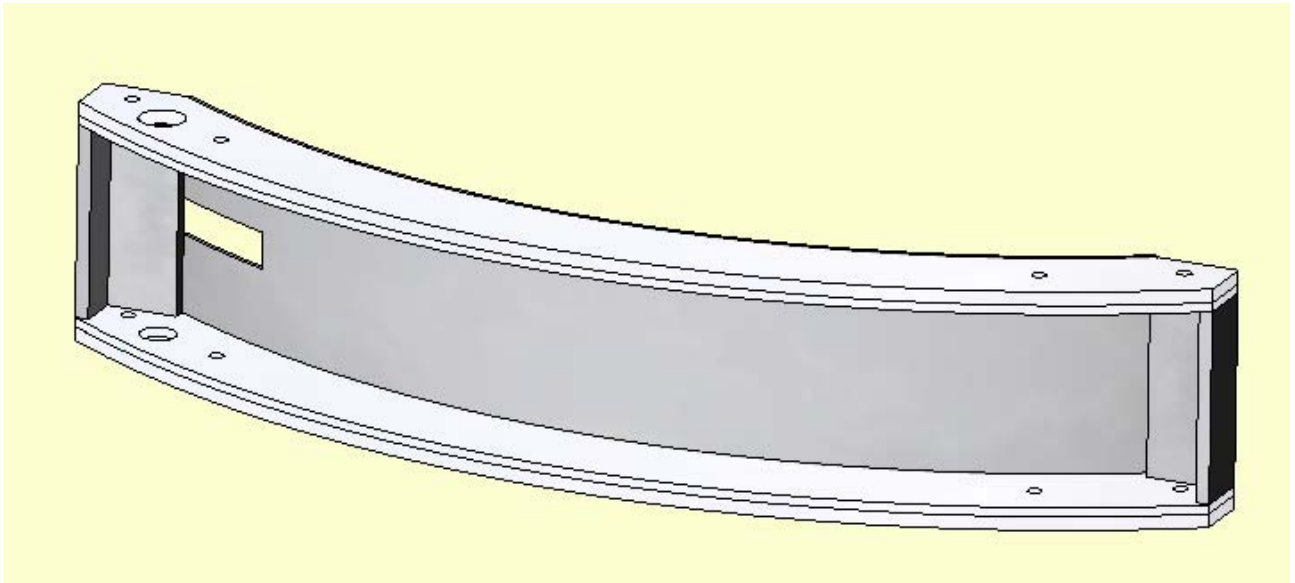
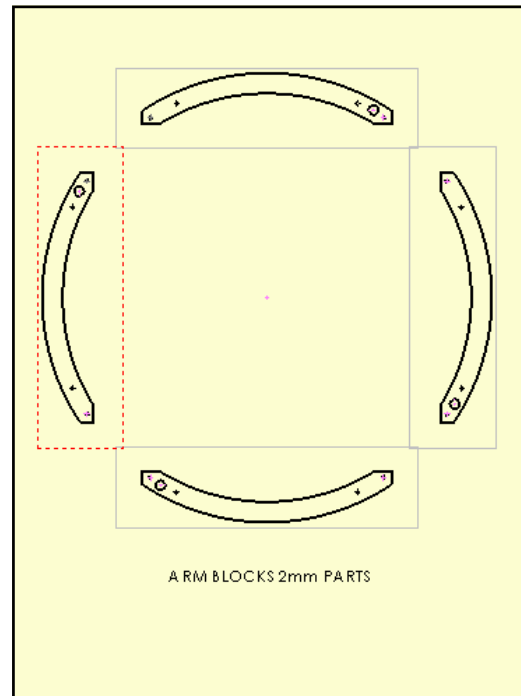
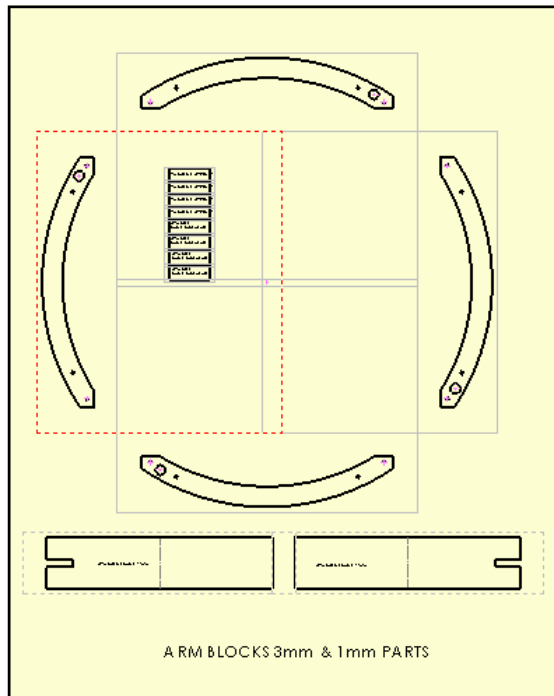


