



EDO OSE-1

Introduction

I met Steve Milos and Paul Schultz (the designers of the first two OSE-1 models) several years ago at Lake Vancouver. They were flying and winning with .40 size Rufes powered with .60's. The next year at Pine Hollow, Steve and Paul had scratch-built .40 size Spitfires powered

with piped YS .45's. The following year they had .60 size EDO's powered with .90's. The Portland Sky Nights give bonus points for scale ships at their Northwest Model Seaplane Championships, and the two .90 powered EDO's took first and second; that was out of a group of pretty darn good fliers, too. Besides being beautiful

scale ships, Steve and Paul demonstrated that the EDO's were capable of performing all the prescribed maneuvers quicker and more precisely than the rest.

I was so impressed I immediately asked about plans and, to my amazement, Steve said there weren't any. I listened incredulously as he talked of patterns, 3-views, and some foam work — but no plans. It took me another year to talk Steve into letting me draw up his ship and build one. He just gave me his EDO and all the patterns for a couple of months --- the transmitter too, but not to worry, I can't fly Mode I.

The rest is history. The construction photos are from my ship, but there is a mixture of both mine and Steve's ship in the finished shots. Here and there you might see some slight differences, but, for the most part, I did my best to faithfully reproduce their original designs. Both Steve and Paul installed complete cockpits modified from Byron Hellcat units. I chose to use a Royal Bearcat Sr. cockpit and a pilot bust only to save a little weight.

Of course by the time you read this, Steve and Paul (and myself, for that matter) will be a couple of ships down the road. Don't worry though, the EDO





A FLOATPLANE FOR ALL SEASONS

By Ed Westwood

you see here is the best scale flier of'em all. They may get hotter and wilder, but never more elegant and graceful. This ship is a floatplane for all seasons; it will never — never be out of style.

Back in 1944, at the request of the Navy, the EDO Corporation designed and built their second attempt at a complete aircraft. Over the years they had built thousands of aluminum floats and parts for Martin and Grumman but not since the mid-twenties with the Flying Fish had the EDO design team, led by Lorvin Kroukovsky, designed and built another complete ship. The Navy didn't want much; just a lightweight, single engine, observation/rescue, single float seaplane that could be catapult launched and stored aboard ship. Oh yes, put a couple of guns on it too.

EDO engineers came up with the XOSE-1, a handsome machine that encompassed a large, single float strutted directly to the lower fuselage under-wing structure. The whole concept was designed around a 550 HP Ranger power package which was

secured to the firewall with four bolts and could be replaced in 30 minutes. In order to lessen the open sea water loads, the wings were equipped with slats and shock absorbing flaps which lowered the touchdown speed to 55 Kts. The large, high canopy and short sloped forebody offered the pilot excellent visibility and a spacious

cockpit to boot. The wings folded for storage aboard ship and the float had the standard carry-throughs for the attachment of ground handling wheels. Its first flight was not until December 1945 — too late for the war. But EDO went on to build a total of ten of these ships for Naval evaluation; another XOSE-1, four OSE-1's, two



OSE-2's which were tandem cockpit ships, and two trainer version XTE-1's. Sadly, although an excellent seaplane and considerably cheaper than its helicopter replacement, the era of the shipboard float plane was over; it had become an anachronism.

CONSTRUCTION

Begin by cutting out the fuselage bulkhead patterns and securing them to 1/8" ply with spray adhesive. Note that bulkheads 1 and 2 are 5-ply birch and the rest, 3-ply lite. Cut them out and mount them on the stand-off frames, then secure them to a 48" 2 x 6. (Be sure to partially cut through bulkhead 1 where the cooling vent opening will be cut out.) I put in a couple diagonals to insure the bulkheads remain in vertical alignment. Sight down them to insure they are straight, and secure the 1/4" stringers. I found when applying the 3/32" sheet that it was easier to pin the individual pieces in place after spraying them with ammonia and allowing them to dry—then trimming and securing them permanently. The trick (if there is one) is to use as few pieces as possible, thereby reducing the joints that must be filled. Obviously, the whole fuselage cannot be sheeted while on the jig, but sheet as much as you can, then remove the assembly from the stand-offs and complete it. Be sure to lay the assembly on a soft surface while working on it; otherwise you'll find little dings in the soft sheet which will show through the covering and paint. No battle damage is allowed here!

Sand the completed assembly carefully and cut out the cooling vent holes up front. 1/16" plywood side vent supports are then installed and the 3/32" covers contoured and backed with short strips of 1/64" ply to hold their shapes and provide additional strength. These are now installed and the edges sanded to their final shape. Next we install the 1/4" balsa tank support. Remember to put a couple of rubber bands around the piece before gluing; this way the tank can be wrapped with a piece of foam and secured directly to the support. Add the 3/32" cockpit bottom and the instrument panel bulkhead next.

Carefully cut away the flash from the Great Planes 72" CAP 21 canopy and check for fit. Little of the rear will have to be removed, but a bit more of the front bottom than is outlined on the glass needs to be cut. The canopy will be RC 56'ed to the ship after the cockpit innards are installed and the ship covered, but prior to painting. Steve and Paul both opted for a full figure in the cockpit complete with life jacket, but you could use just a bust and save some weight should you desire; take your choice.

The cowl supports are installed



next. It takes about six on each side to insure the fiberglass cowl maintains its shape. Use small 1/8" plywood tabs and epoxy them into the firewall notches. A 1/16" shim is added to the exposed tab after sheeting to make the cowl fit flush. Of course you must check for a nice fit here and even sand down the fuselage slightly if necessary. I spent quite a bit of time getting this area right, and the firewall bulkhead should be near perfect if you completely sand off the lines before installing the sheeting.

Now install the cowl and drill through it into the tabs to accept #2-3/8" Allen head sheet metal screws; then, using your Dremel cut-off wheel, cut open the cowl openings for the prop and cooling air. Remove it and temporarily install that big .90 (with spinner) on a JTEC or Hayes mount and check for fit with the cowl slipped back on. With the Hayes, a 3/8" shim will have to be installed between the mount and the firewall to get the proper spinner clearance. Measure it out and cut enough plywood shims to make up the proper distance and epoxy them in place. Now, put the engine back in and with the cowl on, mark the firewall extension for the mount screw holes, and use 8-32 Allen heads with blind nuts to secure the installation. The Super Tigre header pipe is cut off 1 3/8" in from the discharge end and the stub ground out with the Dremel sanding drum to receive a 1/2" copper female-female street "L". JB weld the L at an angle to meet a like L in the modified snuffler end. The snuffler is mounted cross-wise beneath the engine, and the other end silver soldered shut with a tin flange. Drilling and silver soldering a 9/16" brass discharge tube and the pressure tap in the side completes the system. The header and muffler inlet are connected with a 2" piece of 9/16" i.d. high temp silicone tubing secured with Teflon ties. I strapped the muffler in place with a screw tightening SS

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EDO OSE-1

Designed By:

Steve Milos & Paul Shultz

Drawn by Ed Westwood

TYPE AIRCRAFT

Seaplane

WINGSPAN

72 Inches

WING CHORD

12.5 Inches (Avg.)

TOTAL WING AREA

900 Sq. In.

WING LOCATION

Low Wing

AIRFOIL

15% Semi-Symmetrical

WING PLANFORM

25% Tapered

DIHEDRAL EACH TIP

2 Inches

OVERALL FUSELAGE LENGTH

54 Inches

RADIO COMPARTMENT SIZE

(L) 15" x (W) 5" x (H) 7"

STABILIZER SPAN

27 Inches

STABILIZER CHORD (incl. elev.)

6 3/4 Inches (Avg.)

STABILIZER AREA

182 Sq. In.

STAB AIRFOIL SECTION

Flat

STABILIZER LOCATION

Top of Fuselage

VERTICAL FIN HEIGHT

14 Inches

VERTICAL FIN WIDTH (incl. rud.)

