

Maxwell Animatronic Head Kit - Shoulder Sub Assembly

The shoulder sub assembly is six pieces of 1/4' thick plywood, as well as a metal plate and four wood screws.

Shoulder Sub Assembly Parts:

- 2 x front plate (bottom of photo)
- 2 x side plate (left middle)
- 1 top plate (right in photo)
- 1 bottom plate (left side of bag)
- 1 metal thrust plate
- 4 #6 wood screws



Step One - Drill pilot holes for servo

These are left to the kit builder since there is such a variety of servos on the market.

Use your servo to mark the holes, or you can measure your servo and then mark the wood with a ruler. I like the Inca rulers for this, shown in the picture.

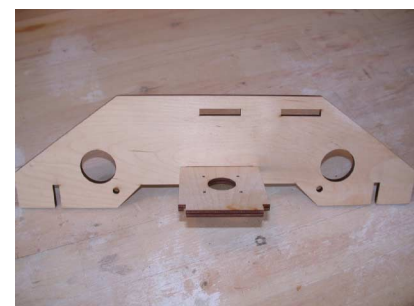
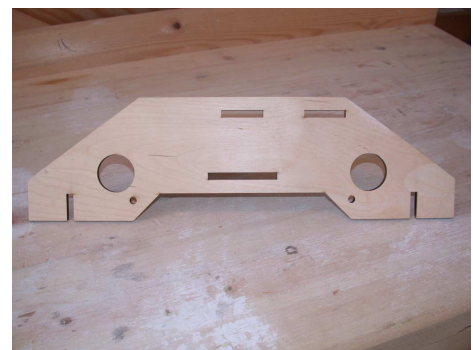
Use a 1/16" diameter drill if using the screws included with your servo.



Step Two - Assembling the pieces

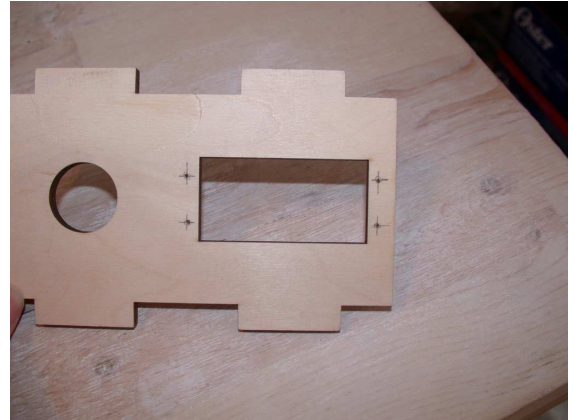
The parts have slots and tabs to make assembly easier. Note that the top and bottom plates are inserted so the neck pivot post hole lines up.

The parts are laser cut for accuracy, however you will want to sand the parts a bit to fit together without forcing. Use a small square of 100 grit paper on the inside of the slots and the matching tabs.



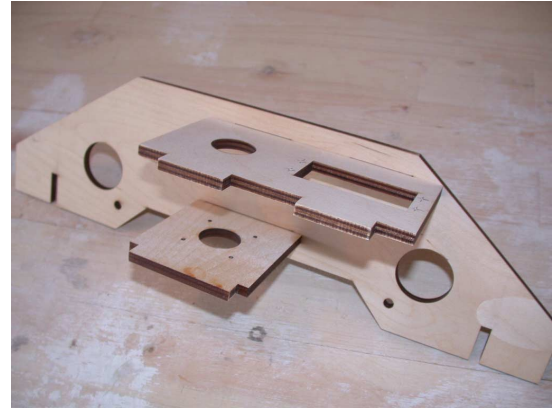
Maxwell Kit - Shoulder Sub Assembly cont.

Top plate with servo mounting holes drilled and ready to go.

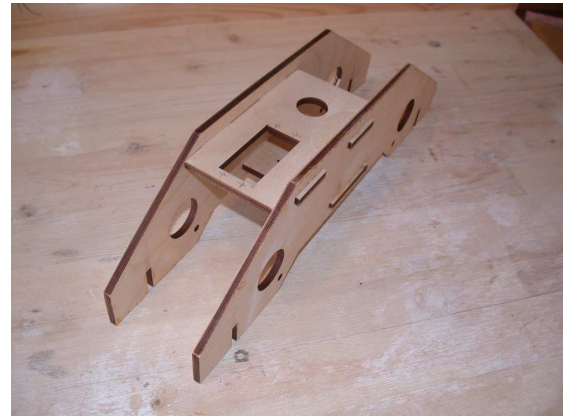


The top and bottom plate slide into the matching slots in the front/back plates. The front and back plates are identical.

The servo opening of the top plate is on Maxwell's right, so that is now the front plate in the photo.



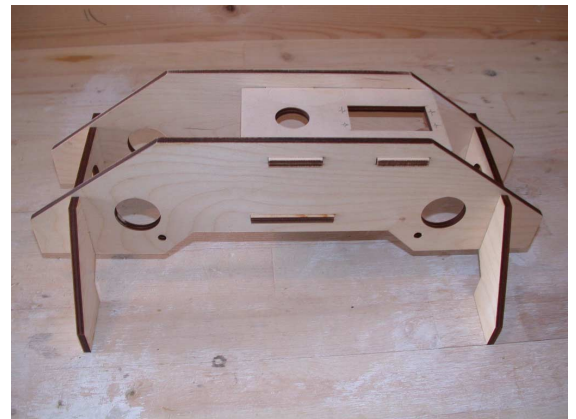
The back plate is then added. Don't glue anything yet!



Finally, all the wood pieces are together.

Now, use some epoxy on the wood pieces to hold them in place. The tabs/slots provide the strength, I prefer epoxy for speed. However, wood glue can be used although you will need to take everything apart to put wood glue on both joining surfaces.

That is not necessary with epoxy - it will find its way into the gaps on its own.



Maxwell Kit - Shoulder Sub Assembly cont.

Final step is to flip the shoulders over and screw the metal thrust plate onto the small square bottom wood plate.

The metal plate provides a smooth surface for the neck pivot post to turn against, acting as a thrust bearing.

