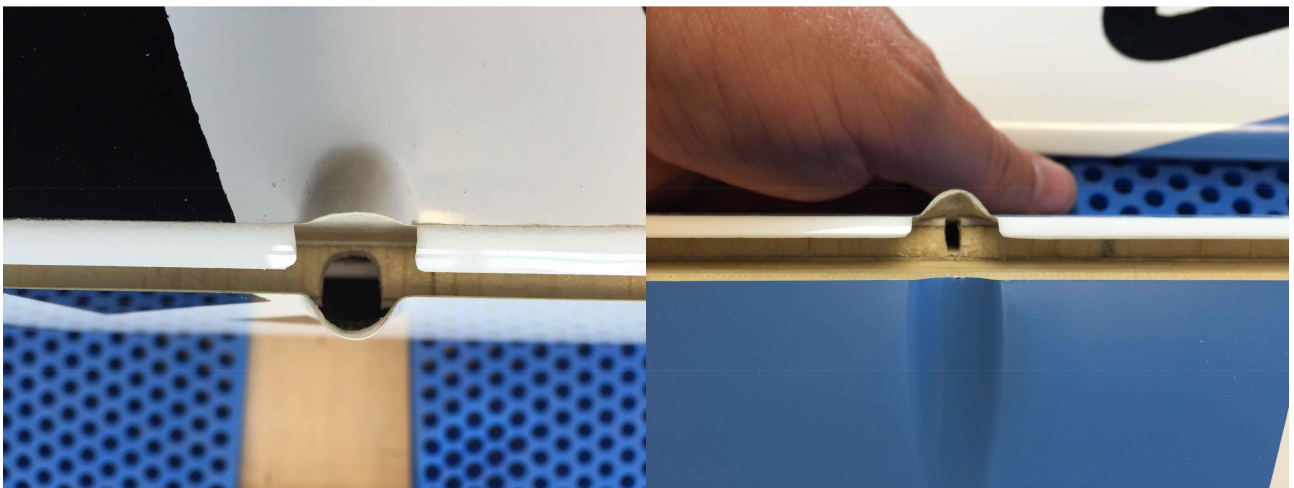


R C R C M - T O M C A T E V O



This is just a short documentation of one way you can assemble the TOMCAT EVO I'm sure the pictures will speak for themselves. Good pictures are better than to many words.

The Wings:



At first you need to cut the openings to the longerons so that your pushrod can pass through to the control horns. For the control horn you need to cut out a slit. The better tighter it fits to the Control horn the easier it is to put the place properly.



