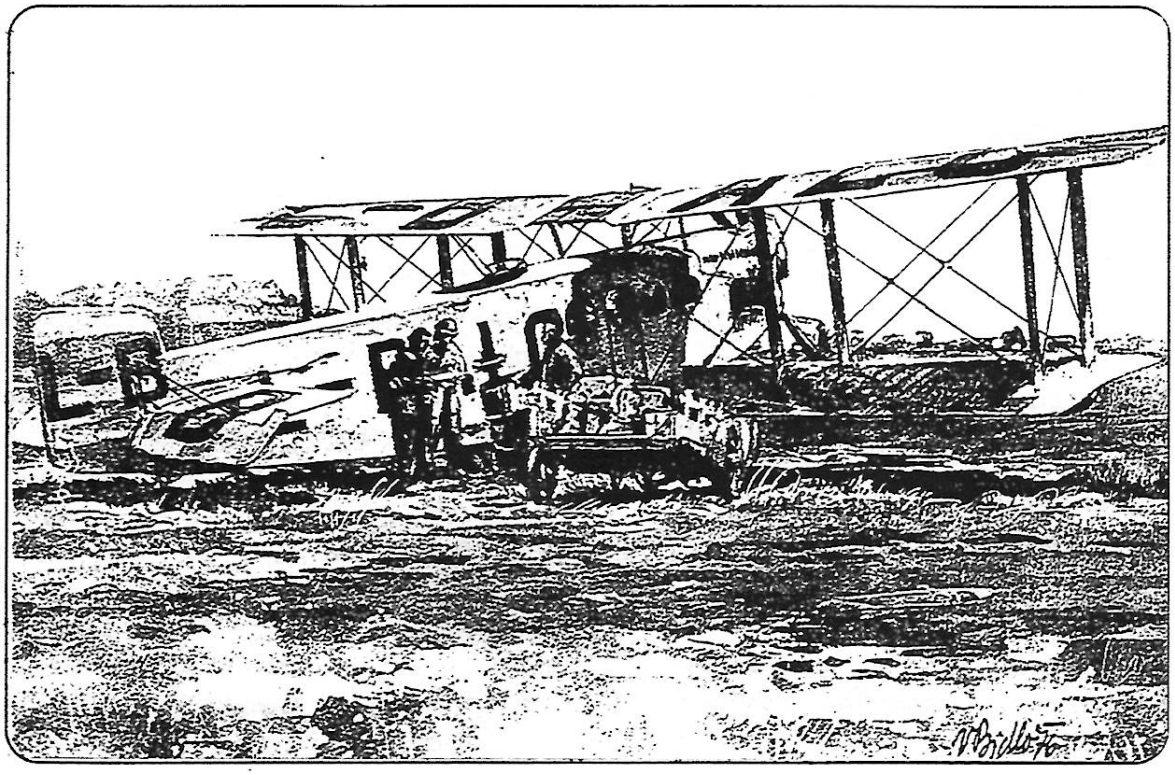
MAXFAX

Journal of the D. C. Maxecuters

. . . home of the dreaded POTOMAC SQUADRON of the Flying Aces Club

NOVEMBER – DECEMBER 1993



1993 COMING ATTRACTIONS

Indoor Flying at Sherwood High School
Fridays 7:30 to 9:30

Nov. 12 * Dec. 3 & 17 * Jan. 28 * Feb. 4 & 11 * Mar. 25

BULL SESSIONS: Jan. 15 at Pat Daily's, Richmond, VA. Meet at 1 p.m. at the Shannon Museum at Byrd Airport in Richmond, after which we will go to Pat's house for Bull Session.
Feb. 14 at Ray Rakow's, 9111 Crosby Rd., Silver Spring, MD.

CHRISTMAS PARTY: Sunday, Dec. 12 at 94th Aero Squadron. Cocktails: 4:30 to 5:30.
Call Terry Pittman by Dec. 7 for reservations (703/698-1726).
Prime rib, $26; Chicken Moutard, $22.

THIS MONTH'S cover of the AERO A10 is one of a series of watercolor paintings from the AERO Aircraft Corp. of Czechoslovakia. The artist is Vbidlo.

This month's issue features two original plans by Hurst Bowers, a 30-inch AERO A10 and a bogus scale Bostonian Wong-Way-Wobin. Also included are some articles by Pat Daily, one on a workshop and some handy hints. Also there is an article on flying boats for those interested in flying off water a la Dave Rees's annual contest as well as Tom Schmitt's usual selection of fine photos. Last but not least is a plan of the Auster A.O.P.6 lifted from a foreign publication.

Tom's Other Excellent Adventure
or
The Maxecuters go to New England

Bert Phillips

The Glastonbury Modelers, Squadron No. 2 of the Flying Aces Club, tossed down the gauntlet in challenge to all other FAC squadrons to do aerial battle in the skies over Pinkham Field, known to the non-modelers of the area as Durham, Ct. Fairgrounds. Well there was nothing for it but to go, so Tom Schmitt, Don Srull, and I left on a rainy Friday on what should have been a 6 or 7 hour drive only to find bumper-to-bumper, stop-and-go traffic from New York to someplace in Connecticut....like 40 or 50 miles of it.

Saturday dawned--I think it dawned--but you could not see the sun, and all day there was a light drizzle or heavy mist. The routine for me was to make a couple of flights, then put the planes in the car and run the motor and the heater to dry them out. I did not see anybody else do this; they just flew soggy, wrinkled airplanes--and beat me anyway. The good news is that there was no wind.

I flew my Jumbo Nesmith Couger on Saturday, and Tom started to trim his Catapult Jet scale. I got the Couger going pretty good but was beaten soundly by our New England friends in Jumbo Scale. I think Don spent most of the day sorting out his "Victory model"; this was for a special event on Sunday. Victory models were small endurance models, plans of which were in *Flying Aces* magazine during WW II. They were small so as to consrve balsa, rubber, glue, and other strategic materials for the war effort. There were about nine different designs. Mark Fineman told us that if we didn't fight the war any better than these Victory models flew, we all would be speaking Japanese or German.

As it turned out, he was right. Mine would almost fly now and then; I think the best I did was 19 seconds. Tom built one called the TriFlyer. I think it was called that because you could TRY to FLY it, but you couldn't actually fly it because it just would not fly. There were two other TriFlyers there, and they wouldn't fly either. At least it was consistent.

Saturday night we were invited to Mark Fineman's house for dinner, but it turned out to be a feast. Mark is married to a lovely lady named Susan, who has got to be one of the top ten best cooks in the world.

Sunday was a great day for wind surfing, and the wind was blowing up and down (msotly down) and from one direction at one part of the field and from another direction at another part of the field. One flight with my electric Cessna C-34 looked pretty good until it did a loop, then power-dived into the ground. The day was not a total loss, however. The wind would die down now and then.

Vance Gilbert got some great flights in with his TriMotor Cant with floats and his Boeing Airliner, as a TriMotor, but a biplane. Mark Fineman got some beautiful flights with a large twin Mustang and another twin that I didn't recognize.

There were a lot of nifty models there, with great workmanship and detail. They have a lot of hot dog modelers up there.

