

# Scale Soaring UK

The forum for all your modelling requirements relating to scale gliders  
<https://scalesoaring.co.uk/phpBB3/>

## 40% Scratch Built ASG29

<https://scalesoaring.co.uk/phpBB3/viewtopic.php?f=12&t=469>

### Re: 40% Scratch Built ASG29

by **Simon WS**

Page **1** of **1**

Posted: **03 Sep 2015, 16:42**

Just to complete the whole story, after the successful certification flights and some slope soaring action, I added scale details.

<https://youtu.be/ia8JfGpja3M>



































**Re: 40% Scratch Built ASG29**  
by **Simon WS**

Posted: **03 Sep 2015, 15:50**





P1010534 by swarrans, on Flickr





P1010535 by swarrans, on Flickr



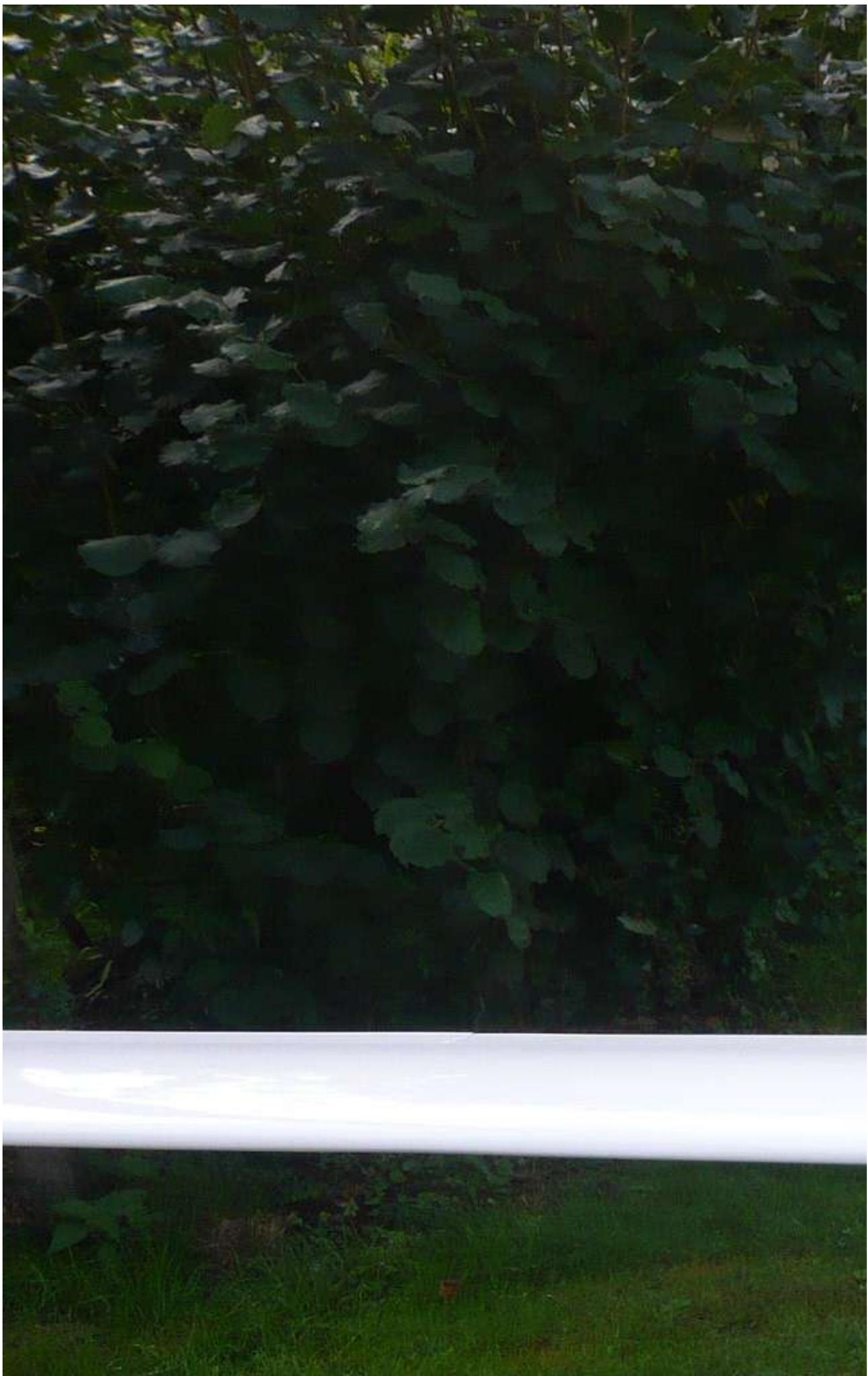


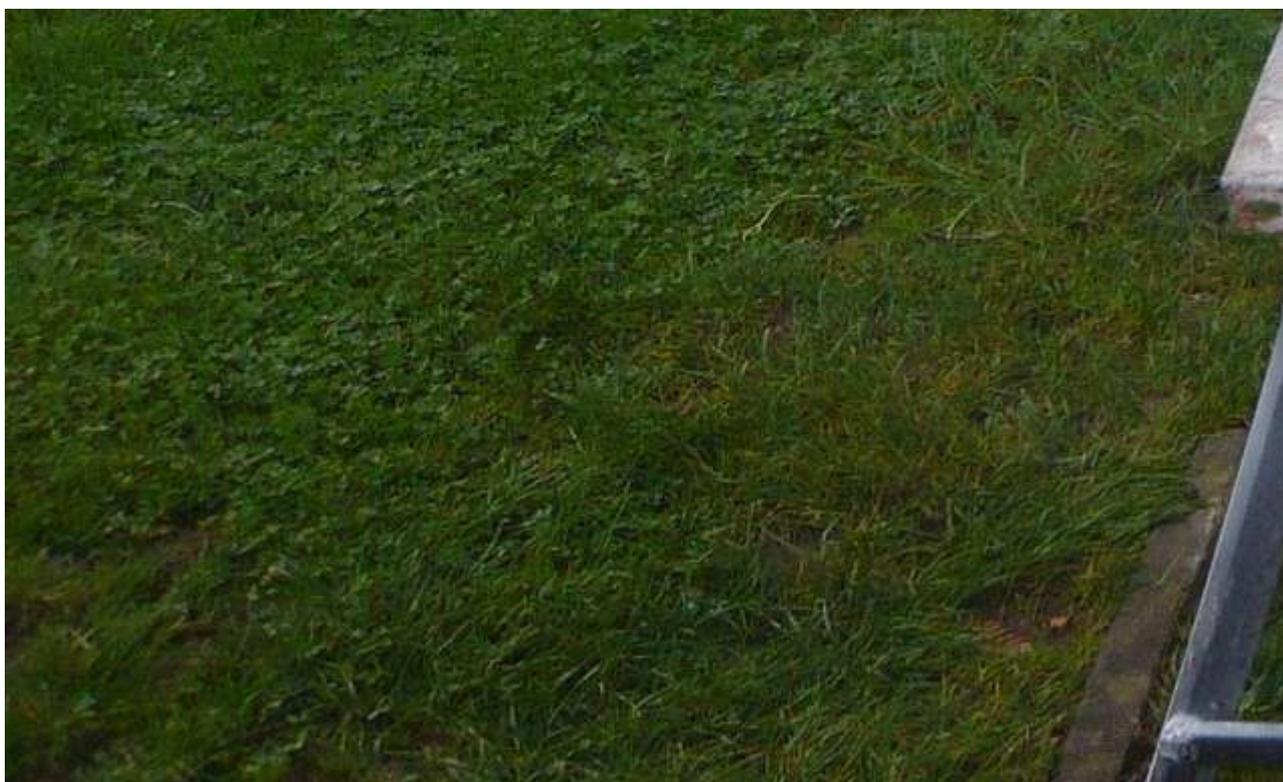
P1010539 by swarrans, on Flickr











P1010543 by swarrans, on Flickr



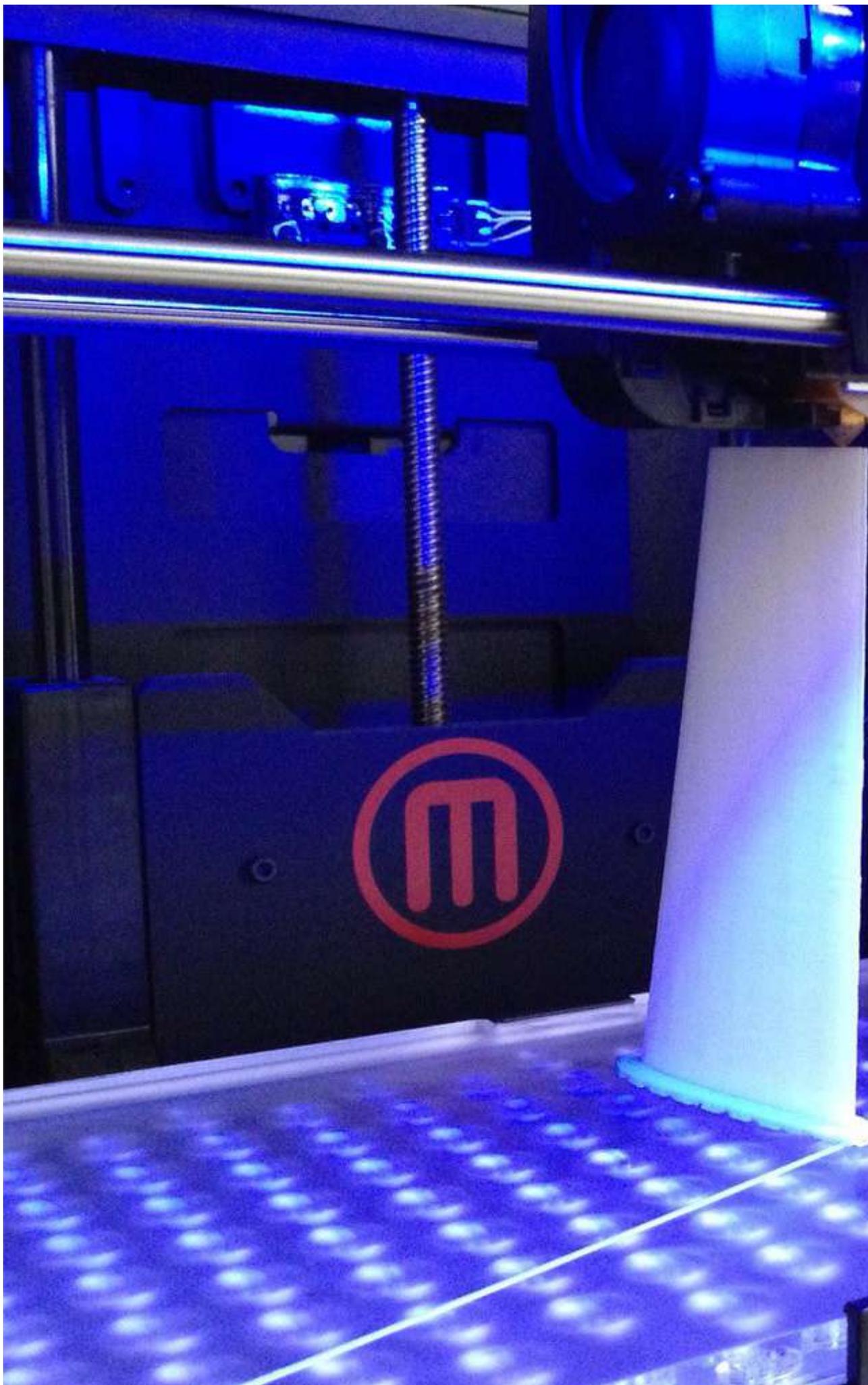


P1010544 by swarrans, on Flickr





Printed the wing tips with a 3D printer - was quite new then - common as muck now!





Makerbot by swarrans, on Flickr





Wing tip joiners and link box between 1 inner aileron and mid aileron - worked really, rock solid connection and saved yet another pair of servos!