8 Inches

REC. ENGINE SIZE

.90 2-stroke

FUEL TANK SIZE

13 Oz.

LANDING GEAR

Center Float & Tip Floats

REC. NO. OF CHANNELS

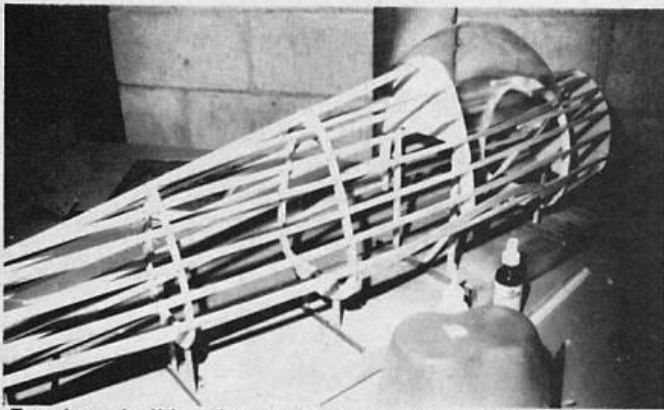
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CONTROL FUNCTIONS

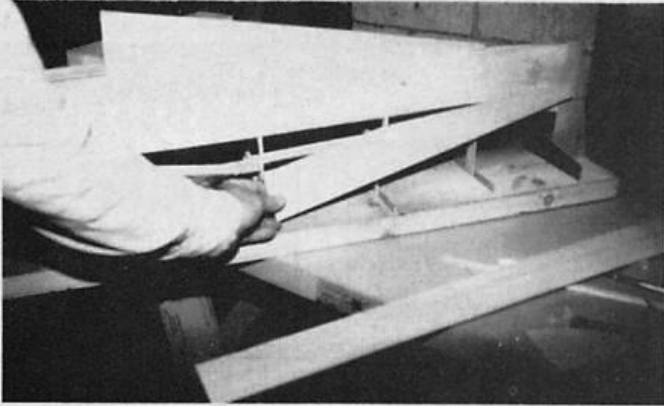
Rud., Elev., Throt., Ail., Flaps

BASIC MATERIALS USED IN CONSTRUCTION

| | |
|------------------|-------------------|
| Fuselage | Balsa & Ply |
| Wing | Balsa & Ply |
| Empennage | Balsa |
| Wt. Ready To Fly | 176 Oz. (11 Lbs.) |
| Wing Loading | 28.16 Oz./Sq. Ft. |



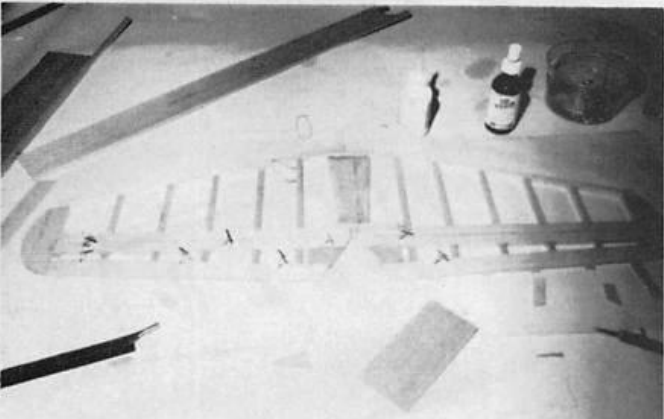
Fuselage bulkheads mounted on stand-offs. 2 x 4 holds assembly as 1/4" sq. stringers are installed.



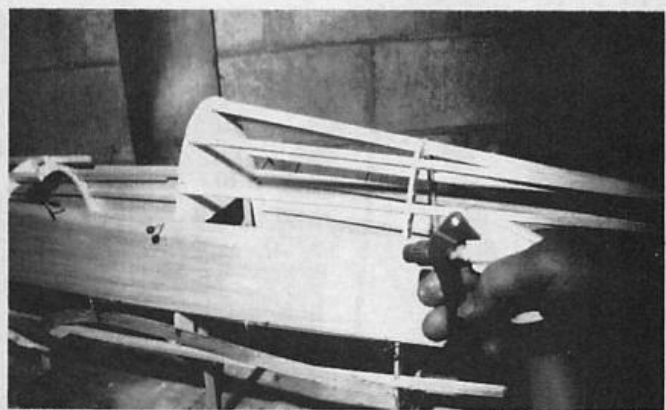
Sheet is taylored to fit with as few pieces as possible.



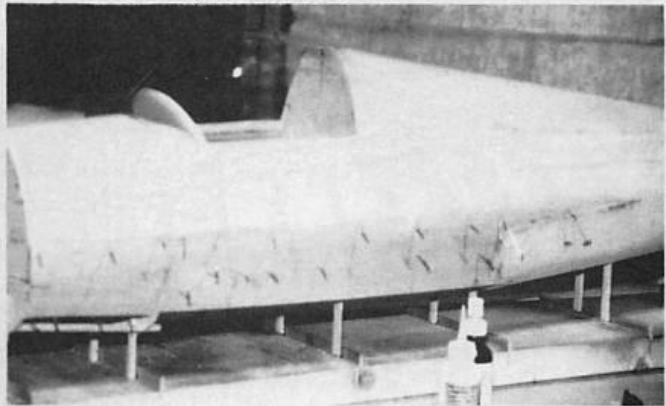
Installing rear wing hold-down blocks. Two more are installed up front.



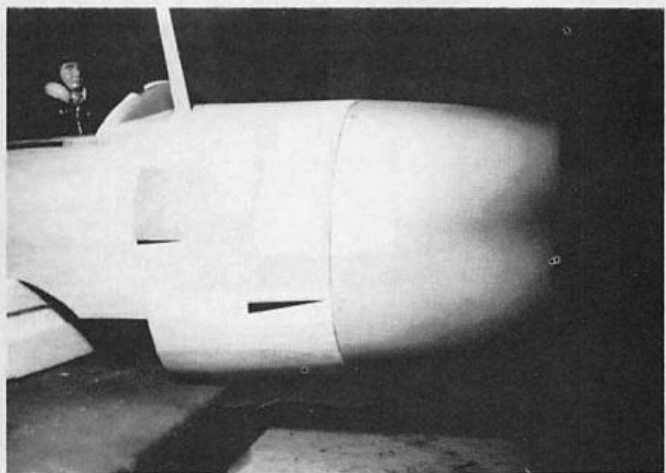
Stab-elevator framed up on Celotex building board.



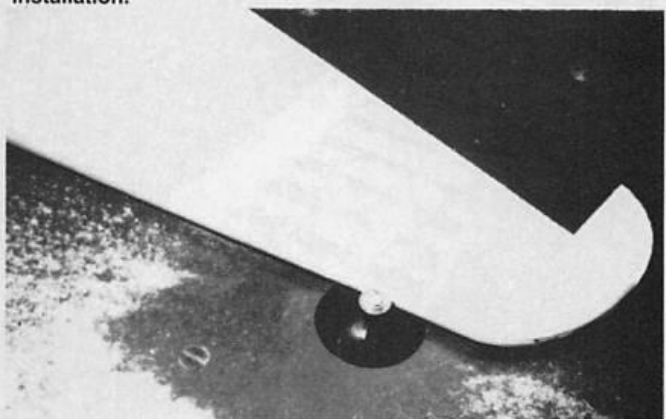
3/32" sheet is pinned to stringers and sprayed with ammonia. After drying, it is glued in place.



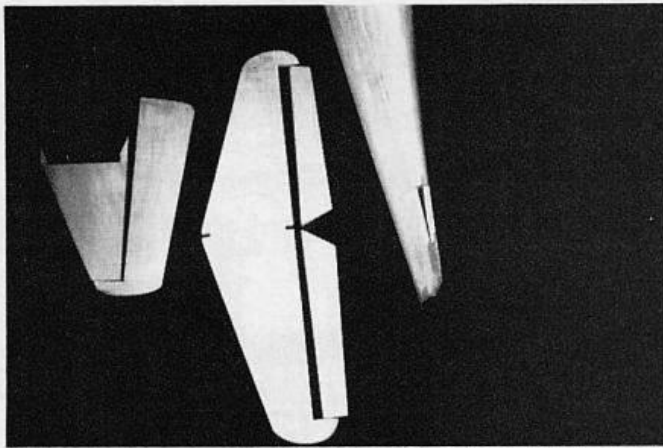
Great Planes CAP 21 canopy is trimmed carefully for fit. Wing saddle is cut out after sheeting is completed.



Note plastic "L" along cockpit. Paint covers up canopy ahead of instrument panel. Jerry Holcomb's glass cowl ready for installation.



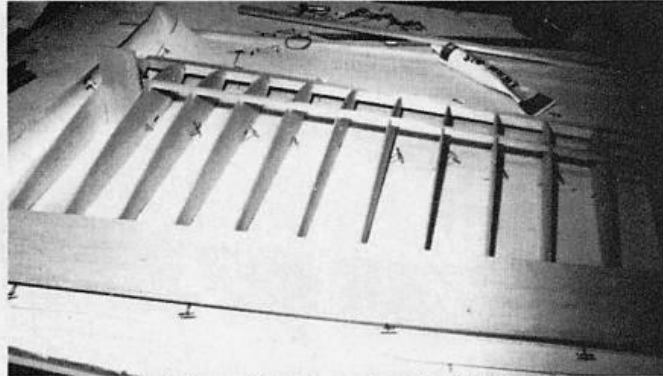
3/16 router bit makes short work of rounding stab leading edges.