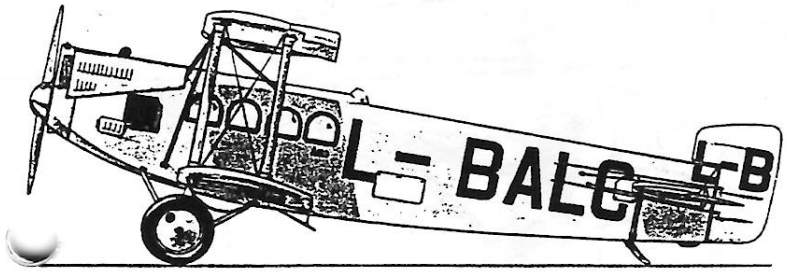
The AERO A10

Hurst Bowers

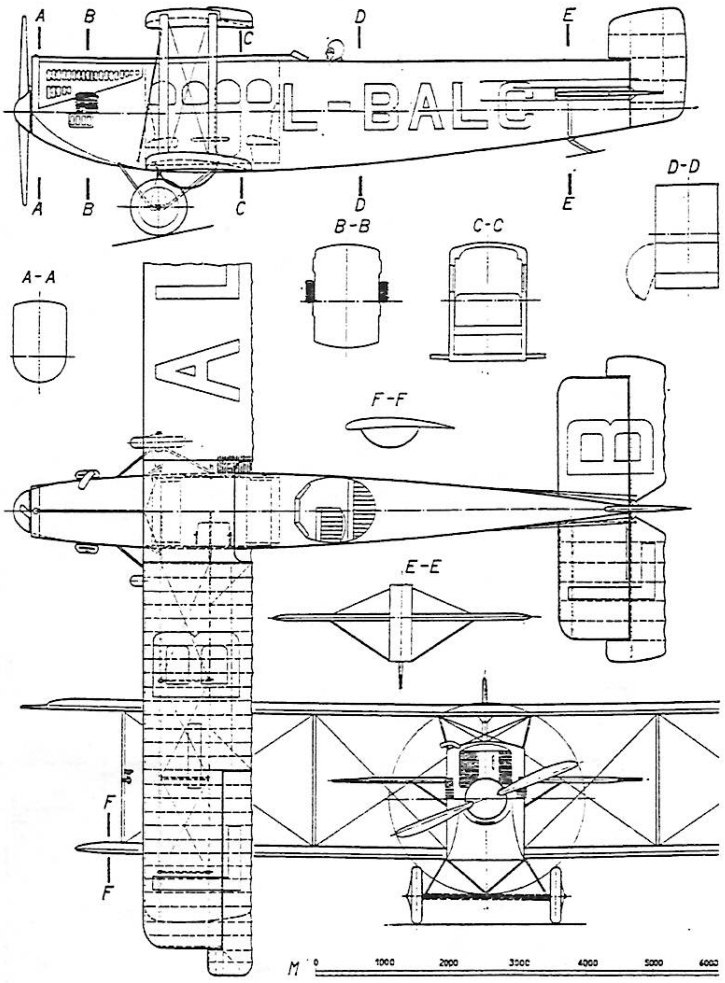
The AERO A10 was produced in Czechoslovakia during the 1920s to compete with other European nations in meeting the growing post-WW I air transport requirements. The firm of AERO had a reputation as a producer of quality airplanes of the era, and the AERO A10 certainly confirms this. It was a most comfortable airplane for the period, offering passengers the protection of an enclosed cabin, complete with window shades.

Very little information on the design is available. However, excellent photos of the one remaining machine now in the Prague Air Museum were recently taken by our own Tom Schmitt. Our other "DC Maxecuter," Terry Pittman, who traveled with Tom to Prague and to the Paris Air Show, brought back beautiful photographs and several books containg data on Czech airplanes, including the AERO A10. They both agreed that it was "my kind of airplane," window shades and all. As my fascination with the big old ugly biplanes is well known within our club, I agreed to "draw it up" for our *MAX FAX Newsletter*. So here it is. It should be a good flyer on either rubber, electric, or CO_2. ane the 30-Inch wingspan qualifies it for several Flying Aces events. It will be easy to build, but keep the tail section as light as possible.

Now that the "iron curtain" has fallen into the Elbe, hopefully we will see many more of these great old pre-WW II Eastern European designs at our Flying Aces competititions.



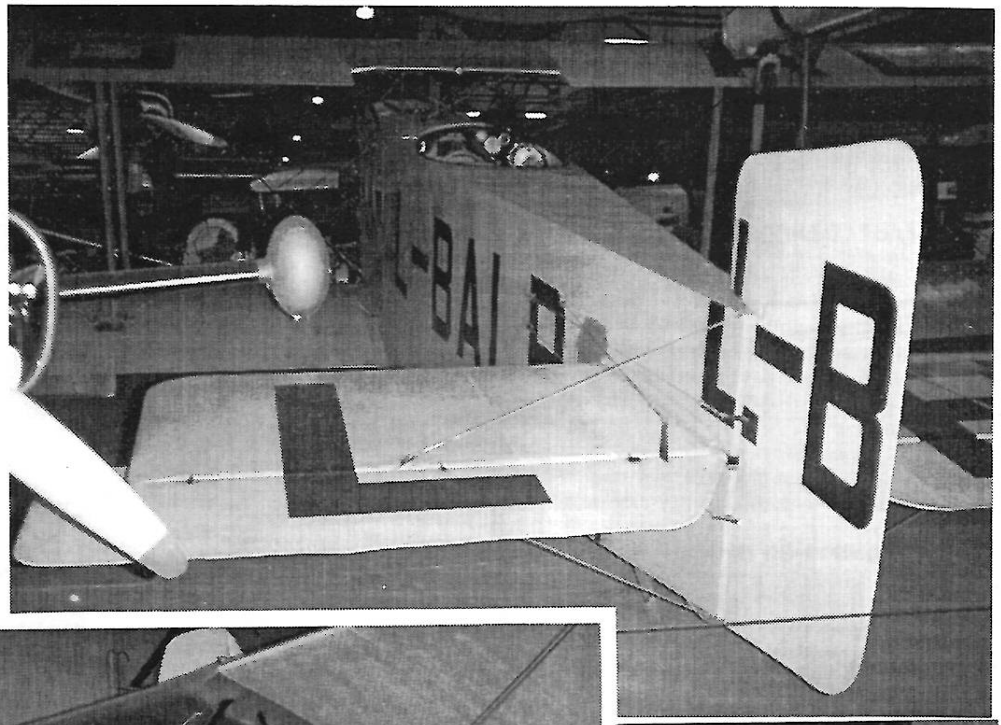
Aero A 10

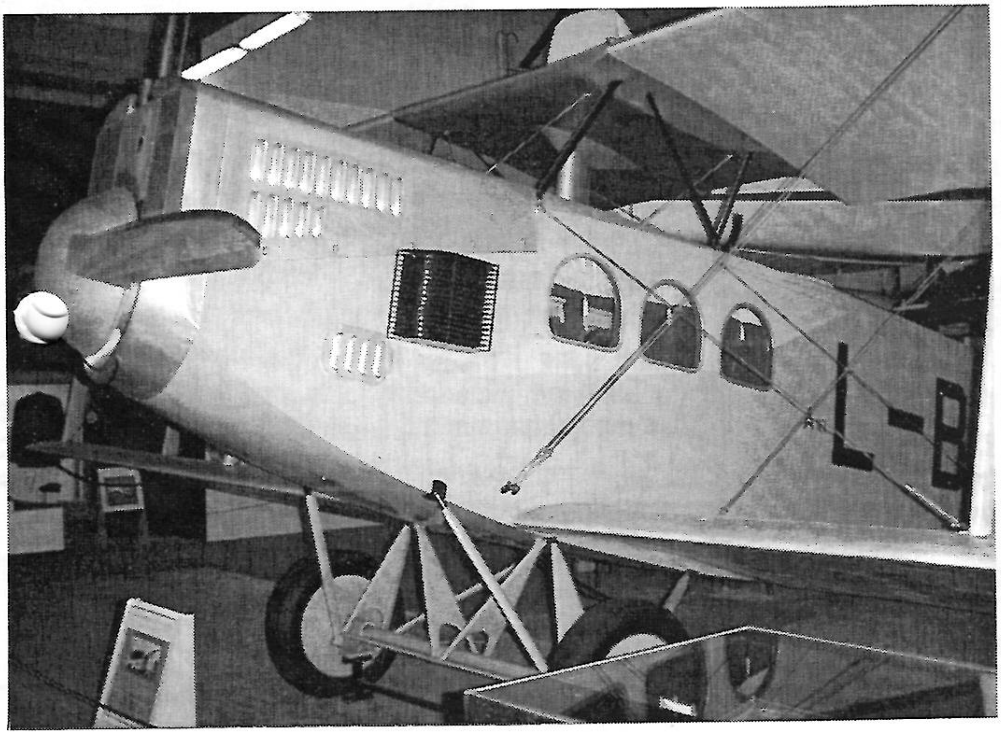


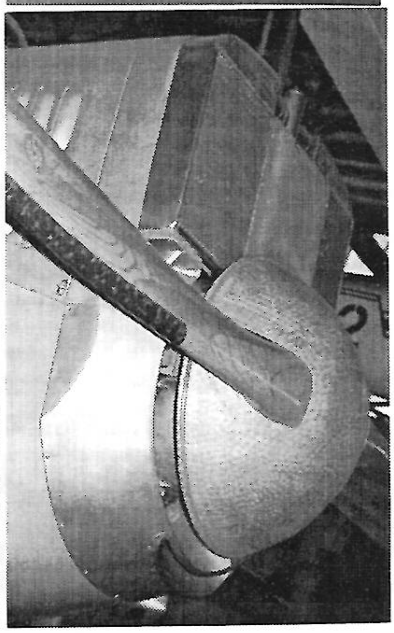
HERMAN

"As soon as my arms get tired, I'll come down and you can have a go."

AERO A10 PHOTOS FROM THE PRAGUE MUSEUM TAKEN BY TERRY PITTMAN.







SALUTE TO BILL WINTER T-SHIRTS

Anyone interested in a T-shirt featuring the accompanying logo may contact Hal Howard (703/670-5206). The cost appears to be about $7 per shirt. No money is required until we get the minimum order of 12. At that time Hal will let us know the exact price and collect the money. The logo is a picture of Bill's 1933 Commander, featuring Don Scrull's drawing.

And You Think You Have Trouble!

Hurst Bowers

Back in the "golden days" of the great depression during the 1930s, aviators took work where they could find it. One of our senior "DC MAX" members was fortunate enough to find a job up in the Canadian bush country flying a big Bellanca "Airbus" between the scattered settlements and mining camps. And that sets the scene for our tale.

