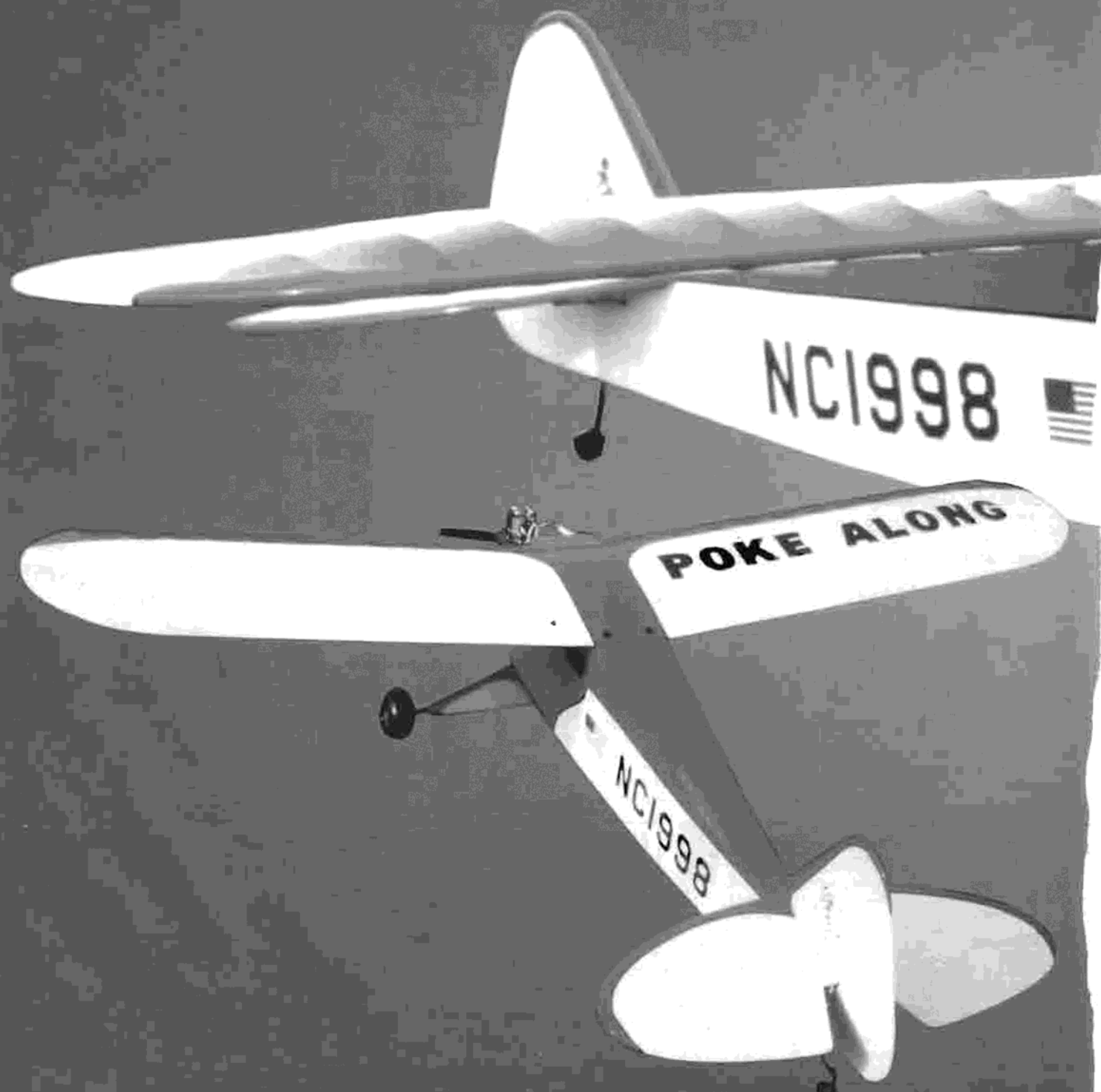


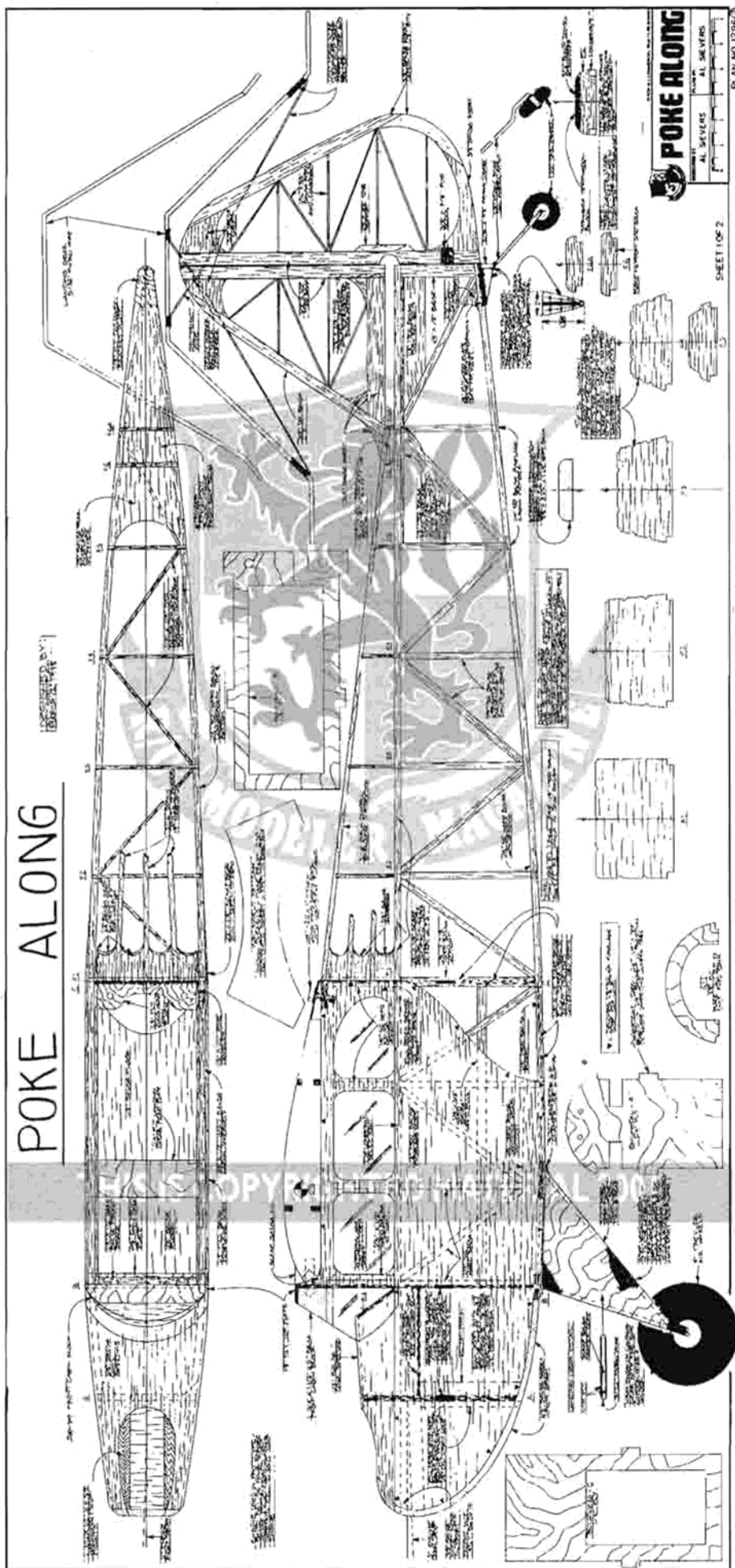
POKE

ALONG

By Al Sievers



*.45-.61 Powered Sport Flier
With Classic Old-Timer Looks*



This airplane was designed around popular 1930's and 1940's free-flight models. Some of Poke Along's ancestors have famous names like Cloud King, Buccaneer, Powerhouse, and Buzzard Bombshell, just to name a few. The stubby nose, wing planform, tail feathers, and of course, that swept forward landing gear, definitely suggest its vintage free-flight heritage.

Upon seeing the Poke Along for the first time, people's comments are, it sure is cute, and I can't wait to see this one fly. Their comments really get exciting when I fly the Poke Along 4-6 feet off the deck. Coupled with the quiet putt, putt, putt of a 4-stroke at quarter throttle, really makes this airplane especially attractive and it is a real crowd pleaser!

Frankly, when I fly any of my airplanes in this manner, I invariably attract a crowd of on-lookers. People sometimes come up and express an interest in learning to build and fly R/C aircraft. I believe we all should practice being responsible ambassadors, helping to promote goodwill and a positive image of R/C modeling, to the general public. Flying an airplane like the Poke Along at eye level helps to accomplish this goal because people can see and gain a real appreciation for an airplane in its element.

As with previous designs, certain criterion or goals were set. I wanted an airplane that looked like an airplane should, i.e., a cabin type with windows, a large, roomy fuselage since my hands are quite large and, of course, I wanted the airplane to be large enough so it can be easily seen when flown. I also wanted it to be stable at slow air speeds. Last, I wanted it to have a light to moderate wing loading, 16-17 oz./sq. ft.

