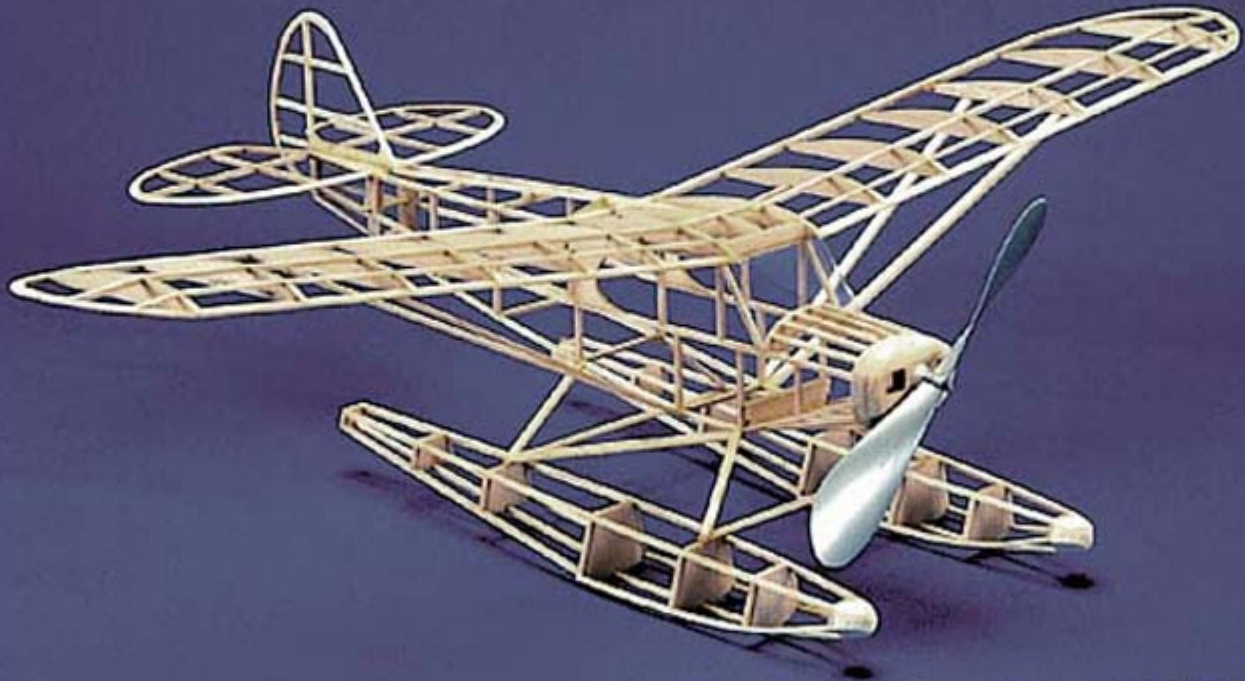




Award Winning Model Designs™

Piper Super Cub Floatplane



Herr Engineering Corp. HRR109



ASSEMBLY INSTRUCTIONS

Your kit contains the following parts. Please check your kit for any missing or damaged parts before starting construction.

COMPLETE KIT PARTS LIST					
1	Plan Sheet	1	Decal Sheet	2	White Tissue
1	1/2 Sheet Gray Tissue	1	1/16"x12" Landing Gear Wire	3	6"x3 1/4" Window Material
2	1/16" sq.x18" Balsa Strip	26	3/32" sq.x18" Balsa Strip	5	3/32"x1/4"x18" Balsa Strip
1	3/32"x3/16"x18" Balsa Strip	2	1/16"x3/16"x18" Spruce Strip	1	3/16"x2" Birch Dowel
2	5/8"x1"x1" Balsa Block	1	Tail wheel Assy.	1	15" Black Thread
1	Instruction Manual	1	9" Plastic Propeller	1	Propeller Shaft
2	Brass Washer	1	Nylon Propeller Bearing	2	1.375" Plastic Wheels
2	1/16" Plastic Wheel Retainers	1	3/16"x60" Rubber Strip	6	Laser Cut Sheets

Tools and Building Supplies

You will need the following items to assemble this model. You must read and follow all of the manufactures instructions provided with these items!

