(1) Bottom wing skins are in three pieces each. Match the parts left and right.

(2) Use masking tape to join the pieces on the seams.

(3) Use these to make top skins from 1/16” x 3” balsa (not supplied) Note: Make left and right sides, and make the skins 3/16” wider at the leading edge to compensate for the top curvature.

(4) Use aliphatic resin to glue the pieces to each other.

(5) Weight down the wing skins until the glue is cured. (A piece of 3/16” glass makes a great weigh.)

(6) Remove tape and sand the panels. Concentrate more on the outer surface. Mark the inside surface of the top panels. Sanding now with fine paper will eliminate sanding later, and the subsequent starved horse look.

(7) Assemble, but do not glue W-2 and W-6 to the spar, and pin in place on the bottom skins. Add remaining ribs. NOTE: W-1 is set at the dihedral angle by the spar.

(8) Use a sliver of balsa to raise skin up to rib bottom at leading edge. CA all ribs and spar to the skin, but avoid aileron spar area. Glue the false leading edge in place.

(9) Remove rib sections for aileron spars.

(10) Cut six bearings 3/8” long from 1/16” aluminum tube or inner Nyrod. Bend torque rod assemblies from 1/16” music wire with 3 bearings on each. NOTE: You can install a micro servo in each wing panel instead of using the torque rod assemblies.

(11) Use a razor as a spacer to cut ribs for torque rod bearings.
Rogozarski IK-3 Assembly Notes

(12) Cut aileron spars from scrap sheet. Install the trailing edge and torque rod assembly. Notch the aileron leading edge to accept torque rod. Add block for torque rod. Spars are separated by T-Pins, to form a gap. This gap must match all cut marks on bottom sheeting. Trim ribs if necessary.

(13) No step 13...I'm superstitious. Proceed to #14.

(14) Add balsa stabilizer block around torque rod at root. Wing is then sanded to accept top sheeting. Bottom trailing edge is tapered to almost a fine thickness. Glue torque rod bearings to ribs with medium CA.

(15) Tack glue wash-out gauge to bottom of wing. Wide part is inboard, just inside W-2 and recessed 1/2" from trailing edge. Short gauge is for under the wing tip.

(16) Top wing skins are attached using aliphatic resin on all ribs and spars, with the exception of the trailing edge and false leading edge, which are glued using thick CA. Then the whole panel is weighted with sand bags.

(17) After the glues cure, trim all sheeting with sanding block. Add 1/4" sheet leading edge.

(18) Blend leading edge into surrounding wing surface. DO NOT ROUND THE LEADING EDGE YET

(19) Wing tip parts, (6) WT’s have two blanks that have the grain in the opposite direction. Each tip consists of (3). And each odd grained WT is in the center of the assembly.

(20) Medium CA wing tips in place on flat surface. NOTE: Do not glue tip to aileron.

(21) Round leading edge and wing tips. Be sure to match each leading edge in shape. On small models, different shapes can make for a funny flight...
Rogozarski IK-3 Assembly Notes

(22) Use a T-Pin to transfer the cut limes from the bottom sheeting to the top. Then join lines with a marker. Cut ailerons free with a brand new razor. #11 Xacto blades do not work well here.

(23) Mark and sand bevel in aileron leading edge.

(24) Cut CA hinges into 3/16" wide pieces. That’s all that is needed. And, full hinges will make for a stiff function.

(25) Temporarily install hinges and check for smooth operation. Sand aileron ends for clearance if necessary.

(26) Cut aileron servo pocket.

(27, 28) Join the wing panels. One wing panel is flat. The other is raised 1" at the center of the wing tip. I used Gorilla white polyurethane glue to join the panels. Center section will be glassed later.

(28, 29, 30) Assemble the radiator.

(31) Add vertical reinforcement strips of scrap 1/16" balsa to F-1, F-3, and F-4. (Ignore F-2; it receives the ply F-2 laminate.)

(32) Glue 1/4" triangle stock to rear of fuselage sides. Make left and right sides.

(33) Glue 1/4" triangle stock to front of fuselage sides. Cut a series of kerfs in the triangle stock to help it bend.

(34) Cut a series of kerfs in the rear 1/4” triangle stock between F-5 and F-6

(35) Glue in wing saddle doubler and bulkheads F-2 thru F-4. Make sure they’re square.