The Poke Along meets and exceeds these objectives and it also flies well, capturing many of its ancestors' flight characteristics. In short, the Poke Along looks great at any altitude but especially when flown at eye level; and it is sure to generate positive comments from your club members and the spectators — possibly stealing the show!

By the way, don't let the name fool you. As mentioned above, this airplane will poke along at quarter throttle; however, at full throttle with the Saito .56 4-stroke, coupled with an 11 x 8 prop, she will leap for the heavens in as little as 10 feet of runway. Once in the air she will do consecutive inside loops all day, hammerheads, and tight spins



POKE ALONG

Designed by:

Al Sievers

TYPE AIRCRAFT

Sport-Trainer

WINGSPAN

72 Inches

WING CHORD

12 Inches

TOTAL WING AREA

850 Sq. In.

WING LOCATION

High Wing

AIRFOIL

Clark Y

WING PLANFORM

Constant Chord

DIHEDRAL, EACH TIP

3-1/2 Inches

OVERALL FUSELAGE LENGTH

50-1/2 Inches

RADIO COMPARTMENT SIZE

12" (L) x 4" (W) x 9" (H)

STABILIZER SPAN

26 Inches

STABILIZER CHORD (inc. elev.)

8 Inches (Avg.)

STABILIZER AREA

215 Sq. In.

STAB AIRFOIL SECTION

Flat

STABILIZER LOCATION

Top of Fuselage

VERTICAL FIN HEIGHT

8-1/4 Inches

VERTICAL FIN WIDTH (inc. rud.)

8-1/2 Inches

REC. ENGINE SIZE

.45-.61

FUEL TANK SIZE

8 Oz.

LANDING GEAR

Conventional

REC. NO. OF CHANNELS

3

CONTROL FUNCTIONS

Rud., Elev., Throt.

C.G. (from L.E.)

