

Merlyn Lock Tutorial

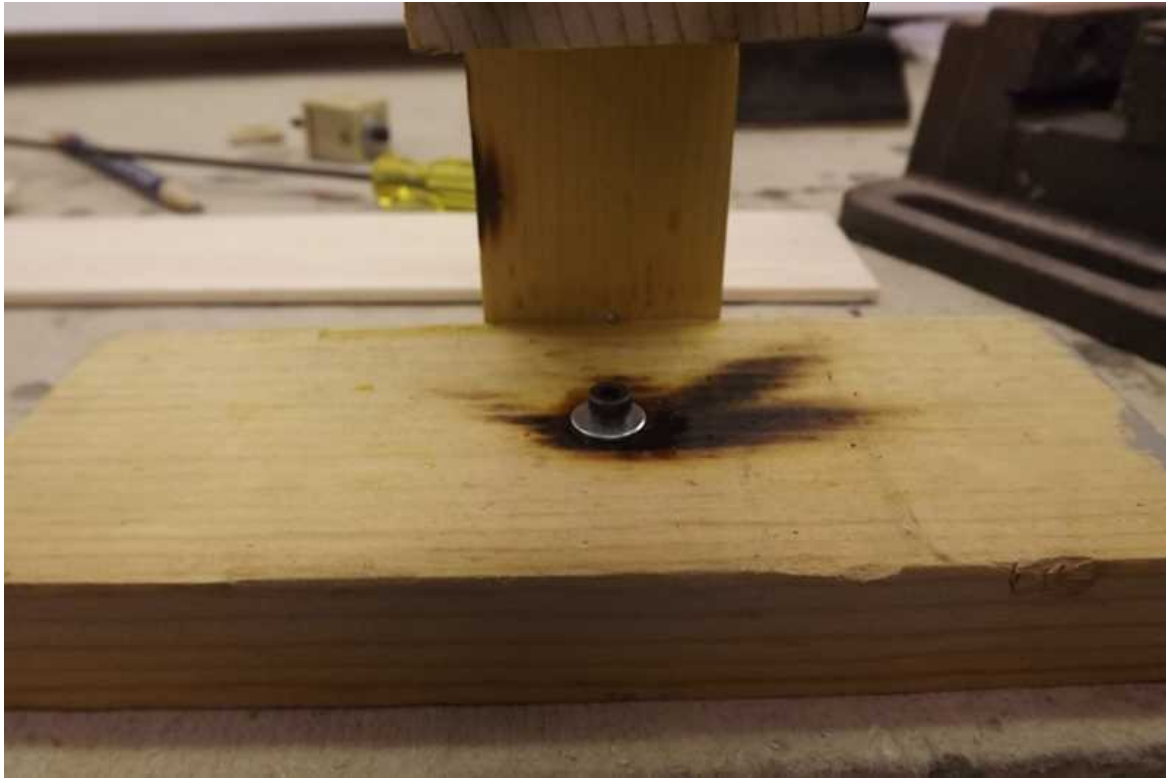
By
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This is what you will need for each lock:

1. 12" length of 9/32" brass tubing.
2. An extended 6-32 ball driver.
3. Two 3/4" cubes from poplar or your favorite hardwood with a 3/16" hole drilled cross grained. Do not drill into the end grain.
4. Two 3/4" squares from 1/8" AC ply.
5. Two 6-32 blind nuts.
6. Three 6-32 flat washers.
7. One larger washer.
8. One short 6-32 bolt.
9. Two 1-1/4 6-62 bolts.
10. One 6-32 nut.



Make a jig to hold the brass tubing perpendicular to the washer. Use the short 6-32 bolt to center the washer over the hole drilled in the base of the jig.



