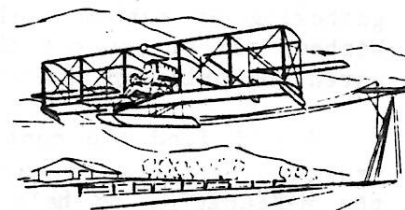


Morane-Saulnier Armed Fighter - 1915



Wire-Slide Launching - 1911

# MAX - FAX

THE NEWSLETTER OF THE D.C. MAXECUTERS  
NOV/DEC 1984

## MEMBERSHIP

Dues for membership in the D.C. Maxcuters is \$10.00 per year for residents of the U.S.A., Canada, and Mexico, and \$11.00 for all other countries. Your mailing label indicates the year and month of the last issue of MAX-FAX for your current membership. A red mark in the box below is a reminder that your current membership is nearing its end. Send a check, payable to D.C. Maxcuters, to the Treasurer.

DUES REMINDER

## PRESIDENT

DAN DRISCOLL  
2000 S. Eads St., #301  
Arlington, VA 22202

## SECRETARY

TOM SCHMITT  
11014 Marcliff Road  
Rockville, MD 20852

## TREASURER AND NEWSLETTER EDITOR

ALLAN SCHANZLE  
20008 Spur Hill Dr.  
Gaithersburg, MD 20879

## MEETINGS

The D.C. Maxcuters hold meetings on the first Wednesday of every month at the College Park Airport, the oldest continuously operating airport in the world.

## UPCOMING EVENTS

- NOV 2, NOV 9: INDOOR FLYING AT WALTER JOHNSON H.S., 7:00 TO 10:30 P.M. SEE MAP IN THIS ISSUE
- NOV 17: CONTEST AT PATUXENT N.A.S. SEE FLYER IN THIS ISSUE
- NOV 24: BULL SESSION AT DUDLEY PRISELS
- DEC 1, DEC 15: INDOOR FLYING AT ROBERT PEARY H.S., 3:00 TO 6:00 P.M. SEE MAP IN THIS ISSUE
- DEC 7: CHRISTMAS BANQUET, EVANS FARM INN
- JAN 5, JAN 26: INDOOR FLYING AT ROBERT PEARY H.S., 3:00 TO 6:00 P.M.
- JAN. 13: POSSIBLE FUN FLY AT U.S. NAVAL ACADEMY. MORE ON THIS IN NEXT ISSUE
- JAN 19: BULL SESSION AT DAN DRISCOLLS

CLUB NEWS  
ALLAN SCHANZLE

LOW HUMIDITY, comfortable temperatures, but windy. Those were the conditions for our contest on September 8th, and from the third-hand rumor mill, your editor and contest C.D. hears that everyone had a good time. Several of you drove considerable distances to attend this

gathering of rubber scale enthusiasts, and we thank you for your support of the MAXECUTERS. Without all of you out there, we wouldn't be holding these events, and the camaraderie alone is worth the price of admission.

You'll find the contest results detailed in this issue, and if you'll recall, we had some Brown CO<sub>2</sub> engines to award, compliments of A.H. Zed Aircraft. These prizes were given to the MAXECUTERS, to help promote the development of CO<sub>2</sub> free flight. If you check the photo page, you'll see that quite a few people showed up with CO<sub>2</sub> planes, so A.H. Zed's offer appears to have accomplished its job.

I didn't know of a better way to encourage CO<sub>2</sub> than award the engines to Junior entrants. There were three of these young men entered in our contest, and we will be looking forward to seeing their CO<sub>2</sub> powered models next year.

In addition to these three youngsters, I tried to select other individuals who had unusually bad luck or an outstanding performance. The following walked away with the engines.

Craig Leszkiewicz: (JR., and entrant of a well built CO<sub>2</sub> Curtiss Robin)  
Mark Houck: (JR., and winner of the Junior Hand Launch event)  
Brian Corwell: (JR.)  
Bill Bell: (Lost his Golden Age Repro. kit in a thermal over the trees)  
George Meyers: (A beautiful flight with his SOC-3, which earned him first in FAC scale.)  
Stew Meyers: (Lost 3 planes in the woods by noon)  
Bert Phillips: (Would you believe a squirrel dropped an acorn thru the fuselage of his Cessna CR-3, and then later in the day, Bert stepped on the CR-3 wing?)  
Rowland Hoot: (Lost his Dunne D-8 CO<sub>2</sub> to the wind and trees)

I would be remiss as CD if special kudos were not given to some who made my job a lot easier, which allowed me to get in a few flights of my own. On behalf of all of us, I wish to thank

1. A.H. Zed Aircraft for supplying the Brown CO<sub>2</sub> engines,
2. John Preston and Hurst Bowers for judging the scale entries,
3. Marty Schindler and my daughter, Lorie, for helping with the administrative duties,
4. The event directors, and
5. Ed Escalante, for bringing the tent to shelter us from the all-day sun.

I think special mention should also be noted for a model by Randy Kleinert that made its premier appearance at the contest. This was a rubber powered, propeller driven, F9F Cougar jet, done in the classic orange and white colors. It looked great, was truly unusual, and showed real promise before the winds and a stall at low altitude did in the fuselage. I had sympathy for Randy, because my rubber powered F8U Crusader jet also dorked the night before the contest - again, a stall at low altitude. But I think these jets may have a future in FAC. Some of them have excellent proportions.

Another item concerning the contest should be mentioned. As noted in the last issue of MAX-FAX, the FAC Power event was run under a set of trial rules. In general, bonus points were given only for multi-engined aircraft, and flight times could not exceed the static score. It's my opinion that this worked better than the traditional FAC concept, and perhaps, this is the kind of activity for those of you who want a more "scale" oriented event. I suggest you study the score sheets and send in your comments. It seems that the FAC concept of "Handicapped Representative Scale" may just not apply to F/F power scale. Please send us your views.

One final note concerning the contest, and that relates to the enforcement of the 40 point minimum scale score for the mass launch events. In general, the models looked very good, but as CD, I was obliged to enforce the rule and exclude one aircraft from participation. This is the third time I've done this in the past 5 years, and while I take no great pleasure in excluding

anyone from the competition, I do feel it's my job to uphold the club rules. Perhaps some guidelines should be offered. What I'm looking for is a plane that the builder would consider flying in the FAC Handicap Representative Scale event. Perhaps the model has had its fair share of battle damage over the past few years, or even during the day of the contest, and that's not going to keep someone out of an event. I think we all know the spirit of the rule, so please, n't bring something you would be ashamed to enter in the scale event.

AS NOTED IN the Upcoming Events, the indoor contest at Patuxent River Naval Test Center is GO for November 17th. For those of you who were there earlier this year, you'll remember what a great facility it is. See the flyer in this issue.

THE CHRISTMAS BANQUET will again be held at Evans Farm Inn, McLean, VA., on December 7, 1984. There will be a cash bar from 7:00 to 8:00 P.M., dinner at 8:00. Send a check for \$15.00 per person (wives and girl friends welcomed) to Don Srull, 941 Kimberwicke Road, McLean, VA. 22101.

IF YOUR FINGERS tell you this issue is a bit on the bulky side, they're correct. There is sufficient pertinent information that justifies a total of 20 pages rather than the usual 18.

To begin with, our feature plan is a Junkers D1, submitted by Lou Buffardi in Louisiana. The plan was originally published by Madison Models in Brooklyn, NY, (probably in the early 1930's), and you'll find a reduced 1 page copy of this original Madison plan in this issue. The actual building plans were redrawn by the editor. If you check the original Madison plan with the 3-view, you'll find that the wing, stab, rudder, and fuselage shapes are all wrong, as well as the location of the landing gear. That's what I call "cow pasture" scale - stand Waaaaaaay off!

The reworking of the original plan leaves something to be desired, as the fuselage shape is still not exactly correct, and wood sizes are still omitted. The intent is to maintain the flavor of the original plan. Use your imagination on this one.

In addition to this building plan, you'll find the detailed September contest results, an amusing letter from local member Rich Hensel, and as previously promised, a flying report about your editor's F8U Crusader (see photo #16 in the May/June 1984 issue of MAX-FAX). Two photo pages of the September Contest scene grace this issue, compliments of Tom Schmitt. So enjoy, and we hope to see many of you at the Patuxent contest.

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PHOTO PAGES  
Tom Schmitt

1. Our full size plan of this issue, a neat rendition of an old plan for the Junkers D-1 by Allan Schanzle.
2. For you super detail buffs, a photo of the real thing at the Paris Air Museum.
3. Allan's elves were hard at work making springs for the Mercedes in the front end of his D-1.