3-3/4 Inches

ELEVATOR THROWS

1" Up — 1" Down

AILERON THROWS

—

RUDDER THROWS

1" Left — 1" Right

SIDETHRUST

2° Right

DOWNTHRUST/UPTHRUST

3° Down

BASIC MATERIALS USED IN CONSTRUCTION

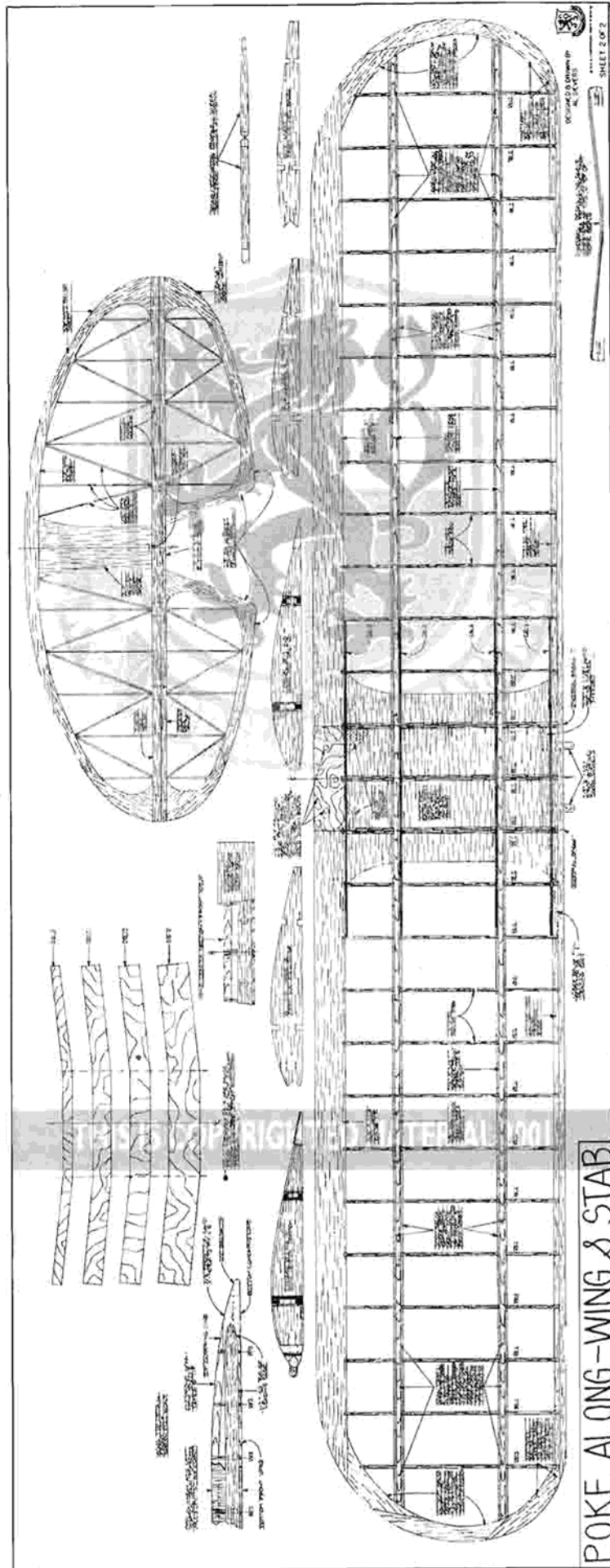
Fuselage . . . Balsa, Ply, Birch Dowels, Pine

Wing Balsa, Spruce, Ply

Empennage Balsa, Pine

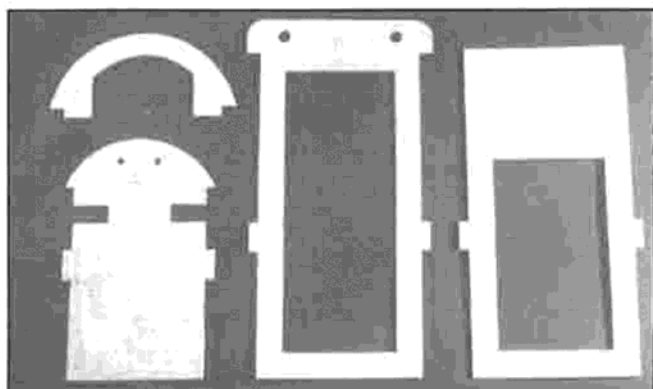
Wt. Ready To Fly . . . 100 Oz. (6 Lbs. 4 Oz.)

Wing Loading 17 Oz./Sq. Ft.

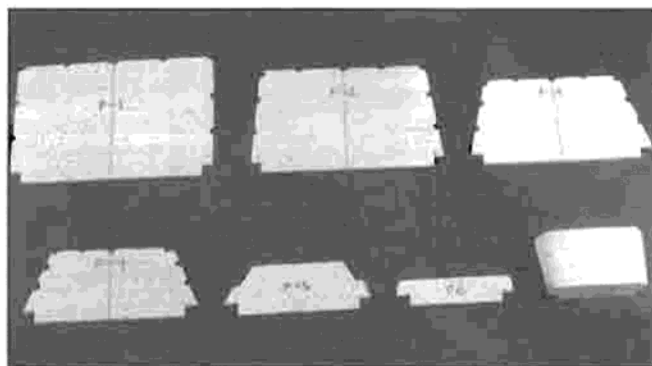


FULL-SIZED PLAN AVAILABLE, SEE PAGE 189

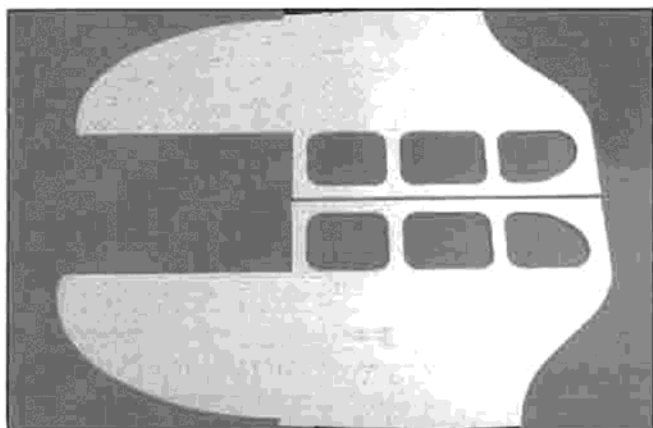
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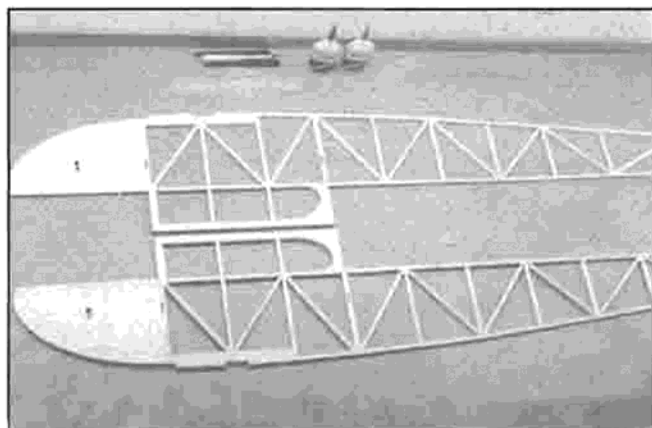
Main fuselage bulkheads, A, A1, B, and C.



Fuselage turtledeck formers F1 through F6 including stringer termination block.



1/8" sheet balsa fuselage sides.



Fuselage sides' sub-structure. Note: Bulkhead alignment tab holes.

both flat and nose down. Stalls are mushy requiring power and some up for recovery. Rolls are sloppy and are difficult to perform, due to absence of ailerons. Even with ailerons, my experience has shown airplanes of this type don't roll well even without dihedral due to the pendulum effect. If high speed, precision aerobatics, and maneuverability are what tickles your fancy, well I suppose the Poke Along won't fill the bill.

CONSTRUCTION

Fuselage:

Select five 1/4" sq. hard balsa straight sticks for the longerons. Splice, using the long angle method, as indicated. I used gap-filling CA glue here.

