

# Ron Gray, Warbird Replicas

## JU-88 Build, 3

Back to the fuselage and attaching the various veneered foam parts.

*(Note, photos are a bit out of sequence as I forgot to take them during construction!)*



Block balsa for under the nose (note holes drilled for wing mounting dowels).





Rear half of plastic nose fitted to ply former and glued to fuselage.



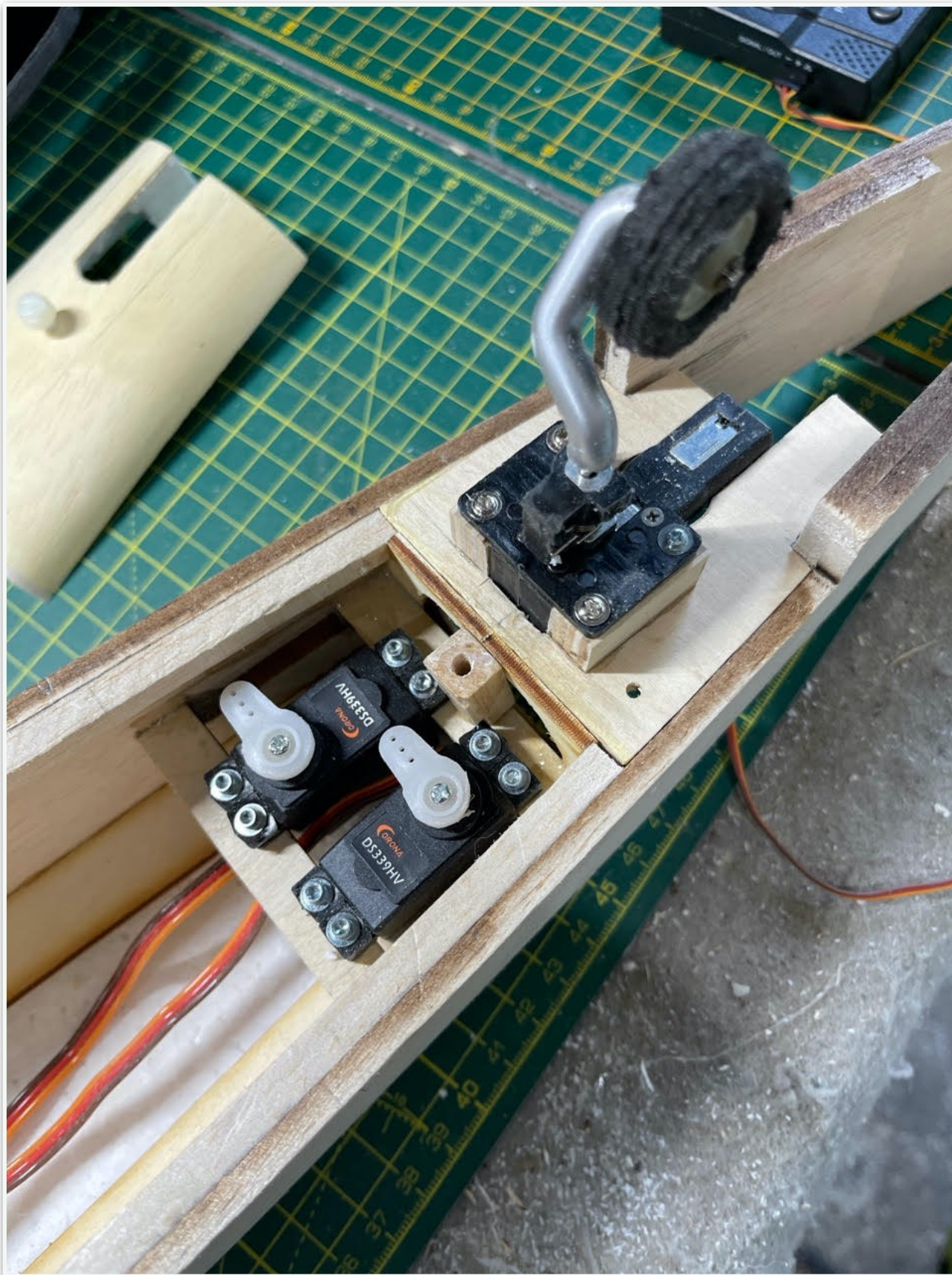
Going back to the tail of the fuselage and in particular the controls for the elevator and rudder. I decided that once I had everything more or less fabricated I would put the frame together to give me some idea about where the C of G was.

As suspected it showed to be nose heavy so that gave me the opportunity to mount the servos for the elevator and rudder at the back.



