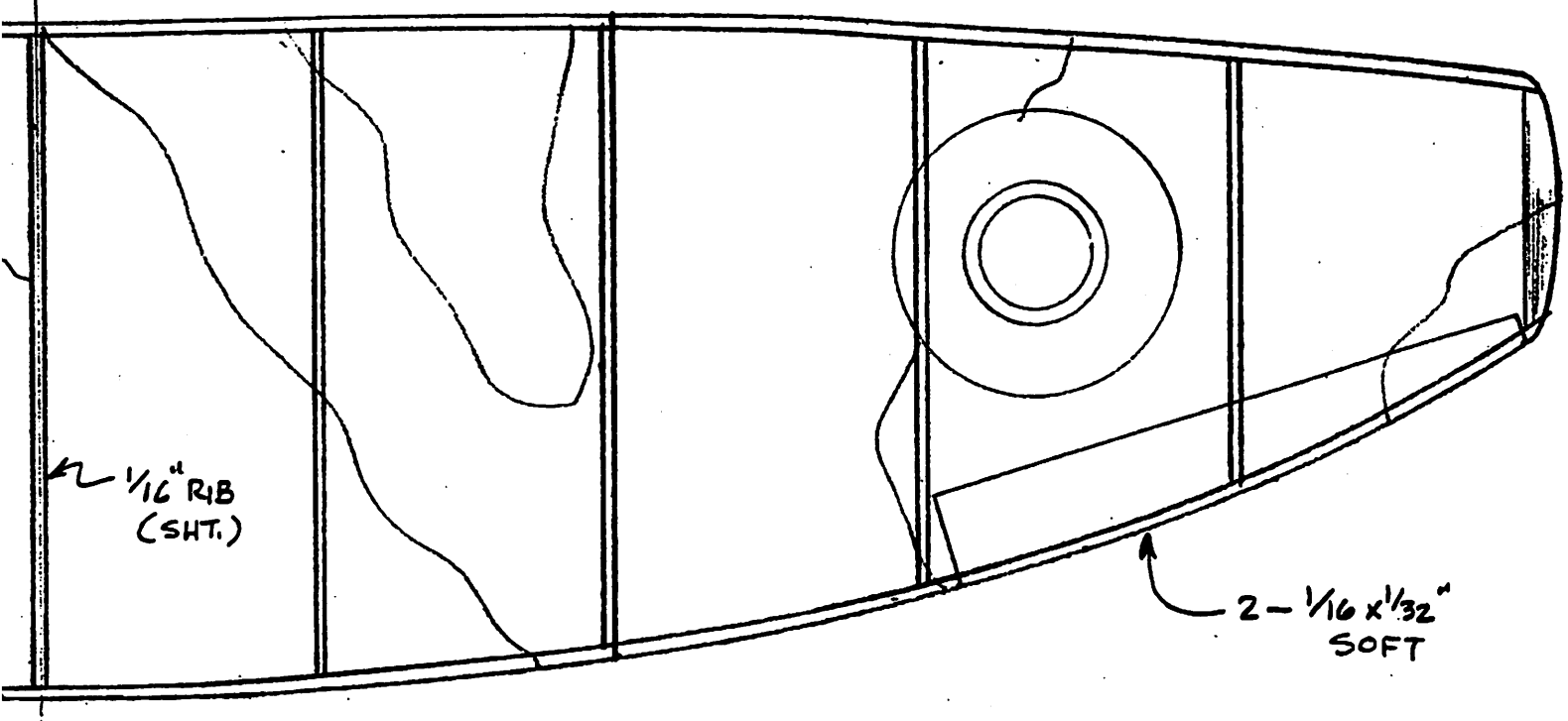
③ PROJECT EACH RIB DOWN TO THESE TWO LINES. THE DISTANCES BETWEEN THE LINES (b, c, d, etc.) ARE THE AMOUNTS OF WASHOUT EACH RIB NEEDS.

