Assembly Manual

H2x Fuselage

Parts provided:

-fuselage
-hatch
-3x M3x16mm steel bolts
-1x M3x10mm steel bolt (wing)
-1x M3x10mm nylon bolt (horizontal tail)
-1x M3x25mm steel bolt (build aid)
-servo tray rudder & elevator servo
-servo tray aileron servos
-1x M4x12mm steel bolt (for hatch)
-4x dowel pins, 10x2mm
-magnet
-carbon tube 3mm
-steel pushrod 0.8mm
-steel pushrod 1mm
-plastic tube 2mm
-pushrod parts

Optional:

-ballast kit

Recommended gear:

Aileron servos: JR D285, MKS ds75k , graupner des 281

Tail servos: Dymond D47 ,MKS ds75k

Battery : around 25g

Tips:

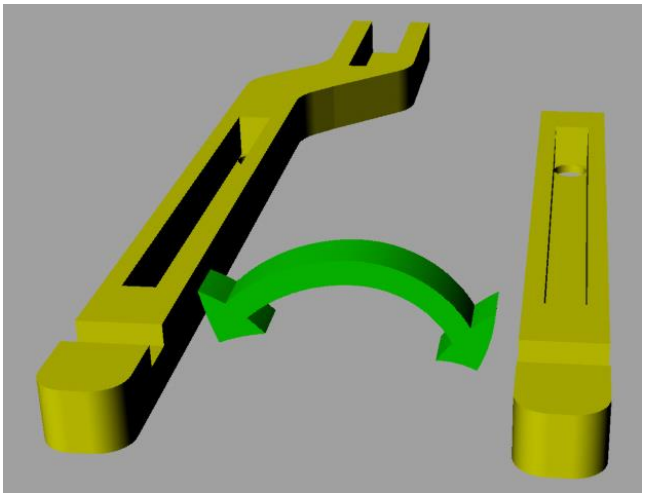
-Clean and sand all surfaces that will be glued for a better bond

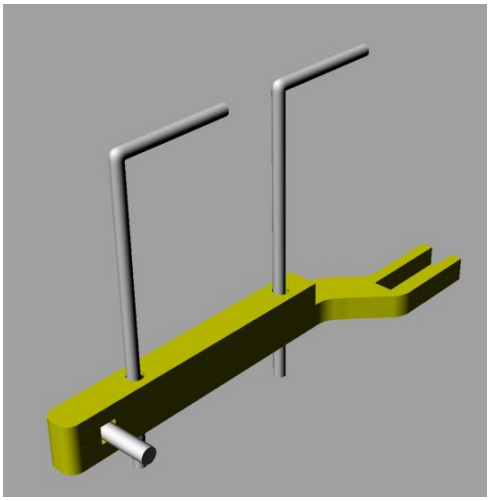
-Use a needle to transfer CA from the bottle to the part , this a good way on how to control the quantity you apply. Use a new bottle of thin CA viscosity gets higher when a (opened) bottle ages.

-If I recommend epoxy I suggest using UHU plus , less critical to dosing error and stays a little flexible so it's less brittle compared to CA , it bonds extremely well.

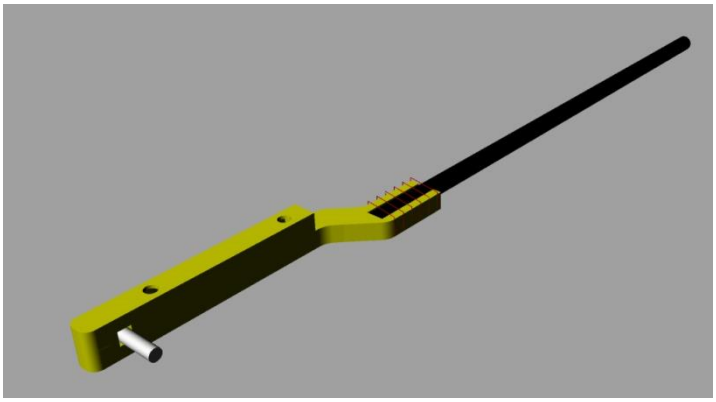
- If you use chemicals on parts of the glider (like CA debonder for instance , always try a small amount first to make sure the chemical doesn't attack the part.

