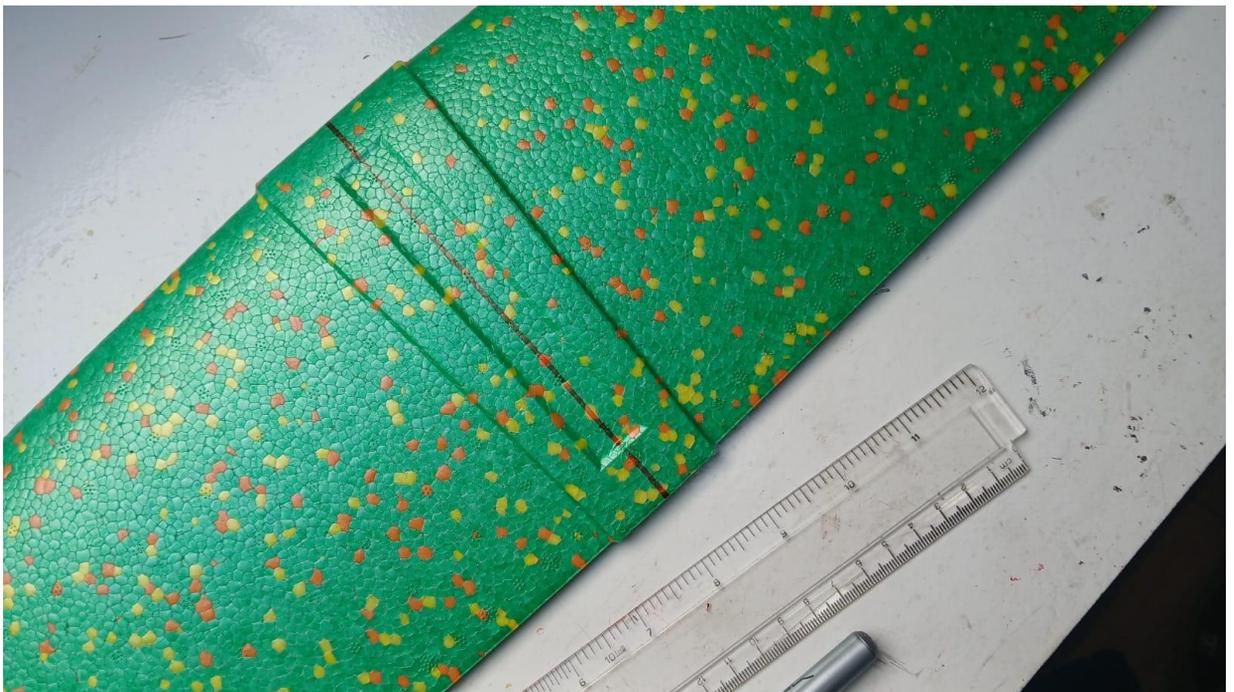


Lidl Glider Conversion to RC Power by Ben Smith

Hey all, I've started a new Lidl glider build and have taken some pics as I go just for reference/inspiration.

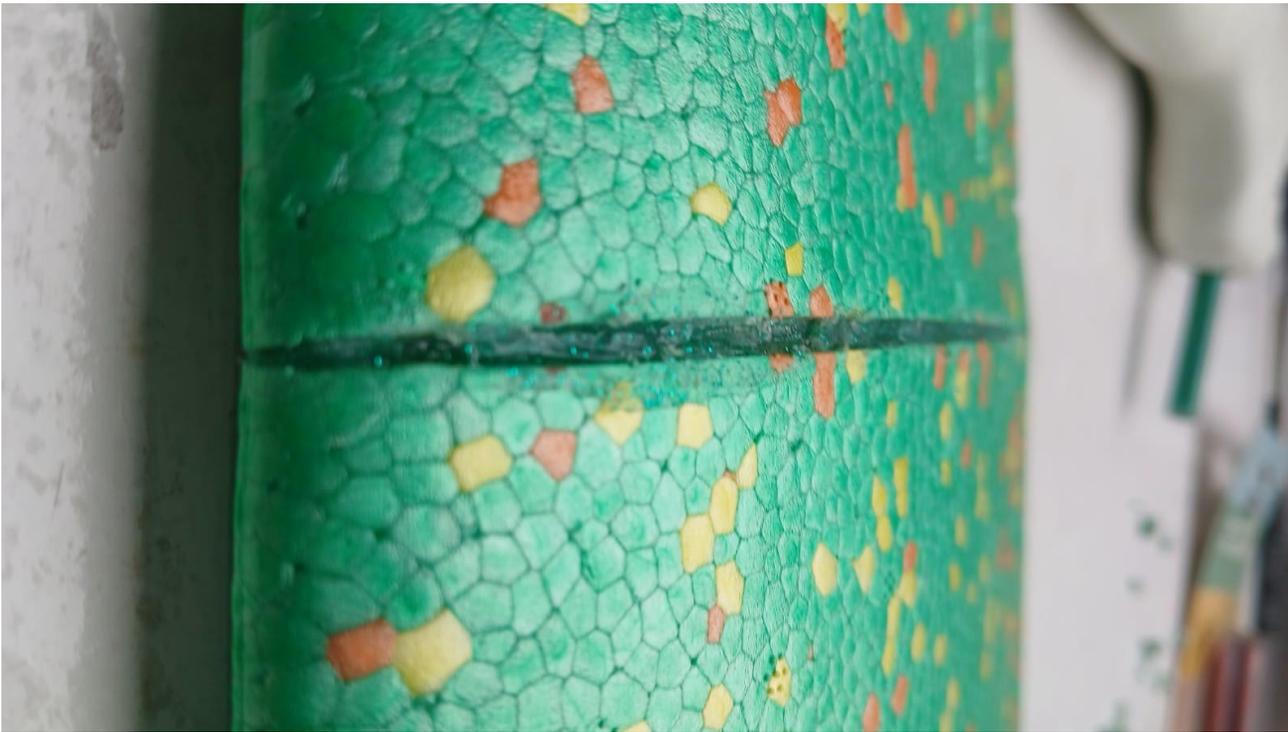


Mark centreline on wing panel



Cut wing to remove outer dihedral
Score through from the top, leave as little material as you dare
on the lower surface

Think I did 240mm from the centre line.