On a day of questionable weather, our pilot departed a remote mining station for a larger settlement to the south. His load consisted of mail, husky dogs, some old mining machinery, and a pregnant Eskimo woman. As the flight progressed, the weather worsened, and severe turbulance engulfed the craft. As the dogs became frightened, they began to howl, and some became sick. Loose objects began flying around the cabin, and suddenly a new sound was heard coming from the rear of the cabin; the Eskimo woman had gone into labor. As if that weren't enough excitement, a sudden loud crack rent the air, and a numbing chill began to penetrate the cabin. Fabric on top of the fuselage had ripped open, leaving a gaping hole and causing terrible wind noise. Eventually the turbulence became less severe, and the airplane could be controlled. The flight was terminated successfully, but nothing more was heard about the Eskimo woman and her offspring.

Many years later in a Klondike bar a young man told the story of how he came to be called Ned. His mother had named him after that resourceful bush pilot who brought all of his passengers to safety after a harrowing flight of many years ago. "And now you know the rest of the story." The first liar doesn't have a chance.

Pictured at the right is Stu Meyers's 1958 Bellanca 14-19-2 Cruisemaster 230, which was recently completely overhauled and recovered. Stu is now in the process of putting hours on the rebuilt engine. For anyone interested in scale documentation, the aircraft is blue and white.

The 1993 Summer Fun Fly was blessed with 75 percent of the possible weather conditions being ideal. It was cool, sunny, and dry, but very windy. The latter of these motivated the CD to proclaim a 60 second max for all events except Embryo, where the lads were invited to tempt fate. That's the reason you'll see no flight times recorded in the results that are greater than 60 seconds. The format for mass launch events was also changed. We had an initial round, in which all were eliminated except the last three down. These then flew one more round for 1st, 2nd, and 3rd. Without this approach, we would have spent more time chasing and recovering than flying.

The big winner was Tom Hallman, who captured four kannonen (FAC Scale, Jumbo Scale, WW-II, and the Races). Relative newcomer Walt Farrell did well with two firsts (the COMSAT Speed and Navigation events), a second in Hand Launch Glider, and two thirds (the Races and Power Scale). Walt's third in Power Scale (a CO_2 Taylorcraft) went OOS after at least eight minutes, first heading over the COMSAT building, then continuing south and nearly parallel to Interstate 270. Several birds were circling with the model, thinking, no doubt, that it was a relative heading for the warm climate.

Many thanks must be given to Bill Ceresa for his endless hours of hand-coloring the buttons and getting the plaques made for the trophies. Tom Schmitt and Claude Powell did the honors of judging the scale events, and Helen Paisley, Chris Rowsome, and Terry Pittman did the deeds of bringing and serving the lunchtime feast. Thanks to all.

GOLDEN AGE

FLIGHT A

NAME	AIRCRAFT	ROUND ELIMINATED 1	2	3	4	5	PLACE
BERT PHILLIPS	BELLANCA	X					
CLAUDE POWELL	RYAN M1	X					
JERRY PAISLEY	CESSNA C37	X					
TOM HALLMAN	??	X					
DAN DRISCOLL	FUNK	X					
MIKE MOSKOW	CORBIN ACE	X					
DAN KRANIS	C-34	X					
TERRY PITTMAN	SKYFARER	X					
WALT FARRELL	ALLIED SPORT						3
BILL BELL	MONOCOUPE						1
JOHN HOUCK	REARWIN SPEEDSTER	X					
JOHN LEWARS	CORBEN ACE	X					
DOUG BUCHANAN	PIPER J3	X					
DON SRULL	STINSON						2

OTHER EVENTS

EVENT	NUMBER ENTRIES	1st	2nd	3rd
BILL WINTER	7	DOUG BUCHANNAN	DON SRULL	BUD CARSON
MODERN CIVILIAN	6	JOHN LEWARS	FRANK ROWSOME	TERRY PITTMAN
RACES	12	TOM HALLMAN	DAVE REES	WALT FARRELL
TRANS-COMSAT SPEED	29	WALT FARRELL		
TRANS-COMSAT NAVIGATION	29	WALT FARRELL		
EMBRYO	8	MIKE MOSKOW	DOUG BUCHANAN	HAL HOWARD
H. L. GLIDER	3	DAN DRISCOLL	WALT FARRELL	MARK HOUCK

BELLANCA "AIRCRUISER" 575-h.p. Wright Cyclone radial. Like all Bellanca designs, this 10-passenger transport was highly efficient. Airfoil section wing struts and fuselage were designed to reduce drag, increase lift.

FAC SCALE

NAME	AIRCRAFT	STATIC CONST	COLOR	WORK	TOTAL	BONUS	FLIGHT (SEC.) FLT 1	FLT 2	FLT 3	SCORE
1. TOM HALLMAN	MARTINSYDE S.1	30	20	12	62	15	57	60	-	137.
2. DAVE REES	FAIRY FULMAR	30	20	12	62	10	56	-	-	128.
3. JOHN HOUCK	P51-A	29	17	11	57	10	60	40	38	127.
4. JERRY PAISLEY	BREWSTER BUFFALO	28	17	11	56	10	60	-	-	126.
5. PAT DAILY	WILDCAT	29	18	12	59	5	45	59	-	123.
6. FRANK ROWSOME	CAUDRON C.460	28	17	11	56	10	54	-	-	120.

POWER SCALE

NAME	AIRCRAFT	STATIC CONST	COLOR	WORK	TOTAL	BONUS	FLIGHT (SEC) FLT 1	FLT 2	FLT 3	SCORE
1. TERRY PITTMAN	DELANNE 20-T-02	30	19	12	61	5	60	-	-	121.
2. BERT PHILLIPS	CESSNA C37	25	16	7	48	0	22	31	60	108.
3. WALT FARRELL	TAYLORCRAFT	20	15	7	42	0	32	60		102.
4. PAT DAILY	HURRICANE	27	19	11	57	10	24	-	-	91.

FAC JUMBO SCALE

NAME	AIRCRAFT	STATIC CONST	COLOR	WORK	TOTAL	BONUS	FLIGHT (SEC.) FLT 1	FLT 2	FLT 3	SCORE
1. TOM HALLMAN	GADFLY	30	20	12.5	62.5	10	54	-	-	126.5
2. MARK HOUCK	LOCKHEED U-2	25	19	10	54	10	60	-	-	124.
3. JOHN HOUCK	JUNKERS J1	27	19	10	56	15	41	-	-	112.
4. BERT PHILLIPS	RYAN BLUEBIRD	22	18	10	50	0	39	30	54	104.
5. DOUG BUCHANAN	PIPER J3	28	19	11	58	0	29	-	-	87.

WW-I

FLIGHT A

NAME	AIRCRAFT	ROUND ELIMINATED 1	2	3	4	5	PLACE
CLAUDE POWELL	DH-6						1
DAVE REES	MARTINSYDE	X					
DON SRULL	FOKKER D7						3
TOM HALLMAN	MARTINSYDE S.1	X					
MIKE MOSKOW	FOKKER D7						2
BILL BELL	FOKKER D7	X					
JOHN HOUCK	JUNKERS J-1	X					
MARK HOUCK	NIEUPORT 12C2	X					

WW-II

FLIGHT A

NAME	AIRCRAFT	ROUND ELIMINATED 1	2	3	4	5	PLACE
JERRY PAISLEY	BUFFALO						3
FRANK ROWSOME	F4F						2
CLAUDE POWELL	YAK 3	X					
DAVE REES	FAIRY FULMAR	X					
DAN DRISCOLL	?	X					
JOHN LEWARS	ZERO	X					
PAT DAILY	WILDCAT	X					
TOM HALLMAN	MIG 3						1
TERRY PITTMAN	P-47	X					
DRISCOLL, DAN	P-51	X					
JOHN HOUCK	P-51A	X					
DAVE FRANKS	FIAT G55	X					
RAY RAKOW	CAUDRON 714	X					