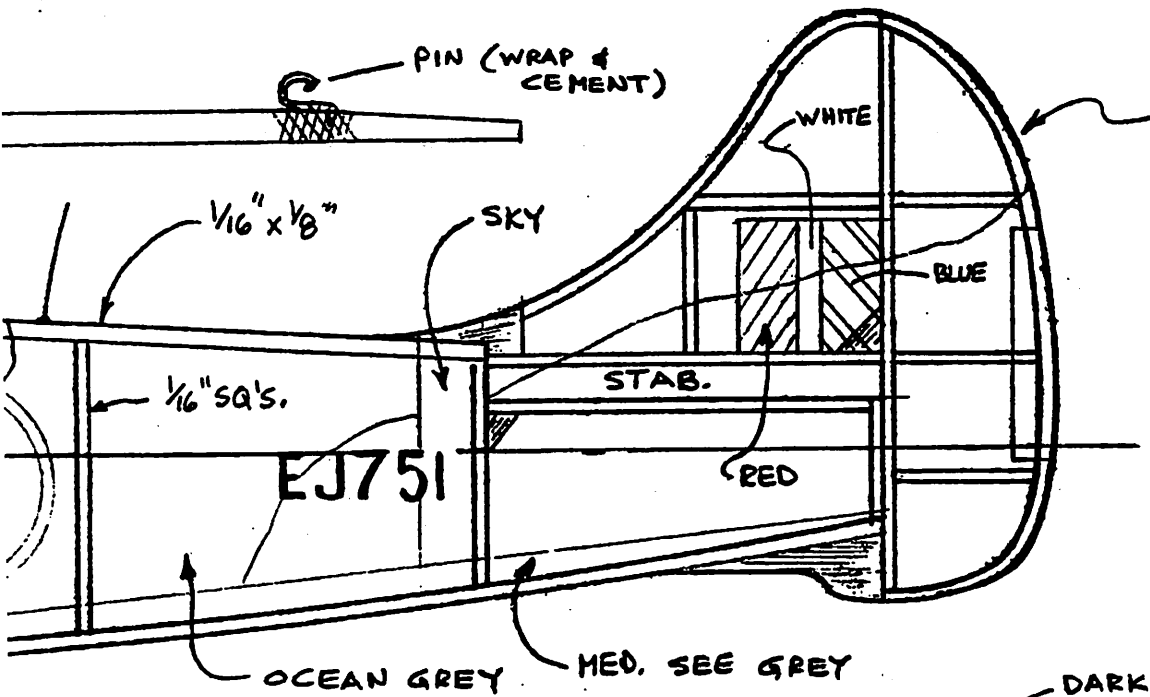
WHEN YOU CUT OUT THE RIBS, ADD STOCK TO THE UNDERSIDE AT THE TRAILING EDGE. IN THE CASE OF W5, ABOVE, IT WILL LOOK LIKE THIS SITTING ON THE BOARD.