Fill with hot glue and flatten panel. Hold down until set

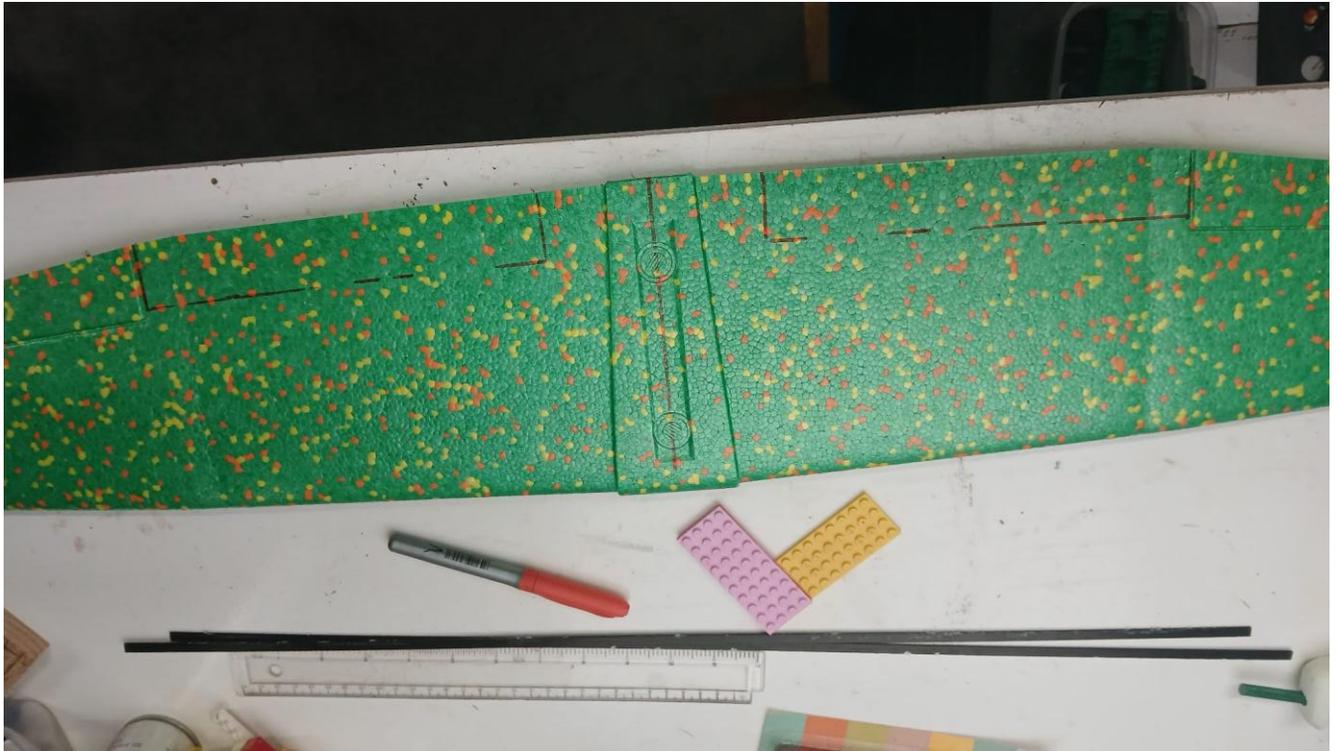


Repeat both sides. Once cold and flat, the excess glue / foam can be locally sanded if required.

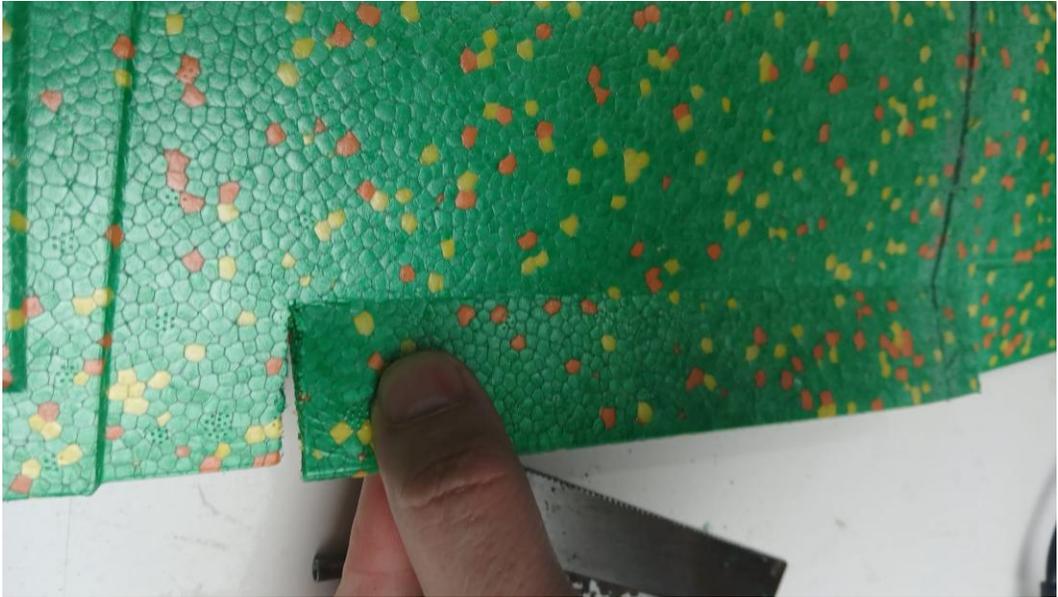
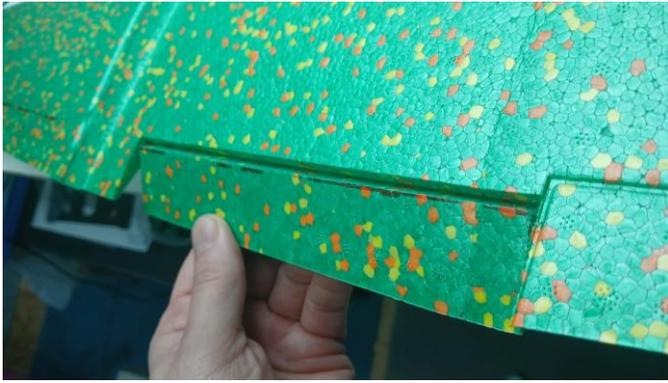
I'm going for a servo in each wing with a carbon spar to stiffen

So next job, think about how much aileron, whether to live hinge the foam or cut out and use balsa stock.

At the moment, the wing is flat(ish) across the bottom surface. I'm going to do the ailerons and sink the mini servos in then when I channel out the servo wires and spar, will set the wing how I want it. Maybe flat to the upper surface



Mark the ailerons out, symmetrically
Careful cutting is required

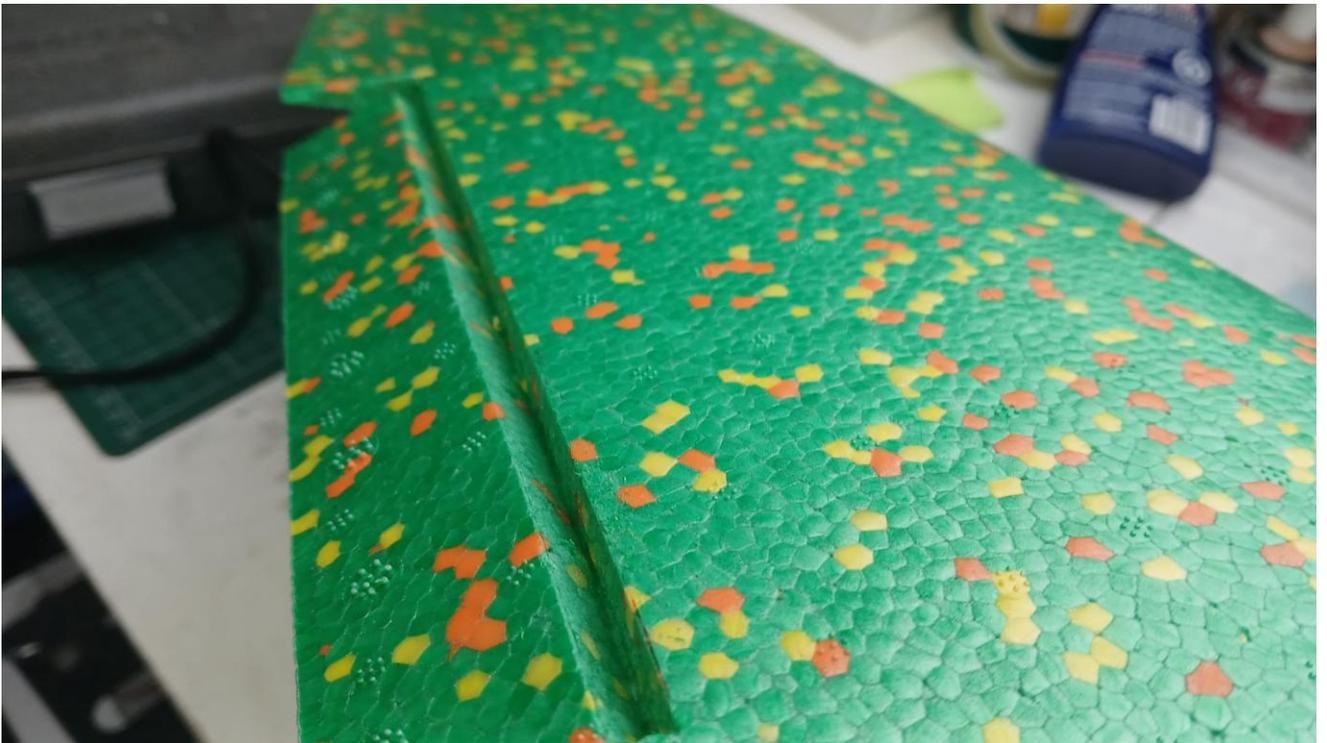


Cut the lower surface almost through to the top surface. just leaving enough to use as a live hinge