Constructing the Utility Arm Boxes



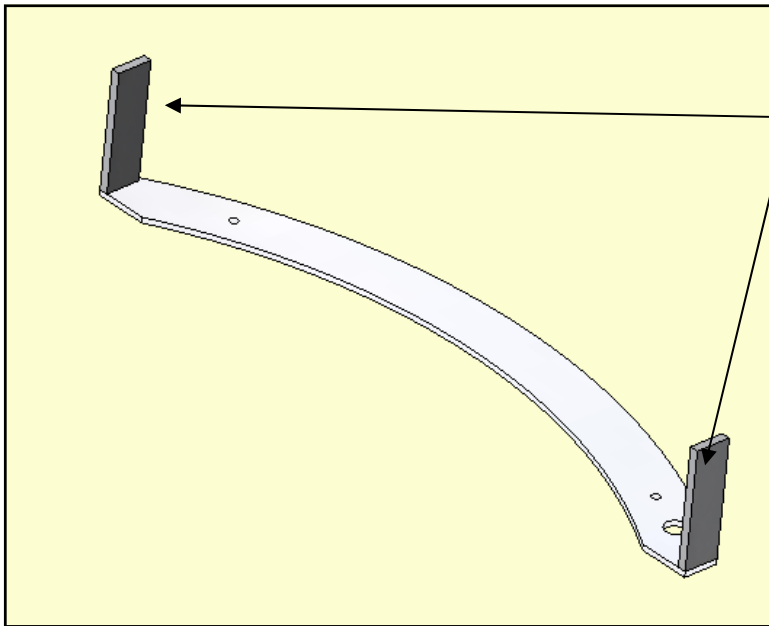
Each box is designed to slip into a carrier that will be glued in to the skins. The reason these parts are not installed during frame construction is because getting the arms to line up perfectly is not possible at that stage.

This method ensures the arms swing in and out freely. If you don't intend to have moving arms, then they can be glued in to the body frame as you make it.

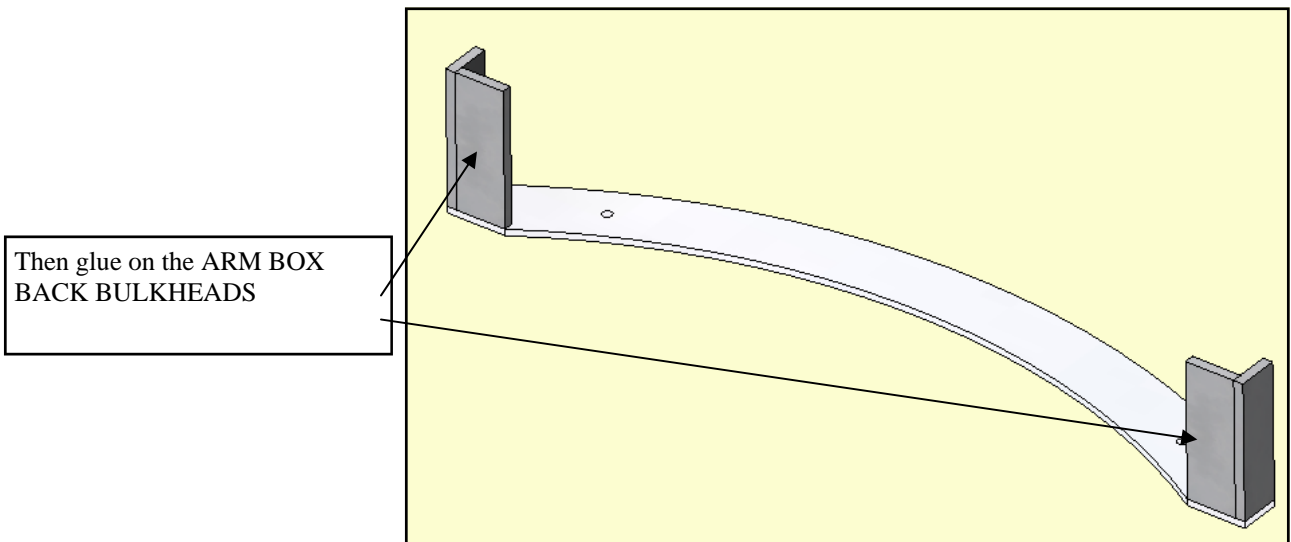
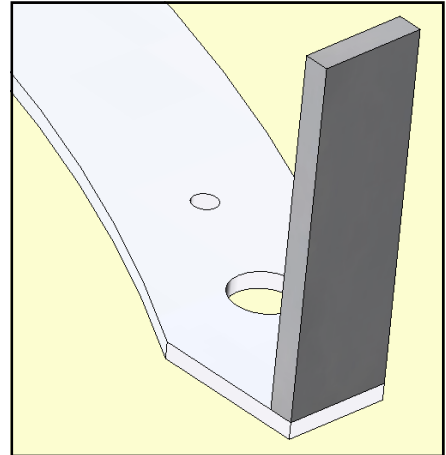