-Glue

CA, White Glue, Siment or Ambroid all work well.

-Cutting Tools

A hobby knife with a #11 blade is used for general cutting. A single edge razor blade is also a useful cutting tool.

-Clear Dope, Thinner & paint brush

-320 and 400 grit sandpaper

-Straight Pins

-Wax Paper

-Needle nose pliers

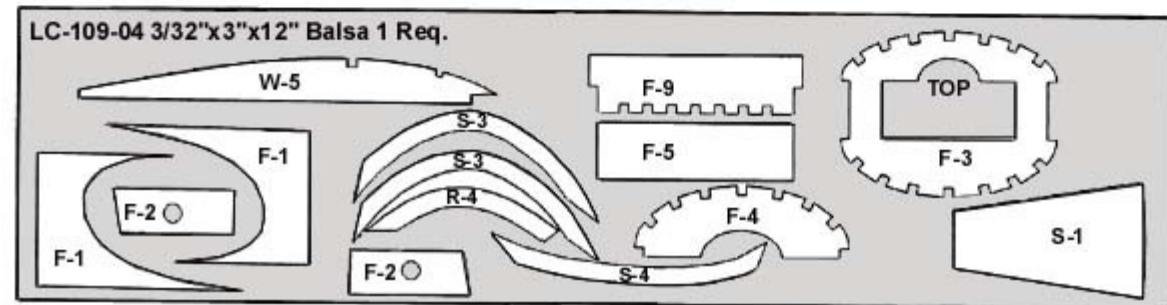
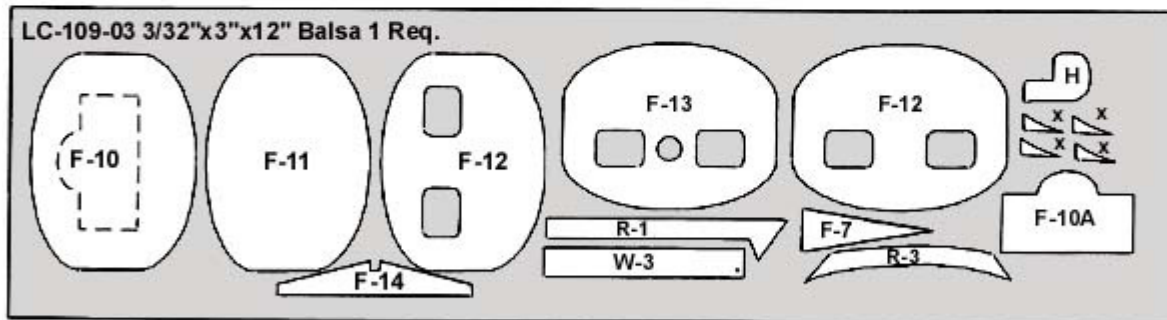
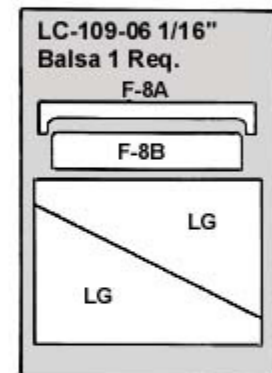
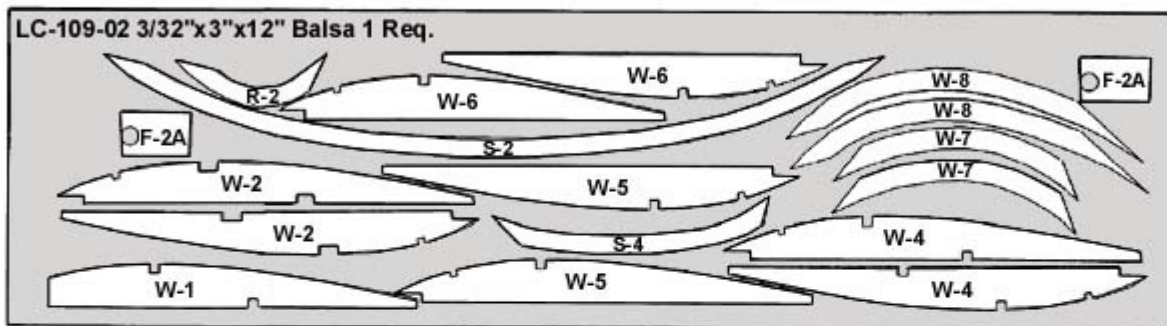
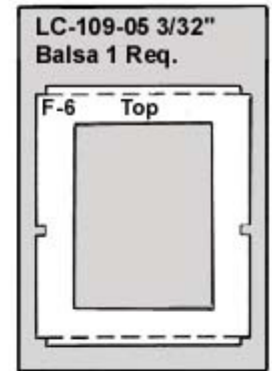
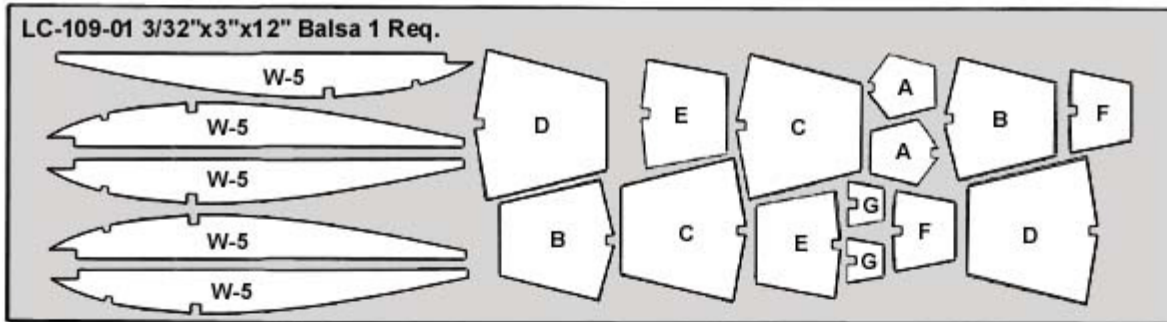
-1/4" Drill Bit