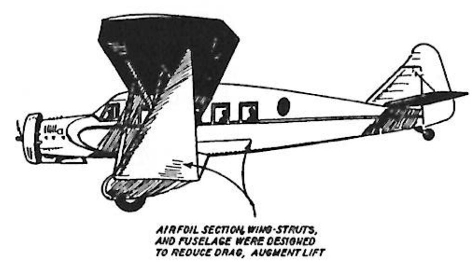


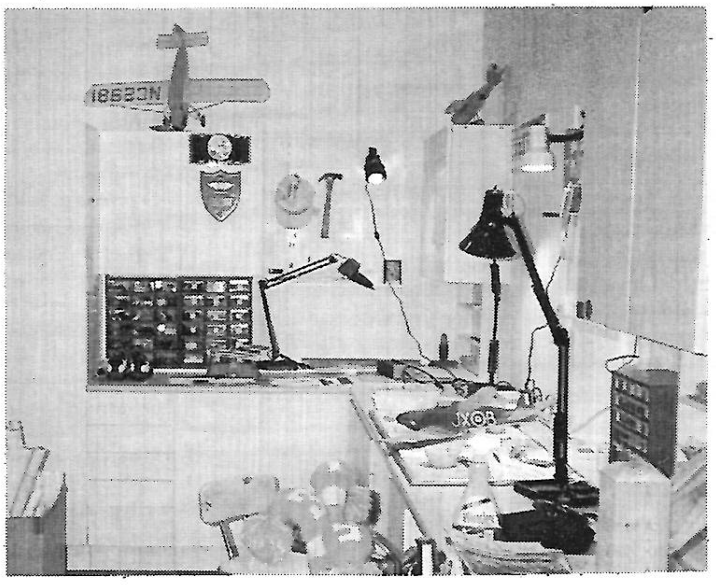
PHOTO PAGES

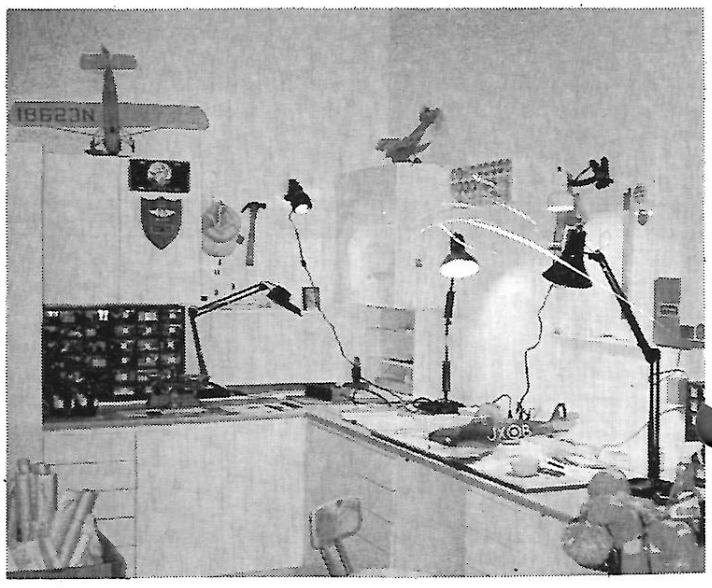
MAXECUTERS 1993 SUMMER FUN FLY

1. Our co-editors for this issue of MAX-FAX, Hurst Bowers and Ray Rakow, with Ray's (Earl Stahl) Caudron for the WWII event.
2. Pat Daily made the journey from Richmond to fly his Wake Island Wildcat with Don helping.
3. The "Bill Winters Salute" had nine happy flyers including Bill's which was flown by Bill Ceresa. Bill would have enjoyed seeing the way all the Commanders handled the gales at Comsat that day.
4. And here is the happy winner of the "Salute", Doug Buchanan, with his handsome first place plaque. We owe Pat Daily a big thank you for obtaining these plaques while stationed in Subic.
5. John Lewars shown here with a Zero won a first in Golden Age with his Porter. We hope to publish early next year some of John's nifty scale ultralight Lympne electric designs for the HiLine Micro-4 motor.

MADD REPORT
(Maxecuter Advanced Design and Development)
by
Pat Daily

WORKSHOP DESIGN: Like most of us afflicted with the modelers' disease (probably caused by some unique single stranded RNA virus that attaches to random balsa dust particles in the bronchial tree of infected persons), I tend to spend a lot of time in my workshop--defined as the place where most of my modeling activity takes place. Recently, the Daily family moved from our home in Rockville, Maryland to Richmond, Virginia. As a consequence of the move, we sold our old home which had a nice cozy basement workshop where I spent countless hours dreaming about my next project, slicing balsa and other assorted behavior associate with modelers' disease. The move to Richmond meant a nice new house (no painting or wallpapering for some years--thank God!), but without a basement. Seems like Southerners, or at least Richmonders, don't go in for basements like Yankees do. After we got settled, I realized I had no workshop -- this created a major crisis in our household. My better half refused to let me





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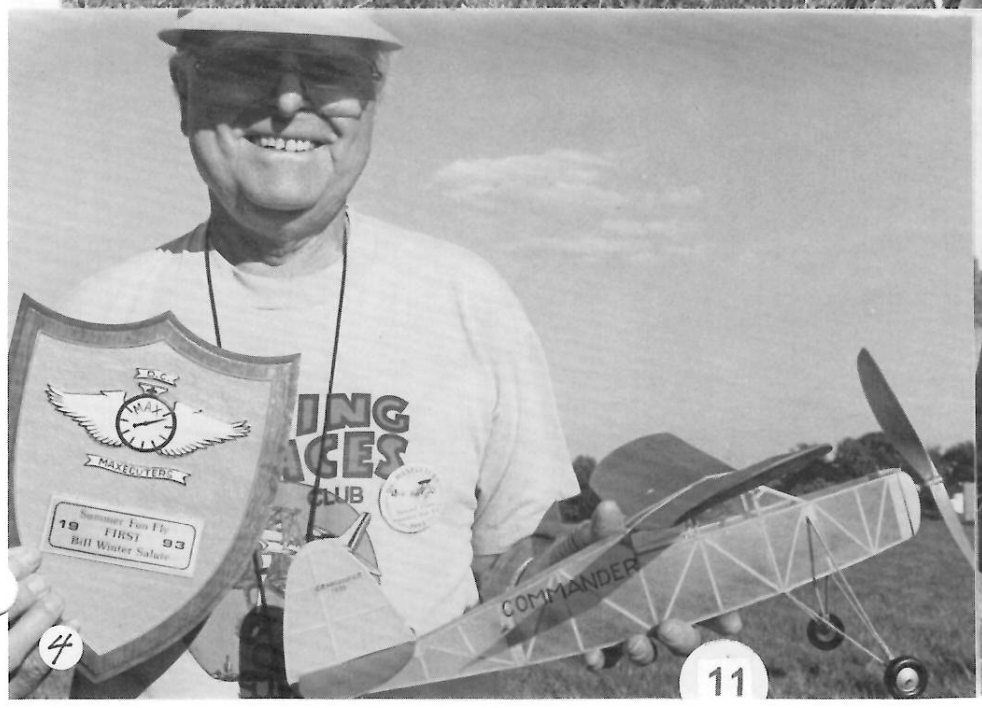
MAXFLYERS
Summer Fun Fly
19 FIRST 93
Bill Winter Salute
COMMANDER

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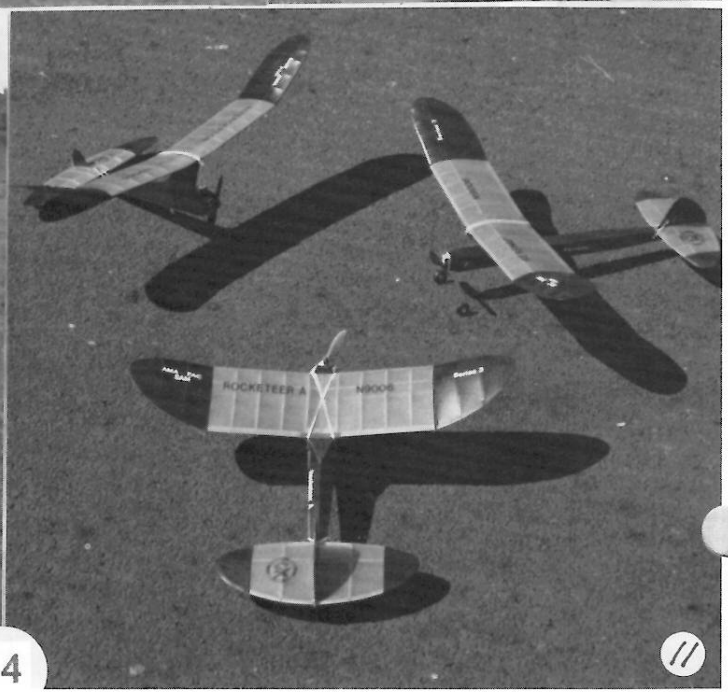

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PINKHAM FIELD CONNECTICUT CONTEST

6. The CinC-FAC Lt. Col. Lin Reichel in action at the fun filled two day bash. Lin and Vic Didalot and their wives journeyed from Erie to enjoy the Glastonbury Modelers Squadron No. 2's hospitality. The Maxecuters had only three in attendance; where were the rest of you? The weather was not the greatest but Cap'n "Never Ready Eddie" Novak and his hardworking crew insured that everyone had a great time. They hope to continue this precedent for similar contests at Pinkham Field in the off years of the FAC NATS.
7. Mark Fineman with his "Vixen" homebuilt flew off with second place in the Electric Power Scale event.
8. The FAC does not have to be concerned about their future! This enthusiastic young lady (all of eight years) is Cassie Stott, a third generation modeler. She is Paul Stott's daughter and Dave's grandaughter.
9. Bob Thompson one of the originators of the FAC movement stands still so we can get a shot of his nifty Spartan.
10. Another young lady was one of the more active competitors; here is Kristina Luzzi with her infectious smile after one of many chases after her scale aircraft. Kristina's dad is an R/C flyer but she was not satisfied until trying FAC flying.
11. Al Lidberg burns the midnite oil again; here are his latest semi-kit Old Timer model designs. They are the Rocketeer A, the Kerswap and the Interceptor. They are $6.00 each plus 20% postage for a total of $7.20. A special offer is available for all three semi kits, with rolled plans in a box for $21.00 postpaid. Add a dollar to your order and get Al's complete illustated catalog which is full of other plans and data. You will not be disappointed. Contact - A. A. Lidberg Model Plan Service - 614 E. Fordham - Tempe - Arizona - 85283. Phone 602-730-9180 (evenings and weekends).

