

MAX FAX

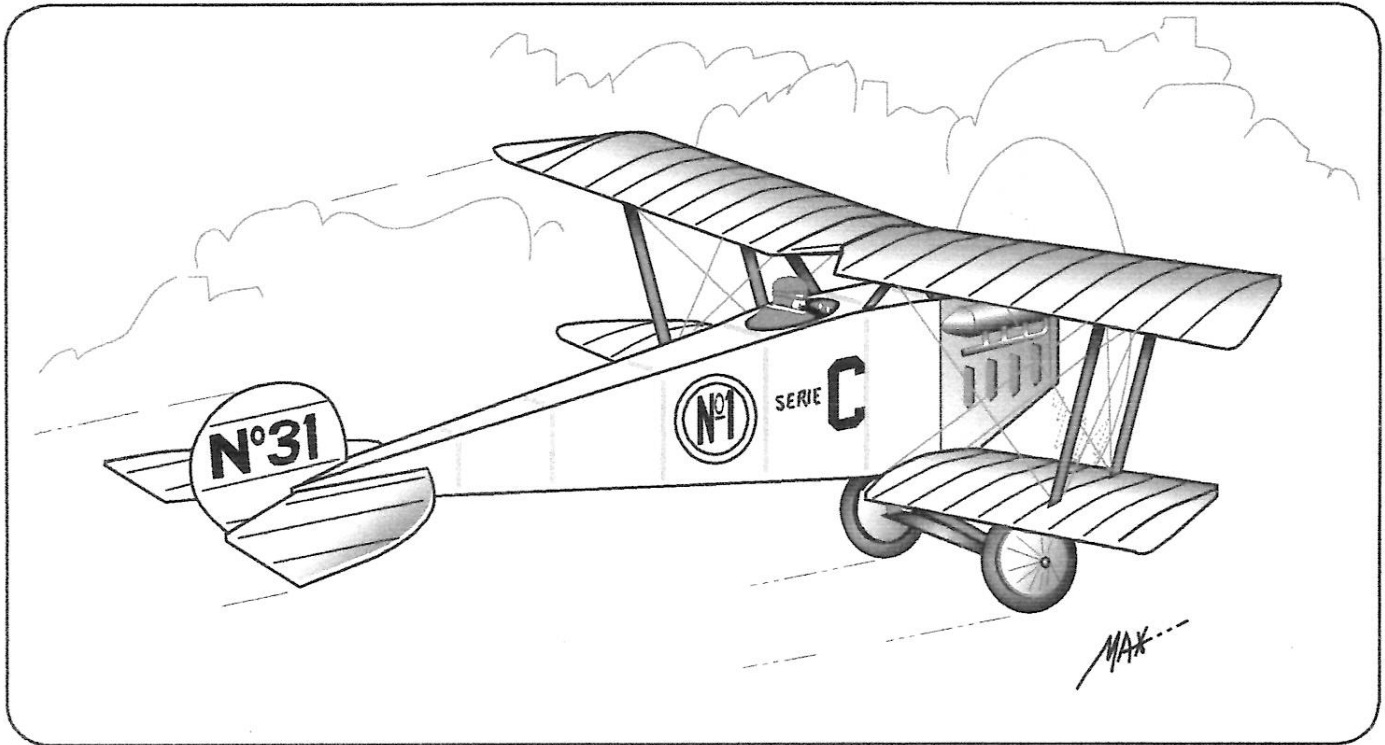


Journal of the D. C. Maxcutters

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

Editor: Stew Meyers

MARCH - APRIL 2002



COMING ATTRACTIONS

- MARCH 2, 2002 MAXCUTTER MEETING AT COLLEGE PARK AIRPORT
Saturday 12:00 Noon -Note change to first Saturday for this meeting.
- MARCH 9, 2002 CUB SCOUT DELTA DART WORKSHOP AT THE NATIONAL BUILDING MUSEUM --
Saturday 10 AM - 1PM *****
- MARCH 24, 2002 CAAMA COLLECTO Sunday Noon to 4:PM
FairfaxCounty Tyson's-Pimmit Regional Library
Contact Jim coffin (703) 256-3865 or Martin Schindler (703) 938-2975
- APRIL 6, 2002 CUB SCOUT DELTA DART WORKSHOP AT THE NATIONAL BUILDING MUSEUM --
Saturday 10 AM - 1PM *****
- APRIL 13, 2002 MAXCUTTER MEETING AT COLLEGE PARK AIRPORT
Saturday 12:00 Noon
- APRIL 14, 2002 F LYING AT THE NATIONAL BUILDING MUSEUM
Sunday 10 AM - 4:30 PM
- APRIL 27-28, 2002 Eastern U.S. Freeflight Championship, e-mail ekerr@hiug.org
- JULY 18-21, 2002 FAC NATS AT GENESEO, NEW YORK
- AUG 25 -30, 2002 SAM CHAMPS AT AMA FIELD, MUNCIE INDIANA
- SEPT 7-8, 2002 FLYING ACES OUTDOOR CHAMPIONSHIPS AT AMA FIELD,
Saturday and Sunday, Muncie, Indiana

****COME HELP AYUMA OTA WITH HIS CUB SCOUTS BUILDING THE FRANK EHLING DESIGNED DELTA DART AND STAY TO FLY AFTERWARDS. AYUMA IS THE MAN ON THE NBM SCENE THAT MAKES OUR SUNDAY FLYING SESSIONS HAPPEN. PLEASE SUPPORT HIM. YOU CAN CONTACT AYUMA BY EMAIL AT AOta@nbm.org



General Dick Dean and 'Bill's Best'

1

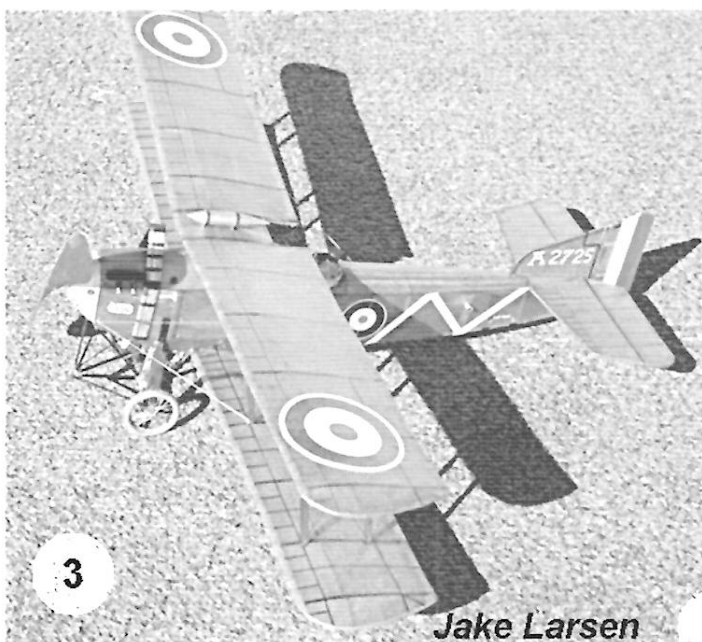


2



Dave Mitchell

4



3

Jake Larsen

2



Phil Cox

5



6

Jiro Sugimoto

Microplano Veloze Issue

Editor: Stew Meyers

This issue features the Microplano Veloze, an obscure Mexican WWI design. We also have a page on the NC-4 that Tom and Bert could not squeeze into the last issue. I answer some "Frequently Asked Questions" about micro R/C equipment. We plug this year's Kudzu special event for Guillow's 18" WWI models, and have the results from the last NBM session. Barry Harrison tells us about the Pico Cub, and a back issue list is included.

The Microplano Veloze has been a favorite of mine since I saw the Joe Wherry design in the August 1950 Model Airplane News. I bought a Campus A-100 for it with my lawn mowing money (I was in Jr. High). Unfortunately the campus did run very well for me – I had trouble with tank sealing. I built it for rubber power in the early 70's coincidentally about the time Walt Mooney came out with his peanut in the September 1973 Model Builder. I had similar experiences to Walt's; it Dutch rolled like crazy. I did have slightly more dihedral than is shown on the plan which did not help. I kept making the rudder larger which helped but never cured the problem completely. I should have reduced the dihedral as well. Burt built the Mooney peanut; his did not wag its tail quite as badly.

A year or so ago Peter Rake published a 400 powered R/C version in the January 2000 Model World. This got my juices flowing again, and I redrew the plan for a 280 powered version with more realistic wings. I cut out the fuselage parts, but never got any further. While I was at it, I came up with a set of 16" plans for rubber which are presented here.

PHOTOS

1. General Dick Dean USMC Ret. succumbed recently to an illness and now flies only in the heavens. The General, as Bill Winter referred to him was a modeling protege of HA Thomas in Little Rock. He has been a friend to many modelers including John Hunton and Bill Winter. His last masterpiece was a copy of Bill Winter's 'Heron' as seen here. Dick thought of that model as "Bill's Best" and so inscribed it on the nose.
2. A good flight photo of Terry Pittman's Besson, one of the plans in the previous MAXFAX.
3. Jake Larsen sent this photo of his 'Big Ack' -- too bad you cannot see it in living color.
4. One of our local MAXECUTERS Dave Mitchell built this great looking Peanut of the Moth using Peck Polymers kit.
5. Phil Cox also builds the larger WWI Guillow models which will be the subject of a future MAXFAX; here is Phil's photo of the Nieuport.
6. Our friend in far off Japan. Jiro Sugimoto, sent this photo of his Peanut Breda, another modeling masterpiece.

Some notes on building the Wherry model-

Stew Meyers

Use 1/32 balsa in lieu of the 1/20 and 1/20 for the 1/16th sheet. Use well plasticized dope. Coat the fuselage parts before assembly so you can sand them flat. You can develop a very strong, flexible, and thin (light) fuselage this way.

I bent the cabines out of music wire as shown, but it took me several tries to get it near right. If I were to do it again, I would make them out of basswood and run them down to a bulkhead as shown on my 16" plan. I vacuformed a set of light wheels. Lindsey Smith has some in this range. Rigging is not shown and I did not use it.

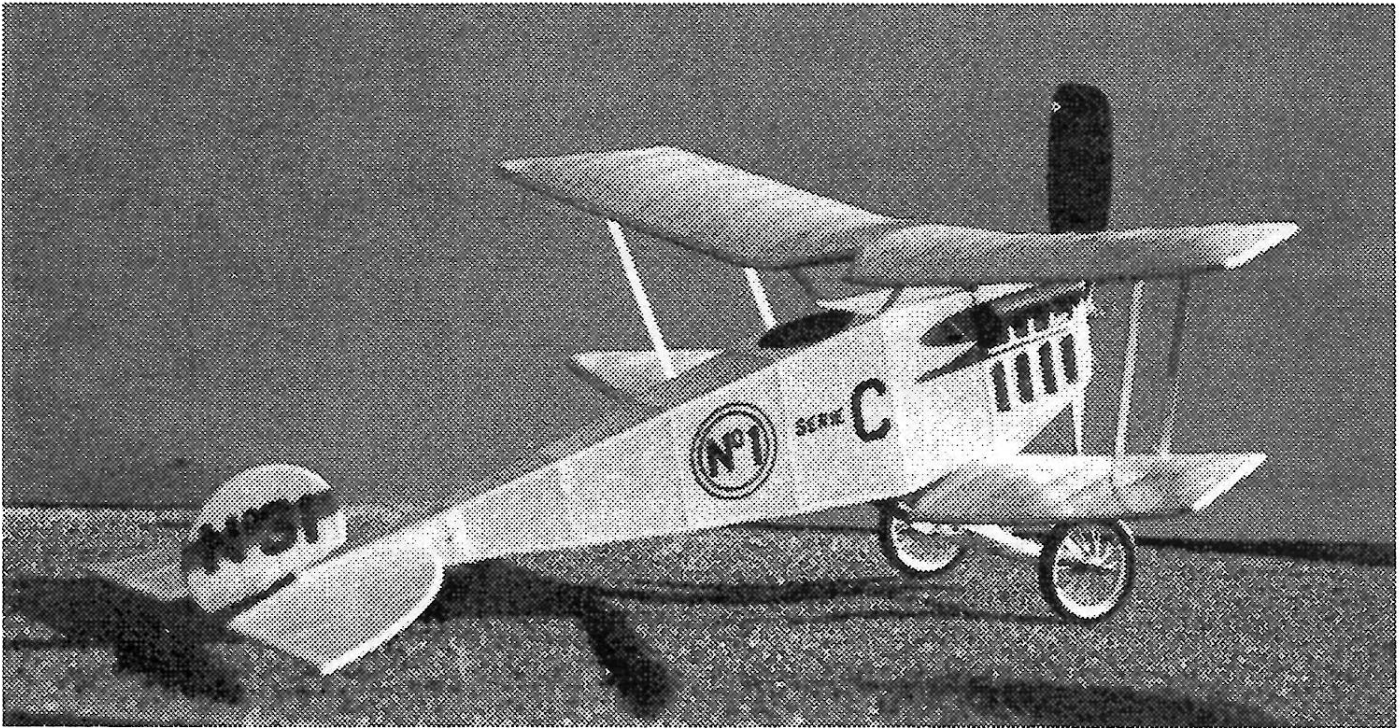
To make mounting the lower wing a little easier, make a 1/6" root rib and glue it to the fuselage where you want the wing to mount. I would use 2 degrees of incidence here and on the top wing. (Rear cabines need to be shorter). Glue the lower wings in place with Ambroid with the undercarriage off so you can easily block up the tips for 1/4" dihedral. I would also use a rib at the dihedral break in the upper wing to maintain the chamber and strengthen the cabine mounting. Glue 3/32 dia paper reinforcing disks at the interplane locations. Use 2 lb. Monofilament pins to mount the struts.

Reinforce the inside of the fuselage sides between former 4 and 5 with 5/8" dia 1/20th sheet balsa disks for the rear motor peg. I cut a 3/4" dia hole in the bottom in this area for ruber access and covered the entire bottom with thin sheet. Tissue covering on this model seemed ascetically displeasing. Obviously former #1 needs to have a hole in it to accommodate a nose block with a fake radiator and real thrust button.

Use jap tissue for the insignia. Spray a stretched sheet of white with acrylic to make opaque white tissue. Of course I prefer the bogus Mexican insignia to the "real" color scheme. I also used a Marlin machine gun in lieu of the Vickers, both equally bogus. Better use one however as well as rigging, if you want to enter this Mexican 'fighter' in WWI combat ;)

Joe Wherry thought the Veloze was a really nifty ship, and Wm. Green says it didn't go into production because of a revolution. But the Allison 3-view from Vol 1 of Hannan's Plans & 3-Views probably has it right. The real air plane undoubtedly was a dog, 1914 technology in 1918 (wing warping and all moving tail surfaces).