P1010556 by swarrans, on Flickr





P1010557 by swarrans, on Flickr





P1010558 by swarrans, on Flickr





P1010559 by swarrans, on Flickr

Yet more painting!























P1010568 by swarrans, on Flickr

Ready for her maiden at Middle Wallop!





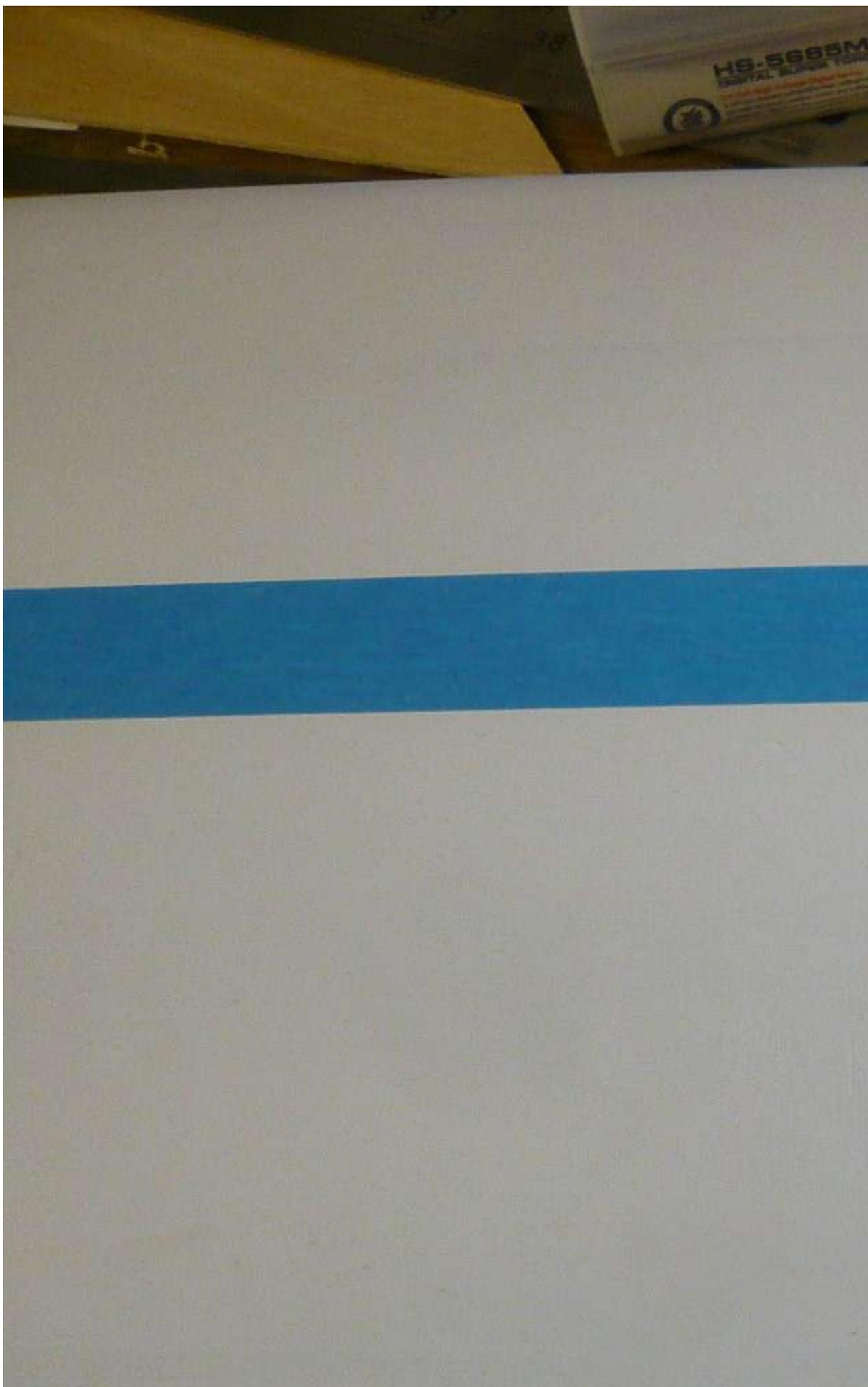
P1010578 by swarrans, on Flickr

## Re: 40% Scratch Built ASG29

by **Simon WS**

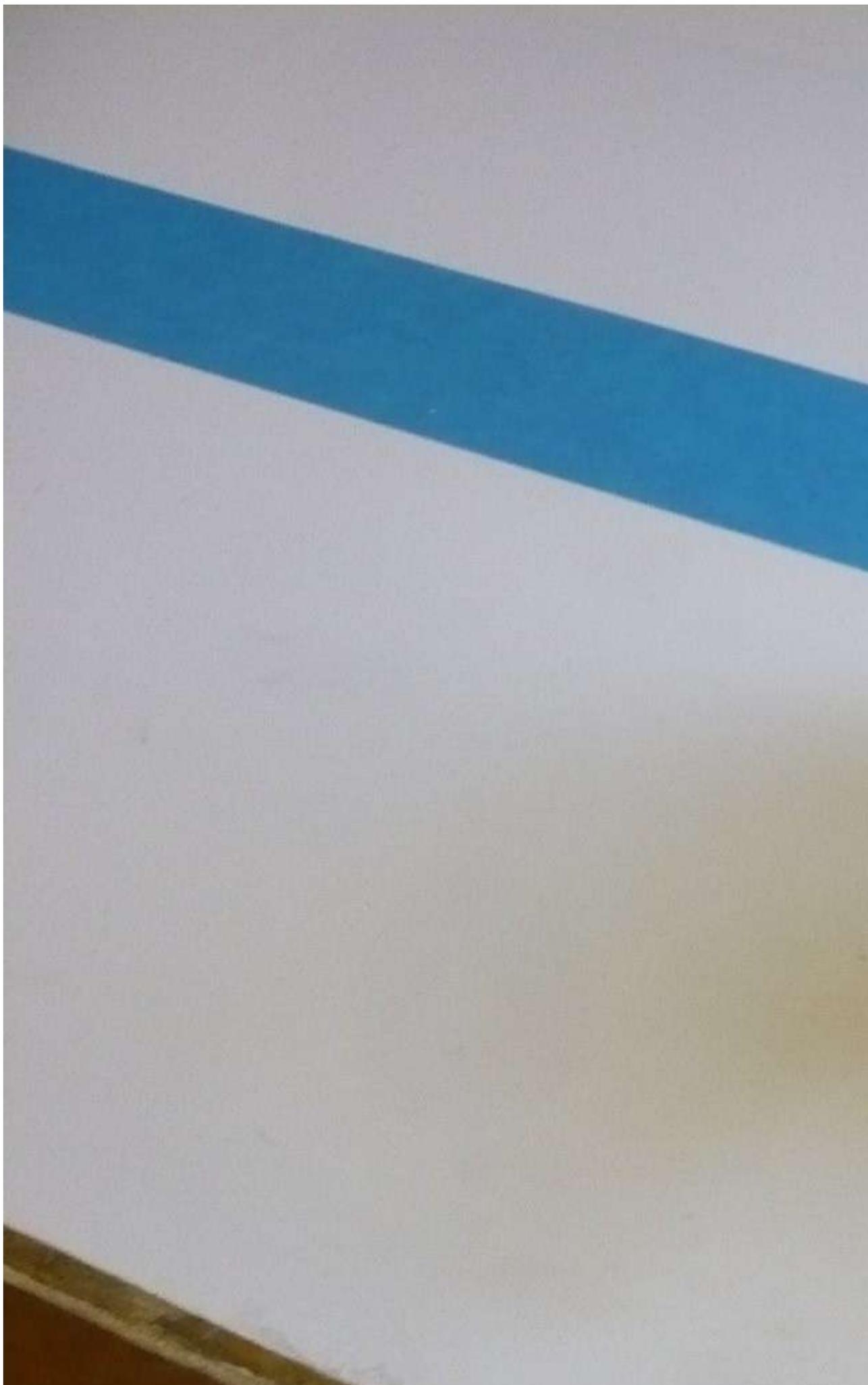
Posted: **03 Sep 2015, 15:41**

Now to cut all the servo holes etc



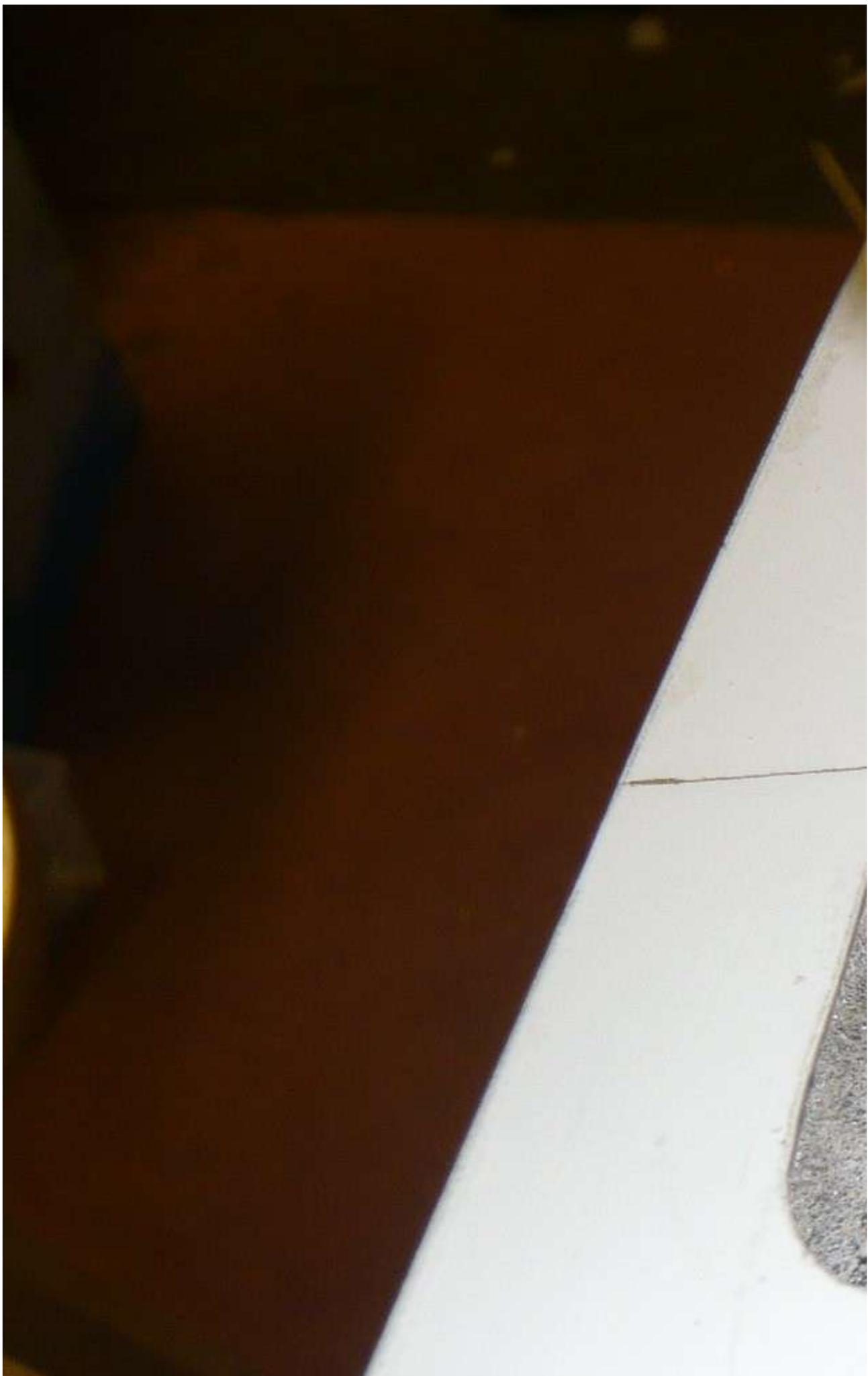


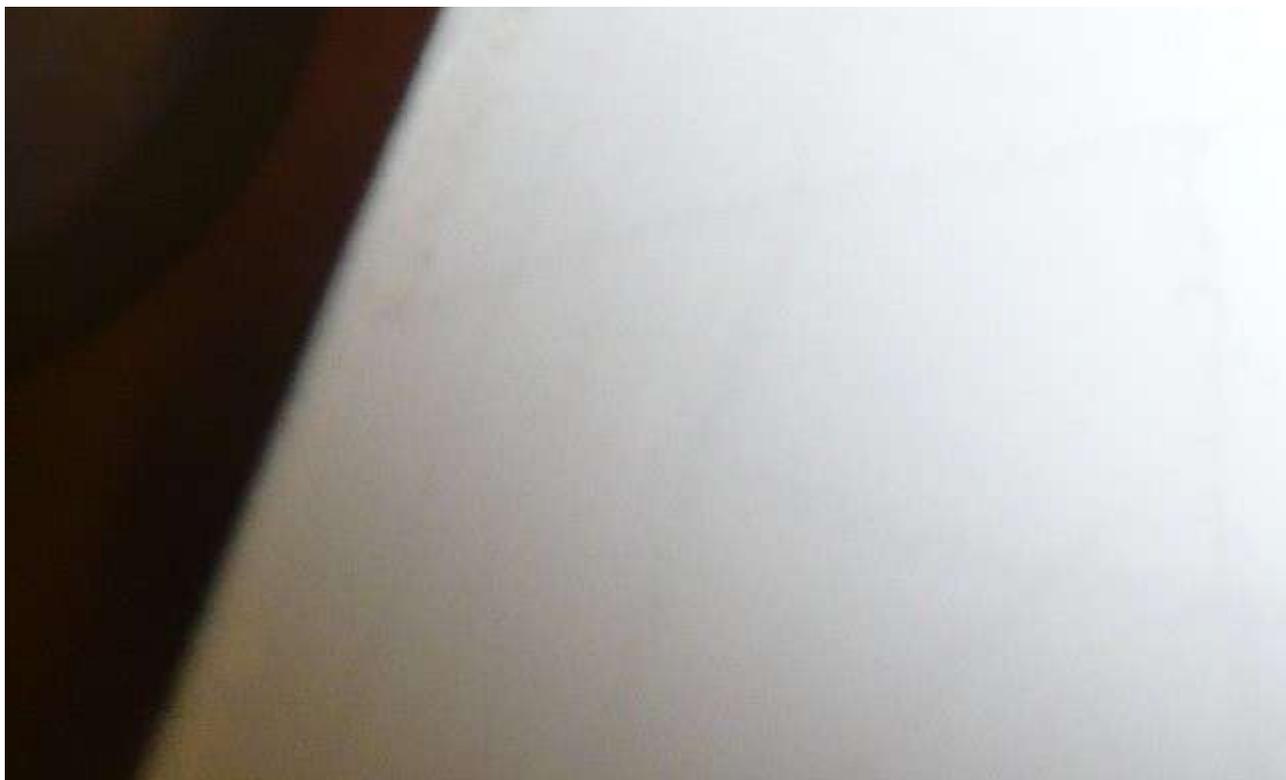