(36) Glue wing saddle doubler to opposite side
(37) Draw a line down the work surface and mark the center of the fuselage formers. Pin the assembly in place.

(38) Glue the opposite fuselage side to the formers. Make sure the assembly is square.

(39) Taper the rear triangle stock to allow tail to be brought together. Place F-5 in position.

(40) Place F-6 in position.

(41-42) Taper sides of F-7 and install in fuselage. Glue F-5 through F-7 in place with CA.

(43) Glue the battery box parts together.

(44) Glue ply F-1 to nose. Be sure center cross member is lined up.

(45) Remove upper cross member from balsa F-1.

(46) Glue top F-1 to rear of ply F-1. Make hatch bases from 1/8x 1/14" scrap. Pin the bases in place.

(47) Glue a scrap of 1/16" ply to the rear of former F-4 to reinforce the wing mounting hole. Then drill 1/8" to match present hole.

(48-49) Glue a short piece of 1/8" dowel F-4 hatch bulkhead only. Fuselage bulkhead F-4 has lightening hole.

(50-51) Glue top F-3 and 1/8" square stringer in place. F-2 hatch and fuselage bulkheads must be tapered on bottom to allow 15deg angle. Even the stringer notch must be beveled. Trim both F-2s till stringer has a slight bow to match plan curvature. Sparingly tack F-2s into position with medium CA. These must be allowed to separate later.

(52) Glue scrap 1/16" balsa to front of former F-2.
(53-54) Upper cross member of bottom F-2 can now be removed (as with F-1). Glue battery box in place. Some sanding of box and bulkheads may be necessary for good fit. Note that down and right thrust is built in.

(55) Sheet bottom of fuselage cross grain with 1/16” balsa.

(56) Use the plastic canopy to locate cockpit sheet line.

(57) I removed the hatch, for the sheeting process, and tacked it to a piece of glass. With the fuselage being built true, up-side-down, I knew I could get a match. And the glass would keep the hatch frame from distorting. I strongly recommend the addition of a piece of glass in your building tools.

(58-60) Balsa sheeting added and 1/8” sheet triangles to blend cockpit corners.

(61-63) Magnets are installed using wax paper separation, with 15min epoxy. And a rear dam from scrap balsa added on rear of hatch F-2 as with the Fuse F-2. After cure, remove hatch and sheet between F-1 and F-2

(64) Replace hatch and add scrap supports behind fuselage F-4, to keep the joint from changing during sheeting of the turtle deck. Add top bulkheads F-5-F-7/

(65) Add rear F-7T to rear of F-7. F-7T is flat on top to accept stab. Add two HSB's. Be sure they are vertical to match with rear fuselage joint. I used a 1/8” diameter sharpened brass tube to bore a path for the pushrod sheath. Inner Nyrod is used, and the pushrod is .032"MW.

(66) Remove hatch and place a piece of wax paper between F-4’s. The turtle deck has multiple compound curves, so plank it with 3/16” x 1/16” strips of balsa.
Rogozarski IK-3 Assembly Notes

(67) I elected to cover the hatch w/saran wrap, and make a perfect hatch/fuse mating. While the hatch bases were perfect, the sheeting was not, in the mating area. Later the spackle is thin CA’d and is like a rock.

(68-73) Tail surfaces are quite simple. Note I kept the elevator and stab separate with pins. Later I applied slivers of balsa to hold these gaps while sanding, ensuring a match. You can just round the edges. I prefer to streamline the surfaces fore and aft, keeping the center flat. Joiner is 1/8" dowel. The elevator leading edge is beveled and hinged with four 1/8” wide CA hinges.

(74-75) I applied a double layer of masking tape to border the center section. This allows a strait cut with a sanding stick later, and easy feather of the glass. Glass is ¾-ounce and epoxy finishing resin is thinned 25% w/denatured alcohol. I also glassed the bottom and sides of the glycol cooler.

Next, cover the parts. We recommend silkspan and lacquer, or Doculam laminating film.

After covering, make wing fillets. My choice of making the wing fillets is for ease and materials on-hand. The intakes, located in the wing root, make things a little dicey during the shaping. But, model mate spackle and sandpaper finally got the job done in a reasonable outcome. The nice thing about the modeling spackles is they do not crack or shrink. And after cure, thin CA is absorbed, making for a STRONG fillet. I only use hardware store spackle for non-structural filling (if at all). The model variety is worth the cost.