The ship however makes an interesting model which can be made to fly well. You will note from the 3-views and photos that there is some disagreement as to whether the rear cabines had the central inverted V. I come down on the side for not using them. I have included a Carlos Godel 3-view as well, which I think better shows the cabines and internal structure. The photo of the real ship originally came from Jane's and was reproduced in Green and Swanborough's book.



MICROPLANO VELOZ by WALT MOONEY

Three-views are nice to have, but in the case of a rare bird, one sometimes must resort to a little calculated fudging in order to produce a set of building plans. Being a fudger from way back, Walt had no difficulties.

Several months ago I purchased a copy of the 1919 issue of *Janes All the Worlds Aircraft*. Like I always do when I get another source of 3-views, I went through it to see if there were any interesting designs for a model or two.

Hola! Que Tal? There was a real interesting airplane. A biplane fighter designed and built in Mexico during the last year of WW I. Now I'd never seen a Mexican biplane from this era, so it immediately took my eye. It was a very simple aircraft to model, with 2 different configuration, while still retaining that vintage look.

Unfortunately there was no 3-view.. but wait a minute! There were good photos, one of them an exact side view, and another of the airplane uncovered, showing lots of detail and all the cross sections. The others give a good look at the wing and tail planform. Also, all the important dimensions are there.

Sooooo, in the best tradition of military intelligence, and with a great deal more to go on than one usually gets for that type of job (many years ago I did a little of this aircraft evaluation for real), I developed the 3-view and the Peanut Scale version shown here. Intentional deviations (also called "premeditated inaccuracies") from scale include the addition of dihedral and an enlarged horizontal tail.

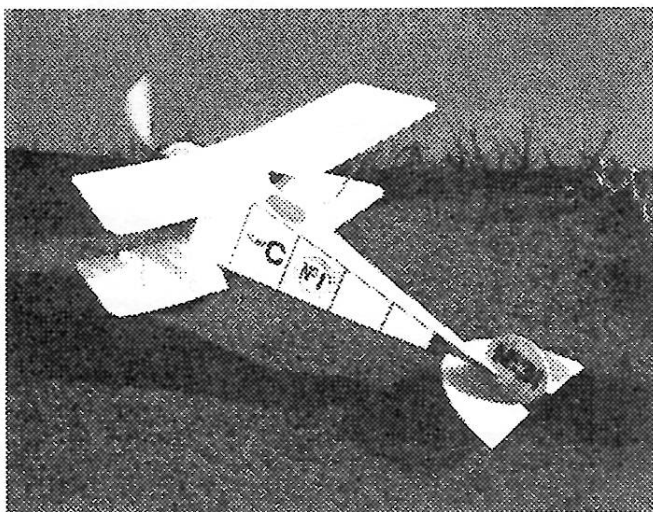
The model is quite easy to build. Its fuselage is simply a square box structure without formers or stringers.

The wings are built using a leading and a trailing edge and ribs between. The horizontal tail is conventional and the vertical is made from sheet. The nose is filled with balsa sheet on the sides and bottom and the top nose uses a thicker piece carved to shape.

It is really the details of this model that make it different and therefore interesting. For instance, the tailskid is made of three pieces as a tripod with its apex towards the ground. The wings have no stagger, that is, they are directly above one another. There are only two interplane struts on each side but the front strut is nearer the fuselage than the rear one. The lower wing leading and trailing edge is actually below the body. The vertical tail is a circular disc with a notch in it to clear the fuselage.



All the struts on the model were cut out of 1/64 inch thick plywood. Hard 1/32 inch sheet will also do, but the Sig plywood works great. The front cabane strut is a "W" in front view. This was assembled over the plans before attaching it to the upper wing. The forward landing gear struts are attached to the lower wing structure and the rear ones are cemented to the fuselage bottom longerons just behind the wing. The wire landing gear is made to lay just along the outside of the forward gear struts. It is not bonded to the struts and is therefore free to flex in a hard landing. Hungerford (FH) wheels were used because they look so good.



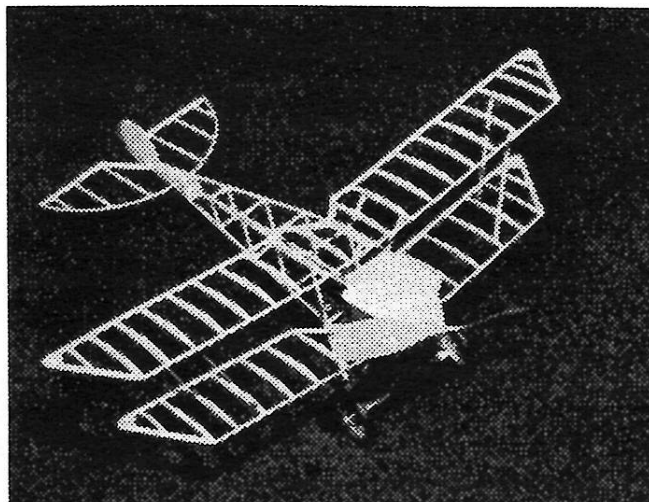
Engine details make the front end worthwhile. Make up the valve covers from scrap balsa. Make the exhaust stacks from aluminum tubing. If the tubing you have is brittle, and kinks or cracks when you try to bend it, anneal it (make it soft so it bends easier). To do this, first light a candle. Now, run the tubing through the candle flame until the tube is completely covered with soot. Let it cool wipe off the soot with a tissue, and proceed to bending. This annealing technique really works, I learned it from watching an experienced metalsmith as he used this technique to a much larger scale in order to form the first aluminum cowl for the prototype Helio Courier, 23 years ago. He used an acetylene torch to soot up the panels and anneal them whenever they got work-hardened by his forming tools.

The propeller used is one of the North Pacific plastic ones, cut to size, and a Peck-Polymers nylon thrust bearing is used in the nose block.

Wings built like my model have a tendency to bow up as the dope shrinks. If this offends you, add a 1/16 inch square spar notched into the top surface of the wings. If your model wallows in flight, consider making a larger vertical tail.

(Bill: The vertical tail has been enlarged from the plans by 1/8 inch in diameter. It is still a little too small. Model Dutch rolls some. I would recommend a rudder 1/4 inch in diameter larger than shown on the plans.)

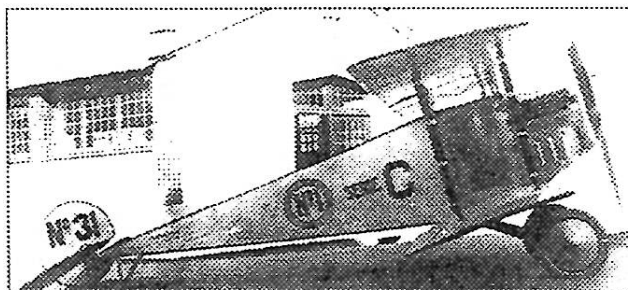
As for the numbers, don't ask me why the fuselage has a No. 1 and the tail has a No. 31. That's what



the photos of the real plane show, so I put it on the model. "And that's the truth!" Bbrrazzzzzzzzzztt!!!!

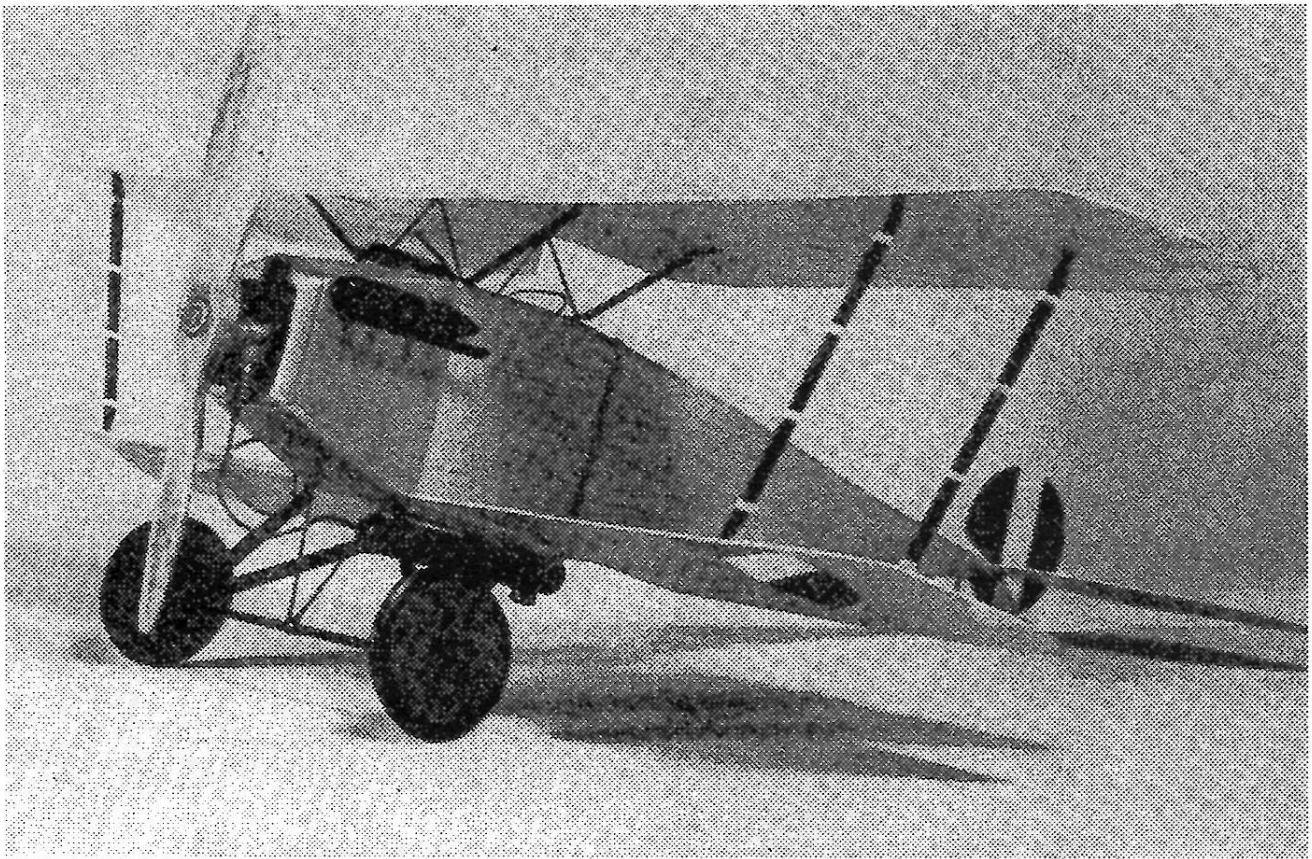
This above from the July 1973 Model builder

*The article below is from
THE GREAT BOOK OF FIGHTERS
Green & Swanborough*



TNCA SERIE C
MICROPLANO

In February 1918, the Talleres Nacionales de Construcciones Aeronauticas (TNCA), or National Aircraft Manufacturing Workshops, at Balbuena Airfield, Mexico City, completed the prototype of a single-seat fighting scout to the designs of Francisco Santarini and Capt Guillermo Villasana. A single-bay unstaggered biplane known as the Microplano, the aircraft was powered by a 180 hp Hispano-Suiza eight-cylinder Veetype water-cooled engine driving a Mexican Anahuac propeller, and was of metal construction. The intended armament was either one or two synchronised machine guns. Although flight trials of the Microplano were allegedly satisfactory, no series production was undertaken owing to the overthrow of the Carranza regime and the ensuing civil war. Max speed, 137 mph (220 km/h). Empty weight, 1,014 lb (460 kg). Loaded weight, 1,433 lb (650 kg). Span, 26 ft 2-1/8 in (8,00m). Length, 21 ft 7-4/5in (6,60m). Height, 8 ft 4-2/5 in (2,55 in). Wing area, 193.76 sqft (18.00m²).



MEXICAN VELOZ

The last two years of World War I found the Allies and the central Powers feverishly building warplanes at a rate that would have been scoffed at as visionary only a few short years earlier. Neutral nations, too, were beginning to assemble military air forces; Norway was experimenting with plywood monocoque construction, Spain was holding military maneuvers complete with supporting aircraft. Even little Siam had a few military pilots (some even served in obscure fashion with the Allies). Latin American nations were seeing in the aeroplane a new means of warfare. Indeed, before the 1914-18 war, a revolutionary pilot had pulled off a one-plane bombing raid, and the plane he flew was an American-built craft— but that's another story.

The above does serve as background, however, for the flying scale model we are featuring herewith. Yes, Mexico, too, was building the nucleus of an air force. It was in February, 1918, that a trim single-seater biplane rolled from the government-owned Military Aviation Factory. Somewhat resembling early Fokker designs, namely the D.I and D.II, this aircraft, the *Microplano Veloz*, was fitted with a 150 hp Hispano-Suiza engine. The pioneering designers were Senor Santarini and Captain Villasana. The latter was Chief of the Technical Department of the M.A.F. and an officer of the Mexican Army. The ship developed a ground level speed of around 120 mph.

The *Microplano Veloz* caught the writer's eye for several reasons: first, it's an obscure type and he was bored with too many models of well known

planes; secondly, authentic records credit it with being an extremely able aircraft (probably the equal of most, and the superior of some U. S. designs of that period); and lastly, this plane materialized in C02 powered flying scale form because its proportions make it a natural for realistic flights. Take it from an old-timer, there's nothing quite like a scale model of a biplane for realism. Try this model and be convinced. Construction is very simple, the only unusual feature being the staggered position of the inter-plane struts.

The principal material required is a generous supply of even grained, medium weight 1/20" sheet balsa, a small amount of 1/16" sheet balsa, and the usual scraps found on any modeler's work table.

First make templates of the fuselage side, top left and bottom left wing panels (these, of course, can be used for right side also), center section, and the bulkheads. Cut two of bulkhead No. 1 from 1/8" sheet balsa. Cut the opening shown in front view from one layer only to accommodate the *Campus* C02 engine. Remaining bulkheads are cut from 1/16" sheet balsa. Cement bulkheads 2, 3, and 4 between fuselage sides (the latter may be marked lightly with lead pencil so that bulkheads may be accurately inserted). Take care to have sides accurately aligned. Next, cement nose bulkhead in place, and when dry cement remaining bulkheads in place. Note that the rear of fuselage culminates in a sharp point with no rudder post or other common constructional feature.

The fuselage may just as well be completed at this time, by inserting the

by **JOSEPH H. WHERRY**

1/16" x 1/4" crosspiece seen just at trailing edge of bottom wing in the side view, and by covering the top with 1/20" sheet (grain running from side to side). Cover fuselage bottom with sheeting also, to the point indicated on the side view. The nose (or No. 1) bulkhead may now be lightly carved and sanded to conform with side view, and the cylinder banks and exhaust assemblies may be added to each side. (The writer found it more simple and quicker to assemble each exhaust unit separately and to dope them black before cementing in place.) You may even sand the entire fuselage at this time; then apply two coats of plasticized clear dope, finishing off with several coats of aluminum dope from bulkhead No. 2 forward as shown in the accompanying photograph.