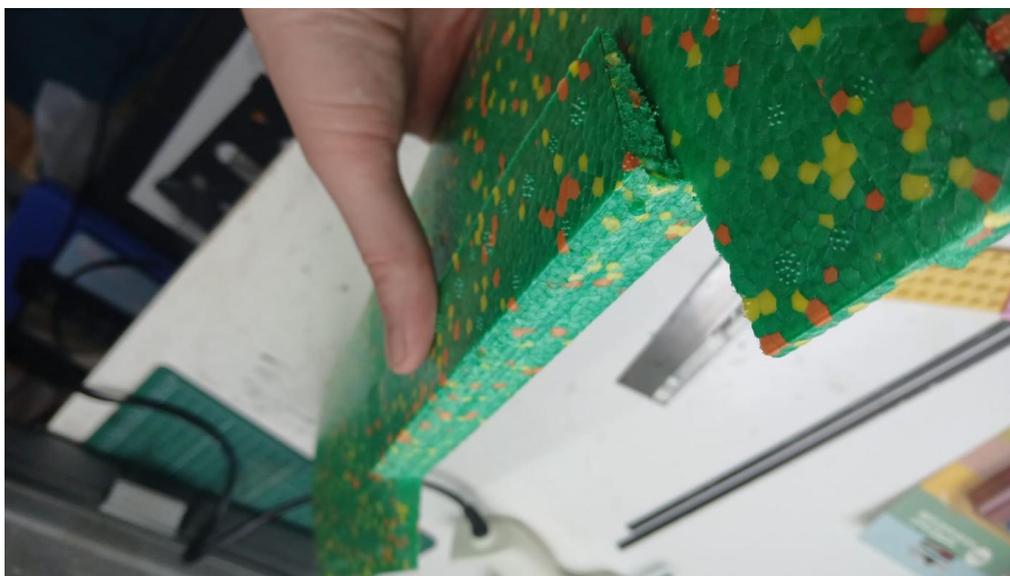


It should now hinge freely upwards. But to get a nice downward travel, I fold it all the way up and over

28/12/2025 version 1



Then remove any excess from the chamfer



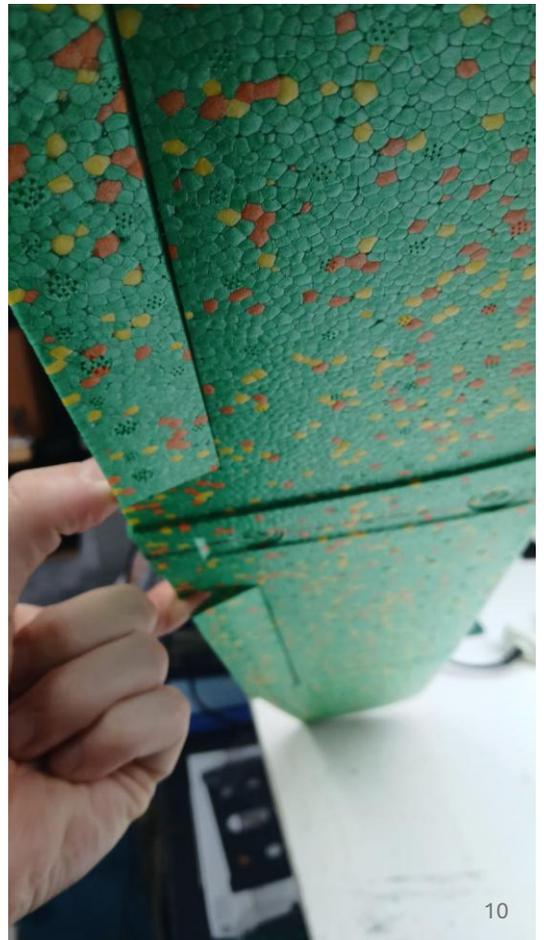
A sharp blade trims the material quite well. You can even sand it too

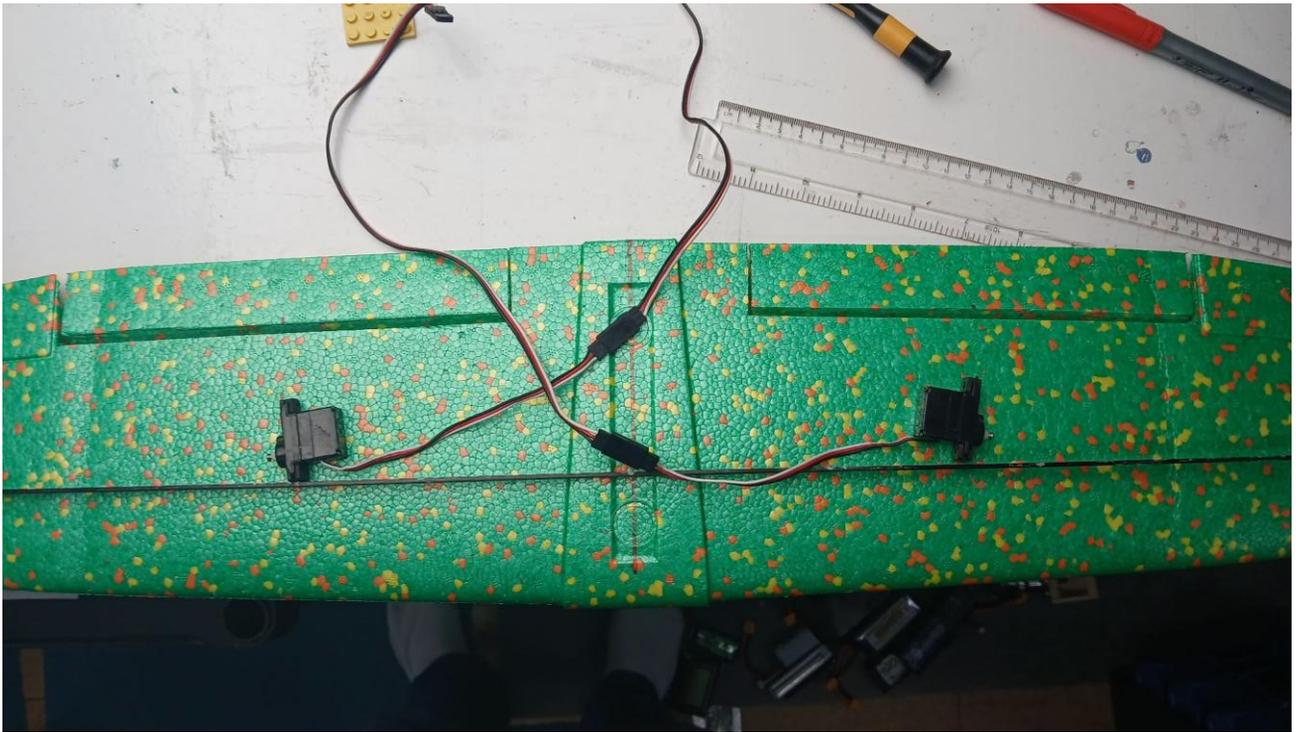


Upwards deflection

Downward deflection

This is probably the trickiest bit.
If you go wrong, then you can
always use tape for the hinges
or even go balsa trailing edge
stock and other hinges