-Building Board

The first thing that you need to do is to identify and mark the part numbers on the laser cut parts using the drawings on the following pages as a guide.

It is possible that several of the laser cut parts may not be completely cut through. If this is the case you can free the part from the sheet quickly using an X-acto knife.

NOTE: The slight discoloration on the edges of the laser cut parts may be removed by lightly sanding the edges with 400 grit sandpaper.



Building the Tail Surfaces

1. Cover the plan with wax paper.
2. Build the stabilizer using parts S-1, S-2, S-3 and S-4. The remaining structure is made from 3/32" sq. balsa.
3. Build the rudder using parts R-1, R-2, R-3 and R-4. The remaining structure is made from 3/32" sq. balsa.
4. Sand the tail surfaces smooth and round the edges. Set the tail surfaces aside until needed later.

Building the Fuselage

5. Build the fuselage side frames over the plan using the laser cut parts F-1 and F-2. The remaining pieces of the side frames are made from 3/32" sq. balsa strip.
6. Glue two 3/32" sq. strips across the front face of F-6 in the locations shown on the plan.
7. Pin the right fuselage side frame to the plan. Glue F-6 into position using a small square to hold it 90 degrees to the side frame.
8. Glue F-3 into position using a small square to hold it 90 degrees to the side frame.
9. Glue the left side frame into position taking care to maintain a square and true assembly.
10. Glue F-4 into position.
11. Laminate F-5, F-BA and F-9 together and then glue this assembly into position on the fuselage.
12. Glue the 3/32" sq. stringers into position between F-3 and F-4. Glue the three 3/32" sq. cross pieces into position in the cabin area.
13. Glue the 3/32" sq. stringers into position between F-3 and F-9.
NOTE: Make sure that these strips stop flush with the rear face of F-9 and do not block the slot between F-5 and F-9.
14. Pull the tail posts together and glue. Be careful to maintain a straight assembly and that the joined tail post is vertical and not leaning to the left or right.
15. Working from the front to the rear, glue the 3/32" sq. cross pieces into position onto the fuselage between the cabin and the tail.
16. Glue F-7 into position at the bottom rear of the fuselage.
17. Glue the two F-2A's into position.
18. Glue the 3/32" sq. stringers into position on the sides of the fuselage between F-6 and the tailpost.
19. Glue F-14 into position. Glue the 3/32" sq. filler strip to the top of the first crosspiece behind F-14.
20. Laminate parts F-10, F-10A, F-11, F-12 and F-13 together as shown on the plan.
21. Position the removable nose block on the front of the fuselage and sand to shape. Now sand the fuselage smooth all over.
22. Drill the 1/4" hole in the nose block for the propeller bearing. Be sure to put 5' down thrust and 3' right thrust in as you drill this hole. Now set the fuselage aside until it is time to cover the model.