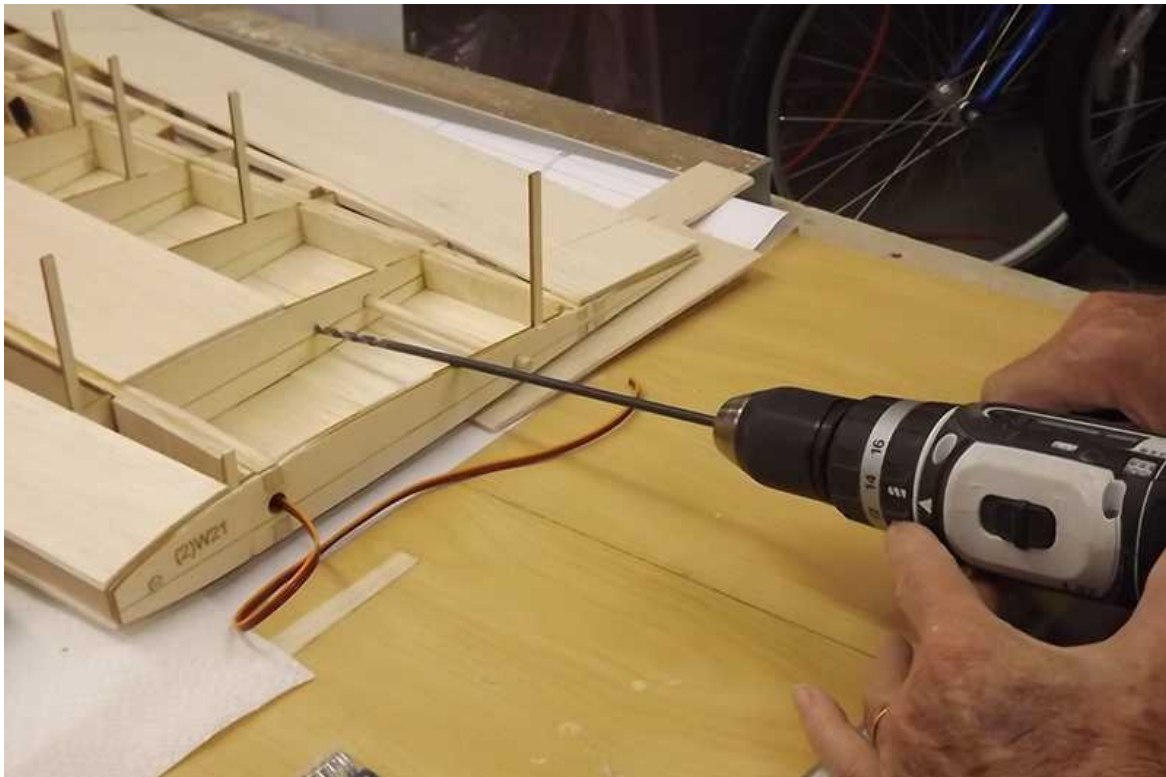
Solder the brass tubing to the 6-32 flat washer.



Finished tube and washer.