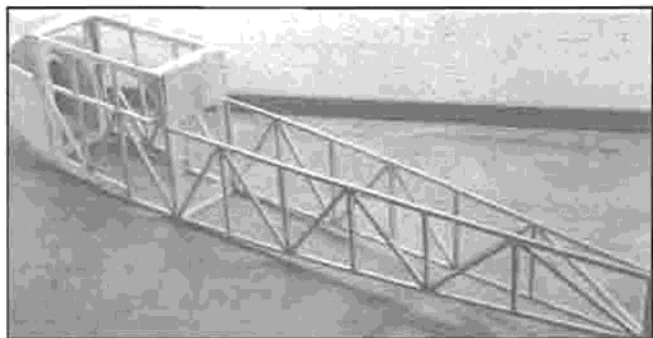
Next, locate and mark the exact center of each longeron. Balance each

stick by indicating which end is the heavy end; the heavy end goes forward, the light end goes towards the tail. This is an old free-flight trick. You'll be amazed how much a stick of wood can vary in density within the same stick. Since the nose is very short, we want to keep the tail as light as possible.

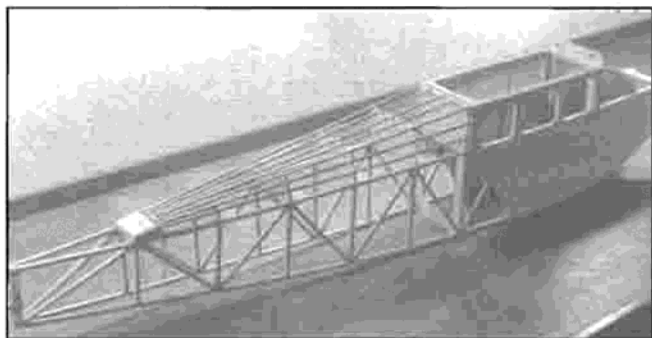
Cut out all fuselage parts such as sides, bulkheads, and formers; note, F-6 is made from 3/16" balsa. The bulkheads have alignment tabs, which aid in keeping the fuselage straight. The stringers are 3/16" birch dowels and nine are required. Cut them long and later trim to exact fit. The stringer rest-points in F-1 through F-5 are made using a 4" length of 5/32" music wire, wrapped with a single layer of 100 grit sandpaper. Glue the sandpaper to the music wire, using gap-filling CA. Note

the rest-points at the top corners of F-1 and F-2 are minimal; you could omit sanding these in until you see how your stringers will line out. Obviously, our goal here is to have all the stringers running straight and true from F-1 to F-6. I sanded each resting point a little at a time, constantly checking the stringer for straightness. Using this method, the prototype's stringers came out perfectly straight — when sighted from either end. If you plan to show off your model by covering with transparent film, having these stringers perfectly straight is a must.

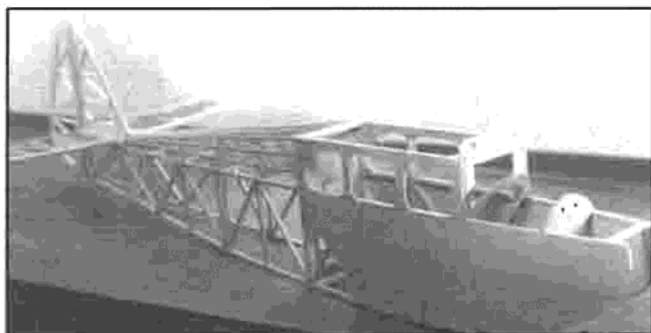
Another important point to keep in mind is that this airplane will be slightly tail heavy — no matter how light you build the tail or aft fuselage. You probably will add some lead to the nose to achieve proper balance. The



Fuselage sides' sub-structure joined to the bulkheads.

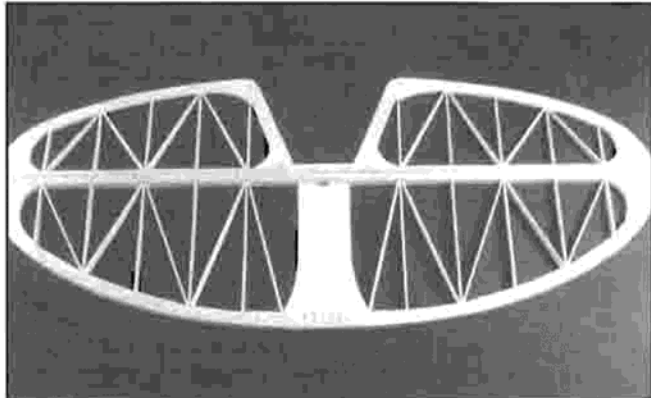
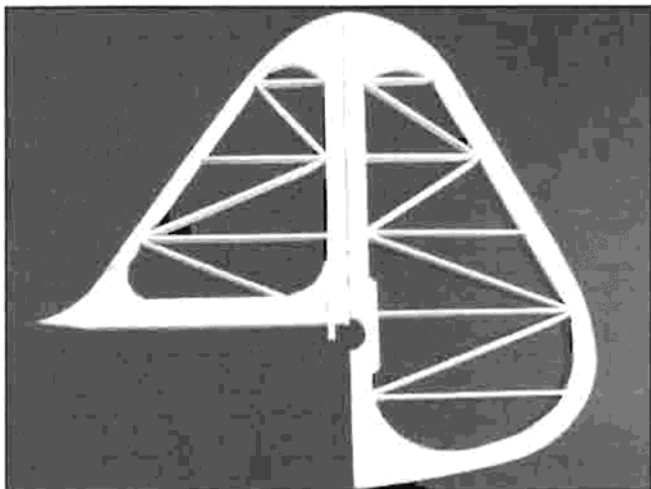
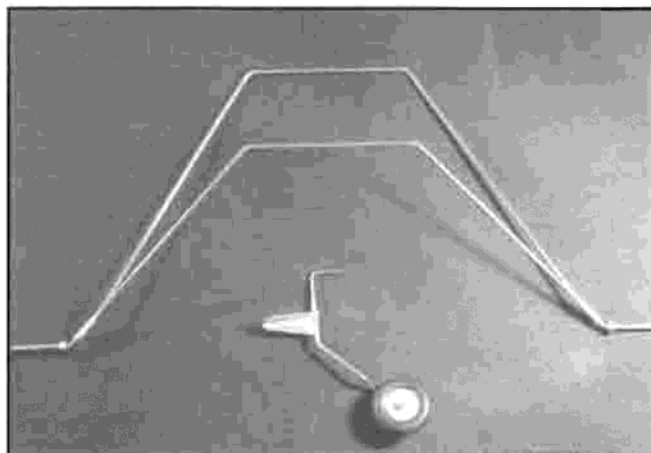


Fuselage showing dowel stringer placement.