1. First make the pushrods, take both parts shown below and lay them onto each other like shown.
   Take out the 1.5mm steel rod and cut 2 pieces, bend each of them 90°, these will be used for alignment of both halves.
   Insert the 2mm diameter 10mm long steel dowel pin provided with the kit like shown.
   You can use a washer pin to clamp down both parts.
   Add a few drops of thin CA to the seams, it will work its way in, also make sure the dowel pin is glued well with CA.
   When cured, pull out (first rotate) the 1.5mm alignment pins and repeat the same for the next pushrod (you can re-use the alignment pins).

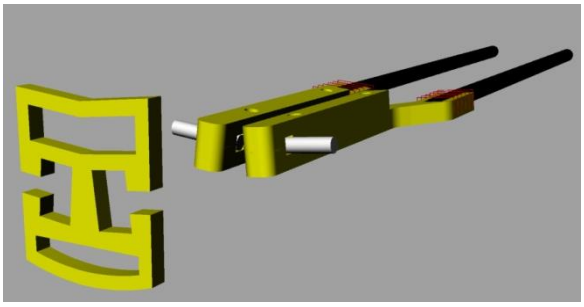


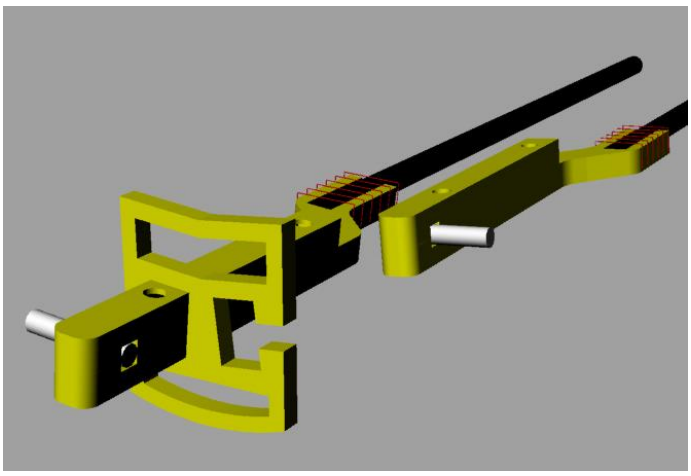


2. glue in the 3mm cf tube with thin CA , once cured wrap a thread around it (I use sewing thread) and add another drip of CA to fixate. Do this for both pushrods.(you can glue one on each end of the carbon tube)

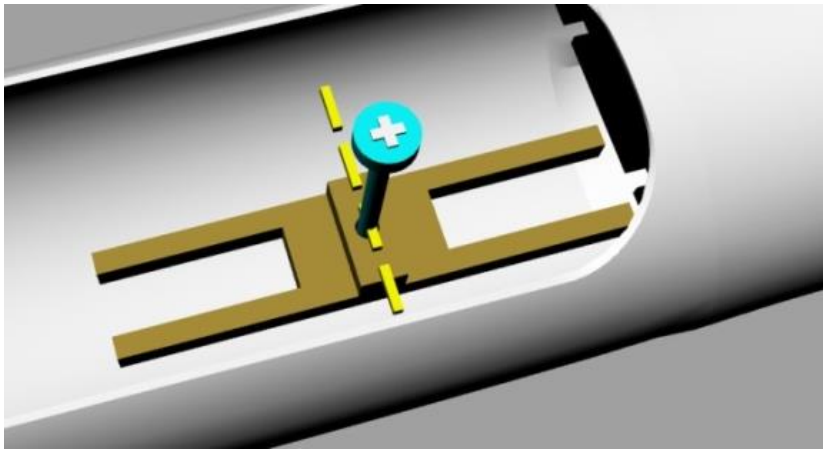


3. Test fit the pushrod ends into the guidance plate shown below , most likely CA leftovers on the sides need to be sanded of to make it fit , make sure it runs smoothly all the way.