D.C. MAXECUTER'S '84 SUMMER FUN FLY

4. Randy Kleinert and his very pretty white and orange F9F entry for the Modern event.
5. Dan Driscoll's "midnite oil" Cougar, another high flying modern event model.
6. One of our junior entries, Mark Houck shows great form in releasing his embryo.
7. Jacqueline Cochran's Bendix winner streaking by overhead; Dudley Prisel's fine reproduction from Joe Fitzgibbon's Golden Age Seversky kit.
8. Pat Daily launching his nicely finished version of Joe's Y10-43 kit; a great flyer.
9. Claude Powell with his MIG-3.
10. Most of our power scale models; all but one of the models are powered by CO2 motors. Even Don Srull was talked into entering (his Gannet converted from rubber) and walked away winning!
11. Craig Leszkiewicz with his CO2 powered Robin, a great flyer.
12. Another nifty CO2 model, a Farman Sport by Hurst Bowers. Note the twin CO2 Burnelli by Hurst in photo #10.

13. Rolfe Gregory and his original Luscombe "show" phantom; untested at contest time but since a great flyer. I am sure that with a little encouragement Rolfe will develop the plans for MAX-FAX.
14. Rowland Hoot may have lost his high-flying CO2 powered Dunne over the Oak trees, but picked up a CO2 motor as a prize from the local A.H. ZED AIRCRAFT, INC. rep.
15. Dave Rees launches his Zippy Sport, a great flying model of a modern aircraft.
16. In keeping with the CO2 character of this report, we have included this photo by Bill Noonan of his Brown Twin powered Martin Kitten, winner of the demolition derby at the FLYING ACES NATS IV. Perhaps there will be room in the next issue for the epilogue.
17. Bill Weaver with his fifty year old Gypsy Moth from a Pilzer plan.

### WHAT A BUNCH OF WIMPS

Rich Hensel

The weather was rotten that Friday afternoon in early July: windy, threatening sky, the whole bit. But I climbed into my taxicab with my new little CO-2 job and started the long drive through rush hour traffic to the COMSAT field. If it rained it would be a double blow: The flying session would be scrubbed, and I'd still lose half a night's work in weather when the cab business is at its best.

Conditions were even worse at the field, but what really hurt was that no one else was there. No one, that is, except Frank Renaut.

"You live in Baltimore, don't you, Frank? How many miles...."

"Forty-six," he snapped.

"Thirty-three for me," I said.

"The others live near about, don't they?"

"More of less," I answered. "At least closer than we do. They're a bunch of wimps," mumbled.

It wasn't pretty; it wasn't even fun, but we flew. No flight lasted more than twenty seconds, however each traveled a distance of at least two hundred yards. By Jupiter! Maybe we should disguise these things as people and enter them in the Olympics. They'd surely win, I thought. After all, is it written in stone that models have to fly in concentric circles, or in any kind of circles, for that matter. Bunch of wimps.

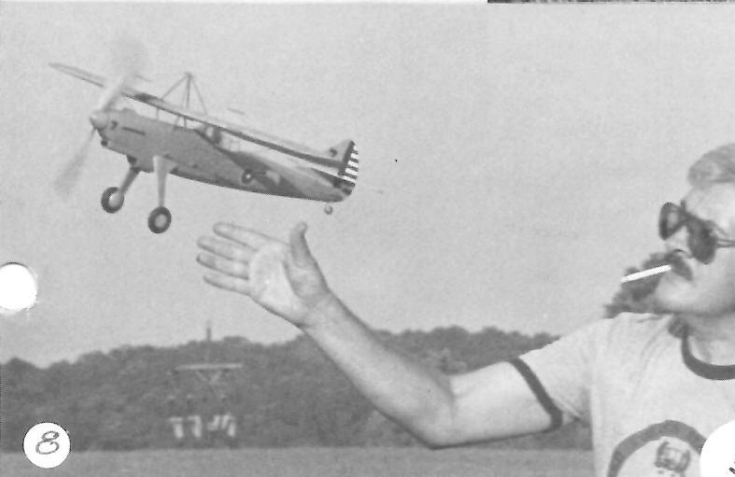
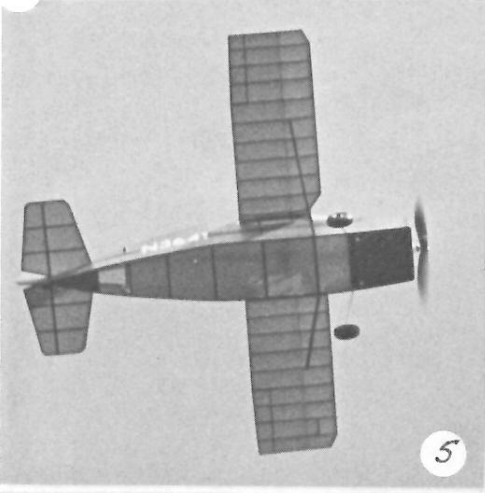
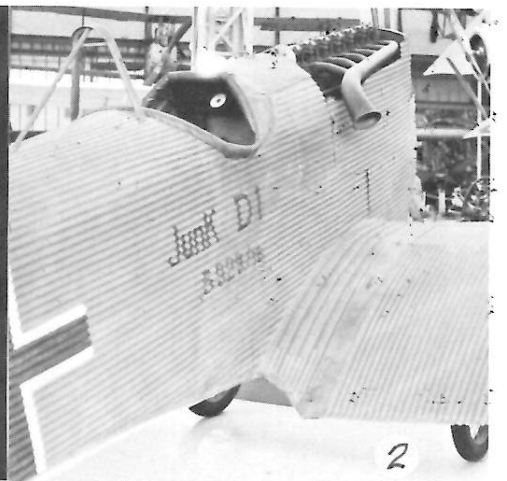
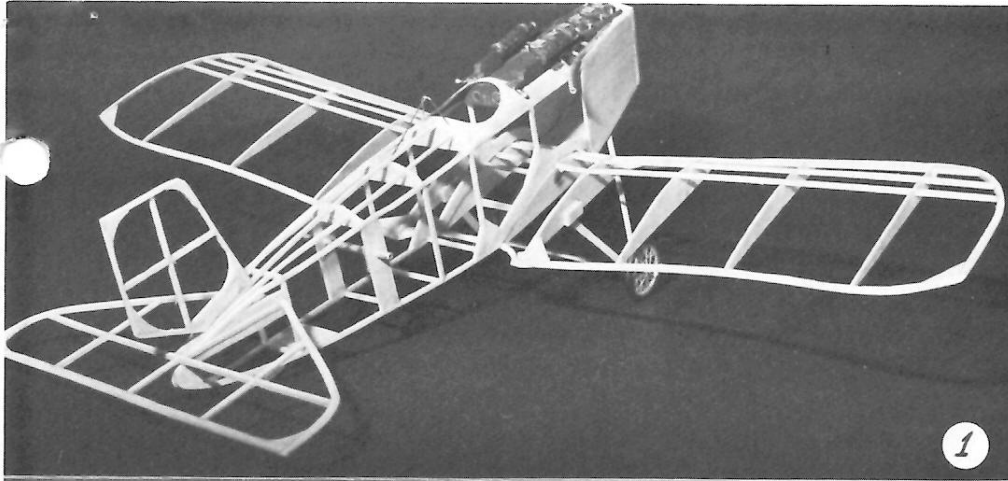
Back home, I called Allan to find out why no one else had shown. Allan said that he looked out the window that afternoon and saw the trees at a forty-five degree angle to the ground. Allan said that many of them were going to the FAC Nats in Detroit the following weekend. And Allan said that they didn't want to risk dorking any of their planes. Big Deal! Go visit the underground, Allan. I know that I'll never build anything good enough to take to the FAC Nats. But I spend a lot of time working on my planes, too. As for the trees being at forty-five degrees, that was a blatant lie. The trees at COMSAT were a good sixty degrees to ground level! Well, at least the larger ones were: the great oaks, the poplars, etc. Now I can understand their cowardice. I can even tolerate their beautiful, well built ships that always seem to fly so damn well. But I cannot accept their lack of scientific curiosity. Doesn't everyone, at least once, wish to see his plane operate in a wind tunnel? Bunch of wimps.

