

# CURTIS MODEL AIRCRAFT

LONG JOHN 60

Spade Light  
Clear Poly  
1/2" Drill

Tin Foil  
Wax Paper  
Butane  
Trash Bags

Sticky Sand Paper  
TRI STOCK 1/2"

Be sure to read these instructions, as well as the attached "Radio Control Installation" instructions, thoroughly before starting construction. Some of the construction features are unique, and your selection of control system may slightly alter a few of the construction steps.

Congratulations! You have purchased one of the best flying "Sport" and "Fun-Fly" models available! The Long John gets its excellent flying characteristics from a combination of its low wing loading, long tail moment, and wing flaps. The wing flaps can be electronically coupled to the elevator, if your radio has this feature.

Light weight is the key to obtaining the best performance from The Long John. The use of CyA glues helps to keep the weight down; however, in order to ensure structural integrity, all areas of high stress should be glued with epoxy.

## WING ASSEMBLY

Lay out a straight line at least sixty (60) inches long on your building board. Cover your building surface with a plastic covering (Monokote backing is excellent, and cheap) to keep the wood from adhering to it. Wax paper is not recommended because the heat generated from instant glue will draw part of the wax into the joint, causing a weak bond.

Glue the 1/4 x 1/2 x 36 balsa and the 1/4 x 1/2 x 36 spruce spar material together to make four (4) 1/2 x 1/2 x 36 laminated spars, making sure they are straight while the glue dries.

Mark the center of the 1/4 x 1/2 x 10 7/8 plywood center section doubler. Lay two (2) of the laminated spar halves end to end (spruce side up) and epoxy the ply doubler to them with the center mark directly over the butt joint of the spar ends. Allow the epoxy to cure while ensuring that the spars are absolutely straight. Repeat the process with the other two laminated spars. When complete, you will have two (2) 72 inch main wing spars.

Note that the center ribs you are about to use have a 3/4 inch main spar slot, while the rest have a 1/2 inch slot. This is to fit the plywood doubler at the center of the spar.



#### IMPORTANT NOTE

Since the strength of the wing depends to a great degree on the webbing supplied, it is very important that all the glue joints where the webbing meets the ribs and spars are strong. If thin CyA glue is used for wing construction, it is suggested that you go over all these joints with gap filling CyA or white glue (aliphatic type). Be sure to keep the wing pinned down to your building surface during this step to ensure that no warps develop.

Lay one of the main spars along the straight line on your building surface, with the plywood doubler toward the trailing edge of the wing. Epoxy the two (2) 1/8 inch lite-ply doublers to each side of the center rib for dowel support. Now epoxy the center rib in the exact center of the spar, making sure it is at 90 degrees to the spar.

It is important to have a good glue joint here, since the lift of the wing will be concentrated mainly at this point. Using two (2) short pieces of the webbing and the other two (2) 1/4 inch ribs with 3/4 inch slots, stand the short webbing on top of the spar, and then slide the two (2) outer ribs in place on either side of the center rib, glue them in place, making sure of proper alignment. Pin the spar to your building surface, while using some scrap 1/8 inch stock under the front edge of the spar to raise it off the board. This will align the trailing edge of the ribs to the work surface.

Using the longer pieces (3 3/4 inch) of 1/8 inch webbing, stand the webbing on the spar against the previous rib and hold in place while sliding on a 3/32 inch rib snug against the webbing, but DO NOT GLUE. Do this for the rest of the 3/32 inch ribs, and then the tip rib. Using a square, glue the tip rib to the spar, making sure it is square with the spar.

Slide the 1/8 x 2 x 36 inch balsa TE sheeting under each wing section, and glue to all the ribs. Now, glue in the two (2) hardwood wedges on each side of the center rib at the trailing edge for the wing attachment bolt reinforcement. Install the top main spar in the rib slots and make sure the webbing is in full contact with both spars. Glue the ribs and webbing to the spars and to each other. Carefully install the 3/16 x 1/4 inch sub-spars into the ribs, and glue. Now glue on the top TE sheeting. Glue the 3/8 inch square x 36 inch leading edge in place.