P1010502 by swarrans, on Flickr



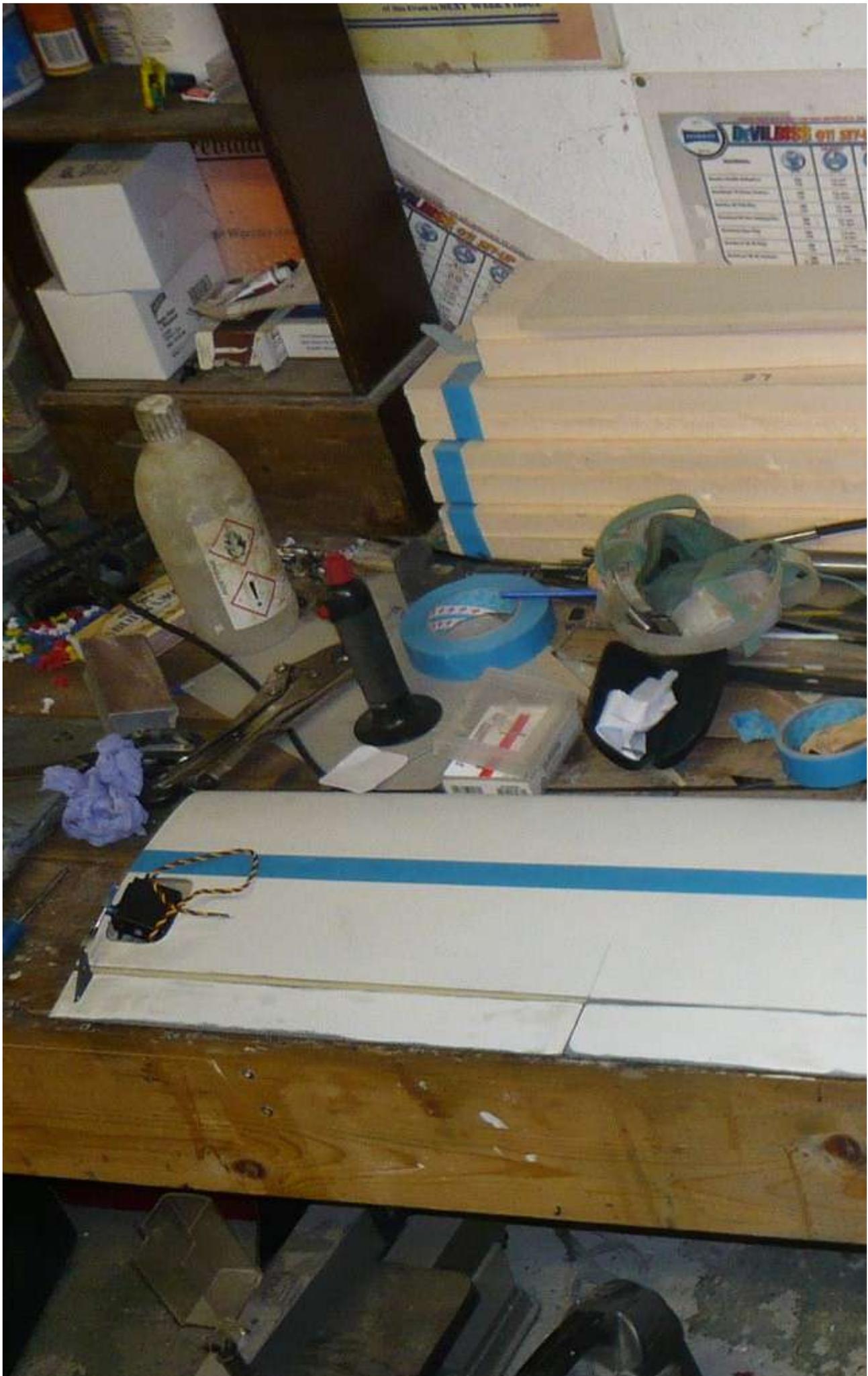


P1010504 by swarrans, on Flickr





P1010507 by swarrans, on Flickr





P1010509 by swarrans, on Flickr

Burning holes for the servo wires using a jig and heated rod - worked well.