Drill small holes (see top view) to receive the center section struts which are made (both of them) by bending a single piece of .010 steel wire. Streamline these struts with 1/8" wide strips of 1/20" sheet balsa. Cement the struts in place, checking side view carefully.

Now bend two landing gear struts as shown from .020 steel wire. These, too, are faired with balsa, streamlined and cemented in place to the inside of fuselage sides with due reference to drawing front and side views. Complete fuselage, if you have not already done so, by covering the bottom of same aft of bulkhead No. 6 with sheet balsa, and the remainder with white tissue or *Silkspan*. Water-spray the latter; then give two coats of clear dope.

Take your time with the wings; weight can be saved by duplicating the following procedure. Lightly sand the 1/20" sheet balsa and then cut the two left, two right, and center section panels. Steam each panel separately and work the proper camber into it with fingers. Rub in thinned clear dope with thumb and forefinger, working each side of each individual wing panel at the same time. This method will enable one, if care is exercised, to retain the airfoil camber without need of unsightly ribs. Two coats of dope should be applied in this manner. The camber is clearly shown in accompanying photo of author's model. Allow doped wings to dry for at least an hour, checking them often; should the camber tend to flatten, mold with the fingers. Perseverance will pay off at this point with good looks and fine flights later.

Cut notch in rear of fuselage for the elevators and install same at zero degrees incidence after they have been cut (in one piece), lightly sanded, and doped. Here again, as well as on the rudder, dope with thinned clear dope by rubbing gently between fingers. Cement rudder in place after insignia of red, white, and green strips of tissue have been doped in place (note color code on drawings).

The writer took several hours out at this point to paint the insignia (modern Mexican insignia has changed—use the old type as shown for authenticity) on the wings and rudder; however, should you feel unable to do so, use cut-to-shape bits of colored tissue; place on wings at both tips, on top surface of top wing and beneath bottom wings.

By this time the landing gear struts should be secure, so complete landing gear with a 1/16" pine spreader bar and the upright "V" which is bent from .020 wire, cemented in place at the fuselage and bound and cemented to spreader bar. Wheels may be purchased; however, the ones illustrated were handmade with light aluminum discs. Install

with appropriate small washers on an .020 steel wire axle which is bound and cemented to the center of the spreader bar. Note that the shock absorbing system, thus automatically provided, is much like those used on many real aircraft (this *Microplano Veloz* included) during the early days of aviation.

Wings, beginning with the center section, are now ready to be attached. Note that the points of strut-attachment are indicated on plans by dots surrounded by small circles. First attach the center section. If your work has been accurate (and later flights will prove or disprove your craftsmanship), the center section will be *without* incidence. Next attach both panels of bottom wing. Block fuselage in place on your bench, and raise both wingtips 1/4" for dihedral. The interplane struts are 1/16" x 3/16" strips of pine which have been sanded to streamlined cross section. Note that these struts are raked away at each end, following the old practice (which was, in fact, necessitated by the somewhat primitive construction and the maze of connecting wires). Cement two interplane struts to top of each bottom wing panel in places indicated on plans. Notice that the forward struts are about 1/2" inboard of the rear struts—the one outstandingly unusual characteristic of the Mexican *Microplano Vek,z* pursuit plane. Struts splay outward slightly, about 1/2", then block the struts in place while they dry. Cement each top wing panel in place, block well, and allow to dry for one hour. Completion is near at hand; bend tailskid from .010 wire and cement in place. Fix the *Campus A, 100 C02* engine securely in place and hold the tank in position by means of a rubber band around the fuselage. This method of tank attachment allows the tank to be shifted fore and aft for correct flight balance; moreover, the entire engine and tank may be quickly and easily removed for installation in another model without any structural repairs or inconveniences.

A windshield will add detail as will mahogany-doped struts, black landing gear and tires, tailskid and radiator. The writer went so far as to install a Vickers machine gun forward and along the right side of the fuselage, though he was unable to determine whether or not any *Microplano* originals were so armed.

Follow the usual precautions when testing and flying this little model. Construction of the ship shown occupied three evenings, or to be more exact—three consecutive nights from 8 p.m. until close to breakfast time the following morning. The time spent, however, was well worth the effort for the result is the model shown—an unusual scale model if ever there was one. Flights are excellent, the plane less the engine weighing only 3/4 oz.

The Mexican *Microplano Veloz* was an extremely good ship for its day, yet it is virtually unknown now, a plane seen only in the oldest of source books until brought forth in the accompanying simply built and fine flying scale model. Incidentally, rubber power may be used equally as well as C02 power, and the lightness of the model will assure you a beautiful "floater."

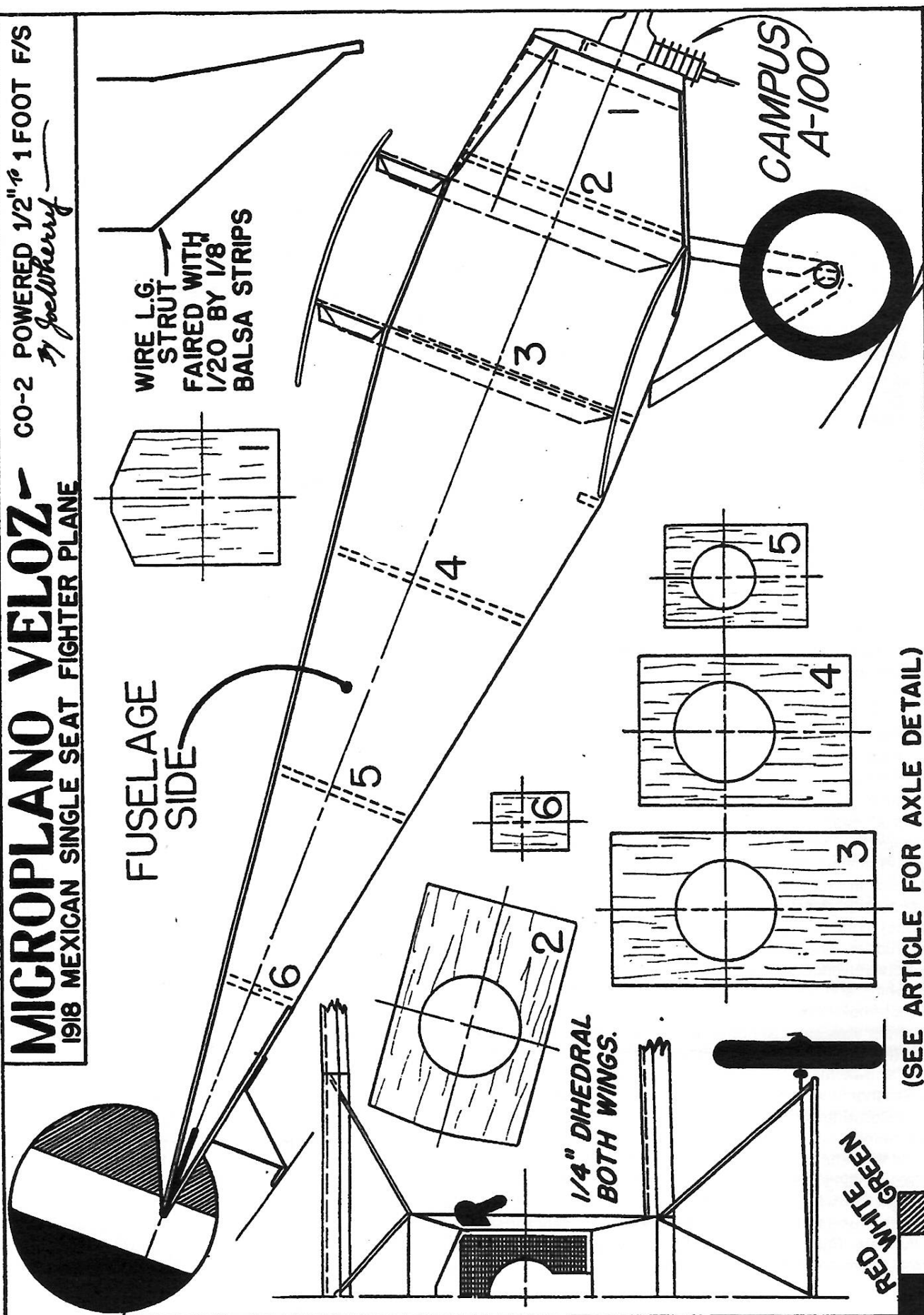
You midget gas bugs (those with 1/2 A engines) might double the size of these plans—you'd then have a fine free-fighter and one that would attract attention wherever flown.

Cheerio and the best of flights to you with the *Microplano Veloz*. (*August 1950 Model Airplane News*)

MICROPLANO VELOZ

1918 MEXICAN SINGLE SEAT FIGHTER PLANE

CO-2 POWERED 1/2" 1 FOOT F/S
J. Jellberry



FUSELAGE
SIDE

WIRE L.G.
STRUT
FAIRED WITH
1/20" BY 1/8"
BALSA STRIPS

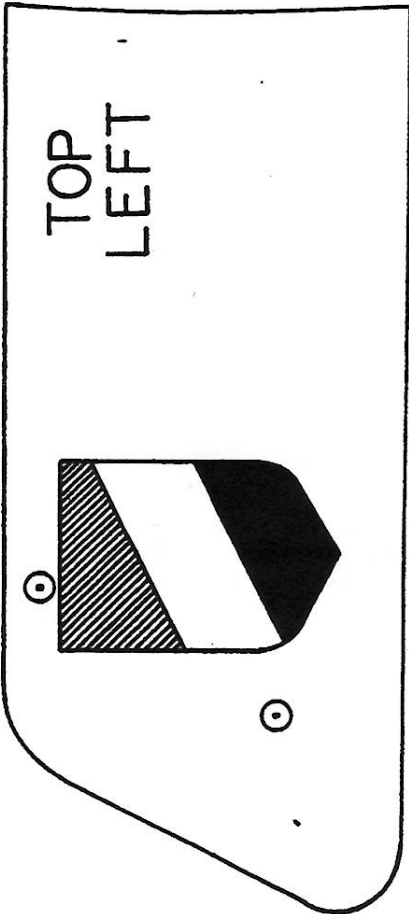
CAMPUS
A-100

1/4" DIHEDRAL
BOTH WINGS.

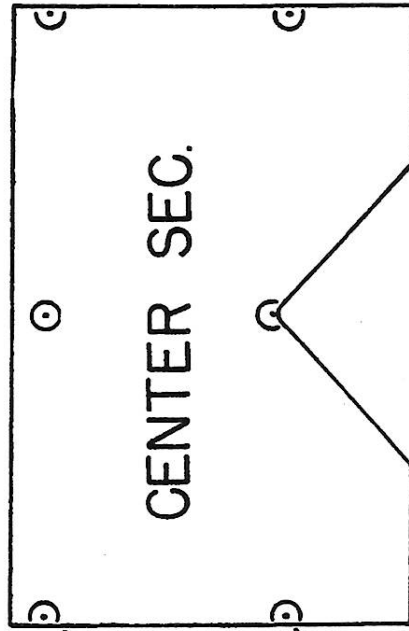
RED
WHITE
GREEN

(SEE ARTICLE FOR AXLE DETAIL)

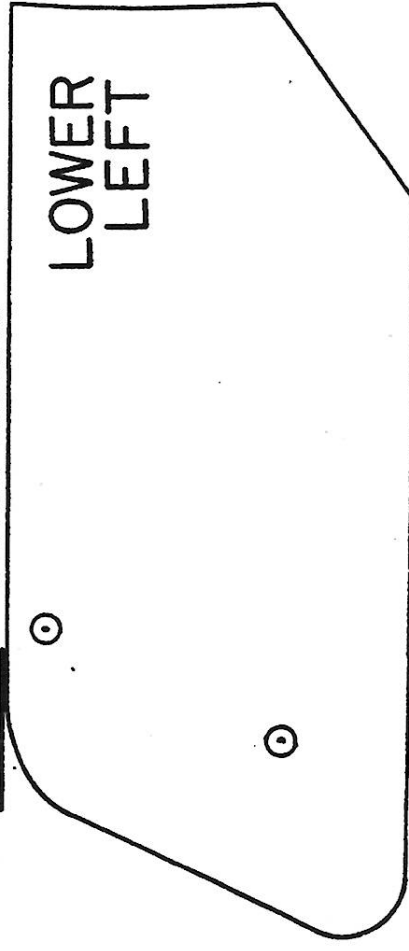
WINGS, FUS. SIDES, & EMPENAGE ARE OF 1/20" SHEET Balsa. WIRE PARTS .020" STEEL WIRE.



EARLY MEXICAN INSIGNIA SHOWN.



CENTER SEC.

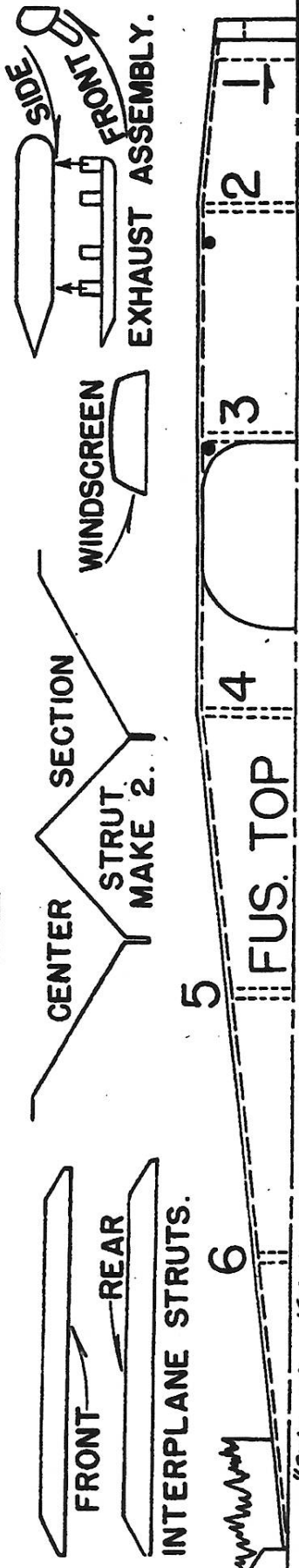


LOWER LEFT

⊙ INDICATES STRUT POSITIONS.

LEFT HALF ELEV.

TOP



"Microplane-Kelly" M.K.

This page has information that did not make it into the last issue.

