

MAX FAX

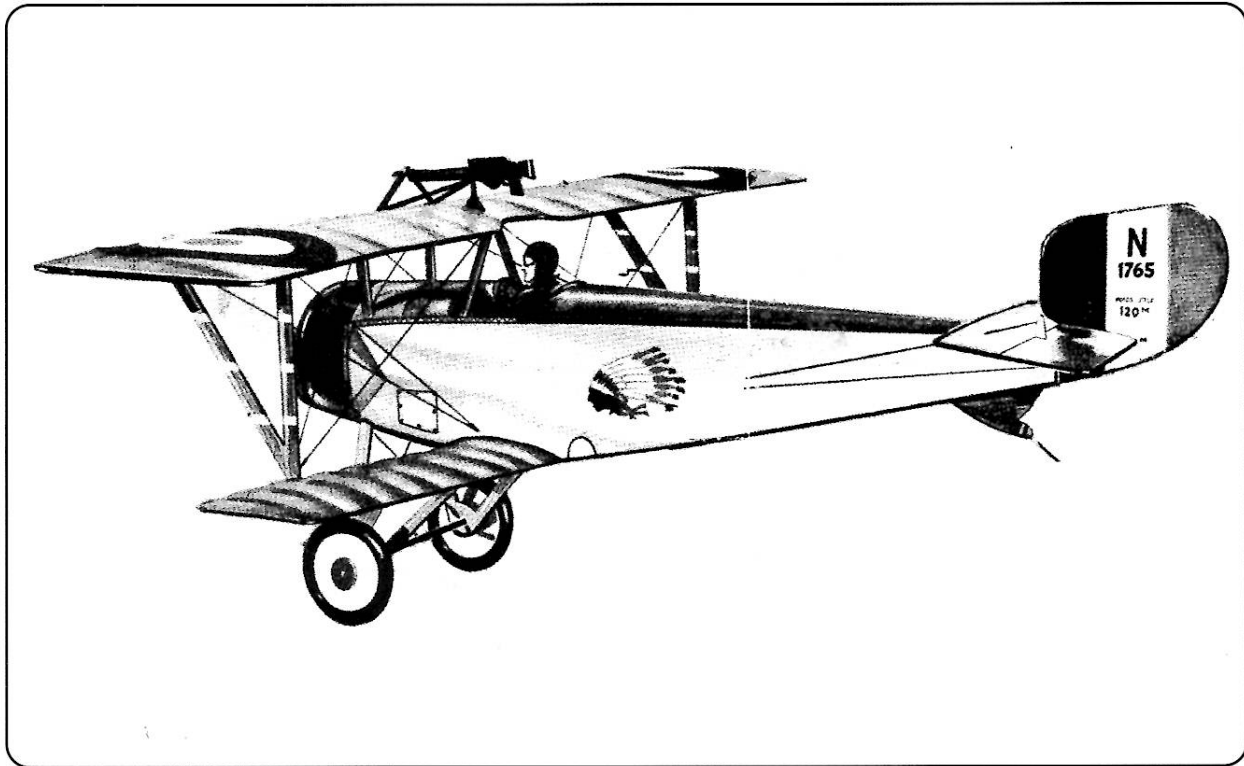


Journal of the D. C. Maxcutters

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

Editor: Stew Meyers

MAY / June 2003



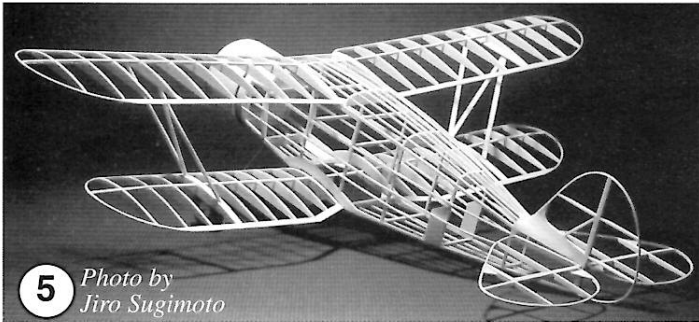
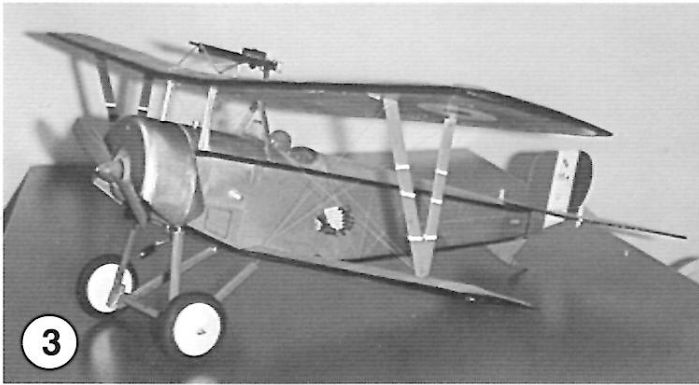
COMING ATTRACTIONS.

JUNE 27, 28 ,29 2003 THE GREAT GRAPE GATHERING SAM 86 contest at the HAG Museum Airfield in Geneseo, New York.(with the assistance and cooperation of the Western New York Free Flight Society - For info contact Jim Anderson, SAM 86 CManderson@superaje.com

JULY 19-20, 2003 FAC NON-NATS GENESEO, NEW YORK Scale Judging at Days Inn beginning 3:00 PM Friday July 18th. For more info Contact Lin Reichel, 3301 Cindy lane, Erie, Pa. 16506

AUGUST 15,16 ,17 2003 EMPIRE STATE FREE FLIGHT CHAMPIONSHIPS sponsored by WNYFFS at the HAG Museum Airfield in Geneseo, New York This will be their 34th annual contest; just a little bit older than the GGG. If Free Flight is your thing, you must go. For Information: For Information: Empire State Free Flight Championships John Carls CD Star Route #2 Box 88 Bradford, PA 16701 (814) 362-7789

SEPTEMBER 6, 7 2003 FAC MUNCIE CONTEST -- SEE FAC NEWSLETTER



Guillow's Big WWI Issue

Stew Meyers

In this issue we tackle the big 24" Guillow's 200 series of WWI models, which is being reissued; or at least four of them are. The Rumpler C-5 and DH-4 have yet to be reissued, but rest assured that I have all the kits. Many of us have built these over the years. Built up stock, they were fine free flyers with the Cox 0.20. The SE5 and Thomas Morse having more wing area also made decent pulse rudder jobs. The construction however is typical Guillow's (read heavy and inefficient). However, it is easy to lighten them up to make a decent rubber or electric model. I have been flying a micro R/C Nieuport 11 for the past three years and Phil Cox showed up at Munice with a beautiful rubber version.

The Nieuport 11 is one of my favorite airplanes. The 24 inch Guillow's N-11 is a fair representation of the mark. True, the fuselage cross-sections are rectangular rather than the trapezoidal shape of the original. The plans seem to be based on the Nieto drawings. As a kid, I had enlarged these and hung them on my wall. Since this kit is again currently available, we will not reproduce the plans in this issue, but rather discuss how to make it fly well. If you want to build it like the kit, buy the kit. Oh yeah, today they list for \$33 for a laser cut kit, but the die-cut can be had for a little over \$20. The laser cut kits have a nice fit but the construction is still heavy as is the wood. I have also included the Nieto drawings as well as a R. C. Hare article from the same issue of MAN that had the Nieto drawings.

John Ernst holds forth on DPC kits.

Phil Cox tells us about his rubber powered N-11.

PHOTOS Page 2

1. The featured plan of this issue is the Guillow Nieuport 11 by our editor Stew Meyers. He is seen here with an earlier R/C version.
2. A great rubber powered version of the Guillow Nieuport 11 by that master builder Phil Cox.
3. And still another Guillow Nieuport 11 enlarged 125% for electric free flight by our keeper of the minutes, Bert Phillips.
4. From across the Atlantic, Lindsey Smith in England sends this pic of his latest scale ship, the Earl Stahl Stinson Vigilant ready for a reconnaissance mission.
5. And from across the Pacific, Jiro Sugimoto sent a bones photo of his latest Peanut a Waco Cabin.
6. Chris Parent sent this nifty pseudo flight shot of his Martinsyde.
7. Our good friend Bill Bell in Baltimore with his Stuka.
8. Bob McLellon continues to build some great model aircraft. Here is one of his latest a Comet Luscombe Phantom. Some years ago we published Rolfe Gregory's plan of the Phantom.

Guillow's Big WWI Series

201 THOMAS MORSE	24"	200 sqin
202 BRITISH SE5-A	24"	208 sqin
203 NIEUPOINT 11	24"	144 sqin
204 FOKKER DR1	20"	180 sqin
205 DE HAVILAND 4	27"	185 sqin
206 RUMPLER C-5	24"	138 sqin

DRAMATIC 1914-1918 WAR BIRDS



FOKKER DR-1
TRIPLANE

\$4.00
EACH

Series 200

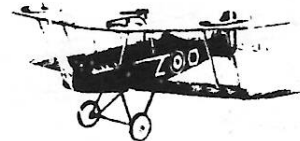
IDEAL FOR THE
COX .020 ENGINE
— PLYWOOD FIREWALL
AND INSTRUCTIONS
INCLUDED IN KIT.

FOR RUBBER OR 1/4 A GAS POWER

We are justly proud of the loving care and painstaking skill devoted to development of these super-detailed World War I flying models. No finer kits have ever been offered the model builder — no costs have been spared to achieve the ultimate in scale construction — buy one today and see!



KIT 201 THOM. MORSE SCOUT 24" span
American made training craft. Over 550
units built.



KIT 202 BRITISH SESA 24" wing span
Flown by Bishop and Minnock. Best of
British fighters.



KIT 203 NIEUPOINT 11 24" wing span
French "Lafayette Escadrille" combat plane
of 1916.



KIT 204 FOKKER TRIPLANE 20" span
Made famous by Germany's Red Baron
in 1917-1918.



KIT 205 DeHAVILLAND 4 27" wing span
British day bomber. Earned the nickname,
"Flying Coffin."



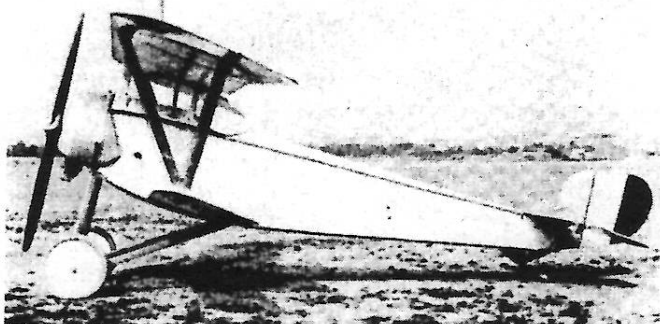
KIT 206 RUMPLER C-5 24" wing span
High altitude German artillery-observation
aircraft.

OUT OF HISTORY'S PAGES —

World War I fighters flown by such air heroes as Rickenbacker, Richthofen, Bishop and Gwynnor. Fully detailed scale rubber powered flyers combining rugged construction, light weight materials and superior design. Plastic cowls, guns, pilots, wheels, props and radial engines (where required) plus the largest complete set of full color decals you ever laid eyes on!



The narrow chord lower wing of the birdlike Nieuport fighters was a development of a straight-through bracing spar for earlier monoplanes.



The "13 meter Nieuport" had area equal to today's *Ercoupe*, less than a *Cub*. Did 97 mph, landed at 30, took off in but 100 feet.

