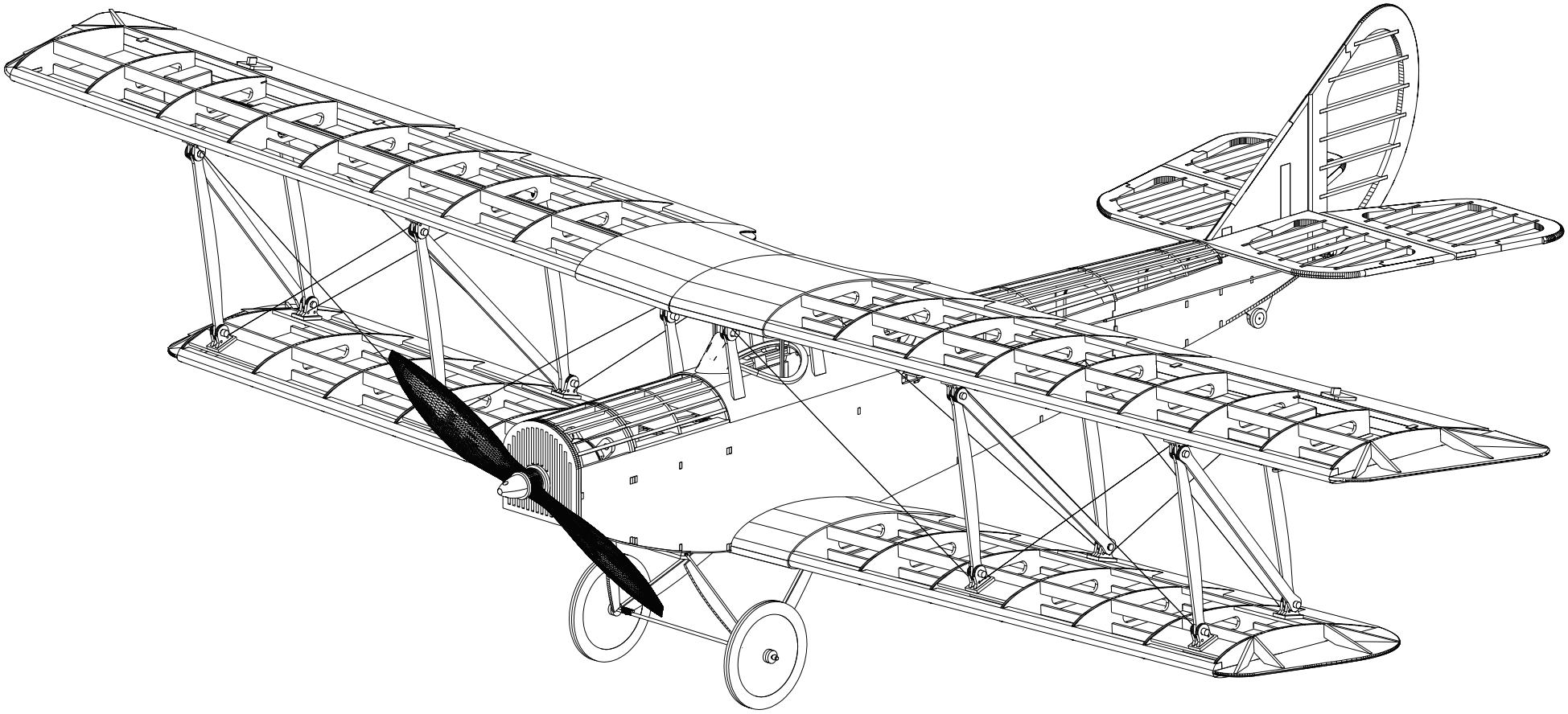
Curtiss Jenny



Wing Span - 38"

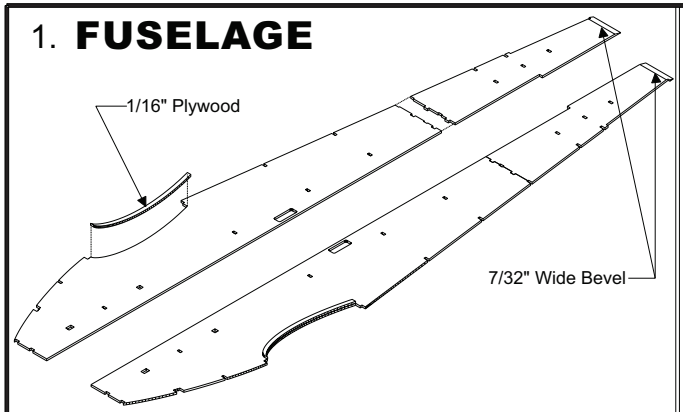
Design By Brian Millar

Assembly Guide By Paul Bradley

HappyRCFlyer.com

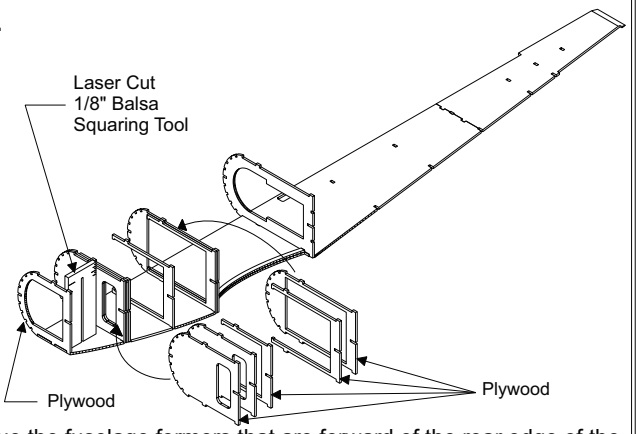
ASSEMBLY GUIDE

1. FUSELAGE



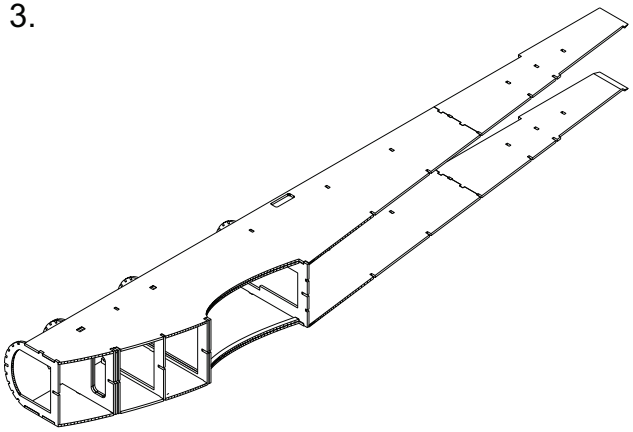
Assemble the two fuselage sides as shown. Be sure to make a right and left side. The plywood lower wing saddle doubler will be on the inside of each side. Sand a bevel on the inside rear edge of each side that is 7/32" wide.

2.



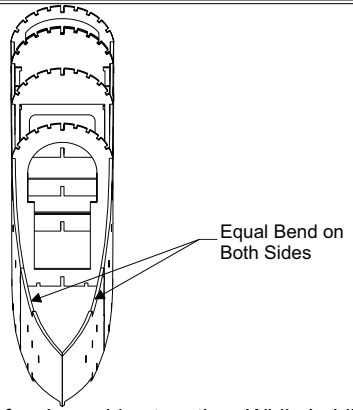
Glue the fuselage formers that are forward of the rear edge of the lower wing saddle opening to one fuselage side. Use the supplied tool to make sure the formers are square to the fuselage side.

3.



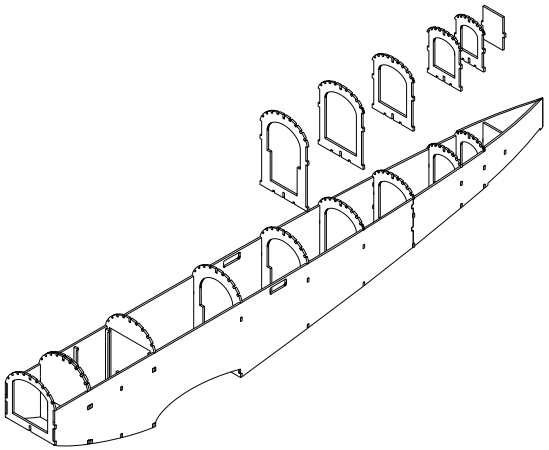
Place the other fuselage side on the assembly as shown. Confirm that it is square and then apply some thin Cya to the joints.

4.



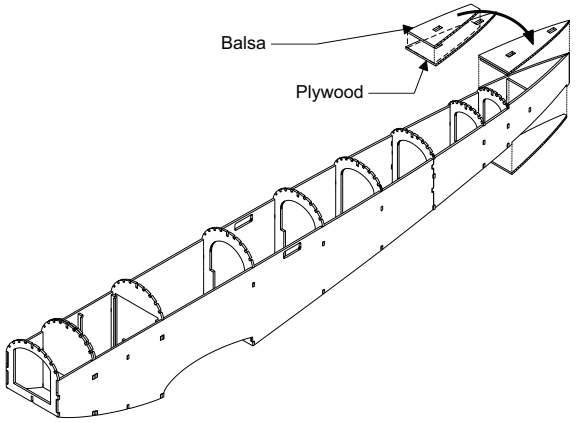
Pull the rear ends of the fuselage sides together. While holding the sides check to see that they are symmetrical. If not move the ends to achieve a symmetrical bend in each side. When satisfied with the alignment, apply some thin Cya to the rear joint.

5.



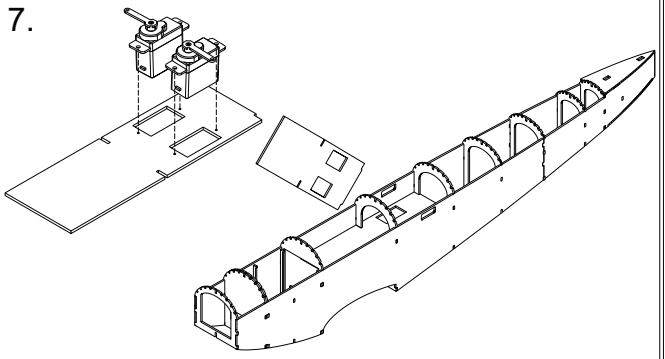
Install the remaining fuselage formers. Dry fit them to confirm the fit before applying any glue to the joints.

6.



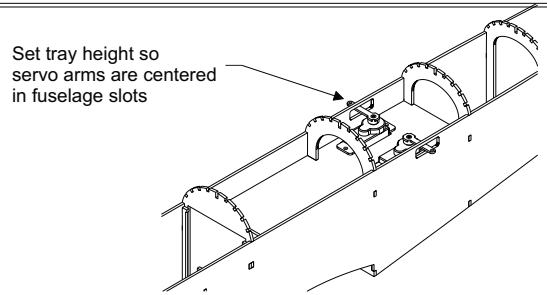
Glue the stab support plate laminations together as shown. Glue the stab support and the plywood tail wheel support plates to the rear of the fuselage as shown.

7.



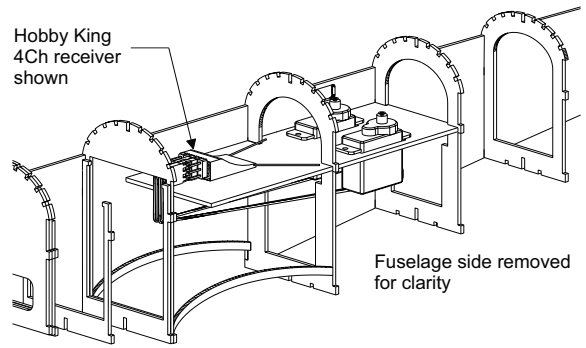
Use your servos to mark and pilot drill screw holes in the plywood equipment tray. Slide the equipment tray inside the fuselage formers. Rotate the plate so it rests on the "shelf" of the former at the rear of the bottom wing slot opening, and the former aft. DO NOT GLUE ANYTHING YET.

8.



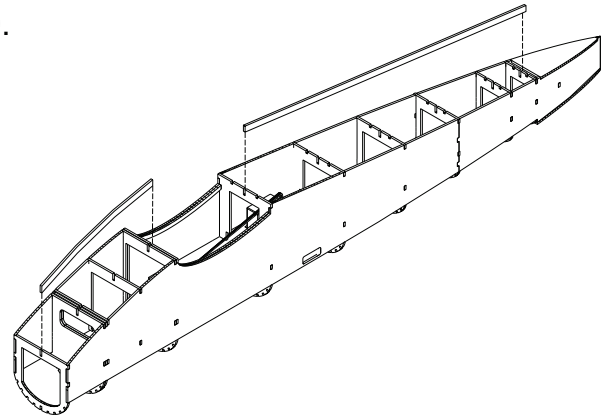
Remove the control arms from your servos. Place the servos in their respective positions in the equipment tray. Use screws to secure them to the equipment tray. Move the tray up if necessary so the servo output shafts are level with the slots in the fuselage sides. Place the control arms on the servo output arms. Move the tray up or down so the output arms are centered in the fuselage slots. Once satisfied with the fit, glue the tray to the fuselage sides and formers. Remove the servo arms but leave the servos in place.

9.



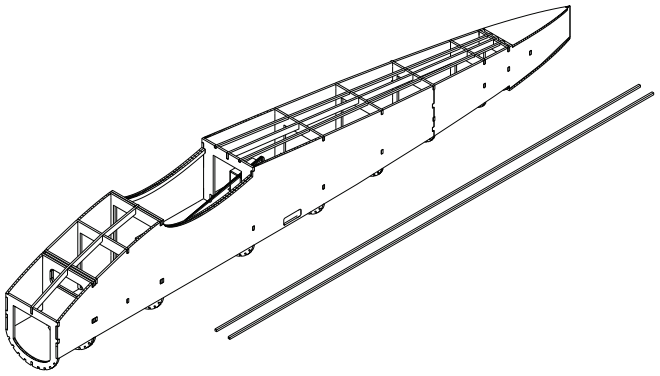
Place the receiver on the equipment tray and hold it in place with some hook and loop fastener material. 3M Dual Lock is a good material as it has a lighter hold than the Velcro brand of hook and loop fastener material. Route the servo leads to the rudder and elevator outputs of the receiver. The rudder servo is shown in the left position (as viewed from the top) but can be either servo.

10.



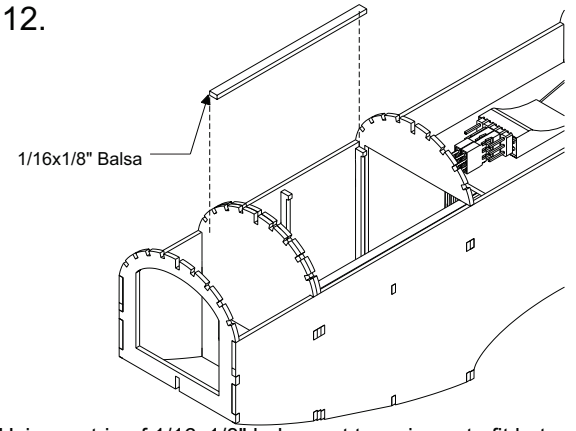
Use one of the 1/16x3/16x20" balsa strips to make the center bottom stringers. The forward stringer will need to bend slightly to fit in the former slots.

11.



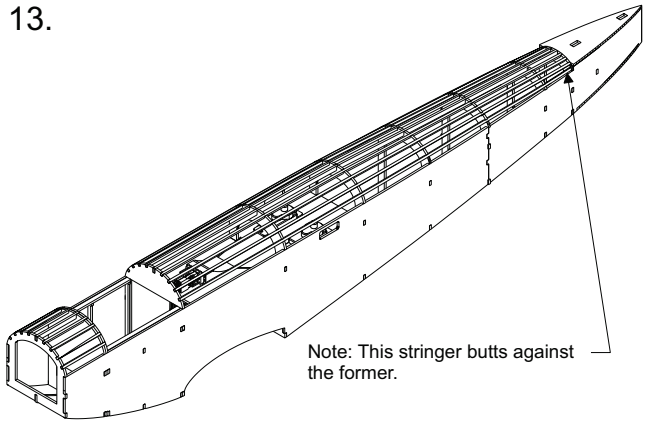
Use two of the 1/16x1/16" strips to make up the two bottom rear stringers.

12.



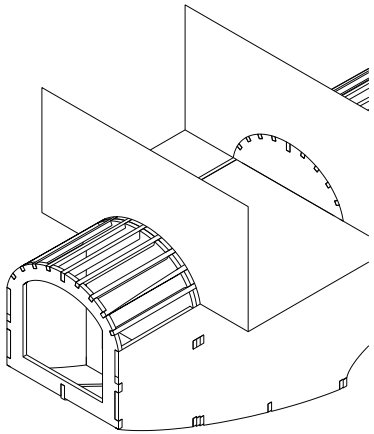
Using a strip of 1/16x1/8" balsa, cut two pieces to fit between the fuselages formers as shown. Glue these pieces to the top of the plywood formers and the fuselage sides.

13.