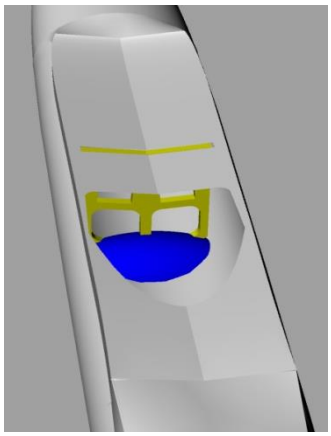


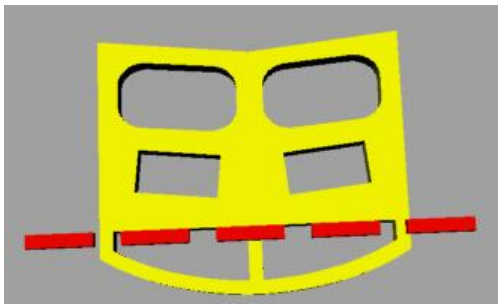
4. Put a mark (line) inside the fuselage at 138mm from the nose tip , screw the M3x25mm bolt in the servo tray (screw it in all the way , the bolt will protect the threaded hole from glue) , glue it in with epoxy , the bolt hole on the 138mm mark , make sure it runs centered and the bolt stands up straight.



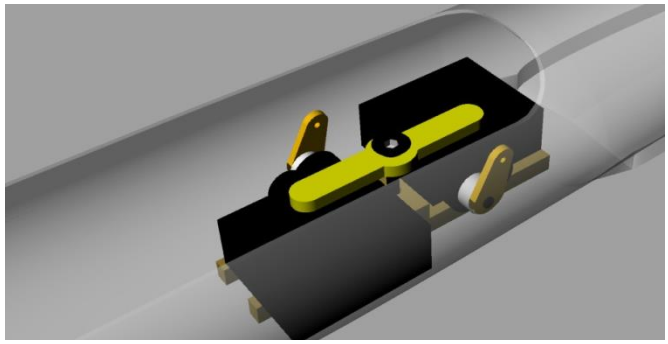
5. Glue the guidance plate into the fuselage, first sand the inside of the fuselage add a good amount of (thickend) epoxy right underneath the slot , then push down the guidance plate and let it cure.
   if you have a fuselage with a ballasttube molded in , cutout the bottom part of the guidance plate .
   make sure you don't get any glue in the guidance plate where the pushrods run thru, you can oil/wax or grease the inside with a cotton bud for instance !

The guidance plate needs to come flush at the top = wingsadlle!!! If not sand the bottom of the plate(red dashline) till top comes flush!