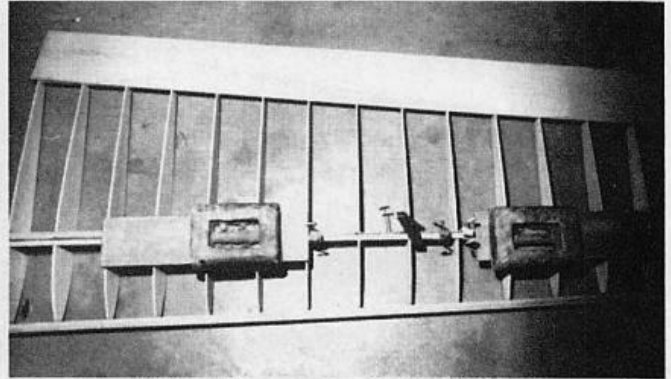
Tail assemblies completed. Final drawings put aero-balances on elevators.



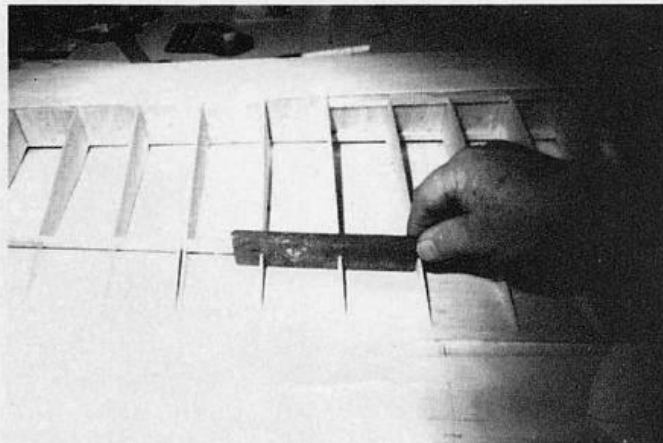
Wing is framed up with washout piece under T.E. Only top T.E. sheet applied here.



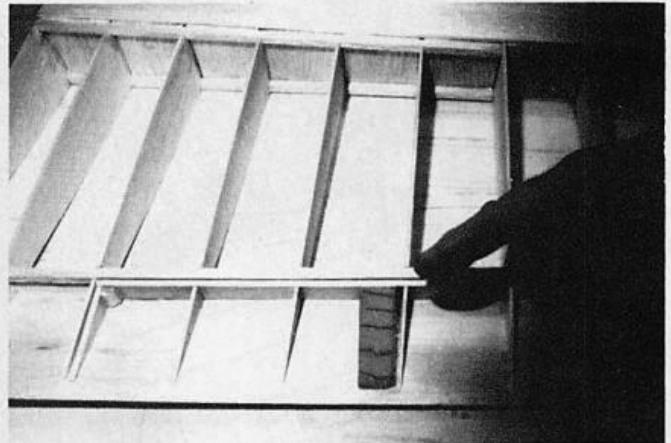
Another shot of wing with L.E. now installed. Note root rib angle template.



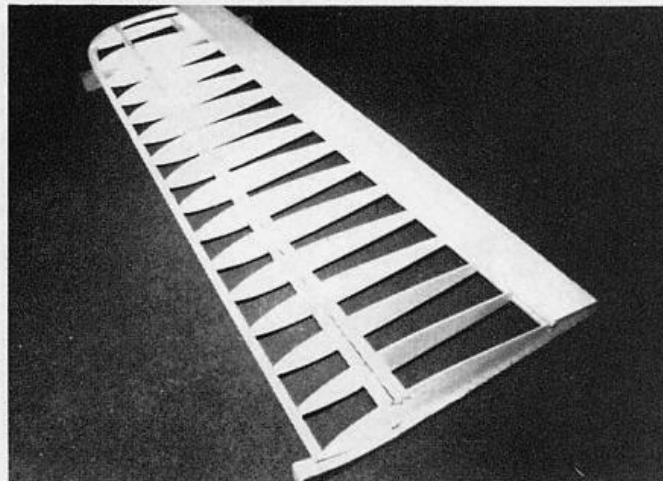
Wing is inverted and lower spar caps installed.



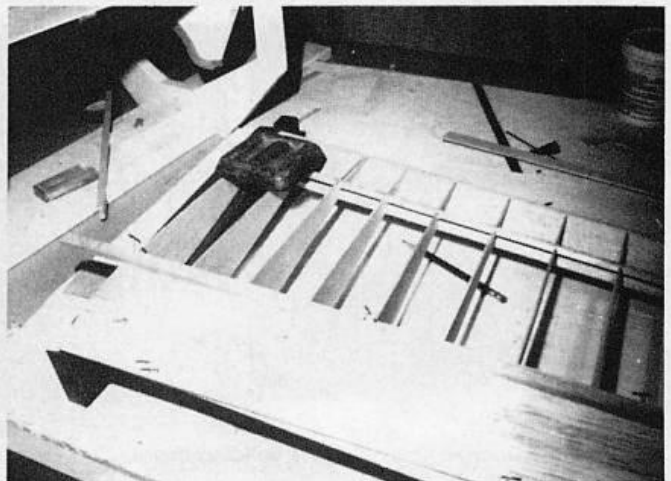
Here webs have been installed and T.E. ribs are cut back to receive flap and aileron L.E.'s.



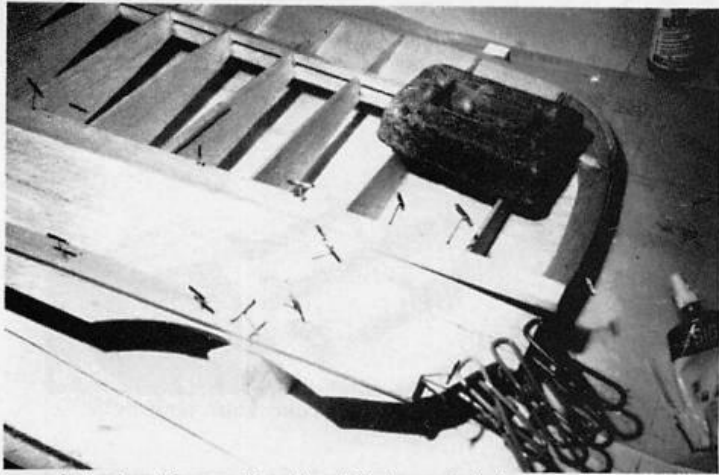
Be sure all internal blocking is installed and checked before lower T.E. sheet is applied.



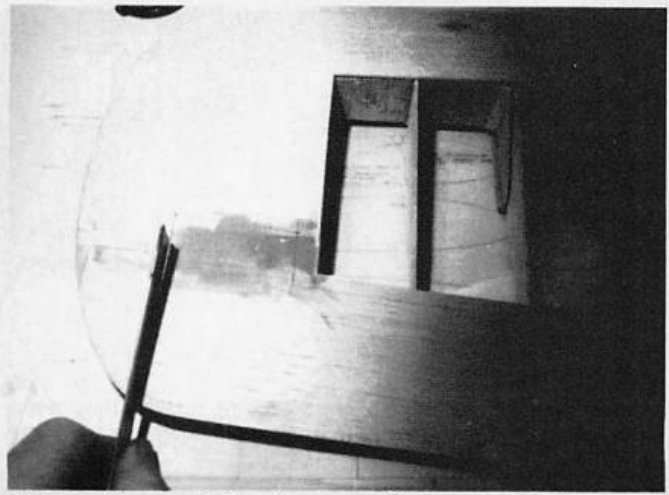
Here wing is resting on the "washout" blocks and ready for L.E. sheet.



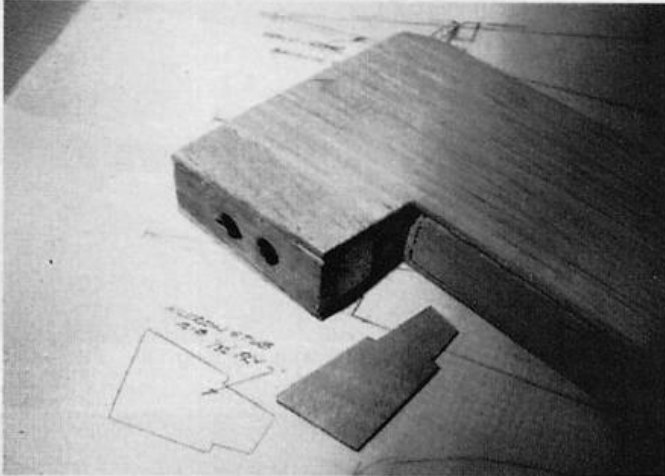
Lower L.E. sheet being installed.