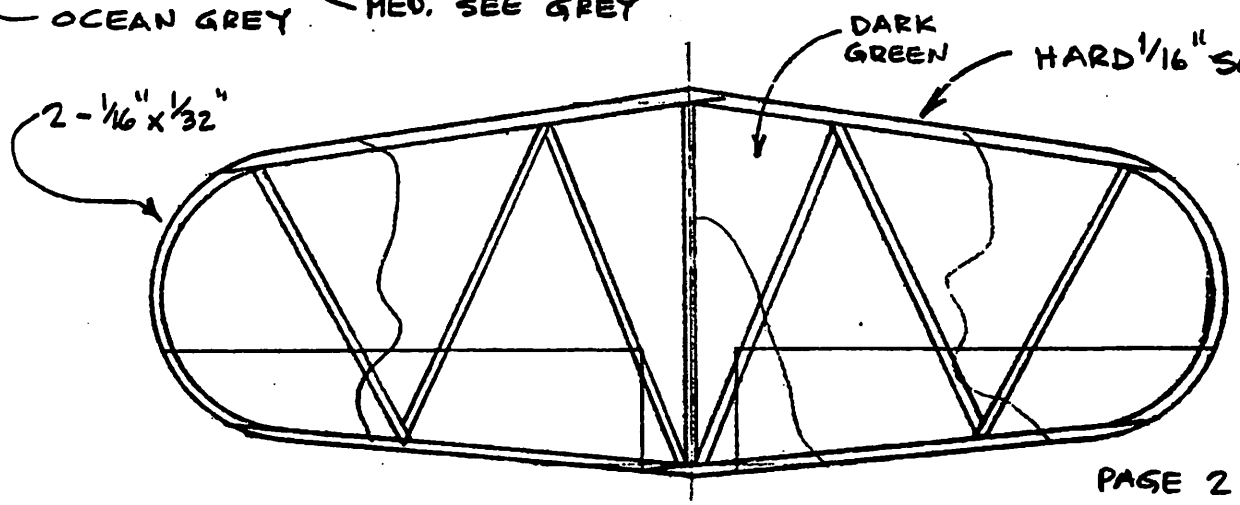


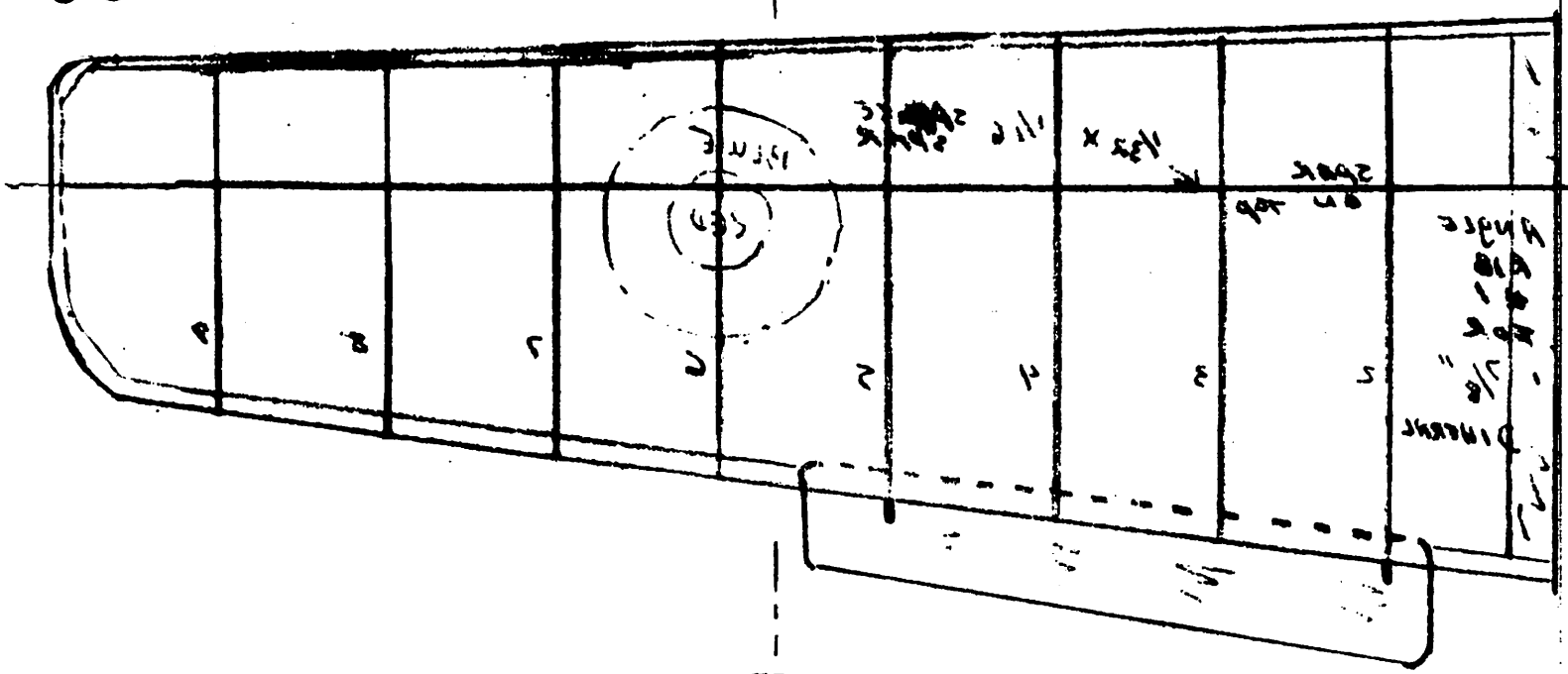
AFTER YOU'VE ASSEMBLED THE WING, JUST TRIM OFF THE SHADED PORTION. PRESTO! INSTANT WASHOUT!

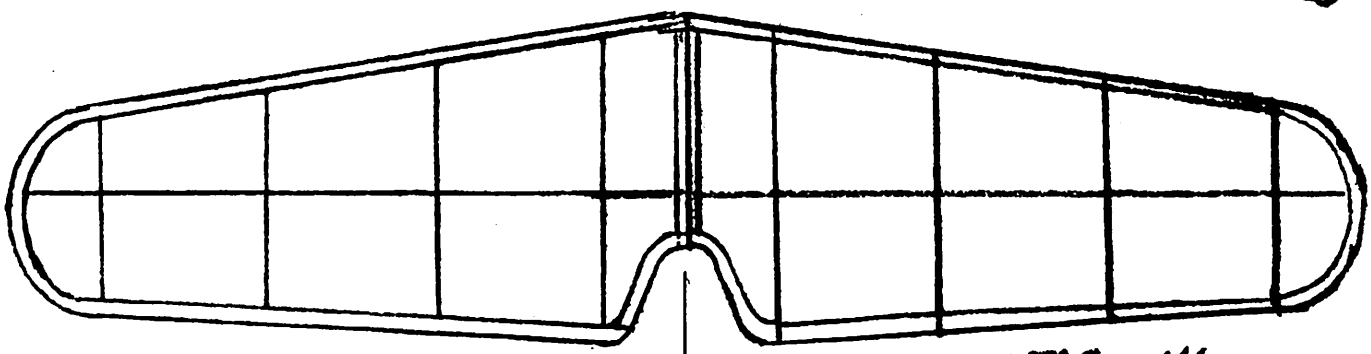
dBENNETT


1/16" RIB (SHT.)
2 - 1/16 x 1/32" SOFT


PIN (WRAP & CEMENT)
WHITE
2 - 1/16" x 1/32"
HAWKER TEMPEST NO-CAL.
1/16" x 1/8"
SKY
BLUE
STAB.
1/16" SQ'S.
EJ751
RED
OCEAN GREY
MED. SEE GREY


DARK GREEN
HARD 1/16" SQ'S.
2 - 1/16" x 1/32"