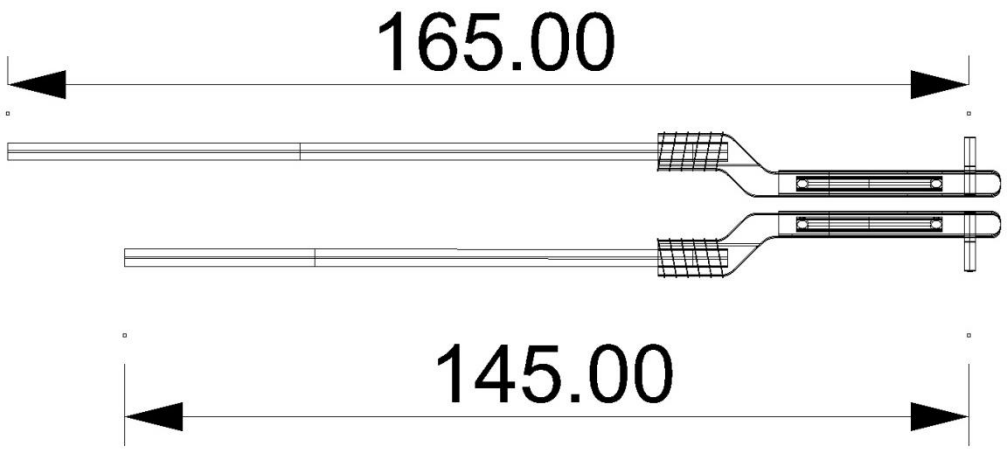




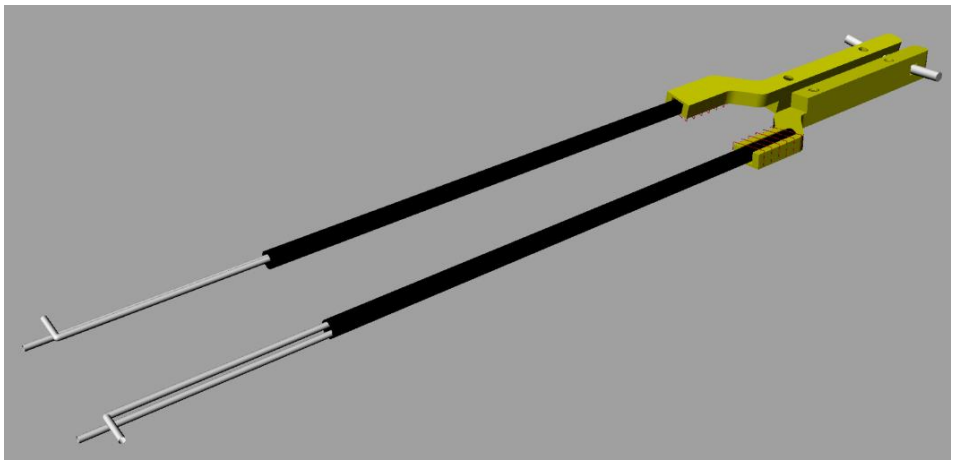
6. Use a hole approx. 12mm out of servo center .
   Install the servos in the fuselage like shown below, you need the flat head bolt for 11mm servos the countersunk bolt for 9mm servos. Don't tighten the top plate yet so you can still move the servos.
   Notice the offset direction on the servo arms, either set the horn up straight or slightly to the back (next tooth) like shown if the servo spline doesn't allow for straight up.



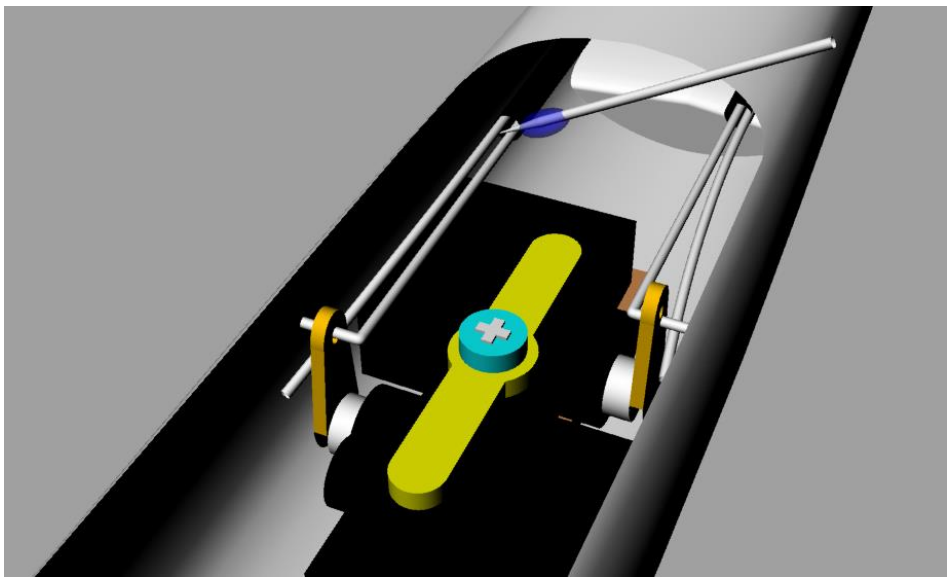
7. Cut the pushrods to length , one needs to be 145mm the other 165mm.