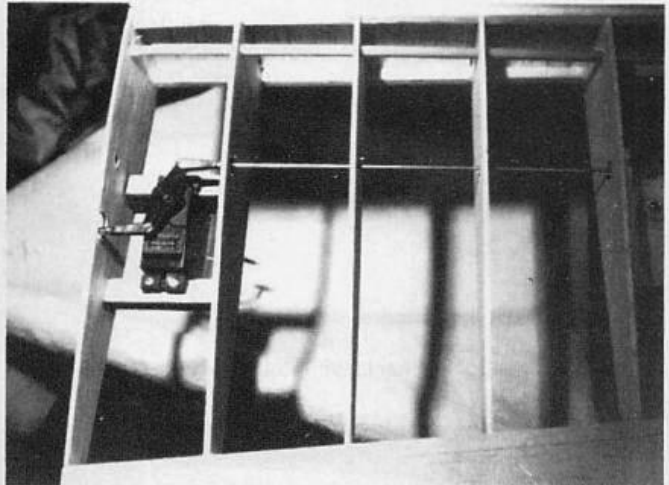
L.E. sheet is gored to allow it to be pulled down and around tip. Note inverted wing is still resting on "washout" contour blocks. Lower T.E. sheet will be applied last while wing is weighted on flat surface.



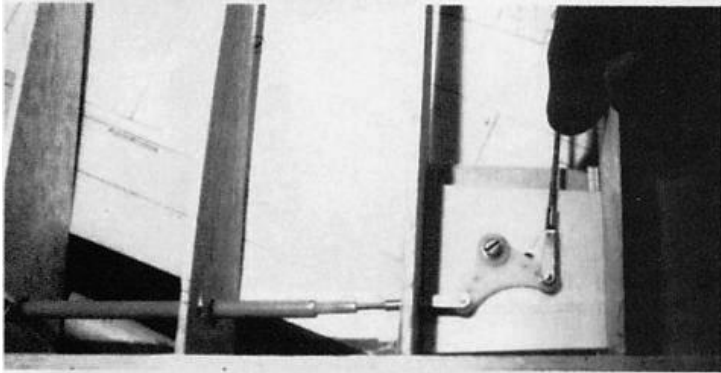
After marking carefully, ailerons and flaps are cut loose.



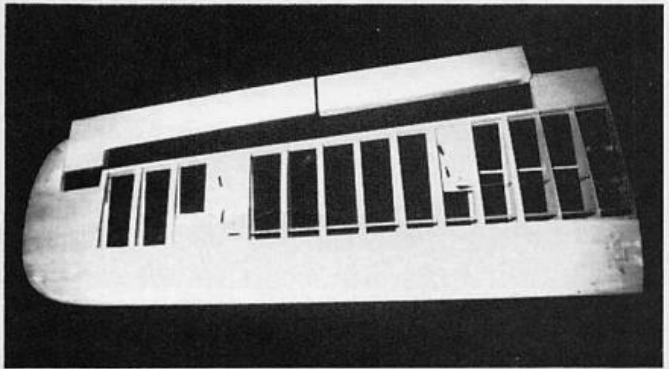
Aileron balance side plate prior to installation. This area is foam filled. Note balance weights.



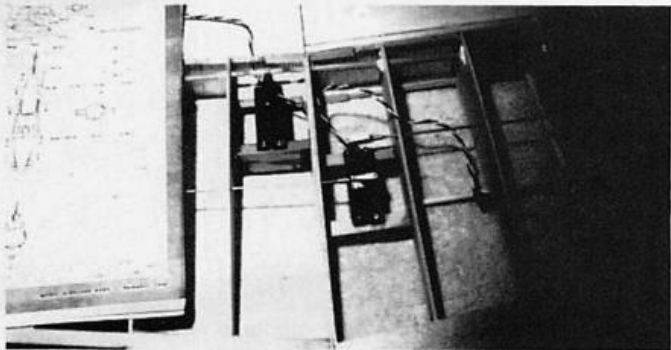
Flap servo installation. Both servos and NyRods are installed before wings are joined.



Aileron bellcrank installed over tip float backing board.



Shot of wing ready for joining.



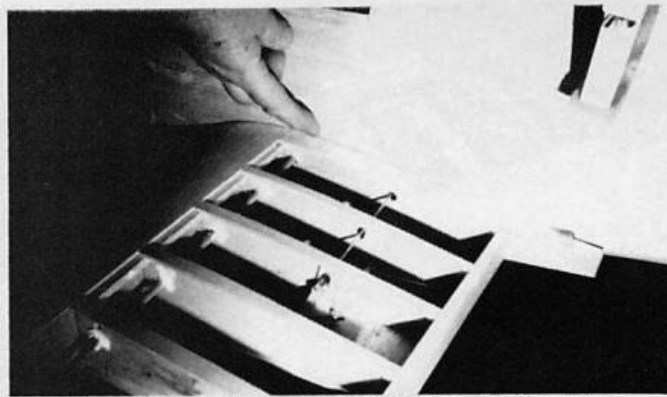
Here wings have just been joined, and lower root sheet is being applied.



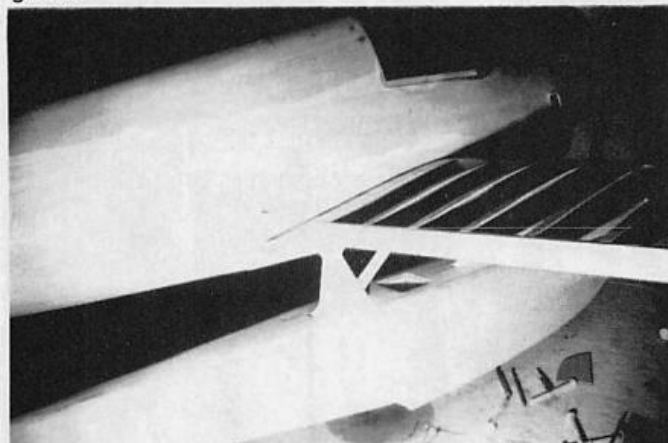
Wing root glassed, servos and links installed, ready for covering. Additional sheet aft of flap bellcranks is optional.



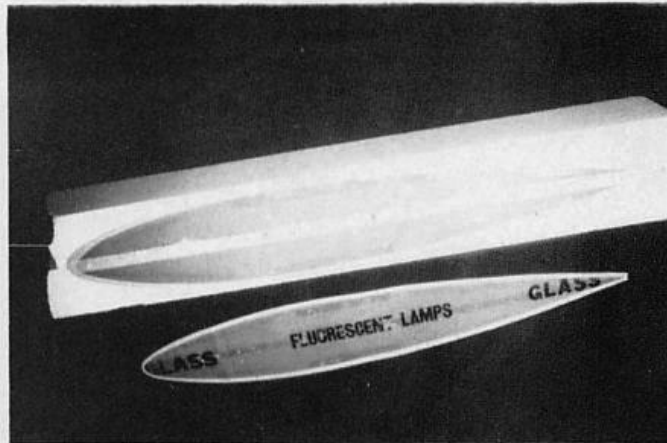
Author used a beveled piece of K&S tubing tube for the aileron splash guard. Plywood tip float pad can be seen in front of the guard.



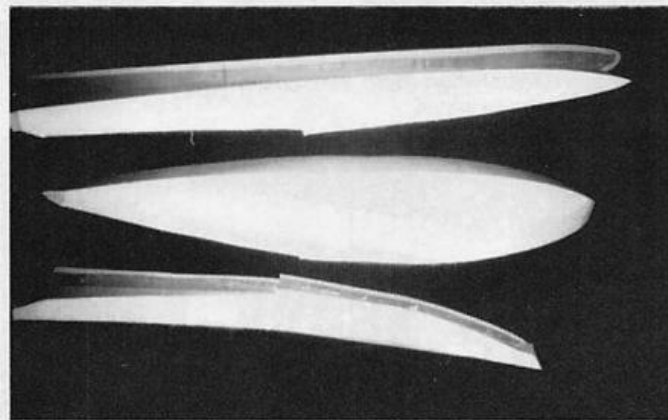
Checking wing-to-fuselage joint. Take your time here — neatness counts.



