SQUAW III ASSEMBLY NOTES

BUILD THREAD

A build thread for this model is available at
http://www.rcgroups.com/forums/showthread.php?t=1683850

MATERIALS REQUIRED:

- 4 each 3" x 36" x 1/16" balsa sheets for wing sheeting and fuselage sheeting
- 1 each 3/8" x 1-1/2" x 36" balsa trailing edge stock for wing trailing edge
- 1 each 1/4" x 3/4" x 36" balsa stick for wing leading edge
- 1 each 3/4" x 13" balsa triangle stock for fuselage nose
- 2 each 1/4 x 24" balsa triangle stock for fuselage
- 2 each 1/8 x 1/4" x 36" spruce wing spars
- Short length of 1/16" music wire for tailwheel strut
- 3/32" x 18" music wire for main landing gear
- 3/32" wheel collars
- Length of fine copper or steel wire for binding landing gear
- 1 pair 2-1/2" main landing gear wheels
- 1 each 7/8" tail wheel
- 1 each 2" spinner
- 1 each 1/8" x 6" hardwood dowel for wing mounting
- 1 each 1/4" nylon wing mounting bolt
- Servo mounting materials and pushrods
- 5" x 2" thin clear plastic sheet for windshield
- Alternate main landing gear (Tower Hobbies part numbers)
    - LXJ922 aluminum dural landing gear
    - LXK176 bolt-on axles
    - LXD833 1/8" wheel collars

FUSELAGE

Each fuselage side consists of two parts. Glue the two parts together to make two fuselage sides, being careful to make a left side and a right side.

Glue a length of 1/4" triangle stock to the fuselage inside, from the front edge of F3 to the aft end of the fuselage.

Glue a length of 3/4" triangle stock to the fuselage inside, from F3 forward. Don't cut the forward end of the triangle stock square with the fuselage side just yet.

Glue the wing seat doublers to the fuselage insides.

Cut a series of saw kerfs in the 3/4" triangle to aid in bending the forward end of the fuselage.

Cut a series of saw kerfs in the 1/4" triangle to aid in bending the aft end of the fuselage.

Glue the balsa triangle stock in place. The 3/4" triangle goes forward from former F3. The 1/4" triangle goes rearward from former F3.

Pin one fuselage side to the building board.

Glue cockpit floor CF between F4 and F5.

Glue F4, F5 and CF into the fuselage side that's pinned to the building board. Make sure the assembly is square.

Glue the other fuselage side onto F4, F5 and CF. Make sure the assembly is square.

Lace the wire landing gear onto F3 with fine copper wire. Then epoxy the wire to F3. (Note – you can substitute an aluminum landing gear for the music wire landing gear. Use the alternate F3 formers and the plywood landing gear mounts provided.)

Glue F3 into the fuselage sides.

Glue the wing bolt plate to the fuselage sides and wing seat doublers.

Making sure the assembly is square, sheet the bottom of the fuselage from F3 to F5.

Keeping the assembly square, glue F6, F7 and F8 to the fuselage sides. Glue the two fuselage sides together at the rear end.

Sheet the bottom of the fuselage from F5 to F8.

Glue the plywood tailwheel mount to the fuselage bottom sheeting. Drill a 1/16" hole through the mount and bottom sheeting. Bend a 1/16" tailwheel strut to shape and glue it to the ply tailwheel mount.

At this point, work out your control runs for the elevator and rudder. Cut slots in the fuselage side accordingly.

Glue 1/8 X 1/4" scrap balsa doublers to the fuselage sides to increase the mounting surface for the horizontal stab.

Squeeze the front end of the fuselage together and glue F2 into the fuselage sides. Note – the Squaw III is designed for a "prop-driver" outrunner or inrunner motor that mounts to F1. You can mount an outrunner to F2 instead, but do it before you glue F2 in place!

Glue the 1/16" hatch base strips between F2 and F3.