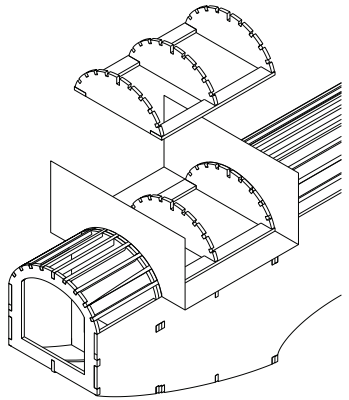
Using the 1/16" square strip stock, glue stringers in the notches at the top of the fuselage formers as shown. Also glue a strip of 1/16x1/8" balsa in the center notches.

14.



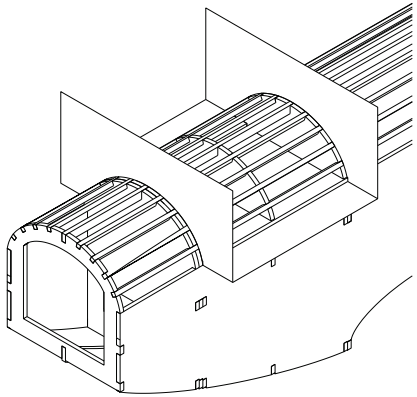
Place some plastic kitchen wrap in the forward hatch opening. A good brand that does not stick to adhesive is Glad Wrap.

15.



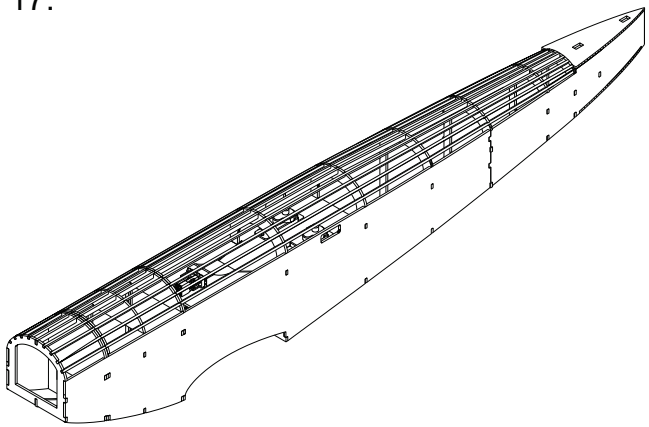
Cut two lengths of 1/16x1/4" balsa strip stock to fit between the formers. Place the pieces in the opening as shown. Glue the hatch formers to the strips. The center former is located above the plywood former in the middle of the hatch area.

16.



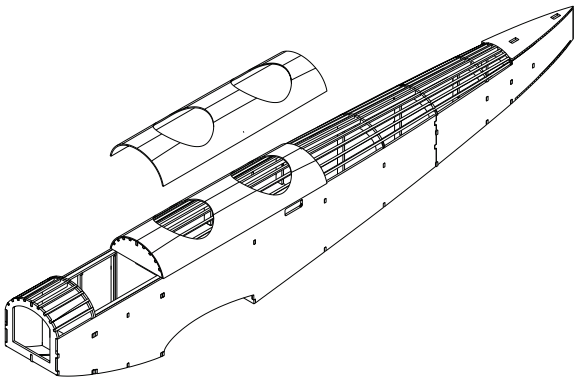
Cut lengths of 1/16" square balsa stock to fit between the ends of the hatch formers. Also cut a tenth of 1/16x1/8" balsa to fit the center hatch notches. Glue all the joints after the strips are in place.

17.



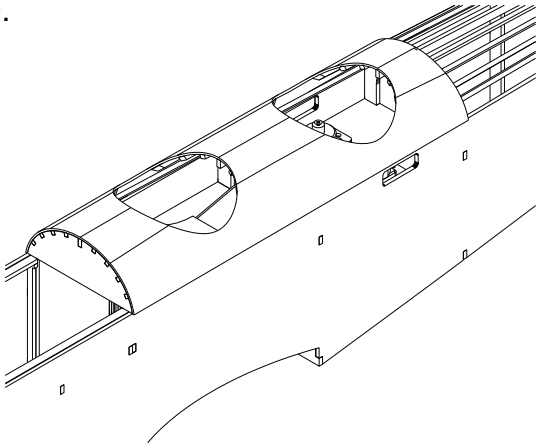
Remove the plastic kitchen wrap and then carefully sand the stringers so they are flush with the formers.

18.



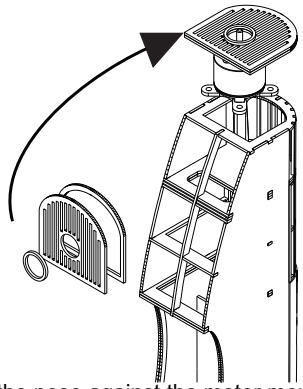
Wet one side of the 1/32" balsa cockpit combing. Let it sit for five minutes or so. Place the cockpit combing on the fuselage and carefully bend it to shape over the formers. Use rubber bands to hold in place. Once the balsa is dry check the fit to see if any trimming is necessary. Once satisfied with the fit, glue it in place.

19.



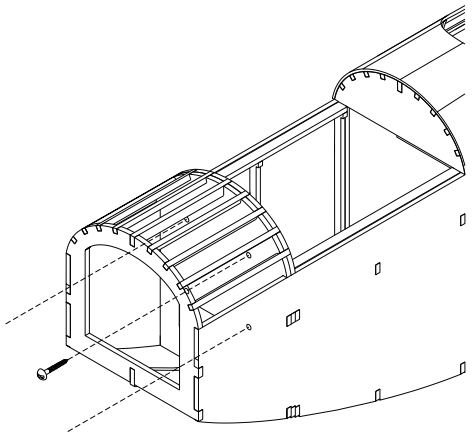
Cut the stringers where they pass through the cockpit openings.

20.



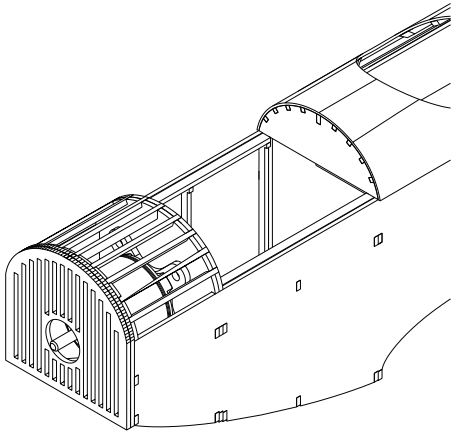
Place the motor in the nose against the motor mount former. Glue the two plywood nose block pieces together along with the prop shaft ring. Lay the nose block on the nose and adjust the motor position so the prop shaft is centered. Mark the location of the mount holes.

21.



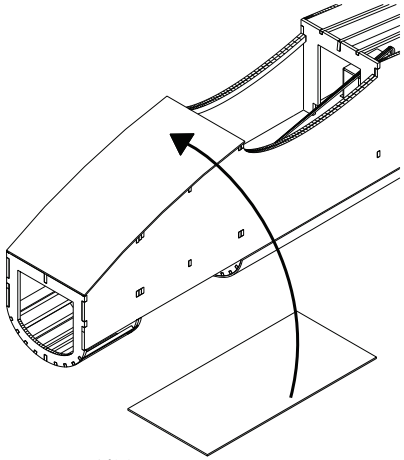
Remove the motor from the nose and pilot drill the mounting screw holes. Drive a screw into each of the holes and then remove it.

22.



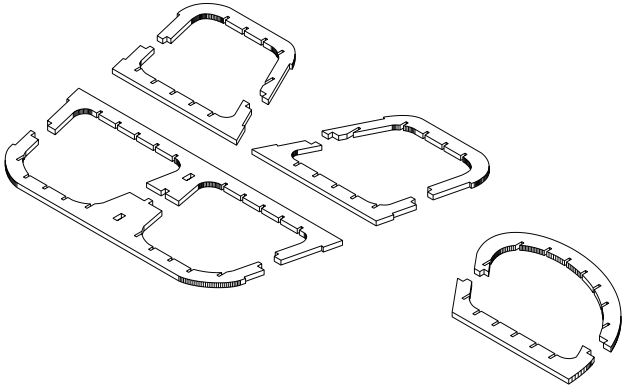
Temporarily mount the motor to confirm the fit and location of the prop shaft when the nose block is placed on the fuselage. When satisfied, remove the motor and nose block.

23.



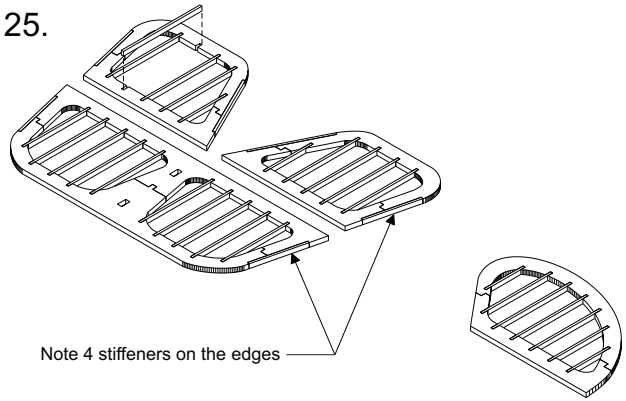
Glue the bottom 1/32" inch balsa nose sheeting to the structure as shown. Set the fuselage aside for now.

24. **TAIL SURFACES**



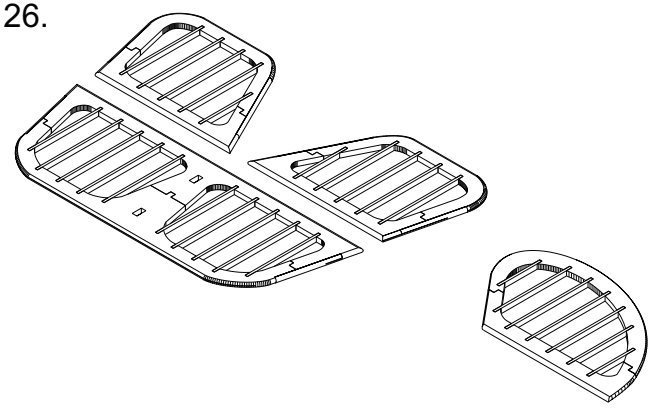
Glue the outlines for the stabilizer, elevators, and rudder together over the plan. Place a sheet of kitchen wrap over the plan before placing the balsa parts over the outlines.

25.



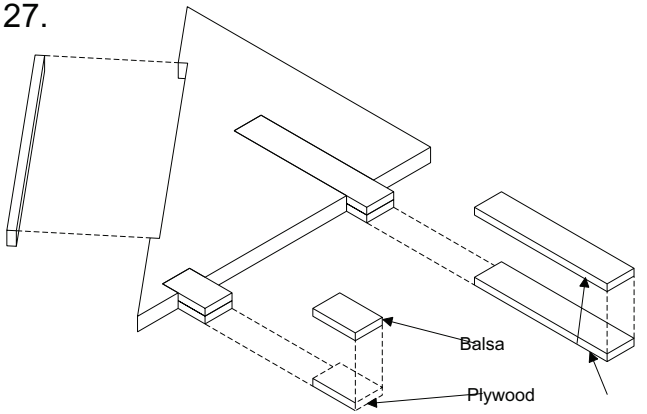
Using the 1/16x1/8" balsa strip stock, cut ribs for the stabilizer, elevators, and rudder. Dry fit the individual ribs in the appropriate slots in the outlines. Once satisfied with the fit, apply thin Cya to the joints.

26.



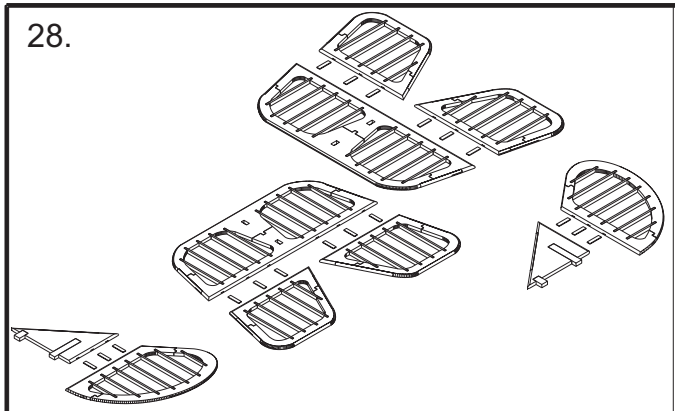
Remove the assemblies from the plan. Carefully sand the surfaces smooth and round off the edges of each assembly.

27.



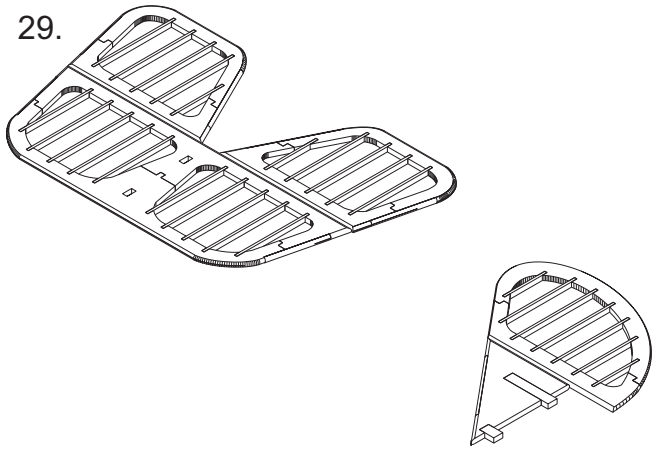
Assemble the fin using the laser cut plywood pieces, 1/16x1/4" and 1/16x1/8" balsa strip stock. Sand it smooth and round off the edges. DO NOT ROUND OFF THE BOTTOM EDGE.

28.



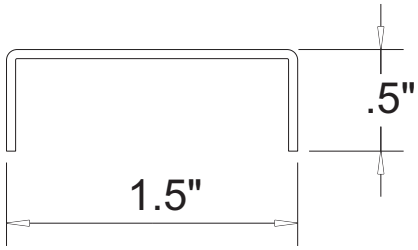
Cut some Cya hinge material into nine 1/8x1/2" strips. Cut hinge slots in the stabilizer trailing edge and the elevator leading edges as shown. Also cut slots in the fin trailing edge and rudder leading edge.

29.



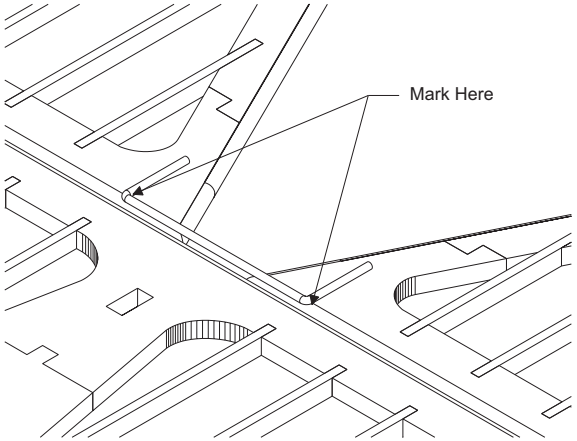
Dry fit the hinges to the stabilizer and fin. Dry fit the elevators and rudder. DO NOT GLUE ANYTHING.

30.



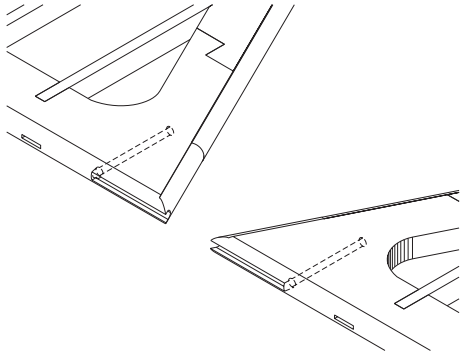
Bend a length of 3/64" (.047") piano wire using the pattern shown above to form the elevator joiner.

31.



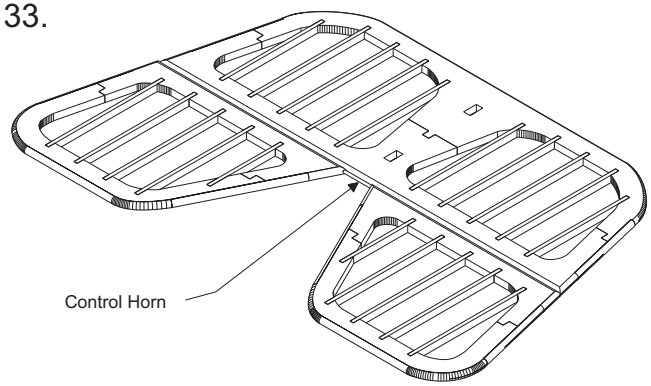
Place the bent piano wire over the two elevator halves and mark the location of each leg.

32.