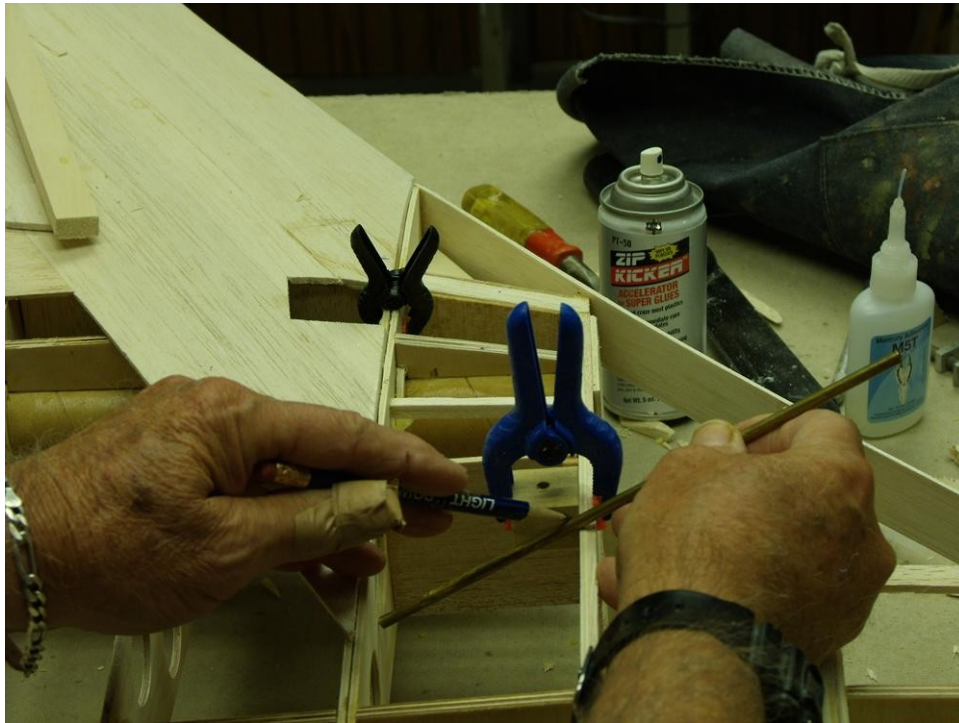


Use a long 3/16" drill bit to drill a hole through the two separation ribs. Align the bit by placing it on the top of the next rib and drill the hole slightly above the center of the ribs and perpendicular to the ribs.



Next you need to determine the correct angle for the blocks. Here are two methods.

1. Clamp the block to the rib, insert the drill into the hole laying on the outer rib, and draw a line on the block.



2. Insert the drill in the hole and use an angle cube to determine the angle.



Mark the center line of the block, Shim the angle cube to the correct angle and draw a line on the block equal distance from the top and bottom center lines.



Saw the block into two pieces.

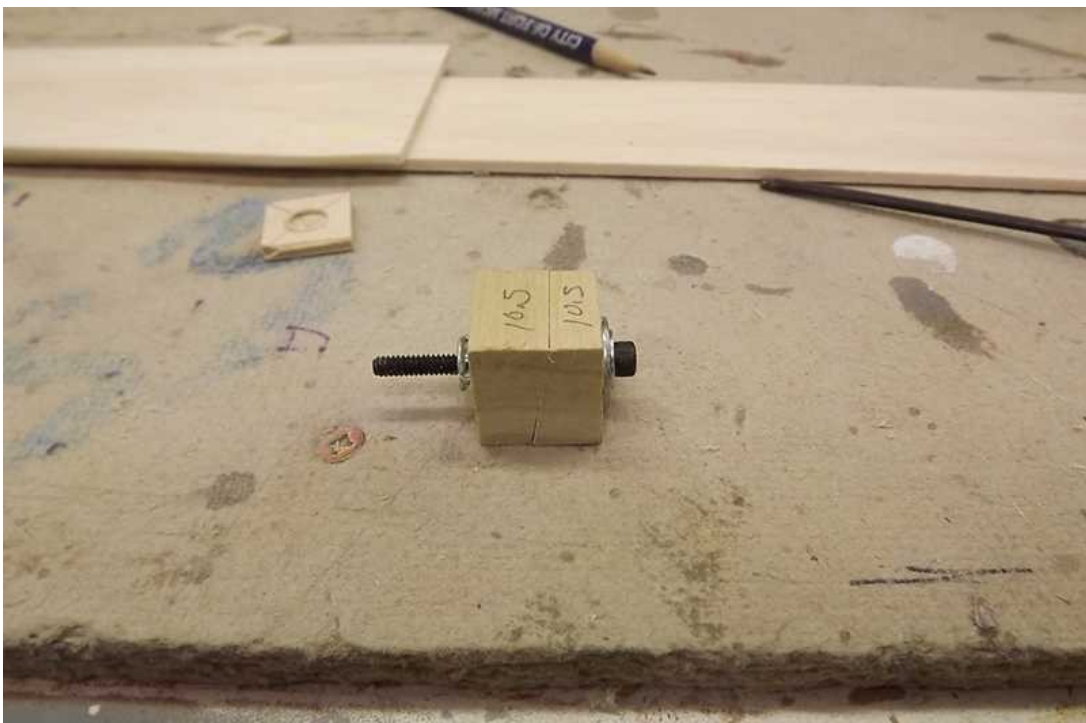


Route out the 1/8" ply to use as a capture plate over the blind nut.