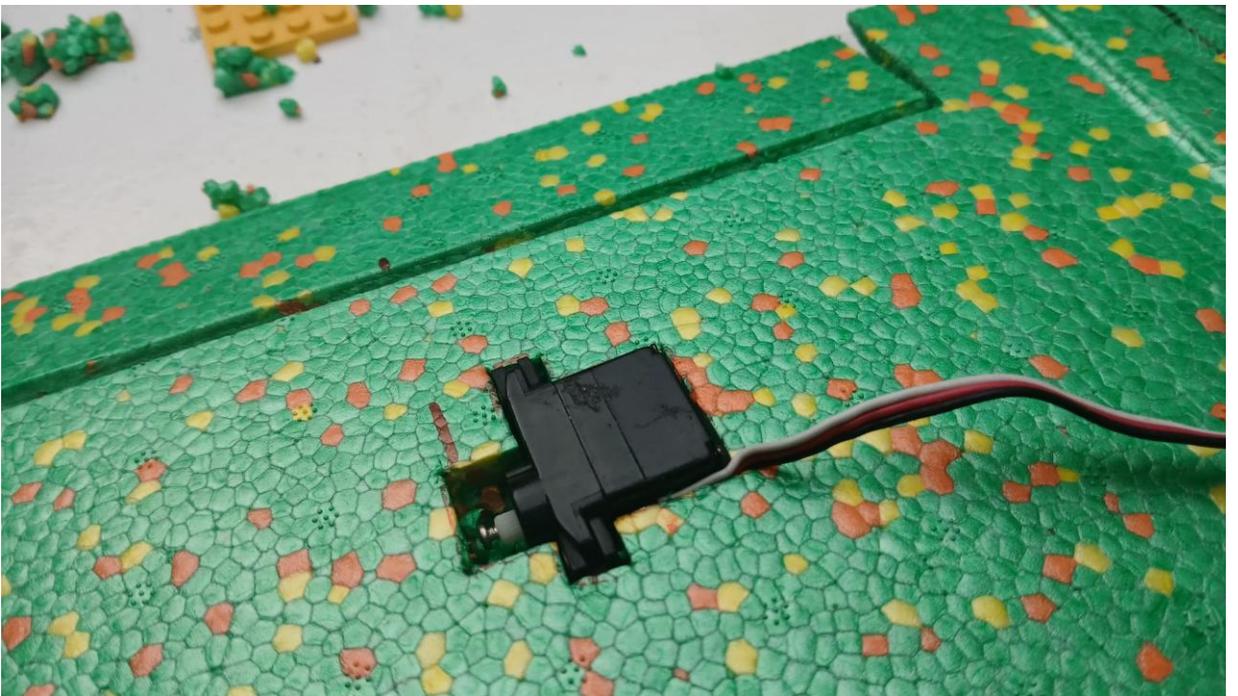




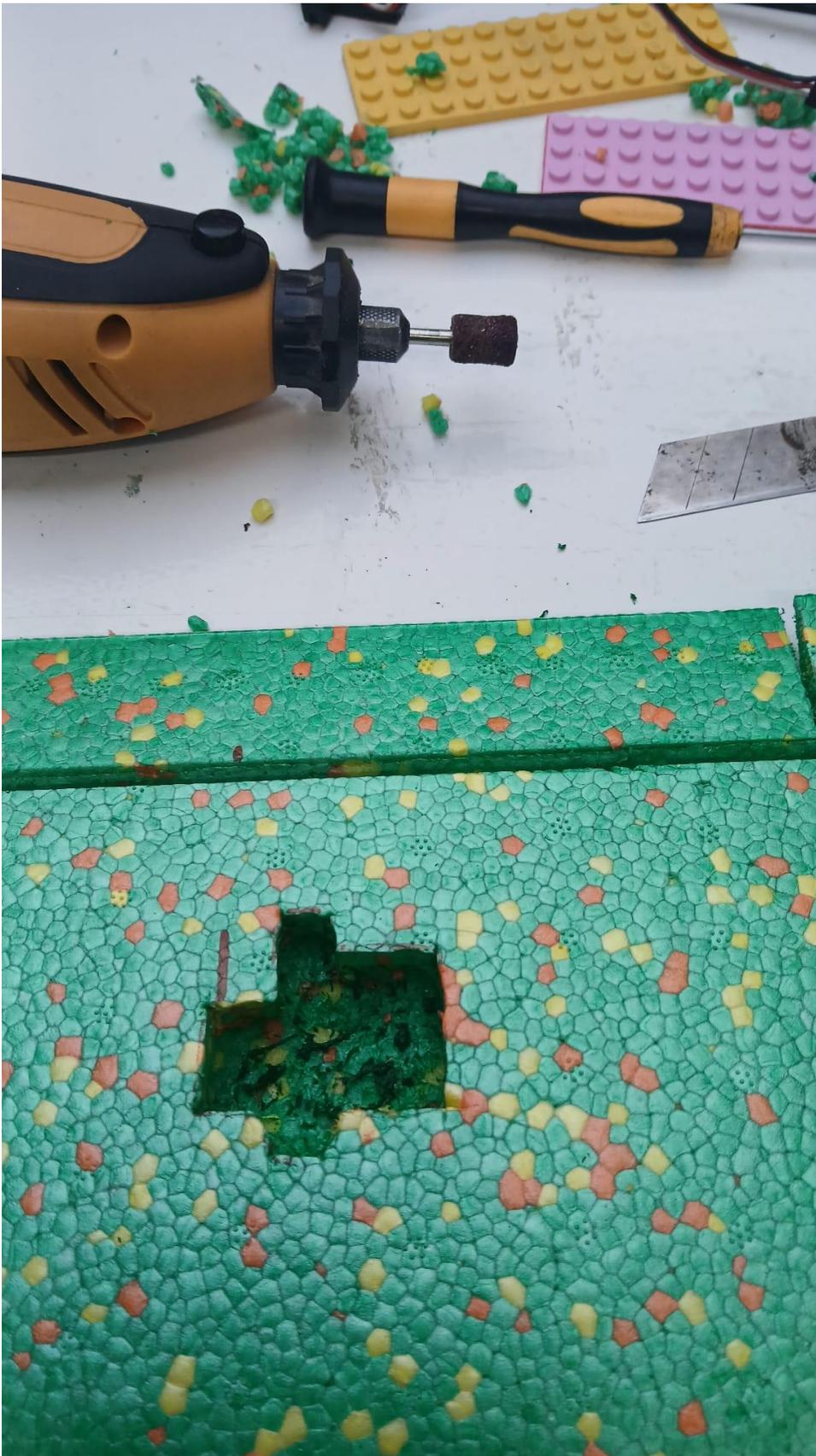
I'm going to sink a mini servo into the lower panel for each aileron. It makes sense to align the servo and drive the aileron at half the aileron length

Also, I'm going to sink in a carbon rod for a spar so think about where the servo wire channel will be