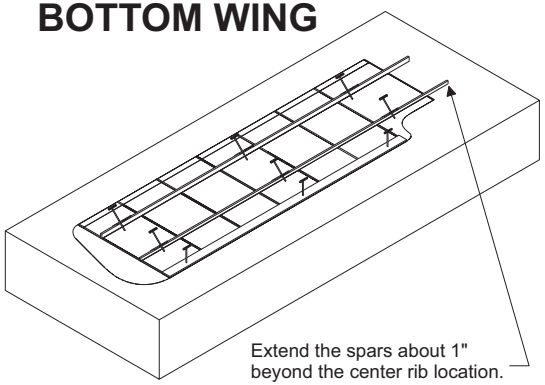
Remove the elevator halves and drill holes at the marked location. If you do not have a 3/64" drill, cut a length of the 3/64" piano wire so one end has an angle. Use the piece of piano wire as a drill bit. Cut a slot from the hole to the edge of the elevator halves as shown.

33.



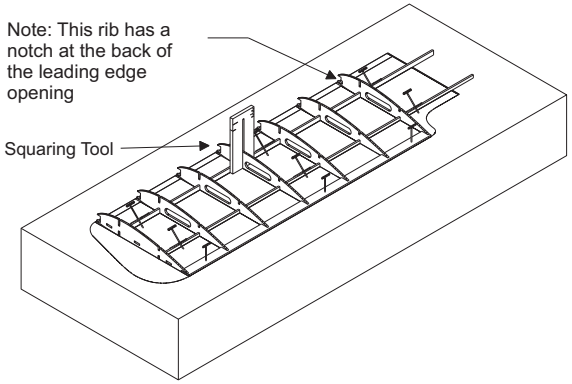
Slide the elevator halves onto the piano wire joiner. Dry fit the elevator halves on the hinges to confirm the fit. Once satisfied with the fit, disassemble the fin/rudder and stabilizer/elevators. Set everything aside for now.

34. **BOTTOM WING**



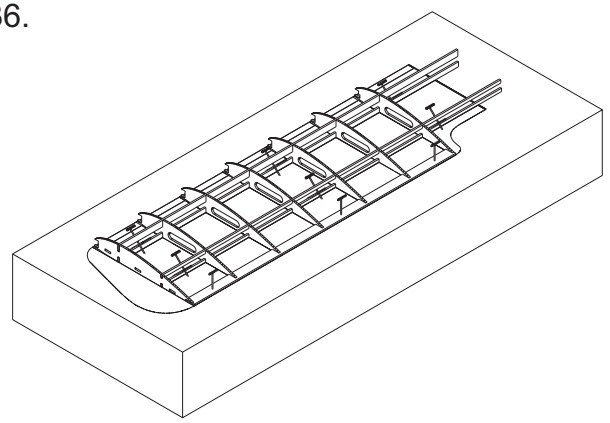
Place some plastic kitchen wrap over the wing plan. Pin down the two bottom spars and the trailing edge for one of the wing panels. DO NOT PIN THROUGH THE SPARS. USE AN "X" PATTERN.

35.



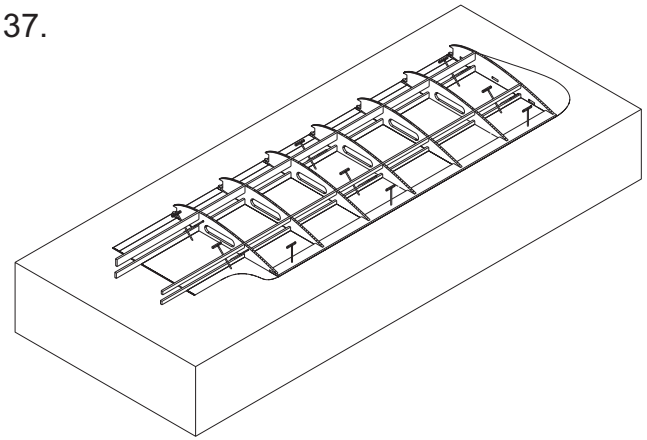
Dry fit the ribs to the spars and trailing edge using the plan as a location guide. Once the ribs are in place, use the squaring tool and glue the ribs to the spars and trailing edge. DO NOT GLUE THE SQUARING TOOL. Note: the center rib is not installed at this point.

36.



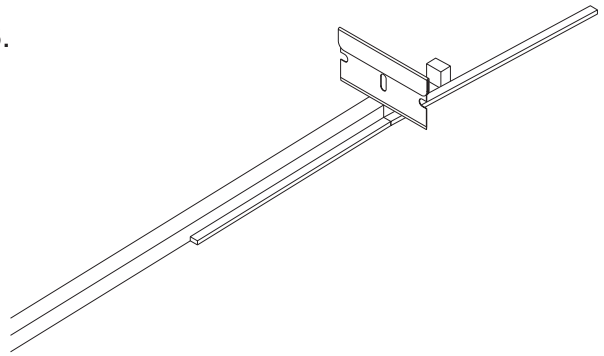
Dry fit the top spars. Align them with the tip rib and extend them about 1" past the center rib location. When satisfied with the fit apply some thin Cya to the joints.

37.



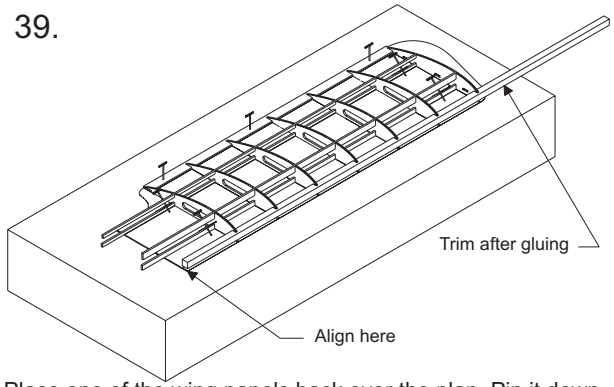
Remove the wing panel from the building board and then repeat steps 34 to 36 for the opposite side wing panel.

38.



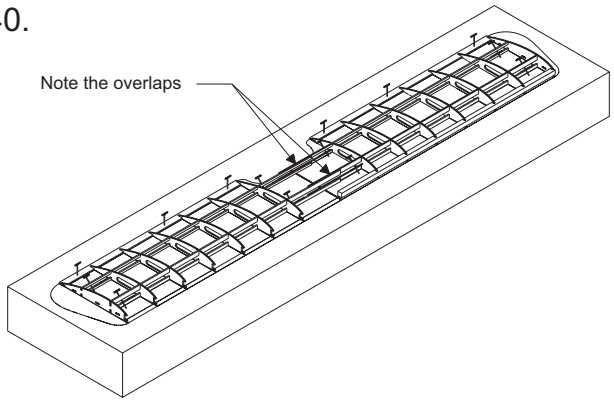
Locate the plywood dihedral doubler that has a line etched at the center. Place one of the 1/4x1/4" strips on the bottom of the dihedral doubler so one end extends about a 1/2" past the center. Align a razor blade or razor saw with the etched line and cut the end of the balsa strip off. Do this for all four of the 1/4x1/4" balsa strips.

39.



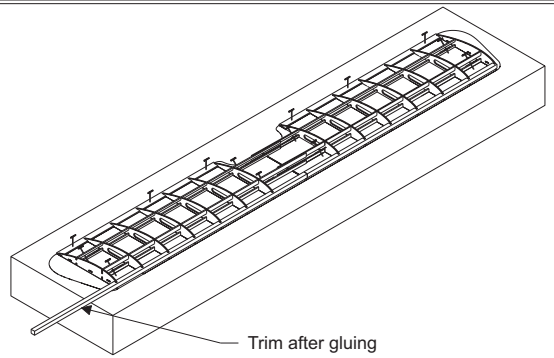
Place one of the wing panels back over the plan. Pin it down. Place one of the 1/4x1/4" balsa strips in the forward rib notches. The end with the slant is aligned with the wing center line on the plan. The short side of the slant goes on top. When satisfied with the fit apply some thin Cya to the joints.

40.



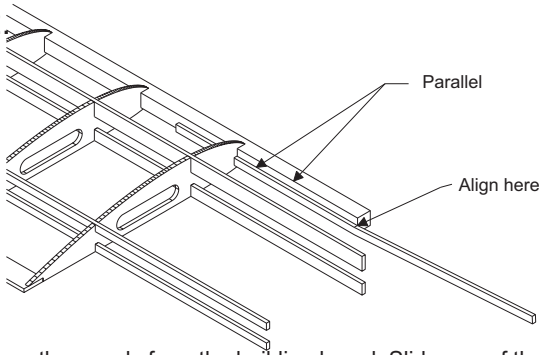
Place the other wing panel on the plan while the first panel is still pinned down.The spars will have to be slightly offset so that one will be in front of the other. Hold it in place with a few pins.It does not matter which side is in front. DO NOT GLUE ANYTHING YET.

41.



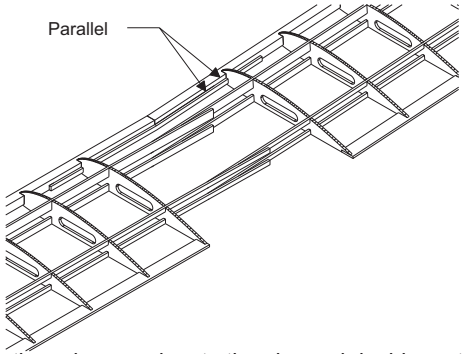
Slide one of the trimmed 1/4x1/4" balsa strips in the rib leading edge notches. The slanted end goes in the center and butts up against the other wing panel leading edge. There will be a gap at the top. When satisfied with the fit, apply thin Cya to the rib notches. DO NOT APPLY ANY GLUE TO THE CENTER JOINT.

42.



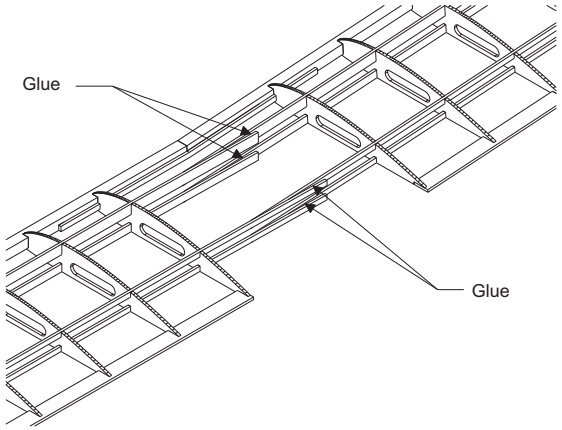
Remove the panels from the building board. Slide one of the plywood dihedral doublers into the leading edge notch of the inner rib of one panel as shown. Make sure the plywood doubler leg is parallel to the edges of the 1/4x1/4" strip and the center is aligned with the end of the 1/4x1/4" strip. When satisfied with the alignment, apply some thin Cya to the joints.

43.



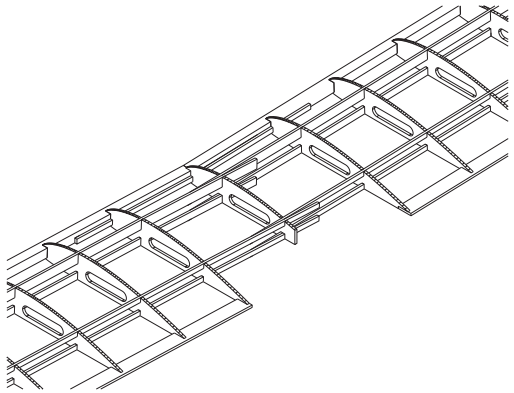
Slide the other wing panel on to the plywood doubler until the leading edge ends of both panels are in contact. You will again have to offset the spars. Make sure the second panel leading edge top and bottom edges are parallel with the edges of the plywood doubler. When satisfied with the fit, apply thin Cya to the doubler joints.

44.



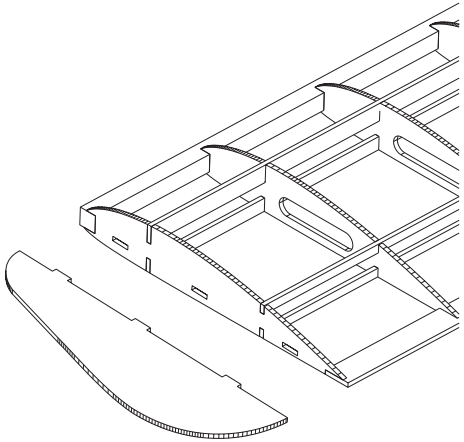
Apply thin Cya to the areas where the spars overlap.

45.



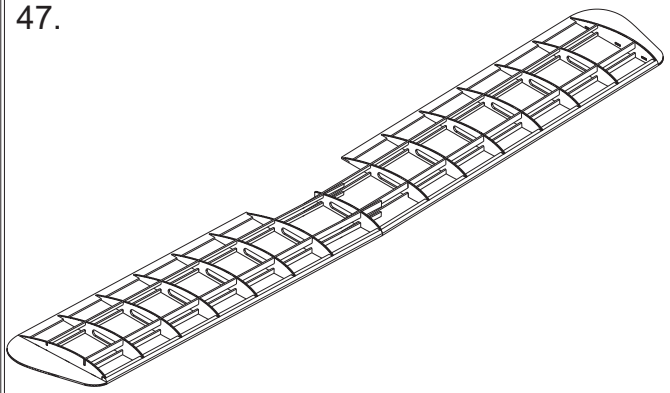
Fit the center rib. Lay the assembly on the plan to aid in the alignment. When the tips are held so they are level to the building surface, the center rib should be vertical. When satisfied with the fit apply thin Cya to the joints.

46.



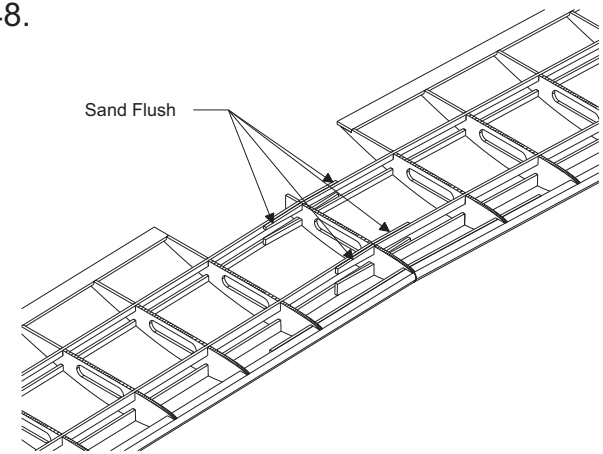
Glue the 1/16" balsa wing tips to the assembly. The tabs on the tip pieces fit in the tip rib slots.

47.



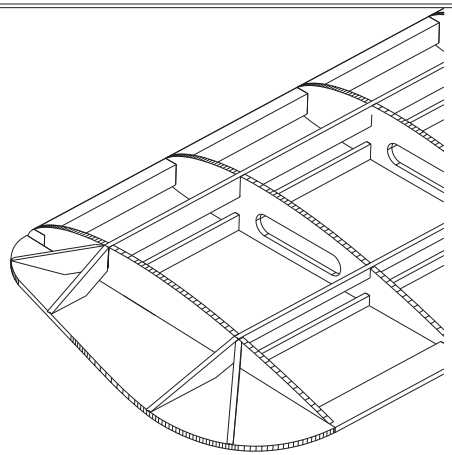
Shape the leading edges.

48.



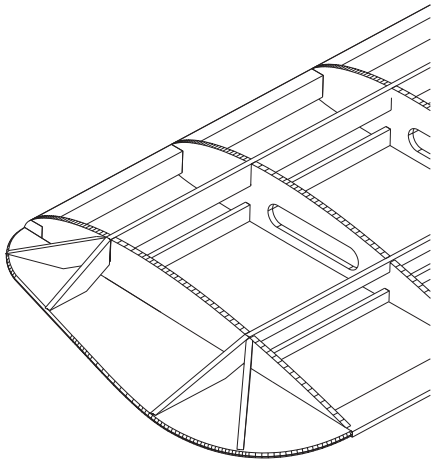
Sand the over hang on the bottom spars so the spar edges are flush with the opposite wing panel spar bottom faces.

49.



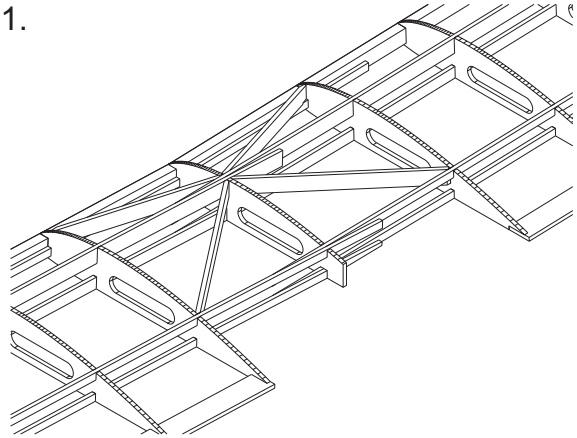
Use some of the 1/16x1/4" balsa strip stock to make up wing tip stiffeners as shown.

50.