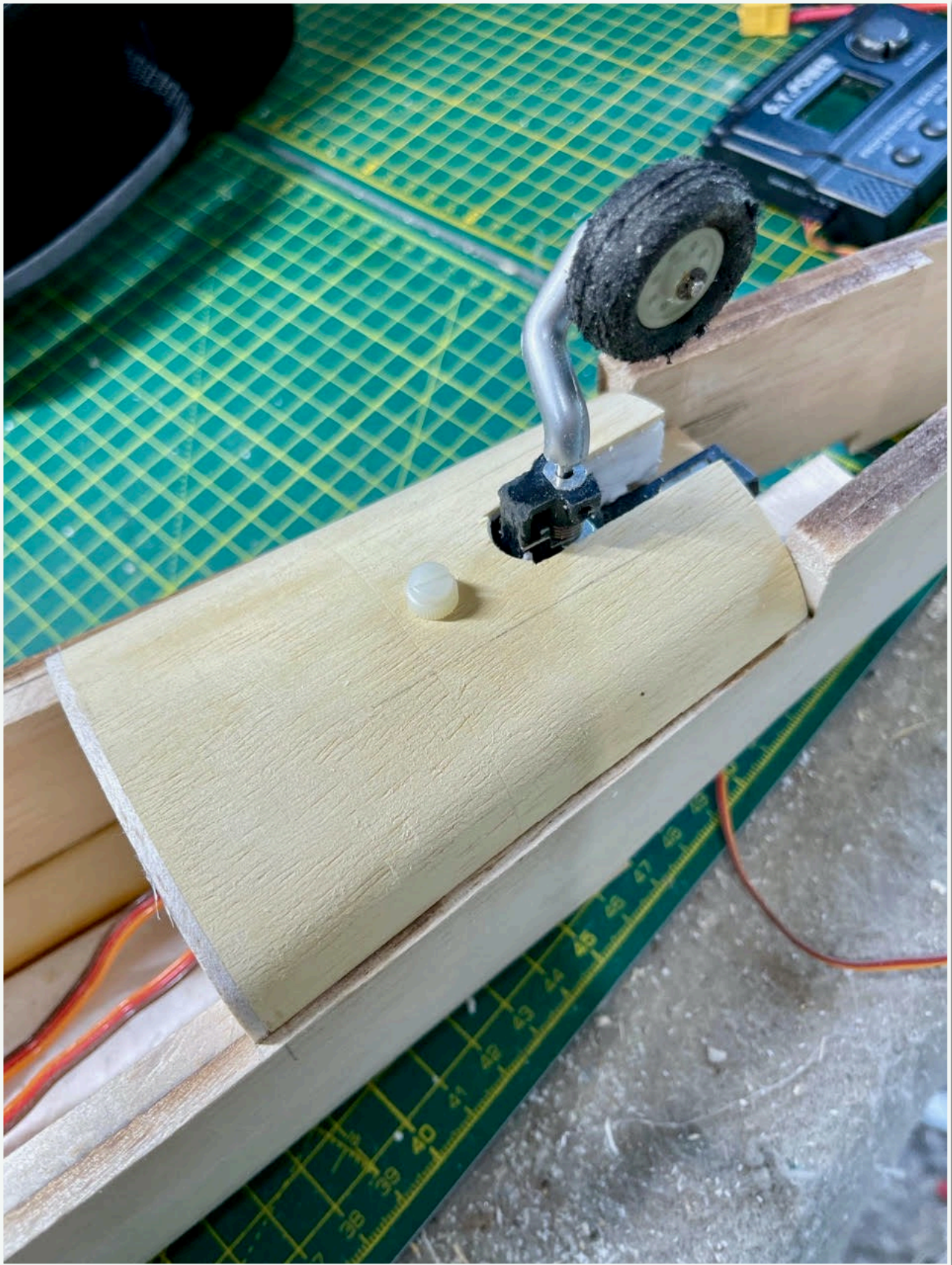


And at this stage I was still going to mount a fixed tailwheel. However, as I had a weight advantage I thought 'what the hell' and went about modifying an older tail retract that I had in my spares drawer and attached a mounting plate for it.





But what with the rear mounted servos and the retract unit I then needed some form of access hatch for them. To achieve this I cut out a section of the veneered foam under fuselage cover and mounted this with a nylon bolt.





I could now glue the front section of the under fuselage covering.



Top section shaped to receive the tailplane.