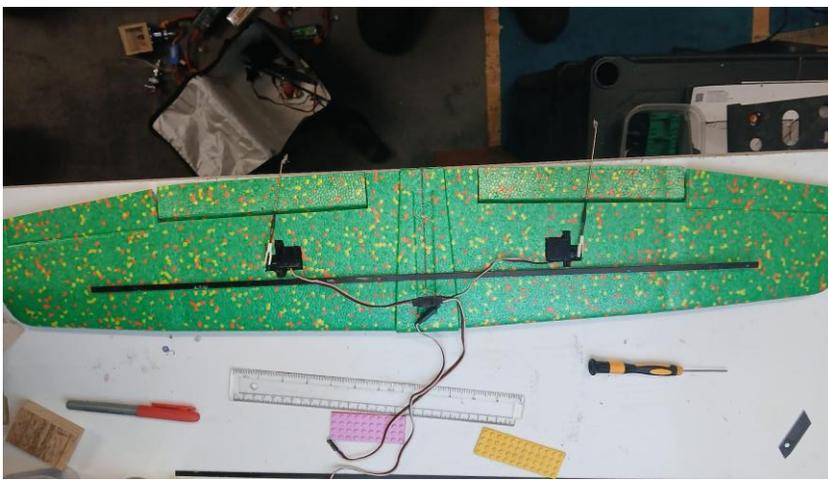
A taped hinge works well



I'm going for a flush fit, careful not to go through
Sharp blade and then just dig out the foam with a small flat
blade screwdriver. Repeat the other side



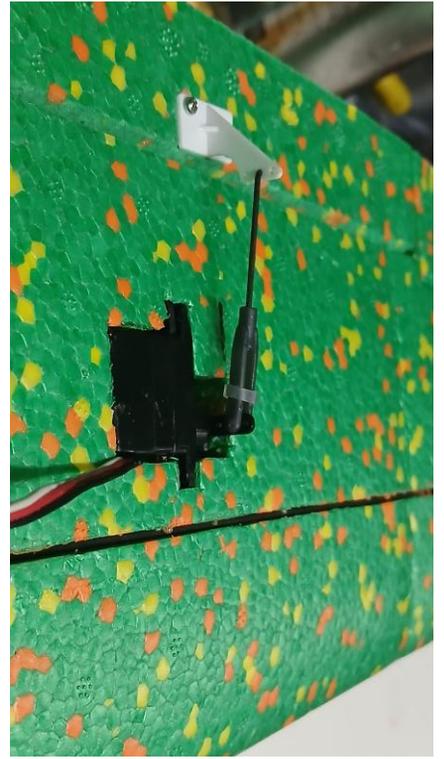
Dremel with a sanding disc in works well as a router



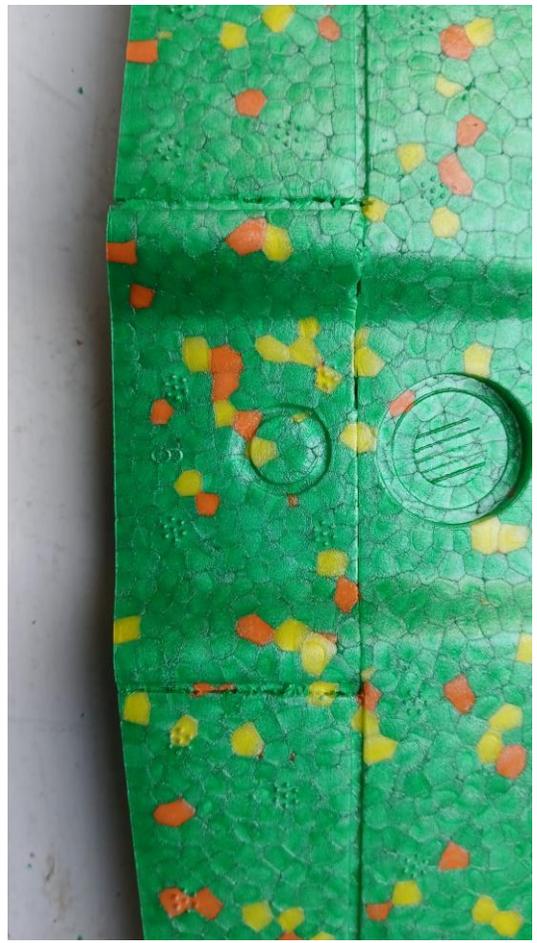
6mm x 2mm solid section Carbon spar channelled in.

Note: my first one flew fine without the spar, wing started to flex when pushed it but if you're not planning to bat round the sky, maybe leave the spar out.

Also, if you are planning a rudder and elevator only model, then no modifications are required to the wing



Servos pushed in



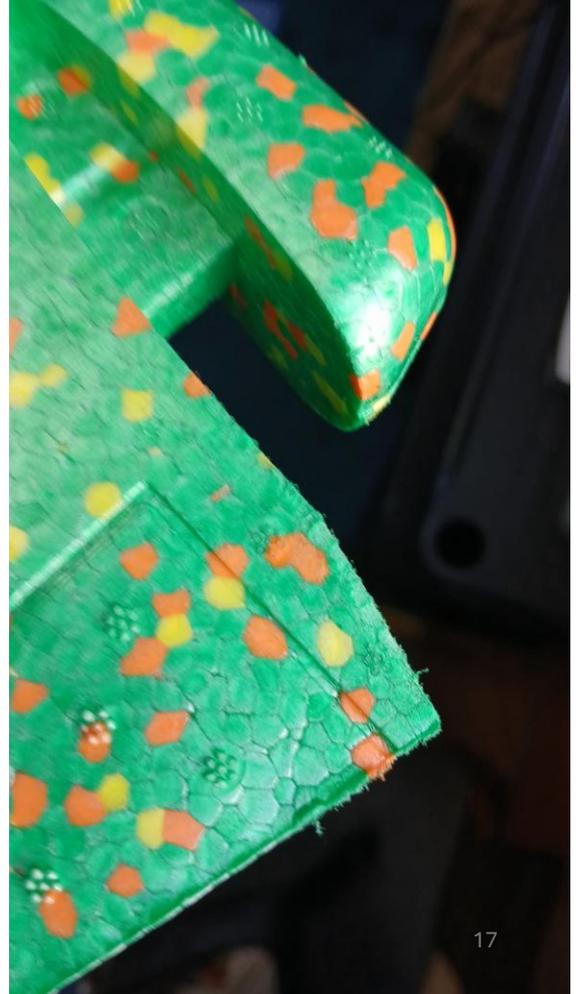
Tailplane and elevator

Mark out and remove material. I will use some balsa stock to join the elevators together to form a single movable surface.



Small trim under the rudder to tidy and ensure clearance for elevator upward deflection

I've also noticed on my model, a burr on the trailing edge of the rudder, I'll remove this

