



Super Sinbad Construction Notes:

The construction of the Super Sinbad glider is rather straightforward and apparent by any experienced model builder. The Super Sinbad is made up from a couple of subassemblies. These subassemblies can be constructed concurrently, and thus requiring the need to complete one assembly before proceeding to the next step. The builder also reads ahead and determines possible subassemblies which need to be built, and construct these in advance of their installation, and thus keep items going at once and saving some overall drying time and thus speed completion. The basic subassemblies for Super Sinbad are the two joined winghelves, fuselage, horizontal stabilizer and the vertical stabilizer assembly.

The original aircraft was built as a simple hand launch glider, after which it was modified for single channel radio control. The radio control receiver indicated upon the original plans was of the tube type, with room for B Batteries. A builder may wish to install any late model radio control system. The plans are not indicative of placement for receiver, batteries, and servos, as the types available on the market today are quite varied and individual. The builder will find that there is no urgent need to install the most modern or exotic radio set-up, but he can use any older and cheaper radio as is available. Should the builder modify the Super Sinbad for available equipment, he should give thought to modification of control surfaces for elevators, ailerons or speed brakes not indicated upon this plan.

1. Wing assembly notes: Begin by cutting the 3/8 by 3/16 main spar to a bit longer than the plan indicates. Cover the plan with waspaper, and lay out the main spar on the plan. Shim up the spar with 1/8" wood and hold in place with weights. Slip on and glue into place all the W-2 ribs and the W-3 rib in positions indicated on the plan. When glue is setting, weight the trailing edge and end of each rib so that upon setting the ribs they will be on a straight line. Without moving the parts on the plan, set in the upper 1/8 by 1/4 hard balsa spar. When completely dried and set, remove holding weights, flip over and glue into place the lower 1/8 by 1/4 spar. Lay out the trailing edge on the plan and hold into position with weights. Lay out a 1/2" square strip on the plan along the position of the 1/8 by 1/4 spars. Then lay the spar/rib assembly upside down on the plan and slide into the trailing edge and glue into place. After assembly is set and removed from plan, install the 1/2" square leading edge material using rubber bands to hold in place. You may also want to wet the wingtip onto flat surface and weigh down to prevent possible warping. Note that there is a bit of overlap in the 1/2" strip beyond the edges of the ribs so that the 1/20" sheet can be flushed in on. Lay out all the "W" parts for the tips, and glue and laminate those noted on the plan. Join together wingtip parts W-8 and W-9 over plan. Join together W-6 and W-7 over the plan. Lay the wingtip on the plan again, and then test fit the two tip assemblies in place per the plan. Trim the main 3/16" by 3/8" spar so they fit the tip assembly and taper cut W-8 and W-9 to fit appropriately into the trailing edge and leading edge. Then glue the two assemblies into place taking note that a 1/8" shim may be necessary for the wingtip to obtain an undercamber similar to the main ribs. The two 1/4" by 1/8" spars can be initially bent to each side of the tip assemblies, but do not glue in place. After dried, they can be trimmed to fit the tip assemblies. Slide in place ribs W-4 and rib W-5 between the two strip spars and glue in place as per the plan, taking care to taper the trailing edge to match the curvature of the tip assembly. Square together the two trimmed spar strips and glue into place in the tips. Add Rib W5A in place, and taper the small end to match the tip assembly. Square together the block plane and sand the leading edge into the wingtip per the shape shown on the plan. Taper the upper edges of the wingtip and spars to match the section shape on the plan. Cut some 1/20" by 2" by 26" balsa down the middle. Test fit and then glue into place a half of the 1/20" material to the upper leading edge, allowing to incorporate some overhang for trimming. Use common clothes pins to hold into place. To ensure no warps, it is best to set the wing assembly onto a flat surface, weighing it down until the glue sets. Add the lower 1/20" in similar routine to upper. Sand the entire wingtip, and tips to a smooth surface, and round the tip edges and taper the trailing edges as per plan. Build the second wingtip in similar order. Using a machinist square, mark and trim off excess material at the centerline of the wing. Sand to a vertical taper, such that when joined the correct 5" dihedral measurement will be obtained at each tip. Slide in ribs W-1 and glue in dihedral gussets W-6 to one wingtip and let set. Then slide together and test fit the other wingtip and glue tight when applied.