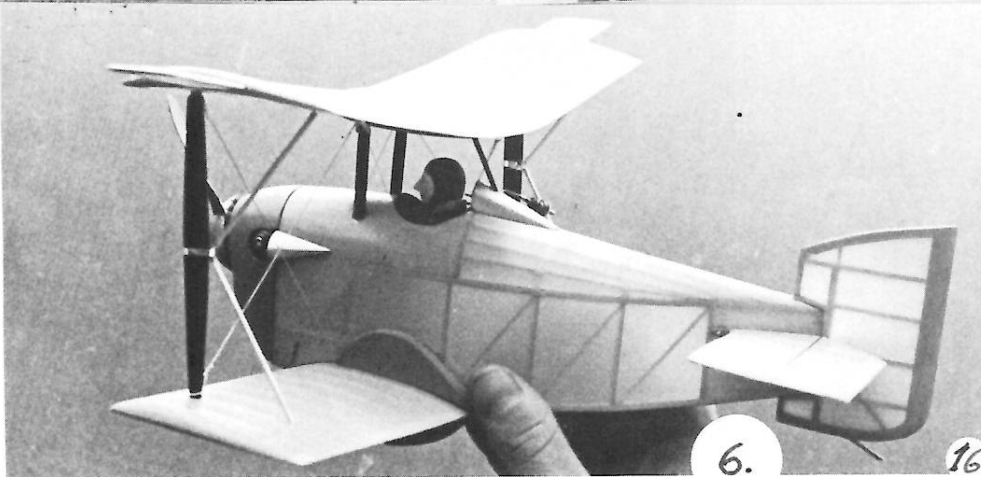
That night I sat cross-legged with beads and petitioned the gods who control such things that hurricane conditions should prevail at their cotton-pick'n contest in Detroit, or, at the very least, a small tornado should tenaciously hover over their flying site. (Editor's note - it did!) Bunch of wimps.

Well, Frank, ole buddy, it was their loss; it was our gain. Who among them can say that has found the ultimate thrill. I mean the thrill of launching his plane and watching it leave his hand.....like a kleenex tossed from a car on the Capital Beltway. We can, ol'e buddy, we can. And we traveled forty-six and thirty-three miles respectively just so that we could.

Whatta buncha wimps.









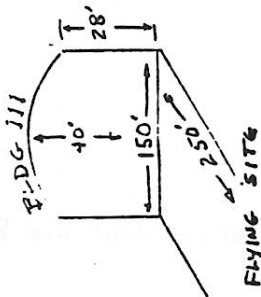






CONTEST RESULTS FOR HAND LAUNCH GLIDER

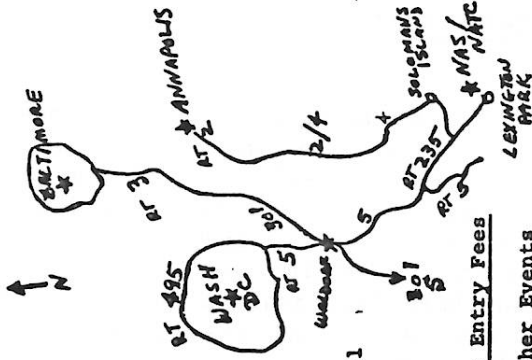
NAME	FLIGHT TIMES (SECONDS)						TOTAL	PLACE
	1	2	3	4	5	6		
MARK HUCK (JR)	12	5	6	(27)	(20)	(14)	61	1 <sup>st</sup> JR
JOHN SITES	13	38	(49)	(43)	14	(39)	136	4
ROWLAND HOOT	(50)	(32)	(61)	29	-	-	129	5
JOHN HOUCK	33	(44)	10	(39)	30	(35)	118	6
BILL BELL	80	-	-	-	-	-	80	7
HAROLD HOWARD	(94)	(49)	(41)	39	35	-	184	2
RANDY KLEINERT	3	(51)	(53)	40	(70)	17	180	3
BRIAN CORNWELL (JR)	16	10	(17)	(18)	14	(15)	51	8
GLEN SIMPERS	43	(20)	(53)	(49)	38	30	221	1



1984 (WINTER)  
INDOOR MODEL AIRPLANE  
CONTEST

17 November 1984  
9:00 AM - 5:30 PM

Rotary Wing Hangar, Building 111  
NAS/NATC Patuxent River, Md.  
(Lexington Park, Md.)



1983 FAC Rules

Mass Launch Events

WMI (Biplanes) 1:10 - 2:00

Navy Scale (Any Navy/ERA) 2:10 - 3:00

P-Nut Scale (Any P-Nut) 3:10 - 4:00

Golden Age 4:10 - 5:00

Awards 5:10 - 5:30

No Entry Fees

Other Events

FAC Scale - Rubber (COMSAT Bonus Rules)

FAC Scale CO2

WINNERS OF COMSAT RACES:

SPEED : CRAIG LESZKIEWICZ

NAVIGATION: BILL BELL

FOLLOW-UP MB-3/3A

The Sept/Oct 1984 issue of MAX-FAX contained a full size plan of the Boeing (Thomas Morse) MB-3A by Kevin Sharbonda. In addition to the 3-view from Paul Matt's Historical Aviation Album, other interesting and informative data have been brought to light. Thanks to Dan Driscoll, we discovered an article by Peter Bowers in the latest (24th) edition of Air Enthusiasts. It includes many excellent photos, a great cutaway drawing and 3-view with mods. Finally, there is a description of the MB-3/3A and other Thomas Morse racers in Thomas G. Foxworth's book, "The Speed Seekers". Yes, the MB-3A did race, in a one of a kind, "John L. Mitchell" race in 1922.

Local Rule: One event per model.

Information: Claude Powell (301) 872-4105 (Coordinator)  
Alan Schanzle (Contest Director)

Sponsored By: Naval Air Station/Naval Air Test Center,  
Patuxent River, Md. and St. Mary's County  
Recreation and Parks.

ONCE AGAIN, A HEARTY "THANK YOU"

Allan Schanzle

In the last issue of MAX-FAX, I mentioned that the editor of this bi-monthly trash wrapper had to travel to the state of Washington for a business trip. You subscribers out there Seattle must never come in off your boats, because I tried to call all four of you several times, but no one ever answered. So there I am, in the great northwest, and the way I see it, if someone is going to pay my way three thousand miles across this land of the free and the brave, the least I can do is to add a few bucks to the pot and visit some modeling friends who reside in that part of the country. True, Nevada and southern California are not exactly in the Northwest, but what the heck, its close enough, and I've never had the opportunity to meet several of our long time subscribers out there. And who in their right mind would pass up the chance to visit Las Vegas, the adult playground of our USA.

So I called Bob Haight out Vegas way, warning him that he was about to have a visitor from the East, and that he should lubricate the elbows of the one armed bandits, more commonly known as slot machines. For indeed, this traveler and gambler extraordinaire had intentions of dropping a large sum of money into these thieves of the West - at least \$10 worth.

Actually, I hesitated to call Bob. At the 1980 FAC NATS in Dayton Ohio, I did terrible damage to his ego, and other physical attributes, when Fritz Von Longeron, the pilot of my Heinkel He 280 jet catapult, homed in on Bob, and got 'im in the "gotchas". But that's another story. We arranged for Doris, Bob's wife, to meet me at the airport, since jolly Robert would be busy catering to the parched Vegas clientele.

The next three days ( and nights, - that place is a 24 hour town), were different from any I've ever experienced. Boy, were they different!!! But thanks to Bob and Doris, the memories are permanently engraved between the ears, and with the liberal use of their phone, a call was made to Bill Stroman, in the Los Angeles area,..... another victim of the Heinkel in 1980, only this time, 'ole Fritz took aim on his FAC badge, which was located directly over his heart. Oh, dat smarts!

I did not yet have flight reservations to L.A. when I talked to Bill, so my exact agenda was unknown to him. Bill had taken the time to call Doris Haight to find out what time I would arrive in LA, and Bill and his wife Sharon planned a Bar-B-Q dinner followed by several hours of conversation that were a well needed respite from the hectic but oh-so-enjoyable preceeding days in Vegas.

It was thanks to Bill that the next two days were totally filled with camaraderie and southern California hospitality. Thanks go to Bill and Phyllis Warner, who scheduled their trip to San Diego so I could follow them and not get lost on the freeway system. And to Bob and Sandy Peck, my deepest and sincere appreciation for arranging a get-together at their home on Saturday evening. I'm grateful also to Bill Noonan, Bill Hannan, and Clarence Mather for taking a Saturday evening from their busy schedules to attend this gathering of eagles. Folks, this is what modeling is all about - friends chatting around the kitchen table, talking aviation. That alone was worth the price of the airline ticket.

A hasty return to Bill Stroman's home in LA on Sunday morning brought forth another day of camaraderie with Bill and Fernando Ramos. Fernando, those were four hours of aviation I'll never forget.