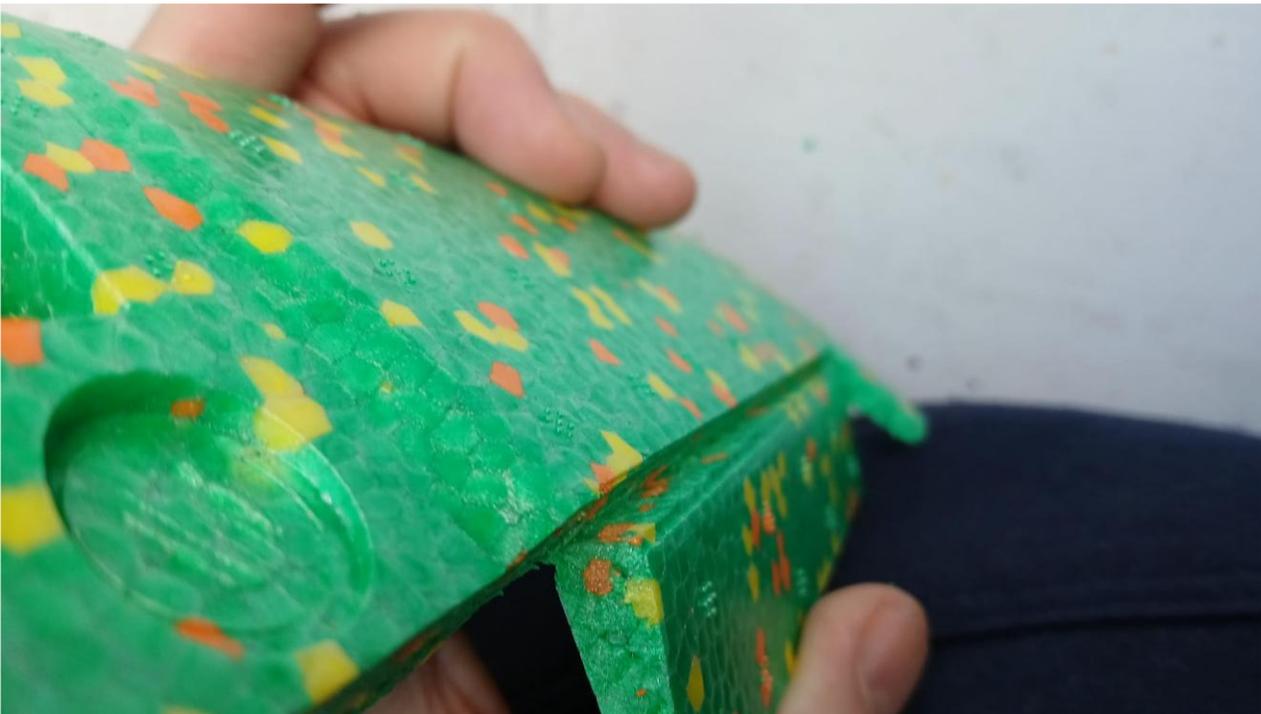




This burr is on some other trailing edges too I've noticed. A sanding block removes it nicely



Elevators, carefully cut through from the lower surface, same as ailerons



From experience, only a small amount of down travel is required

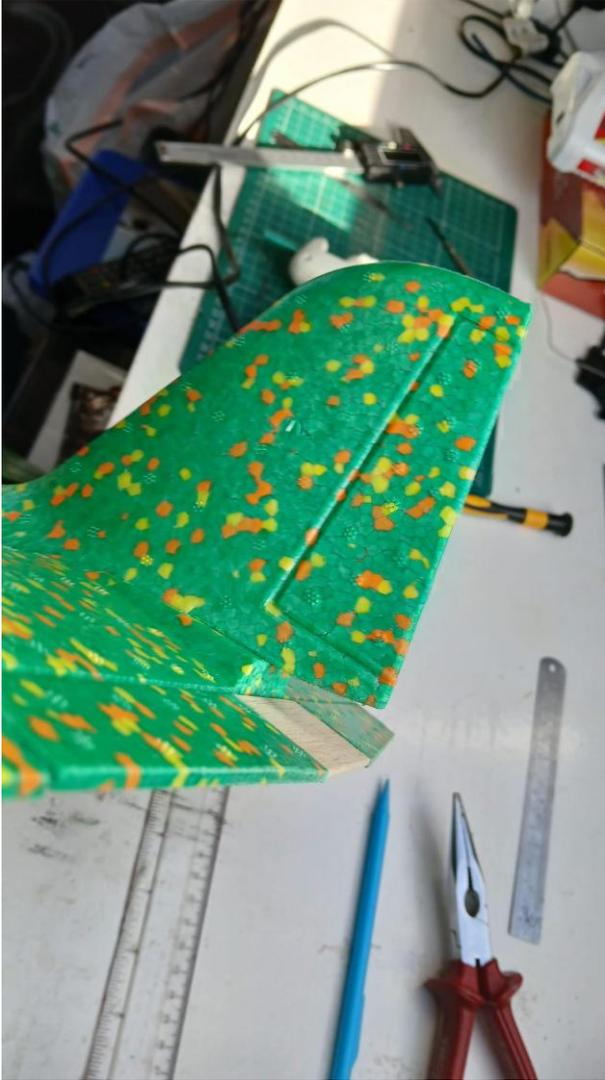


Ok, raid the balsa box. I knew it would come in handy one day.



Glue in place,
needs to be a
good bond





Should have a nice tail end and elevator



I'm going for a central pushrod



Small pocket required to be removed to make clearance to the control horn

I'm going to use a lightweight push pull rod down the centre of the fuselage

I did this last time by heating up a length of piano wire (on the hob) and pushing it down the length of the fuse. My elevator servo was up front in the nose.

But this time, I'm going think about the power system first and ensure it balances



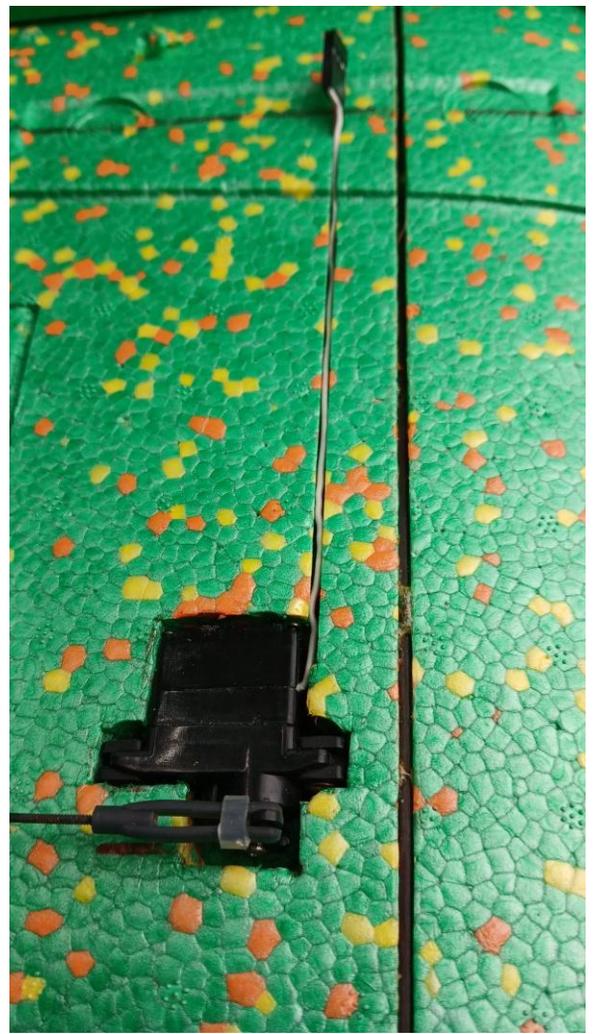
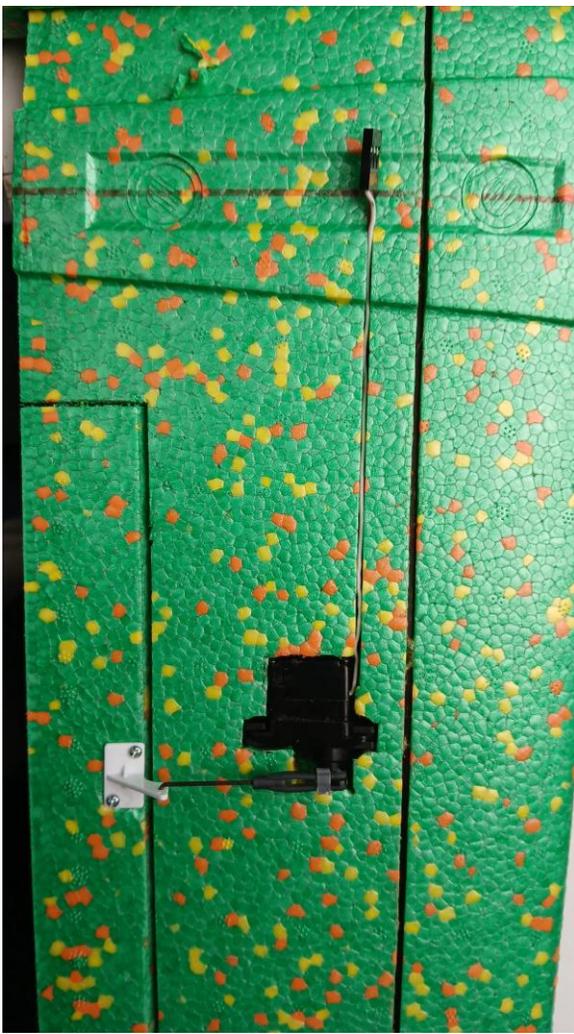
Pulling the canopy off, cut through the Base from front to back
Then pull. There's a square foam spigot front and back



And a free bolt. Bonus



Cleaned up a bit. Ill leave the rear spigot for now as its a useful locating feature for the canopy.