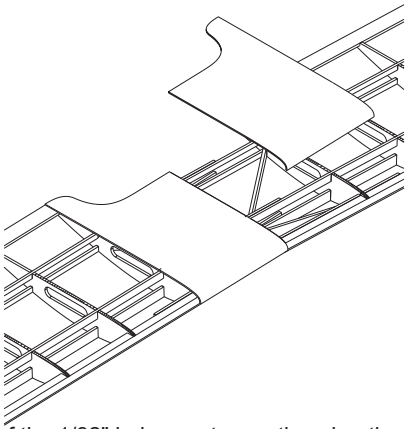
Sand the edge of the wing tips to a rounded shape.

51.



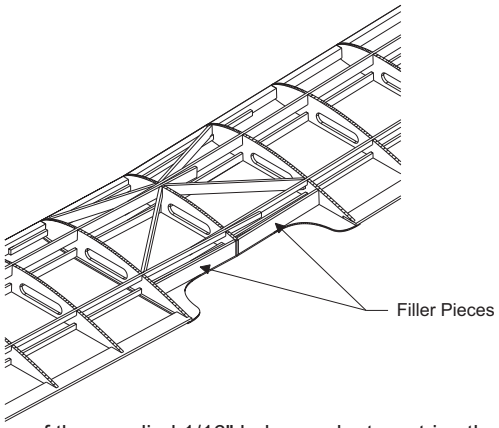
Use some of the 1/16x1/4" balsa strip stock to add diagonal top center section sheeting supports.

52.



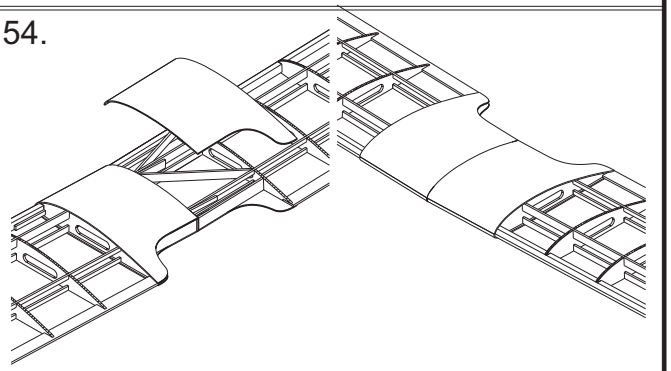
Glue two of the 1/32" balsa center section sheeting pieces to the bottom of the wing as shown. Soaking them in water for 5 minutes or so will make it easier to bend them around the leading edge.

53.



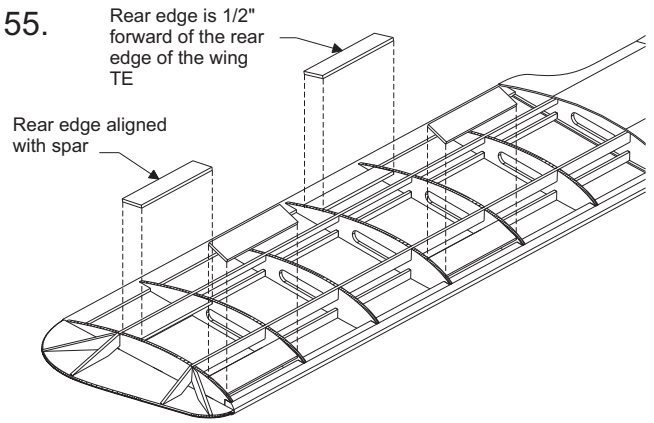
Using some of the supplied 1/16" balsa, make two strips that will be the width of the center rib trailing edge.Glue these strips to the bottom sheeting along the edge of the opening as shown.

54.



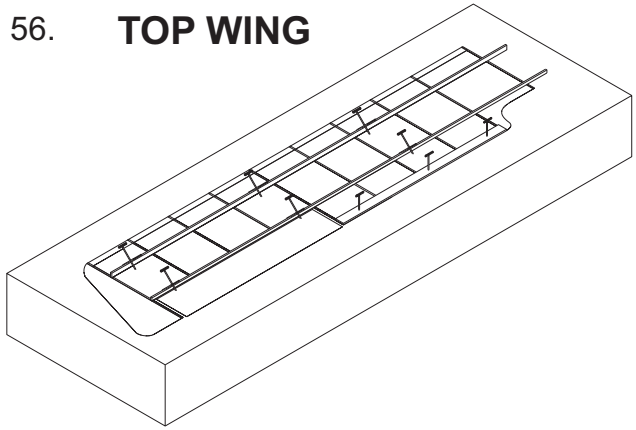
Soak the other two pieces of 1/32" balsa center section sheeting in water for about 5 minutes. Align the sheeting with the center of the center rib and the filler pieces. Bend each sheeting piece around the ribs, spars, and leading edges. Use an air dry glue to attach the sheeting. Masking tape and pins can be used to hold things in place while the glue drys.

55.



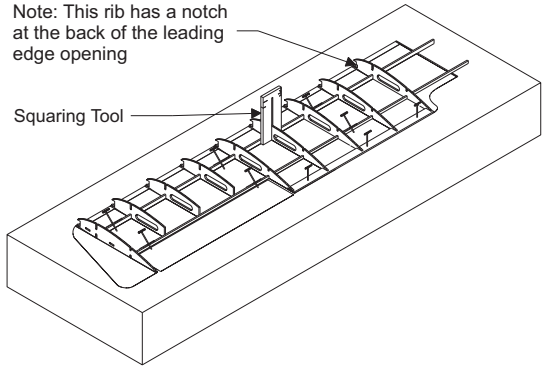
Use the 1/16x1/2" balsa strip stock to make up strut support plates. Glue them in each wing panel in the locations shown. The forward plates are lined up with the rear edge of the leading edge.

56. **TOP WING**



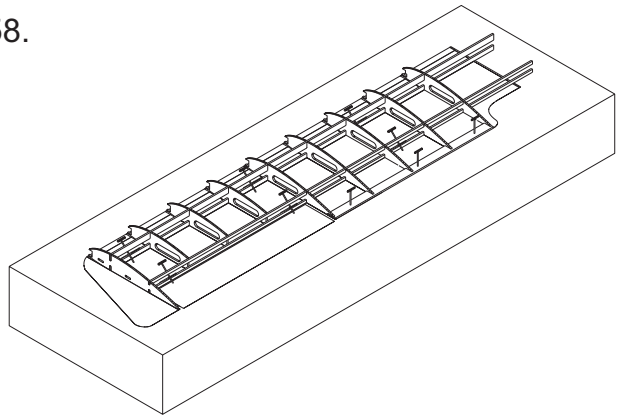
Place some plastic kitchen wrap over the wing plan. Pin down the two bottom spars and the trailing edge for one of the wing panels. DO NOT PIN THROUGH THE SPARS. USE AN "X" PATTERN.

57.



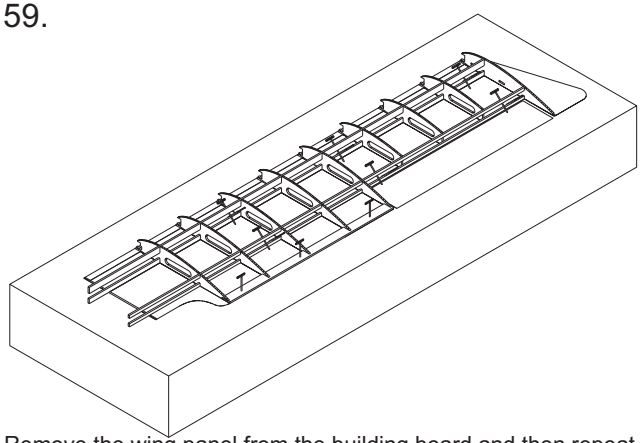
Dry fit the ribs to the spars and trailing edge using the plan as a location guide. Once the ribs are in place, use the squaring tool and glue the ribs to the spars and trailing edge. DO NOT GLUE THE SQUARING TOOL. Note: the center rib is not installed at this point.

58.



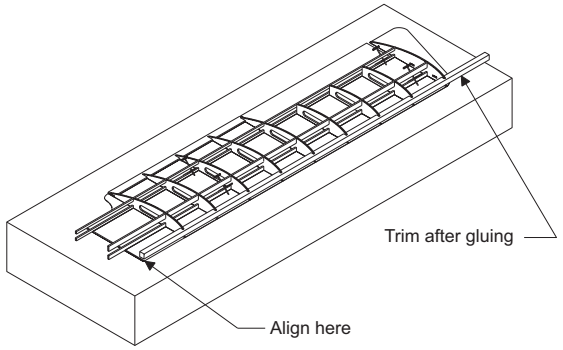
Dry fit the top spars. Align them with the tip rib and extend them about 1" past the center rib location. When satisfied with the fit apply some thin Cya to the joints.

59.



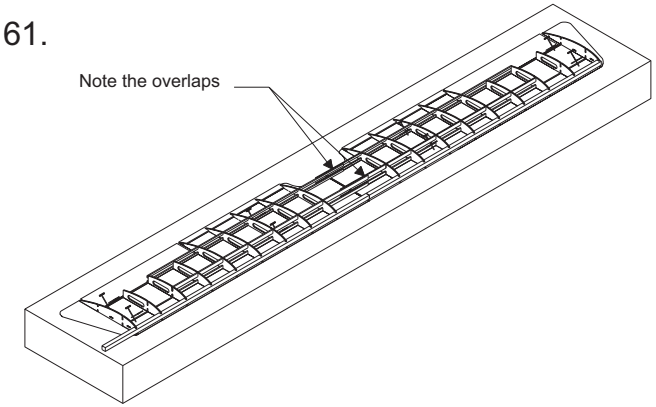
Remove the wing panel from the building board and then repeat steps 56 to 58 for the opposite side wing panel.

60.



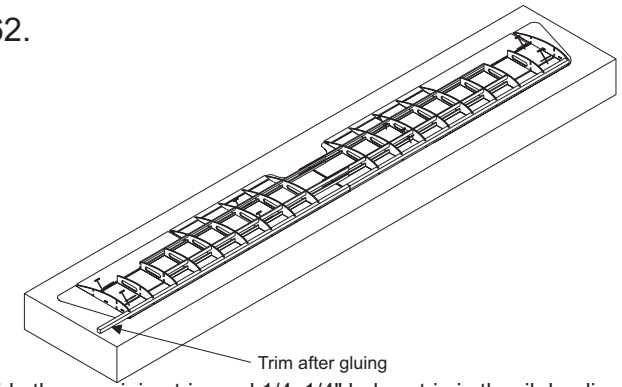
Place one of the wing panels back over the plan. Pin it down. Place one of the 1/4x1/4" balsa strips that were prepared in step 36 in the forward rib notches. The end with the slant is aligned with the wing center line on the plan. The short side of the slant goes on top. When satisfied with the fit apply some thin Cya to the joints.

61.



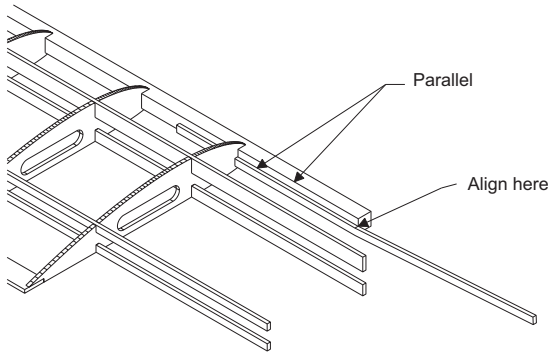
Place the other wing panel on the plan while the first panel is still pinned down.The spars will have to be slightly offset so that one will be in front of the other. Hold it in place with a few pins.It does not matter which side is in front. DO NOT GLUE ANYTHING YET.

62.



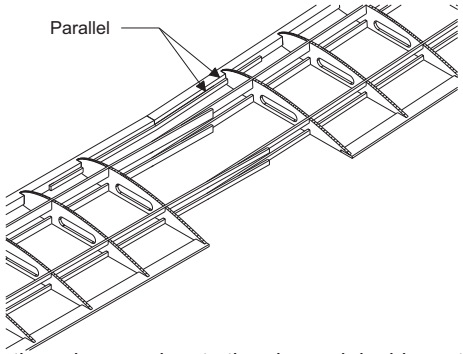
Slide the remaining trimmed 1/4x1/4" balsa strip in the rib leading edge notches. The slanted end goes in the center and butts up against the other wing panel leading edge. There will be a gap at the top. When satisfied with the fit, apply thin Cya to the rib notches. DO NOT APPLY ANY GLUE TO THE CENTER JOINT.

63.



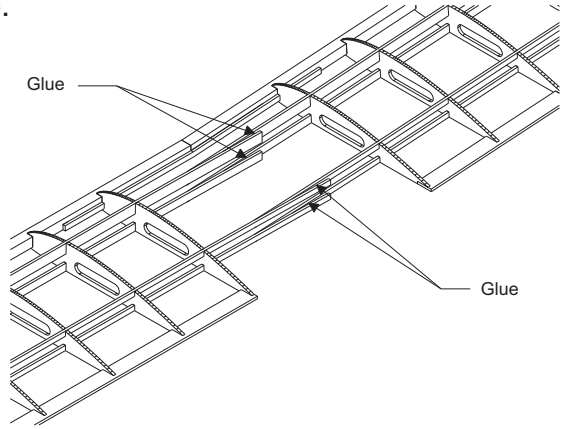
Remove the panels from the building board. Slide one of the plywood dihedral doublers into the leading edge notch of the inner rib of one panel as shown. Make sure the plywood doubler leg is parallel to the edges of the 1/4x1/4" strip and the center is aligned with the end of the 1/4x1/4" strip. When satisfied with the alignment, apply some thin Cya to the joints.

64.



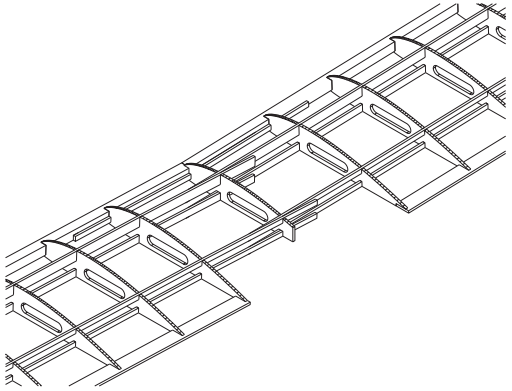
Slide the other wing panel on to the plywood doubler until the leading edge ends of both panels are in contact. You will again have to offset the spars. Make sure the second panel leading edge top and bottom edges are parallel with the edges of the plywood doubler. When satisfied with the fit, apply thin Cya to the doubler joints.

65.



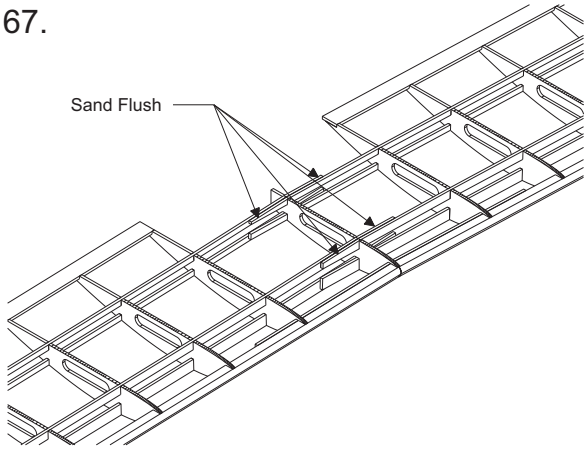
Apply thin Cya to the areas where the spars overlap.

66.



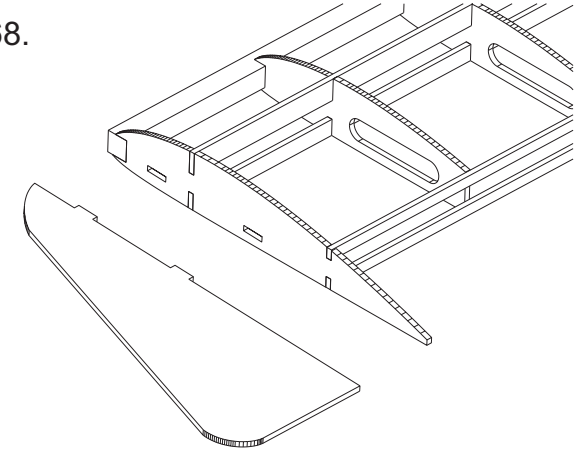
Fit the center rib. Lay the assembly on the plan to aid in the alignment. When the tips are held so they are level to the building surface, the center rub should be vertical. When satisfied with the fit apply thin Cya to the joints.

67.



