



CONSTRUCTION

Step 1. Construction of the wing frame. Pin the 3/32" balsa wood sheet which will form the bottom wing skin to the plan directly over the wing outline, lining up trailing edge of sheet with aft edge of main spar line. Splice sheets as shown. Glue the 1/8 x 3/8 spruce spars down on the sheet. Next stack the four plywood roots and P-1 ribs together, lining up the wing pin holes, and drill an 1/8 inch hole through them for the aft brace tube. Glue all wing ribs, trailing edge, spars, spar web, leading edge, and fiberglass tubes and brace tubes in place and let dry overnight. Be sure to use epoxy on plywood ribs, and on tubes, and be sure not to forget to glue spar webs in place. This is important; leaving out the webs is not advised.

Apply liberal amounts of glue to the leading edge and forward parts of the ribs, and glue the tapered 3/32" forward wing skin in place.

NOTE: It is important that the wing skin touches the ribs everywhere. If the skin has any bubbles in it, these should be taken out NOW by driving in enough pins to hold the skin down. If the skin seems a bit difficult to bend, brush a little water to the top side. This will cause the sheet to curl concave side down. Sponge off any excess glue that comes out at the seams. Complete wing structure by attaching the rest-of-the-upper-wing-sheathing.

Step 2. Completing the wing. The wing panels should be removed from the plan and sanded to the approximate airfoil shape and shape shown on the plan.

Step 3. Construction of the fuselage. The fuselage is a formal fiberglass shell and needs only the addition of the control section, wing attachment wires, canopy, and tail section glue prime and finish painting to complete it.

The control section is fabricated by joining the plywood form to the foam block with contact cement. The foam block is then sanded to shape to fit the bottom of the fuselage. When fit is completed, do not join with the fuselage yet --- wait until all servo components are mounted, it is much easier that way. If you have a kraft brick, then you need only hollow out the aft component and mount the receiver/servo brick in the compartment. The hole is made long enough to accommodate the largest brick. Mount hardwood Bearer so as to fit snugly against brick. If you have regular servos, mount them in the aft cavity, and hollow out the forward cavity to accommodate the receiver. The on/off switch can be located between compartments. When finished and components installed, put contact cement in fuselage and on foam and cement in place.

Step 4. Construction of the tail section. These are of simple all-sheet design and need only be sanded to approximate airfoil shape, and the corners rounded. Leave the elevator in one piece and drill two 3/32" diameter holes for the torsion bar. Glue the torsion bar in place and silt both elevator and horizontal stabilizer for nylon hinges. Assemble the stabilizer and elevator and make certain that the elevator moves freely without binding. When properly aligned, epoxy the hinges in place. Cut the elevators free and sand smooth. Repeat the above process for the rudder and vertical stabilizer assembly.

Prepare the pushrod assembly by cutting the 1/4" square balsa strips to length, and secure the wire ends to them with glue and thread. The forward ends are left straight and are to be trimmed to match the particular servo installation used. Drill pushrod exit guides in the fuselage sides and then install the pushrods. Glue the tail surfaces in place and check for proper alignment of the surfaces and for proper position; if not, fix it now.

Step 5. Completing the fuselage. The canopy can now be constructed. Using the fuselage as a guide, cut the 3/16 balsa sheet to form the front, bottom, and back of the canopy, and glue these three pieces in place. Use some wax paper between this assembly and the fuselage to prevent gluing them together. When assembly has completely dried, remove from fuselage. Next, trim the plastic canopy supplied to fit over the canopy frame. The plastic canopy fits small and forward. It should be trimmed with scissors to approximate shape and glued to the frame.

Before test gliding the model, check for proper c.g. location, and check to see that the wing panels have proper washout (approximately 1/4" per panel). See that neutral trim corresponds to neutral rudder and elevator position. The rudder should be adjusted to give maximum travel (inside hole on rudder horn, and elevator to give minimum travel --- outside hole on elevator horn). Try a couple of hand glides, then if everything is okay, get a hand tow or a hi-start. We prefer a hi-start to a hand tow even if you don't get quite as much altitude, it saves a lot of running for us older fellows.

Get the feel of the model at altitude. Stalls are abrupt, but not much altitude is lost in recovery. If you have proper washout and no warp, the stalls will be straight ahead with no tendency to fall off on one wing or the other. With the minimum elevator travel, loops can easily be performed and the model loses only a few feet of altitude in each succeeding loop. Many times on the slope, the ASW-17 has steadily gained altitude while doing consecutive loops!

Spot Landings

The ASW-17 has a very flat glide ratio so it floats a long way and it takes some practice to get a good spot landing. We find that the best method is to adjust the ship so that full up trim is used during thermal flight. In this way neutral trim gives a good but fast glide which helps wind penetration and you can use full down trim just before reaching the spot and the ASW-17 will descend smoothly and will usually stop without bouncing.

Distance and Speed Events

This design can help you win distance and speed events using 15F fuels. For these speed and distance events mid about 16 to 20 oz. of ballast at the wing pin point.

Power Pod

The best is to forget it and use a high start. But if you must, an 09 or an Astro 10 electric is recommended.

WING SPAN	132 IN.
WING AREA	350 SQ. IN.
ASPECT RATIO	13 TO 1
AIRFOIL	EPPLER 387
LENGTH	48 IN.
FLYING WT.	64 OZ. S
DESIGNED BY	R&R BOUCHER
DRAWN BY	H.D. MYERS

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