ABOVE: Fuselage side sheeting installed, also trial-fit for tail assembly.

RIGHT: Main landing gear made from 5/32" music wire; also home-made tail wheel.



ABOVE: Completed stab and elevator ready for final sanding.

LEFT: Completed fin and rudder ready for final sanding.

reason is, the short nose moment; its short, stubby nose is what imparts a share of unique vintage flavor. So, since we are stuck with the short nose, our goal in building this airplane is, keep the tail feathers as light as possible, shop around for the lightest 4 lb. contest grade wood, and use epoxy and other heavy glues sparingly from the C.G. rearward.

Another significant weight savings could be achieved by substituting a Goldberg nylon tail wheel bracket and 3/32" music wire for the tail wheel strut. The homemade brass tail wheel bracket, tail wheel, and 1/8" music wire strut weighed in at a whopping 2-1/2 oz. Considering this weight, multiplied by a tail moment arm of 3, yields over 6 in./oz. units. In other words, to balance the addition of this homemade tail wheel assembly required over 6 oz. of weight somewhere ahead of the C.G. Of course, the big plus is, the homemade tail wheel assembly is practically indestructible. Here in Western Oregon, all that rain turns our flying sites into pot-holed, swampy cow pastures. So, landing gear has got to be beefier to withstand the punishment. If you are

fortunate to have a smooth paved runway, go with the lighter set-up and save the weight.

Okay, let's get started. Begin assembly by pinning the balsa longerons over the side view. Add the uprights and diagonals. I used gap-filling CA here. Next, glue the 1/4" balsa forward, sub-sheeting inside the frame. Cut a hole for the alignment tab on bulkhead A.

Construct the cabin top using 1/4" x 1/2" hard balsa and 1/4" sq. hard balsa window uprights. Install the 1/4" soft balsa sheet fill behind the third window. Now, install the 1/4" hard balsa landing gear side support members.

With the sides still pinned to the plans, add the 1/8" medium balsa fuselage sides. I used Elmer's carpenter glue here. Momentarily remove the fuselage sides from your board and mop out the excess glue using a damp rag on a screwdriver. Now, re-pin the fuselage sides down and allow them to dry overnight.

The next step requires the use of a fuselage jig. Using your jig, perform a trial set-up to make certain everything fits then epoxy bulkheads B and C "only" in place. **Do not install**

bulkhead A at this time. Pull the tail post together and glue using gap-filling CA.

Now begin squeezing the nose together in preparation to install bulkhead A. Tip: Wetting the outside of the fuselage sheeting helps it to bend. Also, you will see the fuselage sides between B and C, bowing outward as the nose is squeezed toward bulkhead A. Don't worry, that will be corrected when the landing gear plates are installed. Use epoxy to install bulkhead A.

Next, add the formers F-1 through F6-A. Carve and sand the stringer termination block to shape. Now begin installing the nine 3/16" birch dowel stringers. Space the stringers equally on F-6. As mentioned above, minor adjustments in the resting points may be necessary to get the stringers perfectly straight. I used gap-filling CA glue here.

Cut to length and install the 1/4" ply landing gear plates, using epoxy. Install the 1/8" x 1/2" pine cabin top doubler and the 1/4" x 1/2" hard balsa cabin front support.

Install the 3/8" ply wing hold-down block, using epoxy. Drill the bolt hole

and tap using 1/4" x 20 tap. I used Du-Bro's drill, tap, and bolt kit, cat. No. 142. Cut the nylon bolts to 1" length.

Next, cut the rear fuselage cluster joints, both sides and install the 1/8" balsa stab stiffener sheet. **Caution: Don't omit this, it will prevent the fuselage from breaking off ahead of the stab.** Cut to size and install the 1/8" medium balsa pushrod exit sheets and gussets. Now install the 1/8" x 1/4" diagonal bracing.

Install the 1/8" ply tank floor. Fuelproof this area over and under the

tank floor with epoxy, diluted 40% with alcohol.

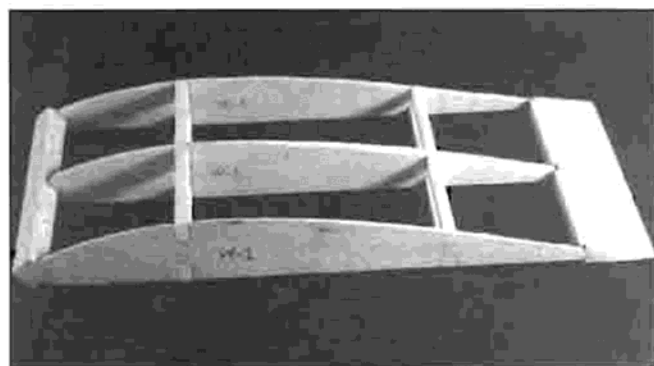
Next, install the hardwood engine bearers, sized according to your engine. I used a Saito .56 4-stroke engine in the prototype. The engine bearers have 3° of down thrust and 2° right thrust, measured from the top longeron. Make certain both sides are the same before gluing, using epoxy. Install blind nuts on the lower side of the engine bearers, secured using gap-filling CA glue. Your engine should be trial-fitted to make certain it fits the engine bearers. Plan the installation of your throttle linkage

now; I used the tube and cable type.

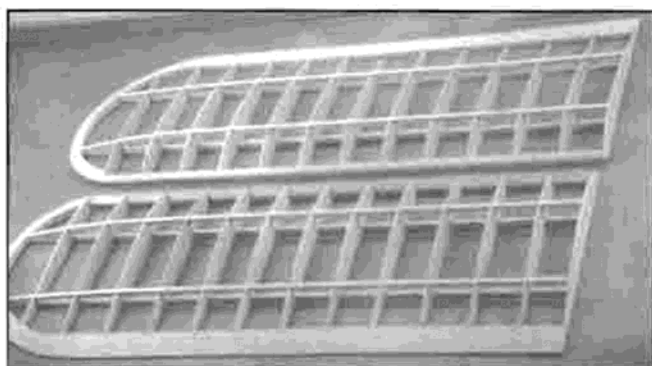
Install the soft balsa nose block under the engine bearers. Drill a 1/4" oil drain hole. I used a scrap piece of 1/4" brass tubing. The balsa block under the bearers is evenly hollowed out to clear the engine case, with the brass tubing installed flush with the top of the block floor. The tubing protrudes through the fuselage bottom 1/4". I applied four coats of epoxy to the engine compartment, including under the cowl sheeting to protect from fuel-soak. Small round cardboard tubes were pushed into the engine bolt holes to prevent the epoxy from coating the blind nut threads.