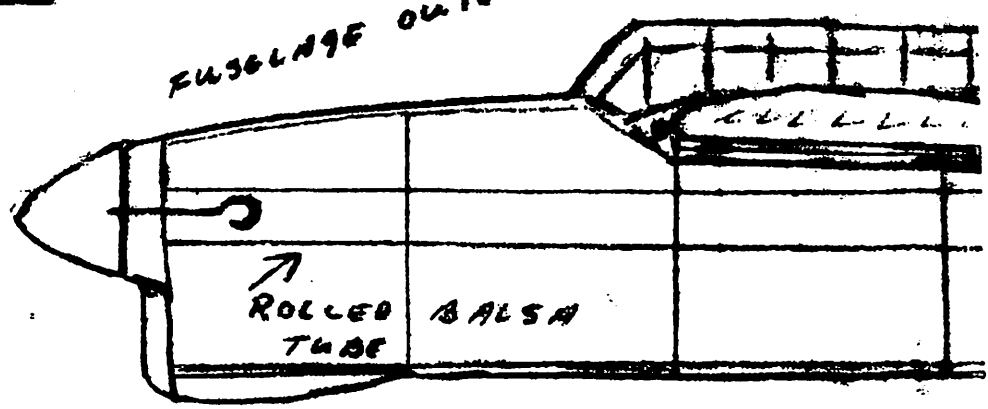


MAKE STAB IN ONE PIECE

CROSSWINDS 75

FAIREY BARRACUDA V
NO. CAL
DARK GRAY - EXCEPT LOWER FUSELAGE WHICH IS LIGHT GREEN

M P Zamb



LA-3/LA-7

1) LaGG-3, 9 Guards IAP, Black sea 1944. Standard green/brown (green shown darker/light blue camouflage. Red stars with silver borders on fuselage sides and below wings (no stars above wings typically), unbordered star on tail. Yellow tail flash, silver "32". Note that many early LaGG-3's had a straight rudder hinge line with small external balance weights at the top and bottom, or one larger weight at the top, before the final aerodynamic balance shown—check your references! (Red Stars in the Sky)

2) LaGG-3, Guards IAP (Capt. Shtshipov), Black Sea 1944. Camouflage, insignia, tail as above, silver "43". Personal insignia a yellow, brown, black, and red lion's head on a red heart. Victory marks (shown as dots for clarity) are small red stars. (Red Stars in the Sky)

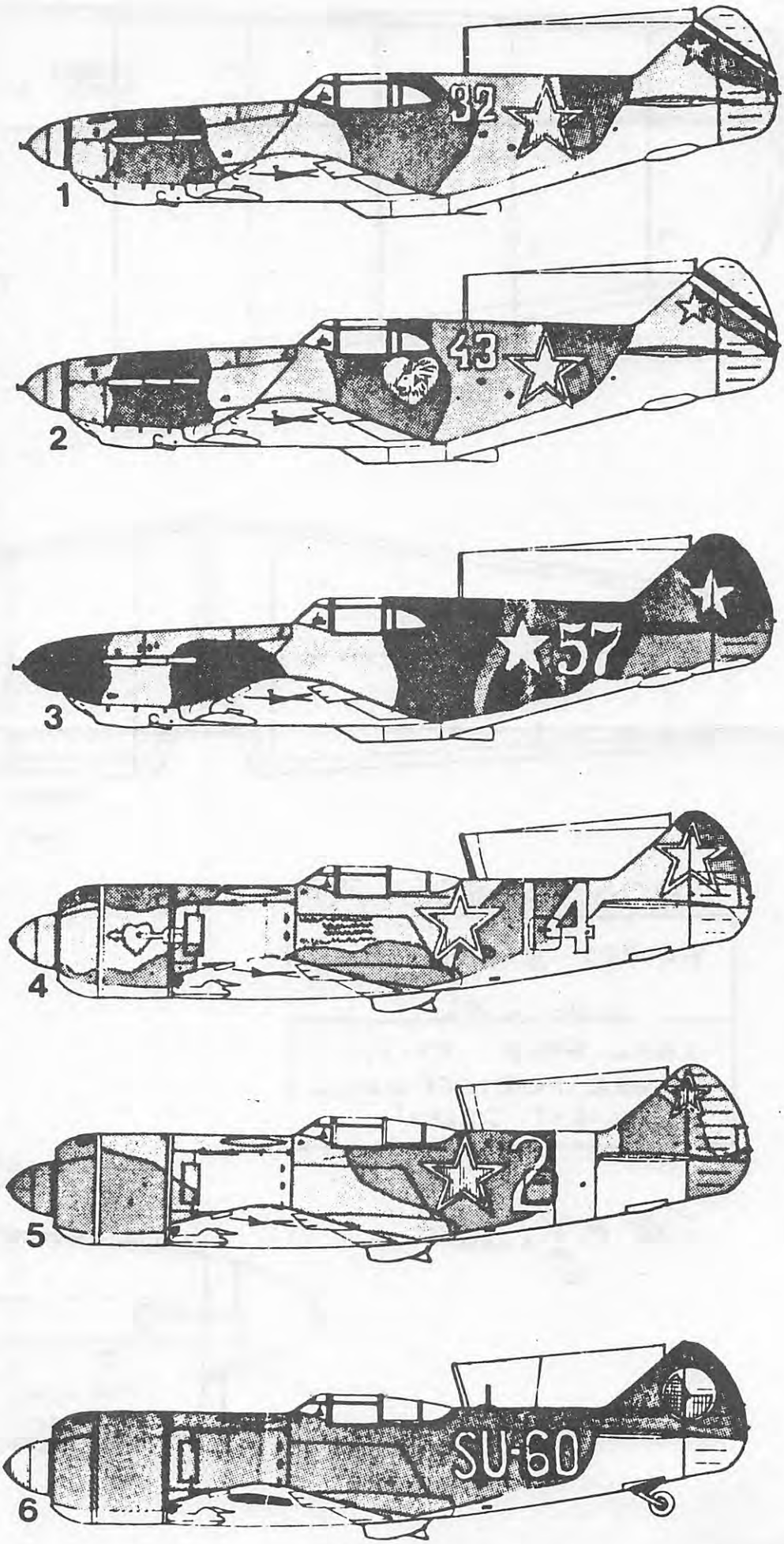
3) LaGG-3, unknown IAP, shot down by Finnish fighters over Karelia 1944. Dark green/black (probably field-applied over the original brown?)/light blue. Unbordered red stars 6 positions, white (or silver?) "57". Spinner black, small tail markings possibly citations or patches. (Soviet Air Force Fighters)