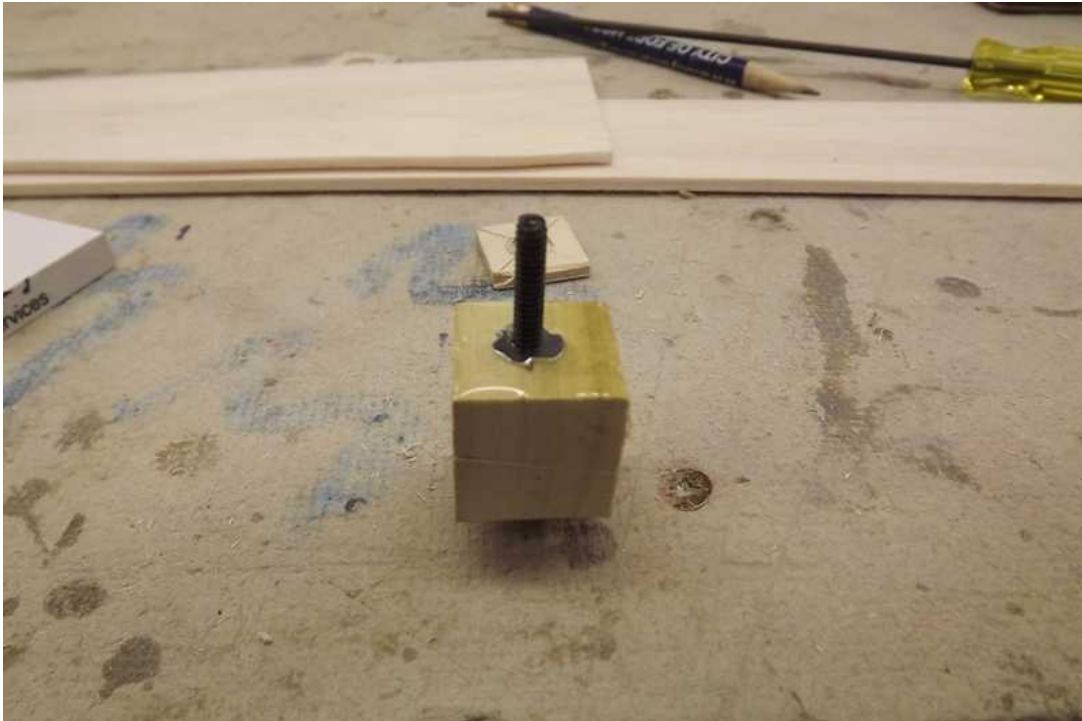




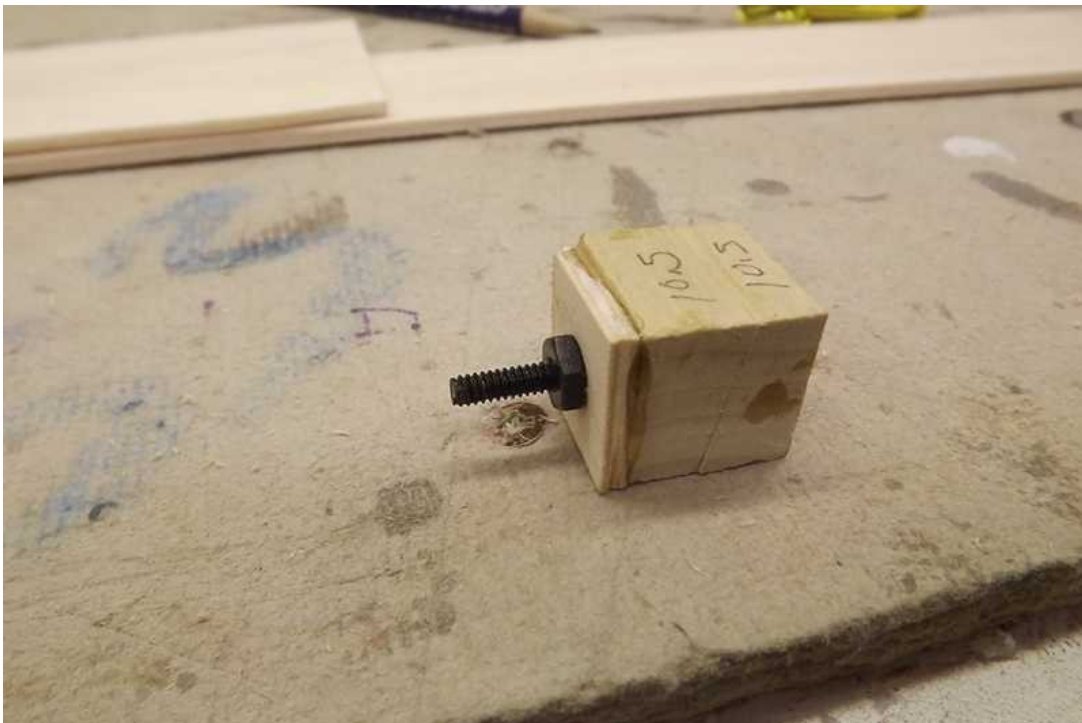
Use the 1-1/4" bolt, large washer, and a 6-32 washer to secure the blocks and blind nut together.