MADD REPORT (*Continued from page 10*)

sand balsa and dope planes in the kitchen or any other room in the house, period. I was relegate to the garage with the '74 Ghia, assorted bicycles and several cats!

Allan Schanzle came through early in this disaster by giving me a nice metal table to use as a work bench. This worked for awhile, I even built a F-4-F Wildcat on it! But very quickly the modeler's disease worsened. I needed a decent place to play. The time for action finally came a few weeks ago (March '93). I had been thinking about options for some time and then I discovered IKEA. For those of you fortunate enough to know about IKEA, no explanation is needed. For the rest of you poor souls, let me explain-- IKEA is a big Scandinavian furniture and housewares concern with stores on the east coast and Houston. Turns out that they have a line of kitchen cabinetry called **PLUS** that is white plastic laminated stuff over particle board. The stuff is really well designed, comes in a package and can be assembled with a screwdriver. Anyway, I ended up buying some really neat 5 drawer base units, corner units and door units that gave me a 4 X 12 foot L-shaped work area topped with nice kitchen counter tops. Over this I added some wall storage units (27 inches by 31 inches and 11 inches deep with shelves) and finally, a the short end of the 'L' an 80 inch tall, 2 X 2 foot storage cabinet with enough shelves to store lots of planes and gear. I spent a weekend installing all of this and now I have a place that is nice, bright and clean to work on, with 20 drawers to store goodies in. I now have so much room that I can spend hours deciding what to put where--at least it's an excuse for not building the Corsair yet.

(*Continued next page*)

Back to IKEA and **PLUS** --this stuff is very inexpensive. A wall cabinet like I described above is only about $50. Five drawer base cabinets are $74. An eight foot counter top (formica finish) is $50, and so on. You can't make your own cabinets for these prices and they are strong enough to drop kick out of a window and survive undamaged. I'm telling you, if its a workshop you want, this is hard to beat and its cheap! The moral of this tale is that all of us spend a lot of time with modelers' disease, suffering away in our workshops. Seems to me its time we take care of ourselves. After all, think how much you spend on a TV set or a piece of furniture for the house. Spending money on your workshop is **Good Medicine**! I'm bench testing the workshop with an F-4-U Corsair and it works great.

TOP SECRET STUFF! The James River Squadron G-2 has been sniffing around the local hobby shops here in Richmond. There are some good ones--the Hobby Center on Broad Street is a super place and sort of on the order of the old CORR'S. Another is Chesterfield Hobbies--predominantly trains and plastic models. While in Chesterfield Hobbies, I discovered that the stock car plastic modelers have some accessories available to them that could readily translate into aircraft stuff. For instance, **etched instrument bezels** that are super light, about the right size for 3/4 inch scale jobs and made of super thin sheets of brass or aluminum-- they look great on instrument panels. Another item is **spark plug wiring harnesses**--just perfect for using on radial engines. Finally, **ACCUFLEX paint**--acrylic paint in a jillion colors, including military, and pre-mixed to spraying consistency. I've tried this stuff with an airbrush and it covers well and is more flexible than Floquil or Poly S and dries with a semigloss finish. Try it! And finally, most of you probably know that model railroaders can buy very fine mesh woven brass screen wire that is superb for radiators on WW I jobs. They also make very fine mesh screen wire that simulates chain link fences--except that its made of very fine acrylic threads and is super light --great for air intakes, etc. Another new item that I recently discovered is something called **FLEXIPADS**--no these are not for us old guys that are beginning to have incontinency problems. **FLEXIPADS** are sort of like fingernail files that our wives buy, but they are different. It is a rubber-like foam pad shaped like a fingernail file with flexigrit sanding films attached to both sides. They come in various coarsenesses -- very fine, fine, medium and coarse and are super for sanding trailing edges and all sorts of stuff. They don't seem to wear out very fast and can be molded to fit curved surfaces. These guys are reall great! Speaking of **Flexigrit**-- this stuff comes as small 2 x 3 inch sheets in many grades of coarseness and is a super sanding film. It is much better than sandpaper or emory paper and is virtually indestructible. You can get it at most hobby shops.

ADJUSTABLE THRUST LINES. It is mandatory to be able to adjust your latest rubber job's thrust line if you are going to trim it out. Seems like I never quite build in enough thrust or whatever. Anyway, I have seen and tried the adjustable thrust techniques using a piece of aluminum at the back of the nose block that is held in place with a screw and permits various thrust adjustments. The problem I have with this technique is that you can't count on the screw holding the adjustment in place and it is difficult to repeat settings. I stumbled on a variation of this technique when I built my F-4-F Wildcat this past winter. Instead of a screw holding the aluminum in place, I cut a piece of aluminum the shape of the back end of the nose block (in this case it was circular) and zapped it in place at the back end of the nose block. Then I proceeded to drill lots of holes in it so as to have several thrust angles. Now all I have to do to change the thrust line is clip off the end of the prop wire at the prop hub end, pull the prop shaft out at the back end of the nose block and reinsert it through a different hole. In this way, I can adjust thrust lines and compare them during the trimming process. I just use a slightly longer prop shaft to begin with and eventually it shortens up after several adjustments. The beauty of this system is that it never slips or changes because there is no screw to fool with and you don't have to use shims on the noseblock. Seems to work pretty well!

Who'll Fly A BOAT?

The C. H. Roberts Cup is awarded each year by the North Kent Nomads club for rubber powered flying-boats, but it is possible that to many aero-modellers this contest is unknown. The specification called for is simple and offers plenty of scope for experiment in this largely unexplored facet of our hobby.

The models should be of scale appearance with at least 150 sq. in. of wing area, a wing loading of 1 oz. for every 50 sq. in. used and be capable of surviving a two-minute floatation test. The longest official time for a flying-boat of this type is 69 sec., but there is a challenge to a model aircraft designer in the conditions under which these machines operate. The likelihood of thermals over water is poor and, therefore, all the altitude gained by a 'boat has to be paid for in power and cunning. In the hope of stimulating interest among experimentally minded modellers, W. TINKER discusses the pros and cons of successful layouts and gives practical hints for those who would like to try their hand at something different.

MODEL flying-boats are rare, but, at the moment, the rubber powered variety is split into two distinct species; the favourite twin motor layout used almost exclusively for a number of years, and the single motor pusher arrangement recently developed by the Portsmouth and Epsom clubs.

Fig. 1 shows the type of model flown by the C. H. Roberts cup winner, A. D. Hall, so successfully over the past few years, and similar style 'boats hold both British records for their class. The attitude of the aircraft during take-off permits the minimum clearance and maximum airscrew diameter possible. Because of the high power available, take-off is short and snappy with no torque problems, although the winding technique necessary with twins sets up a difficulty possibly worse than torque.

Being forced to wind one motor at a time, it is inevitable that the twin will finish up with unequal torque. The turning moment produced is magnified by the offset thrust line and this has to be trimmed out. It is obvious, then, that the two motors should be placed as close together as the airscrews will permit, and, to keep the thrust-line low to obviate "digging-in," just high enough to clear the water by about ½ in. So many factors have some effect on the torque produced by a rubber motor, that it is unlikely that the flight pattern of a twin will remain constant, and in addition a large proportion of the flying surfaces is rendered less efficient due to the slipstream.

With the idea of eliminating the disadvantage of the twin, the single-motored 'boat was brought into being. It has succeeded in this, inasmuch as the flying surfaces operate in smooth air, winding is no more elaborate than with a normal rubber job and utilisation of the full length of the hull for the motor means a potentially longer motor-run. But—it has several disadvantages of its own! The power available is smaller and the increase in the number of turns is lost by the relatively small propeller. With this type, around 1½ in. clearance is needed for the prop. The thrustline must be kept low and this means a smaller diameter than that used on a normal model of similar size. (See fig. 2).

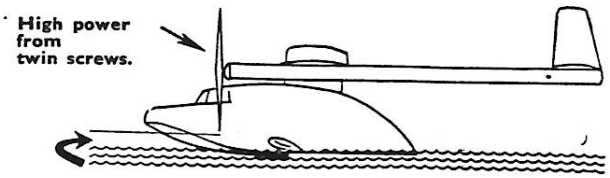
Trimming presents no difficulty and will remain fairly constant. Even torque, surprisingly, does not seriously hamper take-off. In dead calm conditions there is a tendency to curve until planing speed is reached, but this can be counteracted quite simply by heading the aircraft to one side of the required path. A favourable breeze shortens the run considerably, with a corresponding decrease in torque trouble.