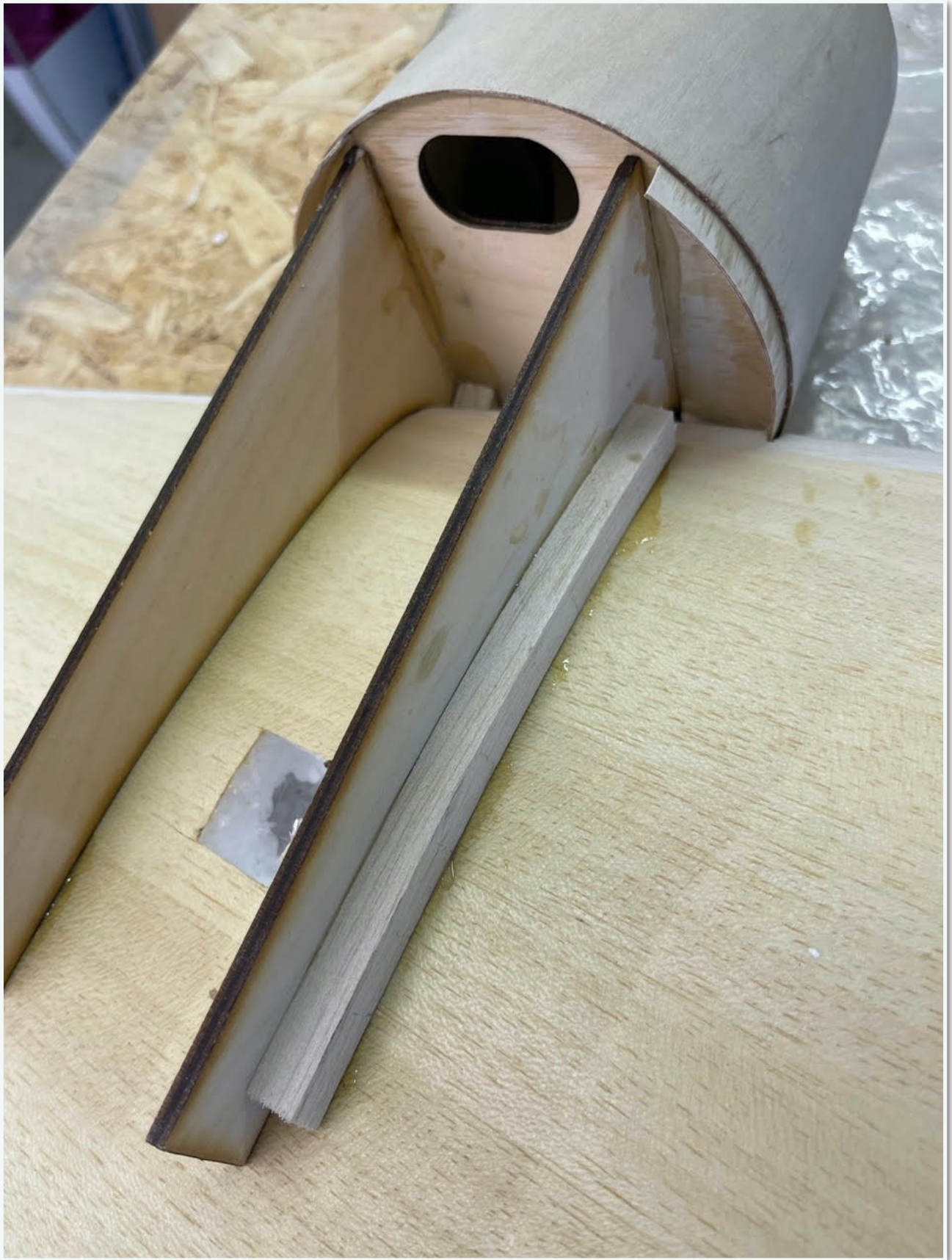
The underside showing the access to the servos and retract.