P1010513 by swarrans, on Flickr





P1010514 by swarrans, on Flickr





P1010516 by swarrans, on Flickr















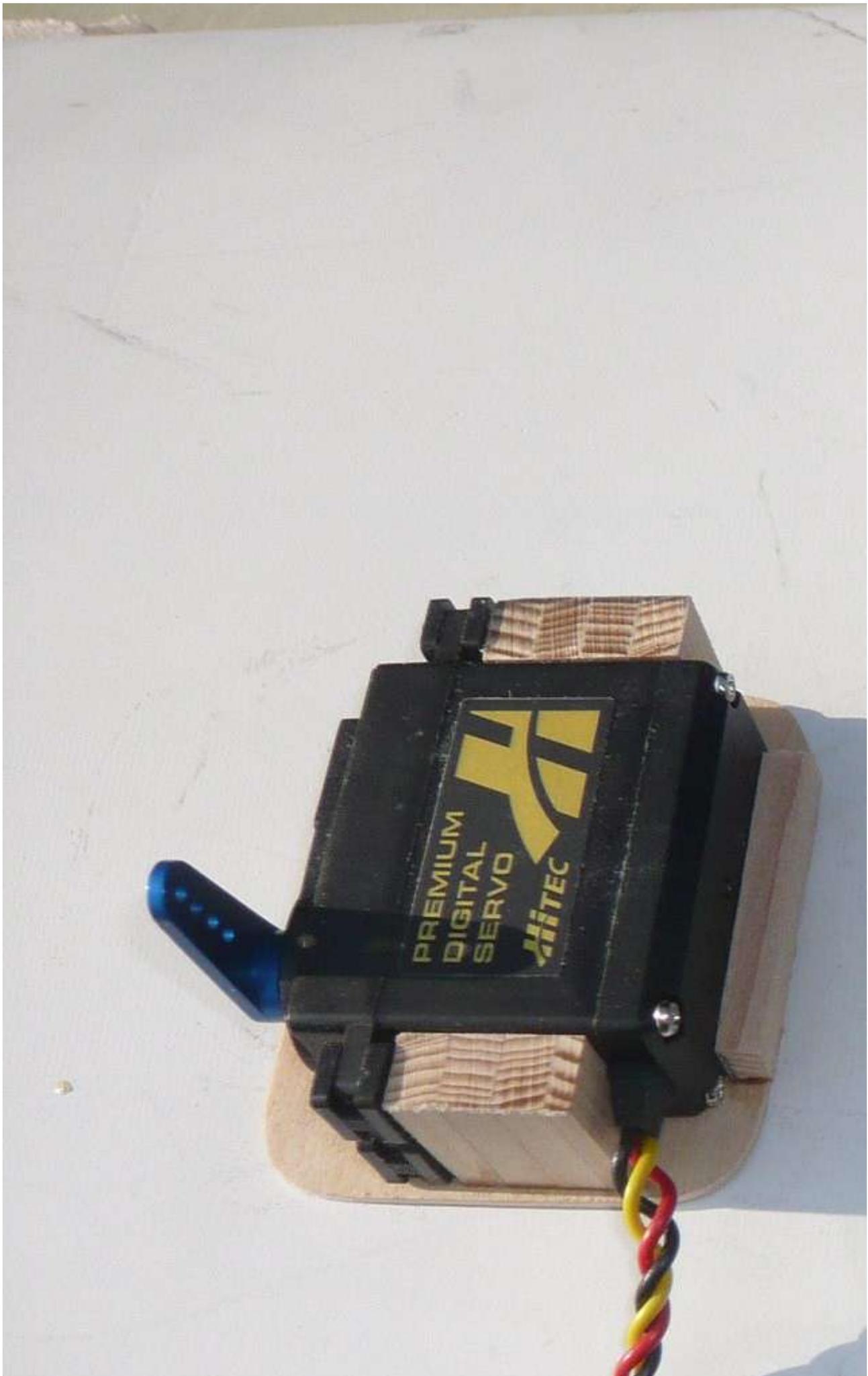


P1010522 by swarrans, on Flickr











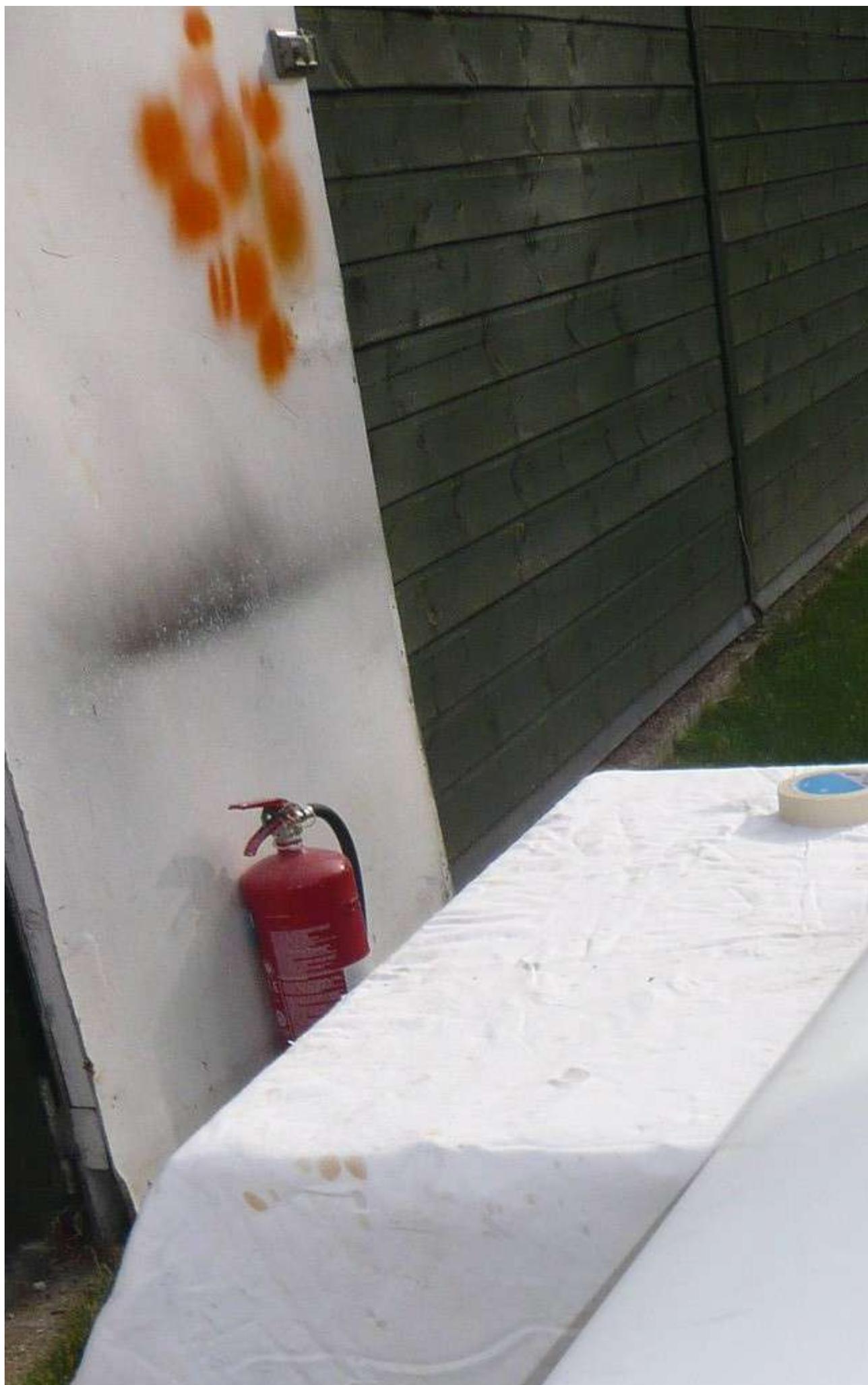
P1010526 by swarrans, on Flickr

Lots of control surfaces to paint!...