4) La-7, unknown IAP, 1945. 2-tone gray/light blue. Panel behind exhausts unpainted, red stars with white (or silver?) borders, "14" white (or silver?), spinner dark gray, personal emblem a red heart pierced by a red and white arrow. Inscription beneath cockpit (probably in red?) is not readable. (SAFF) Note that, for some reason there are no La-7's in "Red Stars," the source of all my drawings, so my La-7 drawing is "eyeballed" from their La-5FN and the odd-scale La-7 in IPMS 12Q1.

5) La-7, unknown IAP, 1945. Green/brown/light blue, green spinner. Panel behind exhausts stained bare metal (note: exhaust stains were quite prominent on all radial-engined Lavochkins). Unbordered red stars below wings, other stars with white (or silver?) borders. Fuselage stripe white, "2" white (or silver?). (Polish "Profile")

6) La-7 (Czech designation S-97), unknown unit, 1946. Overall dark green upper surfaces, light blue lower surfaces. Red spinner, "SU-60" white. Note different antenna, addition of direction finder loop, and fixed tailwheel (provided in KP kit), also that the white-bordered Czech insignia is "handed"—the white portion always faces out (or up on the tail), red in (or down), blue forward. (KP kit instructions, decals of course included)

Mike Driskill



March 10 - Air Racing Historians meeting Tues. 6:30 at Kiefer's. B. Meixner, 676-4708

March 13 36th National Model Plane Show at Randall Park Mall, N. Randall, Cleveland.

March 14 Friday 5-9 P.M. start of registration (free again!) Set up CFFS Elect. R.T.P.

March 15 - Sat. 10 A.M. 'till 9 P.M. Model registry, CFFS displays, and Elect. R.T.P. Judging courtesy CFFS & Erie MAA 8 P.M. 'till 1 A.M.?
Sunday 12:30- 5:30 P.M. show biz. Awards 3:30. Table fold party 5:30 P.M.
The '87 show is looking up with more FF tables, and judging assisted by Erie. We plan to take good care of the FF entries this time, so bring 'em in and keep Free Flight the best entered sector. Same events and school grades.

March 29 CFFS Indoor Contest at Estabrook Recreation Center 10 A.M. to 5 P.M. Cleveland, Fulton Rd. S. West of Fulton Rd. Exit off I-71. Mike Zand CD. 216-524-3480. Events EZB, R.O.G., Peanut High Wing Cabin, FAC Peanut, No. Cal, WW I, WW II No. Cal Mass Launch One Flight. See Flier this Issue.

April 10-12 Toledo W.S. Trade Show. Sorry, no information direct from the Weak Signals. Don Belote retired as Show Director in '85. The W.S. didn't answer '86 mail.

April 26 ERIE MAA Indoor Meet at McComb Fieldhouse, Edinboro, Pa.

May 1-3 3rd Annual Air Racing History Sympo at Holliday Inn, Brookpark, OH.
Speakers include: Cook Cleland, winner of '47 & '49 Thompson Trophy.
Bill Turner, Brown Miss L. A. & Miles & Atwood Racer replicas.
Roger Huntington, Engine & Efficiency stats.
Tom Foxworth, author of THE SPEED SEEKERS on '20's Racing.
Dusty Carter, author of RACING PLANES (Reed Kinert), AAHS.
Advance registration $15. Jim Butler, 36250 Lk. Shr. Blvd. Eastlake, OH 44094
Newsletter Golden Pylons $10 U.S./$12. Foreign. Phone 216-946-9069.

May 10 Mothers Day, & SAM O.T. R/C at Plumbrook.

May 24 Probable date for ERIE MAA FAC at Prangmore Field.

June 5-7 Indoor Champs at Johnson City, TN Mini-Dome 122'. CD A. J. Italiano.

June 7 Probable date for ERIE MAA FAC at Prangmore Field. Joe Barna 814-833-4985.

June 14 SAM O.T. R/C at Lorain, OH.

June 21 CFFS FAC Scale meet at Lorain CCC. CD G-8 Jim Hyka 216-481-6525.
FAC Peanut, Peanut High Wing & Parasols, O.T. Golden Age Rub. Sc.,
FAC Scale, Comet Kit FFS, FAC CO_2 & Elect. FAC Sc. O.T. Replica Precision CO_2 & Elect, Embryo Endurance (JS)(O), WWII Peanut ML, WWII FAC Combat.(WWI Bipe.)