If all this wasn't enough, that evening, Bill and Sharon, Fernando and his family, and I enjoyed an outdoor Mexican dinner that was superb. I'm not sure I've digested all that food even yet as I write this, 24 hours later and at 35,000 feet over Colorado.

To all of you and your families a hearty "thank you". But beware - you've got me turned n to ROW at Elsinor. You may have a visitor next June. I'm just crazy enough to fly out for the weekend.

THE CHANCE VOUGHT F8U CRUSADER, IN RETROSPECT

Allan Schanzle

I must be sick. Perhaps I should move to Cleveland and associate with Dennis Norman, who builds things like a WW-II Lancaster bomber with four rubber motors. Two years ago I built a 6 foot rubber powered PT-19, and now I give a thing like this a try. Yeah, I'm ready for the Maryland State Home for the bewildered.

The project was conceived while Tom Schmitt, Dan Driscoll, and I were returning from Dave Rees' "Pizza Fly" in October 1983. As usual, the car trip was boring, and discussions invariably turn to visions of future building projects. I don't recall exactly what set off my gray matter on such a crazy project, but I suspect it was perpetrated by reflecting on past modeling experiences, and in 1964, I built an F8U from a Berkley kit. It was an .049 powered ducted fan and never flew worth a poop. The glide was fine, but under power, it dove like an SBU Dauntless in the battle of Midway. I tried everything I knew at that time, but to no avail. This was to be just another failure (I had lots of them in those days!!). The model was sacrificed in the standard Schanzle method - torched!!!.

Tom had also built this model, and still has it in his basement. For some reason, it occurred to me that this F8U would make an interesting rubber model. There's lots of wing area (span = 27 inches, root chord = 12 inches), an almost obscene nose moment, and the fuselage is 36 inches long. This sucker would tax the rubber supply almost like the PT-19. But there were some other nice characteristics. The nose radome, if circularized, could be a spinner, and help hide the prop. The swept wing should give exceptional stall stability, and eliminate the need for all but the smallest amount of dihedral. The jet exhaust opening would offer unlimited access to anchor the rubber motor, and the shoulder wing should also help stability. Hey, this sounds better 'n better. The only real drawback was the color - modern Navy jets are not exactly a kaleidoscope. Oh well, I'll suffer a little, and balance this disadvantage with the fact that I have a soft spot in my heart for Chance Vought aircraft, particularly the F8U, since I spent 4 years working with this aircraft as a co-op student during my college days.

The next thing I know, I'm getting visions of this thing in the air, assuming I can get it to fly. Models like this have all the loyalty of a double agent. But by the time I got home, I was primed. This hummer just had to be built.

As many of you know, I hate to draw plans, so I decided to simply review the old Berkley plans and see if I could figure out why the old ducted fan version had such nasty flight characteristics. Yee-Gads!!! The plan shows a negative angle of attack for the wing, the tail moment was shortened for improved ducted fan performance, and yet the stab area was scale! No wonder it wouldn't fly. But onward and upward. Tis time to build this dude with some changes to help out on the preceding problems.

The model was built along the same lines as the Berkley kit except for wing angle and stab area. By the time the fuselage was finished, I began to question my own sanity. Who would try something like this? I'll tell ya who - the same yokel that would build a 6 foot PT-19!!

After the model was completed and covered, except for the prop, I began my search for color documentation. (Doesn't everyone collect their documentation after the model is complete?) The Smithsonian had some colored photos, but all were plain gray. Yuck. As a last resort, I checked the listing of Profile Publications, and U-Ree-Ka, there's an F8U, big as life. And best of all, there are a few colorful paint schemes. Now, the only thing left is the prop. What in the world do you use to pull this abomination through the air? Think, Schanzle, think. You're going to need something that will really bite its way through the troposphere. That swept wing should help tolerate a larger than normal prop. Hey - why not try the obvious thing - consult the wizzard of FF scale, Don Srull? After all, he can get two minutes on a under block.

Off to Don's the next night, with Tom Schmitt to help lug the F8U. Good grief! Don has all kinds of props as well as prop forming molds cut out of 2x4's. Then he says, "Wait - a - minute. I've got something around here that ought to be perfect.", and out comes a set of preformed prop blades and a Z-shaped wire form from Blue Ridge Models. It was designed for a Coup kit. My Lord - it's 16 inches in diameter, but it was very light (a requirement due to excessive nose moment), and had that "it looks right" appearance. "I'll do it", says I, and home we go.

By the end of February, the model was completed and ready to fly. But here in the east, we accept certain truths to be self evident, and one of those is that the wind doesn't calm down until April, sometimes May, and this sucker is going to be given every chance to fly, so wait it is. April,....May,....June,.....even July!!! Come on, jet stream, move your gale force turbulence north, where you belong. Finally, on Aug 17, we got a good calm Friday evening, and out comes the F8U Crusader. Prior to this, I've tried a few low powered flights, but these are really nothing more than extended glides. Tonight, I'm gonna wind this thing up. Of course, this being the first good friday evening, everyone is there to see your editor litter the COMSAT field with balsa sticks and tissue.

Let's cut out the details. Does it fly? Tell me, does a bear fertilize the woods? You bet it flies, and probably as good as anything I ever had before. With four loops of 1/4" FAI, each strand of which is about 42 inches long, this bomb really gets up on 60% turns. I'd guess the last flight was about a minute, and climbed to at least 100 feet. Folks, these rubber powered scale models of jets are fantastic, and I would conjecture that many of them can be made to fly as well as any 'ole high wing cabin monoplane. But beware of one flight feature. If you build a swept wing jet, keep the nose down with downtrust, cause if you don't you're going to see the most gorgeous flat spin you ever saw. Just ask any of the 20 or so people at COMSAT on Aug 17. They saw one flight where this lunatic of a model went thru three flat spins and recoveries before returning to the oh-so-forgiving grass of COMSAT. Because it's different, it's a real crowd pleaser, and that, of course, is always good for the ego.

I'm sure others must have tried rubber powered jets in the past and Dave Smith, in So Carolina, is currently flying a F-84, and Glen Simperts has an F-100. But to me, this opens a whole new arena for FF rubber scale. If we see enough jet models built over this winter, perhaps we'll have a jet mass launch event in September 1985. Do I hear any takers?

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## AIRCRAFT DESCRIBED No. 174

# JUNKERS D.1

BY IAN STAIR                      Aero Modeller

IT IS SELDOM possible to write a description of an aeroplane without referring to the types which preceded or succeeded it. This is particularly true of the Junkers D1 which is a most important milestone in the development of the modern aeroplane. Owing to its introduction at the close of the First World War it remained somewhat obscure and it was left for later types to make the name 'Junkers' famous throughout the world.

Professor Hugo Junkers was one of aviation's outstanding pioneers. He first became interested in aerodynamics while Professor of Thermodynamics at Aachen University. By 1910 he had developed a thick aerofoil section, this made it possible to design a cantilever structure which would dispense with the external bracing used on all contemporary aeroplanes.

Owing to the pressure of other work these ideas did not see realization in the shape of a finished aeroplane until the J1 of 1916. From this first type the Junkers Company persisted with all-metal monoplanes (except the J4), a formula which was not adopted by the majority of the world's aircraft manufacturers until twenty years later.

The experimental J1 was followed by a single seater fighter, the J2 - six being built in 1916. With the radiator slung under the fuselage the side view was more appropriate to the early thirties than the First World War. Unfortunately, these machines came out very much overweight and were not a success.

Both the J1 and J2 had a thin metal skin. This apparently gave trouble in manufacture as it can be seen

from photographs that the skin was very badly crinkled and this must have caused almost as much drag as the omission of wires had saved!