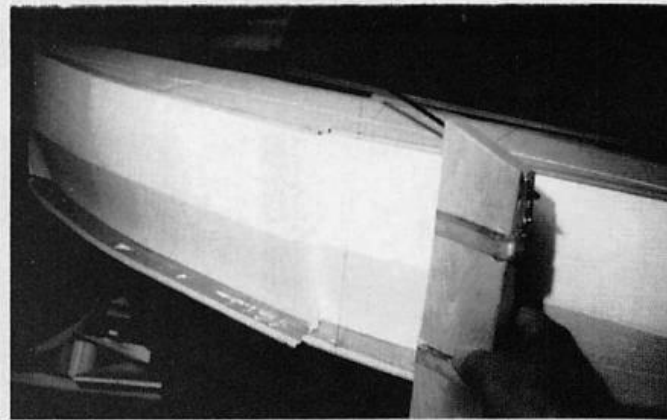
Wing-fuselage-float fit check. Wing-fuselage fairing not used on this ship.



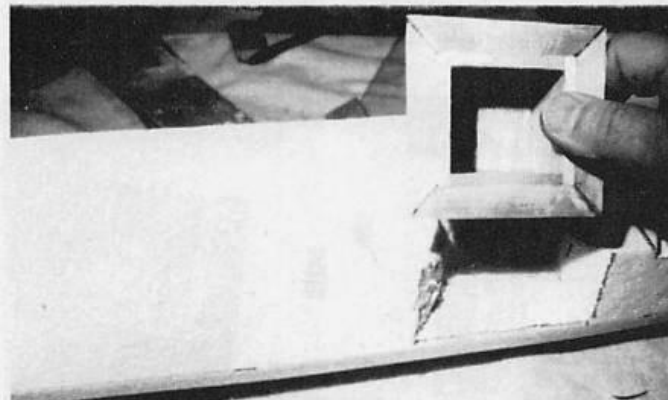
Cardboard patterns are sealed with masking tape, then float shape is hot wired out.



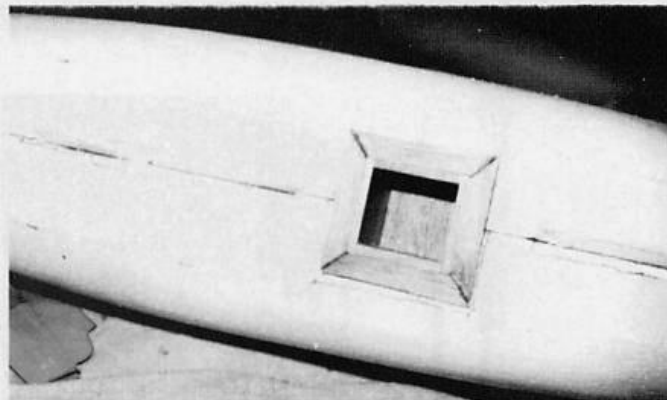
Side patterns — one has high side for bevel cuts.



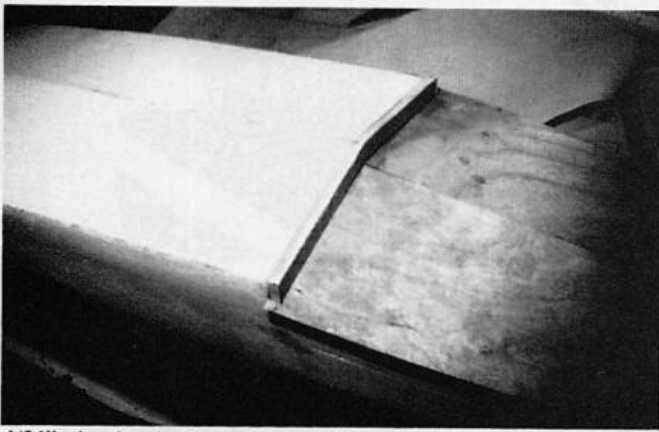
Cutting bottom bevel using high sided float profile template.



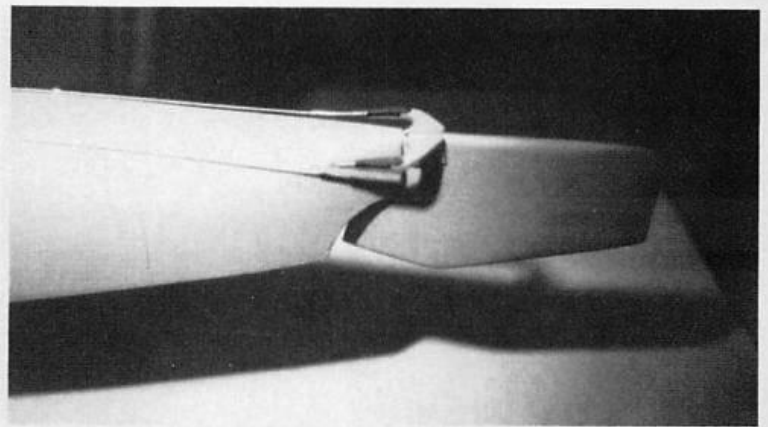
Separate float halves, then cut out servo and strut openings with long knife.



Servo box has 1/2" triangle stock top lip to secure hatch.



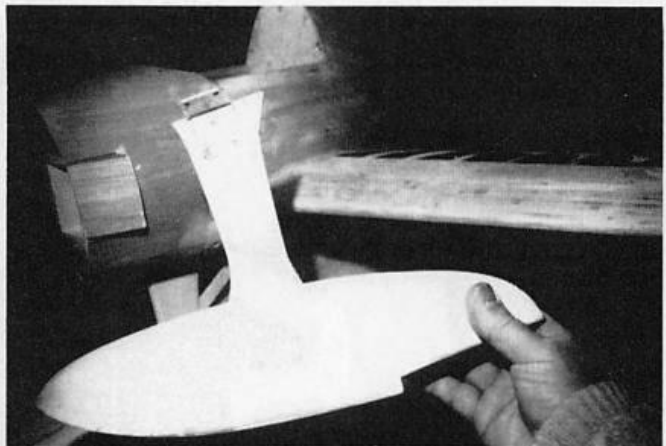
1/64" ply after bottom sheet and step block installed.



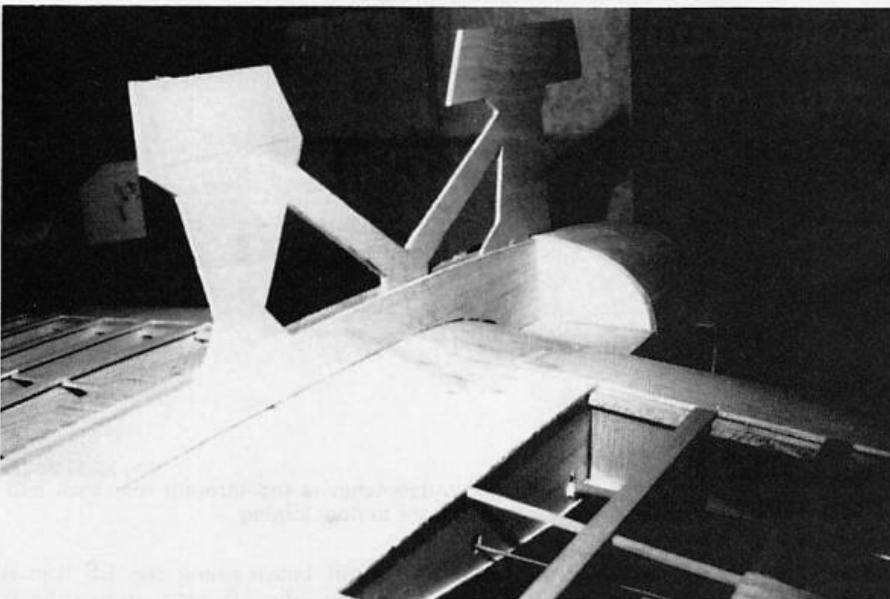
Water rudder has stainless steel fishing leader pull-pull cable actuation system.



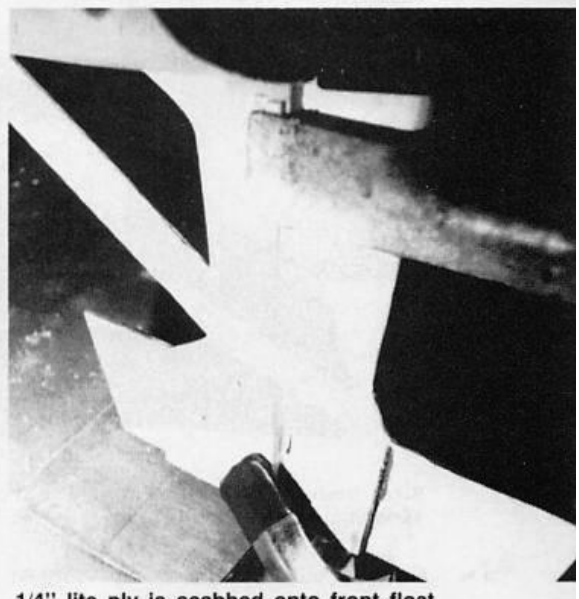
Tip float bottom bevel cut with bandsaw table angled 12 degrees.