Building the Wing

Center Section:

23. Pin the 3/32" x 1/4" trailing edge to the plan. Pin the 3/32" sq. lower spar on the plan.
24. Glue ribs W-1 and two W-2's into position.
25. Glue W-3 and the 3/32" sq. top spar into position. Remove the center section from the plan when the glue is dry.

Outer Wing Panels:

26. Pin the 3/32" x 1/4" leading edge and trailing edge to the right wing plan.
27. Glue rib W-4 and four W-5's into position.

28. Glue the wing tip pieces W-7 and W-8 together over the plan.
29. Raise the end of the wing tip 3/32" from the building board and glue it to the leading and trailing edges.
30. Glue rib W-6 into position.
31. Glue the 1/16" sq. and 3/32" sq. top spars into position. The inboard ends should be long enough to extend past W-2 slightly. The outboard ends should be beveled to fit the angle of the wing tip. When the glue is dry, remove this wing panel from the plan.
32. Now build the left wing panel in the same manner as you did the right.

Joining the Wings:

33. Pin the wing center section over the plan.
34. Lay the left wing in position. Raise the tip so that there is 1 1/4" dihedral under rib W-6 and pin into position. Securely glue the wing panel to the center section.
35. Join the right wing panel to the center section as you did the left.
36. When the glue is dry, remove the wing from the plan. Sand the leading edge and the tips round and taper the trailing edge. Sand the wing smooth all over and then set it aside until it is time to cover the model.

Floats or Wheels?

37. You must now decide if you want to build the floatplane version or the landplane version. To build the land plane version, skip ahead to step #48. To build the floatplane, build the floats now as described starting with the next step.

Building the Floats:

38. Build the first of four float side frames over the plan using 3/32" sq. balsa strips. Soak the bottom front strip in hot water for 15 minutes, wipe it dry and then pin it to the plan. Allow the side frame to dry completely before removing it from the plan.
39. Build the remaining three float side frames over the plan as you did the first.
40. Pin the float formers A, B, C, D, E, F and G upside down on the top view of the float on the plan. Glue the side frames to the formers. Make sure that the float remains straight and that the top of each side frame is flat on the building board.
41. Glue the 3/32" sq. rear keel into position. Soak the forward keel in hot water for 15 minutes before gluing into position.
42. Glue two short strips of 3/32" sq. balsa to the rear face of former D between the side frame and the lower rear keel.
43. When the float is dry, remove it from the plan and glue the nose block into position.
44. Sand the float smooth and shape the nose block. Now build the other float as you did the first.
45. Build the two float struts over the plan using 1/16" x 3/16" spruce strips. When the glue is dry, remove it from the plan and sand the edges round.
46. Cut the two 5 3/4" long float spreaders to length and sand them smooth and round the edges.
47. Glue F-8B into the slot between F-5 and F-9 and sand flush with the bottom of the fuselage. Sand part H smooth and round the edges. Now set the float parts aside until covering the model. Now skip ahead to step #51.