Install the 1/4" balsa sheeting, cross-grain under the nose. Extend the last sheet up past the top longerons approximately an inch or so. This sheet, joined to the 1/8" cowl sheeting, forms a rounded nose above the propeller hub. A 3/8" balsa nose doubler must be added for support. Sand the nose to a rounded shape.

Install the fuel tank, tubing and throttle cable assembly. Install the 1/8" medium balsa cowl sheeting. I wetted the sheeting, wrapped it around a coffee can and allowed it to dry overnight. This made the installation easier.



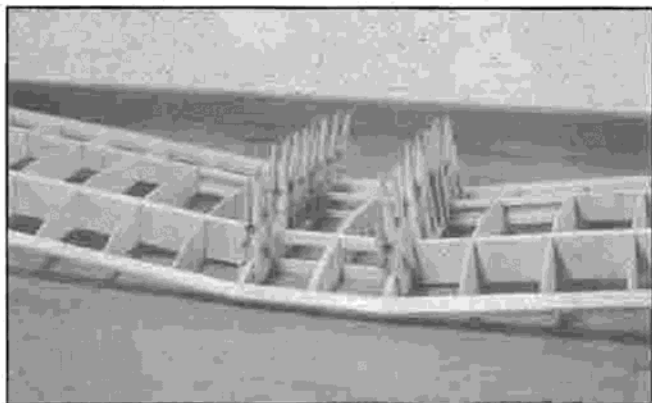
Wing W-1 center section.



Completed wing panels ready for shear webbing.



Wing dihedral braces DB-1 through DB-4.



Outer wing panels being joined to W-1 center section.

Next, carve and sand to shape the front cabin block. Epoxy it to bulkhead B. Drill $3/8$ " holes through the bulkhead and into the block for the wing dowels.

Plan and install your pushrods. I used Sullivan blue/yellow Gold-N-Rod. If you use this type, install at least four supports in the aft portion of the fuselage. I used $1/8$ " x 1 " contest grade balsa sheets, with $3/16$ " holes to accept the outer blue tubing. I also installed one support sheet across bulkhead C. Next, install the $1/4$ " x $3/8$ " hard balsa servo bearers and plan the installation of your radio equipment. I ended up mounting my servo tray right on the C.G. This left just enough space for the receiver between the servo tray and bulkhead B. My battery pack was installed under the tank area, wrapped with foam rubber.

Install the $1/8$ " medium balsa fuselage floor, stringer webbing, and $1/8$ " x $1/4$ " filler strips. The latter prevents the covering from sagging, where the sides meet the longerons and diagonals. Taper-sand the filler strips to zero.

Cut to size, fabricate and solder the landing gear. If you know how to solder, this won't present any problems. I used two soldering irons; a 40-watt and an 80-watt, both Weller

brand. The 80-watt was necessary to solder heavy $5/32$ " music wire; the 40-watt is good for $1/8$ " or smaller wire. Make certain the music wire is polished with fine sandpaper, then wiped clean with acetone to get rid of the oil residue. Solder type was Master Mechanic brand, 40% lead, 60% tin, rosin core. Flux type was Nokorode Soldering Paste, by M.W. Dunton Co., Providence, RI. I wrapped the gear legs with fine, bare copper wire and soldered the above products. This produces outstanding solder joints that look great and are structurally strong. One last point, when I've finished with a solder joint, I wipe it with acetone. This removes the flux residue and leaves a bright, shiny joint. If you plan to install the balsa, ply-fill between the

gear legs, you may skip the next step — otherwise coat the solder joint and adjacent music wire with oil; this prevents the formation of rust.

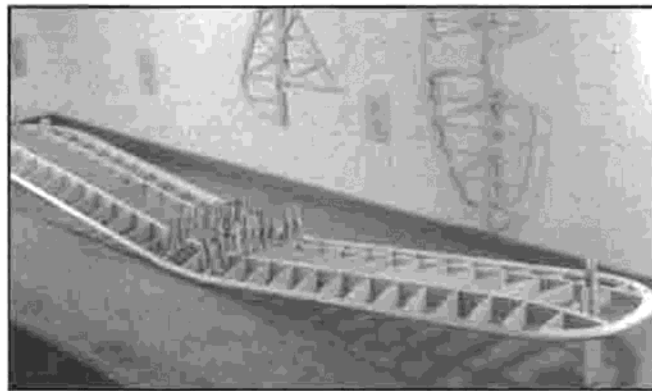
Tail Assembly:

Construction of the stab, elevator, fin, and rudder is simple and uncomplicated. Do pay attention to the type and density of wood specified; also, grain direction in curved portions that are joined together. Taper-sand the tail assembly from $3/8$ " at the leading edge to $1/8$ " at trailing edge. This saves weight and gives a pleasing streamlined appearance. Total weight of tail assembly was 3 oz., uncovered.

Wing:

First, put wax paper over your plans and tape to your building board. I used discarded office ceiling tiles called Cellotex or Firtex, as a building board. I'm a scrounger; I found several at an office remodeling construction site, laying in a dumpster. Best of all they are free and pins go into them easily.

As mentioned in the fuselage construction, it is important to find and mark the exact center of each stick, spars, leading edge, trailing edge, etc., and balance each



Completed wing ready for center section sheeting. Note: clothespins and scrap balsa to set dihedral angle.

piece on that mark. Always put the heavy end of each stick toward the wing root, the light end toward the tip. You will be amazed how much weight difference there is within the same stick. Using this method I rarely end up with a heavy wing panel.

Begin the wing construction by building the center section first. Join the two ribs at the centerline using your favorite glue. I used Elmer's Carpenter glue here. Use 1/8" medium hard balsa for the ribs. Next, lay down the bottom spars and side-pin in place over the plan. **Avoid sticking pins through the spars — especially near the ends, because of possibility of splitting.**

Allow a little extra length on the spars; they will be sanded flush later. Glue the ribs in place, using the dihedral gauge to set the angle on both outer ribs. Make the gauge from scrap balsa. Notch the trailing edge to receive the ribs, and glue. I used gap-filling CA glue here. Glue in the top spars and leading edge. Sand everything flush with the outer ribs and set the center section aside.