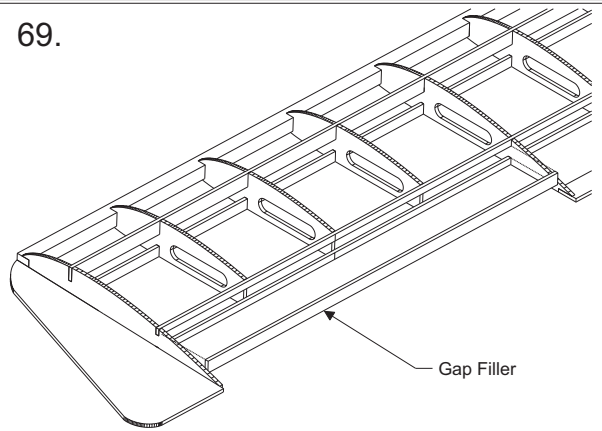
Sand the over hang on the bottom spars so the spar edges are flush with the opposite wing panel spar bottom faces.

68.



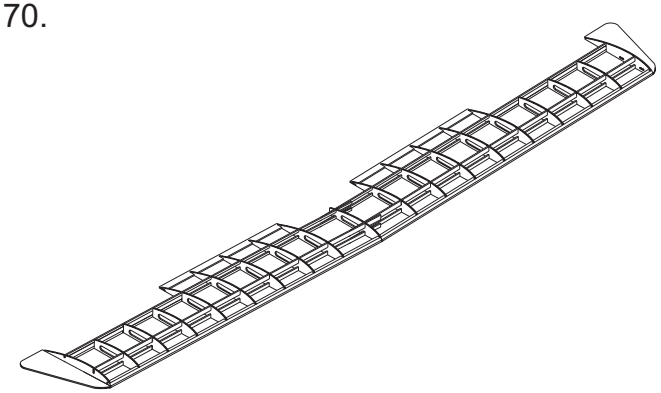
Glue the 1/16" balsa wing tips to the assembly. The tabs on the tip pieces fit in the tip rib slots.

69.



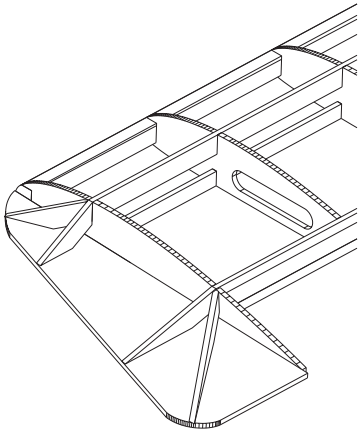
Use some of the 1/16" balsa stock to make up spar gap fillers for the aileron open areas in each wing panel. When satisfied with the fit, glue them in place.

70.



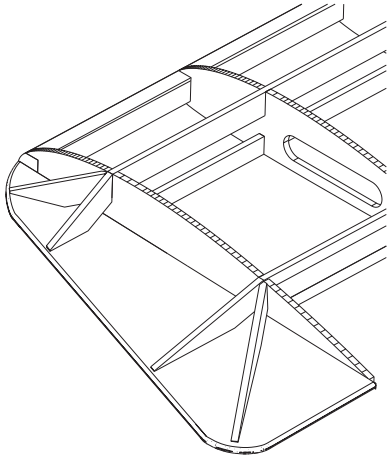
Shape the leading edges.

71.



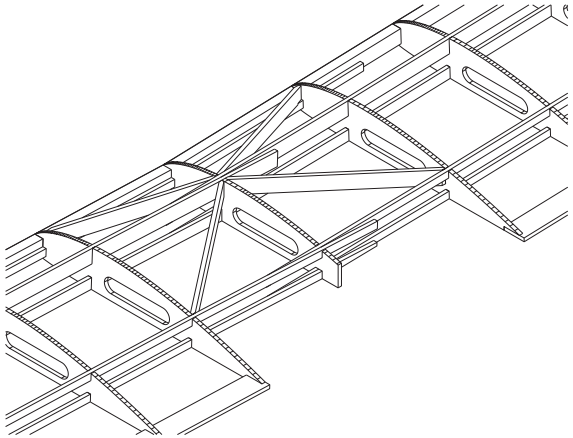
Use some of the 1/16x1/4" balsa strip stock to make up wing tip stiffeners as shown.

72.



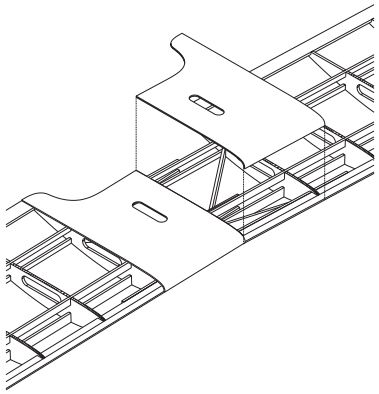
Sand the edge of the wing tips to a rounded shape.

73.



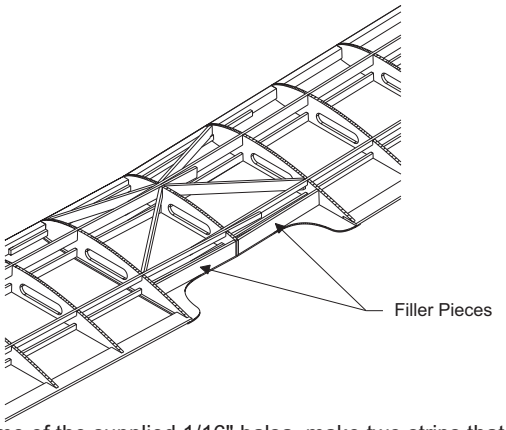
Use some of the 1/16x1/4" balsa strip stock to add diagonal top center section sheeting supports.

74.



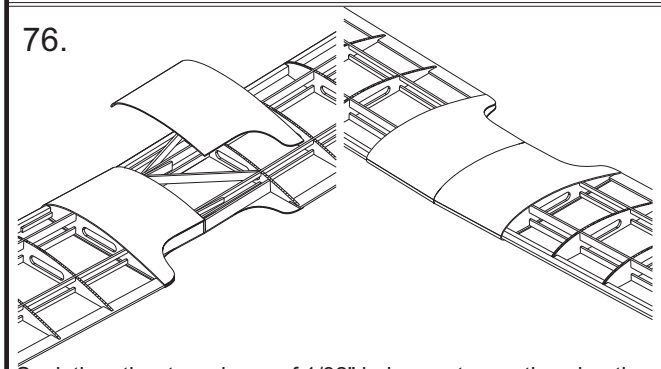
Glue the two 1/32" balsa center section sheeting pieces with the slots to the bottom of the wing as shown. Soaking them in water for 5 minutes or so will make it easier to bend them around the leading edge.

75.



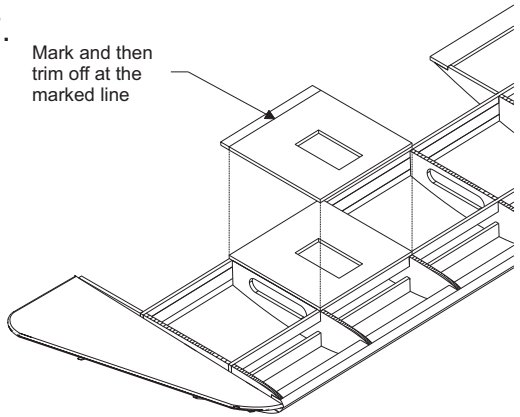
Using some of the supplied 1/16" balsa, make two strips that will be the width of the center rib trailing edge.Glue these strips to the bottom sheeting along the edge of the opening as shown.

76.



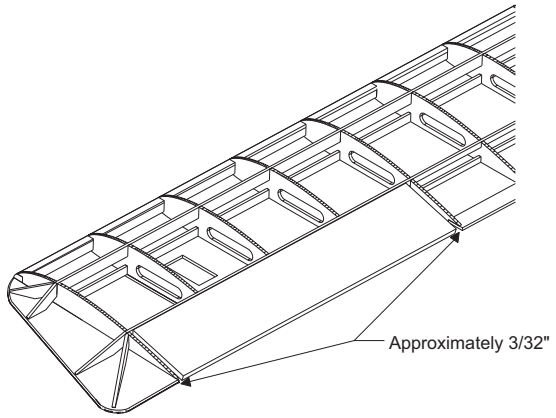
Soak the other two pieces of 1/32" balsa center section sheeting in water for about 5 minutes. Align the sheeting with the center of the center rib and the filler pieces. Bend each sheeting piece around the ribs, spars, and leading edges. Use an air dry glue to attach the sheeting. Masking tape and pins can be used to hold things in place while the glue drys.

77.



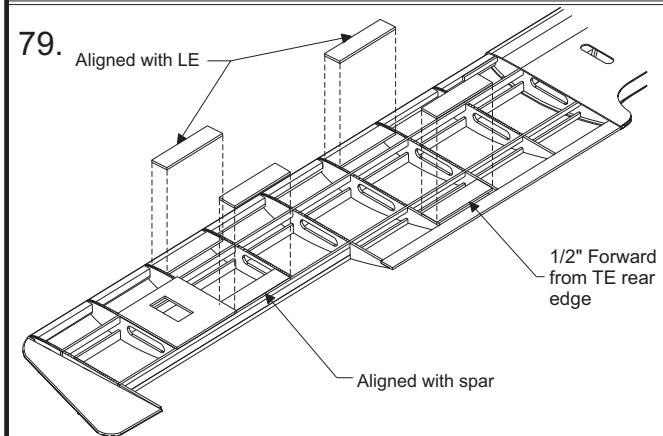
Place the plywood wing servo mount plates on the bottom of the wing. Mark the rear edge of the bottom rear spar. Cut the plates at the mark and then glue them to the wing bottom as shown.

78.



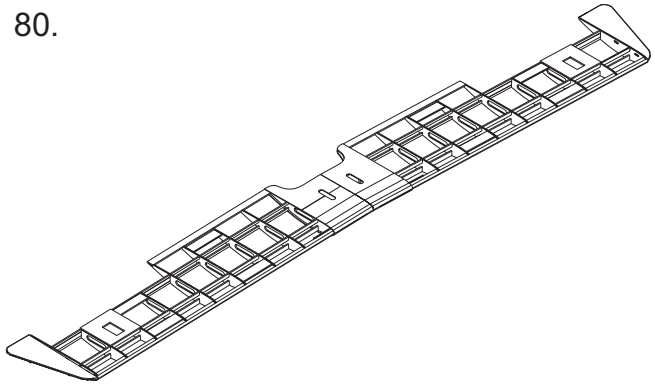
Round off the leading edge of each aileron. Check the fit of the 1/8" balsa ailerons. There should be about 3/32" clearance at each end.

79.



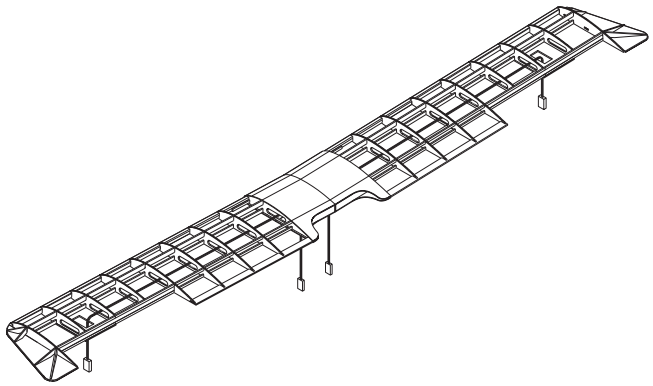
Use the 1/16x1/2" balsa strip stock to make up strut support plates. Glue them in each wing panel in the locations shown. The forward plates are lined up with the rear edge of the leading edge.

80.



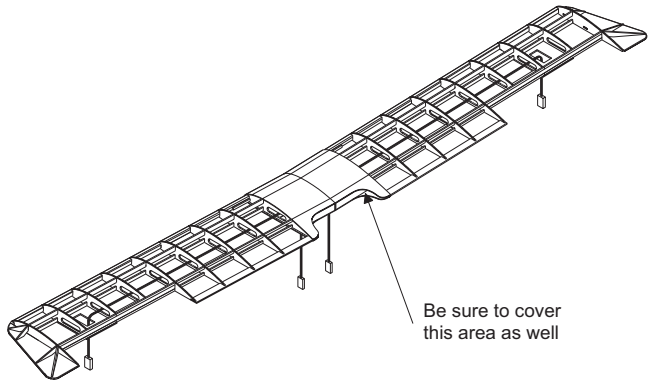
Cover the bottom of the wing. Note that for clarity, covering in this and all subsequent illustrations will not be shown.

81.



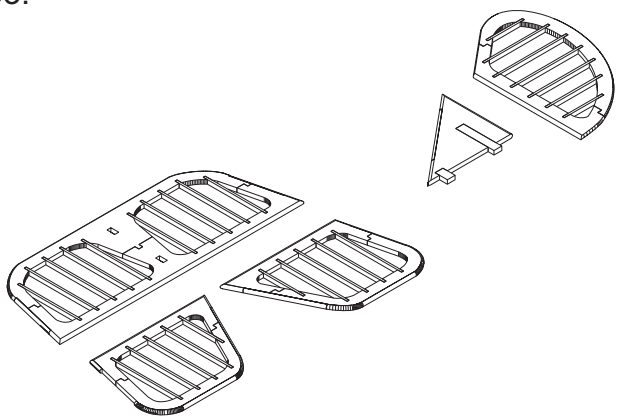
Cut the covering away from the servo openings and the servo lead openings in the center section covering. Route your servo extension leads through the openings and the wing ribs.

82.



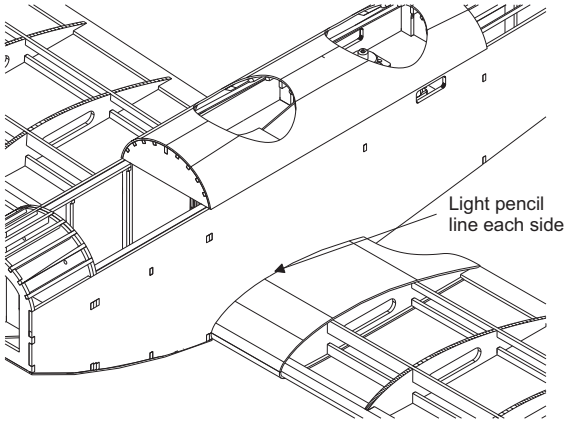
Cover the top of the wing including the vertical area of the center section.

83.



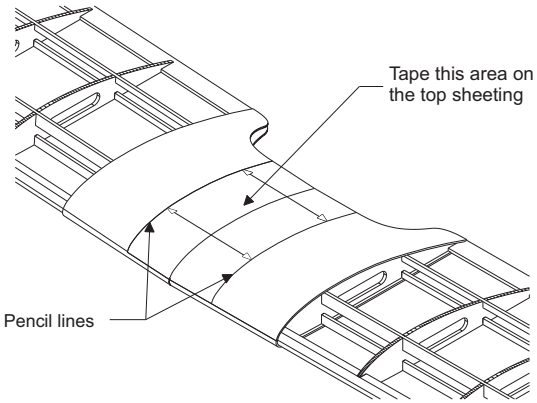
Cover the tail surfaces.

84.



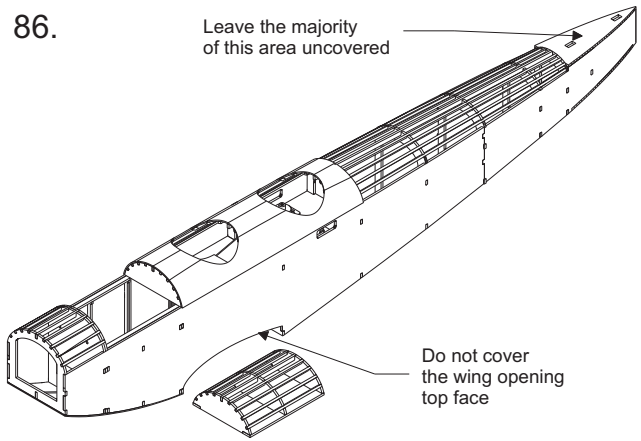
Place the fuselage on the uncovered bottom wing. Make sure it is centered on the wing. Draw a light pencil line along the fuselage sides on the bottom wing top sheeting.

85.



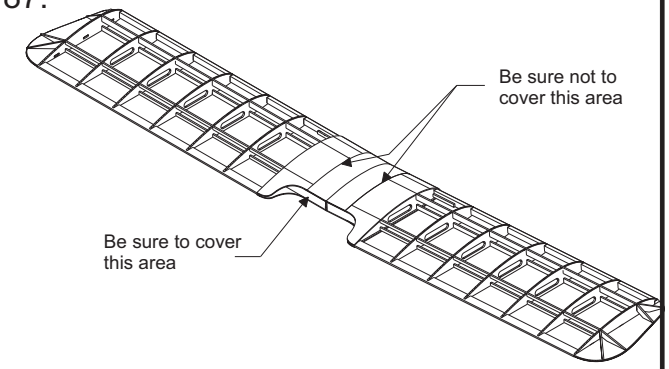
Put some masking or painter's tape on the inside edges of the pencil lines. The area of the center section sheeting defined by tape will not get covered.

86.