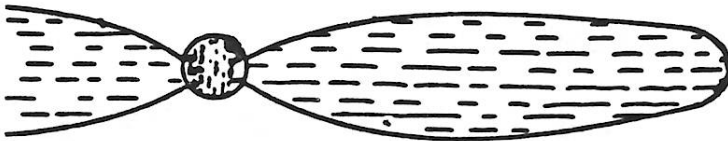
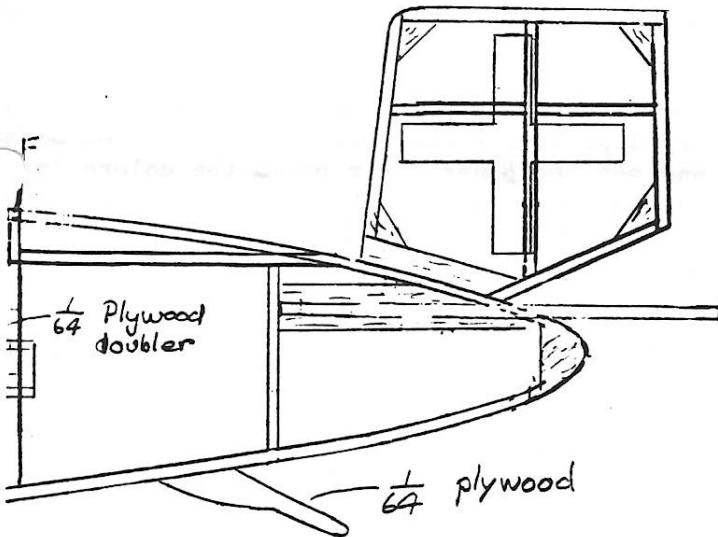
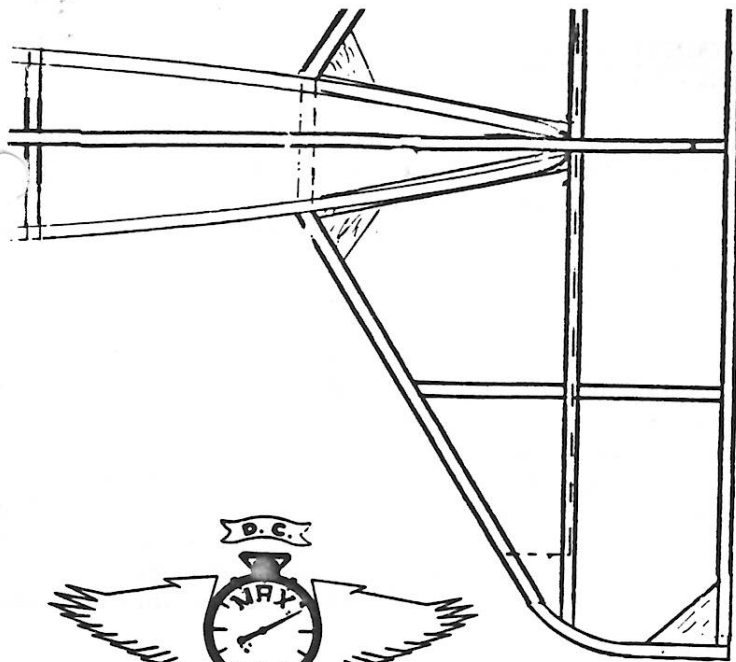
It is likely that this trouble, as much as the need for extra strength, led to the adoption of corrugated metal for the wing covering of the next type, the J4 Biplane (Military designation Junkers J1). The outer wings of this type were cantilever (as the monoplanes) and were braced. The corrugated skin became a feature of Junkers aeroplanes until the mid-thirties.

The next model to be built was the J7 single seater fighter, produced late in 1917. In its first form the J7 had no ailerons but the wing tips, rounded on plan were pivoted about a central spar. The radiator was on top of the engine which obscured the Pilot's forward view and an exhaust, large even by German WW1 standards gave the machine a very clumsy appearance. This detracted from the overall conception which was so very advanced for the period.

The J7 first flew in September 1917 but lateral control was poor and the pivoted tips were replaced by small conventional ailerons. These also proved unsatisfactory and the prototype crashed while being flown by Anthony Fokker. However, it was rebuilt and appeared in January 1918 with square cut wings with balanced ailerons. At the same time the radiator was moved to the front of the engine. Finally the front of the wing tips were given a generous radius.

The production aircraft were given the Junkers number J9, the J8 being a two seater developed in parallel with the J7. The military designation was Junk D1 as the 'D' was an abbreviation for Doppeldecker it was officially a biplane! It appears that the letter D was by that time used for fighter aircraft, its original derivation being disregarded. It will be recalled that the Fokker D.VIII started life as the EV.





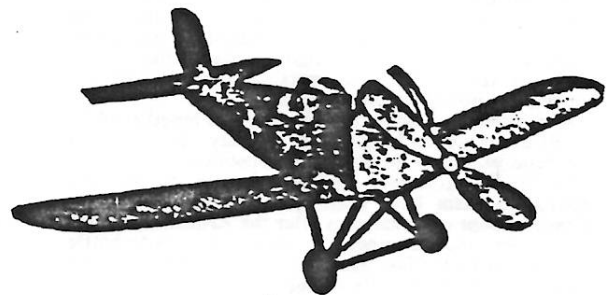
### Stabilizer and Rudder

The stabilizer and rudder are constructed of 1/16" sq. balsa. By cutting the pieces to the required size and gluing them together by using plans as a guide you can have a perfectly constructed tail surface. Cover both sides of the stabilizer and rudder and glue the two black rudder crosses on the rudder.

### Assembling and Flying

Cut away the paper on the side of the fuselage where the wing is glued to it. Use plenty of glue in glueing the wing to the fuselage because there are no wing struts supporting the wing. Next glue the rudder and stabilizer into position. Cut the two fuselage crosses from the plans and glue them to the sides of the fuselage as indicated. The exhaust is made by cutting 1/8" balsa to shape and rounding it with sandpaper. Make a hole in the bottom longerons with a pin. Make a point on the end of the landing gear struts which is 1/8x1/8 and glue them into the holes. Glue a 1/16" sq. axle between the landing gear struts. The axle is just a straight pin. Insert it through the wheels and push it through the balsa axle. Hook up the rubber which is 1 loop of 3/16" rubber between the prop shaft and the rear hook. Glide the plane forward by giving it a gentle push. If it dives bend the end of the stabilizer up. If it stalls, bend it down.

**JUNKERS "DI"**  
**15" FLYING SCALE**  
**MADISON MODEL AIRPLANE Co.**  
**134 LIVINGSTON ST.**  
NEW YORK, N.Y.



*MODIFIED BY ALLAN SCHANZLE*  
*10/84*

JUNKER D-1 CONSTRUCTION NOTES  
Allan Schanzle

As noted in the CLUB NEWS section, this plan came to MAX-FAX via Lou Buffardi, in Slidell, LA. Lou sent the drawing over a year ago, and the primary deterrent to its inclusion prior now has been twofold. First, substantial redrawing was required to remove it from the category I call "Cow Pasture" scale. The original plan from Madison Models would be hard pressed to even pass the concept of FAC Handicapped Representative Scale. And as you know, I'm not big on drawing plans, and no one was willing to redraw the bugger. Hence the delay.

The second reason for procrastinating the use of the Junkers D1 plan was the simulation of a corrugated surface. I refuse to go the Fulton Hungerford route, but I did want something that looked reasonable. Several fancy attempts were tried, but none looked good enough to use. I finally settled on the relatively easy method of drawing pencil lines on a piece of plain 8 1/2 x 11 bond paper, and then smearing them lightly with my finger in one direction perpendicular to the lines. This gives the effect of shading. If you want to save some time drawing lines and have access to a Xerox, Kodak, or other copying machine, draw about 2 inches of lines about 1/32 inch apart parallel to the 11 inch side of the bond paper, and make about 5 copies. Then cut these on the last line and scotch tape them together to give an original page about 8 1/2 x 11.

Now you've got your master, and the next step is to cut tissue about 8 x 10 and scotch tape this to a regular 8 1/2 x 11 piece of paper used to make copies on your Xerox or other machine. It's not necessary to tape around the entire periphery - three small pieces on each side should be sufficient. Put this piece of tissue mounted paper into the copying machine and reproduce your original onto the tissue. Some thought must be given to how you cut the tissue so that the grain is in the proper direction.

Application of the tissue is most easily done with white glue, since dope will dissolve and smear the Xerox toner. However, if you're careful, dope will work. Water shrink in the normal manner and air brush lacquer to seal the tissue and set the toner. Air brush the colors in normal manner. I would conjecture that an interesting effect could be obtained by lightly air brushing a color such as aluminum on the back side of the tissue. This might look reasonable for simulating unpainted corrugated metal finishes.

Choice of wood sizes is left to the builder. I used 1/16 throughout, except for wing ribs 3, 4, and 5, which were 1/32. I also laminated the tail surfaces, wing tips, and wing trailing edge.

Engine detail is not shown on the plans, but check the photo pages. You will also find a detailed drawing of the Mercedes engine by Wylam in "The Best of Wylam", Book 1, published by Model Airplane News.