First cut out all the components on the ARM BLOCKS sheets. Note 1mm, 2mm and 3mm material is required.

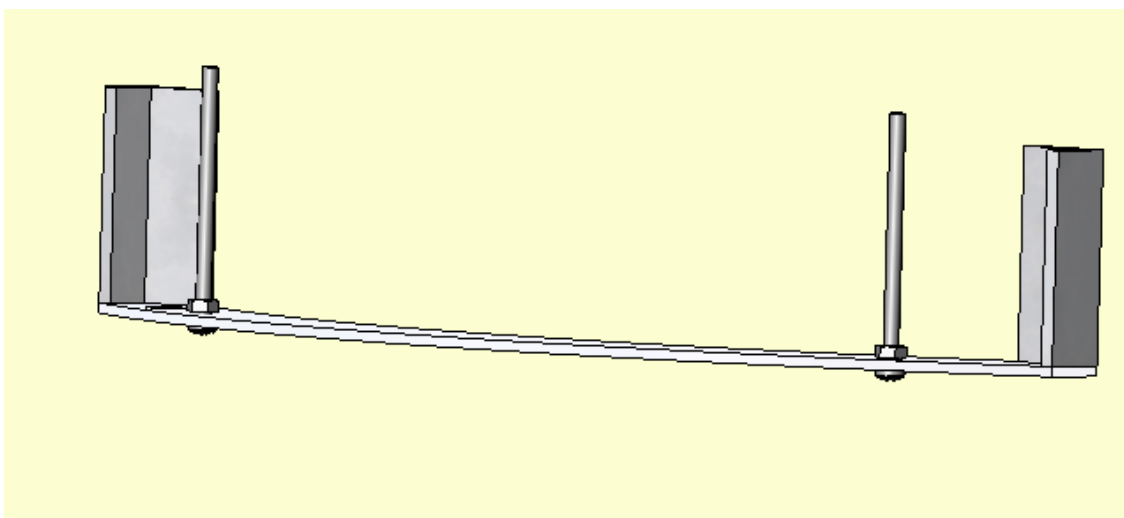
Drill all holes to the specified dimensions. This is necessary for assembly and for the flange bearings the utility arms will ride on.



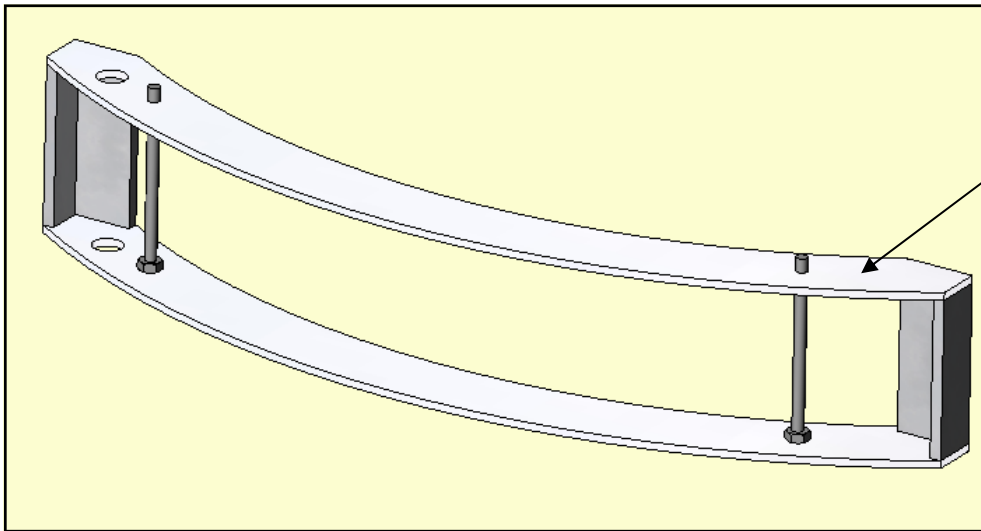
Start with a 2mm curve piece. Glue the Arm Block Uprights flush with the back and side edges.



