

11 FUSELAGE - Basic Frame-up

The fuselage plan for the Super Flyin' King is really only needed for building the fuselage side frames. After that, the top view will be handy for reference while joining the two sides.

Build two fuselage sides in the order shown in the "Fuselage Frame Assembly Diagram" on the fuselage plan. Use the hardest, heaviest 1/2" square sticks for the longerons.

Sand the sides then trim SIDE-5 to create the front part of the wing saddle. You can make a template by cutting the plans or tracing them onto another piece of paper.

Glue the lite-ply doublers onto the fuselage sides. Be sure to line up the rear edge of the notch for F-2 with the back edge of SIDE-4. Extra slow CA works well for this step. Notice that there should be a 1/8" gap between the doubler and side along MOST of the bottom edge and along the top edge in the nose area. There should also be a 1/8" gap along the rear edge of the rear window where the cabin rear will be installed later.



Fuselage Sides with Doublers shown here.

Spot glue F-2 and F-3 onto one of the fuselage doublers. Use a square to make sure both bulkheads are 90° to the fuselage side. Then spot glue the other fuselage side to the bulkheads. When you are sure the sides are aligned with each other, firmly glue the bulkheads to the sides with medium CA.

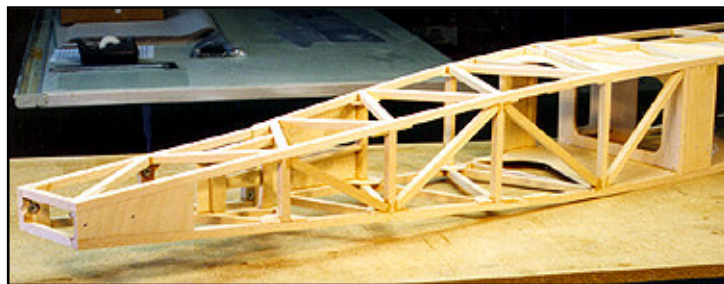
Add four 1/2" sq. balsa crossbraces in the cabin area between F-2 and F-3 (two near windows, two on bottom).

Pin the fuselage over the top view on the plans. Only pin the area between F-2 and F-3, leaving the aft portions of the sides free to move.

Pull the sides together at the rear and glue them to the 1/4" plywood tailwheel mount. CAUTION: There will be quite a bit of pressure trying to spring the sides apart. Add 1/2" sq. balsa crossbraces along the top (7 places) and bottom (4 places) of the framework.

Lift the fuselage from the board and add ten lite-ply gussets to the crossbraces - six places on the bottom, four places on the top.

Unlike the Flyin' King, I decided to add some diagonal sticks (four places) to the bottom of the fuselage to give it some extra torsional stiffness. No diagonal sticks are needed on the top because the sheeting to be installed later will serve the same purpose.



Fuselage, Bottom View - In this picture you can see all of the crossbraces, the lite-ply gussets, the tailwheel mount, and the diagonal sticks on the bottom of the fuselage. This picture is a little out of order because some upcoming steps are already done here. The plywood plate in front of F-3 is one I added to serve as a rear mount for floats sometime in the future.

Trial fit F-1 in place. Use a couple of hardwood sticks and a bunch of rubber bands to pull the front end of the fuselage together, as shown in the photo on the next page. The bottom edge of F-1 will need to be trimmed to match the angle of the fuselage bottom. If you are building in right thrust, you may find that one side of F-1 needs more trimming than the other. When you are satisfied with the fit, epoxy F-1 in place.

FUSELAGE - Basic Frame-Up, Continued...

❑ The fuselage doublers end about 1-1/2" forward of F-1. Add the lite-ply internal cheeks that butt up against the forward edge of the doublers. When dry, add the external cheeks. The external cheeks not only finish off the inside surface of the engine area, they serve to reinforce the joint where F-1 meets the fuselage sides.

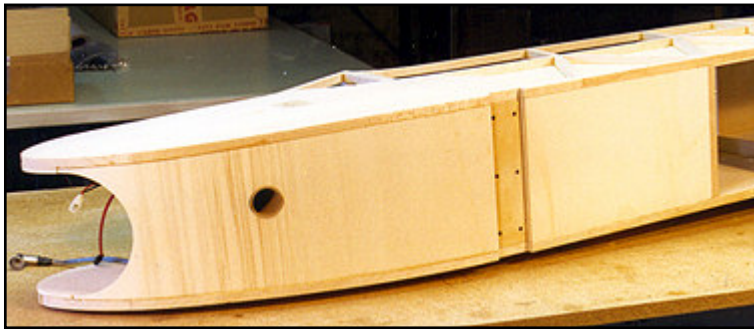
❑ Use two of the 1/4" x 3/8" x 12" basswood sticks that are included in the kit to reinforce the backside of the F-1/fuselage joint on each side. Trim the sticks to fit and glue them in place.

❑ Epoxy the landing gear mount in place. Two large 1/2" plywood triangles are included to brace the landing gear mount to F-2. You may have to notch the bottom edges of the braces to clear the blind nuts for the landing gear.

❑ Now glue the lite-ply bottom pieces in place. **-SFK**



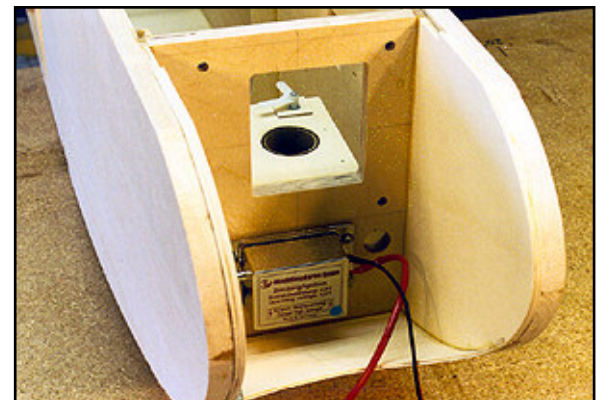
Fuselage Front End shows the stick and rubber band squeezing tool. I used a straight channel of aluminum taped to each side in the cabin area to help visualize and measure that the front end of each side was pulled in equally.



Fuselage Bottom - The front piece may need slight trimming to fit your model perfectly. The rear piece of bottom sheeting is provided extra long to overlap the landing gear mount if you choose to recess it into the fuselage as shown here. If not, the length of the rear mount will have to be trimmed.

The half-moon cut at the front of the bottom sheet is optional - it's purely for looks.

The big hole is the air intake for the rear-mounted carb of the 3W. I've installed a cardboard tube that goes from the bottom sheet up to the bottom of the carb box.



F-1 with Ignition Module temporarily installed. The internal and external cheeks help lock F-1 in place. The bass sticks are barely visible behind F-1 at the fuselage joints. You can clearly see the bottom of the carburetor box with the air intake tube and bellcrank for the choke.