Make the Trans-Atlantic NC-4

For a flying model only the two out-board propellers of our NC-4 are powered. These are carved-- one left hand and one right hand-- from blocks of 5/8" by 7/8" by 4-3/8" medium balsa. Under-camber the rear faces about 3/32" and balance perfectly. Brush on several coats of dope to toughen the surface.

The center motor props of scale diameter-- one at the front and one at the rear of the nacelle-- are mounted on pins, permitting them to spin freely during flight.

Form the propeller shafts from 4" lengths of .028 piano wire. Slip them through the drilled nacelles and embed and cement them in the hub. Insert a couple of washers between the props and the front bearings. The rear hooks are also bent of .028 wire. Glue them solidly to the upper stabilizer's leading edge. Though it is unnecessary to rig the brace wires in the wings for a flying model, it must be done in the tail booms to help absorb the pull of the rubber motors. A drop of glue is applied wherever the light grey silk threads contact the framework.

Details and Flying

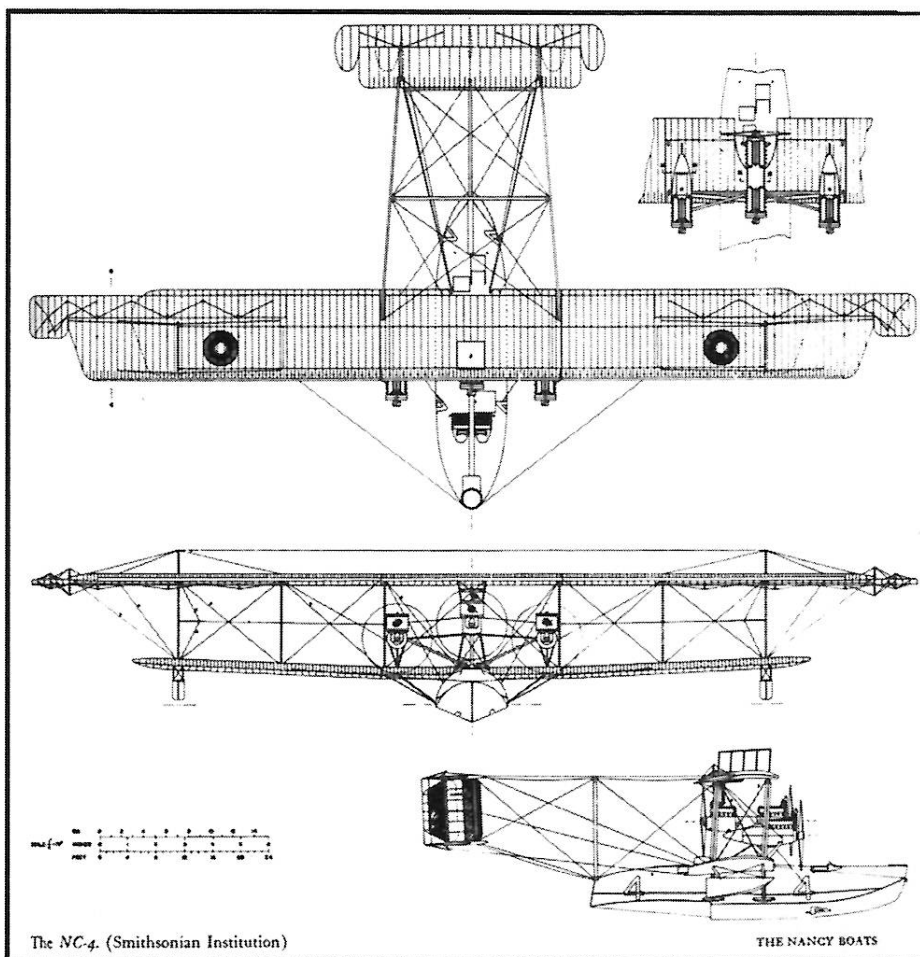
Short lengths of 1/8" diam. balsa are cut and cemented to the top of the nacelle. to simulate the fourteen cylinder Liberty motors. They may be painted black with India Ink or dope. Exhaust pipes are made from 1/16 diam. aluminum tubing or reed. Radiators, cockpits, control positions, etc., can be detailed with India ink and ruling pen.

White numerals may be painted direct or cut from paper doped onto the hull. Strips of red and blue tissue are doped onto the rudders for the Official U.S. Navy insignia. And now your NC-4 is ready to be motored.

Four strands of 1/8" flat lubricated rubber are used for power. Before flying, check the balance of your NC-4. It should balance level 1-1/4" from the leading edge of the upper wing. Add a little clay ballast inside the front of the hull if necessary reaching inside the cockpit to do so.

Since this ship has no landing gear, select a grassy plot to prevent scraping the hull. Glide the model gently, making minor adjustments by warping the elevators down slightly if the tendency is to stall or *vice versa* for too steep a glide.

Set the center rudder to circle the ship in the desired direction. After a few hand launched



check-flights, increase the number of turns, set your NC-4 on the water-- and watch her lift into the air. If you have a body of water "bigger than a mud puddle" to fly from, the best fun of all-- a landing on the water-- is in store for you. But keep your feet dry!

THE BABY IN THE JAN/FEB 2002 MAXFAX

Some additional information should clarify the Blackburn 'Baby' plan in the previous MAXFAX. The 'Baby' aircraft was designed by Sopwith and was derived from the Sopwith Schneider aircraft. Many of the 'Babys' were also built by the Blackburn Company as shown on the plan in that issue. Several design changes were made along the way. They were also built by Fairey and known as the 'Fairey -Hamble Baby'. This latter 'Baby' was redesigned considerably with new wing tip plan forms. Additionally Ansaldo built a number of 'Babys' with more changes.

National Building Museum

Jan. 13, 2002

Russ Sandusky

To kick off the New Year at the National Building Museum we had the largest turn out of flyers ever. Interestingly the number of competitors was down. Randy Kleinert brought a contingent of RC Gliders pilots. Two of Randy's Rangers did very well in the Butterfly event. As usual Steve Fujikawa put up the best time for the day with his new NoCal Cassutt Racer. Bruce Foster, my friend from New Jersey, came down. Ed Zaposki won both NoCal WWII European and Pacific there by becoming our Ace of Aces. A huge crowd was on hand to ooh! and aah! the flights. They also applauded the winners of each Mass Launch! How about that FAC headquarters.

We also had Electric RC at the other end of this huge building, no contest just plain fun flying.

Hats off to our host Ota Ayuma.

Come to our next session on Apr 14th!

Timed Events: (unlimited attempts, total of best three flights)

ButterFly 3 contestants

1. Al Renzis 8:33
2. Don Vetter 7:40
3. Steve Fujikawa 6:31

NoCal 6.5 grams, 7 contestants

1. Steve Fujikawa/Cassutt 10:05
best flight 4:13
2. Rich Gillis/Mong Sport 3:49
3. Al Flesher/P-51D 2:28

Bostonian 2 contestants

1. Steve Fujikawa/Patriot 5:47
2. Rich Gillis/Citabria 3:41

Mass Launch Events:

WWII NoCal European, 3 contestants

1. Ed Zaposki BP Defiant
2. Dan Driscoll FW-190A
3. Barry Harrison FW-190A

WWII NoCal Pacific 3 contestants

1. Ed Zaposki Hellcat
2. Barry Harrison Buffalo
3. Doug Gregs Zero

ACE of ACES - Ed Zaposki

Bogus Bostonian, 4 contestants

1. Rich Gillis/Citabria
2. Dan Driscoll/Robin
3. Ed Zaposki/Monocoup

Ten Centers, 5 contestants

1. Rich Gillis/Howard
2. Burt Phillips/Cessna C-34
(where did he come from)
3. Bill Bell/Fairchild 24C8a

Golden Age 5 contestants

1. Burt Phillips/Cessnac-34
2. Ed Zaposki/Vega
3. Bill Bell/Fairchild 24c8a

Peanut Low Wing 4 contestants

1. Bruce Foster/Arrow Sport
2. Bill Bell/Heath
3. Ed Zaposki/BD3

Peanut High Wing, 3 contestants

1. Rich Gillis/Cougar
2. Ed Zaposki/Ryan M-2
3. Dan Driscoll/Ord-Hume

WWI, 3 contestants

1. Dan Driscoll/Bristol
2. Bruce Foster/Fokker D-VII
3. Ed Zaposki/DH-6

Dart (JR-SR) 5 contestants

1. David Wenzel
2. Dan Griggs
3. Mat Marchese

Dart (Old Guys) 4 contestants

1. Keith McConnelly
2. Ed Zaposki
3. Steve Zaposki

Building notes 16" Veloze

Stew Meyers

This model has several slightly unusual features. The fuselage forward of the cockpit is parallel sided, but the rear longerons taper to a point. In order to provide a modicum of structure back here, fit triangular sheet pieces on the top and bottom as well as the sides. Glue up the forward parallel section with the forward bulkhead and cabine formers with the cabins installed. Then crack the longeons and bring them together at a point. Add the thin triangular top and bottom rear gussets, then gusset the front ends of the longerons horizontally and vertically.

The lower wing mounts with staple wire shear pins. Tissue tubes (0.02 ID) are glued in the fuselage where indicated. The rear pin is glued in the wing and the wing is mounted in position on the fuselage. The forward mount is then match drilled with a pin through the forward tube into the wing. The wing is removed and a staple wire pin is glued in the hole just drilled.

The upper wing is simply glued to the top of the cabins. Since it is squarely in line with the lower wing it is easy to line up with out jiggling. (Continued below V)

The interplane struts are hard balsa with monofilament pin attachments.

The stab has a 0.02 ID tissue tube on the front of the spar. A short length of 0.020 music wire is carefully cyanoed horizontally to the aft fuselage to provide a mount for the stab. Lightly tack glue the stab in place until it's trimmed then firmly glue in place. The rudder is held on with a thin (0.010) piece of soft aluminum sheet. (A piece of aluminum tape doubled over.) Once the trim is set up, a drop of Ambroid will hold the setting.

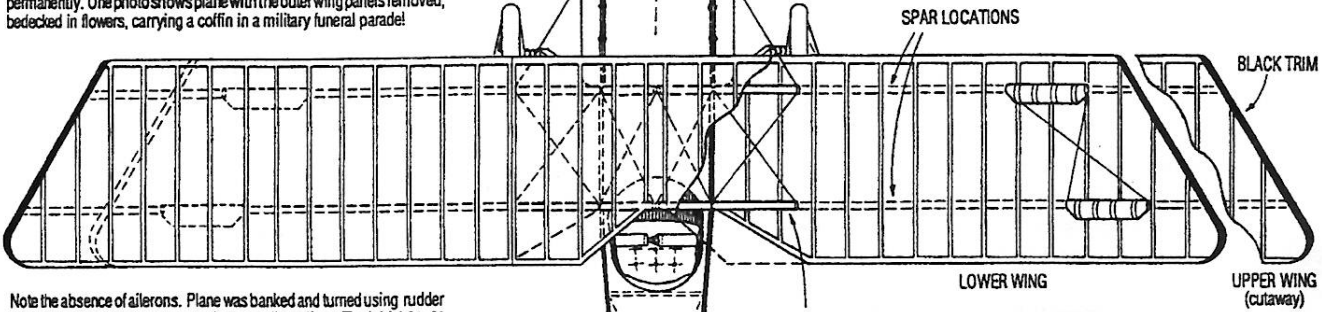
The under carriage is built from bass wood with soft wire pins to join it to the fuselage. True lengths are shown on the plans. This is built as an assembly and then the ply strips are glued to the formers. Use 1.5" vacu-formed wheels. Spring these by fastening the 1/32" dia. axle only at the central inverted V. The tail skid tripod is best bent from 0.015 music wire and faired with balsa.

The nose has 1/32 sheet on the top and a 1/16th sheet insert on the bottom. Engine details can be gleaned from the 3-views. For combat, use the Mexican insignia from the Wherry plan. Be sure to add a pilot and arm him with the maxim gun shown. Rigging should be added per the 3-views.

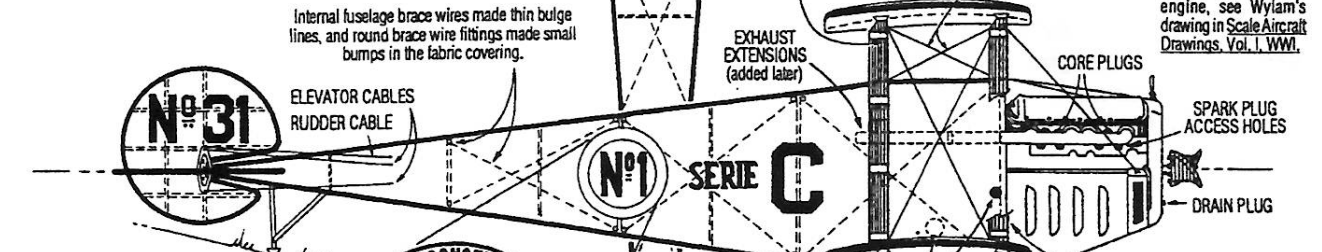
Go get 'em with your Veloze! Documentation? We don't need no stinking documentation!

Only one aircraft of this type was constructed. Except for spars, ribs and strut fairings, entire aircraft was steel tubing, a construction seldom used in her day. The airplane suffered many modifications (separate elevator surfaces, dihedral changes, a different upper wingroot cutout, exhaust extensions, even a radial engine was tried) all to no avail. Flight characteristics were still considered dangerous, and the aircraft was grounded permanently. One photo shows plane with the outer wing panels removed, bedecked in flowers, carrying a coffin in a military funeral parade!

Grateful acknowledgement to Ed Leiser, G. James Alaback, Sr. Francisco Garcia Palomino, Bill Hannan, and special thanks to Sr. Enrique Velasco Padilla for "aero-archeological" digging! Respectfully dedicated to the memory of Walt Mooney, whose pistachio scale version appears in *Peanuts & Pistachios*, Vol. 5.



Note the absence of ailerons. Plane was banked and turned using rudder and wing dihedral to create a yaw/roll coupling effect. The initial 0°, 0° dihedral proved to be inadequate.

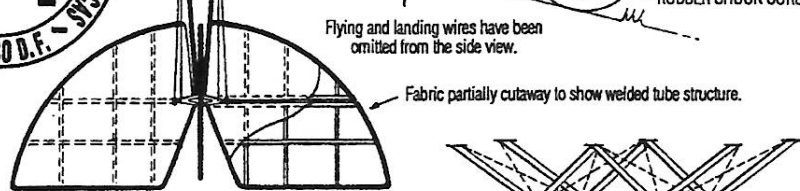


Circular insignia is in the same position on the left and right side of fuselage. "SERIE" and "C" exchange positions on the left side of fuselage. "No. 31" reads front to rear on the left side of the rudder.