Nieuport 11

by ROBERT C. HARE

Concocted as the French answer to the synchronized-gun Fokker *E-1*'s, the graceful Nieuport 11 was put to good use by the renowned Lafayette *Escadrille* squadron.

After the Fokker monoplanes, equipped with the synchronized machine gun, appeared over the French and British sectors of the Western Front in 1915, the Allies entered into a mad scramble to produce machines that could cope with the German menace.

The British countered with the De Havilland 2 and the *F. E. 8*, both small pusher biplanes, and in general configuration small editions of the De Havilland 1 and *F. E. 2b*, respectively. The little pushers had respectable performance which approximated that of the Fokker. They even had an advantage in visibility, with the pilot sitting out in front of the bathtub-like nacelle. The machine gun, fixed to fire forward, was aimed by aiming the plane as in the Fokker, but did away with the synchronizing gear.

Over in France, the Air Service threw into the breach a conglomeration of types, principally Nieuport two-seaters and Sopwith 1 A2 (British 1½ strutters) which pilots of the Tn-Color used as two-place fighters. The French, who were also caught short without the synchronizing gear, developed

a smaller edition of the Nieuport two-seater, calling it *Model 11*. Thus favoring the tractor biplane type, they were forced to attach their forward firing gun to a superstructure on the upper wing, firing over the propeller disc. This little single seater, officially designated as *Nie. 11C-1*, came out in the fall of 1915 and set the pattern for a series of highly successful single seaters that were in use in one way or another until the end of World War I.

Prior to 1914, the Nieuport firm had gained a good deal of success with its monoplane, a good-looking, rotary engined, shoulder-wing ship that placed high in every air race it finished. It was one of the first types with a covered fuselage, but still sported external wire wing bracing. Nieuport engineers began building their monoplanes with a rigid external bracing arrangement. They ran a spanwise beam out from the bottom of the fuselage on each side, and connected it to the upper wing with a series of bridge-type struts and Warren truss bracing.

The Nieuport engineers went on, however, from where the

others stopped . . . they made the spanwise beam into a narrow chord wing, put the upper wing in parasol position, put in some "V" shaped interplane struts and conventional biplane wire bracing, and came up with the Nieuport "one and one-half" plane. Thus the spanwise beam was made to contribute to lift as it did its structural job, and the visibility advantage of the parasol upper wing was gained.

Immediate predecessor to the *Nie. 11* was Model 10, built both in single and two-seat versions. Model 10, with a wing area of 18 square meters became the smaller Model 11, with a wing area of 13 square meters—hence the additional popular identification ". . . the 13 meter Nieuport."

Thirteen meters, about 140 sq. ft., compares to the area of an Ercoupe, or something less in area than a modern *Cub*. Obviously a small airplane, the *Nie. 11* spanned 24' 6" in the upper wing and 22' 6" in the lower. Respective chords were 3' 11-1/2" and 2' 4". The upper wing had no dihedral but was set at 2 deg. 30 min. positive incidence throughout. Right lower wing panel was set at 4 deg. throughout, while the left panel was 4 deg. at the fuselage and 5 deg. at the tip to counteract torque. The lower wing was set at 3 deg. 30 min. dihedral. Both wings were swept back at an angle of 3 deg. 40 min. and were positively staggered 28 inches.

Overall length was 19 feet. Total weight of the *Nie. 11* ready to go was 1,210 lbs.; empty weight was only 759 lbs. One hundred ten pounds of the 451 lb. useful load were taken up by the machine gun and ammunition.

The Nieuport 11 fuselage was framed entirely in wood. Upper longerons were straight in elevation except at the nose, where they turned down. Lower longitudinal members were heavily curved to give the fuselage its characteristic Nieuport elevation. Vertical and horizontal connecting struts were tapered and set in steel sockets bolted around the longerons. All members were made of ash and were rectangular in cross section. Upper longerons were set slightly farther apart than the lower, except at the tail.

Fuselage sides and bottom were flat. The top, however, was rounded off aft of the cockpit by a series of plywood formers and stringers covered by thin plywood and cloth. Forward of the cockpit the upper deck was cowed in sheet aluminum attached by metal lacing. The nose finished off in a one-piece stamped aluminum cowl. The lower portion of the cowl was left open to improve cooling and prevent accumulation of engine fluids.

Powerplants fitted to the Nieuport 11 included the seven cylinder Gnome *Monosoupape* model "A" of 80 hp; the nine cylinder Le Rhone engines of equivalent power.

All engines were mounted on stamped steel bearing plates with the rear bearing supported by a second stamped steel structure, containing the end of the shaft within the fuselage. Immediately behind the engine was a 22 litre oil tank, and behind that a gasoline tank holding 78 liters.

Cockpit of the Nieuport 11 was compact, but adequate for a six-foot tall pilot. The metal bucket seat was mounted on a plywood box, but was not adjustable. The control stick and rudder bar were mounted on a plywood floor or platform

just large enough for the purpose. Cockpit accessories consisted of the usual gadgets required for the operation of a rotary engine, plus an altimeter, airspeed indicator, tachometer and air pressure gauge.

Landing gear was a conventional design, but novel for its day in that an aluminum alloy was used for the struts. These were hollow and of streamlined section, attached to the lower longerons by means of a steel stamped fitting secured by a steel pin. Lower extremities were attached on each side by stamped steel plates and although the axle was steel, the spreader bar covering was again made of an aluminum alloy. Rubber cord was used to absorb shock. The tail skid was rigidly attached to the fuselage and consisted of a small plywood fin and an extending arm. Shock was taken up by a length of spring steel at the end of the arm which also served as the skid shoe.

The characteristic Nieuport rudder was carried into the design from the Nieuport monoplane. It was equipped with a very small balancing portion ahead of the hinge line, and was flat in airfoil section. Horizontal tail surfaces consisted of a conventional stabilizer and split trailing edge elevator. The former was simply bolted across the upper longerons and braced by a short steel tube strut on each side attached to the lower longerons. Tail surface frames were a combination of wood and aluminum tubing.

The lower wing was constructed in right-and left-hand panels, each with a single spar of "I" section. Leading and trailing edges were wood. Ribs were made of thin three-ply cut out for lightness, held in place with tacks, small wood blocks and glue, then capstripped with strips of spruce. The lower wings were attached to a steel tube running across the lower longerons and which had half of the pin fitting brazed to each end. Inner wing spar ends were fitted with a ferrule to which was welded the other half of the fitting. The tapered steel pin which held the wing to the fuselage was cottered.

The upper wing was built in one piece, with two spars of "I" section carrying the ribs, leading and trailing edges. The front spar was exceedingly close to the leading edge and was widely separated from the rear spar. The latter provided anchorage for aileron hinges. Aileron control was a series of rigid steel tubes. A rocking arm on the stick had at each end a vertical tube connected to a bell crank. The crank, in turn, rotated a spanwise tube, located immediately aft of the rear main spar, to which the ailerons were attached. The upper wing was held off the fuselage by four streamlined wood struts bolted to fittings on the upper longerons. The forward struts were perpendicular when viewed from the front, but the rear struts formed an inverted 'V, with the point carrying attachment fittings. The right-hand rear strut carried a rear view mirror as standard equipment. The photographs accompanying this article show the prototype *Nie 11* in which the rear struts were made in the form of a bow.

Interplane rigging consisted of two flying and two landing wires on each side. Both forward flying and landing wires were 3 mm. diameter stranded cable, while the rear wires were 4 mm. in diameter.

For an 80 hp biplane of its period, the Nie. 11 possessed a fairly respectable performance. Top speed at sea level was 97 mph. Climb to 1,500 ft. altitude required 2 min 35 sec.; it reached 3,300 ft. in 5 min 6,600 ft. in 11 min 9,900 ft. In 18 min and its ceiling of approximately 15,000 ft. in 41 min Total air endurance was two hours maximum.

The Nieuport 11 took off after a run of about 100 ft. in still air, landed at 30 mph with a ground run of only 75 to 100 ft. depending on the surface. The tail skid was so shaped that it actually dug into the ground and provided an effective braking force.

Flight characteristics of the Nie. were far from what you could call perfect. At low speeds all controls lost their best effectiveness, particularly the rudder. At normal operational speeds the ship was quite sensitive, and required attention constantly. It was not a "hands-off" plane by any means. Lateral control was good and the rudder was quite effective. The elevators, however, were very effective and the ship responded instantly to fore and aft stick movement. At normal speeds, the Nie. 11 was very maneuverable, and was light on the controls. It stalled rather violently, spun easily but recovered quickly. The main difficulty with the ship was its lack of stability. Withal it was an enjoyable plane to fly and made many friends among Allied pilots.

One of the most famous squadrons to make good use of the Nieuport 11 was the renowned *Lafayette* Escadrille, officially designated as N. 125. This French Squadron was made up of American volunteers, and was activated April 16, 1916. At that time, the Nie. 11 was the standard single seat fighter of the French Air Service. It was used for four months by the *Lafayette* until August 1916, at which time the Nieuport 17 replaced it.

The remarkable exploits of the pilots of the *Lafayette* Escadrille were due in part to the good qualities of the Nieuport 11. As a fighting machine it was crude to begin with and soon became inadequate, but when France needed a single seat pursuit to combat the Fokker monoplanes it was ready and it helped turn the tide of German aerial supremacy.

(November 1951 Model Airplane News)

The photos accompanying this article are of the prototype.

Guillow's N-11 Building Notes

Phil Cox

It was built from the Guillow's 24" plan as you know and of course the primary problem with Guillow ships is to lighten them up using any method possible, which I'm sure you are familiar with.

Wings:

I used 3/16" x 1/8" stock for leading edges, 3/32" x 3/16" for trailing edges and 3/16" x 1/16" for spars, and laminated the tips. Ribs were mostly 1/32" except for juncture at fuselage saddle. More dihedral was added.

Stabilizer:

I used 3/32" sq. for the basic outline with 1/16" x 3/32" for ribs. This way I had plenty of stock which allowed me to sand the structure down to a strong 1/16".

Rudder:

Structure was done the same way.

Fuselage:

I abhor the half-shell method with the multi stringers running down the side of the fuse on a slab sided WWI ship, when it's so easy to locate what would normally be the main longerons on the plan and simply build two sides and use the former shapes for the tops only. I used firm 1/16" longerons with medium stock for the uprights. I filled in the sides and top (from nose to cockpit) with 1/32" soft "A" grain sheet for a more scale appearance.

Miscellaneous Details:

All struts (including landing gear) were medium-hard balsa. I eliminated the 'extra rib' the plan shows for mounting the wing struts which usually messes up the conformity of the rib spacing. Instead, I just used necessary cross blocking etc. to mount the struts.

I used the wire pin method to mount both the wing and L.G. struts- it's amazing how much more abuse the ship is able to absorb using this method - even landing gear. I very rarely use the bent wire L.G. system especially on the smaller to medium size models.

The biggest mistake I made with this model was using the dummy engine supplied in the kit. Not so much the appearance of the engine itself, but I made the hole for winding a little too small (which I will correct with minor surgery). I covered the structure with Esaki white tissue applied wet. Two coats of thinned nitrate and two coats of thinned silver Flo-Quill airbrushed constituted the finish. Struts were stained light oak and given one coat of gloss polyurethane. Rigging was elastic thread that I obtained some years ago from England- it's really great for rigging because it won't sag with age (like me).

