

## 8 STABILIZER, ELEVATOR, FIN, AND RUDDER

*Decide early if you want the tail unit to be removable from the fuselage for easy transportation. I made mine removable, but it took extra time and added some weight. It doesn't really change the construction of the tail, except for adding some hard points in the stabilizer.*

❑ Start with the stabilizer. Notice that the outer framework is laminated 1/2" square sticks. I chose to laminate rather than use 1/2" x 1" balsa for several reasons. The main reason is that two sticks, even if they are slightly warped, will stay straight when glued together and the glue joint adds to the overall strength of the structure. Take your time and strive for tight joints with lots of wood-to-wood contact. I started out trying to use a miter saw, but ended up marking the sticks as accurately as possible then cutting them on the bandsaw. Use thin or medium CA for initial gluing, then lift the structure from the table and build up a small fillet of medium CA at every joint.



*Complete Stabilizer ready for final sanding. The thin vertical sticks are 1/4" x 1/2" balsa added to help during the covering - that's where the green stripes overlap the other colors*

❑ Drill 3/8" holes for the tail brace hard points as shown on the plans. Add the dowels and the lite-ply reinforcements. When dry, use your big sanding block to sand both sides of the stabilizer flat.

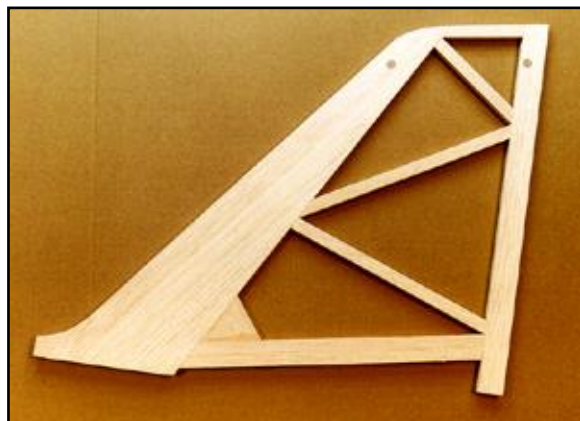
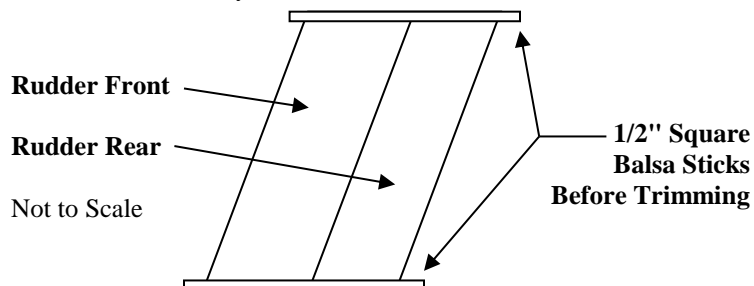
❑ The elevator is supplied in two pieces. You can splice those together if you plan to use a single servo and pushrod, or you can go with a split elevator with a servo on each half.

❑ Now you can build the fin over the plan. Laminate 1/2" square sticks for the fin bottom and TE, just like the stab. Add the two hard points and sand the sides smooth.



*This Stabilizer Close-up shows the hard point and lite-ply reinforcement. Also notice the staggered joint at the corner of the stab*

❑ Glue the front and rear rudder pieces together. To make the rudder stiffer and more warp resistant, add a 1/2" square stick to the top and bottom edges as shown in the diagram. You might want to do this to the tips of the elevator as well. I cut three lightening holes in my rudder only because the balsa was extra hard and heavy.



*Fin ready for final sanding. Note the hard points. Tail bracing is required on the Super Flyin' King.*

❑ Add hard points to the elevator and rudder in accordance with the type of control horn you plan to install. I glued in short lengths of 1/2" dowel for my Sullivan Super Horns. **-SFK**