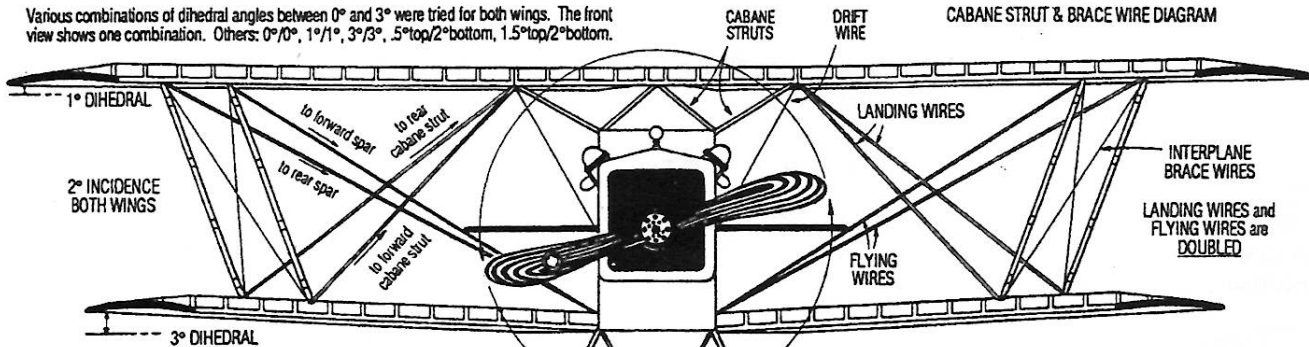
"TALLERES NACIONALES DE CONSTRUCCIONES AERONAUTICAS" translates: "National factories of aeronautic construction."



"All moving" horizontal and vertical stabilizers originally. Excessive sensitivity in pitch required a change to a separate, hinged elevator (shown on the right). Apparently, it didn't solve the problem.



Various combinations of dihedral angles between 0° and 3° were tried for both wings. The front view shows one combination. Others: 0°/0°, 1°/1°, 3°/3°, .5°top/2°bottom, 1.5°top/2°bottom.



COLORS: Overall: silver (aluminum) paint. Insignia, numbers, rear fuselage corner trim, empennage edges, wing tips, and tail skid: black. Interplane strut fairings and landing gear strut fairings: varnished mahogany. Metal bands on interplane struts, shock strut ends and radiator edges: shiny metal color (brass?). Radiator screen, tires: dark gray. Valve covers, prop boss & nuts: shiny steel color. Exhausts: heat-darkened steel color.

TECHNICAL DATA:

Single seat, scout/flighter biplane	
Upper wingspan	8.00 meters
Lower wingspan	6.88 meters
Surface area	18 square meters
Interplane gap	1.5 meters
Overall length	6.6 meters
Maximum height	2.55 meters
Area of elevators	1.73 square meters
Area of rudder	.76 meters
Cruise speed	190 kph (118 mph)
Maximum speed	220 kph (136.7 mph)
Empty weight	460 kilograms (1012 lbs.)
Gross weight	650 kilograms (1430 lbs.)
Useful load	190 kilograms (418 lbs.)
Engine	Hispano Suiza liquid-cooled V-8, 150 h.p.
Propeller	Anahuac

1918 BIPLANO MILITAR TIPO C MICROPLANO

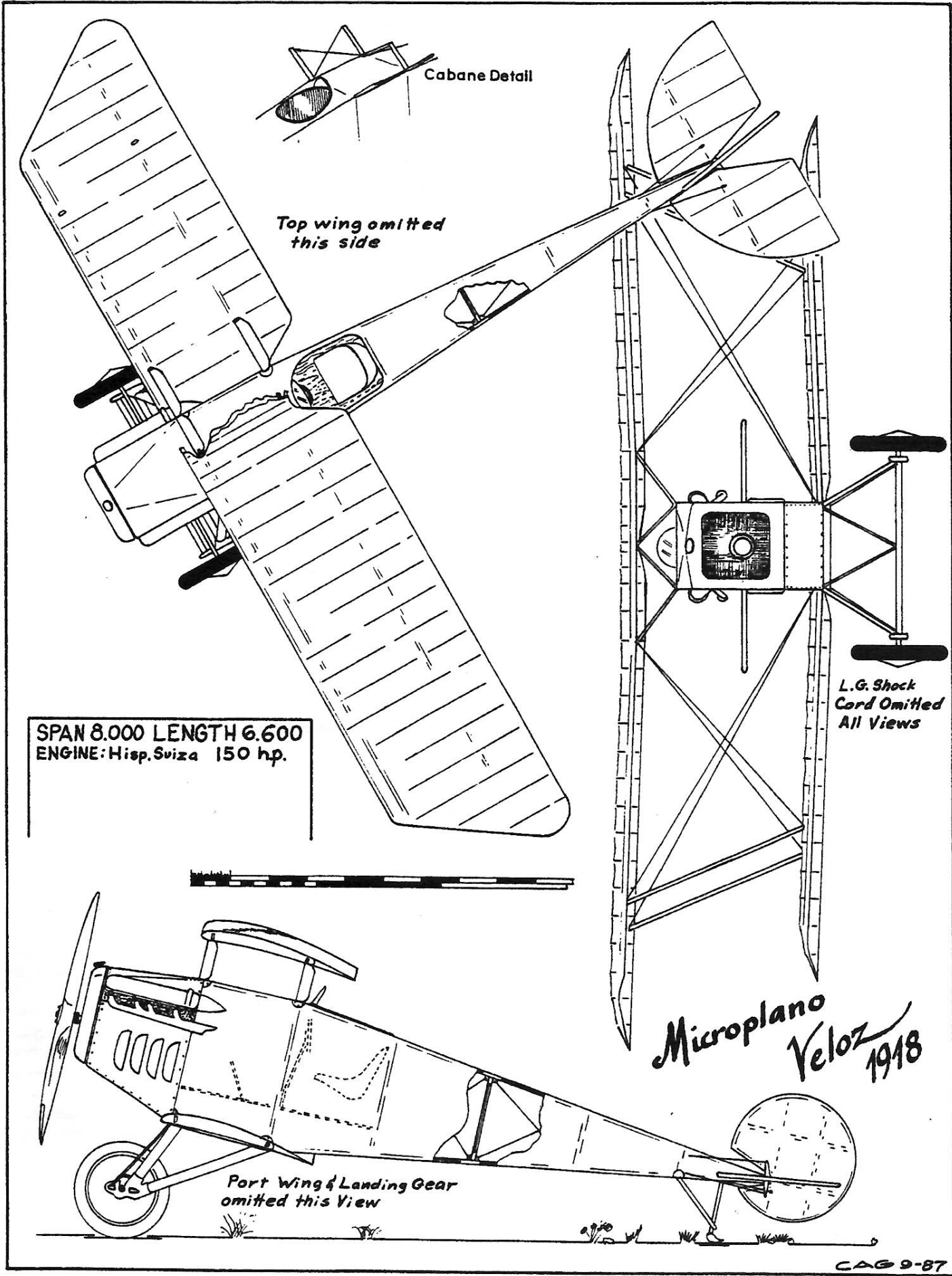
(also called the "Microplano Veloz")

A Mexican military biplane, designed by

Señor Francisco Santarini, factory director, and

Captain Juan Guillermo Villasana, Chief of the Technical Department

Drawing and ©1991 by Mark Allison • Graphics.



Cabane Detail

Top wing omitted
this side

SPAN 8.000 LENGTH 6.600
ENGINE: Hisp. Sviza 150 hp.

L.G. Shock
Cord Omitted
All Views

Port Wing & Landing Gear
omitted this View

Microplano
Veloz 1918

CAG 9-87

MICRO R/C EQUIPMENT

S. C. Meyers

I have frequently been asked to recommend systems for Micro R/C. There are several levels to which one can go to. While smaller systems are available, I don't think it makes economic sense, at this time, to go below the one ounce radio system, which is well suited to models of 5 to 8 ounces all up weight. These radios are FM which is more noise tolerant than AM for electric flight. I have included a light 2 ounce power system which works well with lower drag models and stronger 3 ounce power systems which are better for draggy bipes and larger models. These are suitable for lightly built models (similar to free flight construction) of around 120 to 250 square inches. Typical spans are 24 to 30 inches. Five ounce per square foot or one gram per square inch makes for a pleasant flying model.

What not to get:

While the cheapest (under \$100) way to get into the air is a Hi-Tech "Feather" 3 channel system, this has several disadvantages. The receiver and servos are heavier than need be and the transmitter can not be adjusted to limit the travel of the control surfaces or throttle. Often scale models have relatively large control surfaces which result in excessive sensitivity in pitch which is not fun to fly with. Non-scale models can have smaller surfaces which can work well with the non-adjustable system. Some Electronic Speed Controls (ESCs) have problems working with this transmitter. Finally the receiver is not as interference immune as the lighter cheaper smaller GWS. I have this radio system and it does work well with my *Request* but why not do it right for about \$50 more.

What to get:

My recommendation is an "computer" adjustable transmitter, such as the Hi-Tech Flash 4 or 5. The GWS receiver is phenomenally good for its weight. The Hi-Tech HS-50 is a really excellent small servo, but the GWS Pico, about the same size and weight but with slightly more current draw, is an ok alternative. You need an ESC with enough current capacity for your motor. You also should have an efficient battery. The NiCads that come with the stock GWS flight packs are only about 40% as efficient as a NiMh pack. The battery size is driven by the motor used which in turn is driven by the requirements of the model.

Getting the Gear

To assemble a system you first need to order a HiTech Flash 4 or 5 transmitter from Hobby Horse (1-800-604-6229) (the only known source that will sell the Transmitter and its charger separately ~\$85 Flash 4). Pick a frequency that is not in heavy use at your field or at least one that the fewest of you buddies have.

Then order the GWS flight pack from Bob Peru of Balsa Products (732-634-6131). Specify a crystal of the transmitter frequency you ordered and a type F receiver to match the HiTech (Futaba shift type). Bob supplies a 7.2 volt 280 mAh Teig Nimh battery with his flight packs

(\$95 all up, but no switch harness). He does sell the switches and connectors to make one up.

John Worth (aka Cloud Nine 703-273-0607) also has receivers, servos, Nimh batteries in several sizes, and other items such as light weight switches and JST (GWS) connectors to make up battery packs and switch harnesses. Get his catalog or see him at a meeting. Radial R/C (937-237-7880) has Nimh cells in 4 to 10 cell batteries and other stuff.

Flight Power Systems

Perhaps a further word is due here on sizing props and motors and the flight battery. There is a maximum size prop that an electric motor likes to swing. Go over that and you just load it down, draw more current and more input power is converted into heat rather than thrust. Going to higher voltage for a given prop will also cause the current to increase. There is also a maximum current rating on these motors above which you over heat it, loose power and cause damage. If you run a smaller prop you can increase the voltage to increase the power until you reach the current limit.

The Dymond M-1 motor 5:1 gear box with the red 7"x 6 Chech prop that comes with it is a nice match with an eight cell 110 mAh Nimh battery pack. This combination weighs 60 grams and costs ~\$35. It's well suited to my *Request*. I found it was a little under power for my draggy 24" bipes. I have forced more power out of it by going to an 8-6 prop, but this gets the motor out of its best operating range. (The prop screw on this motor is 2mm in case you need to replace one.)

For more power GWS motors are the answer. The motor shipped with the Pico stick is the "A" ratio 5.86:1 gear ratio a 10"x4.7 prop is supplied. A six cell NiCad pack is provided in the GWS packaged flight pack that is a good match for this. The batteries are either 110 or 270 mAh and weigh 46 and 78 grams respectively. A six cell NiMH 280 mAh pack weighs 46 grams. A seven cell NiMH 280 mAh pack weighs 52 grams. (You might want to add an extra cell when you go from NiCads to NiMH.) The standard GWS motor with a black back has wire brushes and a slightly higher resistance winding than the current carbon brush motors with the light colored plastic backs. These carbon brush motors will draw a little more current and produce a little more power at the same voltage. Not many small scale models can handle a 10" prop. You can drop back to a 9"x7. That may be a little high pitched if you want to fly at a scale speed with your bipe or still too big a diameter.

Now a 4.14:1 ratio gear box is available. The is called the IPS-S1 by Balsa products and will swing a 9"x4.7 or 8"x6 and produce 30 to 40% more power than the 5.86:1 and a 10"x4.7 at the same voltages. A good way to supe up that Stick or Tiger moth. Although you don't want to spend too much time at full power with out a heat sink with this combo and the duration is proportionately less.

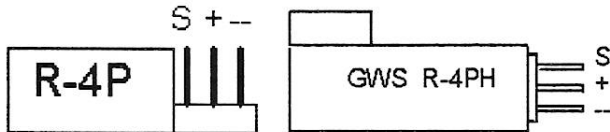
Maxx Products (847-438-2233) also has a 3.5:1 ratio "GWS" motor that they market as the EPU3, this likes an 8"x4.3 or K&P 7" prop on 7 cells. This will even

produce decent power on a 6" prop. They have the rest of the "GWS" (as the EPU) motors and props as well. These GWS motors use a 3mm prop shaft and you can find 3mm nuts and washers at most hobby shops and hardware stores. All motors mentioned draw less than 2 amps and the smallest GWS ESC (ICS 50) is adequate.

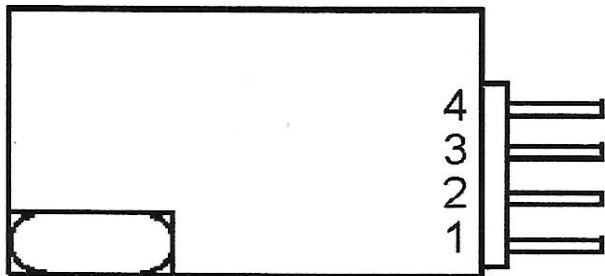
You can order GWS motors and props from either John or Bob. The Dymond M-1 is available from DYMOND Modelsports (902-303-1100).

Connecting it up

Another question that arises is how do you connect the pieces together? The instructions are not quite as clear as the manufactures think. On the GWS R-4P receiver there is small print on the label that says S + -- (signal, plus, minus). The minus is on the outside.



For end mounted connector blocks on the R4PH, the minus is closest to the circuit board. (You might get either style when you order one.) The rub is that the wires on some plugs are white, red, and black as one would expect for s, +, and -, but not always. Rainbow ribbon is manufactured in vast quantities with the color code brown(1), red(2), and orange(3) like the standard resistor color code. When this used for servos and the like, brown is used for the minus, red plus and orange becomes the signal. Thus the dark color is always ground (minus) and the light color is the signal, red remains plus and is always in the middle. This is true for Futaba, HiTech, and Airtronics connectors.