There is nothing *difficult* in flying boats and they may be tackled by anyone with a modicum of experience of rubber models, while there is unlimited opportunity for incorporating one's own ideas. For example, the writer believes that the generally accepted vee hull is not the best to use for a quick take-off. Orthodox vee, flat-bottomed and inverted vee or concave hulls have been used, and the concave hull gave the best results in calm water. The Italians tried the concave hull on one of their big flying-boats and abandoned it, probably because it was not acceptable for passenger comfort, this overriding any improvement in take-off distance. A model is quite capable of absorbing any shocks likely to be imposed by normal take-off and alighting, so what does it matter if it richochets off a wave? If it bounces off the first wave it is airborne quicker than if it cuts its way through it, losing momentum and lift simultaneously. It is recommended that the concave section is blended into a flat step, as continuing the section right through may delay the take-off by forming a venturi as the centre of the step clears the water, giving rise to a reduced pressure under the hull instead of the desired increase.

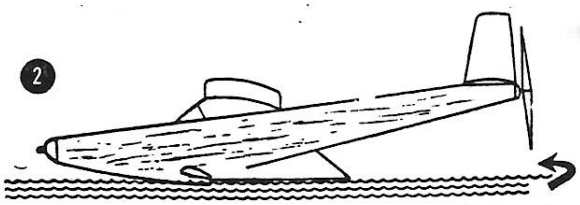
The normal vee hull wastes power by dividing the water and throwing it aside, whereas the concave hull funnels this potential energy down towards the step forcing the model into the air (Fig. 3). Remember to keep the c.g. slightly aft of the step and that the pusher types require a longer nose. Behind the step the hull is best kept flat and on twins may be shaped to a point, but on pushers it is advisable to finish at a straight transom-like stern about half the beam measurement in width. This combats any desire for the stern to sink into the water as the model changes its angle of attack. A coat or two of a silicone floor polish will give a waterproof and water-repellent shine to the hull bottom, almost eliminating the drag of surface tension.

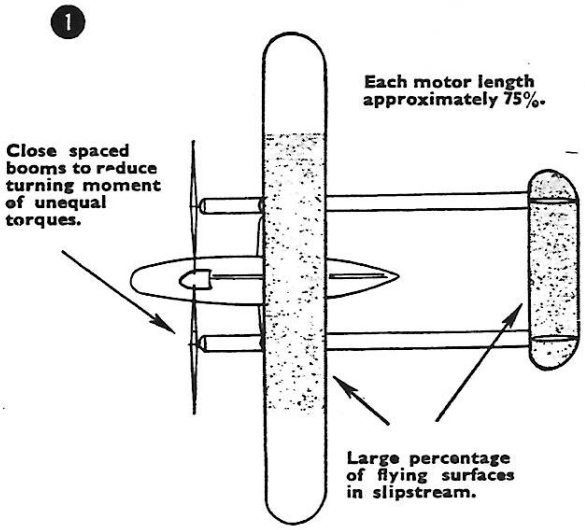
Drag is the enemy of all aircraft, and the two biggest drag producers on a flying-boat are the airscrews and the stabilisers, i.e. floats or sponsons. For sport-flying, free-wheeling or feathering

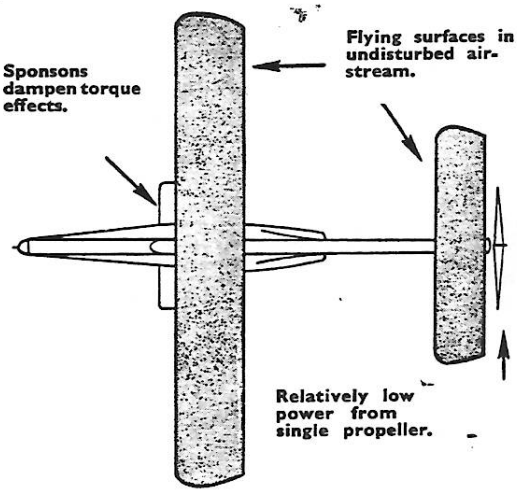
TWIN MOTOR LAYOUT



SINGLE MOTOR LAYOUT







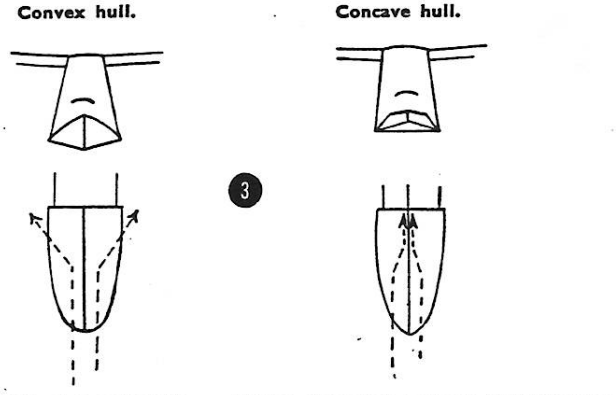
props are acceptable, but where pure duration is the aim folding types are essential for both twins and pushers. Positive stop and folding mechanisms must be incorporated to ensure no change of glide trim, particularly on the pusher layout.

Some form of stabilising force is necessary for adequate stability on the water. Scale type floats are extremely prone to damage and unless used close inboard are dangerous during take-off by causing the model to swing. Twins may successfully use tip floats *only* if they are mounted well clear of the water and only come into use when the model tilts over on its side (Fig. 4).

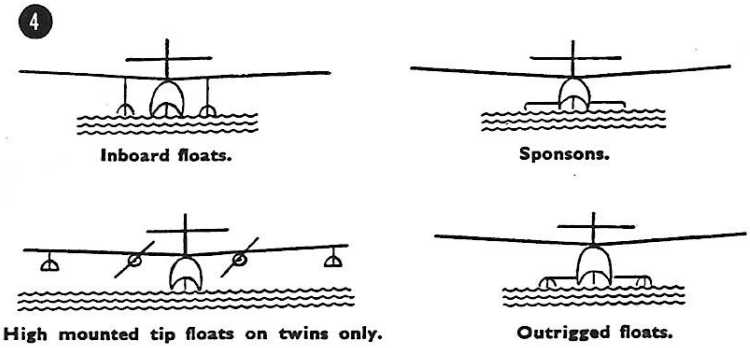
Sponsons are much more reliable and rigid, but although they may lift, they contribute quite a lot of drag. A sponson 9 to 10 in. span with a 2 in. chord should be sufficient for a 3 ft. model, set at 5 deg. on twins and at least 8 deg. on single motor types. A flying-boat must be capable of looking after itself should it alight back on the water—and all the entries for the Roberts Cup last year did just that!

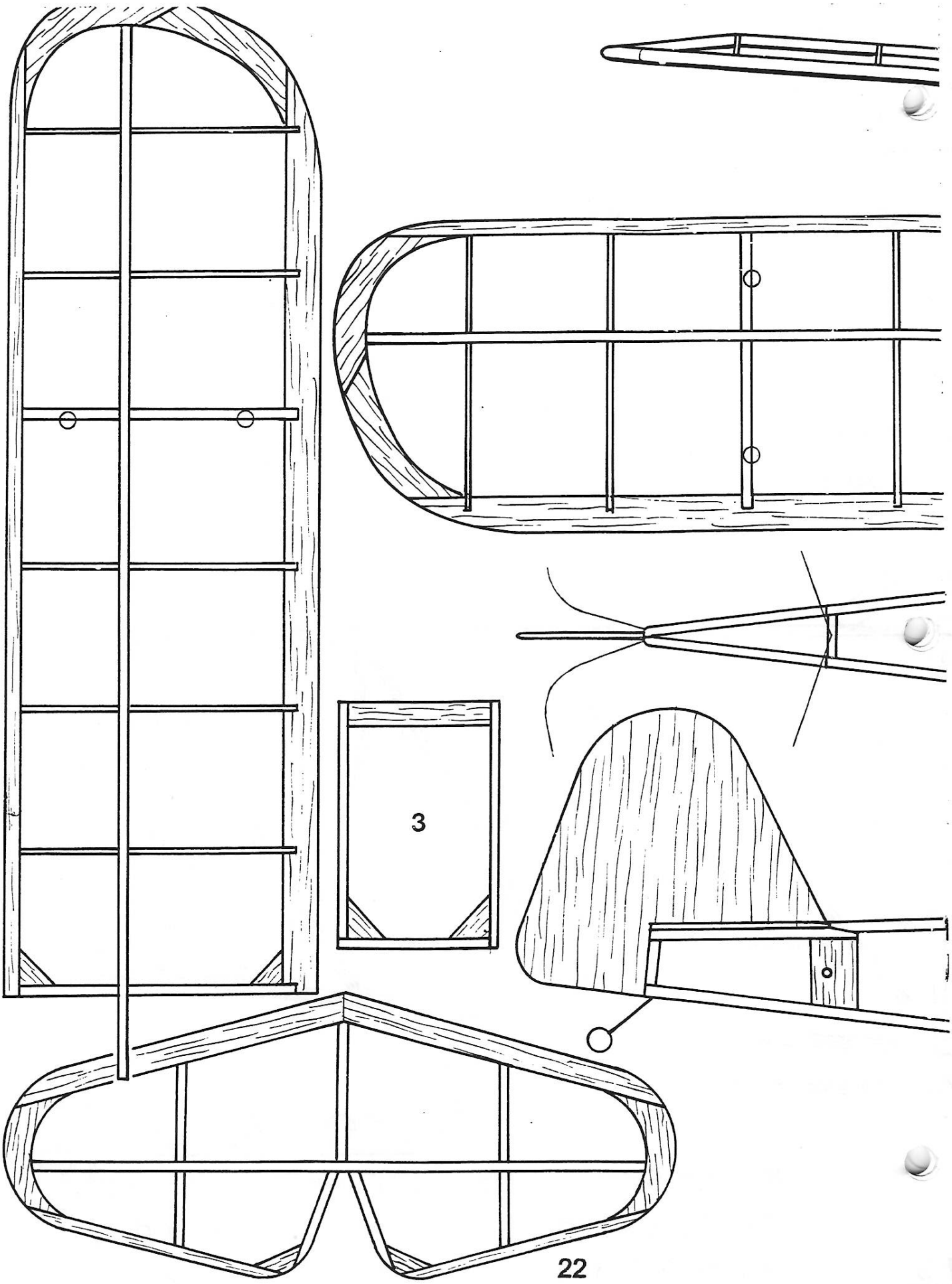
We hope your interest has now been sufficiently aroused to have a go at this fascinating branch of flying, but even if you haven't time to build a model, come along to the C. H. Roberts Cup contest which is on September 28th (an S.A.E. to R. Bareham, 742, Rochester Way, Sidcup Kent, will bring you full details), then we can all swap ideas at Danson Park.