Since the model was built for F.A.C Rubber Scale- I added all of the "ginger bread" I could for better scale points. Roundels were painted tissue applied with thinned white glue. The Indian head was done freehand on thin bond paper, which was cut out and glued on with the same white glue. Spoked wheels were also from England- but aren't made anymore.

The model shows the possibility of being a good flyer. The model without rubber weighs 2 oz. exactly. Test flight was at Muncie which resulted in 36 sec. on two loops of 5/32" FAI Tan 21 inches long. It needed more power but it was difficult to get a bigger motor in the small nose. I'm looking forward to better and longer flights now that it has had its nose surgery. The motor is now two loops of 3/16" FAI tan 21 inches long. The model flies with a very stable attitude, but is slow to attain altitude - my guess is that I'll still need more power and duration. Probably will have to wait 'till spring for further testing - it's starting to turn cold and won't be long 'till winter sets in. 11-20-01

Nieuport 11

Stew Meyers

I confess when I built my N11, I did not draw up a complete set of new plans. I simply Xeroxed the Guillow's plans and drew over them, reducing section sizes and making lamination forms. I only lofted a few pieces like the rear cabins and undercarriage front true views. The model was built directly off these plans. These plans are rather beat up today. Rather than publish this mess I have drawn up the plans for this issue to better show how I did it. I have also indicated the mods that Phil used for his rubber powered free flight where I can.

My Micro R/C version used slightly larger structural pieces, but the same general approach that Phil used with some exceptions. I used plug in lower wings and a bolt on top wing with functional nylon monofilament rigging. Despite some rather enthusiastic contacts with the ground (usually the result of an approach turn stall on landing) my only flight damage has been the hard balsa cabins cracking. The nylon 2-56 screw holding the top wing to the rear cabins has yet to shear as it is supposed to do. The cabins go first, if they were stronger, things would go as planned. I may modify the screw with a shear notch to encourage this. The bottom wings do pop out as designed stretching the rigging and absorbing energy. Building light and flexible pays off.

I have replaced the Puma/Dymond motor I originally used with a GWS -A and this is what I show on the plans. In order to get the required power for ROGs I had to over prop and run the Puma on nine cells. This is really pushes it out of its reliable operating range. For a lighter electric free flight (the R/C job weighs 6 oz.) in the neighborhood of 4 oz. with out the ROG requirement, this motor would work well on eight cells. I think a GWS on two Li-Poly cells would be a better bet though. For R/C I used zero-zero thrust offset, but would build in 5° down and 5° right for free flight. As a mater of fact I might enlarge the plans to 30" span like Burt did, keeping the same size structural elements for micro R/C to reduce the wing loading to 4 oz/sqft to be able to fly in smaller areas. It would not do as well as it does now in the wind however.

For the forward cabine on the N-11, glue a piece of 1/32 music wire to the strut with 3/32 extending aft. Add reinforcing carbon fiber to the outside of the strut on both sides (this puppy is not going to crack and it hasn't since I made this mod.). This music wire is attached with thread binding. The extending bit fits into a piece of 1/32 id aluminum tubing which is bound to a piece of 1/16th hard balsa which is in turn glued to the spar with gussets. This results in a strong connection which has very little eccentricity in the load path. The aft cabine vee is built up over the plan, the apex reinforced with 1/64th ply-wood. When the struts have been installed in the fuselage, the wing is fit up, and a pilot hole is drilled through the wing into the "Vee". The wing is then removed and the holes reinforced with cyano. The wing is then reassembled and a 2-56 tap is run through the holes. The wing hole will be reamed later to make it a clearance fit. Now a single nylon screw will hold the top wing on. A 0-90 nylon screw would suffice.

The inter planes are made from hard balsa (I used Kit wood) with 1/64th ply reinforcing at the base. The upper ends have 1/32 music wire bound to them similar to the cabins. The forward stub faces forward and the aft stub faces aft. Thus you can pinch the upper ends of the Vee together and they will flex enough for you to insert them into the tubes attached to the spars. The lower end has a piece of 1/32 nylon monofilament hot-stuffed to it. This is inserted into a 1/32 id. al. tube installed in the lower wing. For a rubber model, nylon monofilament could be used for the upper ends as well and the ply brace could be replaced by a thin layer of fiber-glass.

The rigging is attached to soft (staple) wire loops attached to the upper ends of all struts, the lower wing at the strut attach point, and the fuselage at the spar attach point. A piece of aluminum captured by the 2-56 mount screw is used at the cabine Vee rather than wire. The 5-lb test monofilament rigging attached to these points is not for decoration, but is functional. Being able to remove the wings at will has real advantages for repairs and the flexibility built in will reduce prang damage.

The undercarriage is made from three layers of 1/32 bass wood with a 1/32 slot left in the middle to accept the mount wire. The lower Vee is reinforced with 1/64th ply. The cross piece is .050 carbon rod faired out with balsa. The axle is shock mounted with dental rubber bands. Functional rigging is used. This has turned out to be exceptionally rugged. I would not back off for a free flight model. You can't flair a free flight on landing or select the site.

Using the vacu-formed motor that comes in the kit is a losing proposition. Not only does it look not quite right, but it makes it difficult to make a removable nose plug that will allow enough rubber to fly it well or allow for easy adjustment the thrust line. I show how to build one from scratch on the plans.

The plastic cowl on the other hand works well. I bonded a styrene reinforcing ring around the rear outside before I cut it out of the sheet. This not only beefed it up but made it easy to cut squarely. I glued in some side pieces to match the cheek pieces on the fuselage and use tiny magnets between these to hold it on. The cheek cowls are easy to make from bond paper and are more scale than the plastic provided.

Only two large rondels are provided in the kit for the upper wing. There should be two more for the under sides. There were also two identical Indian heads in my early kit, so one faces backwards. The later kits have a mirror image head which cures the problem. I painted the rudder colors, I have never been able to get decals to look right on a rudder edge. For rubber I would use colored tissue.

I covered my R/C job with Lite-Span which is too rubbery for my taste. Jap tissue would have been better or Poly-Span if I thought I could afford the weight on an R/C job. The tyres are Hobby lobby with the hard rubber replaced with foam rubber and the hub reamed to .050 to allow a .047 axle.

Other building notes and techniques are found on the plans.

Dummy Motors for Dummies

Stew Meyers

I have flown my N-11 without a dummy engine, but it just did not look right. Partially cowled engines on planes like this or the Fokker E-III really require a dummy engine. No way could I use the vacu-form motor in the kit. I womped up a crude dummy engine for the N-11 with cylinders carved from 3/8" square balsa stock. The motor case was cut from 1" thick balsa and the cylinders pinned to it with sections of toothpicks and Ambroid. The case is held to the firewall with magnets. There is a cutout for the GWS electric motor, and the top cylinder is missing. Very crude with no other details, but it sure looks better in the air.

I have since come up with a better way. Cut the motor case, a nonagon circumscribed about a 1-1/4" diameter from 1" inch balsa. At this scale, the cylinders are about 3/8 inch diameter. Use a sharpened piece of 3/8 inch diameter brass tubing to cut end disks from 3/32 balsa. Use a piece of 11/32 inch diameter brass tubing as a form to wrap bond paper strips into cylinders. I used 4-1/4 x 5/8 inch strips. Daub the end with a glue stick and wrap the strip, glue side out, around the tube. Pull tight to start the cylinder, then lay it down and coat the inside surface of the paper with a thin layer of white glue. Finish the wrap, smoothing it out with your fingers. You can slide the cylinder off the tube in a minute or so and start the next one. Do nine. Glue a balsa disk flush in one end of each cylinder with white glue. This is quicker and easier than carving or turning them from balsa.

Draw fins on aluminum colored paper or easier yet print it with your trusty computer and wrap around the cylinders. Repeat nine times. Glue disks in the open base end of the cylinders.

Now for final assembly. Paint the case. Glue the cylinders carefully in the center of each side face. Add any detail such as cylinder heads, intake tubes, push rods, cams, spark plugs, etc. If you wanted to go first class, drill 10 mm mounting holes in each face of the nonagon motor case and get a 1" LeRhône cylinder set from Thomas Designs for \$22.

For the rubber version, make the nonagon motor case from 1/2 inch basswood. You will need the weight. A central hole is cut with a 3/4 inch Forstner drill bit, so that a BT-20 0.736" O.D. model rocket tube can be inserted as a winding tube. Make a rear spacer ring 1-1/8" O.D. 3/4" I.D. from 1/2 inch basswood. This can be pretty crude. Oh what the hell, you can just use 3/8 inch diameter dowel for the cylinders, you'll need the nose weight. I drilled mounting holes for these with a 3/8" Forstner bit.

Now make the removable nose plug. This consists of a 1-1/8 diameter 1/16th plywood disk and two cross grained hard balsa 3/4" disks cut to a snug fit inside the central hole. Match drill the nose plug and front of the motor case for a dowel key.

On this 1" to 1' scale motor I used a 1/16th Music Wire prop shaft, since I would need a fair amount of rubber to power a draggy 24" biplane. Drill a 3/32 hole through the nose plug at the thrust angle 5° down and 5° right. Solder a 1/2 inch length of 1/8 O.D. brass tubing over a 1" length of 3/32 O.D. brass tube to form a prop thrust bearing. File the ends smooth. Insert the 3/32 O.D. brass tube up to the 1/8 tube and epoxy it in place at the right angle. This tube extends 1/2 inch from the face of the nose plug. Of course you are going to use a 'S' hook and clutch with this.

The dimensions for the dummy motor given in this article are not quite what Guillow's shows for their vacu-form motor but are closer to scale and will fit the Thomas design cylinders. The 3/4 inch rubber hole will let you load in two 24" loops of 3/16 or 1/4 FAI. My prototype motor with dowel cylinders, a FAI clutch, and a 9" peck prop weighs 26 grams. Paper cylinders would bring the weight down to 10 grams.

National Building Museum Fun-Fly April 6, 2003

Dime Scale (4 entries)

- | | | |
|---|----------------|-------------|
| 1 | Rich Gillis | Harlow |
| 2 | Ed Zapolski | Vega |
| 3 | Bob Flickinger | Neiuport 17 |

Phantom Flash (10 entries)

- | | |
|---|----------------|
| 1 | Steve Fujikawa |
| 2 | Terry Slattery |
| 3 | Dave Mitchell |

WW II Profile (9 entries)

- | | | |
|---|----------------|-----------|
| 1 | Steve Fujikawa | Dauntless |
| 2 | Terry Slattery | FW-190 |
| 3 | ? | |

P-Nut (12 entries)

- | | | |
|---|--------------|-------|
| 1 | Dan Driscoll | OH-7 |
| 2 | Bob Bissett | Lacey |
| 3 | Ed Zapolski | Davis |

Bostonian (5 entries)

- | | | |
|---|----------------|-----------|
| 1 | Steve Zapolski | Trex-Box |
| 2 | Ed Zapolski | Monocoupe |
| 3 | Dan Driscoll | Robin |

Scale Biplanes (insufficeint entries)

RTF/ARF (3 entries)

- | | | |
|---|-----------------|-----------|
| 1 | Terry Slattery | Butterfly |
| 2 | Paul Spreiregen | Butterfly |
| 3 | Steve zapolski | Butterfly |

GRAND CHAMP: Steve Fujikawa

PAINT THIS AREA OF
WIND BREAKER SILVER
OR ALUMINUM

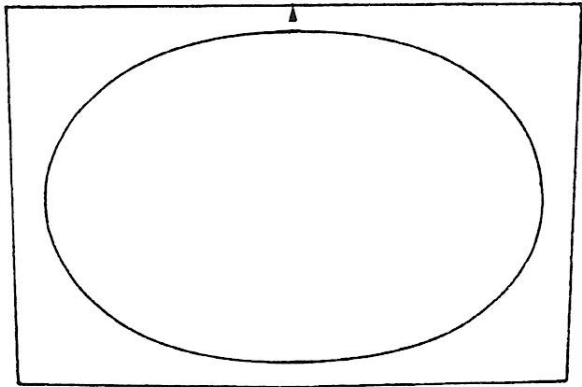


WINDBREAKER PATTERN

CUT FROM CELLOPHANE OR THIN ACETATE SHEET

PLASTIC NOSE COWL

ADD AFTER MOTOR INSTALLATION
— CUT HOLE FOR FUEL TUBE EXTENSION
AND LEAD WIRES.