Now that polarity is nailed down, the questions is which plug goes where. Futaba and Hi-Tech systems use a GWS(type F) receiver. For a 3 channel system, #1 is the rudder, #2 the elevator, #3 is the throttle. For a 4 channel system, #1 is the aileron, #2 the elevator, #3 is the throttle, and #4 is the rudder. When we use a 4 or 5 channel transmitter as a 3 channel system, we use the 3 channel convention. Remember down on #3 is low throttle. #1 is closest to the crystal.

You need to get a different GWS (type J) receiver for Airtronics and JR transmitters and things are a little different. #1 is throttle, #2 aileron, and #3 elevator. The GWS receiver does not work with older Airtronics transmitters.

A word about antennas:

GWS receivers use cell phone technology which makes them relatively insensitive to antenna length. The sensitivity will go down with a shorter antenna, but the receiver doesn't seem to have the antenna matching problems associated with other systems. The stock GWS receiver comes with a 40" (1m) antenna (300m range). They also produce one with a 20" antenna billed as indoor with reduced range (150m). These are the identical receivers with only an antenna length change. I have built some shorter loaded coil systems, but these did not seem any more effective than the 20" antenna. In practice the 40" antenna can be flown as far as you can see the model, and the short antenna as far as I feel comfortably in control. You do notice the difference while doing ground checks with a collapsed transmitter antenna. John Worth sells a shorter antenna which is essentially 40" of light wire wound around a straw. The idea is you can hide it in the fuselage of a scale ship, but you do have a somewhat reduced range. I have not calibrated it yet. My main problem with long antennas is keeping them out of the prop.

A little more information on Servos:

Two size screws come with these. The very short one is used to hold the servo arm on. The longer one is used to mount the servo (Although RTV or servo tape works fine). Using the longer screw to hold the arm on will kill the servo. (Yes, one of our club members has demonstrated this can be done.)

Charging:

You can use either Dean's connectors or JST connectors. The GWS system uses the JST. I like the simple Great Planes ElectricFly Peak Charger (~\$30 from Tower 1-800-637-6050) that works well with 6-8 cells. This is a great match for the GWS flight pack with its JST connector, and 6 cells are exactly what a carbon brush (light colored back of motor) GWS motor likes. This has charging rates of 200 ma and 600 ma. (I have three.) A better peak charger is the Astro 110D (~\$120 from Hobby Lobby 615-373-1444). This charges from 1 to 18 cells and has a completely adjustable current range. Charge at about a 3C rate or less ie: 120 mahr cells at 360ma. I have a bunch of adapters that let me use either Deans or JST or even charge the TX.

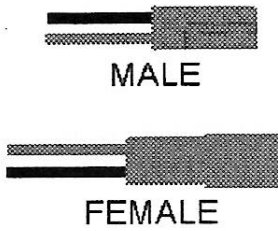
The charge jack can be glued in place or left loose. I prefer the latter since the structure needn't be beefed up to resist Mr. "Hamhands" plugging and unplugging a connector and the JST male is hard to mount..

The switch harness:

An important item that is often overlooked in the flight pack is the on-off switch and charging jack. If you are flying a Pico Stick (not a bad idea for a beginner), and everything is hanging out in the breeze - no big deal. You can unplug it to turn it off and charge and plug it in to turn it on. If however you have a scale model with a buried system it's another matter altogether. You can wire the switch onto the ESC and save a few grams or make a separate unit that plugs in to the ESC and battery.

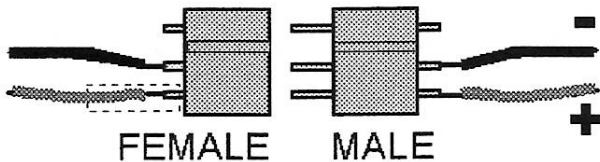
Connectors:

The JST connector is a little strange to one used to the usual conventions of male plugs with external pins and female jacks with sockets into which the pins are inserted. (The Deans plugs are a good example of this anatomically correct approach.) JST references the shell rather than the pins. The side with the pins (which they call female) has a plastic hood covering them into which the side with the sockets (which they call male) is inserted.



This convention reaches the absurd with the black connector on the back of the GWS motors this non-polarized connector has exposed pins that plug into a "male" connector. If you keep the color convention (red plus, black minus) on the leads the motor runs in the normal

direction. (You can reverse it by reversing the connectors.) In any case we always try to keep powered connectors from having exposed pins that can be shorted. Thus for JST connectors the "male" plug is always used on the battery. Deans connectors have a real female on the battery. Naturally the connector on the charger will have to mate with the battery. In this case we build circuitry into the charger to mitigate shorting problems on exposed pins. (The JST hoods help here.) The red JST connectors come wired up with red and black leads and are polarized. You solder splice these leads as required.

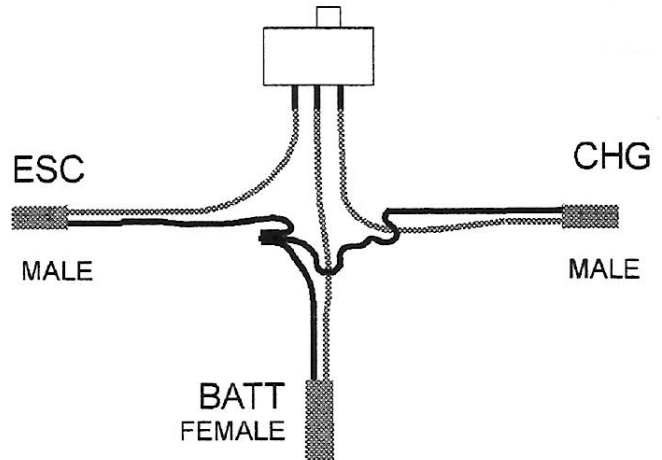


Deans connectors on the other hand are not pre-wired (and they are black not the grey shown). They are polarized by the notch and pin spacing, but you must be careful to wire them up right. I find a spring clothes pin holding the opposite sex connector makes a handy jig. Don't forget to slide the tubing shield up the wire before soldering it to the pin. On the male plug make sure you solder to the correct (offset) set of pins. Having it plugged into the female helps here. The Maxecuter wiring convention has the red plus lead on the pin furthest away from the notch and the black minus lead in the middle. Use #22 stranded wire. You may want to borrow somebody's battery or charger at the field so use this convention.

Making a switch harness:

Use a GWS switch (both John and Bob have them for \$3). Pop the case off and drill another 3/32 hole in it to let you use the other on position on the switch and remove (de-solder) the existing wires. The connections are on common on. You will need a JST male (\$1.50) to mate with the GWS ESC and connectors to mate with your battery and charger. Let's assume another JST pair (\$3). Thread

the battery plus wire from the JST female through the center hole and solder it to the center common tab. Thread the plus wire from one JST male through an end hole and solder it to the corresponding on tab on the switch. Thread the other plus wire from the other JST male through the last end hole and solder it to the corresponding on tab on the switch. Snap the case back on. Now solder all three black (minus) wires together. This is best done by stripping and tinning all leads and binding them with single strand of thin bus wire. A piece pulled from stranded wire works well. Now that they are mechanically held together it is easy to touch them with a soldering iron and bond them. Slip a length of shrink wrap over them and hit it with a heat gun. Plug one male in the ESC and the female in to the battery. The remaining male is the charge jack. Place a dot of red enamel on the case on the side going to the ESC; this is the on position. JST connectors shown below.



You can of course substitute a male Deans for the battery plug and a female Deans for the charge jack and use a Radio Shack SPDT toggle switch.

Balsa Products Flight Pack \$95

Item	Weight
GWS R4P Receiver	7
GWS BP101 PICO SERVO	6
GWS BP101 PICO SERVO	6
GWS ICS-50 2 amp ESC	5
TIEG 6 CELL NiMH 280 mAhr	46
Total	70 grms

The flight pack weight less the battery, but with a switch harness is less than an ounce. The GWS motor plus prop is 32 grams, + 5 for harness 107 grams all up or about 3-3/4 ounces. In a 3-1/2 ounce airframe with 200 to 240 square inches this is a great combination. Think Guillow's 24" WWI or other 1/24 scale WWI fighters. See you over the front!

Back issues available @ \$3.50 each.

Send check to EDITOR

**May-Jun 96: OUT July-Aug 96: OUT Sep-Oct 96: OUT
Nov -Dec 96:**Schanzle-Pasped Skylark, Tail wheel tales,
Felix Gutman Outdoor Endurance Job, 96 Maxecuter
Fun-Fly results, PearlHarbor, Clark Y airfoils

Jan-Feb 97: OUT Mar-Apr 97: OUT

May-Jun97: OUT Jul-Aug 97:OUT

Sep-Oct 97:Pittman- Double photo pages Gasu Denki
Koken A* 10 cent plan by Dave Aronstein also his
"Washingtonian Proposal" Al Backstrom's Maubossin
Hemiptere 10 center No-Cal Hellcat by Ralph Brady and
Wildcat by Mike Nassie Russ Sandusky's work shop
E:mail stuff on Geneseo

Nov-Dec 97:Strull- Vega Issue Comet Dime Scale Vega
plans & details of Kudzu Vega Event. Peerless Vega
plans Kuzu and Comsat contest results Many Vega 3-
views and color schemes.

Jan-Feb 98:Meyers- 5th dimescale issue NBM fun-fly
writeup, Washingtonian rules, Dave Aronstein on building
the Comet Lusombe50, Comet Curtiss P-36, Phantom
Flash, 5¢ Baby ROG, 20"Comet style Miles Mohawk,
Comet dimescale listing with Penn Valley price list, Doug
Buchanan's workshop, Comsat contest correction, Rolf
Gregory Memorial.

Mar-Apr 98:Bowers-&-Rakow Bowers 30" Monocoup &
Curtiss Robin for rubber or elct. 2 CAVUs by Rolfe
Gregory. The Giant Chickadee Model from 1931.
Clayton Knight write up. Al Lawton's workshop.

May-Jun 98: Daily & Paisley 20" Fok D7 22.5" Hallman
Mitsubishi 1 MF1 two super bipes! With building tips.

Jul-Aug 98: Schanzel Super scale Rearwin Skyranger
separate detailed plan 1998 Geneseo Nats Winner many
building tips & hints, list of Classic Rubber Scale Models.

Sep-Oct 98:Meyers-6th dimescale issue

Bob McClelland's Cunningham-Hall dimer Comet Puss
Moth, SPAD & Fok D7 for next year's Kuzu Kombat Dave
Stott on Dime Scale NBM & Brainbuster results Van
Gorder Farewell

Nov-Dec 98:out **Jan-Feb 99:**out

March-April 99: Bowers & Raykow- 29" Mooney A-1 for
electric, building notes on Chris Parent's PWS 10, 17"
Fokker D-8, 14" DH Moth Minor, More on Robert Short,
and ' Visits with Kurt Tank' by Hurst.

May-June 99:Russ Sandusky -Goodyear Racer issue
with 4 plans OLE TIGER, IDJIT'S MIDGET, POGO, AND
BONZO with 3-views and building comments. How to
build Cheek Cows. An account of the 1966 FDK races
and a brief history of the Goodyear Races. Eastern U.S.
Free Flight Champs results and photos.

Jul-Aug 99:Meyers-7th Dimescale Issue featuring Comet
dimers, a Fairchild 24, an Aeronca Low Wing, Aeronca
Seaplane and the Luscombe again. Contest flyers for
Kudzu and the MaxMeet. Don Strull tells the Kestrel
Farms story. Burt Phillips expounds on compressed air,
air hogs and Luft Schwein. Bob McLellon gives us some
trim pointers for the Cuningham-Hall. John Hunton builds

and critics the Aero Aces Cessna CR3 kit. ALPS decal
printer introduced.

Sep-Oct 99:OUT Nov-Dec 99:OUT Jan-Feb 00: OUT

Mar-Apr 00: Schmitt und Srull - Nakajima 91 by Nate
Strurman, westland F.7/30 by Bob McClellon, John
Hunton on tools and the Stinson Gullwing, Doug
Hannay remembrance.

May-Jun 00:Sandusky racer issue, Ingleside, Essex, &
NBM results, GeeBee R2 & Laird Solution no-cals,
Brown B2 by Tom Nallen, Keith Rider R-6 peanut by
Dave Livesay. Visit to Bill Bell's shop Kevin Sharbonda
construction article.

Jul-Aug 00:Guillow's WWI issue Nieuport 28 & Pfaltz
D-3, keel construction notes , Windsock Datafile list,
vacuumforming wheels. Kevin Sharbonda construction
article.

Sep-Oct 00: Guillow's WWI issue Albatross D5A &
Sopwith Camel, carving pilots heads, contest
announcements, Phil Cox on the N-28. Guillows
construction articles.

Nov-Dec 00:Guillow's WWI issue SE5 & Fokker D-7
Kudzu & Petersburg results ads for Lozenge Tissue and
Small Scale pilots and wheels.

Jan-Feb 01: Guillow's WWI issue Fokker D-8 & SPAD
Don Strull & Pat Daley on micro R/C for rubber type
planes. Bob Thompson on flying Guillow's WWI's. Tom
Arnold on shimming. Pat Daley's construction tips.

Mar-Apr 01:Guillow's WWI issue Nieuport 27 & Bristol
Scout Tom Arnold's November '92 Scale Staffel
Newsletter on horizontal keels. Dan Driscoll on the N-27.
DPC models announces it is kiting Guillow's type
models. Micro-R/C sizing. Walt Eggert's Monofilament
Strut article. Steve Hales' laminating article.

May-Jun 01: Making Guillow's 500 series WW2 Models
fly. "Battle of Britain" for the Sept 29th Kudzu BoB event.
Doug Griggs does the P-40. John Robison relates his
experiences in making the Guillow's 500s fly. I have a
go at the Me109. We also go into the mechanics of
rubber power fittings for both the front and rear ends (s-
hooks, clutches and braiding). John gives us a treatise
on building that is not just for beginners and Doug adds
his hints. Claude describes his Guillow's Cessna. I have
an article on Micro R/C linkages. CAMMA Spring Fling
and Brainbusters contest (featuring a Guillow's WWI
event) flyers.

JUL-AUG 01:Sandusky NO_CAL Issue: Jack J2M3,
P51,BP Defiant, FW190,Buffalo, and thePussycat.

SEP-OCT 01: Meyers- Snipe issue, Guillow's, DPC, &
Wherry plans, Robert C. Hare WWI article from OCT
1949 MAN. Comments on building the DPC/Guillow's
kit.