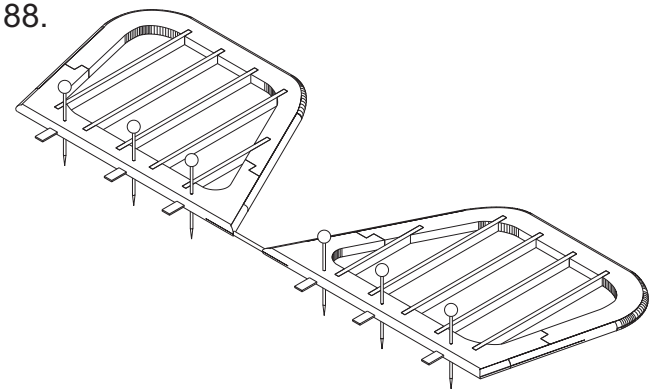
Cover the fuselage and fuselage hatch. Do not apply any covering to the bottom face of the bottom wing opening.

87.



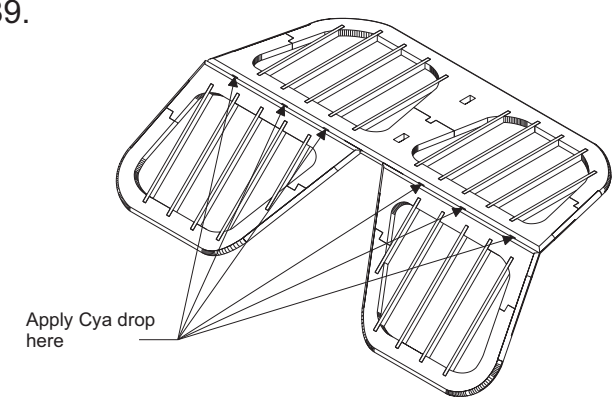
Cover the bottom wing making sure the top center section area defined by the tape is not covered. Do cover the vertical area of the center section trailing edge. Remove the tape after the wing is covered.

88.



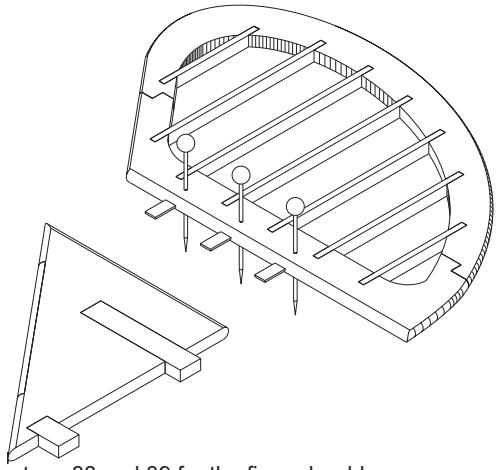
Insert the elevator hinges in the elevator halves. A straight pin through the elevator and hinges will keep them from pushing in when the elevators are mated with the stabilizer. Also slide the elevator joiner into the elevator halves.

89.



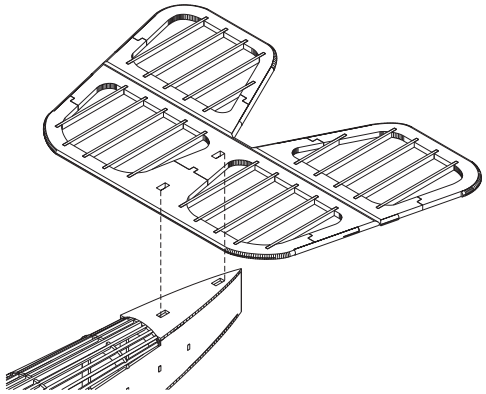
Insert the ends of the elevator hinges into the corresponding slots in the stabilizer. Push the elevator halves tight against the stabilizer trailing edge. When satisfied with the fit, bend the elevator up or down and apply a drop of thin Cya to each hinge.

90.



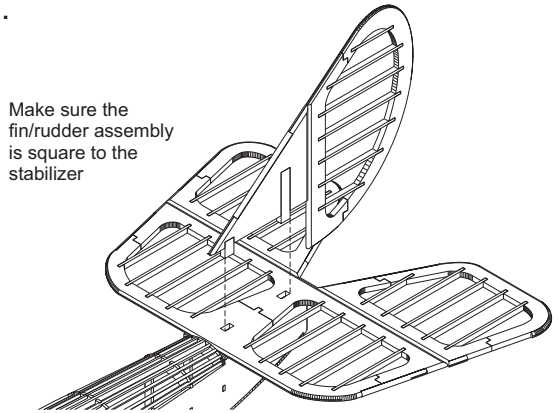
Follow steps 88 and 89 for the fin and rudder.

91.



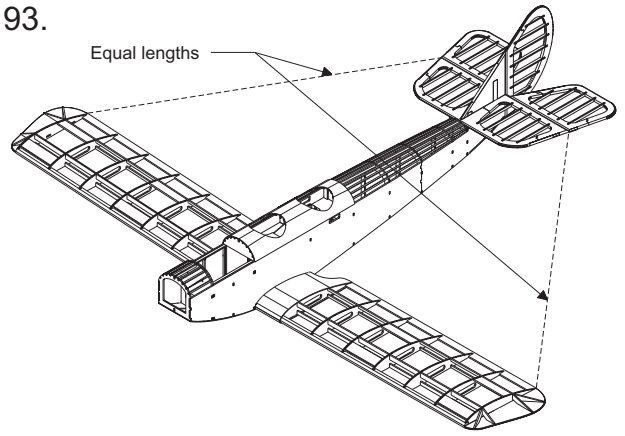
Glue the stabilizer/elevator assembly to the fuselage. Make sure the slots in the assembly line up with the slots in the fuselage stabilizer mounting plate. A few pin pricks in the bottom center covering of the stabilizer will add strength to the joint.

92.



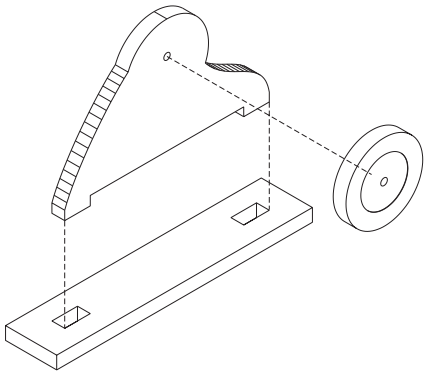
Glue the fin/rudder assembly to the top of the stabilizer. The posts will fit in the stabilizer slots. Some pin pricks in the stabilizer covering in line with the slots will help produce a strong bond.

93.



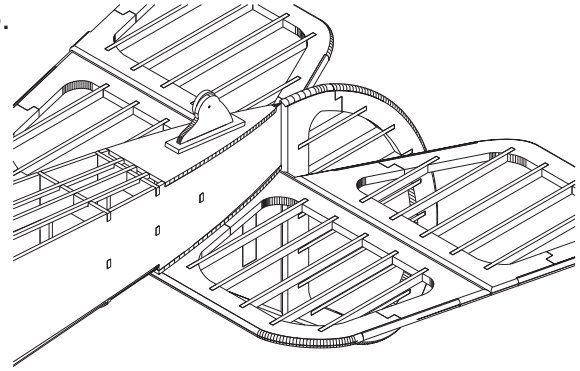
Glue the fuselage to the bottom wing. Make sure that the measurement from the wing trailing edge to the stabilizer trailing edge tip is equal on each side.

94.



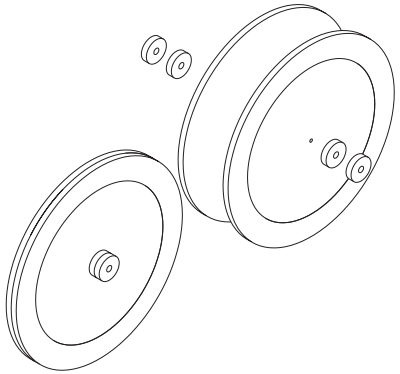
Glue the plywood tail wheel support to the plywood base. Attach the plywood wheel to the support. A small screw can be used or piano wire. If you just want a skid, the wheel can be glued to the support.

95.



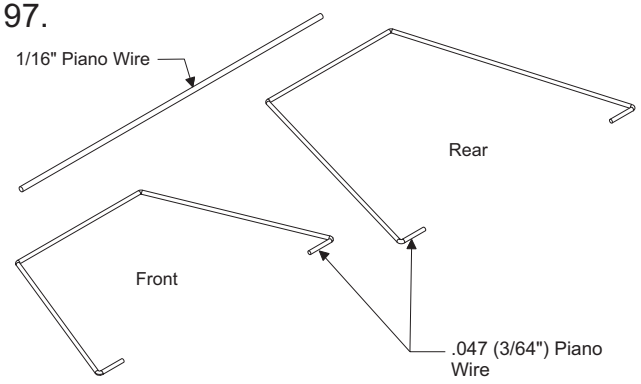
Glue tail wheel assembly to the bottom of the fuselage. A few pin pricks in the covering where the assembly will be attached will strengthen the joint.

96.



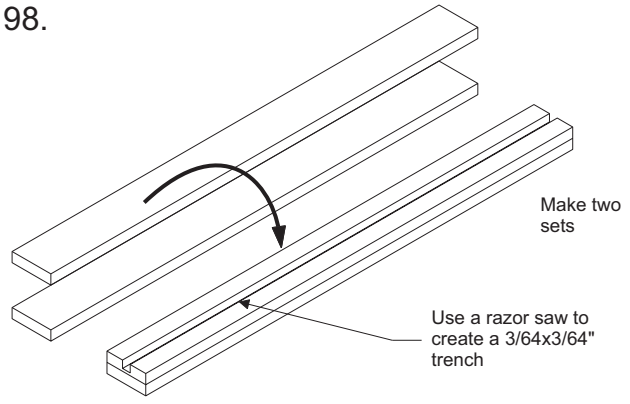
Glue plywood wheel halves together. The etched circle should face out. This would be a good time to paint the wheels. The etched circles represent the edges of the tires. Drill the center hole to 1/16" diameter.

97.



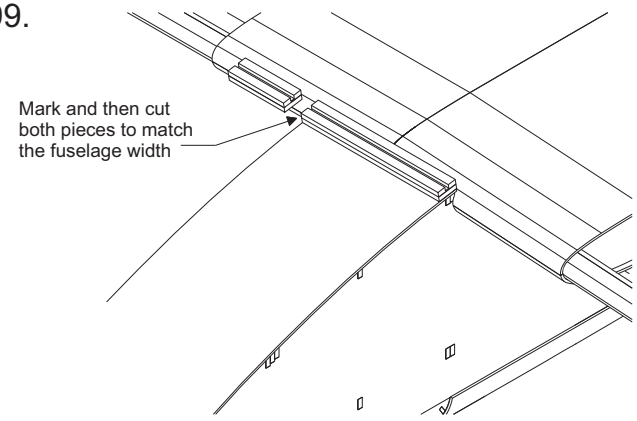
Using .047" (3/64) piano wire, bend the forward and aft landing gear legs using the provided patterns. Also cut a piece of 1/16" piano wire to a length of 4 3/4".

98.



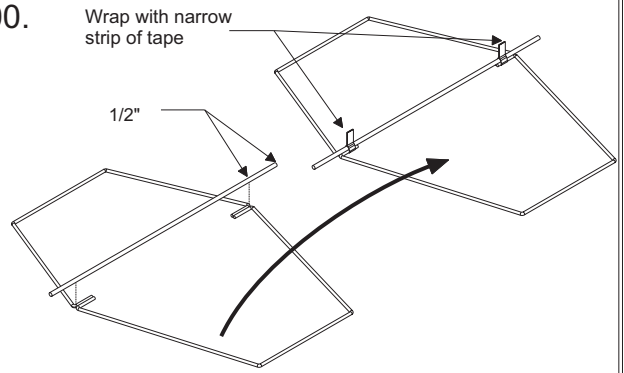
There are four 1/4" strips of plywood. Glue two together and then with a razor saw create a "trench" in the center that is 3/64" wide and 3/64" deep. Make up two sets.

99.



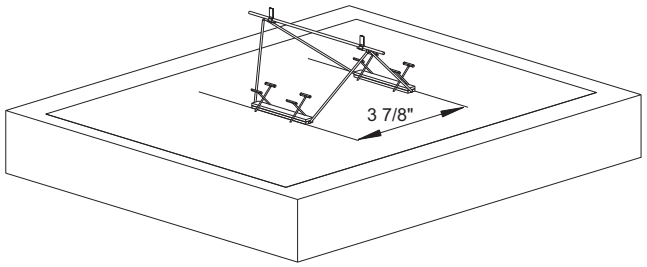
Place the two plywood trench pieces on the bottom of the fuselage and mark the fuselage width on each piece. Trim them to the make line. DO NOT GLUE ANYTHING YET

100.



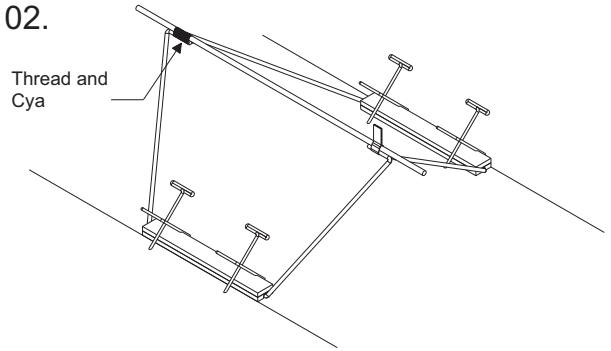
Place the bent 3/64" piano wire legs flat on your building surface with the short arms against each other. Place the 1/16" piano wire axle on top of bent legs. There should be about 1/2" between the bend legs and the ends of the axle. Wrap the joints with a narrow strip of tape.

101.



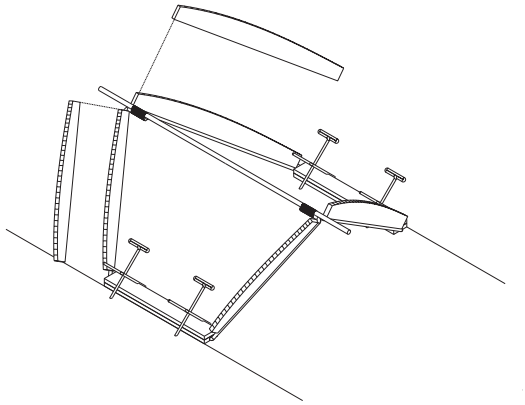
Draw two parallel lines on a piece of paper that are 3 7/8" apart. Place one of the plywood trench pieces on each end of the landing gear legs. Place that assembly on the paper and move the outer edges of the plywood pieces so they are alined with the two lines. Pin the plywood trench pieces to the building surface.

102.



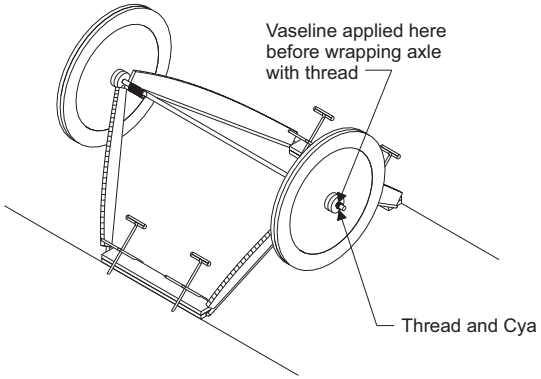
Apply a drop of thin Cya to the taped joints. Remove the tape from one of the joints. Wrap the joint with thread or something like Spider Wire fishing line. Use at least 10 wraps around the pieces of piano wire. Apply some thin Cya to the thread. Remove the tape from the other joint and repeat the thread wrap and Cya application.

103.



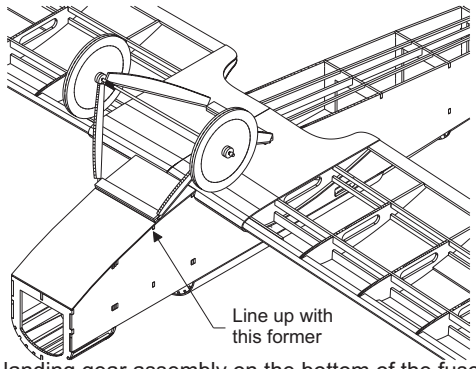
The plywood landing gear leg covers are now attached to the piano wire legs as shown. Use epoxy as the adhesive. If the plywood pieces will be painted, after the epoxy has set this would be a good time to do the painting.

104.



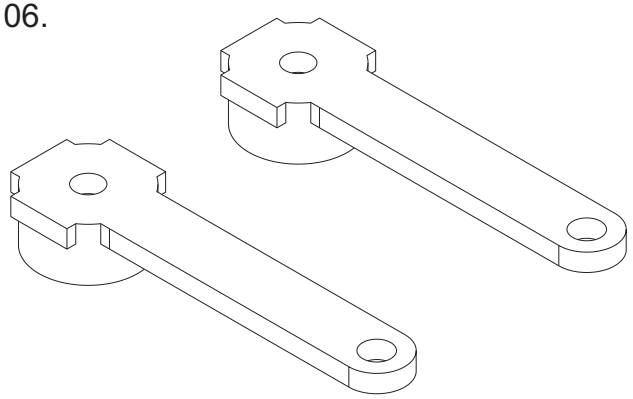
The wheels are placed on the 1/16" piano wire axle. Put a small dab of Vaseline on the outside face of the wheel hub so it just touches the axle. Use thread/Spider Wire and wrap the ends of the axle. Use enough wraps to make sure the wheels can't slip off. Apply some thin Cya to the tread to lock it in place.