Building the Wheel Landing Gear:

48. Bend the landing gear wire to shape using the pattern on the plan.
49. Test fit the landing gear wire into the slot between F-5 and F-9. Do not glue the wire into position until after the model is covered.

50. Sand parts LG smooth and round the rear edges.

Cover the Model

51. Sand the entire model smooth with 400 grit sandpaper.

52. Coat the outside edges with two coats of clear dope.

53. Attach the tissue to the model with clear dope mixed 50/50 with thinner. Do Not cover the top of the fuselage at this time. This will be done after the wing is attached in step #58.

NOTE: The entire model is covered with white tissue. The floats are covered with the Gray tissue, and the bottom front of each float should have two layers of tissue for additional strength. The float struts and spreaders should also be covered with gray tissue.

54. Lightly mist the model with water to shrink the tissue.

55. Apply two coats of thinned dope to the entire model.

56. Carefully apply the water slide decal's to the model.

57. Draw additional details on the model with a waterproof marker.

Final Assembly

58. Glue the wings into position on the model. Add the top 3/32" sq. stringer to the fuselage between the wing and the last cross piece on the top of the fuselage. Now cover the top rear of the fuselage as described in the covering section of the instructions.

59. Glue the windshield and side windows into position on the model.

60. Test fit, sand, finish and glue the wing struts into position.

61. Test fit and glue the stabilizer to the rear fuselage being careful to maintain proper alignment.

62. Glue the rudder to the fuselage accurately.

Landplane:

63. Glue the landing gear wire into the slot between F-5 and F-9. Glue F-8B into the slot and trim flush with the bottom of the fuselage. Cover the exposed balsa with a small strip of tissue.

64. Glue parts LG into position. Assemble the wheels and paint them with an enamel paint made for plastic models. Install the wheels on the model and then carefully glue the wheel retainers into place.

65. Glue the tail wheel into position.

Floatplane:

66. Assemble the floats by gluing the two spruce spreaders into position.

67. Lightly tack glue the float struts to the float assembly with a small drop of white glue. Prop the fuselage into position to help in establishing the proper angle.

68. Tack glue the float struts to the fuselage with a small drop of white glue being careful to maintain proper alignment.
NOTE: The white glue may be softened with a small amount of hot water to allow precise alignment of the floats on the fuselage.

69. When the floats are in the correct position, permanently attach them using C/A glue or a small amount of epoxy.

Both Versions:

70. Assemble the propeller assembly using the hardware provided.
71. Glue the propeller assembly into the removable nose block. Be sure to use the correct amount of down and right thrust.
72. Tie and install the rubber motor using the 3/16" dowel at the rear end to retain the rubber motor.
73. Balance the model at the point shown on the plan. Add weight to the nose or tail as required to achieve the proper balance.
74. Your model is now complete. You **MUST READ AND FOLLOW** all of the safety rules. We hope that you have enjoyed assembling your model and hope that you enjoy many fine flights.

Your First Flights

1. Make sure that all flying surfaces are straight and warp free.
2. Wind the motor about 100 turns.
3. Point the nose of the model into any gentle breeze that may be blowing.
4. Release the propeller and after it starts turning gently toss the model aiming the nose at a point on the ground 100' in front of you. Adjust the model to circle while increasing the number of turns in the motor. Adjustments can be made by gently bending the tail surfaces and wing trailing edge.
5. A properly trimmed model will circle to the left while climbing under power, level out as the power runs down and transition into a right hand gliding circle.

Safety Rules

1. Fly your model in a large open area that is free of obstructions, people or their property.
2. Do not fly your model in the vicinity of power lines, trees, streets or buildings.
3. Never try to retrieve any model stuck in power lines, in trees or on a roof or other high place. Never run onto the street to retrieve your model.
4. Position yourself at least 150' from spectators before launching model.
5. Never launch model directly at another person or other object.
6. Never stick your fingers into a spinning propeller. Do not try to stop a spinning propeller with your hand or fingers. Never stick any object into a spinning propeller.
7. Fly your model only on calm days. Do not fly when the wind is blowing.
8. Get proper permission before retrieving your model from private property.

WARRANTY

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