*cont. from pg. 12.*

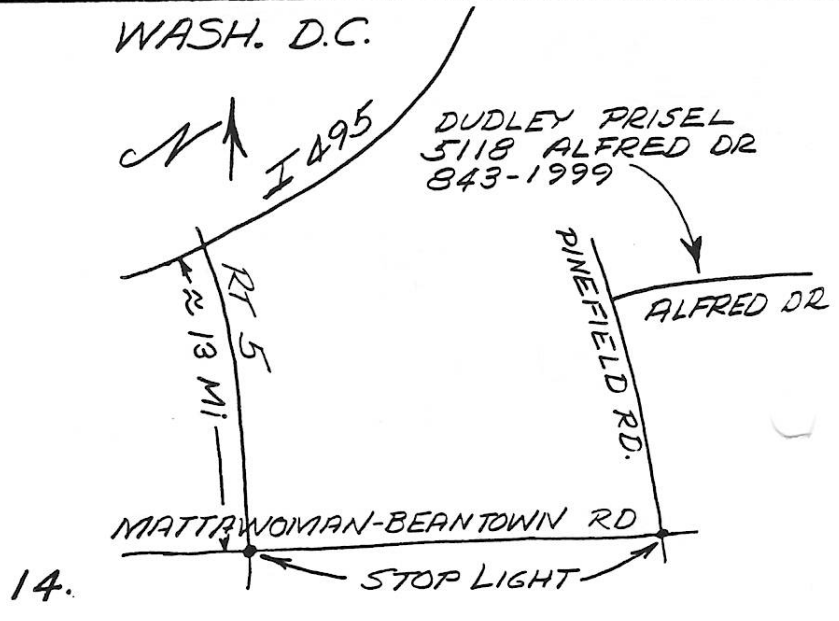
The early production D1s can be distinguished from the J7 by the change in undercarriage design and by the crash pylon which replaced the headrest of the earlier machine. The 185 hp Benz engine replaced the 160 hp Mercedes and the twin gun installation was tidied up; but this did not affect the appearance.

After the initial batch the fuselage was lengthened by 1 ft 9 1/4 in for greater longitudinal stability. About 40 D1s had been produced by the end of hostilities.

As the D1 came into service so late in the war few reports on them have been recorded. Allied officers, inspecting captured examples after the Armistice, appear to have been most impressed by their resistance to battle damage and by the fact that they could be left out in the open without appreciable deterioration.

Both the D1 and the CL1 saw action against the Bolsheviks in Eastern Europe but little is known of their activities in this confused period.

As with most 1914/18 aircraft, various performance figures have been published some crediting the D1 with a top speed of 145 mph which seems unlikely. Its empty weight was 1,439 lbs, and when loaded, 1,840 lbs while the accepted top speed was 119 mph.



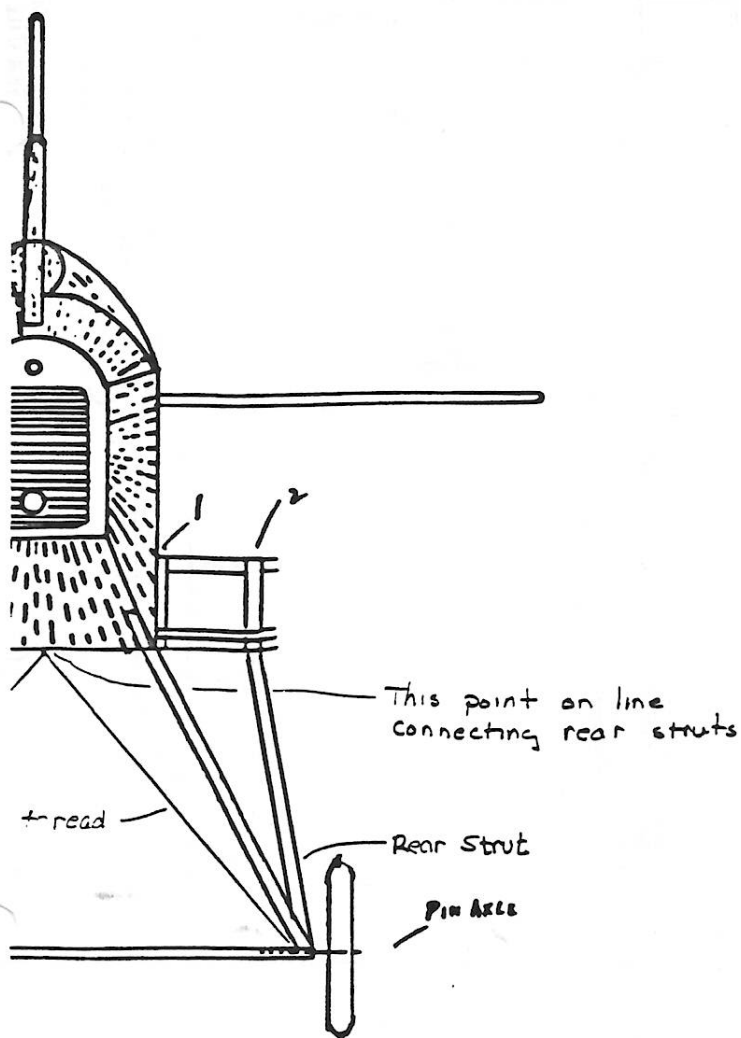
# JUNKERS "D1" 15" Flying Scale

## Fuselage

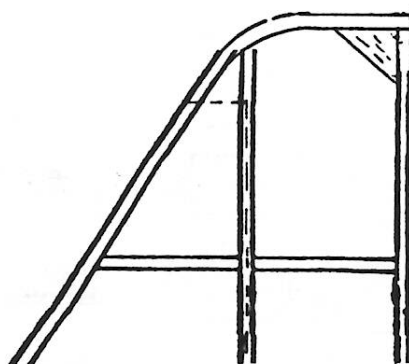
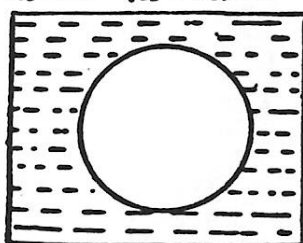
Make two sides of the body by working on the plans. Glue bulkheads on the top of the fuselage in their respective positions. Cross braces are placed on the bottom of it. Make the nose plug from 1/8" sheet balsa. Drill a hole with a pin and glue a washer at each end. The motor cowl is covered with 1/32" sheet balsa. Sandpaper the corners round. Fit the nose plug into position and sandpaper plug and cowl until both are faired together. Cut the cockpit out of 1/32" sheet balsa and make a hole by tracing around a 25¢ coin and cutting out the circle. Glue it between bulkhead C & D. Bend the rear hook and glue it to the rear plug of the fuselage which is stationary. Cover the rest of the fuselage with black tissue, leaving an opening at the rear of the fuselage where the rear hook is, so that the rubber can be hooked up when the plane is assembled. Spray the tissue with water by using an atomizer. Cut out the windshield from celluloid and glue it in front of the cockpit. The head-rest is just a circle of 1/16" balsa with a brace.

## Wing

Cut out the ribs. The wing is made in two halves. Glue the ribs in their respective positions to the center spar. Then glue in the trailing edge. Round off one corner of 1/16" sq. with sandpaper and glue it into the slot of the ribs. The wing tip is made by bending bamboo around the outline and holding its position by using pins. Glue in the tip braces. Cover both wings with white tissue on both sides and spray in the same way as the fuselage. Cut out the 4 wing crosses and glue them on top and bottom of the wing tips as indicated in the plans.