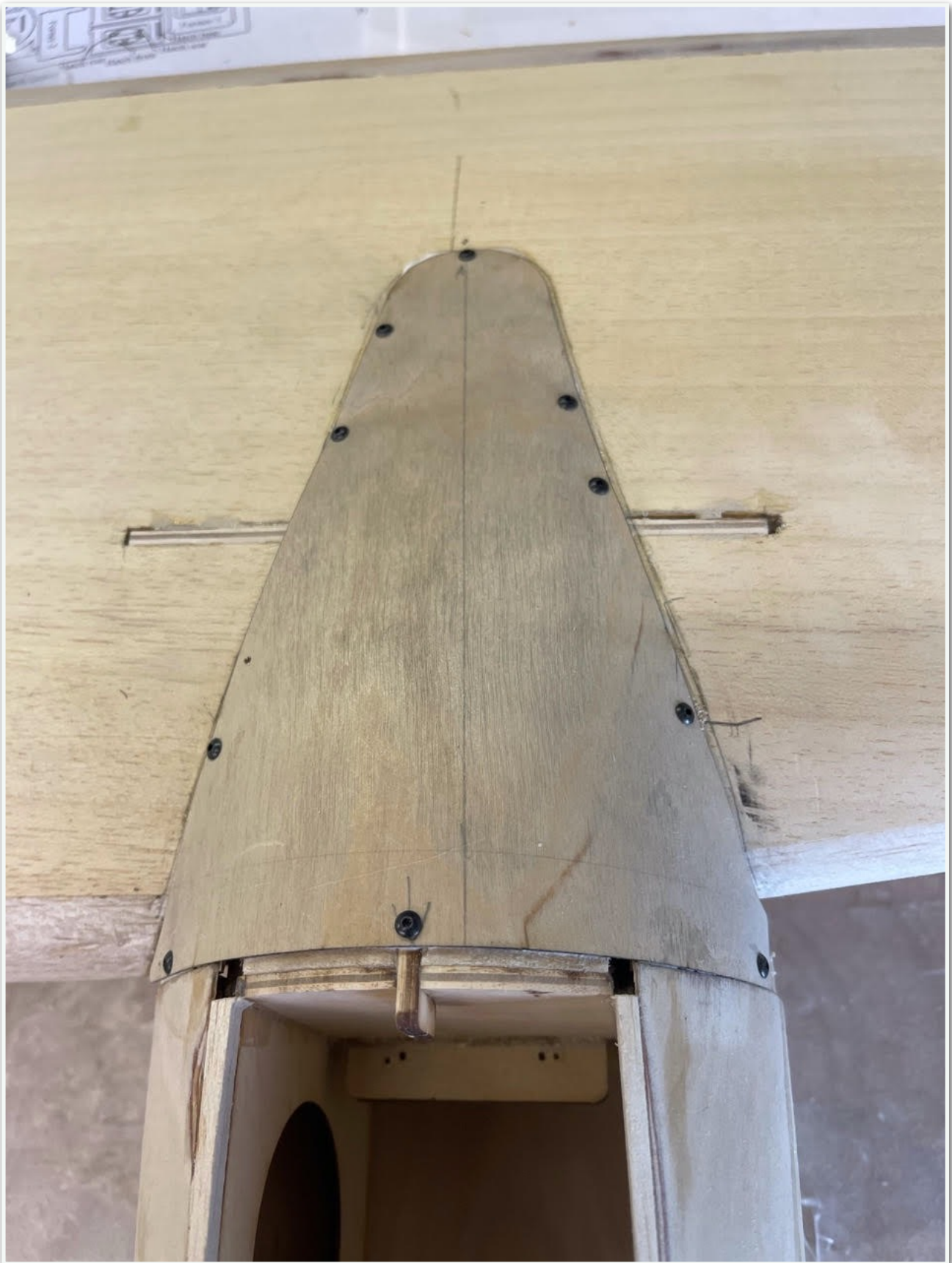
Back to the wings and bearing in mind that this will be fitted with 52 four stroke glow engines I decided to strengthen the nacelle to wing joints with some square section balsa epoxied in place.







After which i was able to attach the thin ply nacelle covering using small screws to hold it in place whilst the glue dried.



Next up the fitting of the retract units which have been specially manufactured by Warbirds Replicas to suit models like this where the U/C folds back into the nacelles. Due to their construction the fixings are through the sides so I fitted some ply strengtheners / load spreaders to the sides of the nacelle frames.



