Miss Sarah

BUILDING GUIDE

WING

- Your model will not fly well unless the wing is straight with no warps.
- Make sure you start with a flat - level building surface or use a Jig.
- If you do not have a jig obtain some 1 X 1 balsa and cut it into 8 pieces
- Tack glue the balsa to the building surface in the shape of the wing. Be sure that you place the jig blocks between rib locations (4 pieces on leading edge and 4 pieces on trailing edge).
- Lay the leading edge, trailing edge and spars on the plans and mark rib positions on them
- Join formed leading and trailing edges as shown on plan and pin them to the jib blocks
- Pin ribs 1 and 10 to leading and trailing edge, square up the ribs and glue
- Install the rest of the ribs
- Fit the 1/4 x 1/4 balsa spars into the ribs
- The center section has 2 pieces of 1/4 x 1/4 between Ribs # 1 & # 2
- When satisfied that everything fits properly glue in place
- Sand the ribs from leading to trailing edge using a T-Bar sander to make sure all ribs taper properly
- Locate the Bellcrank mount, Bellcrank, lead out wires and 3/32" x 7-1/2" wire. If you wish to use a plate-style Bellcrank mount drill a 3/16" hole in the 1/8 plywood Bellcrank mount where indicated on the plans. Mount the Bellcrank to the plywood plate using the 6-32 bolt by inserting the bolt through the plywood and Bellcrank. You can use an extra nut or washers between the plywood and the Bellcrank to raise the Bellcrank high enough above the mounting plate to insure free movement of the wire pushrod. It's a good idea to install the lead out wires onto the Bellcrank now. Also drill out one of the Bellcrank holes to accept the 3/32" pushrod wire.
- Bend the 3/32" wire at 90 degrees, clean the wire and solder a flat washer to the wire at the bend. Clean off the wire and insert through the Bellcrank. Now solder a second flat washer to the wire on the other side of the Bellcrank. Your wire pushrod should move freely with no binding. Place the Bellcrank onto the 6-32 bolt and lock in place with the nut. A little glue or threadlock on the bolt will insure that your Bellcrank will stay in place.
- Mount the Bellcrank so that the hole is 2" from the back of the leading edge
- Make sure everything moves freely with no binding and epoxy in place
- Use a # 11 blade to cut out the inboard ribs to allow the control cables to pass through each rib
- Run control cables through each inboard rib from Bellcrank to wing tip location
- Cut the 1/16 x 3 balsa center section sheeting to cover the center 4 ribs
- Cut a hole for the pushrod wire then glue in place
- You are now ready to turn the wing over
- Unpin the leading and trailing edges and turn wing upside down then pin in place
- Cut and epoxy 2 pieces of 1/4 x 1/4 scrap to edge of Bellcrank mount and Ribs # 1
- Cut the 1/16 x 3 balsa center section sheeting to cover the center 4 ribs
- Locate the adjustable weight box and assemble it. This box is designed to accept the Sig brand of 1/4 oz flat weights. Glue the two 3/4 x 3/4 sides to the 3/4 x 3/4 bottom. Glue the two 3/4 x 1 sides. Place the 1/16 top plate in place and drill a 1/8" hole in the center of the top piece and the box bottom. Install a 4-40 blind nut in the box bottom and glue it in place. Epoxy the weight box to the last rib and spar on the bottom of the outboard wing
- When everything is completely dry remove the wing from the balsa blocks.

- Your plans may show a different wing tip. The reason for this is that we have changed the wing tip construction in order to simplify the installation of the adjustable lead out guide. Your kit will have a wing tip package consisting of 1- 3/8" outboard wing tip, 2 - 1/8" inboard wing tip caps and 2 - 1/4" wing tip centers.
- Glue the 3/8" wing tip to the outboard wing
- Assemble the inboard wing tip by glueing the 1/4" center pieces between the 1/8" wing tip caps. When assembled you will have a 3/8" thick wing tip with a hollow box at the lead out guide location. Glue the adjustable lead out guide to the inside flat area of the wing tip (directly behind the hollow box). Now glue the wingtip to the inboard wing
- Run the lead out wires through the ribs and out through the adjustable lead out guide. Finish the ends of the leadouts using the eyelets and crimp sleeves (or wrap the ends if you prefer)
- Use some 1/16" scrap to make wing tip filets.

