

BUILDING THE “ORIGINAL” GOLLYWOCK

by George White

A few years ago Paul Grabski gave me an ancient set of Gollywock plans and advised me to have them checked out by our resident Gollywock guru Jerry Klingaman and gather some smarts before starting to build. Jerry has built and lost so many of them that he is now flying #8 and building #9. Jerry was also an acquaintance of the late Wally Simmers, designer of the original Gollywock. Under Jerry's tutelage, I built one and it promptly flew away even after DTing, making me downright "cross."

Recently after the club decided to hold an "any version" Gollywock one-design contests, it forced me to violate my determination never to build another. As the gruppenfuehrer of this club it would be unseemly of me not to build one, so I'll do the "original" version again.

I again went back to the local authorities for sage advice. Grabski again gave me a set of ancient plans he obtained from Oldtimer Model Supply, together with an article by Wally Simmers from the 1944 Air Trails Annual. I referred both of these documents to Klingaman for "original authenticity" holy water. He pronounced the Oldtimer fuselage plan to be accurate but recommended the nose have a 1-1/8" inside dimension, both vertically and horizontally for motor access. The wing plan isn't original, and although the stab plan is accurate, the rib profile for both the wing and the stab are not. Also, the rudder is different from the original. When he looked at the Air Trails article, he stated he considered it to be most likely the original design, although he noted that the distance shown at former #11 from center line to the inside of the bottom longeron is a misprint and should be 13/16" instead of 15/16". Interim upright and cross piece dimensions not shown can easily be interpolated on that plan.

Not drawn in the original Air Trails article are the chords of the wing and stab, although if you measure the length of the rib pattern shown, you can figure that out. The rib patterns are true to the original design, contrary to some of the fatter ribs shown on several of the later "redraws" which are available today.

A couple of tips from Klingaman on building a Gollywock:

1. When building the wing, pin a thick straight edge to the building board/plan to hold the leading edge in place, glue the ribs to the spar and press the assembly against the leading edge and glue it.

2. Don't forget to place a 1/32" shim under the front of the trailing edge while you are building the wing. That makes a major difference in the undercambered airfoil.

3. The wing and stab has bamboo tips, not carved sheet balsa tips used on some later models.

4. Later, non-original versions of the plan show the wing mounted on a low platform. This is not necessary. Simply add a 1/8" square rail atop the fuselage between the 5th (counting the nose piece) and 8th uprights. Then add a 1/8" square piece 1 3/4" long on each side under the spar of

the finished wing. That will give you the correct incidence.

5. There is no DT on the plan, but the space in front of the horizontal stab is left uncovered, and will allow for a pop-up stab DT.

6. The vertical stab should be assembled between two ribs. You'll need to make an extra rib for that.

7. The vertical stab may be made from 1/16" soft C grain balsa and if you are careful and cover it with tissue, it won't warp. Otherwise, use very light 3/32" and outline it with a very thin strip of basswood. Using 1/16" wood should be OK for the subrudder. Just remember, lightness is next to Godliness back there.

8. For a surface to anchor the bottom vertical stab, fill in the bottom of the far aft bay with very soft/light 1/8" balsa, oriented cross grain. It will need to be curved, so soak it in water and glue it in.

9. The nose bay and rubber anchor bays must be sheeted top, bottom and sides with 1/16". The rubber anchor bay should be 6-1/4" from the tail where the dual uprights are shown, and reinforced with 1/32" plywood inside to prevent the hole from wallowing. For strength, it would be wise to make the sheeting extend further forward than indicated on the plan and move the forward dual upright further forward to accommodate this.

10. The CG will be about at the 70% point aft the leading edge. Simply slide the wing fore or aft to get the correct climb and glide.

11. Although the original had long rubber bands wrapped around the fuselage to hold the wing, the use of gussets and dowels at bays #5 and #8 makes more sense.

12. The down thrust should be in the neighborhood of 4.5° and there should be right thrust of about 4.5°. Further trimming can be obtained by cutting a 1" high X 1/2" wide movable trim tab out of the base of the upper vertical stab to get the right/left pattern.

13. Twelve strands of 3/16" rubber should make the thing climb like crazy. A motor weighing about 35 grams should be about right.

14. When you've got that gnarly motor wound and ready to launch, you are going to have a pretty good grip on the fuselage, so you might be smart to add a 1-1/16" sheet on the bottom where you would be gripping at launch. An imploded fuselage caused by a crunched longeron is a sign of very bad luck!

15. Remember, build it light. The model should not exceed 60 grams, empty.