105.



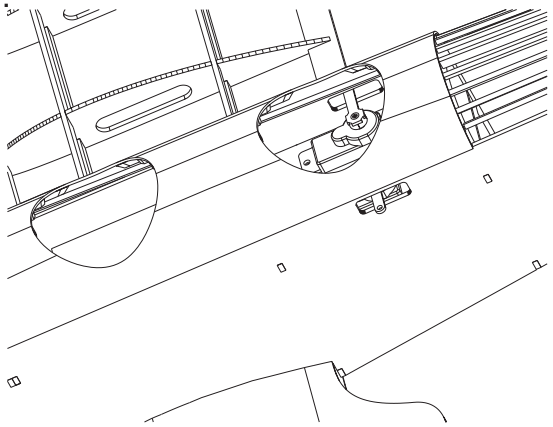
Place the landing gear assembly on the bottom of the fuselage as shown. Use some tape to mark the edges of the plywood trench pieces. Remove the assembly and pin prick the covering between the tape lines. Use epoxy and glue the landing gear assembly to the bottom of the fuselage. Remove the tape when the epoxy is fully set.

106.



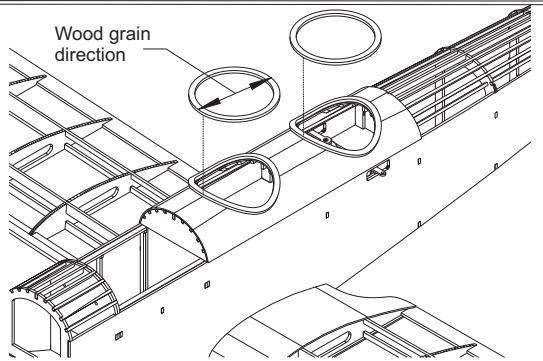
Locate the long output arms that came with your servos. Trim off all but one of the long arms. Do this for two output arms.

107.



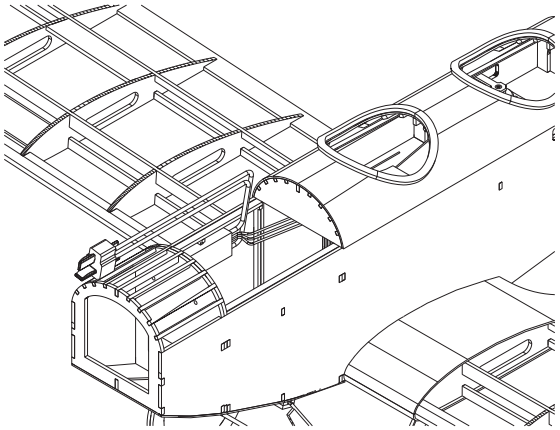
Install the two trimmed output arms on the servos. The output arms extend through the slots in the fuselage sides.

108.



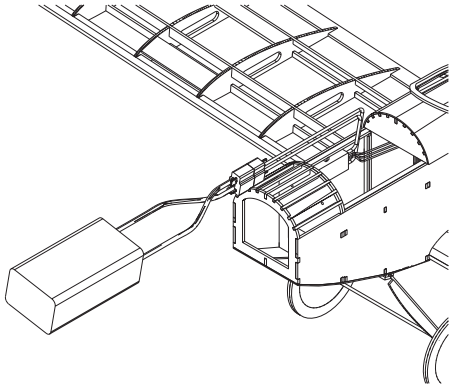
Locate the two 1/16" balsa rings. These are used to simulate the cockpit opening combing. Soak them in water for a few minutes. Bend them around the top of the fuselage. Hold in place with tape and let the balsa dry. Once dry carefully round off the top edges. Paint either black or dark brown. When the paint is dry glue each ring to the edge of the cockpit openings.

109.



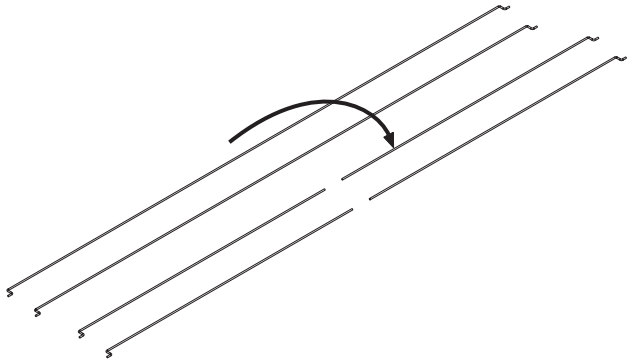
Place the ESC in the fuselage and connect it to the receiver using the battery slot. The ESC is left lose for now.

110.



Turn on your transmitter and then plug a battery into the ESC battery lead. Center the two servos. You may need to remove and reposition the output arms to get a suitable centering range. Unplug the battery and turn off the transmitter.

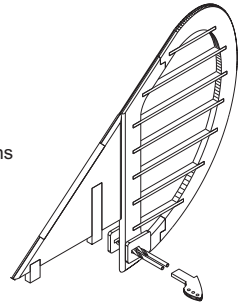
111.



Using some 3/64" (.047) piano wire, cut two lengths 14" long. Make a "Z" bend on each end of each piece of wire as shown. Cut each piece of piano wire in the middle.

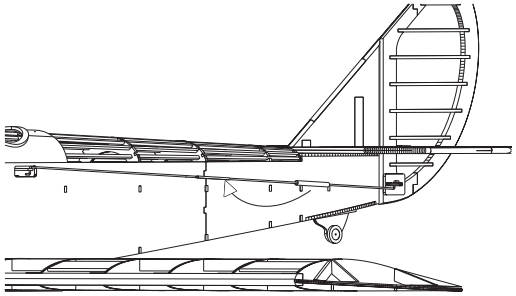
112.

How to install
the control horns



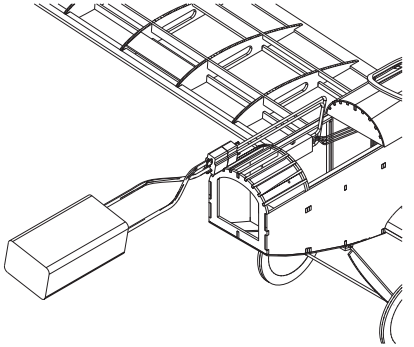
How to install a control horn on the rudder and elevators. Place one of the base plates on the surface where the horn will be located. Use a 1/16" diameter drill bit and drill a hole at each end of the base plate slot. Remove the plate and cut out the material between the holes. Insert a control horn into a base plate and then slide the assembly into the slot in the control surface. Glue it to the control surface and then glue another base plate on the outer side of the surface.

113.



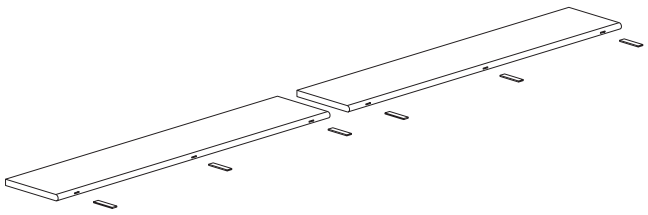
Insert a bent end of each piece of piano wire in the rudder servo arm hole and the middle hole of the control horn. Place a 1" length of small shrink tubing on one of the pieces of piano wire. Slide it away from the free end. Hold the two free ends of the piano wire lengths with your hand and slide the shrink tubing over the overlapped ends until it is centered on the overlap. Shrink the tubing. Make sure the rudder is in the neutral position. Repeat the process for the elevator push rod.

114.



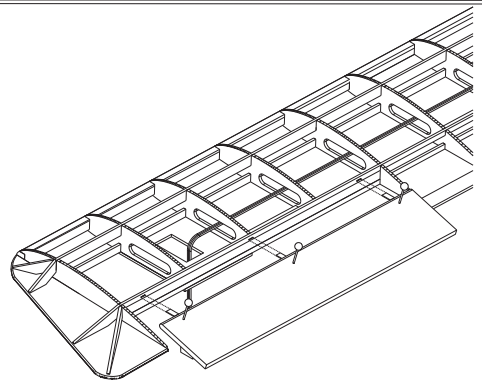
Turn on your transmitter and then plug a battery into the ESC battery lead. Make sure the two control surfaces are in their neutral position. If not carefully pull or push one side of the affected push rod until the control surface is neutral. Apply some thin Cya to the ends of the shrink tubing. Unplug the battery and turn off the transmitter.

115.



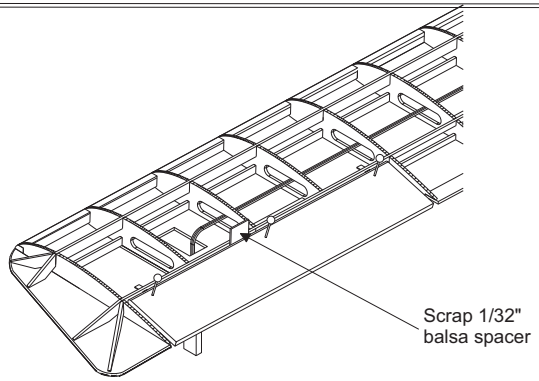
Cut some Cya hinge material into six 1/8x1/2" strips. Cut three hinge slots in the leading edge of each aileron and the wing trailing edges in the aileron openings as shown.

116.



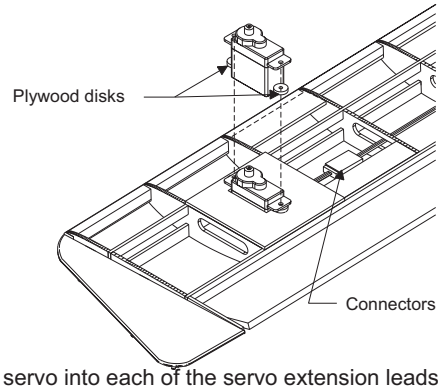
Insert the hinges in the ailerons. A straight pin through the ailerons and hinges will keep them from pushing in when the ailerons are mated with the stabilizer. Use the ailerons and hinges to mark the hinge locations on the wing trailing edge. Cut slots where marked.

117.



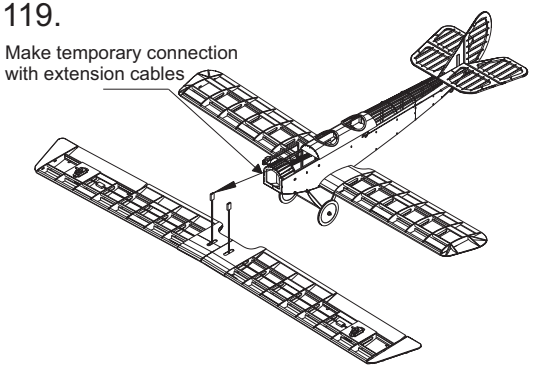
Slide the aileron hinges into the corresponding wing trailing edge slots. Use a piece of scrap 1/32" balsa as a spacer to maintain a 1/32" gap between the ailerons and the wing trailing edge. When satisfied with the alignment, apply a drop of thin Cya to each hinge. Remove the pins.

118.



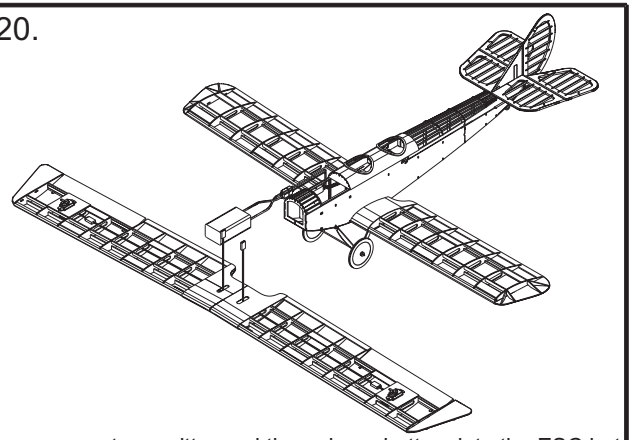
Plug a servo into each of the servo extension leads that are hanging from the servo openings. Pull the leads through the wing as you insert the servos into their respective openings in the top wing. Place a plywood disk between each servo mounting tab and the wing mount plate. Secure the servos with screws.

119.



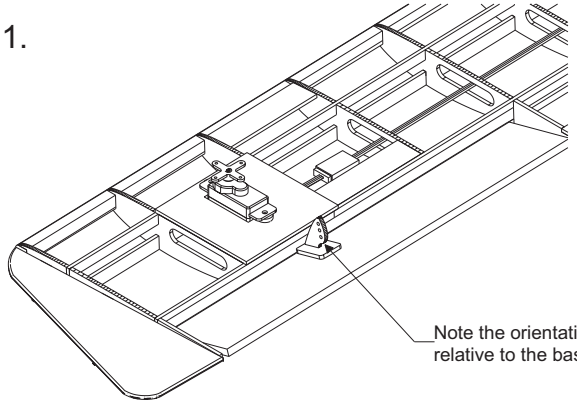
Install the servo control arms and then place the top wing near the fuselage and connect each aileron servo extension lead into the aileron outputs for your receiver. If your set up does not support dual servos in the transmitter, then connect the extension leads to a "Y" cable and connect the Y cable to the receiver.

120.



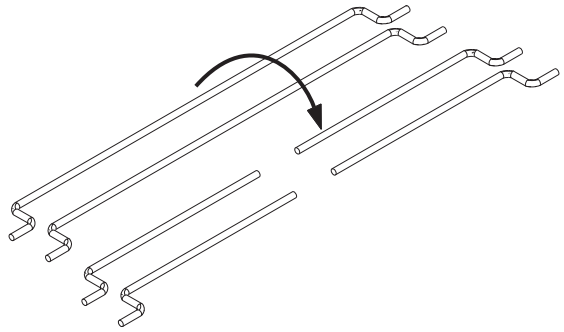
Turn on your transmitter and then plug a battery into the ESC battery lead. Center the two servos. Unplug the battery and turn off the transmitter.

121.



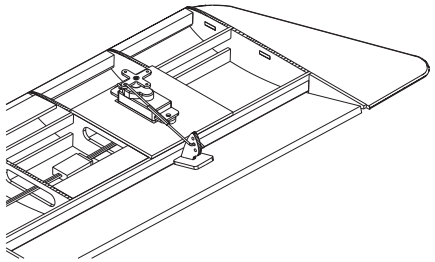
Install control horns on each aileron in line with the end of the servo output arms. Use the same process as described for the rudder and elevators. Note the orientation of the horn for this installation.

122.



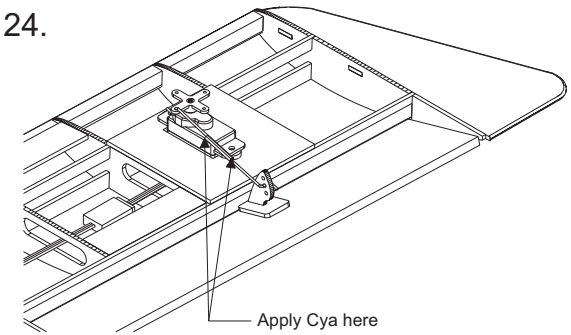
Using some 1/32" (.032) piano wire, cut two lengths 3" long. Make a "Z" bend on each end of each piece of wire as shown. Cut each piece of piano wire in the middle.

123.



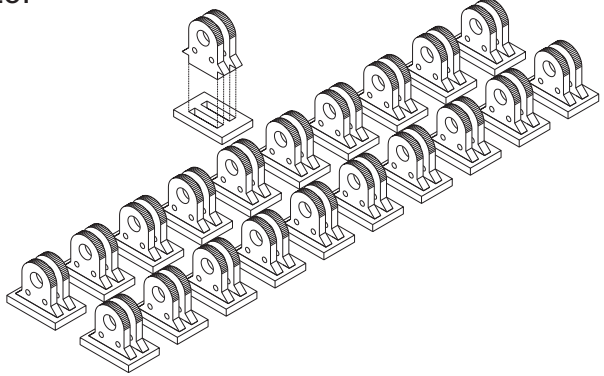
Insert a bent end of each piece of piano wire in one of the aileron servo arm holes and the middle hole of the corresponding control horn. Place a 1/2" length of small shrink tubing on one of the pieces of piano wire. Slide it away from the free end. Hold the two free ends of the piano wire lengths with your hand and slide the shrink tubing over the overlapped ends until it is centered on the overlap. Shrink the tubing. Make sure the aileron is aligned with the top surface of the wing. Repeat the process for the other aileron push rod.

124.