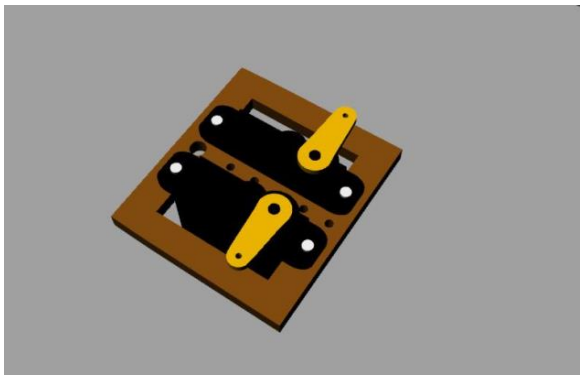
8. Cut 2 pieces 60mm long out of the 1mm steel wire, soften the edges and bend 1 end on each (5mm) 90°.
   Cut 2 pieces 60mm long out of the of the 0.8mm wire, soften the edges.
   Insert these in the carbon tube and install the pushrods in the fuselage.



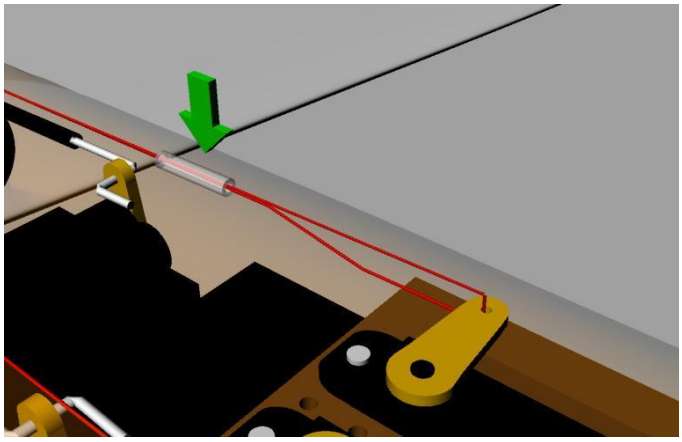
9. Attach the pushrods to the servos, bolt the wing on, make sure the fork shaped horns on the wing are placed onto the dowel pins on the pushrod and tape the ailerons at the root for 0 deflection.
   Transfer a few drops of thin CA to where the steel wires enter the cf tube, the ca will work its way in.



10. Install the tail servo(s) in the servo tray. Glue it in the fuselage with epoxy. Sand the area where it will be bonded. **Pay attention, you need to have the largest hole upfront!** the easiest way is to have the servos installed without horns , then insert this assembly in the fuselage, you need to bend open the hatch opening a bit to get it in. put it as deep as possible(servo bottom touching the fuselage. Put is far back as possible but leave enough room to take out the aileron servos.
    Screw in the m4 bolt provided with the kit in the biggest hole (threaded) in the servo tray.

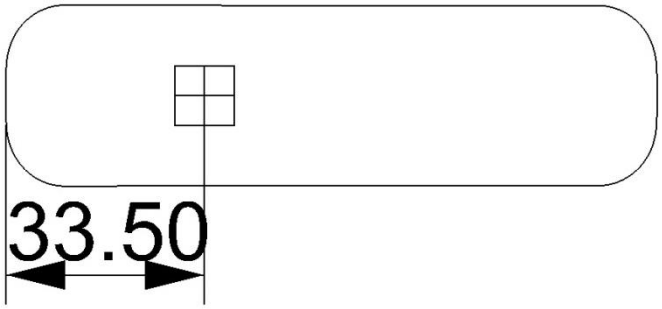


11. Guide the steering lines connected to the tails through the fuselage *(first build the tails using the manual for the tails)* **, make sure they run through the guidance tubes.** Slide another ~8mm piece of plastic tubing (like used on the tails) over the steering line (green arrow).



12. Center the servo in your TX, put on the servo horns 90° and pull the steering line so there is no rudder or elevator deflection, mark the steering line where it meets the servo horn hole and bend 90°, proceed like described in the tail manual and do the same for the other servo. **Use a hole 5mm out of servo center.** Slide over the plastic tube, press it with pliers and transfer a drip of thin CA to it.

13. Glue the magnet on the inside of the canopy according dimensions below. Sand the canopy where it's going to be glued. I suggest using epoxy (fillet around the magnet in transparent blue on the drawing).



14. Adjust the M4 bolt when the canopy is in place the magnet rests on the M4 bolt head. Use (clear) tape to make a hinge on 1 side of the canopy.

DONE!