P1010527 by swarrans, on Flickr



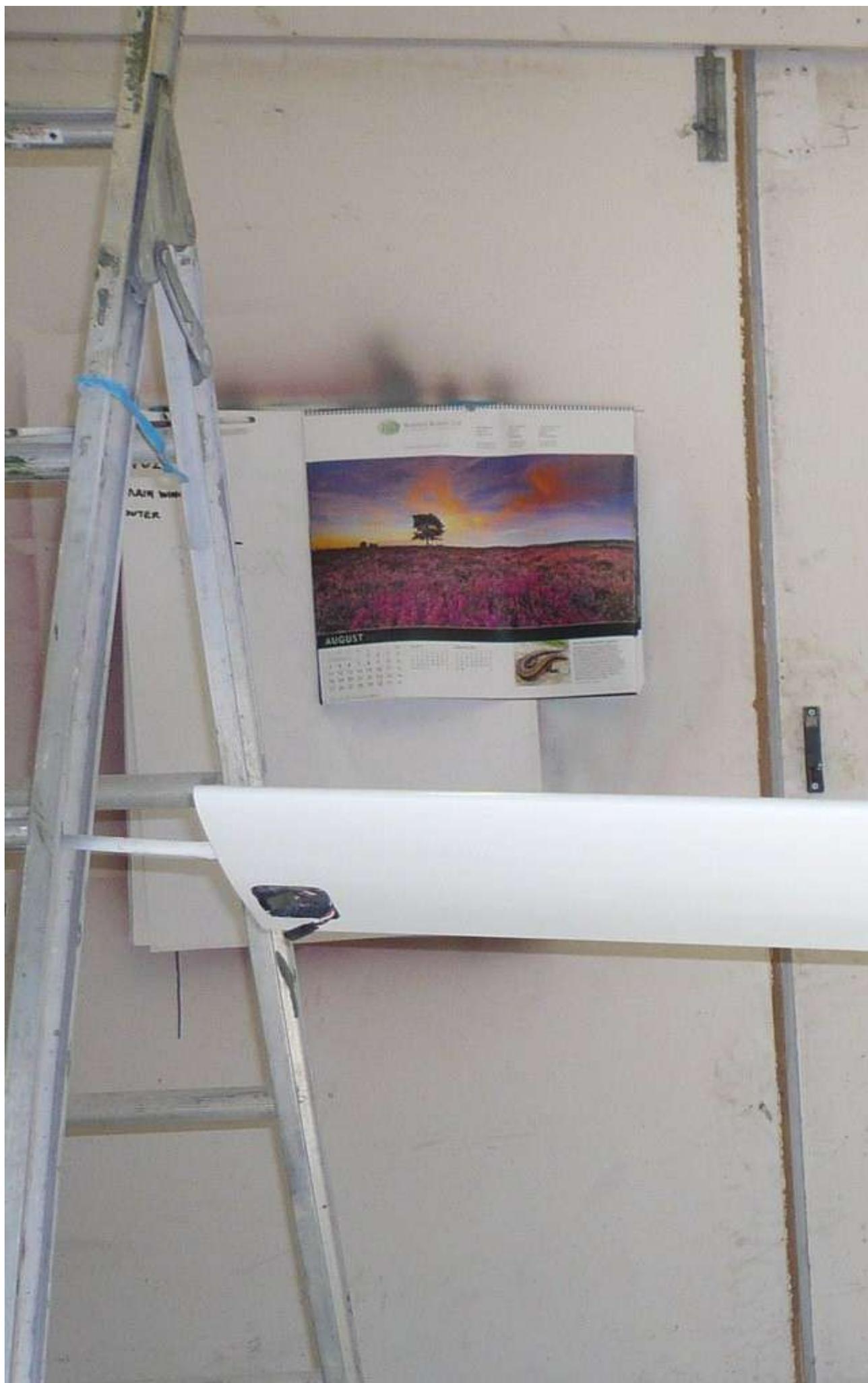








P1010531 by swarrans, on Flickr





P1010532 by swarrans, on Flickr





P1010533 by swarrans, on Flickr

## Re: 40% Scratch Built ASG29

by **Simon WS**

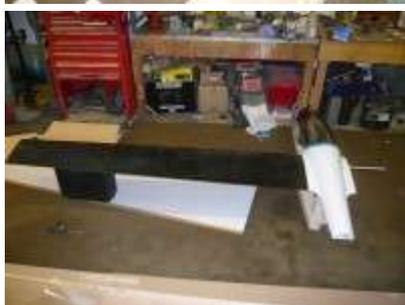
Posted: **03 Sep 2015, 15:24**





Cutting out the flaps and ailerons - I REALLY hated this bit...





## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 15:08**

From memory there were 4 layers of 200 g/m<sup>2</sup> carbon cloth and 4 layers of 200 g/m<sup>2</sup> glass cloth in the inner wing panels. 2 of each 4 were cut at 45 degrees to maximise torsional as well as longitudinal stiffness. They have proven to be seriously strong!





## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 14:56**

Thanks Antonia and Terry, only a few hundred more photos to go!

The first instalment of building the fuselage and tailplane took until May 5th 2013 which was 291 hours build time and total cost (inc. electronics) of £889.32

The original thread had now had 13,686 views!! (I did keep a diary with some of the info!)



## THE WINGS

Hot wire cut the foam cores and made a building board





There were 640 metres of this 24K carbon fibre rovings in the wing's spar caps!

I decided to use a steel walled tube stuffed with carbon rovings to try and keep the weight down (if I hadn't it would have ended up about 3 Kg heavier than the final 23 Kg lardiness!) Quite an interesting process doing this - wet out the rovings, double them over and pull through the tube with wire. If they go through easily add some more and so on until you can't pull them through any more. Then take just a few out and pull through again - that way the tube is absolutely stuffed with well wetted out carbon.



Do I look pretty?!

Made wing joiner boxes from multiple layers of carbon wrapped round the wing joiner. It was a B\*\*\*\*r getting them off again but they still fit well even today so it must have worked.