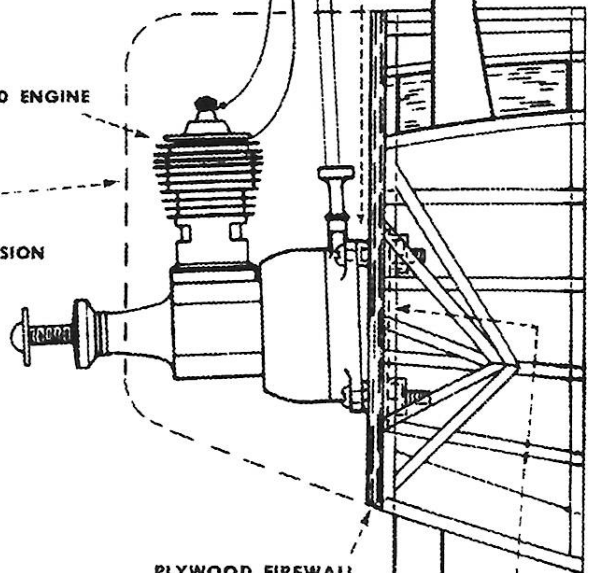
STIFF PAPER COCKPIT PATTERN

PLASTIC FUEL TUBE EXTENSION

SOFT COPPER LEAD WIRES

USE PIECES OF FUEL LINE
TUBE FOR SPACERS— SEE
INSTRUCTION

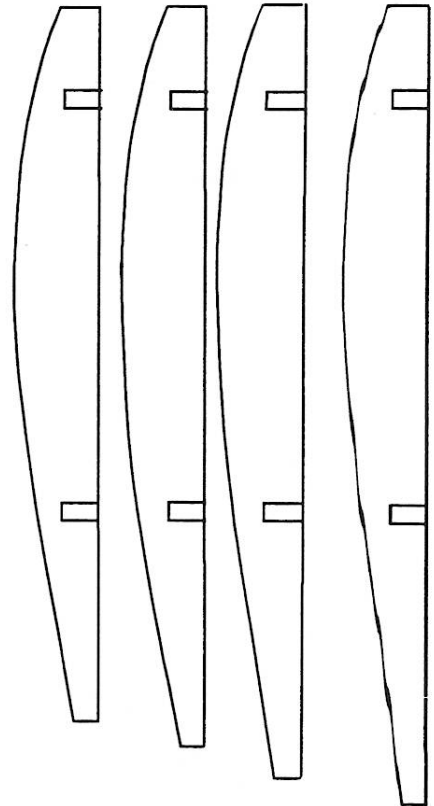
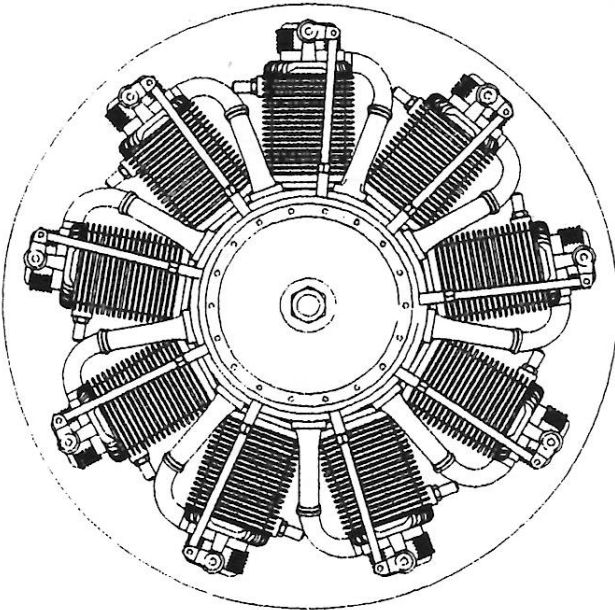
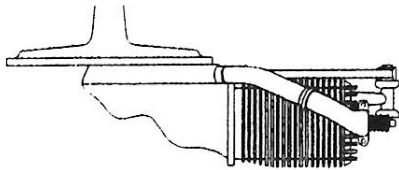
LOX .020 ENGINE



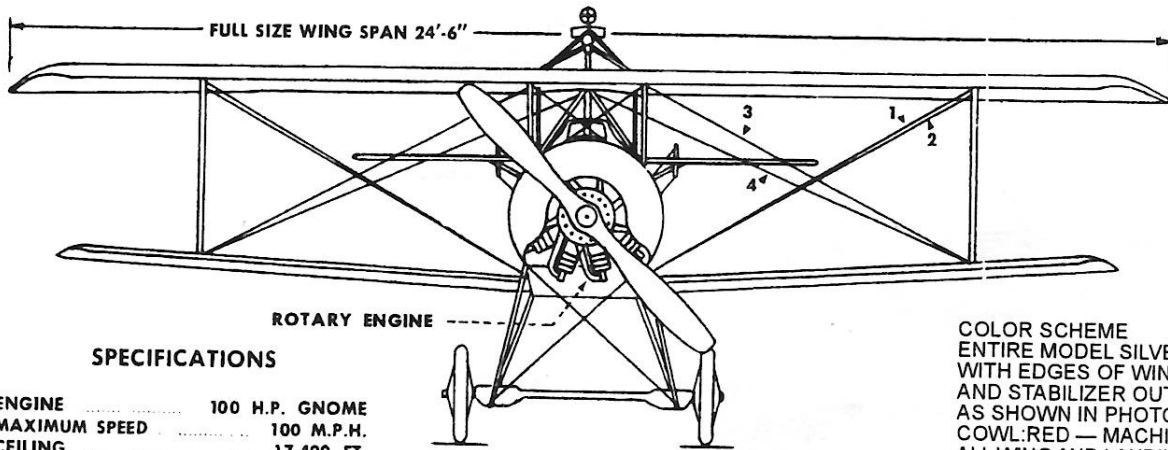
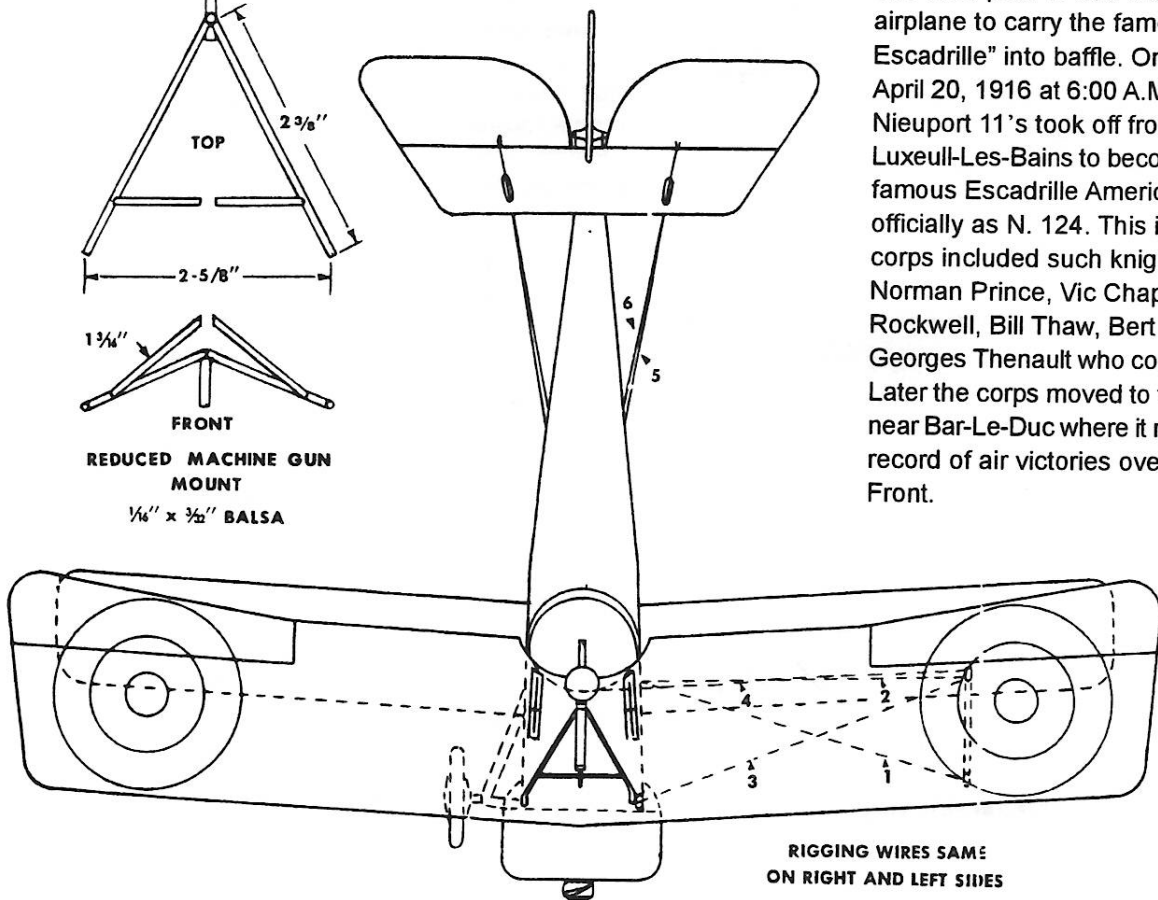
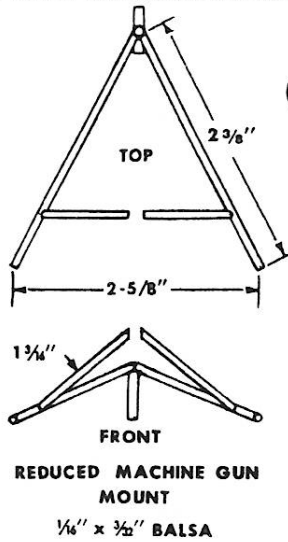
PLYWOOD FIREWALL

PLASTIC
NUT HOLDER

GAS MODEL HINT: USE A PIECE OF
MEDIUM SIZE PLASTIC FUEL LINE AS A
NEEDLE VALVE EXTENSION THRU TOP
OF PLASTIC COWL.