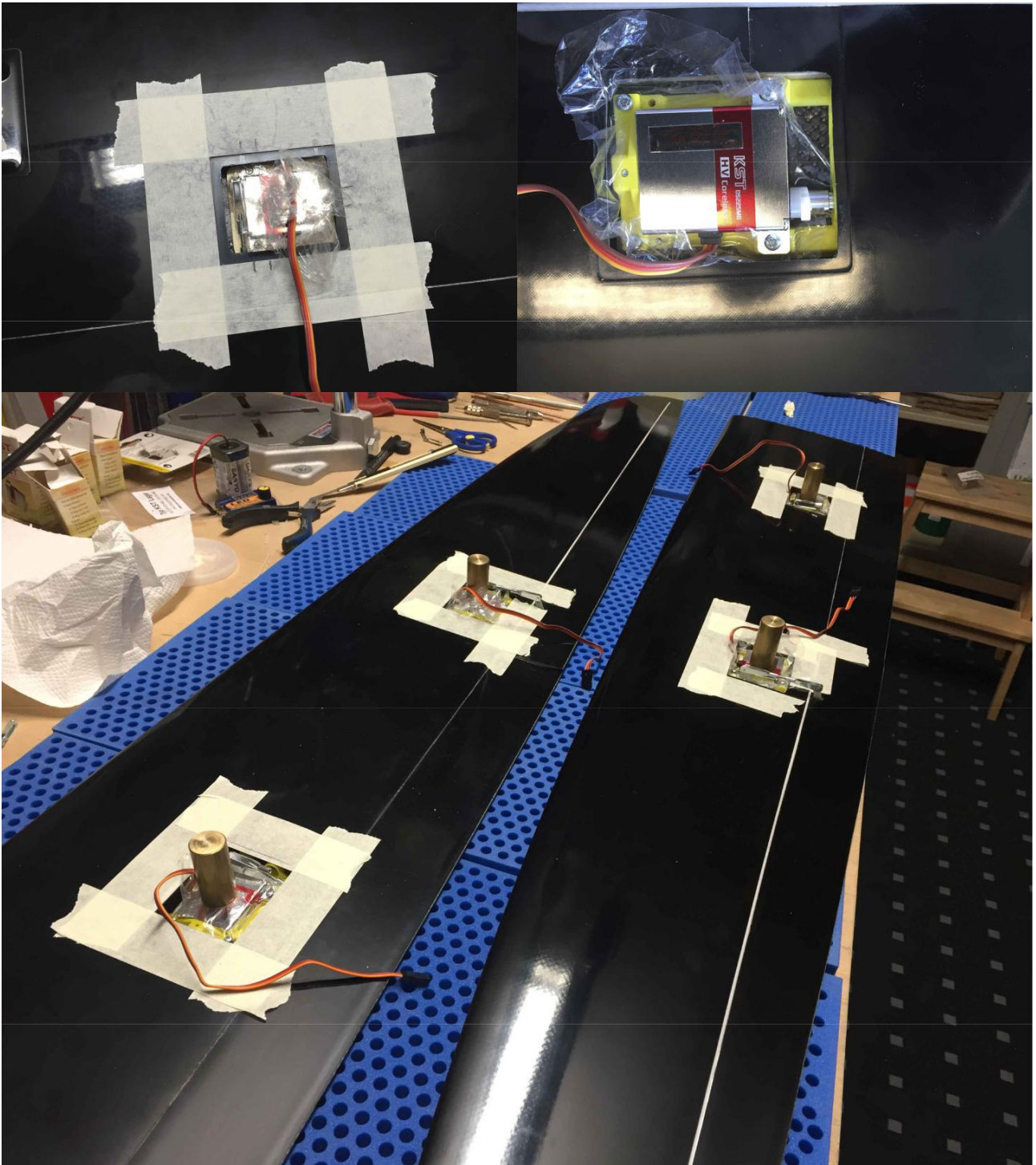
Use this little trick to make all linkages exact the same to get same throws just by gluing in the fittings as exactly as possible. Once you control horns sit in place tight fix them with two drips of CA. After that put a nice amount of thickened (cotton) slow cure epoxy to make the horns save as hell. Never forget to sand and clean (acetone) all surfaces where you want to get a good bond.