Cut out all the wing ribs for the outer wing panels, W-1, W-2, and W-3, from 1/8" medium balsa sheet. Cut the spars, leading edge and trailing edge to length, leaving them long on each side. The inside edges of the top front spar must be taper-sanded at the tips. The top and bottom spars are joined at the tips and their combined thickness must equal that of the wingtip. Note — the last 8" of the top spars — especially the top front spar must be soaked in boiling water for 30 minutes, due to the drop across W-2 and W-3 ribs. **If this step is omitted the stiffness will warp the wing up and off your board.** This step uses a lot of pins. I used gap-filling CA on the damp wood.

Cut the wingtips from contest balsa sheet and assemble using both gap-filling and thin CA glues. Note the grain direction of each piece. A V-shaped notch is sanded into the portion joining the wing leading edge.

The notches in the trailing edge can be easily installed with a homemade tool. I glued two X-Acto saw blades to either side of a 1/8" x 1/2" x 3" piece of scrap ply. Before gluing the blades to the ply, sand the ply so that the combined thickness of the blades plus plywood equals that of the ribs. After sawing the twin cuts into the trailing edge, use the tip of your #11 X-Acto blade to pop out the notch. Prior to cutting I scribed marks on the trailing edge using my square, corresponding to each rib location. Notches cut with this

tool will create a perfect fit for the ends of the ribs.

With all the wing parts cut out and tips assembled, glue up each wing panel by gluing the ribs over the lower spars, then adding the top spars and finally the pre-assembled tips. I used gap-filling CA glue here. Now add the leading and trailing edges. Next, install the 3/32" medium balsa shear webs. Tip: I cut all of the shear webs at one time on my table saw, making them just a little long. When the shear web is glued in place the extra length pushes against the ribs, creating a super-tight joint. I used Elmer's Carpenter glue here. Don't forget to wipe the excess glue from the top and especially the bottom of the wing, using a damp rag. After cleaning, re-pin the wing to your board and allow it to dry overnight.

With both outer panels completed, join them to the pinned down center section, using epoxy and clothespins. Check each tip for proper dihedral, 3-1/2" per tip.

Next, cut out all the dihedral braces from 1/8" aircraft grade plywood. **Do not substitute lite ply as it is not strong enough to withstand the bending loads!** Using an X-Acto saw, cut out the wing ribs to accept the dihedral braces, starting with DB-2. Cut out the ribs and glue in one brace at a time to avoid weakening the wing. Use epoxy here. Now, install DB-3, DB-1, and finally DB-4, in that order.

Install scrap balsa-fill between the leading edge and DB-1. Also, install the 3/8" hard balsa dowel supports and trailing edge angle braces. Drill two 3/8" holes in the leading edge, DB-1 and 3/8" dowel supports, to receive the dowels. Cut two 3/8" birch dowels to length and sand the ends round. Trial-fit the dowels in the wing, also in bulkhead B. Make any adjustments

now. Do not glue the dowels into the wing yet.

Sand the leading edge to shape as per airfoil on the W-1. With the wing set in position on the fuselage and dowels temporarily installed, mark and drill holes in the trailing edge for the two 1/4"-20 nylon hold-down bolts. The drill angle is critical, allowing the bolt heads to sit flat on the wing trailing edge when tightened down. Next, here is the procedure I used to install the dowels in the wing. First, I made certain the dowels fit into bulkhead B, front cabin block, and the wing leading edge. Using slow-curing epoxy, glue the dowels into the wing. Quickly set the wing in place on the fuselage, inserting the dowels into bulkhead B. Finally, install the nylon hold-down bolts in the trailing edge. Do not overtighten. **Check that the wing center section remains perfectly flat on the fuselage during the gluing operation. Also, do not permit the epoxy to squeeze out and into the holes in bulkhead B or you won't get the wing off the fuselage.**

Now install the 3/32" medium balsa sheeting between the ribs and spars, both top and bottom of the wing. Sand everything flush and smooth. I had no problem with this method in terms of achieving a smooth surface for covering. However, if you are a new builder, or rough or uneven areas exist, you might consider installing 1/32" ply sheeting over the 3/32" balsa. This will smooth out any surface irregularities and add strength to the wing center. If minor imperfections, holes or dents are present, fill with a product called Patch N Paint lightweight spackling compound manufactured by Custom Building Products. I've used this stuff for years and it bonds well to balsa, sands easily, and it even bonds to plywood.

Finally, with the wing completed, check for balance as follows: Find and mark the exact center of the wing. Now invert the wing over a straightedge; I used a balsa sheet clamped in my vice. The straightedge must align with your center mark. Add lead weight to the light end, taking care to factor in the weight of the epoxy used to secure the lead. An ideal location to hide the lead is inside the front tip, where the 7/8" tip piece joins to the leading edge.

After the wing is covered, install 3/8" wash-out per tip. **Do not omit this because at high angles of attack the wing root may be stalled, but the tips, because of the wash-out, are still flying and generating lift.** To install

the wash out, I weight down the wing center using two full gallons of paint, set on soft towels.

With the center weighted down, I grasp each wingtip and gently twist the tip downward towards the workbench surface. Any resultant wrinkles in the covering can be re-shrunk using your iron, while maintaining the gentle pressure or twisting motion on the wingtip. Check to be certain both wing panels are equally washed out, by measuring from the underside of the trailing edge, behind W-2, to the workbench surface.

Last, an optional 1/16" ply trailing edge protector plate can be installed to help protect the surface from the dents caused by the hold-down bolts. If the ply is outside the covering, protect against fuel-soak with a couple coats of epoxy. Cut out the covering, leaving a 1/16" margin and install the plate on the wing trailing edge, using epoxy.

Covering And Finishing:

The prototype was covered with MonoKote. Covering was unconventional and quite simple, with one exception — the stringer area or turtledeck. Even here I had no problems. I started by allowing the usual 2" of extra per side, so I could grab and pull as I heated the covering. First, I attached the covering to the top-center stringer, then I gently heated and pulled the covering down to the longerons. I firmly attached the covering to the longerons before shrinking the middle portion of the turtledeck. If wrinkles persist, just keep pulling and heating the covering. Using my Top Flite brand iron, I have the heat selector set at hot.