Cut pieces of wax paper in the shape of F2H and F3H and the hatch base strips. Build the hatch in position, with the wax paper inserted to prevent gluing the hatch parts to the fuselage. This would be a good time to install some small super magnets to hold the hatch in position.

Square up the forward ends of the 3/4" triangle.

Glue F1 in place.

Glue a 1/8 X 1/4" balsa stringer from F1 to F8.

Moisten the top portion of the fuselage sides between F1 and F1. Then roll the fuselage side onto F1 and glue in place.

Fit and glue the two 1/8" and one 1/16" sheets in place between F1 and F2 on the bottom of the fuselage.

Plank the top of the fuselage from F1 to F8 with 1/16" balsa. Sand the fuselage to prepare it for covering.

Cut out the cockpit opening.

Cut out the hatch.

Sand the headrest to shape. You can install it now, or install it after covering the fuselage.

Cut out the wing openings in the fuselage sides.

Using a razor saw, cut out the fuselage belly pan directly behind former F3, and directly in front of former F6. Remove the cut out belly pan.

Glue F3A in position in the front end of the belly pan.

WING

Glue the 1/16" ply servo mount doublers to the inside faces of two 1/8" ribs.

Cut a pair of 1/8" balsa scabs to reinforce the wing bolt hole in the center ribs. Glue the scabs to the outsides of the two center ribs. (This is not shown on the plan.)

Cut 1/8" deep rib notches in the trailing edge stock, per the plan.

Pin one spar (1/8" x 1/4" spruce) to the plan.

Position the ribs on the spar, but do not glue.

Pin the trailing edge over the plan. Shim up the trailing edge about 1/2" above the building board.

Fit each rib into the trailing edge, but do not glue.

Place the upper spar on the ribs, but do not glue.

Install the false leading edge onto the ribs, but do not glue.

Make sure all parts are aligned correctly, then glue together.

Glue the 1/16" sheeting to the top side leading edge of the wing.

If you plan to install the servos so that their arms exit the bottom center section sheeting, install the servos now.

Glue the 1/16" sheeting to the top side center section of the wing.

After the glue has set, unpin the wing from the building board, turn it over, and pin it back down.

Glue the 1/16" sheeting to the bottom side leading edge of the wing.

Glue the 1/16" sheeting to the bottom side center section of the wing. Cut holes for the servo arms.

Glue 1/16 X 3/16" cap strips to the ribs.

Shape the wing leading edge.

Install the wing hold-down dowel in the center rib. Wait until after covering the wing to glue this dowel in place.

Glue the wing tips to the wing.

Use scrap 1/8" balsa to fabricate riblets and glue them to the wing and wing tip.

Temporarily install the 1/8" dowel in the wing leading edge.

Place the wing in position on the fuselage. Adjust the fit as necessary.

Drill through the center rib into the wing bolt plate.

Install the wing mounting bolt.

Now fit the belly pan to the wing and fuselage.

Cut an access hole in the belly pan for the wing mounting bolt.

Glue the belly pan to the wing, but do not glue it to the fuselage. (Note – you can wait until after covering the fuselage to do this.)

Finish sanding the fuselage, and cover as desired.

TAIL

Glue the fin parts together. Sand and cover.

Glue the elevators to a 1/8" dowel joiner. Use epoxy for this.

Sand and cover the horizontal stab and elevators. Hinge the elevators to the horizontal stab. Glue the control horn into the elevator.

Glue the horizontal stab assembly to the fuselage.

Glue the fin to the horizontal stab and fuselage.

Cut a slot for a control horn in the rudder. Glue the control horn in place. Hinge the rudder to the fin.

Use scrap balsa to fill the area on each side of the base of the fin. Cover.

FINAL ASSEMBLY

Paint and trim as desired.

Install motor, radio gear and battery.

Balance the model upside down. The balance point should be 2-3/8" behind the wing leading edge. This is at the rear of the main spar.

Thank you for purchasing this kit!

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