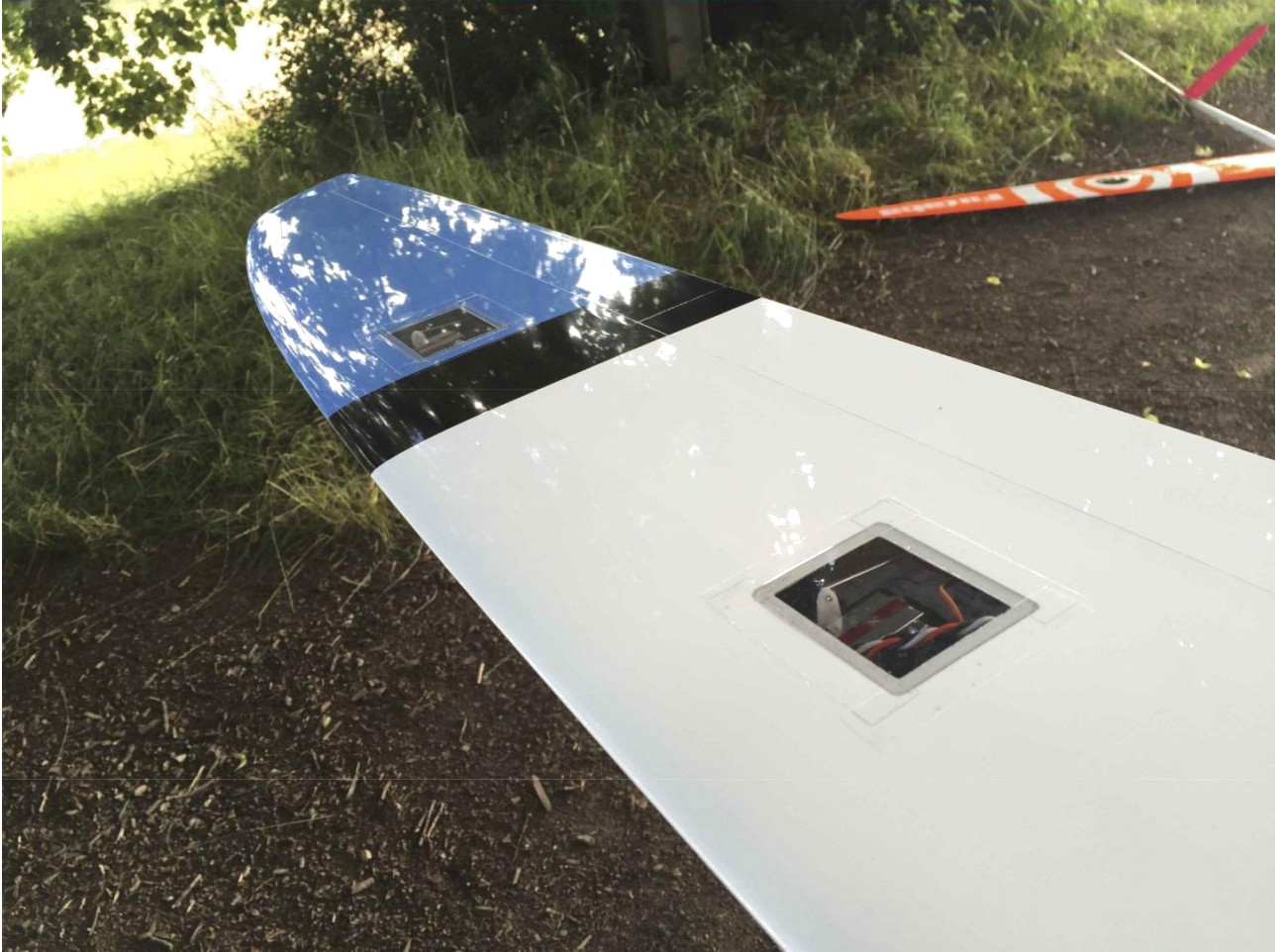
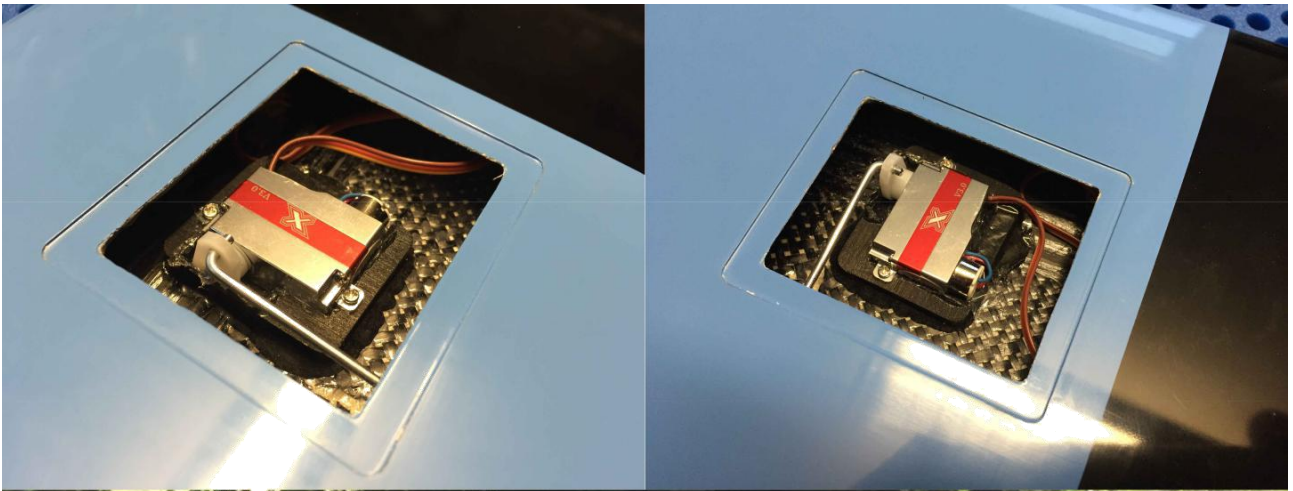


control horn fixed with thin CA. after that glue it in save with thickened slow cure epoxy

The Servos:

In this case we use ultralight 8mm servos just to keep weight. Depending on the style you want to fly the plane you should use bigger 10mm wing servos. As always please sand and clean with Acetone the inside surface of the wing before gluing in the servos with the frames. Please wrap the servos into foil and then screw them to the frames. Now dry fit the servos with pushrods and the control horns. If everything fit well put some tape around the servo bays to prevent the wing bottom from dripping epoxy. Now put the thickened epoxy on the complete bottom side of your servo and frame just as butter on your sandwich.





As you can see we didn't use the original servo covers because we wanted a complete flat surface to get the best possible aerodynamic shape.