FUSELAGE

- The fuselage is made out of ½" balsa
- Locate the 3/8 x ½ maple motor mounts
- Measure your engine and adjust the engine cut out as necessary
- Glue the maple motor mounts in place using slow set epoxy (not 5 minute)
- If you wish to decrease vibration in the nose you may want to glue .007 carbon fibre to the inside of the plywood doublers
- Glue the plywood doublers to the fuselage using slow set epoxy
- When epoxy is set, set your motor in place and drill the mounting holes
- If you intend to use 4-40 blind nuts mount them in place now
- If you intend to use an adjustable tank drill the holes now and mount the blind nuts
- Assemble and glue Cheek Cowl to the inboard side of the fuselage
- Sand the fuselage to shape
- Mark location of tailwheel and drill 1/4" hole on angle as shown on the plans
- Drill 1/16" hole in center of hardwood dowel
- Bend tailwheel wire to shape desired and insert into dowel
- Bend top of wire at 90 degrees and epoxy wire in dowel
- Glue tailwheel mount into 1/4" fuselage hole
- Mark landing gear location and drill 1/8" hole through fuselage
- Insert brass eyelet into hole

ASSEMBLY

- If your model is to fly properly you must insure that the engine thrust line is parallel to the wing and stabilizer thrust lines. An easy way to insure this is to draw lines on the fuselage representing the motor mount top(engine thrust line), wing and stabilizer leading and trailing edges centers (thrust lines)
- Slide the wing into the fuselage, center it and tack the leading and trailing edge centers to the fuselage at the marked lines

- Measure from the trailing edge of the last rib to the center of the fuselage front to insure that the wing is positioned properly. Measure everything again and if satisfied that the wing is centered and lined up on the thrust line epoxy it to the fuselage. If you use slow set epoxy you will have time to correct any misalignments.
- Mount the stabilizer into the fuselage and center like you did the wing
- When you are satisfied that everything is level, centered and on the same centerline glue in place
- Glue plywood elevator doublers in place both sides of the elevator.
- Attach Elevator to stabilizer with hinges. Make sure you have free movement with no binding
- Mount Elevator control horn to elevator with holes over the hinge line
- Locate Arrow shaft Pushrod, Dowels and 3/32 wire
- Groove both dowels to accept 3/32 wire and fit inside Arrow shaft
- Bend end of 3/32 wire at 90 degrees
- Solder #4 washer to wire at the bend (To keep the washer straight drill a 3/32" hole in a piece of scrap and insert wire with washer into the hole then solder washer to wire)
- Clean the wire first so that you will get a good glue joint and epoxy wire to dowel
- Clean the Bellcrank pushrod wire and epoxy it to a dowel then glue front wire/dowel assembly inside the pushrod
- When dry test your joint by attempting to pull apart
- An easy way to insure that you have the elevator centered is to lock the elevator in neutral before you epoxy the rear dowel. Place two pieces of hardwood over and under the stabilizer and elevators and rubber band them in place. This will insure that the elevator is neutral. Use 30 minute or 3 hour epoxy on the rear dowel and center the Bellcrank. This will make the pushrod slide along the wire until it is located in the correct position. When you are satisfied that both the Bellcrank and elevator are centered set everything aside until the epoxy sets.

FIN & RUDDER

- Glue fin to fuselage
- Glue rudder to fin with an offset of 1/4" to right (looking from rear of fuselage toward front). Make sure that the elevator moves freely without binding on the rudder.

FINISHING

- Mount the wire landing gear using nylon gear clips
- Sand entire structure smooth
- Cover wings
- Paint model
- Put 3 or 4 Sig 1/4 oz weights in the adjustable wing tip weight box and screw the box cover in place
- Mount the main and tailwheel

We are proud of our Hobby Fasteners kits. The very lightest balsa and finest materials have been selected to insure that you will build the lightest & strongest aircraft possible. Please check that all parts are in your kit. If anything is missing or damaged please contact RSM DISTRIBUTION at the address below. We will send out the part immediately.

Thank you for purchasing this kit. If you have any suggestions for improvements please contact us.

PARTS LIST

1 - Full Size Plan	2 - Maple Motor Mounts
2 - Medium Silkspan	1 - Cheek Package
1 - PAMPA Brochure	1 - 1/8" Balsa Fin
1 - PAMPA Application	1 - 1/8" Balsa Rudder
1 - 1/16 x 3 x 24 Balsa	2 - 1/32 Ply Elevator Pads
1 - Fuselage	1 - Wing Tip Package
1- 1/8" Balsa Elevator	1 - 1/8" Ply Bellcrank Mnt
1 - 1/8" Balsa Stabilizer	1 - Rib Package
2 - Formed Leading Edge	2 - 1/8" Formed Wire Gear
2 - Formed Trailing Edge	1 - Hardware Package
3 - 1/4 x 1/4 x 36 Balsa	1 - Arrow Shaft Pushrod
2 - 1/8" Ply Fuse Doublers	1 - Tailwheel Package

RSM DISTRIBUTION
1570 E. Edinger Ave Unit # G
Santa Ana, CA 92705-4909
Voice (714) 547-5745
Fax (714) 547-6438
Web Page : RSMDistribution.com