HULL DESIGN



STABILISERS

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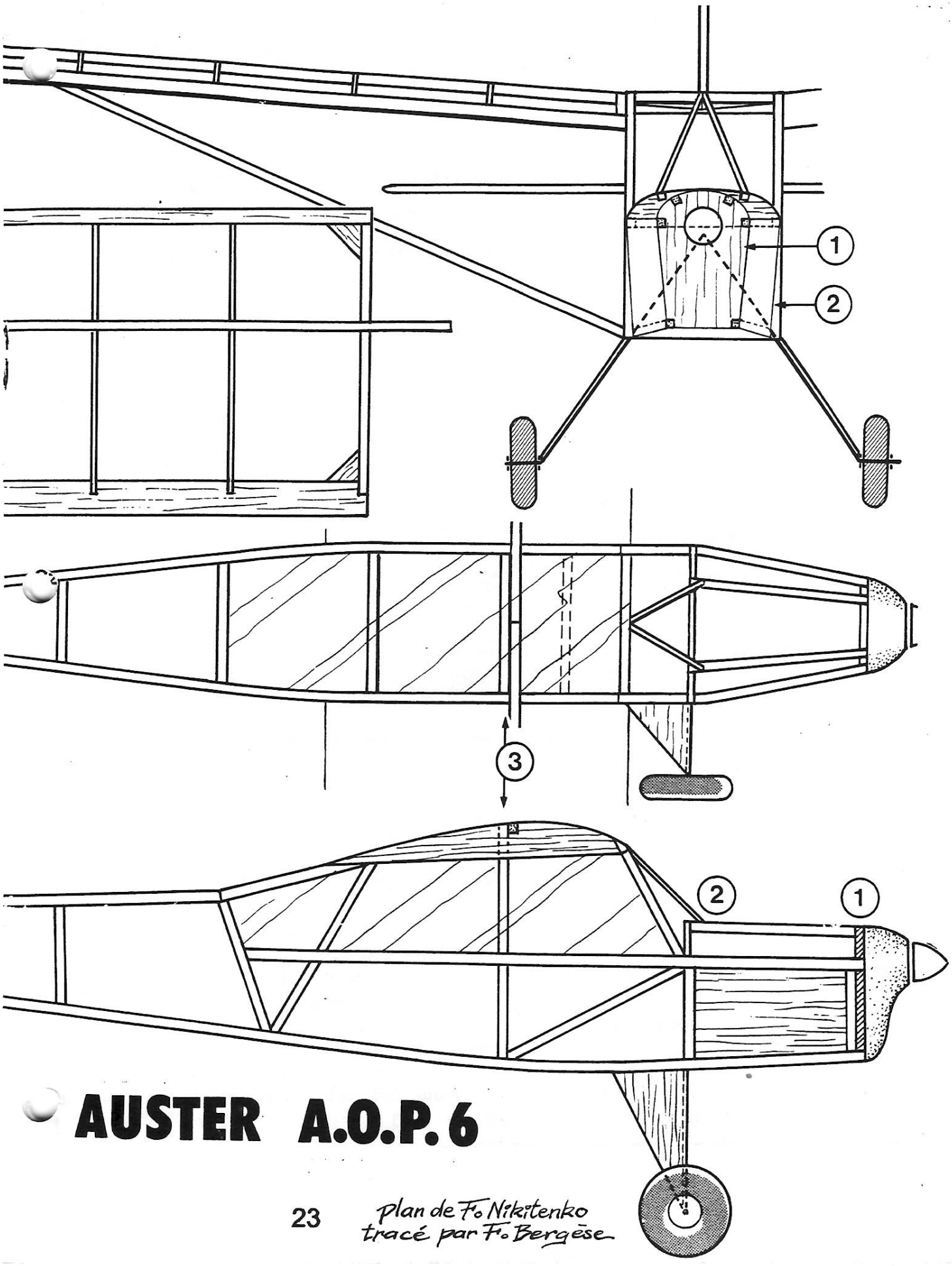


AUSTER A.O.P. 6

plan de F. Nikitenko
tracé par F. Bergèse

PAX RIVER INDOOR CONTEST

SATURDAY NOVEMBER 20, 1993 9:00 AM to 5:30 PM

ROTARY WING HANGAR BUILDING 111
NAS/NATC PATUXENT RIVER - LEXINGTON PARK, MARYLAND

NO ENTRY FEE - DONATIONS TO NAVY RELIEF SOCIETY WELCOMED

MAJOR EVENTS (FAC Rules & Trophies awarded)

MASS LAUNCH

1-	OLD TIME SCALE *	11:00 AM
2-	WW-1	12:00 PM
3-	NAVY SCALE	1:00 PM
4-	PEANUT SCALE	2:00 PM
5-	GOLDEN AGE	3.00 PM

SPECIAL EVENTS

1- FAC POWER (Electric & CO2)
2- 14 GRAM BOSTONIAN ***
3- 7 GRAM NO-CAL ***
4- NOVICE PENNYPLANE (AMA Rules) ***
5- MASS LAUNCH CONSOLATION EVENT - FLOWN ABOUT 4:30 PM ****

OTHER EVENTS

6- FAC RUBBER SCALE
7- COCONUT SCALE **
8- BOGUS SCALE BOSTONIAN
14 GRAMS MIN. WGT. ***
(Rules in Nov-Dec 89 MF)

6- COCONUT MASS LAUNCH *****
7- NO-CAL MASS LAUNCH *****
8- MINI-STICK ***

* OLD TIME SCALE RULES - Built from any old time kit plan which was sold before December 31, 1942 with a 20 inch wingspan or less. Construction may be heavier but not lightened; nose block and rear motor attachment may be modified.

** COCONUT RULES - All COCONUTS must ROG for official times except for the special MASS LAUNCH event.

*** Single best flight time determines winner.

**** SECOND and THIRD place flyers from the 5 standard MASS launch events are eligible to enter this event but must use plane flown in those events.

***** These events will be flown about 3:30 and 4:00 PM.

AIRCRAFT FOR SCALE JUDGING MUST BE TURNED IN BY 11:00 AM
No Qualifying Flight is Required
ALL FLIGHT TIMES MUST BE SUBMITTED BY 4:30 PM DEADLINE
AWARDS -- 5:15 to 5:30PM
LOCAL RULE - ONLY ONE MASS LAUNCH EVENT PER AIRCRAFT

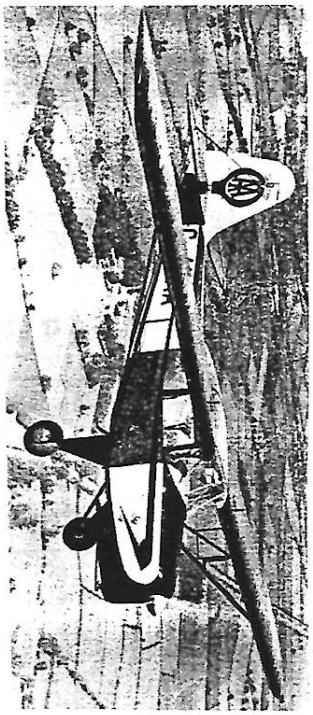
CONTEST INFORMATION: CLAUDE POWELL 1 (301) 872-4105
TOM SCHMITT 1 (301) 530-0327

IMPORTANT NOTICES:

-----PLEASE CONTACT CLAUDE POWELL AT LEAST ONE WEEK BEFORE CONTEST TO PROVIDE YOURS AND GUESTS NAMES FOR ENTRY TO BASE --- IF YOU HAVE DONE SO IN THE PAST YOU DO NOT HAVE TO THIS TIME ---