The Fuselage

Finding the needed weight in the nose:

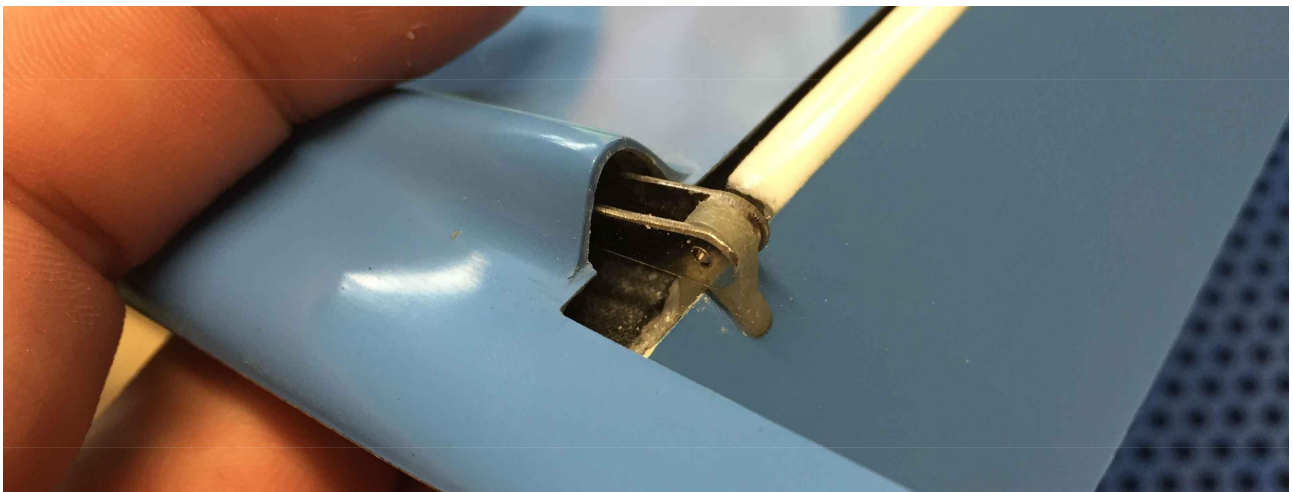
Depending on the Layup Version the Bird needs more or less lead. Stick your finished wings to the fuselage. Dry fit all all needed RC components incl. battery into the fuse. Then take your "CG machine" and set it to 93mm. Now put your Glider onto the CG machine and put everything onto your scale which needs to set to zero. And now you just need to press the nose down until the plane sits in good realistic flying angle. Now your scale shows you how much lead is needed. I prefer to build a foam cone that fits perfect into the gliders nose. Stick this cone into moist sand. Then pure liquid lead into the gap. Please be careful of sparkling hot lead. Use safety glasses and gloves. Use a little less weight you've measured before. You can fine balance the plane with small pieces of lead later. A more simple way is to stick the glider nose directly into the sand.



Now it's time to prepare your servo tray for personal benefit. As I decided not to use the ballast tube I had the space. The wing chambers carry enough weight for the light weight glider I wanted to assemble. When you finished your cutting, screw in your servos and bring the tray in place so that everything fits nice and snug. Once you are happy with it fix it with some drips of CA and put the servos away. Make sure you have sanded and cleaned everything before. Now put a rope of thickened slow cure epoxy into the corners and then layer a rest piece of 64g glass fabric with thin epoxy resin. Now go to bed and have rest. Tomorrow you can gut the fabric away from the borders.



The next step is to glue in the ruder control horn. Make sure that there is enough space in the scoop so that the clevis can run free without scratching anywhere. If it's too narrow take you metal file and rasp the clevis thinner. For gluing the control horn use the same principle as with the wings.



If this step is done you are ready for finishing your plane make your connections to the servos. When there is less space I use to glue the clevises directly to the pushrods using medium cure epoxy and heat shrink tubings. In case of this plane it's very easy to find the correct point for the elevator because it's not a full flying elevator and you can just adjust the middle like you do with rudder. :)



Last but not least here are

The Setting:

CG: 93 mm from leading edge

Elevator:

5 mm up 8 mm down (5mm for flying / 8mm needed to have down control at full butterfly)

Rudder:

15 mm each side (as much as you can get)

Ailerons:

15 mm up (or more if you like) 5–8 mm down (or more if you like)

Butterfly:

Ailerons: 20 mm up

Flaps: 45° – 60° down Elevator: 6mm down