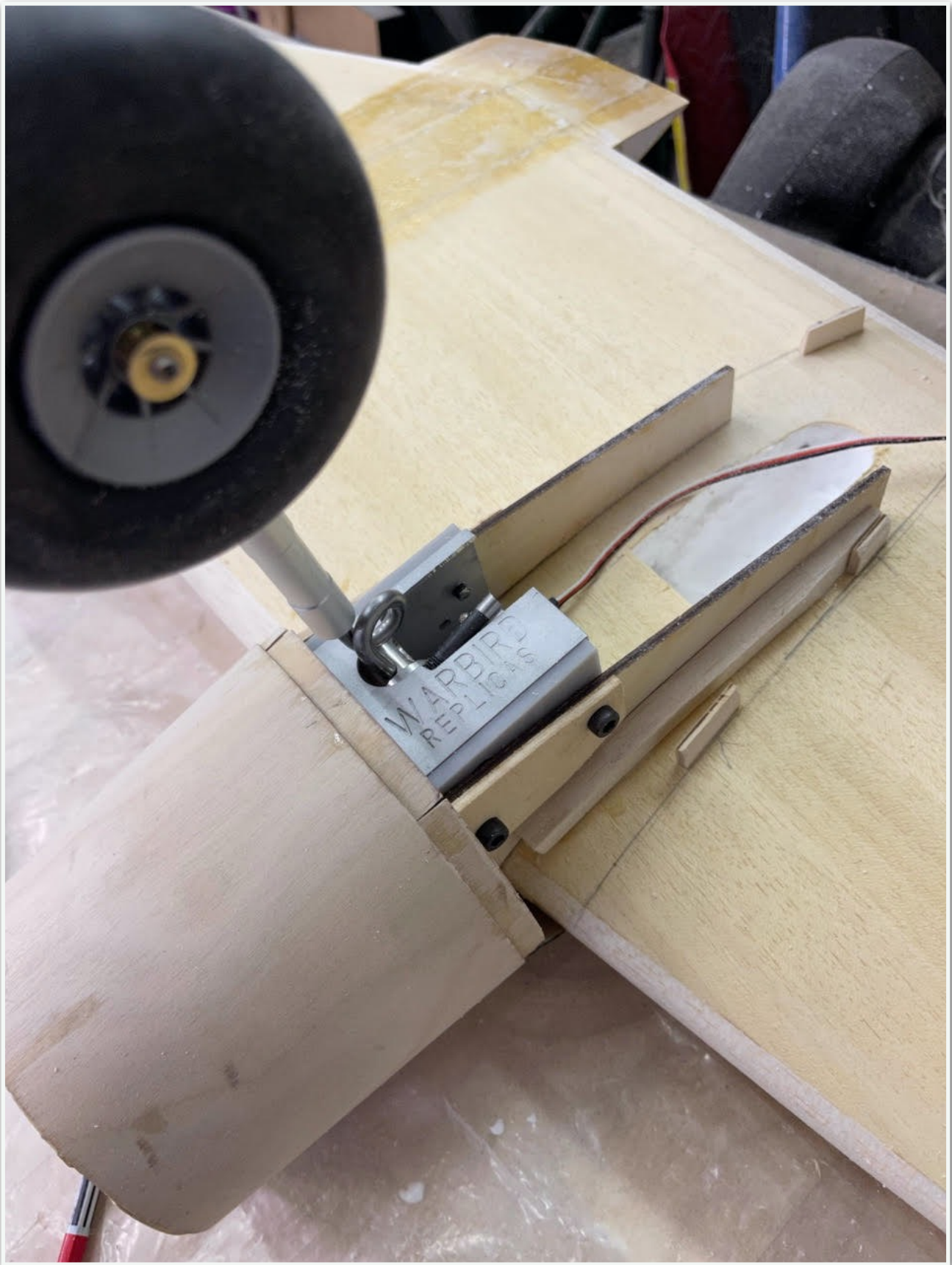


And packing pieces to take up the space between them and the retract units in which I had tapped holes to take the fixing bolts.









Recesses cut into the wing allow the wheels to retract quite deep.