Then glue on the ARM BOX BACK BULKHEADS



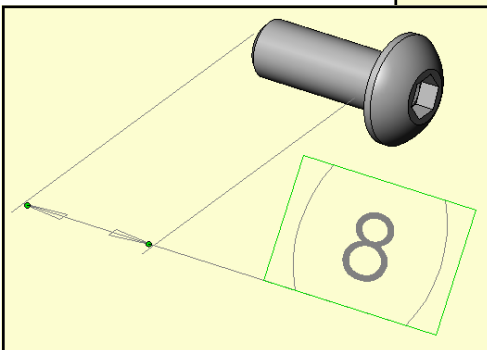
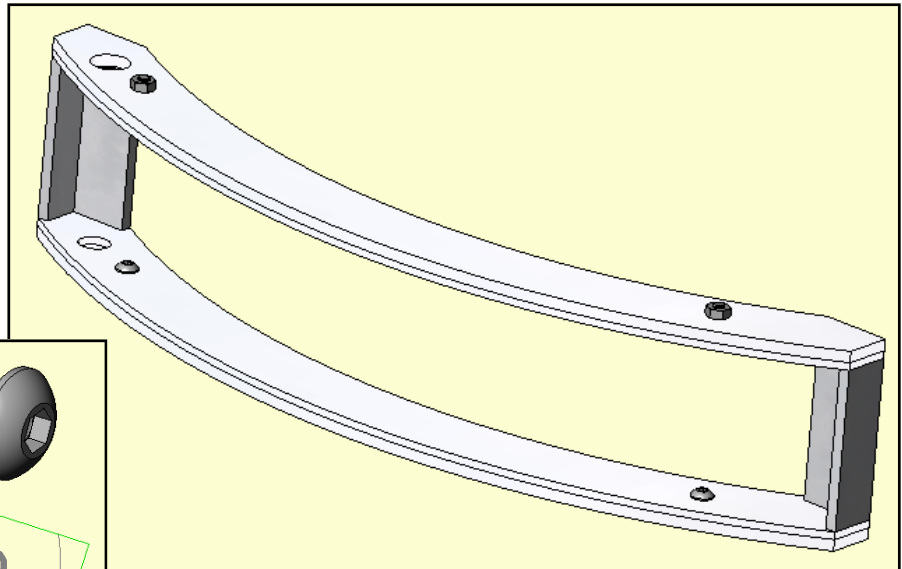
Insert 2 M3 x 50mm screws into the alignment holes. These must be screws, that is, the thread goes all the way to the head. Put nuts on the other side to hold them solid. These screws will help you align the top of the box so everything is square.



Glue another 2mm curve piece on the top using the screws to align it.