NOV-DEC 01: Meyers- Frank Ehling's *Request* Original
Air Trails article, Model Builder article R/N 30" plans
Micro R/C conversion notes. Delta Dart, cubic Splines

JAN-FEB 02: Phillips- Sea Plane issue NC-4, Besson
MB411, Blackburn Baby, Westland Baby,Curtiss Racer,
"Fenway" (Bostonian) floats. Kudzu Contest results.

Pico J3-F Indoor/Outdoor Slow Flyer

Barry B. Harrison

Being a relative newcomer to the Maxecuters, a little over two years, I have been eagerly learning from the masters in the club with little capability of offering any advice in return. With that being said, this is my first attempt to "give back" to my fellow modelers.

About a month ago, I purchased the GWS Pico J3-F Piper Cub kit for my introduction to slow-flying. The kit takes approximately 6-8 hrs. to put together and is, in my opinion, a good model for the beginner. Since the construction plans are straight -forward, I will only elaborate on modifications that you may want to consider if you decide to build the model.

For starters, I would get some 5-minute epoxy to use in attaching the parts. My advisors, at the local hobby shop, indicate that the glue supplied in the kit is of poor quality. When the time comes to attach the fuselage halves, abandon the recommendation in the instructions to use tape to hold them together while drying; this just pulls off the paint when you remove the tape. You may also want to reinforce the control arm attachment points at the rudder and elevator with tape and put a dab of glue, such as ambroid, on the control horn retainer to help keep it from popping off when least expected. If I was building this model again, I would fully detach the rudder and elevator and re-hinge with tape to get uniform deflection. (I will probably make this alteration soon.) I also replaced the dowel wing struts with ones that were slightly longer to support a marginal increase (approx ¼") in dihedral. This seemed to give a marked increase in the stability. I also fashioned my own clevises for attaching the struts out of flattened aluminum tubing, since two of the ones in the kit (plastic) broke rather easily. I consider these changes to be very minimal and have been rewarded with an airplane that has offered hours of enjoyment. The one change that I would strongly recommend, however, is reinforcing or replacing the kit-supplied propeller. The attachment point between the propeller blade and hub is very weak. I applied a woven fabric material, at this location, and built-up the thickness of the blade where it meets the hub. This really increased the lifespan of the prop. Unfortunately, I waited to do this after snapping off the blade. The good news is that GWS does sale replacement props---so I have some on order, which I will strengthen before use.

Overall, I have been very pleased. The airplane, when hand-launched, climbs out smoothly, requiring just a touch of elevator. For the maiden flight, I went cowless and omitted the landing gear fairings to avoid damaging them. The only problem was that I forgot and left the cowl in my car on a hot summer day-- --now I fly the cub permanently sans cowl. Using the GWS sub micro flight pack (order #GWS2015), which contains a 6 cell 7.2V/270 mAh Ni-CD battery pack and the motor supplied in the kit (A motor), I find it capable of flights as long as 12-15 minutes. I have even pulled out loops with this docile creature when conditions are just right. Most of the time I

PHOTOS

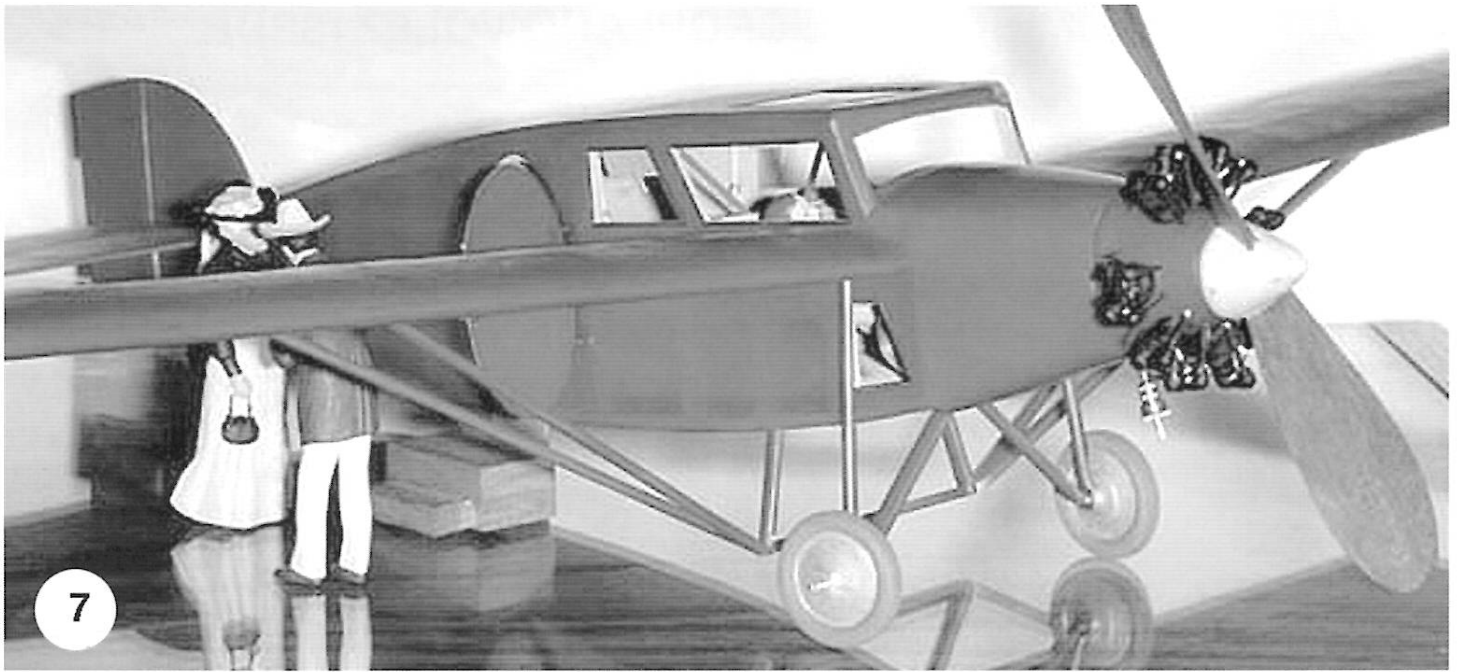
7. Now this is an obscure aircraft but leave it to Allan Schanzle to find it and build the model. This one is the 'Invincible', built by the Aircraft Division of the Invincible Metal Furniture Company of Manitowoc, Wisconsin. Allan's is CO2 powered of course.
8. John Ernst sent a photo of his latest Guillow WWI series aircraft, the Nieuport 27. Our editor published this plan in a recent MAXFAX.
9. A great looking Stahlwerk by Bob Haight way out in Las Vegas. Bob has joined in the Micro Electric R/C fun.
10. A photo of a real Blackburn 'Baby' to supplement the 'Baby' information.
11. Lou Buffardi sent this photo of his CW-21, another unusual modeling subject. Lou is the modeling editor for several of our favorite magazines including WW Aero and Skyways.
12. Another beauty by Hurst Bowers; his Standard converted to Micro R/C by Don Snull and it is a great realistic flyer. 'Waldo' would approve!!
13. Our editor does build Guillow WWI aircraft from his MAXFAX plans; look at Stew's nifty Bristol ready for Bill Sheppard's 2002 'Tool Box Quest' at the Kudzu meet in Raeford.

enjoy flying lazy figure eights, while watching the evening sun shine through the thin (but strong) foam wings; a sight I have always enjoyed when watching stick and tissue models fly. I can say with certainty that this plane can take a lot of abuse. While flying the other night, after about 25-30 flights, the wire I was using to hold one of my strut/wing connections together came loose while pulling out of a steep dive. The wing flexed upward and the model dove straight-in from about 50 feet. Even though it struck the edge of an asphalt roadway, totally destroying the motor, very little damage occurred to body of the plane. That's what makes this plane a good beginner's model. You can experiment with it, abuse it, and with little repair, it's ready to go again.

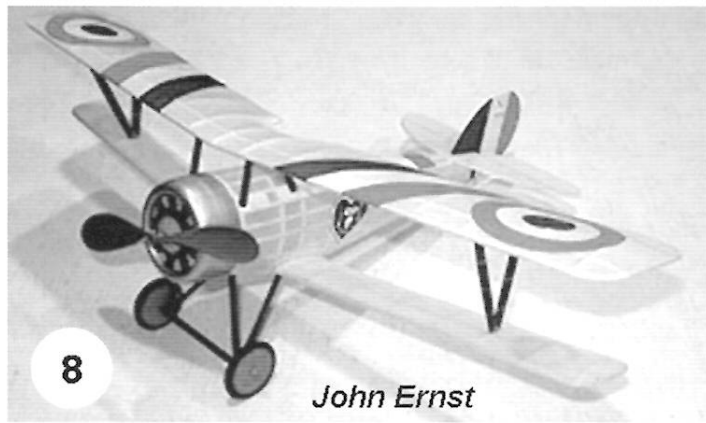
If you decide to purchase this airplane, I am sure that it will reward you, as it has me, with hours of fun. Check out the GWS website at gws@grandwing.com

WANTED: Model aircraft plans, especially scale types of all sizes: R/P, C/L, R/C, CO2, F/F. I have hundreds of model aircraft plans of all types for sale and trade. I want mostly German and Japanese aircraft, but many other scale types too. Call or write to me, anytime :

MR. DUANE B. BREHMER
14720 SOUTH 234th STREET
GRETNA, NEBRASKA 68028-6416,
[1-402-332-4303] (anytime retired)

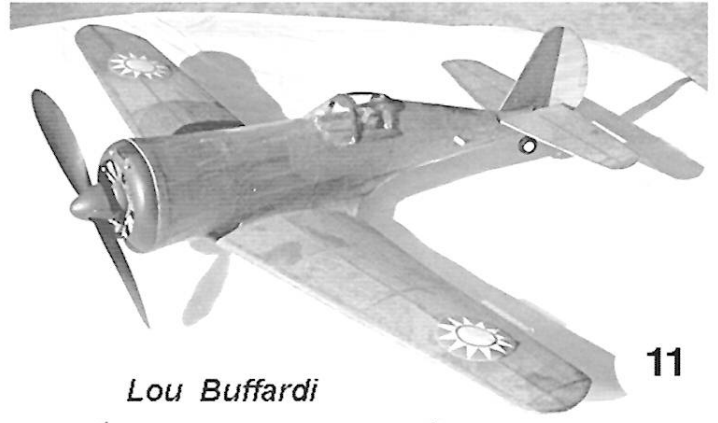


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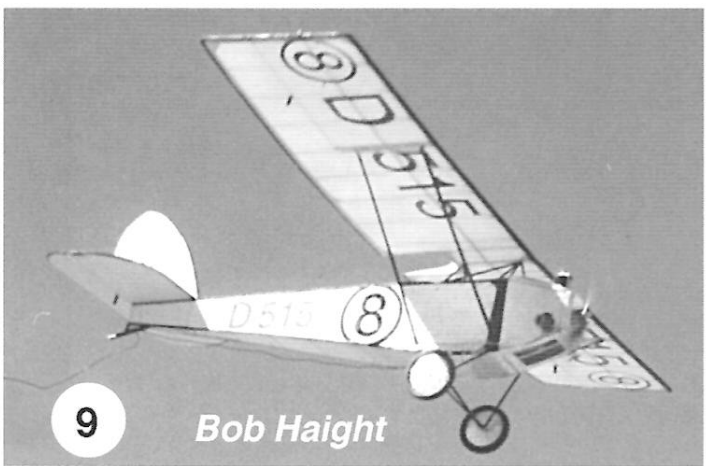
8

John Ernst



11

Lou Buffardi



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Bob Haight



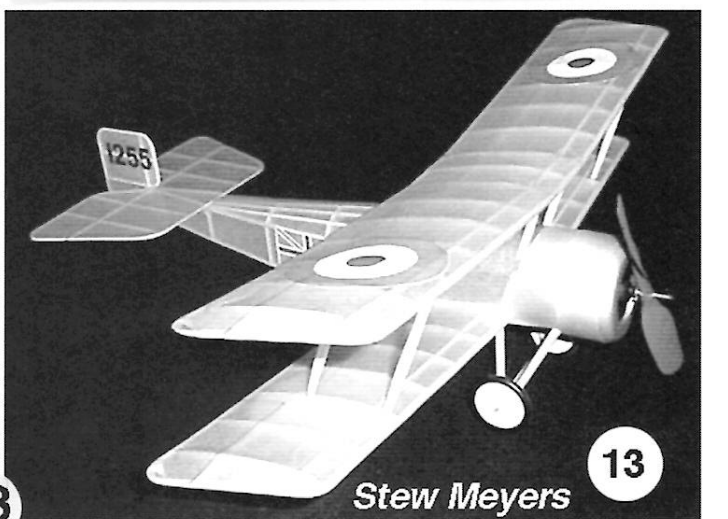
12

Don Strull



10

A Blackburn 'BABY'



13

Stew Meyers

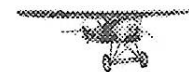


Eastern U.S. Freeflight Championship, APRIL 27 and 28, 2002 e-mail ekerr@hiug.org
 Saturday: Mass Launch, WWI, WWII, Racers, Dime Scale, Timed event: Embryo
 Sunday: Mass Launch, Golden Age, NoCal, Peanut, Bogus Bostonian,
 Timed events: FAC Ruber scale and FAC Power Scale

KUDZU SPECIAL EVENT



Over the past two years, we have published the plans for all 12 of the Guillow's 18" WWI series. These models are the subject for the special event at the Kudzu meet. Bill Shepard is making another custom tool box for the prize. Any of these models or the DPC reproduction kits are eligible built at the original size. The structure may be lightened, but the general outlines should be retained. Of course, you need a pilot (a profile at the least), guns, and rigging. No foam structure. Rubber power only. The models should reflect either the kit color scheme or some other authentic WWI colors backed up by a photo or drawing. The allies will fight it out (mass launch sorties) as will the central powers. The best three of each will then go against each other to see who gets the box and who gets boxed. A contestant may enter both an allied and central powers aircraft. If both make it to the finals one may be proxy flown.



NOTE: Your Dues Are Due



CLUB OFFICERS - President: Hurst Bowers, 1649 Birch Rd., Mclean, VA 22101
 Secretary: Bert Phillips, 1709 Crofton Pky, Crofton, MD 21114-2305
 Treasurer: Norm Davison, 14008 Castaway Dr., Rockville, MD 20853
 Editor: Stew Meyers, 8304 Whitman Dr., Bethesda, MD 20817

MEETINGS - The D.C. MAXECUTERS hold meetings at 8:00 pm on the first Tuesday of every month at the College Park Airport, the oldest continuously operating airport in the world. Daylight savings rule not in effect.

MEMBERSHIP - Dues for membership in the D.C. MAXECUTERS are \$15 per year for residents of the USA, Canada, and Mexico, and \$25 for all other countries.