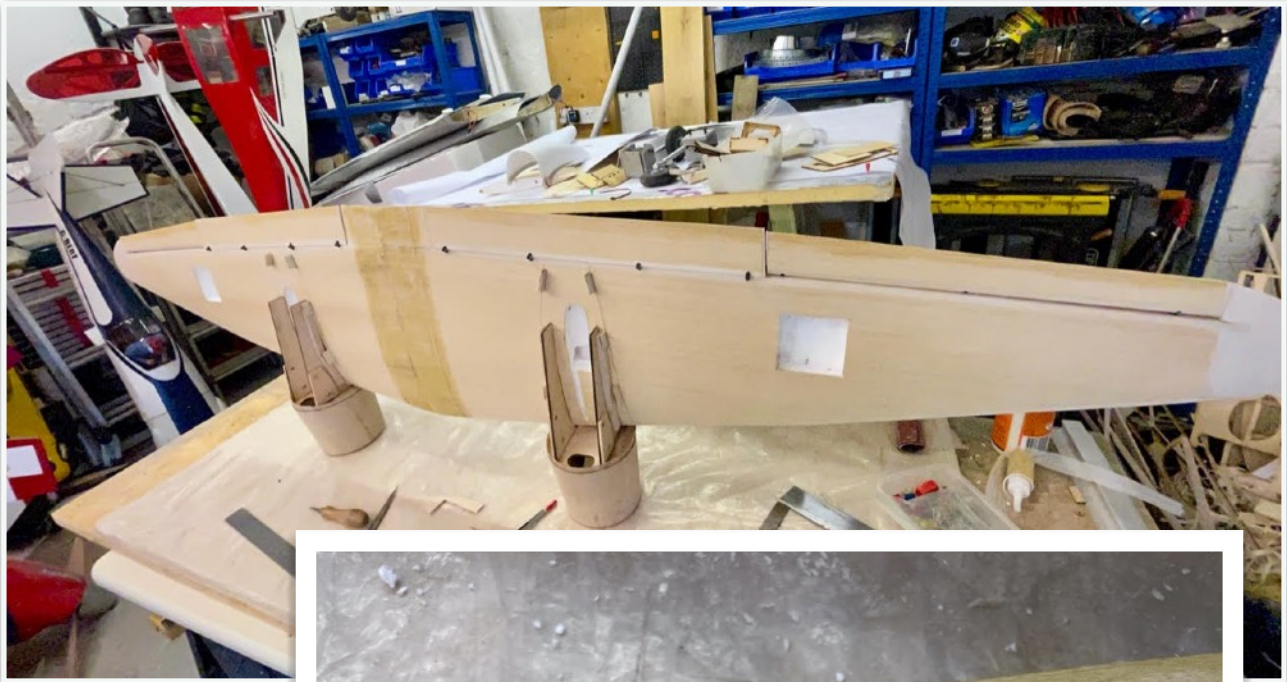




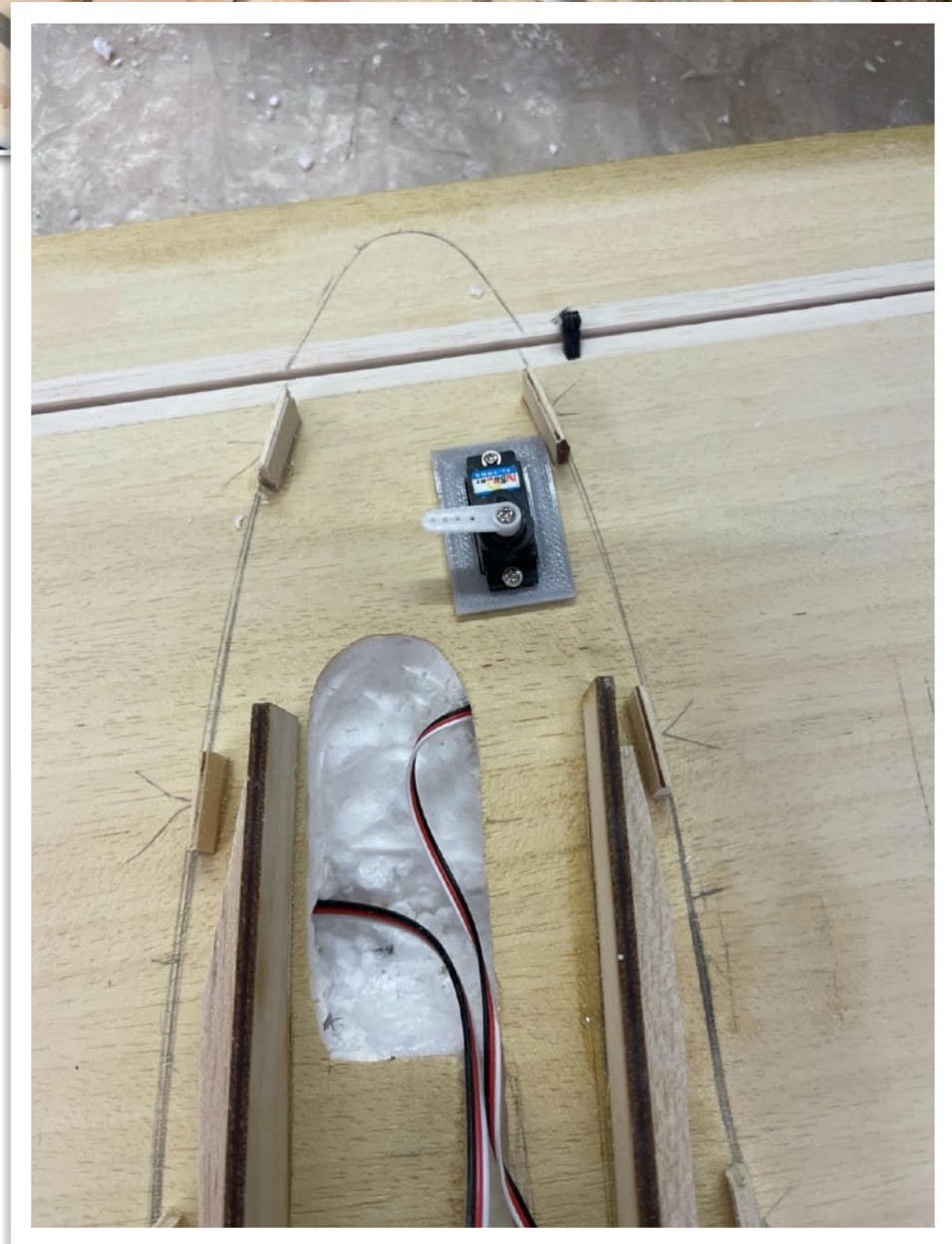
A trial fit of the plastic nacelle underside covers shows that very little of the wheels will protrude when retracted.