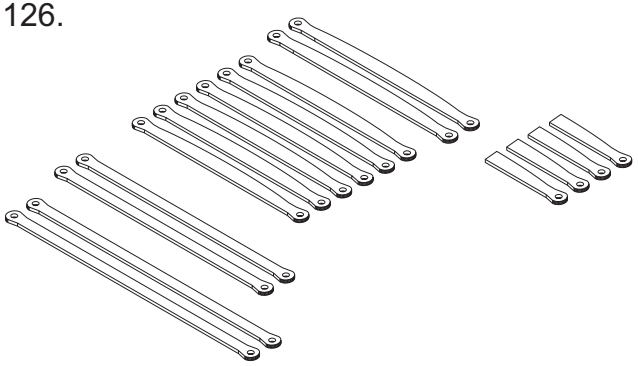
Turn on your transmitter and then plug a battery into the ESC battery lead. Make sure the ailerons are still aligned with the top of the wing. If not carefully pull or push one side of the affected push rod until they are aligned. Apply some thin Cya to the ends of the shrink tubing. Unplug the battery and turn off the transmitter.

125.



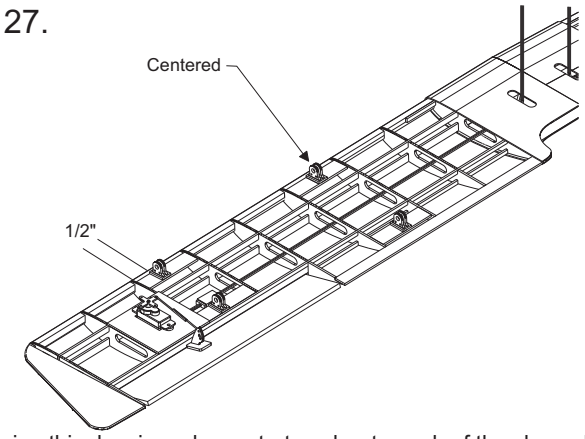
Unplug the top wing servos from the receiver. Make up 20 wing strut anchors. If they are to be painted, do that now. DO NOT PAINT THE BOTTOM FACE OF THE ANCHORS.

126.



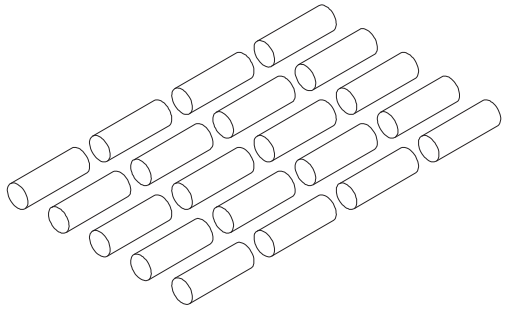
If the wing struts are to be painted, do that now.

127.



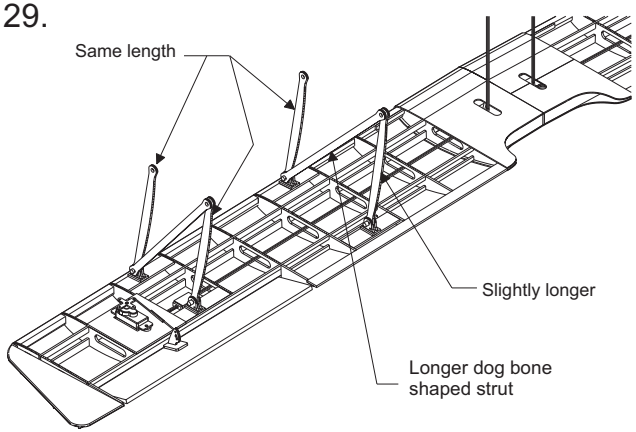
Using this drawing, glue a strut anchor to each of the shown locations on each side of the top wing. Prick the covering where they will be located with a pin. Use epoxy as the adhesive.

128.



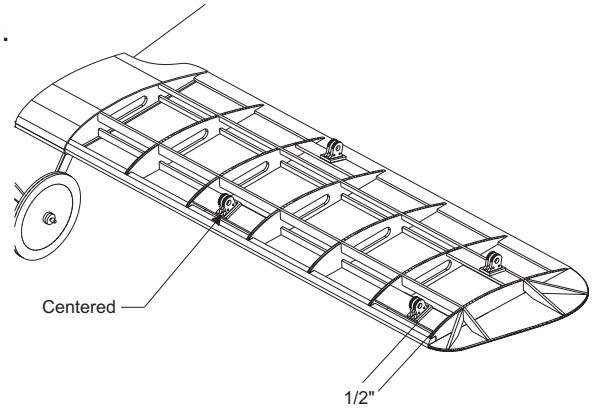
Using some 1/8" dowel, or bamboo skewers, cut 20 lengths that are 3/8" long.

129.



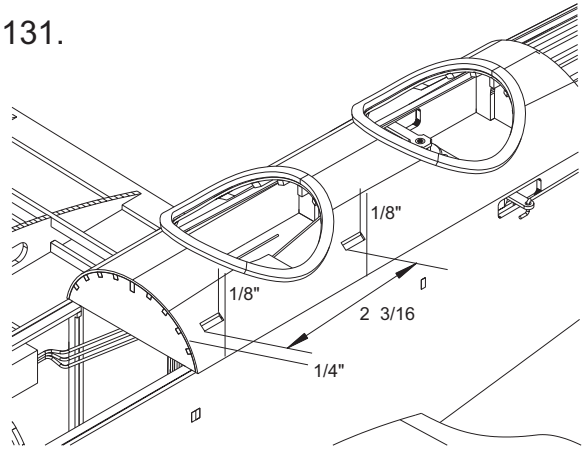
Use the dowel pins to attach the struts to the top wing as shown. DO NOT GLUE ANYTHING. Angles will be set later.

130.



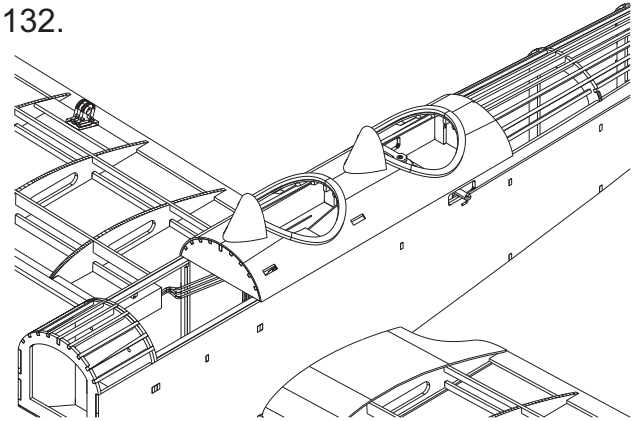
Using this drawing, glue a strut anchor to each of the shown locations on each side of the bottom wing. Prick the covering where they will be located with a pin. Use epoxy as the adhesive.

131.



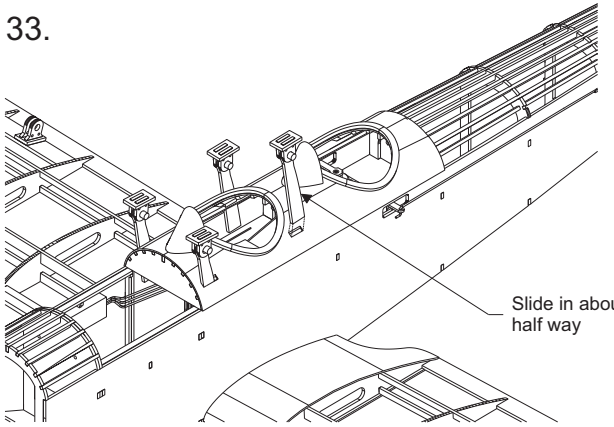
Use one of the center struts to mark the top of the fuselage as shown. Cut slots at these locations.

132.



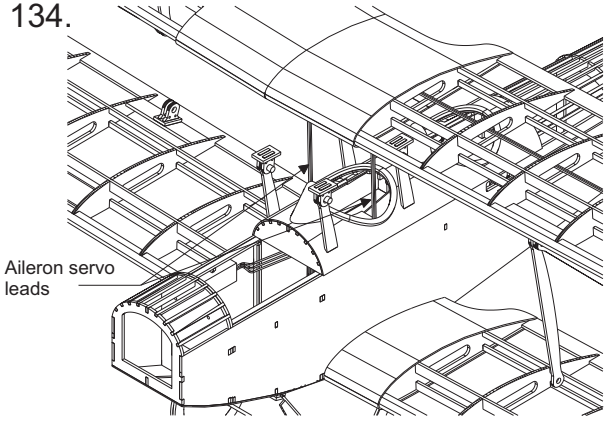
Glue the windshields to the fuselage top decking as shown. Canopy glue can be used or Liquid Stitch brand glue use for making clothing repairs.

133.



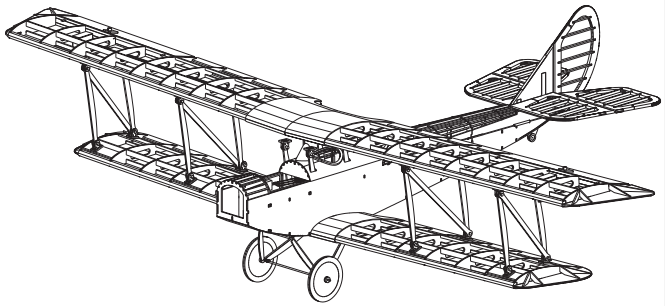
Using the dowel pins, secure a strut anchor to each of the four center section struts. Slide the struts into the slots that were cut in the top decking. Slide them about half way in. DO NOT GLUE

134.



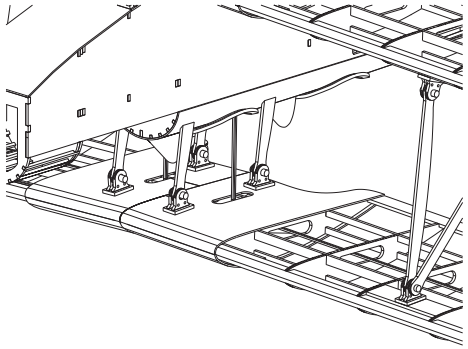
Place the top wing on the fuselage and run the aileron cables through the forward cockpit opening. Connect the cables to the aileron slots or Y cable on the receiver.

135.



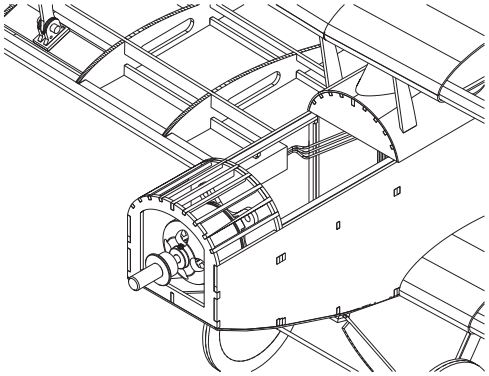
Insert the struts in their respective anchors on the bottom wing. Use the dowels to secure the struts to the anchors. The angle of the struts will be set automatically by the dog bone struts. Confirm the top wing is parallel to the bottom wing in both the top and front views. When satisfied with the fit glue the dowel pins with some thin Cya.

136.



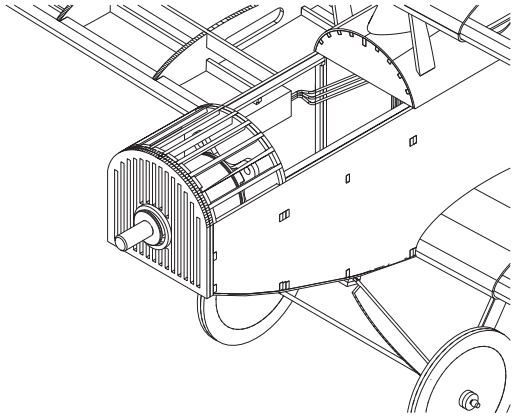
Push the center struts up so the anchors rest against the bottom surface of the top wing. Sight down the wing and angle the center struts to match the angle of the other struts. Mark the anchor positions and then pin prick the covering in the area where the anchors contact the top wing. Glue the anchors to the top wing using epoxy. Also glue the struts to the fuselage top decking.

137.



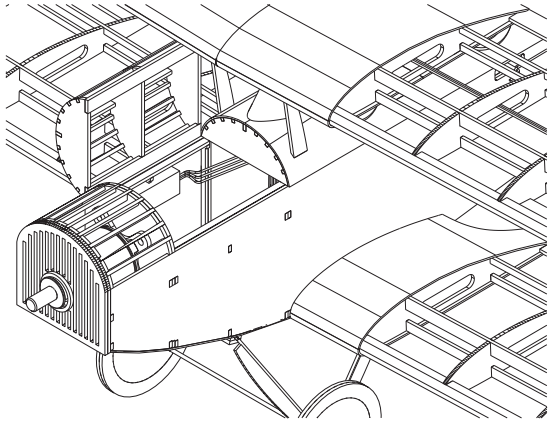
Install the prop coupler on the motor prop shaft and then install the motor. Connect the motor leads to the ESC. Turn on your transmitter and then connect the battery to the ESC. Confirm the motor rotation direction. Adjust the motor leads if the direction is not correct. Remove the battery and turn off the transmitter.

138.



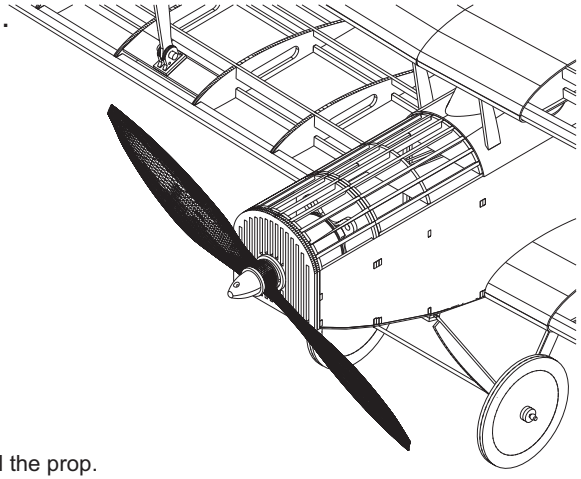
Place the nose block on the nose of the fuselage. It can be retained with a strip of covering material. That will make it easy to remove should you require access to the motor.

139.



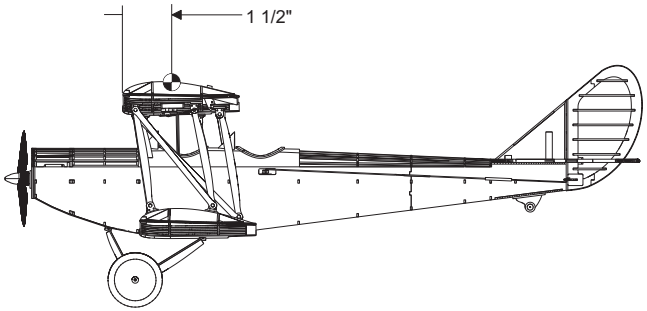
Place the battery hatch in the fuselage opening. Use some covering material and hinge one side. The hatch is held closed with a piece of tape on the opposite side from the hinge.

140.



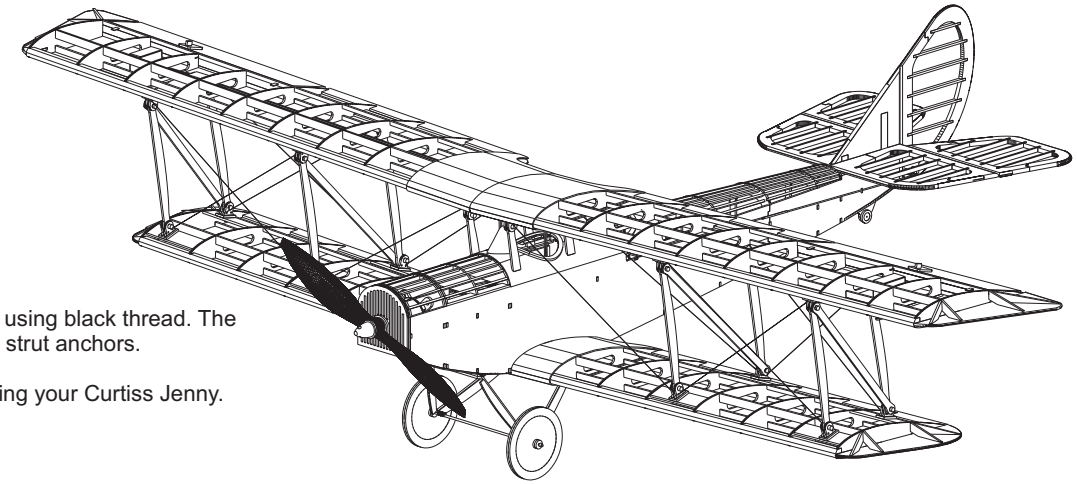
Install the prop.

141.



Place the battery in the fuselage and then check the Center of Gravity (CG). It should be 1 1/2" back from the leading edge of the top wing.

142.



Add the simulated wing wire rigging using black thread. The thread runs through the holes in the strut anchors.

This completes the model. Enjoy flying your Curtiss Jenny.