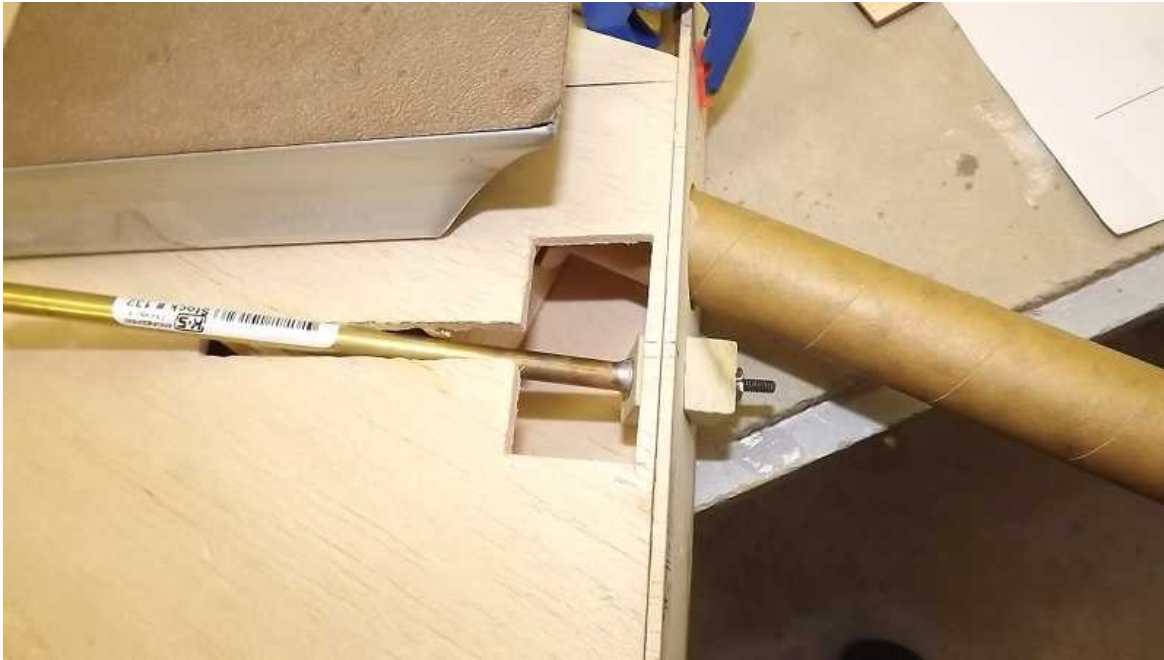
Put 5 min epoxy under the blind nut and around the block surface. Tighten the bolt to secure the blind nut.



Place the capture plate over the blind nut and secure with the 6-32 nut.



After the glue has set, drop the 1-1/4" bolt through the brass tubing and out of the washer on the end. Insert the bolt through one half of the block, the two ribs, and into the block with the blind nut. Snug it up to the ribs and apply liberal thin CA to the two blocks. Apply non-sag 5-minute Hysol to the brass tubing and washer to bind them to the rib.



Add 1/4" square balsa sticks to the sides of the brass tubing for support. Keep them flush to the top of the ribs.



After sheeting around the tubes, cut them off flush with the surface using a Dremel cutting wheel. Fill around the tube with wood putty.



Lastly, Use 5 min Hysol to glue a 1/8" magnet to the end of a piece of 1/8" dowel. This is used to extract the bolt from the brass tubing after you have loosened it. Make sure the magnet is securely glued to the dowel. If it happens to come off when you insert the dowel and the bolt is still slightly threaded into the nut, you will be unable to remove the bolt and that, my friend, makes for a messy repair.



TADA! You are done.