I've added the slot channels in the lower wing panel for the aileron servo leads

Quite neat



A bit of tape over the surface to cover over the channels and job done.

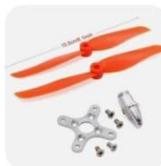


The next bit all depends on your power option. It will need to balance so motor position and battery size and position will probably dictate the rest.

← Item

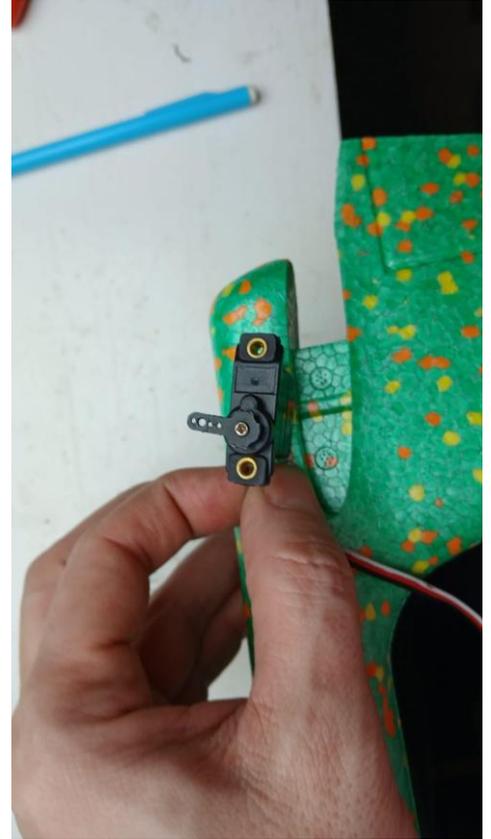


20



2200KV Brushless Motor & 30A ESC + Propeller Props Combo Set for RC Plane Parts

I'm going to try this combo on Ebay. £9.58 which seems very reasonable. One consideration is the prop. A fixed prop up front will snag when landing. A folding prop would be good but adds more weight. So, I'm going to try the prop driver with the bands same as a shock flyer



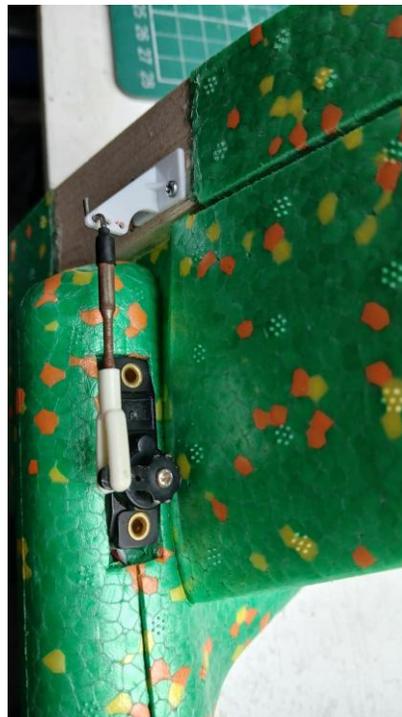
I've decided to go for a conventional motor up front configuration. This means we need to offset the weight of the motor to manage the C of G

For this I'm going to install the elevator servo in the tail rather than use a long push pull rod and mount it in the front as previously thought

Marking out and cut the aperture for your servo orientated as shown



28/12/2025 version 1
Careful not to go all the way through but get it as deep / flush as you can



I'll then run a servo extension lead down the fuselage to the rx

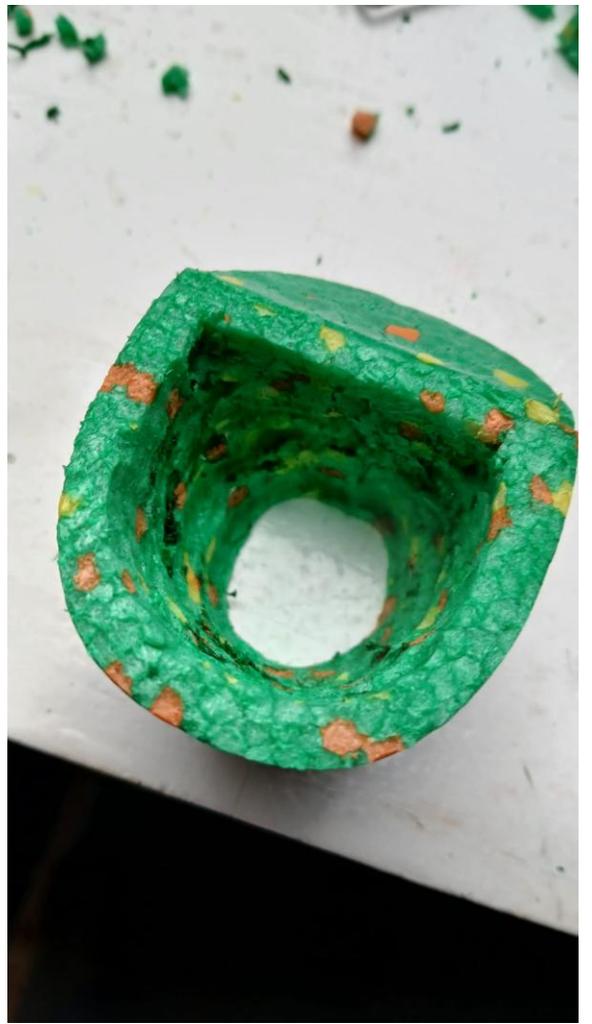
Then a short rod to the repositioned elevator horn



Next stage, motor installation

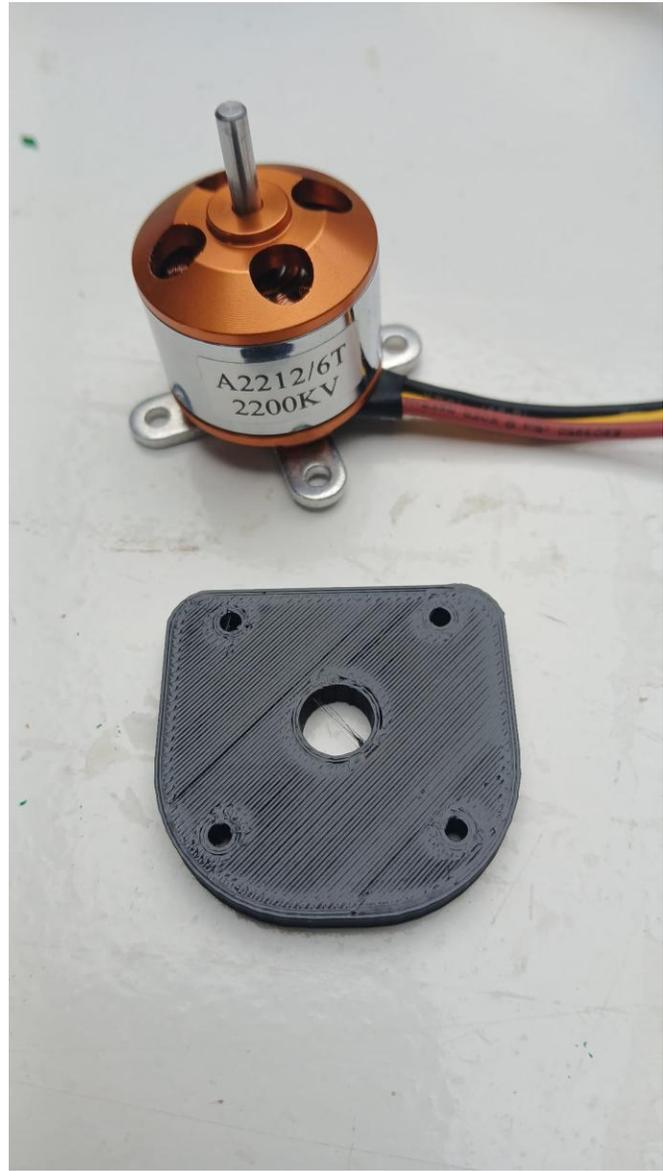
This involves once you have decided when to position the motor, cut the nose. I've chosen to cut here

I'm going to try and be clever by mounting the motor to a bulkhead, then reuse the cut off nose to make a cowl





I'm going to recess in a bulkhead.