Having got the nacelles sorted I was then able to mark out and drill the holes for the Robart hinges for both the ailerons and flaps and dry fitting them to make sure they all lined up.

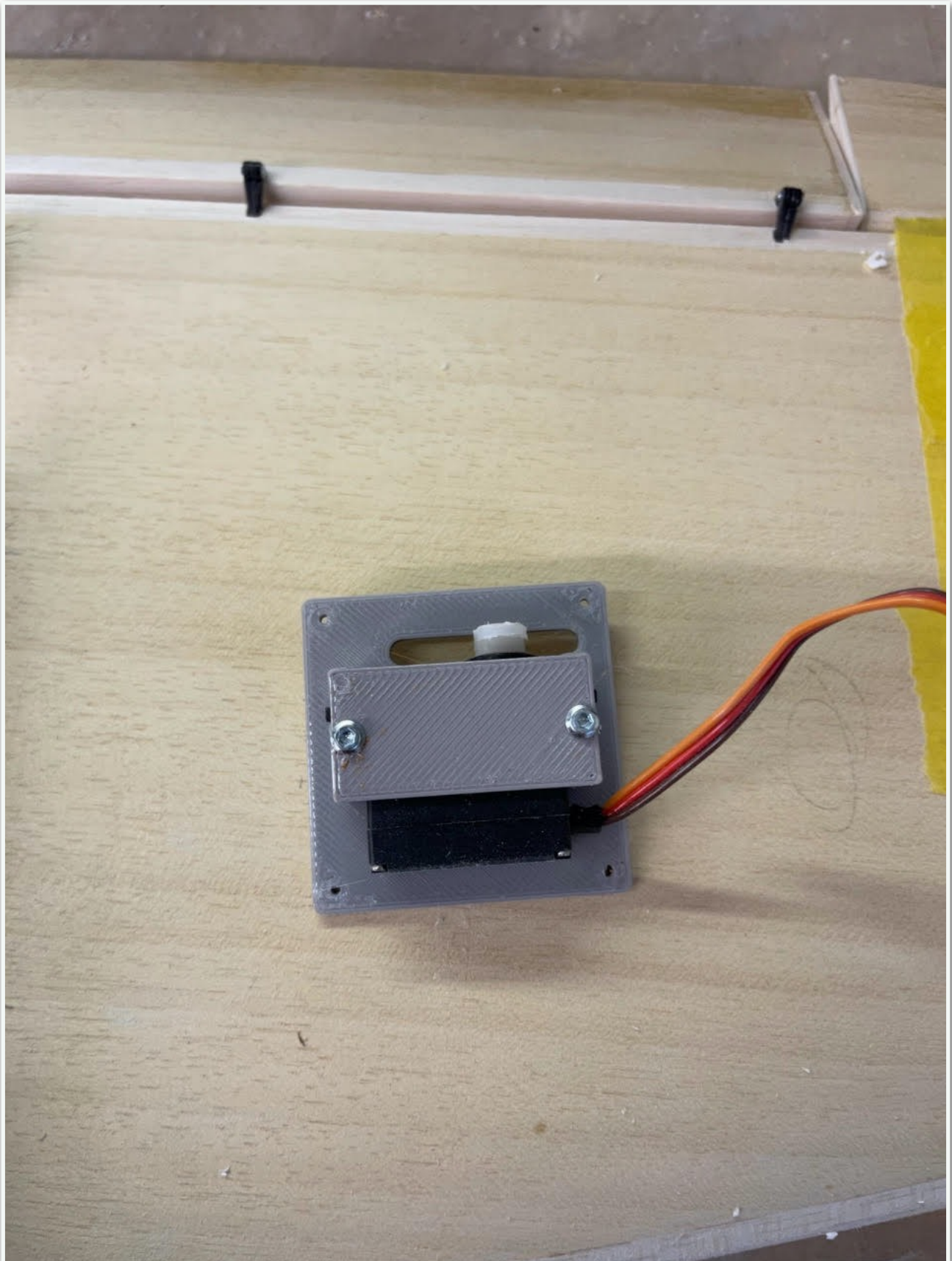


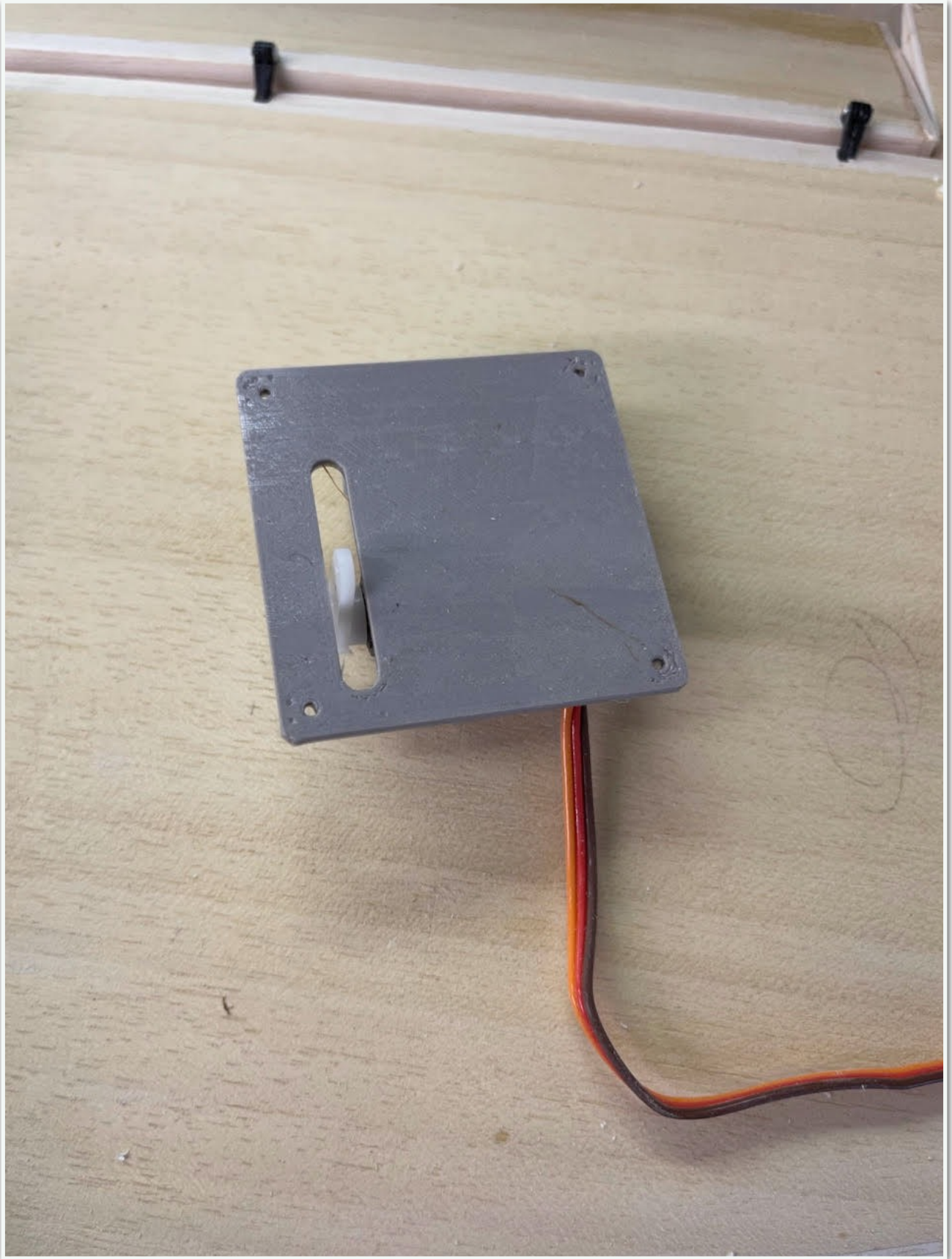
Pockets for the flap mini servos were cut out and the servos fitted using 3D printed servo mounting plates.





Similarly, the aileron servos were fitted using 3D printed servo mounting assemblies fitted to ply servo boxes.









Wing mounting dowels were fitted using epoxy and the wing located in the fuselage to hold the dowels in place until the Gorilla Glue (brown) had set. A thin sheet of plastic was positioned between the wing and fuselage to prevent the 2 sticking together!





Once that was dry I could bolt the wing to the fuselage so that I could form the wing fillet out of triangular balsa, cut, wetted and bent to shape, left to dry then stuck to the fuselage sides once again using thin plastic sheet to prevent sticking to the wing.