Completed tip float. Strut is Titebonded in place after glassing and finishing. Note aluminum angles.



Check fit of float strut between end bulkheads. 1/4" ply doubler not shown in this photo.



1/4" lite ply is scabbed onto front float strut to increase lateral bending resistance. Here clamps are holding them in place while the epoxy sets up.

hose clamp, secured to the firewall with 4-40 nuts and bolts. Incidentally, a \$1.50 lawn mower muffler works as well as the snuffler. It's really the same thing!

Tail Group:

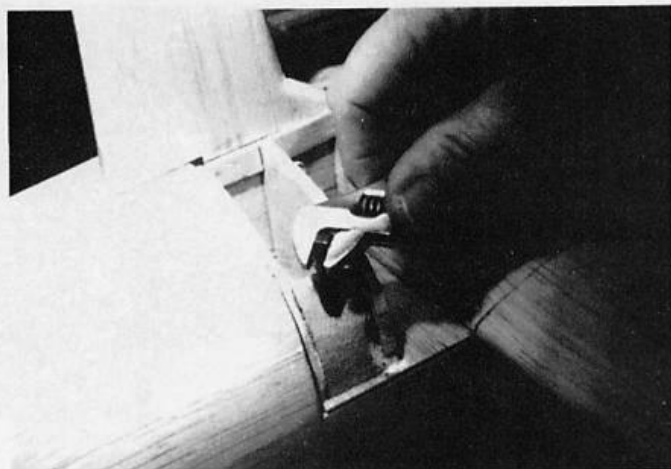
This is about as standard as you can get. Just lay up the 1/4" frame members, sand them smooth, and sheet with 1/16" medium balsa. The

TE's are tapered of course, but the rest is flat except for the rounded LE's. I cut the hinge slots in the 1/4" frames before sheeting to insure accuracy and get rid of any chips inside. The elevator roots are notched to receive a V shaped piece of 3/32" steel which forms the torque carry-through. Do not install this member until the tail is covered and mounted; then, after the

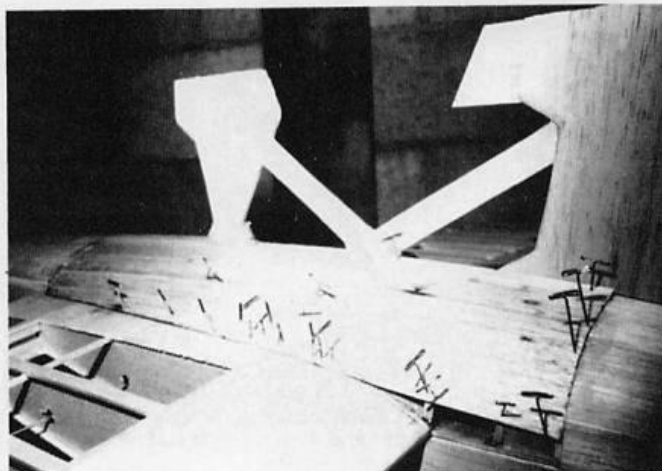
elevators are hinged and installed, it can be epoxied in place. The rudder is installed last. A small notch will be needed to clear the elevator torque carry-through rod.

Wings:

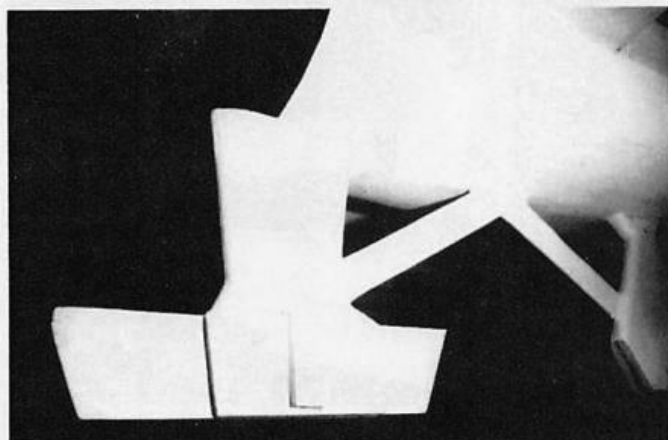
Anyone who has constructed tapered, washed out, built-up wings will recognize this one. There aren't any shortcuts, so let's just dig in.



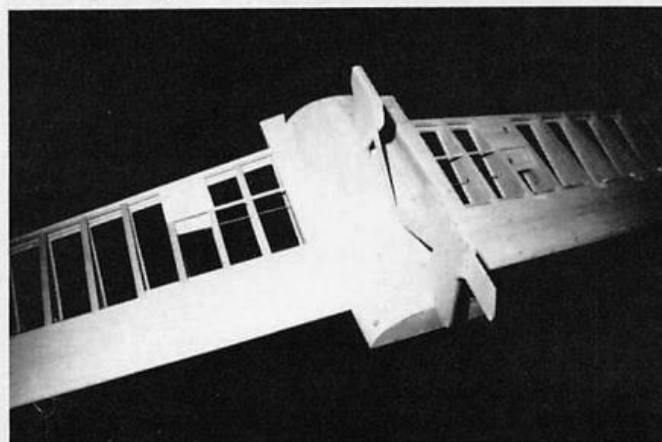
Threading 1/4-20 tap thru support block and into fuselage backing block. 1/4" ply doubler not shown in this photo.



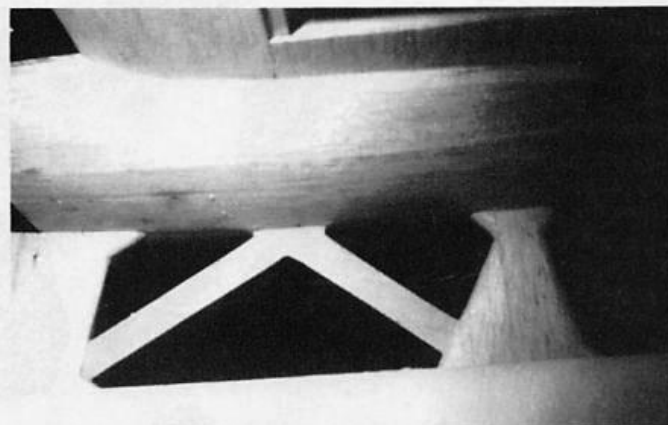
Sheeting under-wing fairing. Float is not installed until after covering and paint. 1/4" ply doubler not shown in this photo.



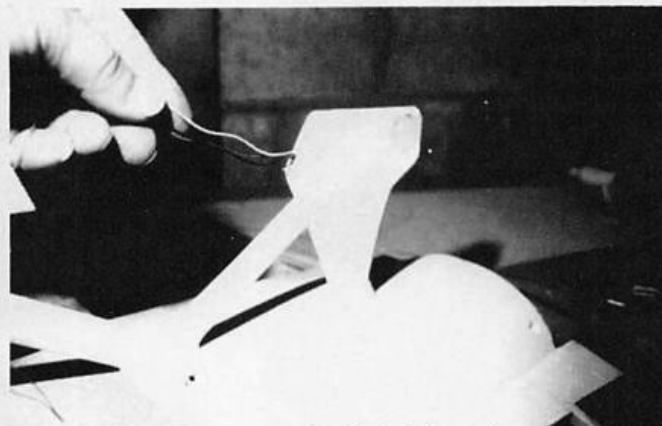
Finished front strut assembly.



Another under-wing fairing shot.



Strut under-wing fairing shot. Front strut does not have stiffening mod yet in this shot.



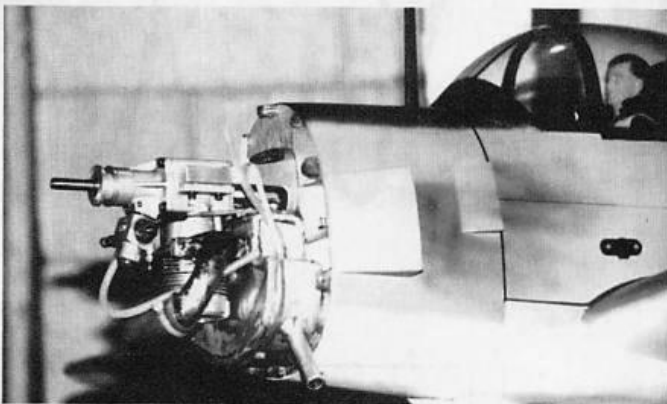
Water rudder servo extension is fed through rear strut and connector attached prior to float joining.