Create a small bulkhead, this is about 5mm thick
I'm going to recess it in

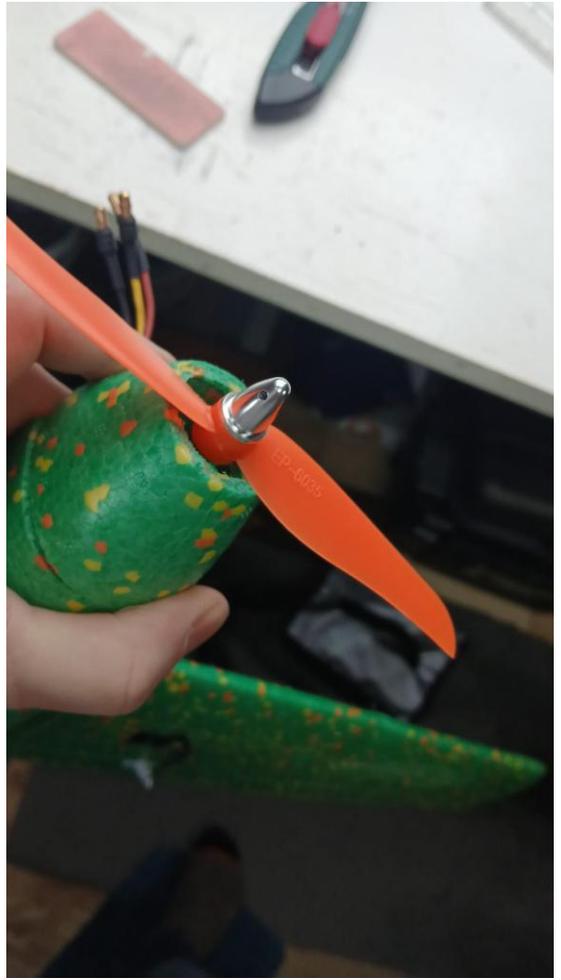


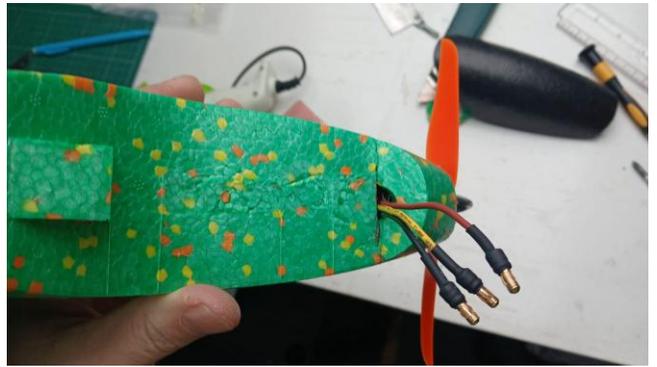
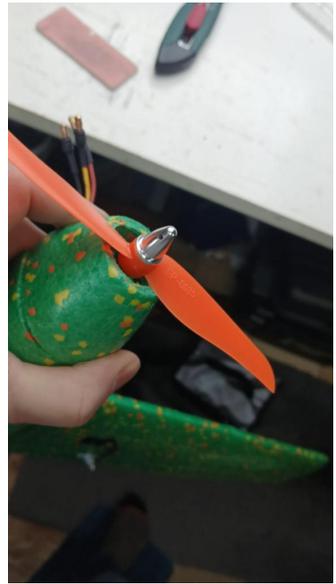
Square thrustline will do, no harm in a bit of side (right) and down

I'm going to glue it in and set the angle with the glue



Glued in place





Happy with that. There's no need to cowl in the motor.

The balance seems to be about right which is the main thing.
So I plan to install the battery under the wing
on / near the CofG



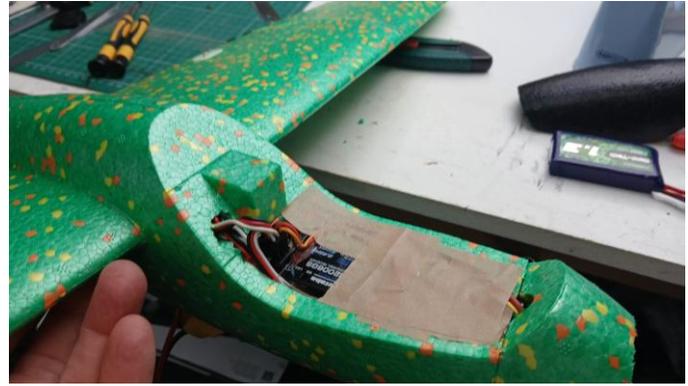
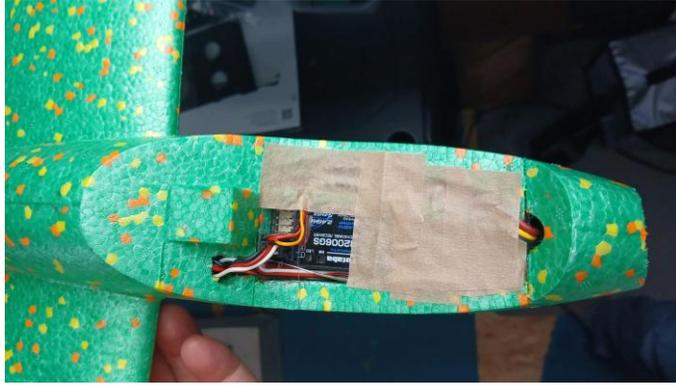
*So now, only the battery, esc and rx to find a home for.
With a 1300mah 2s battery and rx, it weighs in at 380g
I'll aim to fly it to assess the performance with the 2s / motor
prop combo as supplied. We'll see if cooling etc is
required based on that.*



Elevator servo extension lead

I ran it up to the trailing edge and made a channel just inbd of the wing to fuselage line for the lead to sit in.

From here in, its about getting the leads to where you want them to you rx. I've got my rx at the back of the cockpit area. My esc slotted in from underneath



Hollow out the hatch as needed to clear the equipment and wires if required



The final stage is the battery location. Double check the CofG. Before finally committing. Mine is slotted in from the side beneath the wings.



Battery cover in place



My finished lidl glider. notice i have taped over the spar and servo wire channels. Added stickers to aid with orientation. The battery is a tight fit so I plan to test fly it first before finalising the battery cover

I hope everyone can use these pics for inspiration for your own lidl glider builds.

The first flight was very successful. It flighs very straight and true. Only small control surface deflections are required for smooth flight. On 2s and the orange 6x4 prop, its not that quick. I changed to a spare apc 6x4 which made a small difference. I think a 6x6 would see further improvements



On the second flight, I noticed the roll rate was reduced somewhat. Still flyable but landed to check and one aileron servo arm had snapped.

Easy fix and I think I'll add a small fixed fairing to protect the arm.