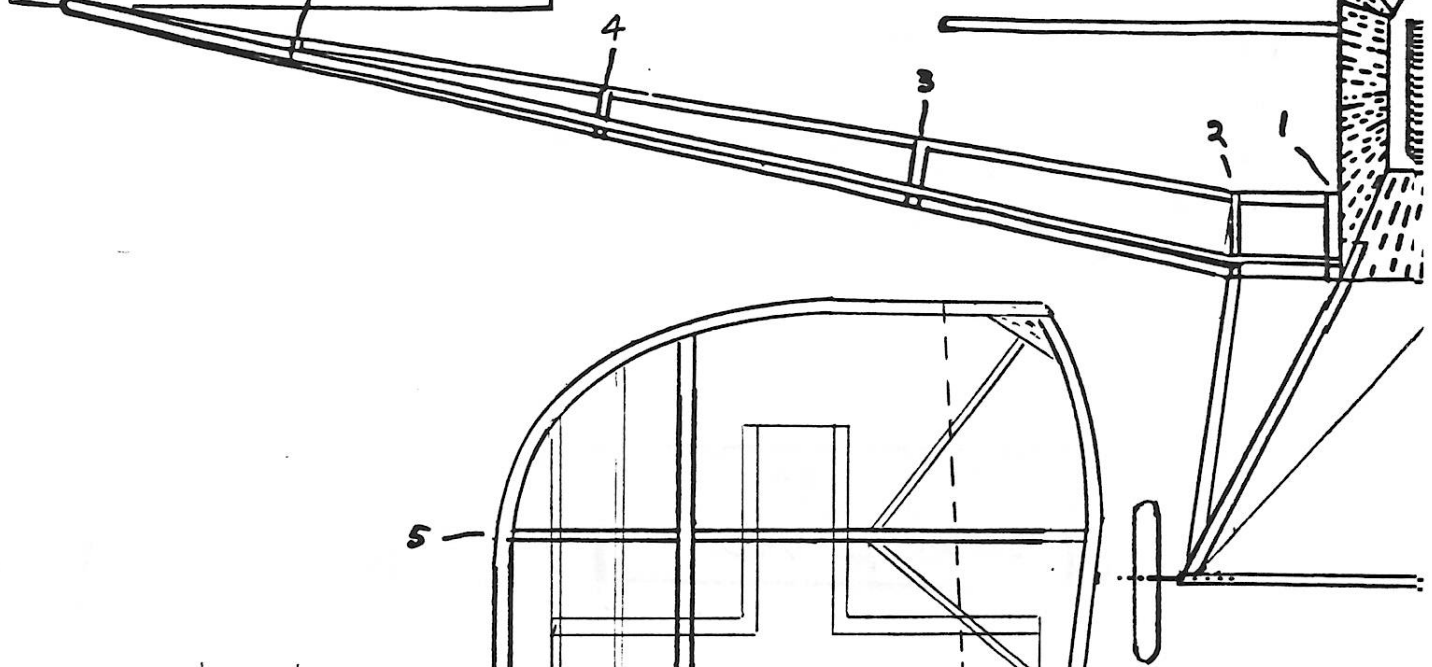
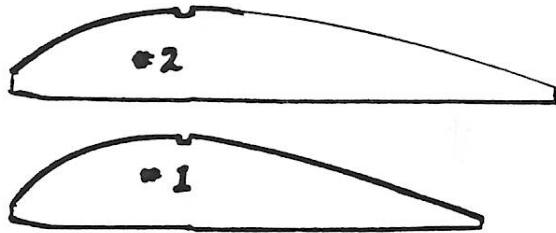
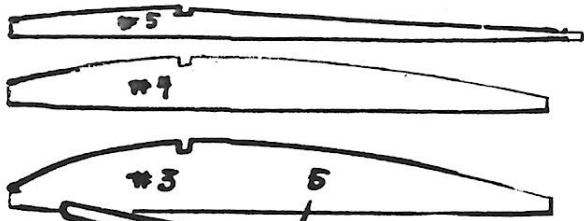
Cockpit 1/32" Sheet Balsa



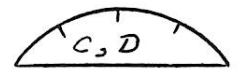
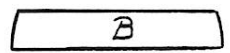
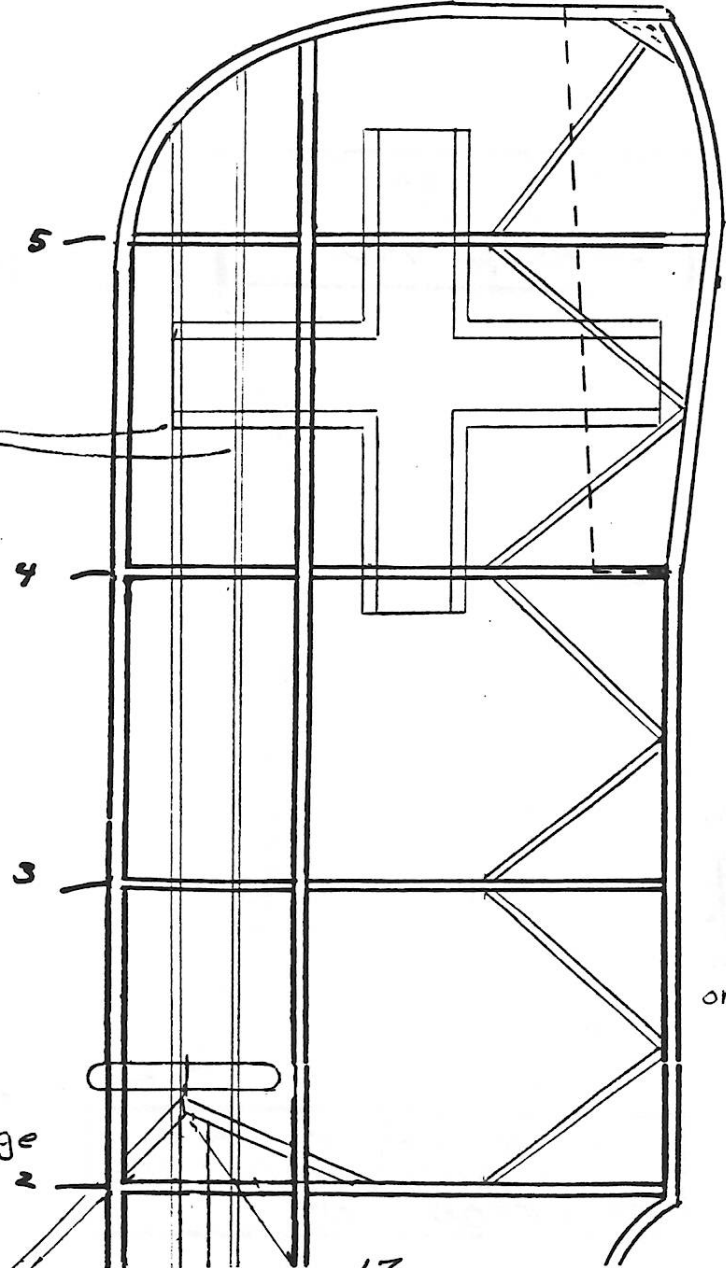