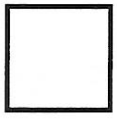
PLEASE NOTE THERE WILL BE NO CHAIRS OR TABLES AVAILABLE SO BE SURE TO BRING YOUR OWN

SPONSORED BY: NAVAL AIR STATION/NAVAL AIR TEST CENTER,
PATUXENT RIVER, MARYLAND AND
ST. MARY'S COUNTY RECREATION AND PARKS



D.C. MAXECUTERS

NOTE: Your Dues Are Du



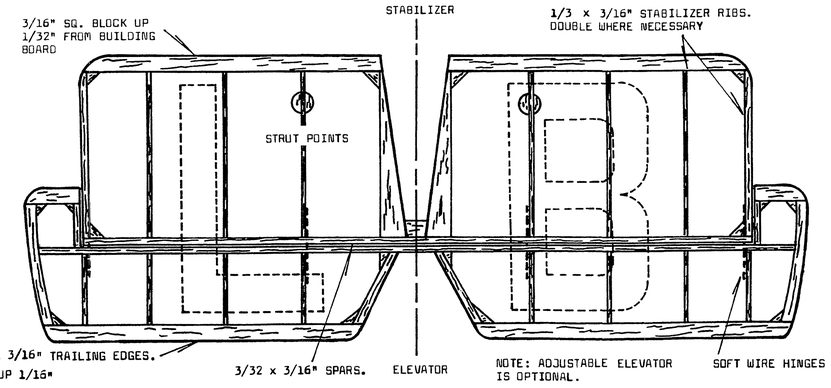
CLUB OFFICERS

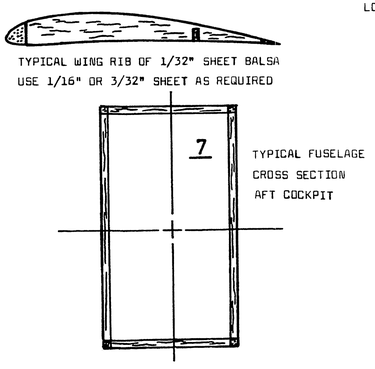
President	Jerry Paisley 20 Clearwater Ct. Damascus, MD 20872
Secretary	Terry Pittman 7863 Colonial Vil. Row Annandale, VA 22003
Treasurer	Frank Rowsome 10904 Bellehaven Rd. Damascus, MD 20872

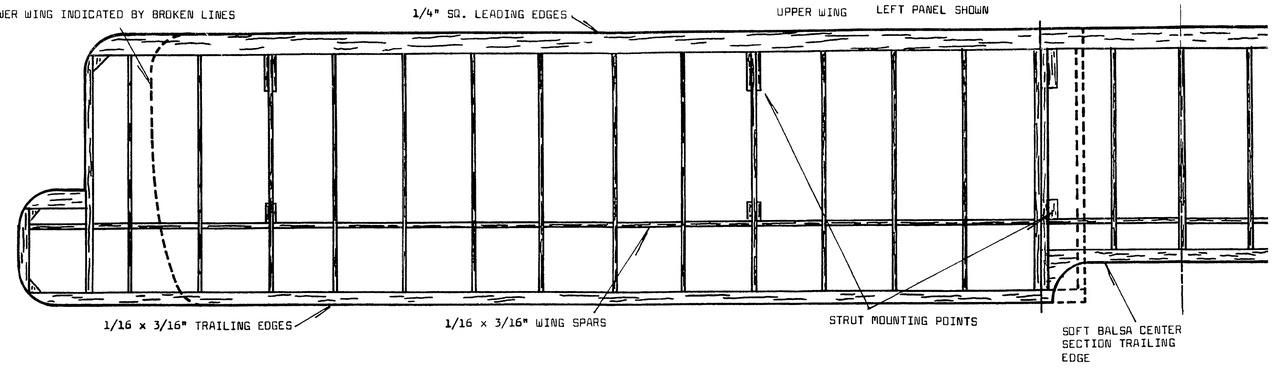
MEETINGS The D.C.Maxecuters hold meetings on the first Tuesday of every month at the College Park Airport, the oldest operating airport in the U.S.

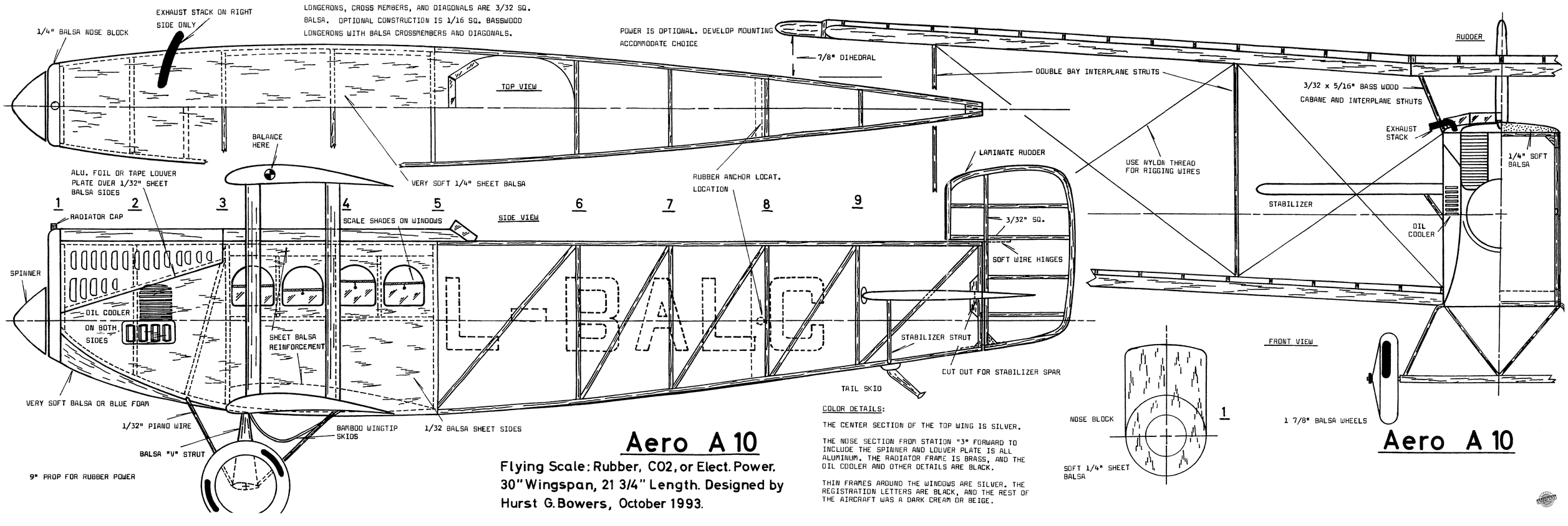
MEMBERSHIP Dues for membership in the D.C.MAXECUTERS is $15 per year for residents of the USA, Canada, and Mexico, and $25 for all other countries. Your mailing label indicates the year and month of the last issue of your current membership. A red "X" in the box above is a reminder that your dues are due. Send a check, payable to the "D.C. MAXECUTERS", to the treasurer.

DJP









Aero A 10

Flying Scale: Rubber, CO2, or Elect. Power.
30" Wingspan, 21 3/4" Length. Designed by
Hurst G. Bowers, October 1993.

COLOR DETAILS:

THE CENTER SECTION OF THE TOP WING IS SILVER.

THE NOSE SECTION FROM STATION "3" FORWARD TO INCLUDE THE SPINNER AND LOUVER PLATE IS ALL ALUMINUM. THE RADIATOR FRAME IS BRASS, AND THE OIL COOLER AND OTHER DETAILS ARE BLACK.

THIN FRAMES AROUND THE WINDOWS ARE SILVER. THE REGISTRATION LETTERS ARE BLACK, AND THE REST OF THE AIRCRAFT WAS A DARK CREAM OR BEIGE.

Aero A 10

DJP

LEADING EDGE OF 1/16" SQUARE

1/16 x 1/8" WING SPAR AND TRAILING EDGE

1/16" SQ.

ELEVATOR

LAMINATE TIPS

WINGS

3/4" DIHEDRAL

1/32" PLY. JOINER

TOP VIEW

VERY SOFT BALSA BLOCK

MAKE 5 CYLINDERS FROM SOFT BALSA OR CORK

TYPICAL WING RIB
12 REQUIRED OF 1/16" SHEET

ENTIRE FRAMEWORK OF HARD 1/16" SQ. BALSA

NX9243

1/16" SQ.

SIDE VIEW

REAR RUBBER ANCHOR

ALU. OR BAMBOO TAILSKID

NOSE BLOCK OF HARD BALSA

COLOR SCHEME: ENTIRE MODEL IS SILVER WITH BLACK DETAILS

1 1/4" LIGHT BALSA WHEELS

TYPICAL LANDING GEAR STRUT OF PIANO WIRE. COVER WITH BLACK PLASTIC TUBE

tech. adviser:
"Nutsy" Fagen

"WONG-WAY-WOBIN"

(The Gay Leprechaun)

A BOGUS SCALE BOSTONIAN

by H. Bowers, 10-'93