June 25-26 EAA WACO Fly-In at Hamilton, OH.

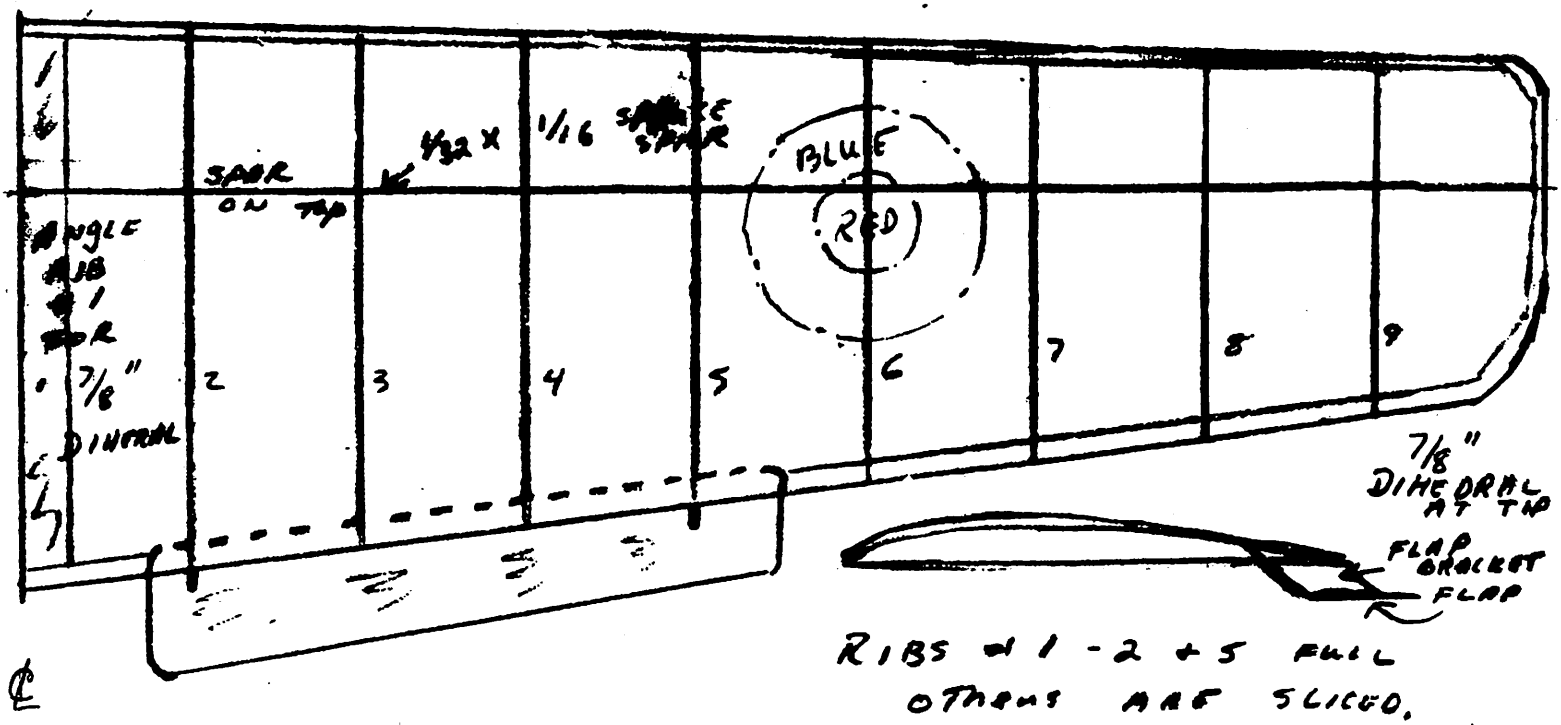
July 4-5 CFFS Ushers at CLEVE. Bud 500 Auto Race at Burke Lakefront Airport.

July 6 Week of SAM CHAMPS O.T. at Seguin, TX.

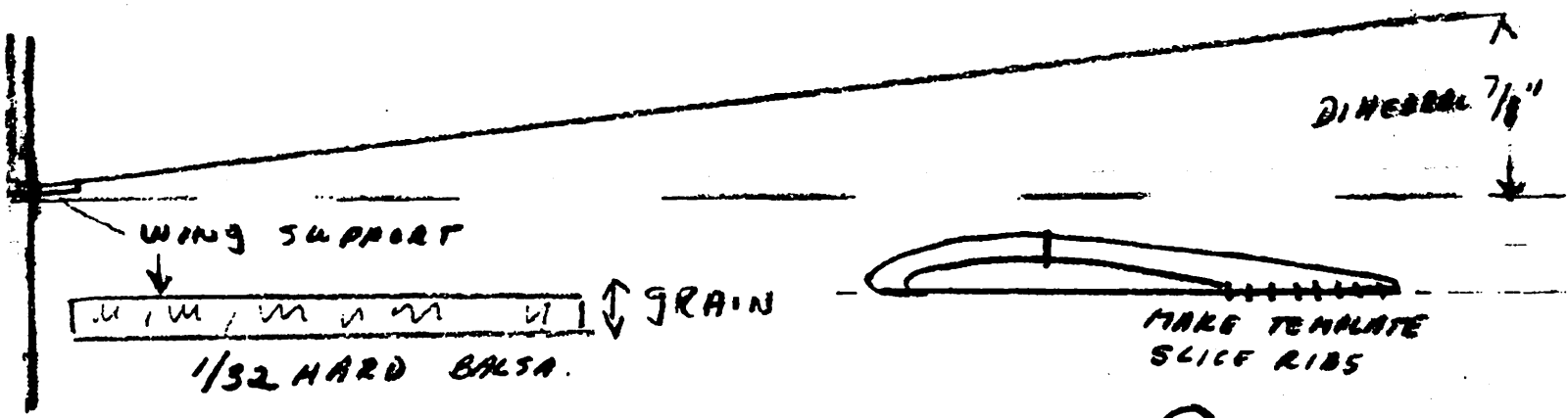
July 12-18 AMA Nat's at Lincoln, NB. Indoor Sc 7/13, Outdoor Sc 7/15.