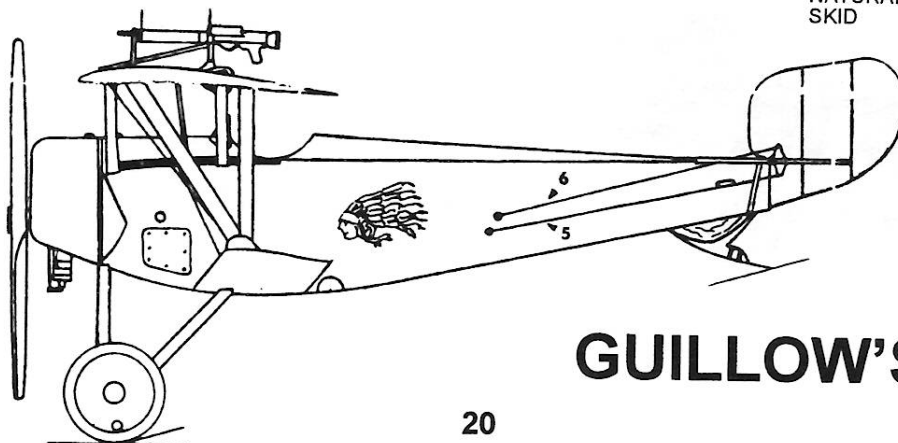
The Nieuport 11 was the first combat airplane to carry the famed "Lafayette Escadrille" into battle. On the morning of April 20, 1916 at 6:00 A.M., the first flight of Nieuport 11's took off from the airdrome at Luxeuil-Les-Bains to become the historically famous Escadrille Americaine, known officially as N. 124. This immortal flying corps included such knights of the air as Norman Prince, Vic Chapman, Kniffin Rockwell, Bill Thaw, Bert Hall and Captain Georges Thenault who commanded N. 124. Later the corps moved to the Verdun sector near Bar-Le-Duc where it ran up an enviable record of air victories over the Western Front.



SPECIFICATIONS

ENGINE	100 H.P. Gnome
MAXIMUM SPEED	100 M.P.H.
CEILING	17,400 FT.

COLOR SCHEME
ENTIRE MODEL SILVER OR ALUMINUM WITH EDGES OF WINGS, FUSELAGE AND STABILIZER OUTLINED IN BLACK AS SHOWN IN PHOTO.
COWL: RED — MACHINE GUN: BLACK, ALL WING AND LANDING GEAR STRUTS NATURAL WOOD FINISH — ALSO TAIL SKID



GUILLOW'S 3-VIEW

John Ernst on the DPC Halberstadt

Stew has asked me to write down some comments about my experiences with the DPC Halberstadt CL.II kit after I sent him and Tom some photos in an effort to cheat my way into the Guillow's Grappa.

Let me say that although I built this using some parts from the kit, I must mention that I made several modifications. These changes were made in an effort to increase the potential flying ability of the finished plane, not because there was any apparent problems with the kit.

First, I made all the tail feather outlines from two laminations of 1/16x1/32. I also did this for both sets of wingtips. This I'm sure really helped to lighten the load behind the CG. Next, I made all new wing ribs. The kit ribs had the main spar on the bottom surface, and I wanted to move it to the top, also I made all the ribs (except those at strut attachment points) from 1/32 sheet. I'm sure this saved some weight also. Then I added some weight back into the plane by building the wings with scale rib spacing. I think it just looks good. While I was at it, I changed the trailing edge of the wings from 1/16 x 1/4 to 1/16 x 1/8.

You're probably asking yourself - is there anything from the kit that I did use? Well, for the fuselage, I used all the laser cut kit parts, and it went together beautifully although I did cut out the excess meat in the formers to save weight. The wood was good and light so I didn't see any reason not to use it. The strip wood in the kit was light although not quite as straight as I would have preferred.

I should mention that DPC is undergoing some positive changes. Dave Cowell, the owner, has purchased his own laser cutting machines and is now responsible for the accuracy of the kit parts - not a subcontractor. This I know will result in greater quality control. I have the bones of several of the DPC kits waiting to be covered, and if I had ever mentioned a discrepancy in a kit, i.e., parts weren't the same size as the plan, or not enough strip wood to complete the project, Dave has always sent me the adjusted parts, new plan, extra wood, or whatever was needed to complete the kit - no questions asked. Actually, he wants feedback from his customers so he can continue to make his product better.

If you're looking for a lightweight, FAC scale, Kanone grabbing, WWI plane, then be prepared to spend some time making modifications. But, if you are looking for a nostalgic trip into your earlier model building days when a Guillow's kit was the best thing going, then a DPC kit is the item for you. The construction methods, and wood sizes are typical of the Guillow kit, but the wood thankfully is much lighter, and the planes actually fly. You're not going to find a better selection of WWI FF kits anywhere.

<http://www.dpcmodels.homestead.com/>

PHOTOS Page 23

9. Nate Sturman in Japan is a prolific producer of great looking and flying rubber scale models is seen here with one of his latest the Ann.

10. One of our correspondents, Van Hereford sent this photo of his latest low wing rubber model; believe the plan was in a recent edition of Flying Models.

11. Another model from the Bob McLellan; his original low wing trainer the Temco T-35 Buckeroo ready for Bob's Low Wing Trainer event this month at Petersburg.

12. A recent scale model of the Taylor Chummy by our friend John Lewars in Pennsylvania. Send John a note to JOHN G.LEWARS 4416 MAYS AVENUE READING PENNSYLVANIA 19606. John is facing some surgery and we are sure he would be glad to hear from you.

13. John Ernst is a prolific builder of WWI models. Here is his Halberstadt. Stew has finally included an article by John is in this MAXFAX.

14. How could anyone forget Ned Kragness and his love of the BT-13. Here is one of many he constructed as restored and converted to electric R/C by Don Srull.

15. Jerry Persh sent this photo of his old time rubber the Cleveland 'Polish Valor' one of the series Cleveland produced to commemorate the counties overrun by the German War machine in WWII.

16. Our good friend Captain Pat Daily sent this photo of his electric R/C Pietenpol from a Dumas kit. Look at the nifty Ford engine installation. A 1524 motor and

THE FINAL WORDS - "I WAS WRONG!!!"

Allan Schanzle

Bill Weaver is one of our long time members and resident of Hagerstown, MD, where the Fairchild XC-31 was manufactured. This was the plan presented in the Jan./Feb. issue. Bill wrote to say he saw the plane, and the fuselage was "light/medium blue". So if you choose to build the model, don't follow my rational in the Jan./Feb. issue and make the fuselage olive drab. Do it right!

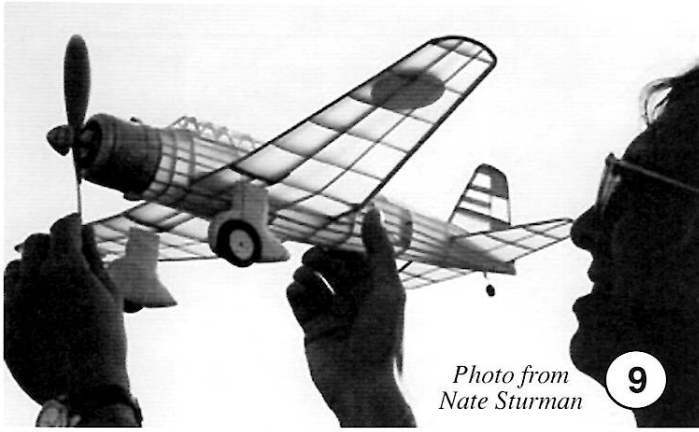


Photo from Nate Sturman 9



Photo by Van Hereford 10



Photo by Bob McLellan 1



Photo from John Lewars 12

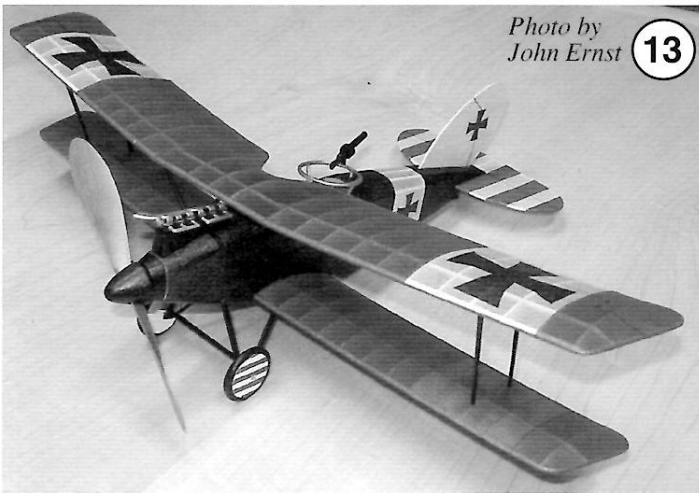


Photo by John Ernst 13



14 Photo by Don Snull

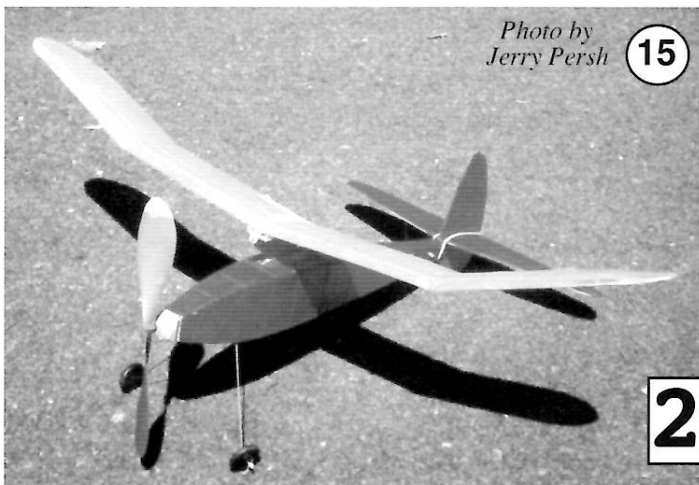


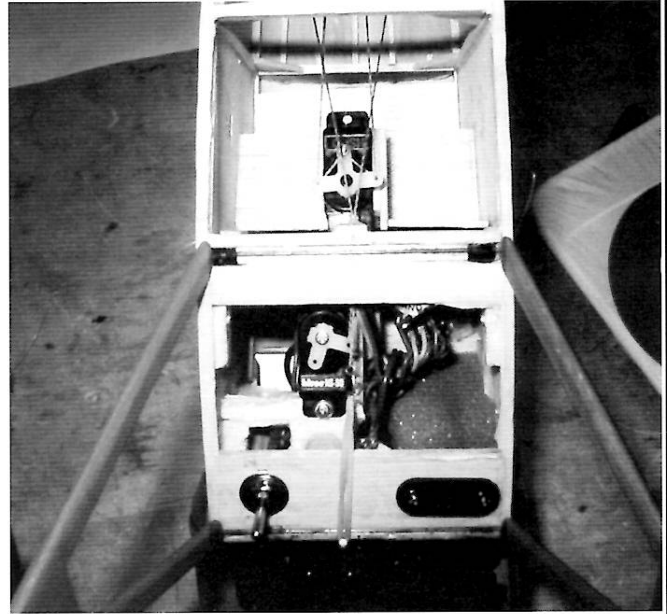
Photo by Jerry Persh 15



16 Photo by Pat Daily



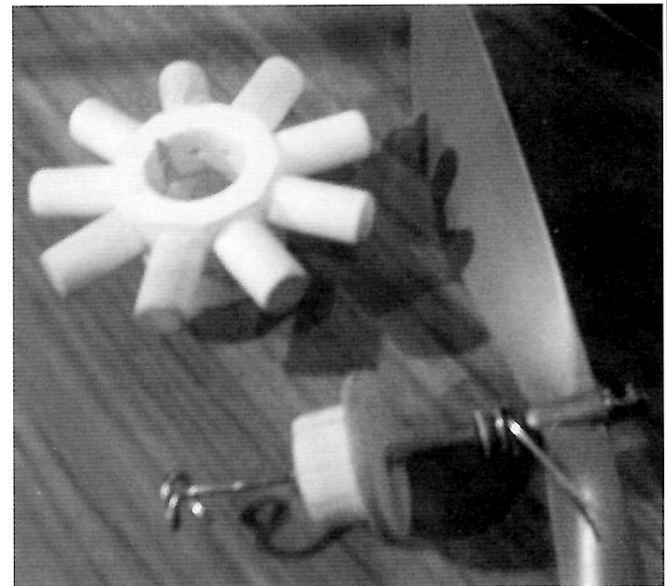
Here the cowl has been removed to show the GWS-A motor installation. The round dots on the cheek cowls are the magnets that hold the cowl on. The dummy motor had not yet been installed. It is held in by magnets in a similar manner.