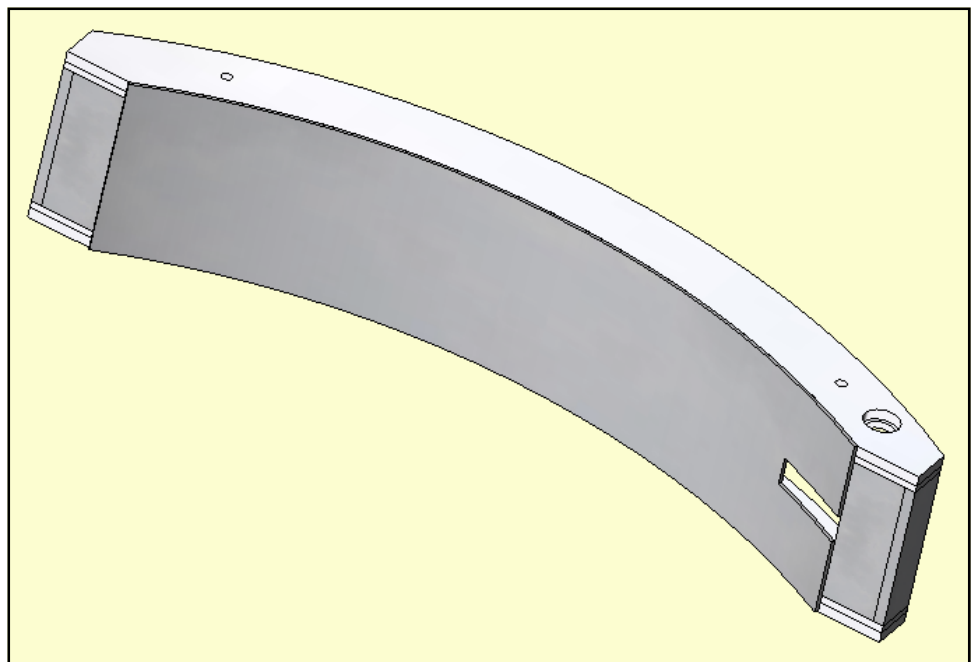
Glue a 3mm curve piece top and bottom. Use 4 M3 button head socket screws of 8mm length to hold them together.

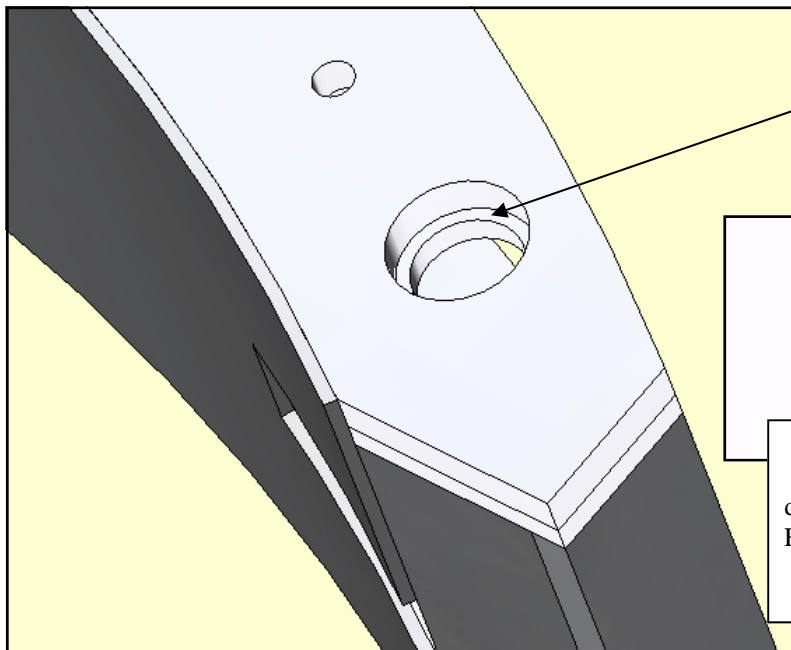
You will use these screws later to secure the arm boxes into the body so they can be removed if some snotty-nosed kid breaks an arm off.



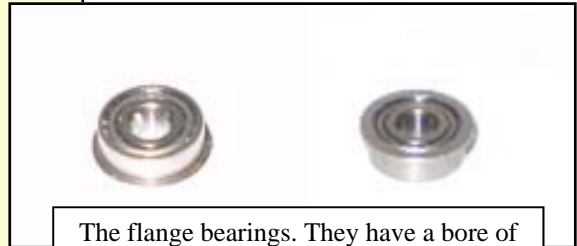
Glue on the back piece. Note the slot goes at the end the large holes are.

This slot is for an lever arm to come through from the Utility Arm so a servo can move it.





Notice how there is now a ledge inside the large hole formed by the 2mm curve piece having a smaller diameter hole. This is what the flange bearing will sit on.



The flange bearings. They have a bore of 3mm, flange diameter of 10mm and body diameter of 8mm. I got mine from Bayside Hobbies who no longer exist, but any store that sells bearings for RC cars should be able to help you out.

Construct 4 spacer pieces by nesting 3 styrene tubes together.

The inner tube is 1/4 inch outer with 1/8 inch inner
The middle tube is 1/4 inch inner and 3/8 outer
The outside piece is 3/8 inner and 1/2 inch outer

Constructed to the specified length they hold the utility arm dead centre.

Use M3 pan Phillips screws of 20mm length to secure the arm through the flange bearing and spacers