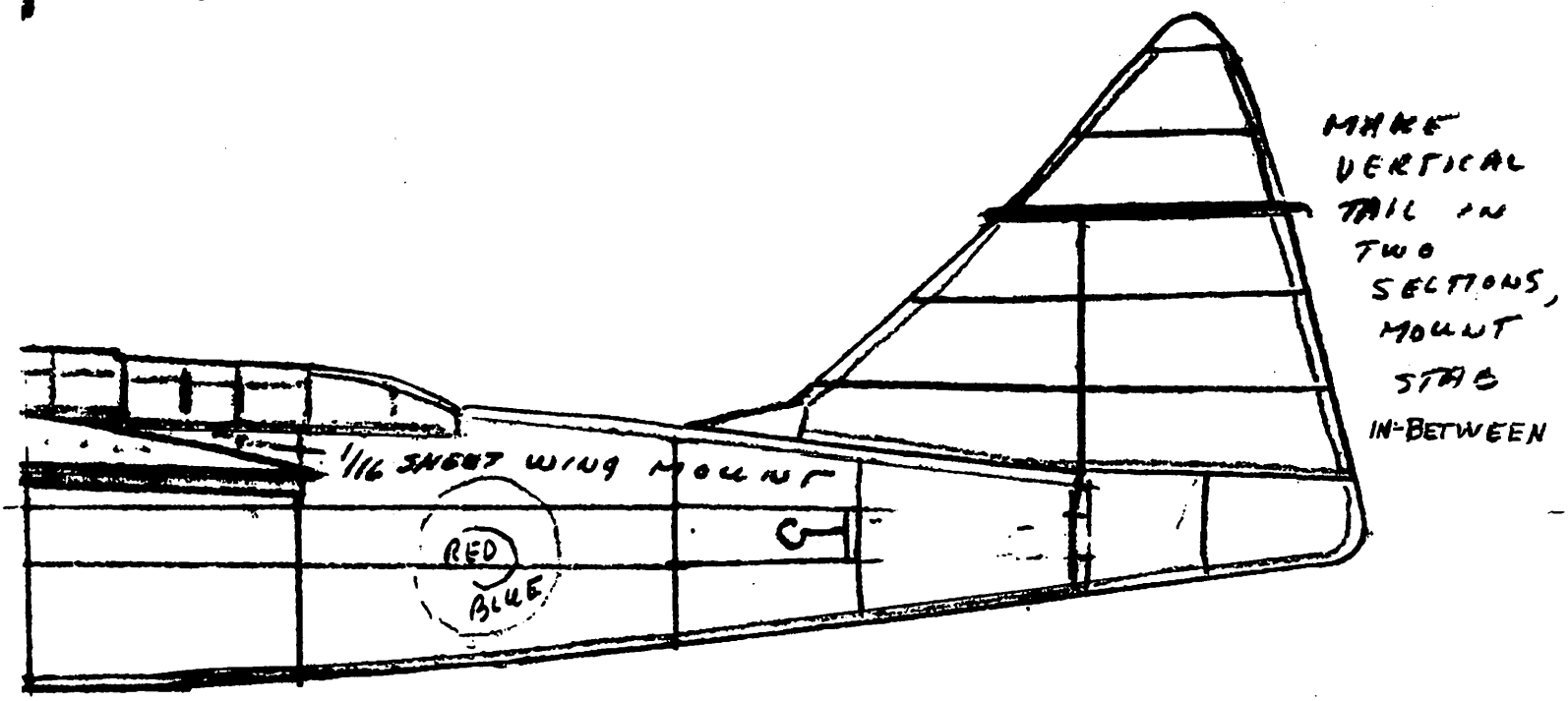
July 19 CFFS All Small FAC FF at L.C.C.C. Gordon Roberts 216-749-4817.
FAC Peanut, Hi wing cabin & Parasol Peanut, O.T. 10 Cent Sc & Hi Flier Kit Sc.
FAC Walnut 18" Max., No. Cal. Profile Sc., WW II No. Cal. 1 flight M.L.,
Embryo Endurance (JS)(O), WW I Peanut Dogfight ML., WWII Peanut Combat ML.,
H.L. Glider (J)(SO). (Unofficial event added for GHQ Peanut)

July 31 EAA Fly-In at Oshkosh, WI. 40th Anniversary of 1st Goodyear Trophy Race.