2. Fuselage assembly: The fuselage is based upon a horizontal framework, a lower keel and an upper crutch, each assembly being treated separately and then combined into a final assembly. Scribe about 12" of a pair of 3/16" square balsa strips. Using the plan framework view, cut a few (but not all) of the short perpendicular 3/16" to lengths indicated. Lay out the wetted strips on the plan, and bend to shapes noted, trim and taper the rear most of the 3/16" long strips to match the plan. Hold in shape with heavy weights or pins until dry. Then lay into position and glue in the 3/16" square lengths. Using the finished shape, then cut and taper additional lengths to match the inside of the framework. Layout and glue together all K parts as per plan. After dry, slip on to the keel all B parts, but do not glue. Part B-1 will be glued perpendicular to the keel and should align with the most forward edge of the framework. See that the remainder of the B parts align onto the 3/16" square balsa framework, and that the overall length of the keel terminates at the joined 3/16" sides. Lightly sand the upper and lower sides to the joints of the framework and glue the adjusted keel and B parts into place. After set, trim and taper the 1/8" by 3/16" keel supports and set in place, noting that the lower portion should be blunt, and not pointed. Sand flat the bottom of the keel, the B parts, and the supports, and then glue on the 1/8" by 3/8" keel skid strip. The forward end of the strip may need to be wetted to bend. Add in the two long 1/8 by 1/4 strips to the lower sides of the fuselage framework. Check that the correct distance forward in the placement for BB-2 is met. Note that BB-1 lies onto the edge of the recently installed 1/4 by 1/8 strips. Trim, fit and glue into place the ballast box sides BB-3. Using a square, glue K-5 into the upper slot in T-3. Mark K-5 at 6 3/4" from the inside top of T-3, and glue in place part T-4 square to. Glue this assembly onto the top of the framework as per plan. Glue on the remainder of the T parts in positions noted on the plan. Being careful, bevel the mating edges of parts C-1 to each other, and then attach to the top of K-5 and T-3. The mating line goes down the center of K-5 and that the rear of each C-1 fits flush up to the rear face of T-4. Square off a little about 3" from one edge of same 16" long by 3/16" square strip. Then square off about 4" from the opposite edge and end. Place the 3/16" square onto the tapered portion of K-5 and the Vees of the rear T parts. You may need to soak the strip to make it conform to the arc. Add on two 3/16" strips to each face of the strip as shown on the plan, then sand flat. Add on the two upper 1/22" square longerons to the side of the T parts as per plan and add in the uprights in the area below the wing. Glue in place the semicircular cockpit parts T-1 and T-2 and then the sheet from T-2 to the forward end of C-1. Cover T-1 and T-2 with 1/20" sheet balsa as noted on plan. Glue in the vertical dowel at B-1, then glue in and form the two side nose blocks and the upper nose block. Consideration for installation of radio gear must be done at this time. As late model radio gear is lighter, it is suggested that the area forward of B-3 be used. A platform for servo should be fabricated underneath the windshield and the radio gear underneath this. Access can be via the upper semi-circular section of T-1/T-2. **3. Horizontal stabilizer:** Glue laminate the S parts as noted on the plan. Using the plan, connect together the assemblies for S-4, S-3 and S-2 on a flat surface. Glue in place the long 1/8 by 3/8 spar, then the rear ribs hives on a flat surface. Sand and taper the rear edges to the installed S part assemblies, and then the center section of the spar. Laminate in the short spar center support, and sand to taper in the center. Glue in place ribs S-11a through S-13a per positions on the plan. To one side, glue in an overly long 3/16" square leading edge. After dry, cut off excess of the square strip where it meets assembly S-1, and fit and glue in place each. Do the same for other side of horizontal stabilizer, but do not join trim leading edges at the indicated centerline. Sawcut and sand a little portion of a line each half of the leading edges, and coincidentally fit part S-10. Once fit, flatten about 1" of the interior edge of the square leading edges and then glue in S-10 and the two gussets. Sand, round or taper the exterior surfaces preparatory to covering.

4. Vertical stabilizer: Glue laminate the R parts as noted on the plan. Then lay out and join assemblies R-1 through R-3 over the plan. Sand or otherwise make sure the connection and bottom of R-1 and R-3 is straight. Shim into center and glue R-8 in place. Install the three 1/8" by 1/4" rubber ribs, tapering to fit at R-1. Sand entire assembly to one section, tapered at the forward edge, but square at the rubber join edge. Glue parts R-5 and R-6 to R-4, then taper sand the assembly towards the rear. Drill R-5 and R-6 as per plan for pin hinges. Drill R-8 such that the assembly will rotate freely. Sand once again vertical stabilizer and rubber preparatory to covering, and then install covering and colors. Install R/C rubber horn on R-4, and install pin hinges, then mount on finished horizontal assembly. The rudder and horizontal stabilizer assembly becomes a unit, and held in place with rubber bands.

SUPER SINBAD

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BUILD FRAMEWORK OVER THIS CRUTCH VIEW, THEN ADD ON KEEL PARTS, 1/8" X 3/16" UPRIGHTS, BALLAST BOX PARTS AND LONGERON AND KEEL STRIP