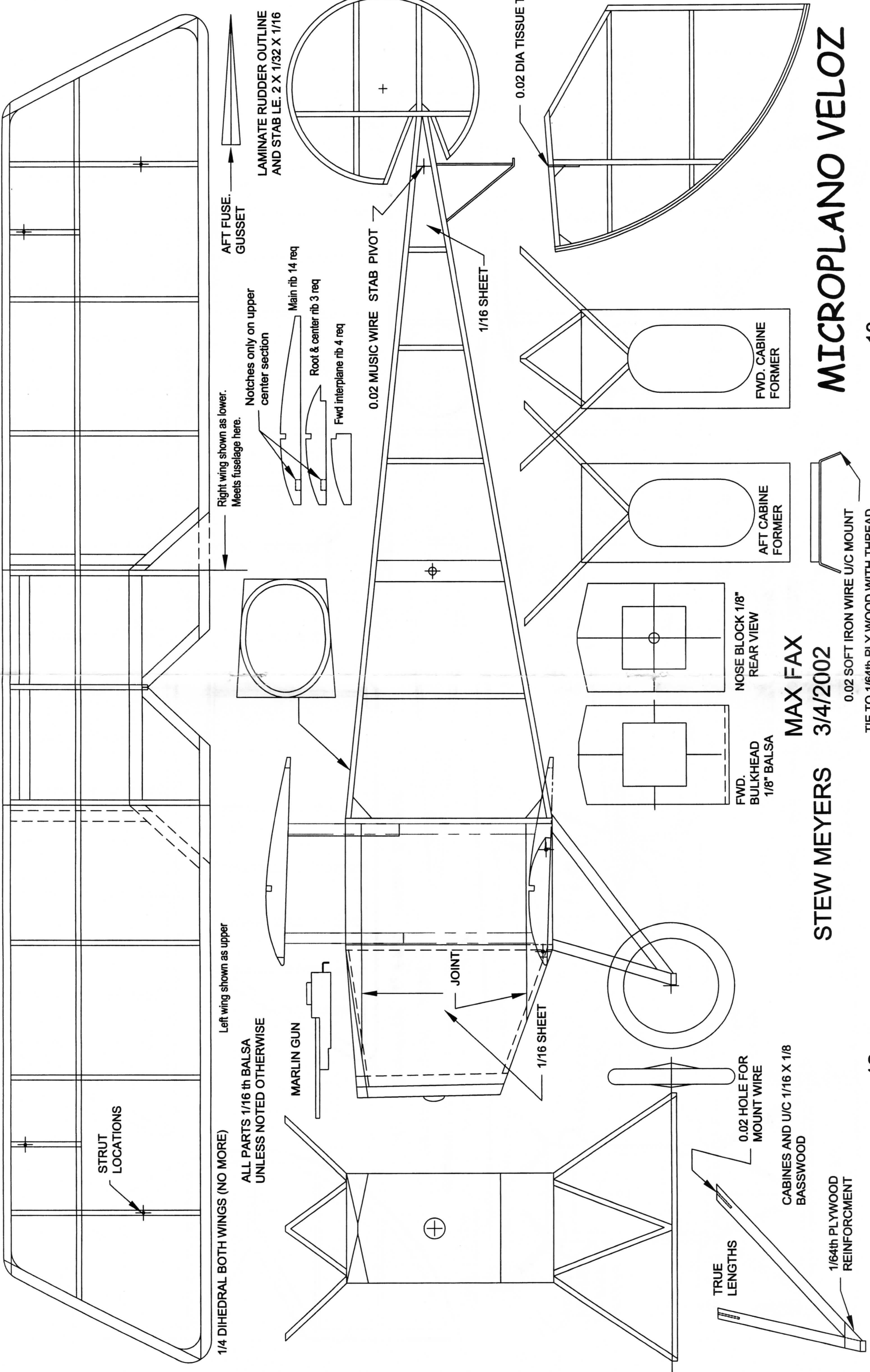
Your mailing label indicates the year and month of the last issue of your current membership. A red "X" in the box above is a reminder that your dues are due.

Send a check, payable to the "D.C. MAXECUTERS", to the treasurer, Norm Davison.

PUBLISHING DATES - Six issues of **MaxFax** are sent each year as close to the nominal dates as possible, but since this is a volunteer publication nothing is guaranteed except that six issues will be sent to all members.

CONTACTS - Material for the newsletter and membership questions should be addressed to Stew Meyers phone 301-365-1749. E:mail gets immediate attention. stew.meyers@erols.com

Maxecuter web site: www.maxecuter.com



STRUT LOCATIONS

1/4 DIHEDRAL BOTH WINGS (NO MORE)

Left wing shown as upper

ALL PARTS 1/16 th Balsa
UNLESS NOTED OTHERWISE

AFT FUSE. GUSSET

Right wing shown as lower.
Meets fuselage here.

Notches only on upper center section

MARLIN GUN

Main rib 14 req
Root & center rib 3 req
Fwd interplane rib 4 req

0.02 MUSIC WIRE STAB PIVOT

JOINT

1/16 SHEET

1/16 SHEET

0.02 DIA TISSUE TU

TRUE LENGTHS

0.02 HOLE FOR MOUNT WIRE

CABINES AND U/C 1/16 X 1/8 BASSWOOD

1/64th PLYWOOD REINFORCEMENT

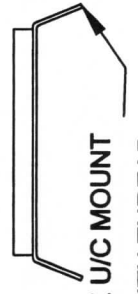
NOSE BLOCK 1/8" REAR VIEW

FWD. BULKHEAD 1/8" Balsa

AFT CABINE FORMER

FWD. CABINE FORMER

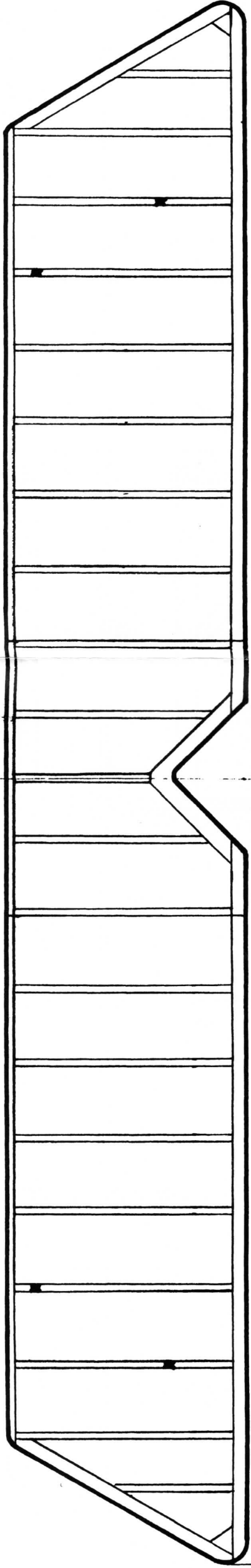
MAX FAX
3/4/2002



0.02 SOFT IRON WIRE U/C MOUNT
TIE TO 1/64th PLY WOOD WITH THREAD

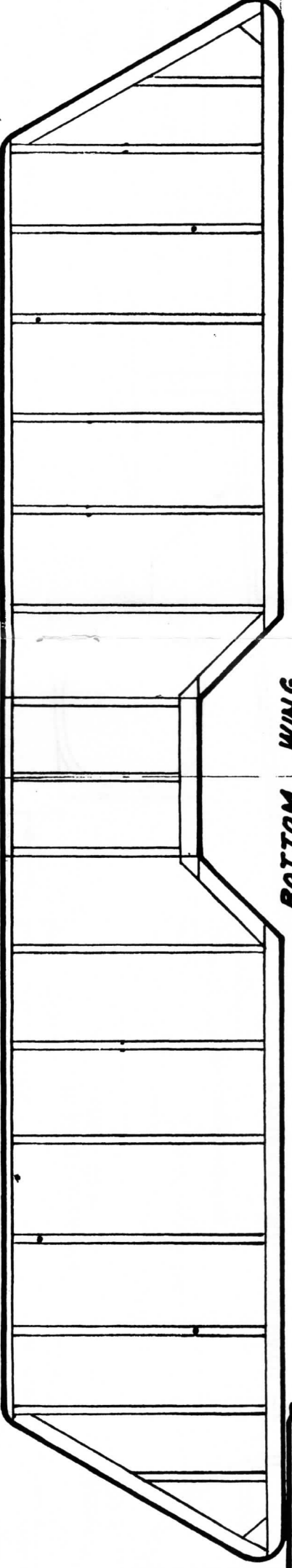
MICROPLANO VELOZ

STEW MEYERS

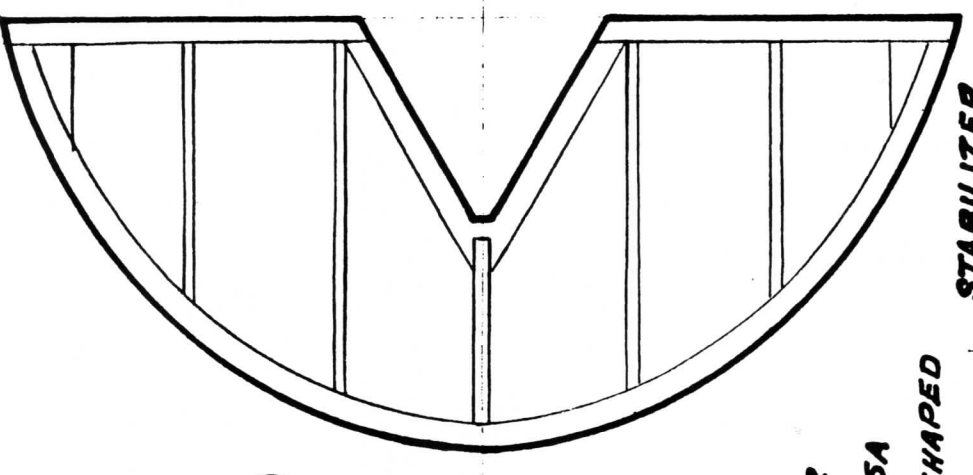


X's & . 's SHOW STRUT LOCATIONS

TOP WING

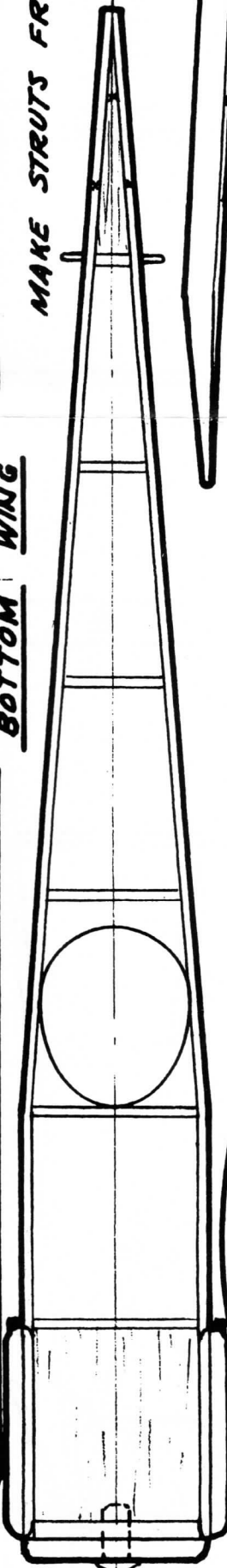


BOTTOM WING



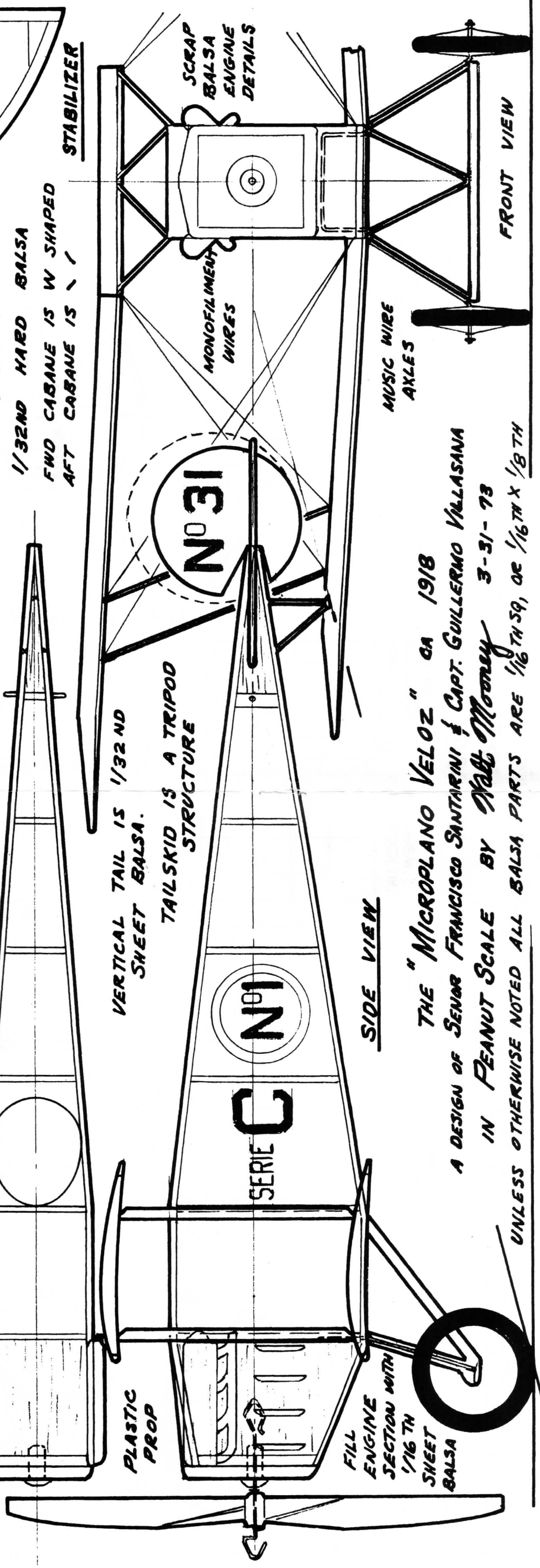
STABILIZER

MAKE STRUTS FROM 1/64 TH PLYWOOD OR
1/32 ND HARD Balsa
FWD CABANE IS W SHAPED
AFT CABANE IS \ /



VERTICAL TAIL IS 1/32 ND
SHEET Balsa.

TAILSKID IS A TRIPOD
STRUCTURE



SIDE VIEW

THE "MICROPLANO VELOZ" ca 1918
A DESIGN OF SENOR FRANCISCO SANTARINI & CAPT. GUILLERMO VILLASANA
IN PEANUT SCALE BY *Walt Mooney* 3-31-73

UNLESS OTHERWISE NOTED ALL Balsa PARTS ARE 1/16 TH SQ, OR 1/16 TH X 1/8 TH