RIBS #1 - 2 + 5 FULL
OTHERS ARE SLICED.





All events are JSO unless there are three or more junior/ senior contestants in an event. Mass Launch events are JSO regardless.

Prizes

Seven or more entries-- 3 prizes per event.
Four to six entries-- 2 prizes per event.
One to three entries-- 1 prize per event.

Grand prize winner

High point winner for all events.
Three points for first.
Two points for second.
One point for third.

If highpoint winner has won CO-2 prize previously then the prize is a special kit.

Entry fee

Open-- $4 first event, $1 each additional event.
$7 maximum.

Junior and Senior-- $2 flies all.

No record trials at this contest.

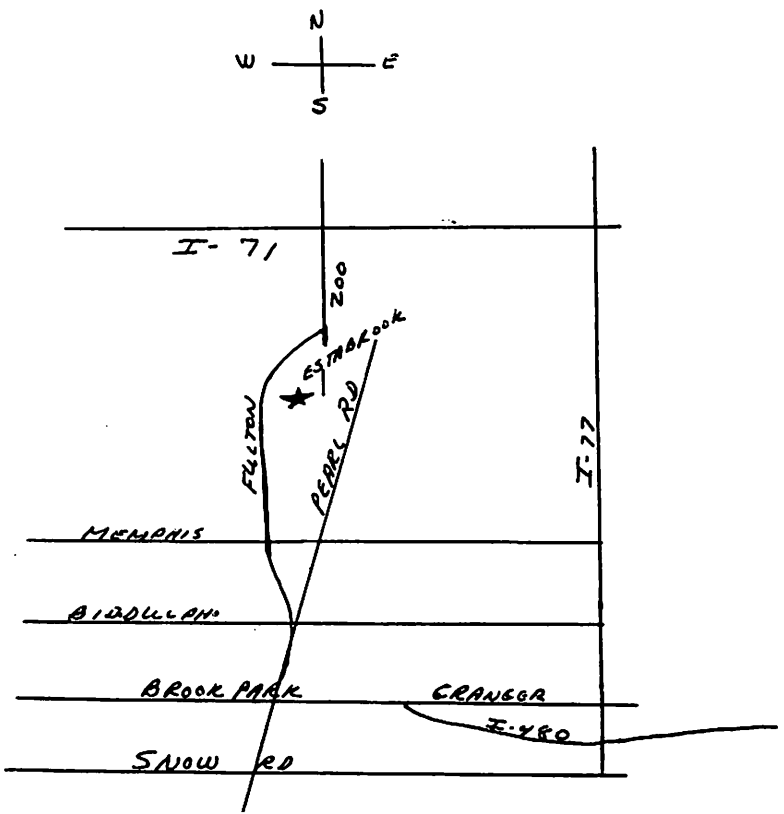
NO-CAL PROFILE SCALE

1. A simple event for recognizable profile models with a wing span limit of 16 inches.

2. Total of three flights to determine score. Highest total score wins. Flyoff to break ties.

3. Any flight of twenty seconds or more is official. All flights to be hand launched. No maximum flight time.

4. Model must have control outlines, registration numbers or letters, etc. Model must also have full landing gear, either one, two, or three legged, etc. no profile gears. Retractable gear may be built in the up position. Judges decision is final. Model must be in correct color scheme, have documentation to prove it.



THE CLEVELAND FREE FLIGHT SOCIETY
PRESENTS

Fourth Annual A.M.A. sanctioned contest for free flight model airplanes Sunday, March 29, 1987. 10:00 a.m. to 5 p.m.

Estabrook Recreation Center
4125 Fulton Avenue
Cleveland, Ohio 44144

10:00 a.m. to 12:30 p.m.

1. EZB-- Scoring will be the longest of five official flights. An official flight is 30 seconds and two attempts will count as one official.

12:30 a.m. to 5:00 p.m.

2. No-Cal Scale-- F.A.C. Rules

3. F.A.C. Peanut Scale All types except Hi-wing cabin and parasols.-- Models must be presented for judging by 1:00 p.m. Models must be tissue covered. Best flight of three. 20 seconds is official. Scale data should accompany model.

4. Hi-wing cabin and parasol wing peanut scale.-- Same as event #3.

5. W.W. I Peanut Biplane Combat-- Flown at 2:30 p.m.

6. W.W. II - No-Cal Combat-- Flown at 4:00 p.m. One mass launch only.

7. Jetco R.O.G.-- May be flown from 12:30 to 2:00 p.m. Best of three, 30 seconds is official. Must be built according to CFFS reprint of plan. 5½" maximum diameter prop which can be modified only by sanding thin. Prop must be plastic. Solid motor stick. No camber in wing due to structural changes or baggy tissue. Tissue covering. Minimum weight of model must be 3.5 grams without rubber.

Contest Director

Michael C. Zand
7055 Seven Hills Boulevard
Seven Hills, Ohio 44131

(216) 524-3480