Under side with covering removed to show the R/C installation. Note the pull-pull control wires in scale positions. Rubber band pulls elevator down. The 560 Li-Poly battery is horizontal above the servo and receiver



Stew's R/C N-11 in latest configuration with a proper dummy motor and painted cowl. Still needs a Lewis gun doesn't it. Well at least that GWS 9-6 prop isn't orange anymore.



Basswood dummy motor with 9 inch Peck prop and clutch ready for a rubber version.

CLUB OFFICERS -President: Hurst Bowers, 1649 Birch Rd., Mclean, VA 22101
Secretary: Bert Phillips, 1709 Crofton Pky, Crofton, MD 2111-2305
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.

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 below 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 301-385-1749. Email gets immediate attention. stew.meyers@erols.com

Maxecuter web site: www.maxecuter.com

Your DUES are due

1/32 Balsa shim between two fuselage sides
to allow easy insetion of ruder hinge
grain runs fore and aft

1/16x1/8 strip even with top of lower
longeron (prevents ham handed
launch crunches)

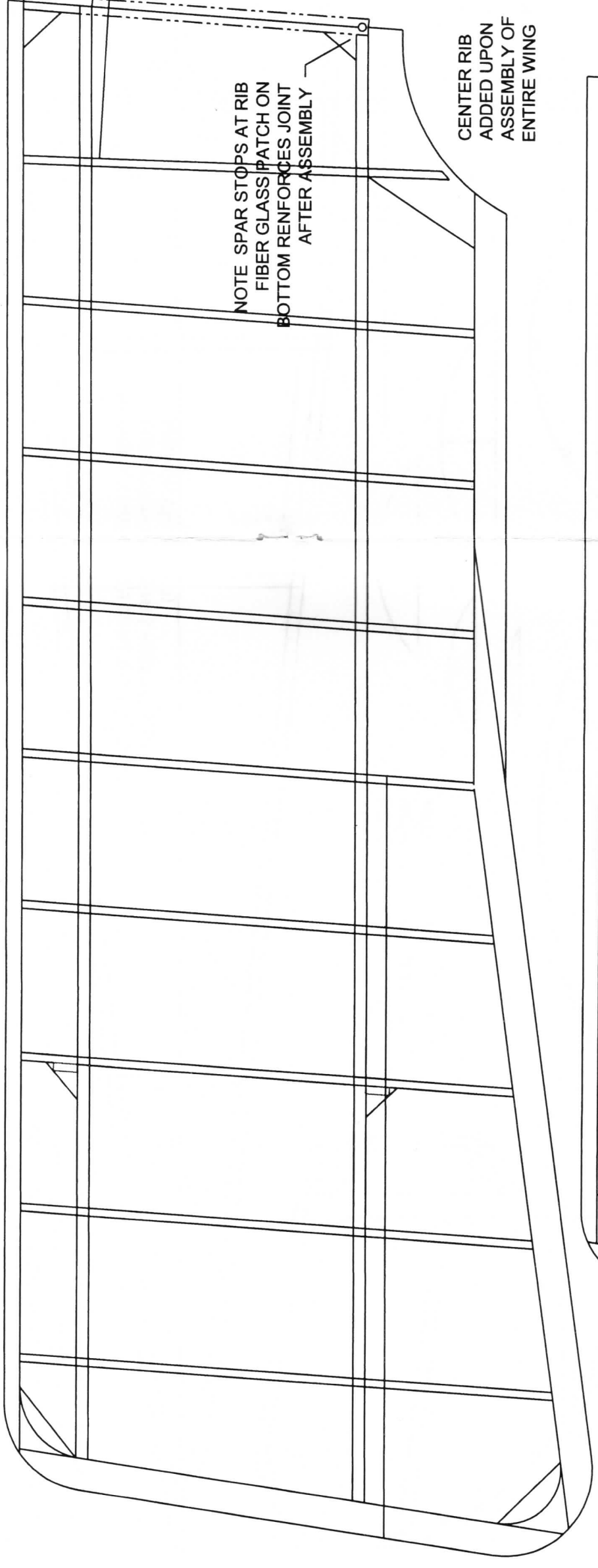
COVER TOP OF FUSELAGE WITH
BOND PAPER TO FORMER 4 AND
WITH STRINGERS AND TISSUE
AFT

CENTER RIB
1/8 Balsa

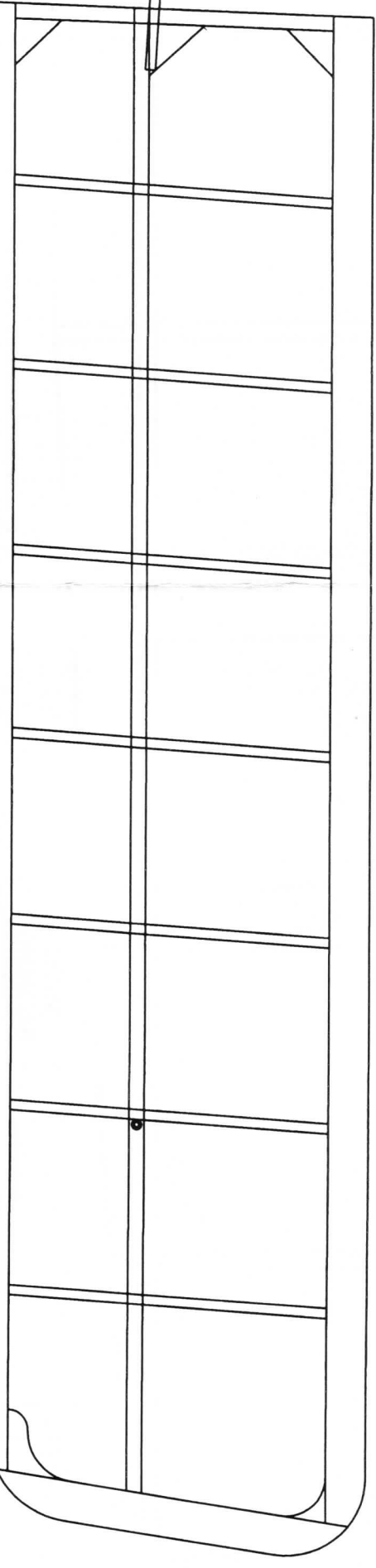
rib 1 fwd
center rib aft

DUMMY MOTOR FOR GWS CUT HERE TOP
CYLINDER OMITED

THESE DRAWINGS SHOULD ALLOW YOU BUILD A LIGHTER N-11 THAT FOLLOWS THE
OUTLINE OF THE GUILLOWS N-11. I HAVE NOT REALLY DRAWN UP A COMPLETE SET OF
PLANS BUT RATHER CONCENTARATED ON CONSTRUCTION DETAILS.
NOTE THAT EVERY JOINT IN THE FUSELAGE SHOULD BE GUSSETED.
MOST FEATURES WERE INCORPORATED IN MY R/C VERSION A FEW HAVE BEEN
SUGGESTED TO CURE PROBLEMS THAT AROSE IN FLYING IT FOR SEVERAL YEARS.



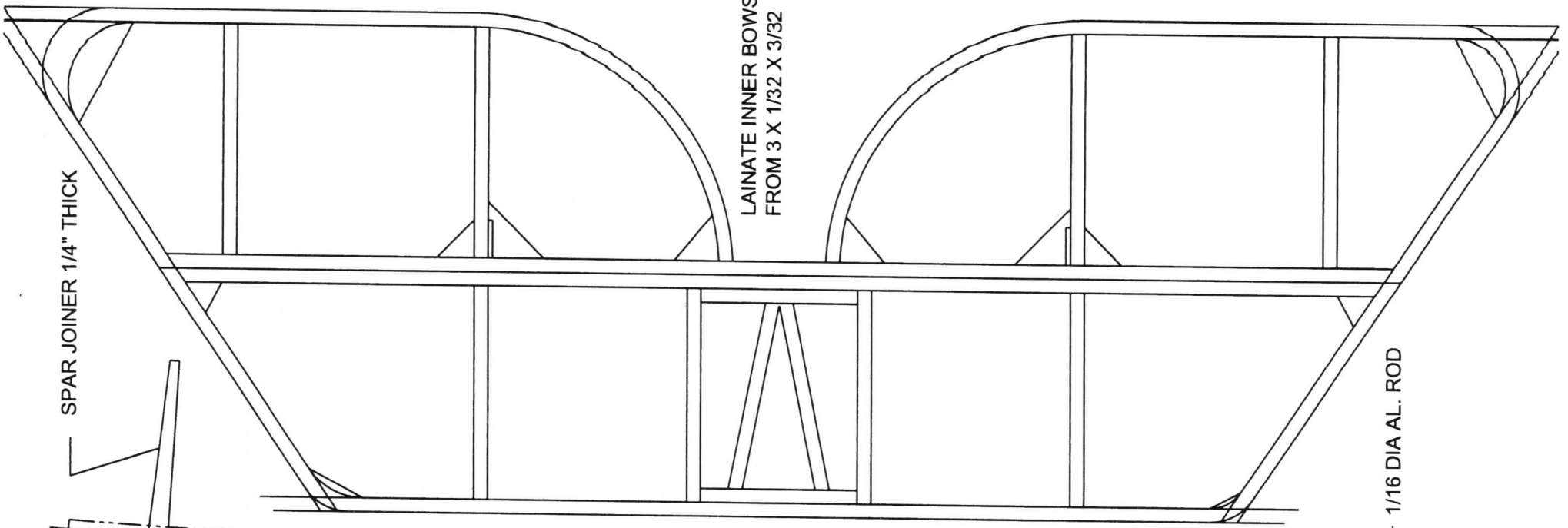
SPAR JOINER 1/4" THICK



DIHEDRAL 3/8"
UPPER WING
1" LOWER WING

LE 1/8 X 3/16
SPARS 3/32 X 3/16
TE 1/8 X 1/4

FOR A RUBBER VERSION:
FOLLOW PHIL'S
APPROACH AND MAKE
MOST RIBS OF 1/32
SHEET AND THE SPARS
OF 1/16 X 3/16
THE INTERPLANES CAN
USE MONOFILAMENT AT
THE UPPER ENDS FOR A
LIGHTER MODEL.
I HAVE TESTED A
MAGNET RATHER THAN
A NYLON BOLT FOR THE
REAR CABINES. THIS
WILL WORK NICELY FOR
A FREE FLIGHT, BUT I
DONT RECOMMEND IT FOR
R/C.