Cutting out the ribs is the biggest chore, and after that it only remains to assemble them — aligned and level. Let's mention here that I didn't install the slats. In discussing them with Steve we concluded they were neat and scale and all that, but did not really contribute to low speed performance so far as we could tell; and the complexity was outrageous. I also decided to make the flaps hinge at the bottom to simplify the wing TE and get more flap deployment. For those of you out there who find this terribly un-scale, a slot cover can be

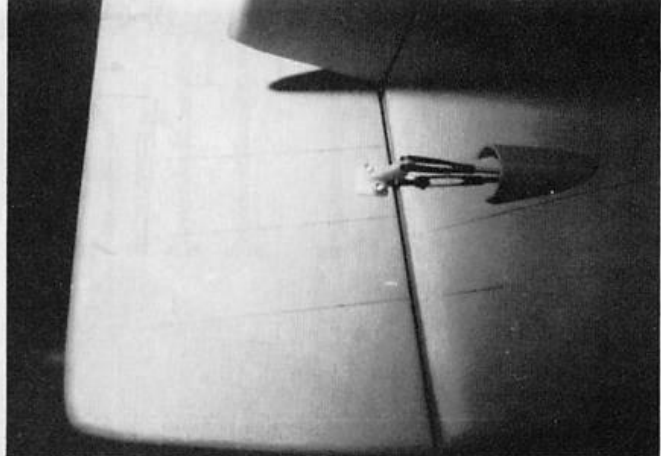
added to hide the crack when they are in the down position.

Cut the rib patterns out of the plans, spray them with 3M adhesive and stick them on the 3/32" sheet. After cutting them out and sanding slightly, lay them on the sheet and cut the second wing set. If this doesn't try your patience, nothing will! Now cut a tapered piece of 36" 3/16" balsa, 3/8" at one end and 3/4" at the other. Pin it on the plans about 1/4" ahead of the TE and with the 3/8" end at the root. This will automatically put in the washout during initial assembly. Place a

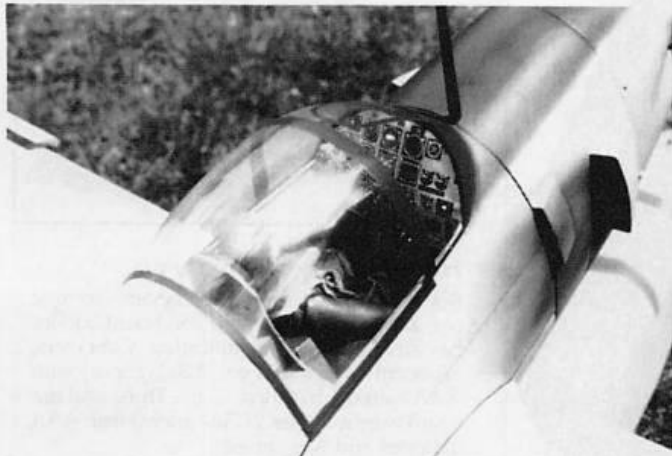
straight board along the LE line so that the ribs will butt up against it. Pin the ribs in place remembering to angle the 1/16" root rib 5°. Glue in the two top 1/4" square spar caps (add the 1/8" .007" carbon TOW to the bottoms of the full length caps first). Notch the rear spar top cap for the aileron hinges before gluing the 3" x 36" x 3/32" sheet upper flap/aileron sheet in place. Don't glue the sheet to the spar cap outboard of rib 15 yet! Now, remove the LE board and glue the tapered LE on. Remove the wing and add the lower spar caps. Next cut out the shear webs



S.T. 90 with custom muffler on Steve's ship. Muffler proved troublesome. Author uses J'TEC.



Splash guards are 1/2" PVC pipe glued over pushrod exits, after covering.



A detailed cockpit is a must with any scale model, and don't forget the pilot!



Steve's plane had leading edge slats, but these were not used on our model. Nice detail but not necessary.

and install them. Trim as necessary to get a good fit. Now add the second stub spar caps top and bottom. Add the tip rib and pull the spar caps together while securing the 1/4" tip contour pieces. Shape the LE and bevel the bottom of the TE sheet. Cut out the two washout rib cradles and place the wing on them. Pin a 4" x 36" x 3/32" sheet on the leading edge and spray it with ammonia. When dry, mark the rib and spar areas. Remove the sheet and coat the marked areas with glue and re-secure the sheet on the wing while it remains on the cradles. To glue the sheet to the tip, a small V shaped piece must be cut out so that it will conform to the tip shape. Add the aileron balance blocking. The lower LE sheet can now be added using similar washout wing cradles. Reversing the wing, install the beveled and tapered aileron and flap spars. Leave a full 1/16" between these spars and the rear wing spar caps; this space will be filled with the 1/64" TE web, hinges, and covering.

Now the lower 3/32" TE sheet can be applied while the wing is held flat on the table to insure the edge is perfectly straight. Sheet the wing tips and pull the upper and lower TE sheets together simultaneously and secure them to the rear former. Mark the aileron and flap cuts carefully, then

cut them free using a straightedge as a guide. Match and cut the aileron hinge slits. The balances must be beveled back slightly at the bottom and 1/2 oz. balance weights installed. I used 1/64" sheet to finish up the sides. Round the front tops slightly too.

Install the aileron and flap servos along with their push-pull rods now and check for smooth operation. Temporarily install the aileron and flap horns and fit the clevises. These must be removed again for covering, however. Now finish sheeting the root area and install the tip float back plates and their reinforcement. The capstrips can now be added. Using LE contour templates, carefully contour them. Now join the wings by simply blocking them up and gluing together. Two pieces of 6" x 15" 3 oz. cloth, top and bottom, and a couple of angled plywood doublers complete the structural joint. Cut out over the servo after the glass has set. It's now time to remove the rear root fuselage match cut-out. Of course, now is the time to remind you that you should have the appropriate blocking pieces sandwiched in the root TE — so that the rear root cut-out will be solid and there will be some substance to the rear hold-down bolt holes!

Fuselage-Wing Joining:

Invert the fuselage on a padded

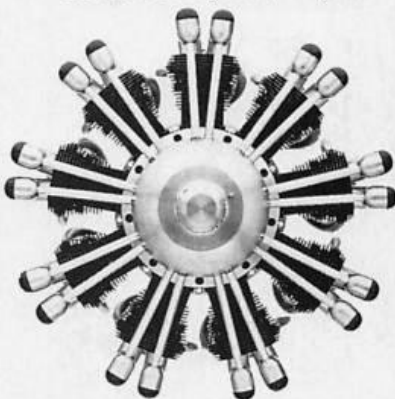
contour — matching cradle. Now you can test the wing for fit. Carefully contour the match lines to fit the wing.

To build the underwing fairing, begin by cutting out the float strut from 5/32" birch ply. Cut out the two 3/16" hard balsa keels and test them for fit too. Add the four matching 3/16" side cheeks and contour them before the strut assembly is glued in place. The wing is positioned on the fuselage and lined up by equaling each tip-tail distance. Add the front and rear fairing bulkheads, remembering to shim them about 1/64" to allow for covering. Now secure the float strut between the two keel pieces and add 5/32" blocking in the openings between the bases. Drill through a cheek block for the water rudder servo lead. Position the strut assembly and glue it in place; use an angle template to insure it's vertical. Now add the fairing ribs and position balsa blocks over the areas where the hold-down bolts will go. Drill and tap the bolt holes; then remove the fairing and contour the blocks to match the bulkhead contours. 3/32" sheet is now applied to the bottom ribs. I recommend contouring the pieces of sheet with ammonia before application. It takes about three pieces per side. While still in place, sand the fuselage, wing, and fairing joint areas

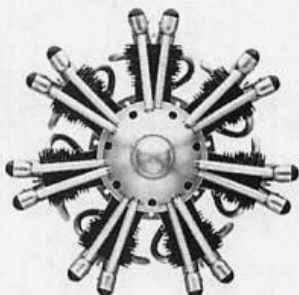
text continued on page 92

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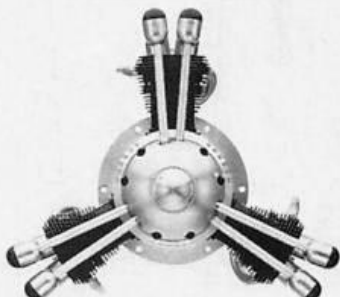
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for a perfect match, and Red Devil any voids. The bolt holes are drilled through from the inside after you remove the wing-fairing assembly from the fuselage. Turn the assembly over and, if you haven't done it yet, cut out the glassed areas over the aileron and flap servos. Go ahead and thread a three-wire rudder servo extension down through the wing and strut. It may be necessary to solder the connectors on after assembly, so tape them off for now.