RIBS MAKE 2 OF EACH



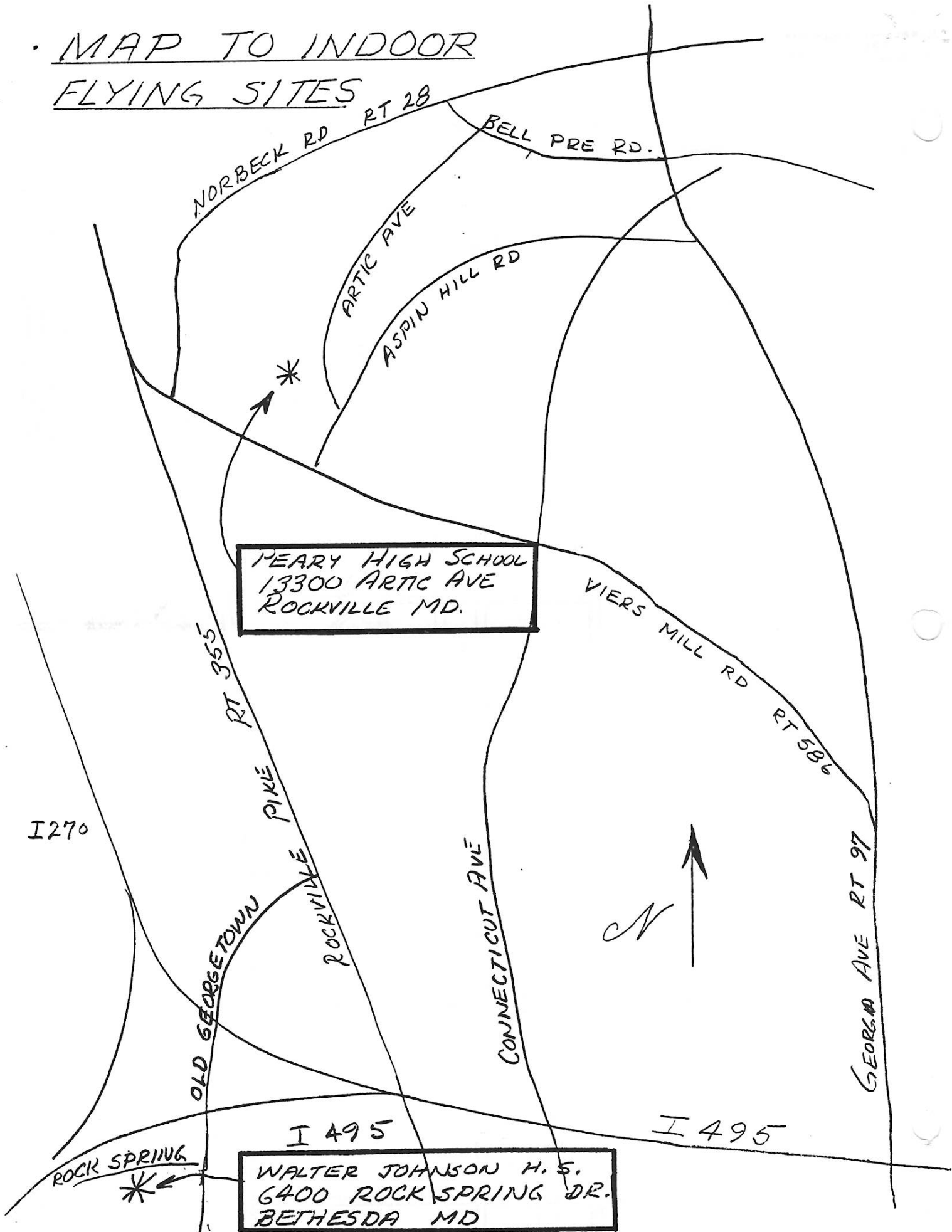
optional spars

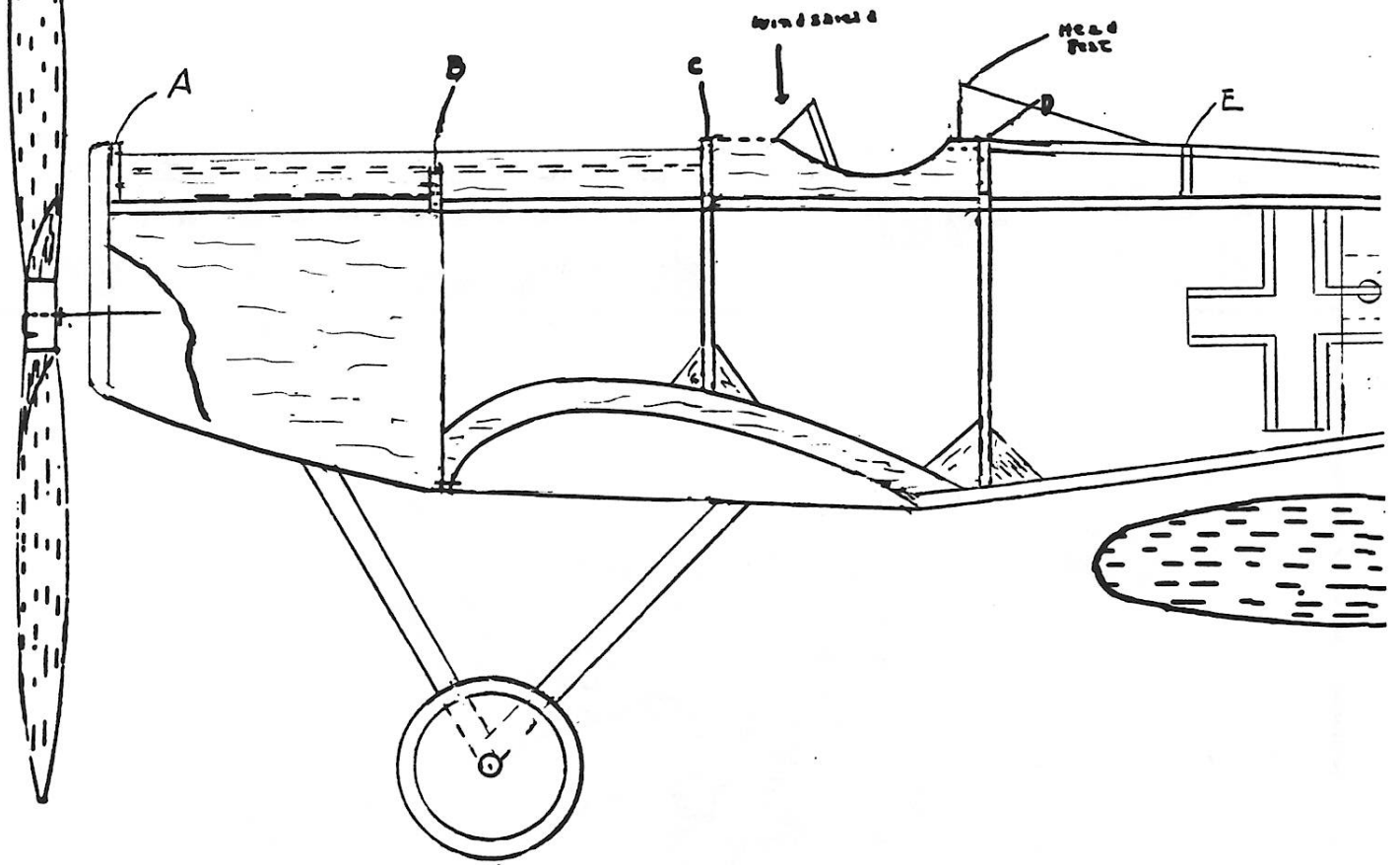
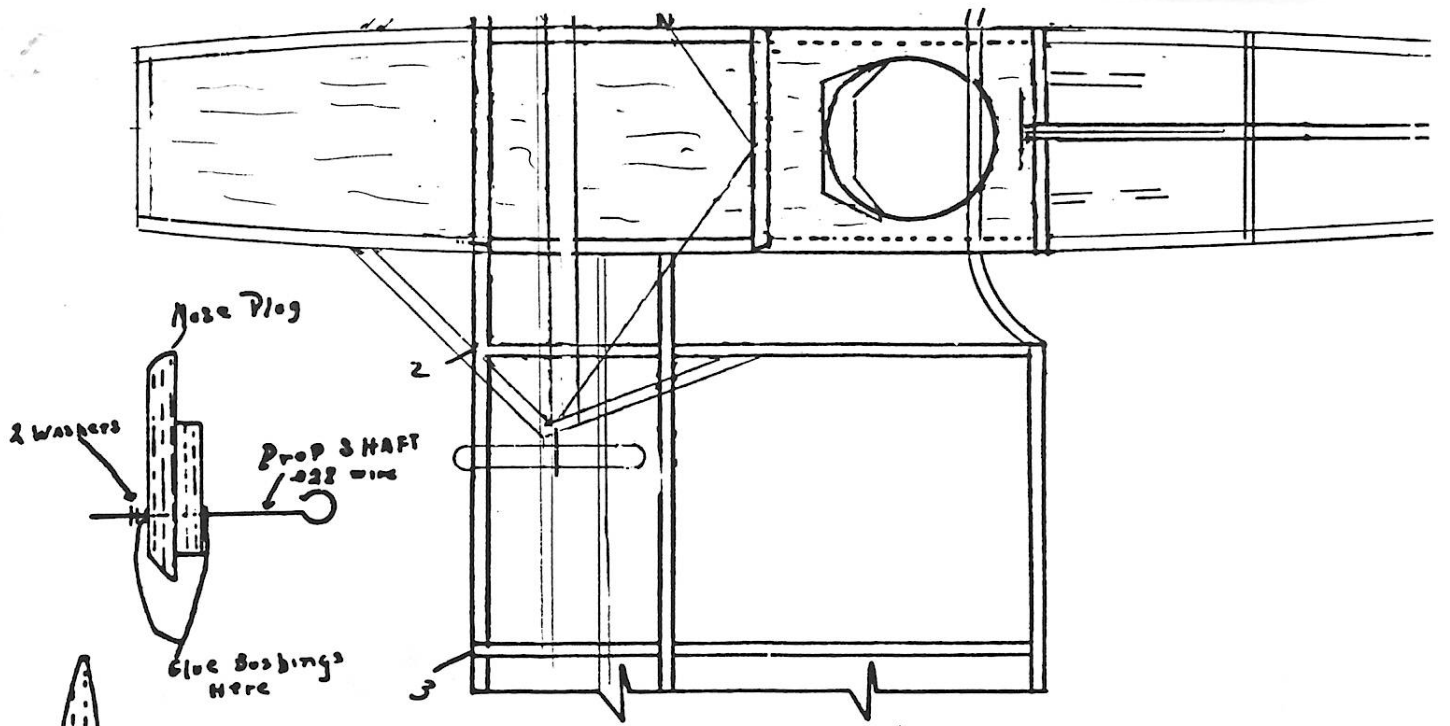


stringer notches  
on D only

See photo page  
for engine  
detail

MAP TO INDOOR  
FLYING SITES





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