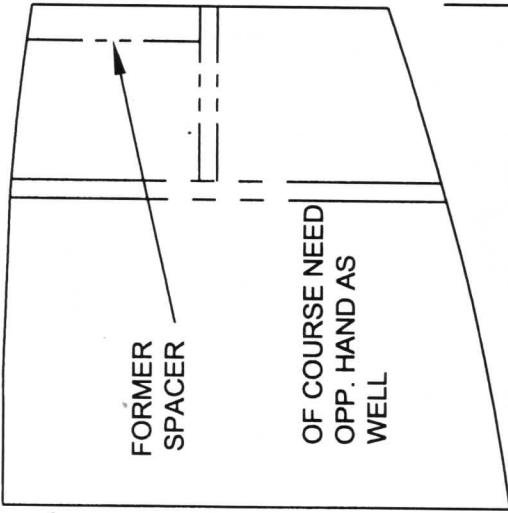


LAMINATE INNER BOWS
FROM 3 X 1/32 X 3/32

1/16 DIA AL. ROD

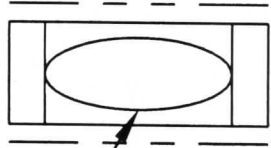
CENTER RIB
ADDED UPON
ASSEMBLY OF
ENTIRE WING

NOSE SHEETING 3/32 R/C MARK FORMER #2 POSITION AS WELL AS CROSS BRACE AND CABINE SPACER

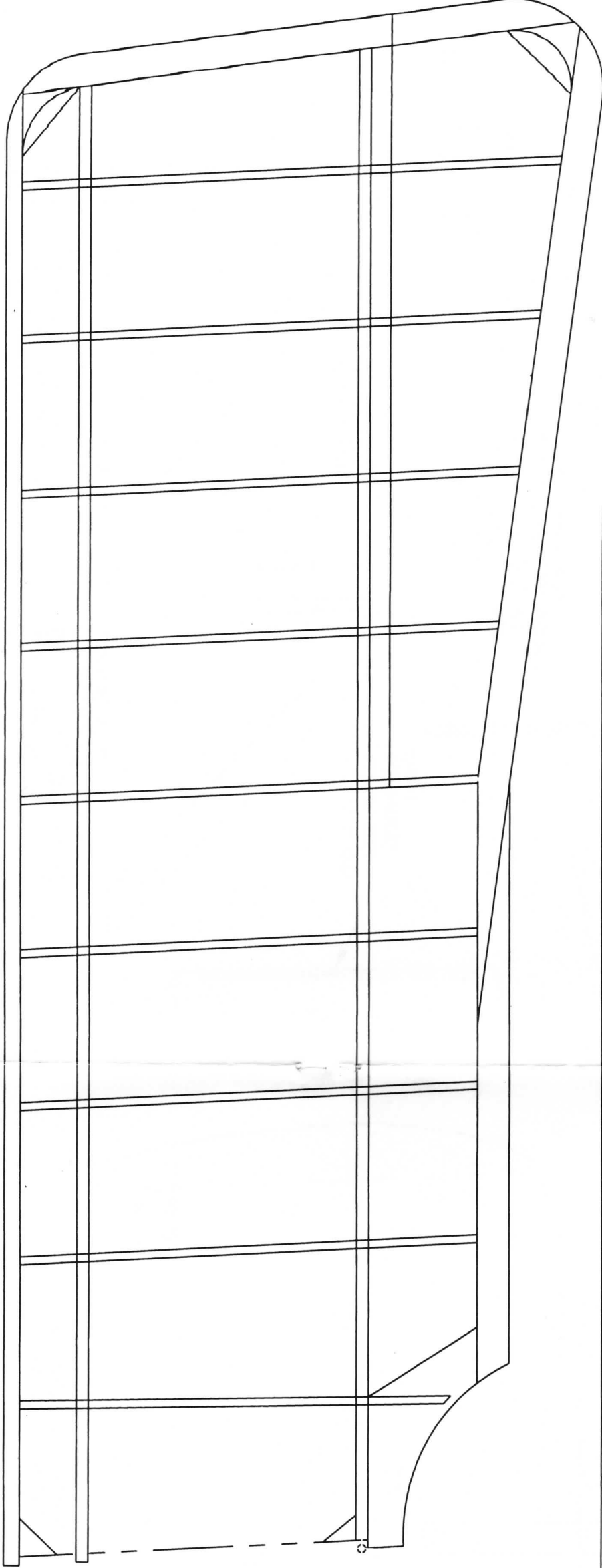


FORMER SPACER

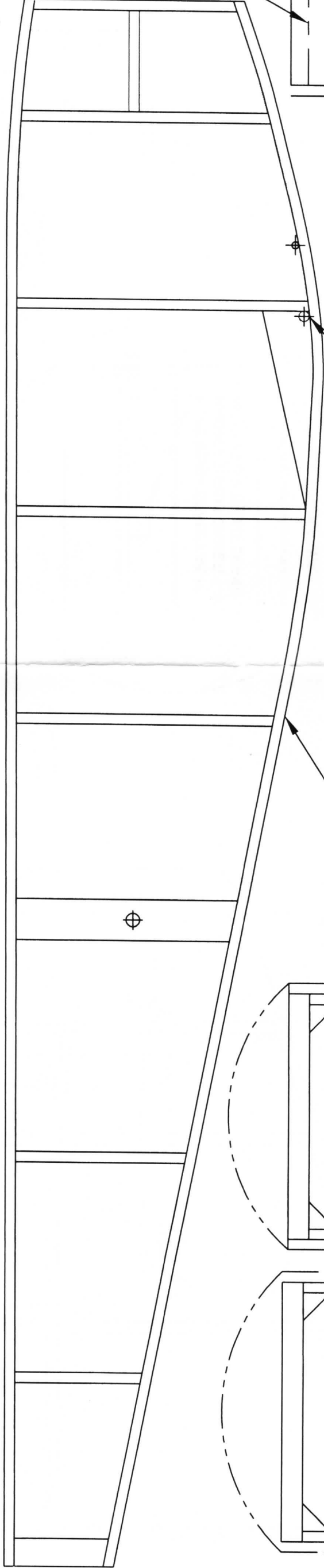
OF COURSE NEED OPP. HAND AS WELL



REAR FORMER MADE UP FROM 1/32 VERTICAL GRAIN SHT. WITH 1/16 X 3/16 CROSS PIECES ASSEMBLE BEFORE FUSELAGE ASSEMBLY



FUSELAGE SIDES ASSEMBLED UPSIDE DOWN - TAB SPACES FORMER, TRIMMED AFTER ASSY

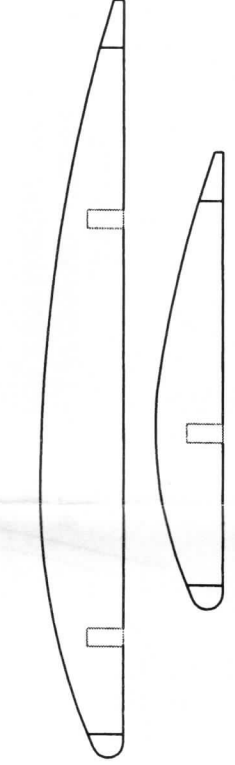


FORMER #3 FWD OF COCKPIT ASSEMBLE AS A UNIT BEFORE FUSELAGE ASSEMBLY ADD CURVED TOP LATER

FORMER #4 AFT OF COCKPIT ASSEMBLE AS A UNIT BEFORE FUSELAGE ASSEMBLY ADD CURVED TOP LATER

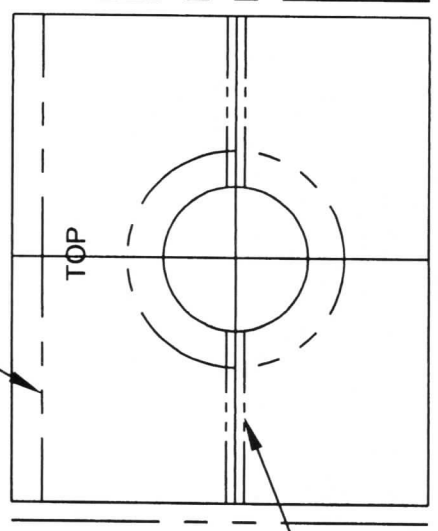
10

SOAK AND FORM LOWER LONGERONS OR LAMINATE FROM MEDIUM Balsa 3 x 1/32 X 3/32. THIS IS NOT A PLACE TO SAVE WEIGHT!