Main Float:

This is a foam job so prepare yourself for it by securing at least a 45" x 8" x 8" block of 1 lb./cu. ft. white foam. Using two straightedges on each side, hot wire the foam down the center, and spray adhesive it back together lightly (it must be light so that it can be separated with a little prying). Now, using the plans, make a float contour box out of cardboard and an extra side contour piece, 1 1/2" taller. Add 1" masking tape to the edges where the wire will run; the wire won't burn the tape if you don't dally on your cuts. Now place the block in the contour box and temporarily secure the extra higher piece to one side. Hot wire the beveled bottom. Next, reverse the high pattern and hot wire the other side of the bottom. Lightly spray the float bottom and place the cut pieces back on the block to make it square again. Using the same masking tape and cardboard technique, make two top profile patterns and position them on the top and bottom of the block. Hot wire this profile, and, using spray adhesive again, replace the outsides. Using two end profiles and a long bow (if you have one), cut out the Tumble Home (that's a fancy term for the upper curvature). Now carefully remove all the outside pieces and go to work with a sanding block covered with 100 grit. Place yourself in the light so that you can see the shadows on the float as you remove the foam; this way you can sand a perfect contour (well near perfect anyway).

Now separate the two halves and match them up with the inverted strut on the ship. Draw around the strut bottoms and, using a long knife, cut out those areas in each float half. Go ahead now and make the rudder servo box to match whatever servo you have chosen. Using the box as a pattern, mark the float halves and cut out this area also. Position a piece of 7" x 24" x 1/32" plywood on the center of a float half and mark it. Cut out this profile and Titebond it to the float half. Mark where it fits on the other half and sand 1/32" down so that the two will fit nicely. Now Titebond the two halves together (the plywood sheet carries the water loads straight to the strut without tending to crush the foam).

text continued on page 98

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continued from page 92/80

Epoxy 1/64" plywood to the float bottom after adding the beveled step piece. Red Devil any voids in the top surface and glass it with 30-minute epoxy and 3 oz. cloth. This will take two pieces of glass since it just will not go around all the contours in one piece. Make your joint at the top neat, and overlap it about 3/8". Make your 1/16" ply servo box cover with two short pieces of Sullivan inner rod exiting for the Teflon covered, stranded SS water rudder pull-pull cables. Additional short pieces of Sullivan rod are neatly

epoxied along the top of the float to serve as guides for the leader to the water rudder horn. Using the Saran Wrap-silicone trick, secure the servo box cover with several #2 brass screws. The water rudder is made with two pieces of 3/32" balsa sandwiching a 1/16" piece of ply, recessed for a Sig XX hinge, and glassed. The horn is made using two Du-Bro control horns as shown on the plan. Be sure to seal the hinge in the float before attaching the rudder.

Tip Floats:

Felt-tip the top and side outlines of the tip floats on 3" x 5" x 14" blocks of foam. The bottom outline should be

5/8" below the keel line to allow for the bevel cut. Now use your bandsaw to cut out these vertical profiles. Bevel the bottoms by setting the bandsaw table to 12°. Next, place the top pattern on the bottom of the float (the top is still flat and easier to hold on the saw table), and saw out the horizontal profiles. Next, saw them in half vertically. Cut the struts from 1/8" ply and draw their bases on the float halves. Cut some 1/8" balsa sheet and glue it outside the strut base lines for blocking. Glue the halves together but leave out the struts for now, they will be inserted after the floats are contoured and glassed. Using 100 grit,

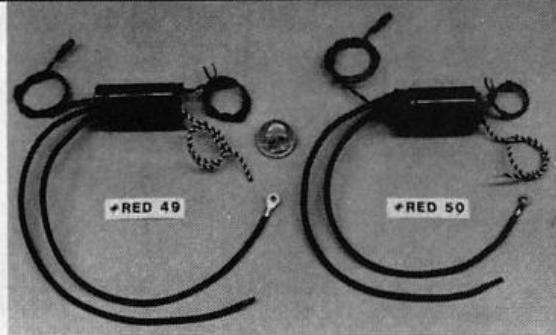
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contour the floats now. Epoxy 1/64" ply to the bottom bevels and glass the entire float with 3 oz. cloth. It will take at least five pieces of glass due to the compound curvatures. The wing attach fittings are four 3/4" x 2" x .030 aluminum angles bolted to the struts and screwed to the hard plates in the wings with four #4, 3/8" sheet metal screws. The small screws will pull out with hard usage and eliminate collateral damage. Slip the struts in the floats, mark the joint lines, and add and contour the side cheeks.

Cockpit Finishing:

I obtained a Royal Bearcat cockpit kit, which didn't fit very well until I

modified it extensively. Secure the dash, sides, and seat with RC-56. Add the stand-off head rest and a simulated radio between it and the rear bulkhead. Paint the inside medium gray. There are several 1/6 scale pilots around, take your choice but don't forget — a scale ship **must** have a pilot! The Great Planes 72" CAP 21 canopy is trimmed carefully to fit. Remember that the full scale ship canopy overlaps the rear bulkhead. Don't install the canopy until after covering, but before painting.

Covering:

Steve and Paul covered their ships

with Super Shrink Coverite. I could do no less. The material is wonderfully forgiving of compound curves and a delight to work with. Just remember to cover the individual parts before assembling them. After covering the fuselage and tail surfaces, the wing can be installed and the fin and stab mounted while lining them up with the wing. Cut away a bit of the covering where the glue is used. Epoxy Lite was used for fillets there. After covering, install all the control surfaces and hook up the pushrods. Cut through the rear fuselage and install the pushrod water shields. The canopy is now installed.

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lines and tabs were outlined with a black marking pen and chart pak, then the entire ship shot with Deft satin clear coat.

Radio Installation:

Install the fuel tank, using the rubber bands previously provided. Install the servo rails and a couple of hard-point clips on the underside of the cockpit bottom to hold the Rx in place. Install the elevator and rudder servos as far back as convenient; then measure for the dowel pushrods and install them. The water rudder servo lead can be finished off with a connector now. It will be connected to the rudder "Y" harness as the wing is installed. My battery was wrapped in foam and placed behind bulkhead #4 with rubber bands attached to four paper clips epoxied to the longerons. Of course, check for your correct C.G. with the ship completely assembled, and move the battery as required.

Control Throws:

High rate: ailerons 3/4" each way; elevator 3/4" up and down; rudder all you can get; water rudder 1" each way. Low rate will, of course, be about half these displacements. Flaps should be capable of 45% deployment which comes out about 1 3/4" down. Those of you having a flap servo ought to use it!

Flying:

The moment of truth! Assuming you've gotten this far, all I can do is give you some pointers. First, let another experienced pilot check it out. He'll do a final C.G. check and catch that reversed servo and pinched fuel line easier than you. He will be calm and not worry about all the work that you have put in. Believe me, he'll appreciate it and be super careful, but won't be anxious like you would be. Just tell him what you want from your first couple of flights and let him do it. Always take off and land directly into the wind. Some ships get away with sloppy directions, but "V" bottomed float ships don't like to try to skid on the water in a cross wind. Only use partial flaps for your first landings until you get the feel of how fast your speed bleeds off with greater deflection.

That's it, you're on your own. Go for it!

Source

The custom fiberglass cowling for this ship can be obtained from: Jerry Holcomb, 1010 N.E. 122nd Ave., Vancouver, Washington 98684. He charges \$25.00 plus \$2.00 postage. □

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Painting:

The two prototypes were painted with Chevron intermediate blue on top, and flat white on the bottom. Of course you could use the Navy Blue that is shown on one of the full size XOSE-1's. I painted mine the Navy's tri-color using Rustoleum's flat white on the bottom, gray on the sides, and Chevron's sea blue on the top surfaces. The canopy was masked off of course during this process and remasked as I painted the canopy separation lines. The float was completely finished before I secured it to the strut. A little Epoxy Lite around the strut joints, and paint touch-up finished it up. Panel

Eastern Idaho Aero Modelers of Pocatello, Idaho "Fun Fly '90"

July 21-22, 1990.

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