I covered the stab, elevator, fin, and rudder separately. This allowed the covering to completely wrap the hinge area. I pre-slotted the control surfaces and trial-fitted the hinges before covering. After covering, I feel along the hinge slot for a slight depression caused by the slit in the wood. I then slit the covering using a #11 X-Acto knife, slipping the hinge into the slot. This method produces good looking, fuelproof hinge joints. To secure the hinges in the control surfaces, I pin-prick a hole through the covering and balsa wood directly over the hinge leaf. Then I inject thin CA glue into the hole using the tiny capillary tube on the bottle. I find this method works well and it avoids the problem of getting the stuff into the hinge centers. A tiny scrap of covering can be ironed on to cover the spots.

Install the tail surfaces by first removing the covering to within 1/16" of the glue joint surface; this assures no bare wood will show when installed. I used epoxy here. Before gluing, check the alignment of the stab to be certain it's square with the fuselage centerline. The fin has a pine support that is glued into the stab. Make certain the fin is straight with the centerline and 90° to the stab.

Balancing:

Assuming your airplane is completed, ready to fly with the engine and radio equipment installed, locate the C.G. on the plans and place two small spots of masking tape on the underside of the wing, next to the cabin. Now you place your fingers on the spots of masking tape and lift the airplane. The airplane will probably be somewhat tail heavy to begin with. Lead weight wrapped in foam rubber must be added under the fuel compartment, against the back of bulkhead A. The airplane balances when it hangs slightly nose down, about 10°. I used five ounces of lead in the nose of the prototype, wrapped with foam and secured with masking tape.

Finishing:

The installation of the windows involved using Fourmost Products, small window flange number 132. This was used around .030" butyrate sheet, cut 1/32" smaller than the window opening, to allow for proper rubber flange clearance. I chose to glue the rubber flange to the window material, using thin CA glue. The method I used involved pin-pricking the back channel, next to the window edge. Then I applied a tiny drop of the thin CA glue to the rubber only, allowing it to find its way through the tiny pin hole via capillary action. The amount of glue is critical; too much will result in fogging of the windows. The pin holes were spaced approximately 3/8" to 1/2" apart all around the window. I used gap-filling CA glue to secure the windows (with the flange now attached) to the inside of the window openings. Glue was introduced from the back or inside of the cabin.

Cover the windows with paper towels to protect from glue splatters. The inside of the window frames were painted black prior to installing the windows.

The flag decals were from Major Decals and they are supposed to be fuelproof, if the fuel doesn't exceed 12%. The N numbers, pin stripes, name, and little airplane were all cut out of scrap MonoKote using a #11 X-Acto knife and glass sheet. Simply iron the

MonoKote to the glass, using medium heat, then trace or draw the outline and cut out the item. The glass method keeps the stuff from moving around. If it loosens during the cutting operation, simply re-stick it down with the tip of your iron. If you decide to copy the red and white color scheme, be aware the red bleeds like crazy — especially the pin stripes. It seems the hotter the iron temperature, the more the bleeding problem. If you experience this, don't despair, simply grab the acetone and wipe those ugly stains away. Always wipe towards the darker color, rather than towards the lighter color. The acetone doesn't seem to have any adverse effects on the MonoKote. If you use other coverings, I can't say what effect this may have, since all I ever use is MonoKote.

Flying:

Before your maiden flight, set up the control surfaces as follows: rudder, 1" right and left; elevator, 1" up and down. Throttle is set up so low throttle trim shuts down the engine. After you have some airtime, you may increase or decrease the control throws. Make certain the airplane is not tail heavy, and last, do toe-in the wheels at least 3° and 2° positive camber. I have found this aids tremendously in ground handling.

Even though the prototype tipped the scales at 6-1/4 lbs., I found her to be a real floater. Twice I attempted to land, but she just laughed at me and flew the entire length of our field. Of course, I had to add power and do a go-around. On the third attempt, I reduced the idle trim all the way and she settled in nicely. At about two feet high, I started adding up elevator; at three-quarters up, she touched down. I realized part of the problem — the idle was set too high due to breaking in the new Saito .56 4-stroke. Once I re-adjusted that, my landing problems disappeared.

The only problem I've noticed with this design is the ground handling. She will ground loop, although the problem is minor. This is caused by the swept forward gear angle. Many vintage designs with their swept forward gear simply refused to R.O.G.; instead, they had to be hand-launched. I suppose the Poke Along's gear could have been redesigned to a more conventional set-up, but then some of her unique personality would have been sacrificed. The problem is only evident from the beginning of roll out to the point where her tail lifts. After that she will track straight — once her rudder gets a bite. So, stay on her rudder.

Once in the air, the Poke Along is forgiving and exceptionally easy to fly. I have also found her to be very maneuverable. This airplane will turn incredibly sharp, with the rudder set as indicated. I found this to be advantageous, since our club field is quite small and flanked by large trees. Having an airplane that will turn sharply, without snapping and stalling, is an advantage. I am totally comfortable even though I only have about a dozen flights on her at this time; most designs take me considerably longer to reach this level of comfort.

What about spins and stalls? Yes, she will spin like nearly any airplane but recovery is easy, simply feed in opposite rudder, add power and she is flying again. Stalls are mushy, with the break straight ahead. Recovery is too easy — just release back pressure and the airplane is flying. You have to work at getting this airplane into a severe stall, resulting in a nose-down dive. Even then recovery is easy; just add power and some up elevator. I honestly haven't been able to get into trouble with this airplane — she is exceptionally well behaved.

What about inverted flight? Yes, she will fly inverted, however, one must hold almost full down elevator. Relax that pressure and the airplane instantly exits the inverted position.

Inside loops are easy and you can do them all day — even at half throttle. Outside loops are next to impossible; she fights being on her back, due to the dihedral in the wing.

Take-offs can be accomplished with as little as quarter throttle and I might add, very, very scale-like. Sort of reminds me of an old J-3 Cub, with a tired 40 H.P engine. I do these kinds of take-offs sometimes for the crowd; they like it. On the other hand, use full power and the airplane will require less than 10 feet of runway — sort of leaping for the sky. I'm confident the Poke Along will fly on any good .35 engine.

In summary, the Poke Along is fun to fly. She's a crowd pleaser, both from the standpoint of appearance as well as flight performance. The only limitation will be your pilot skills.

If you are a new pilot and you want to use the Poke Along as a basic first trainer, my advice is to get someone to help you learn how to fly before you risk it on your own!

Good luck, happy building, and may you have many thousands of fun-filled and exciting flights with your Poke Along.