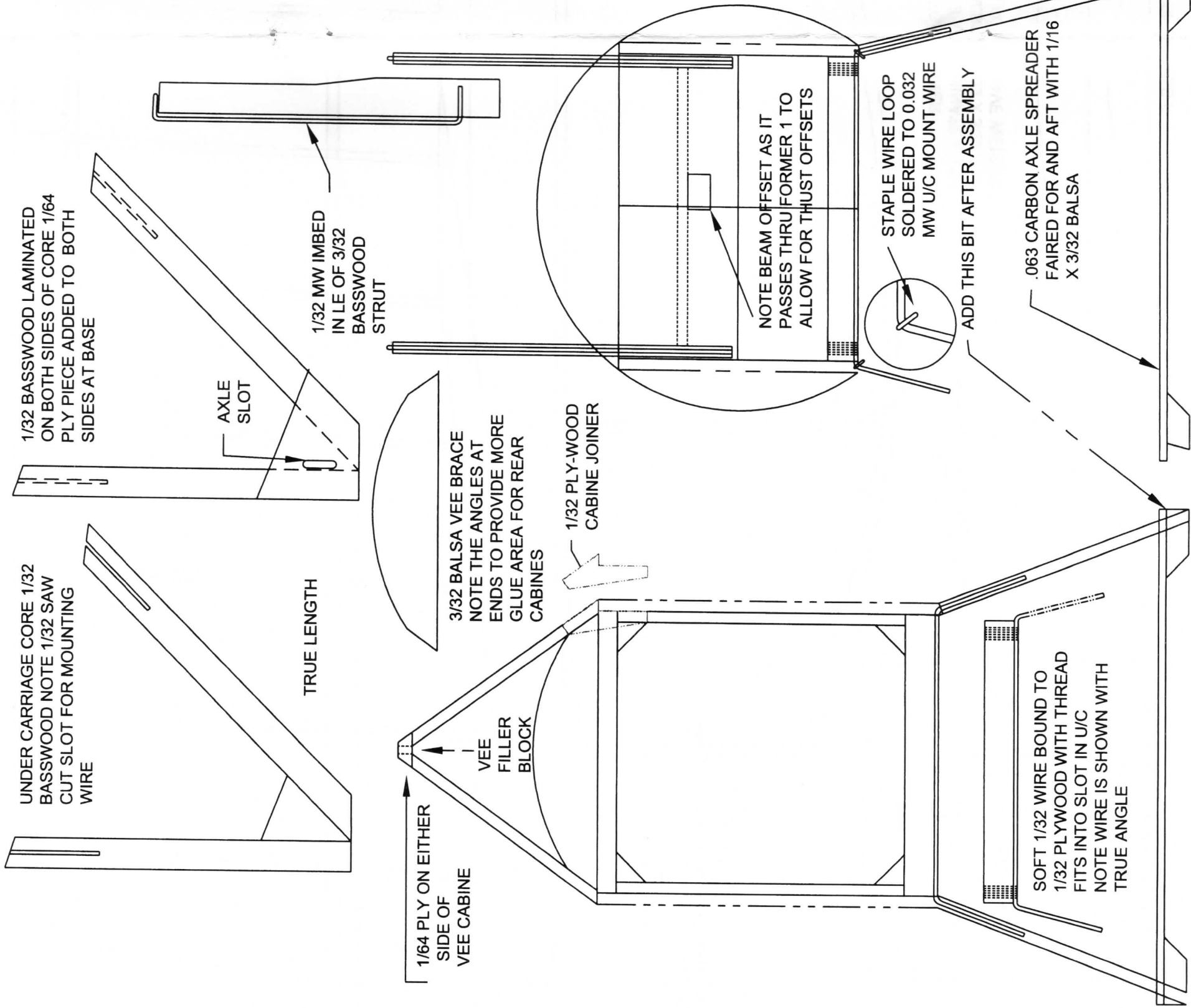
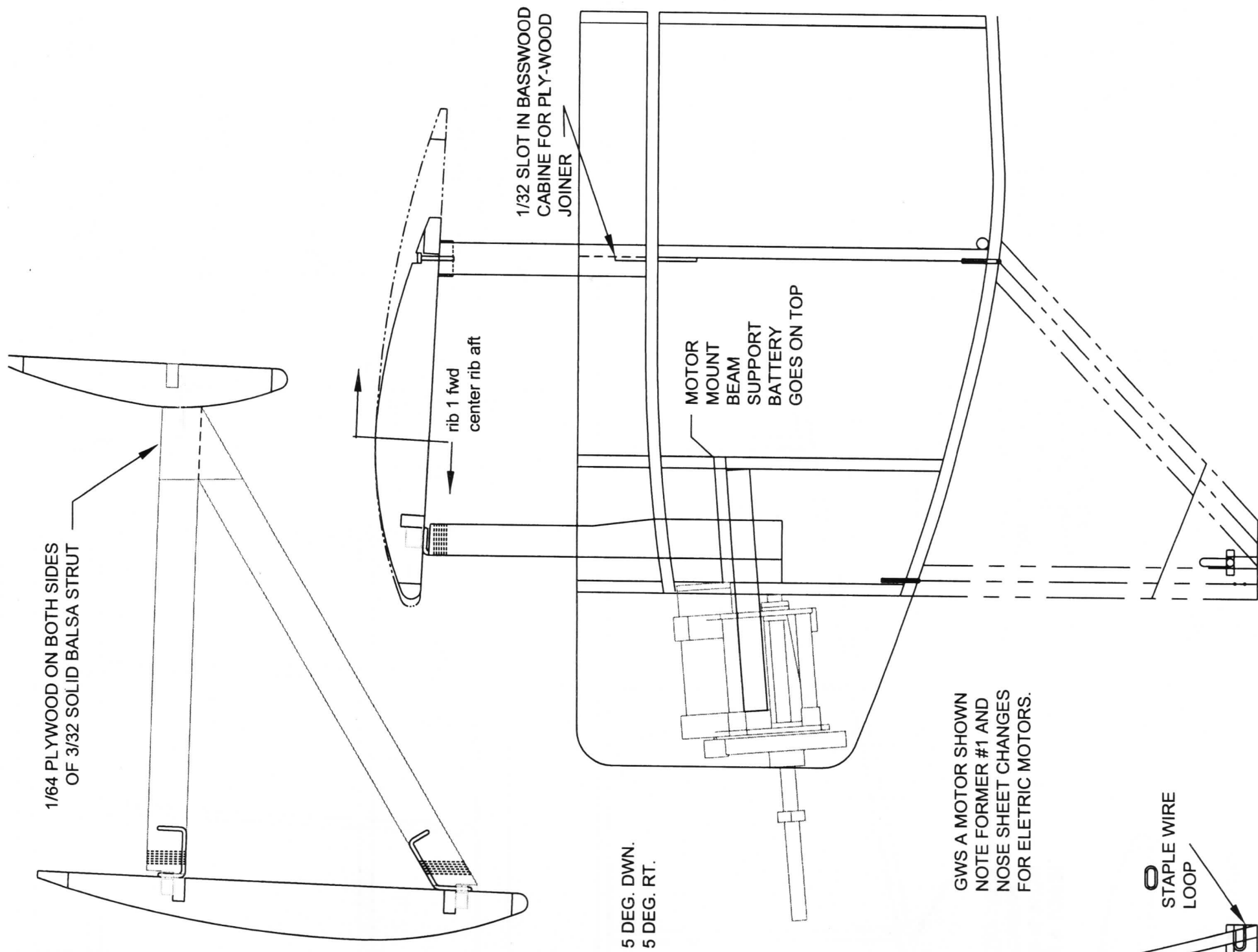
OUTER RIBS ON DETAILS SHEET

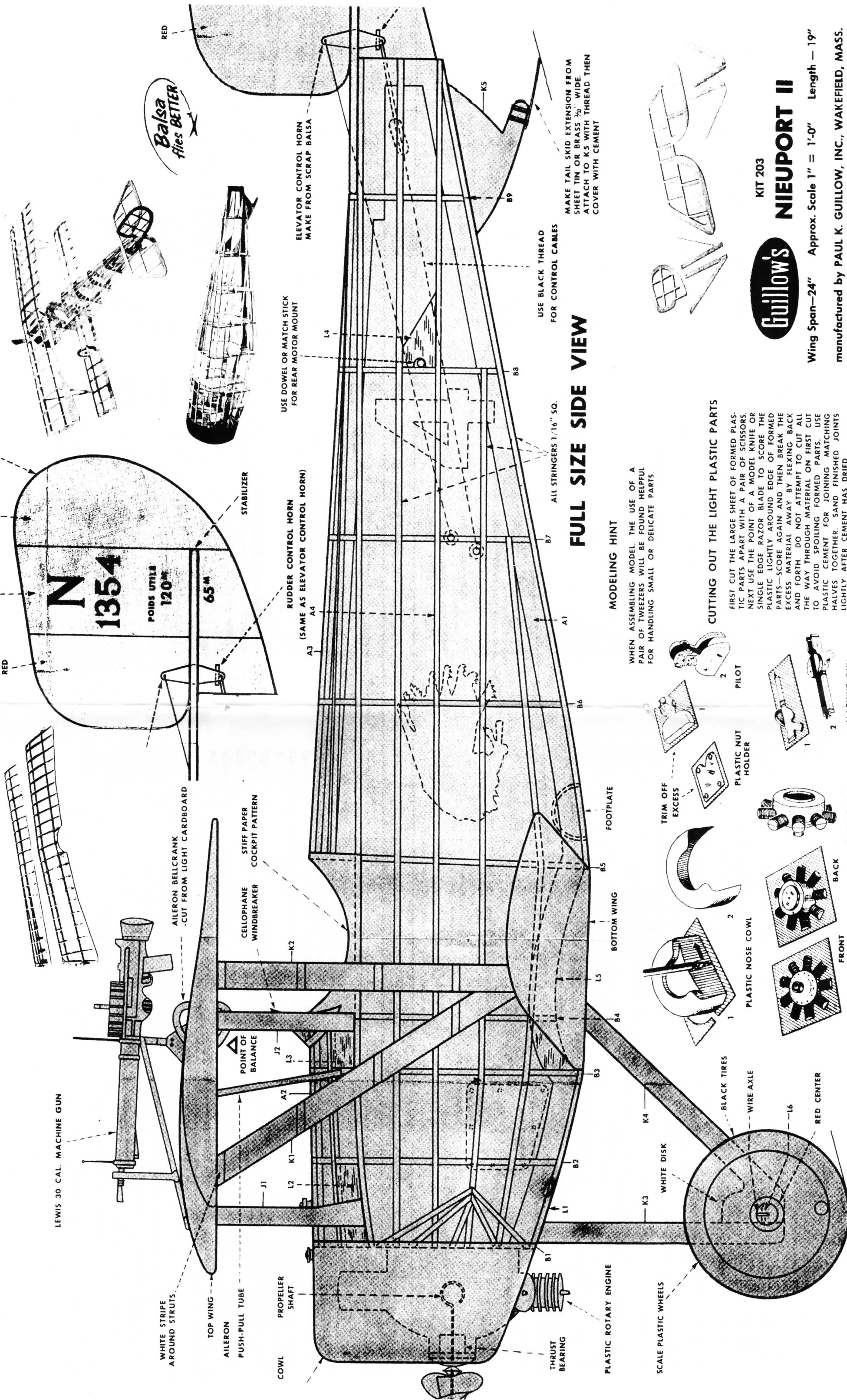
MATCH DRILL BOTH SIDES FOR 3/32 SPAR MOUNT TUBE



FORMER 1 RUBBER

15





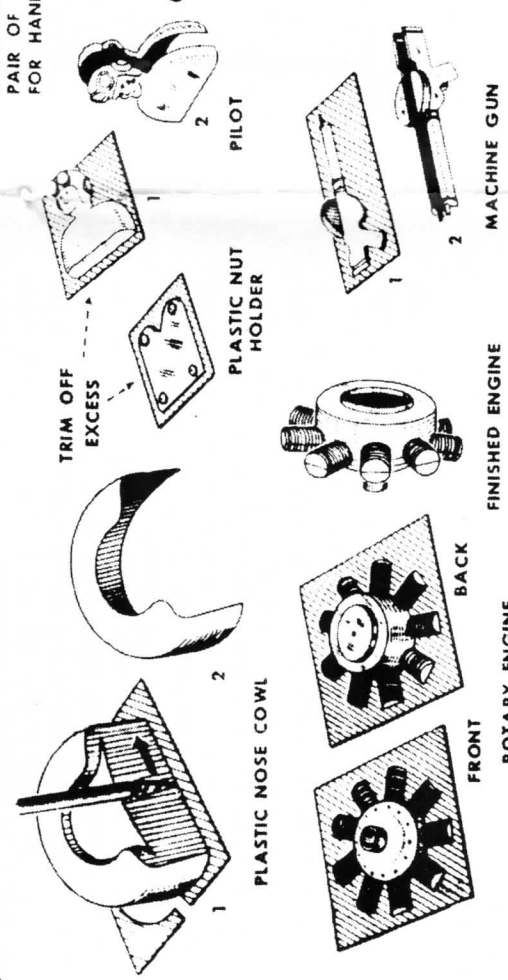
FULL SIZE SIDE VIEW

MODELING HINT

WHEN ASSEMBLING MODEL THE USE OF A PAIR OF TWEEZERS WILL BE FOUND HELPFUL FOR HANDLING SMALL OR DELICATE PARTS.

CUTTING OUT THE LIGHT PLASTIC PARTS

FIRST CUT THE LARGE SHEET OF FORMED PLASTIC PARTS APART WITH A PAIR OF SCISSORS. NEXT USE THE POINT OF A MODEL KNIFE OR SINGLE EDGE RAZOR BLADE TO SCORE THE PLASTIC LIGHTLY AROUND EDGE OF FORMED PARTS—SCORE AGAIN AND THEN BREAK THE EXCESS MATERIAL AWAY BY FLEXING BACK AND FORTH. DO NOT ATTEMPT TO CUT ALL THE WAY THROUGH MATERIAL ON FIRST CUT TO AVOID SPOILING FORMED PARTS. USE PLASTIC CEMENT FOR JOINING MATCHING HALVES TOGETHER. SAND FINISHED JOINTS LIGHTLY AFTER CEMENT HAS DRIED.



Guillows
KIT 203
NIEUPOORT II

Wing Span—24" Approx. Scale 1" = 1'-0" Length — 19"
manufactured by PAUL K. GUILLOW, INC., WAKEFIELD, MASS.

Balsa Flies BETTER