Cut the shear web slot using a heated up nail melting right down to the fully cured spar cap, then put in the rammed shear web, pooled it all with thickened epoxy and then repeated the multiple lengths of carbon rovings for the other side's spar cap.

## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 11:26**





**Re: 40% Scratch Built ASG29**  
by **Simon WS**

Posted: **03 Sep 2015, 11:23**





## Re: 40% Scratch Built ASG29

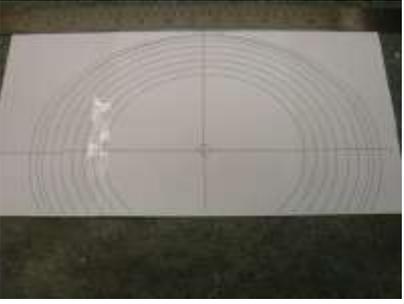
by **Simon WS**

Posted: **03 Sep 2015, 11:11**

The offending article!..



Start again, using a different (and much better technique)





It's like deja vu all over again!!

## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 10:59**







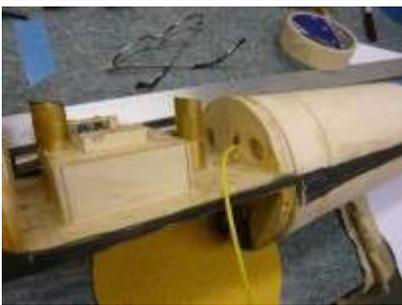
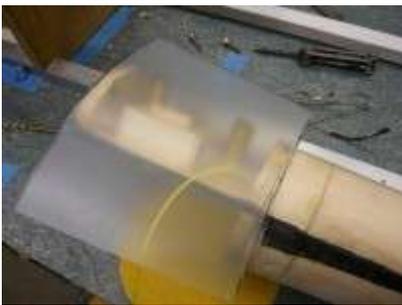
There now follows a respectful silence when we remember the crisis of me using too much vacuum and crushing the the first fuselage!...

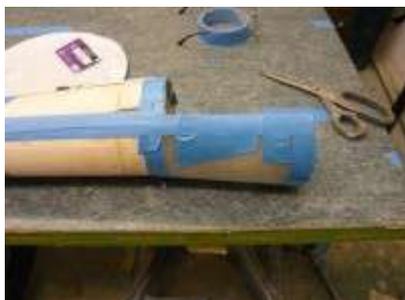
Worlds fell apart, wine lakes were drunk, and the Forum Spirit allowed me to dust myself off and start work on a new fuselage...

## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 10:53**







## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 10:49**





## Re: 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 10:46**







## 40% Scratch Built ASG29

by **Simon WS**

Posted: **03 Sep 2015, 10:43**

I might have a go at posting the pictures, but not the words of the "lost" build thread I originally did for my 40% scratch built ASG29....

History was that I started the build on Saturday Dec 8th 2012 and finished the flying structure on Oct 4th 2013 and took 680 hours.

I will miss out the aborted first front fuselage section that I crushed when vacuum bagging it, so the first part of the build starts with the construction of the rear fuselage assembly (I decided at the outset to make the fuselage in two parts so that I could transport the glider "easily").







Powered by phpBB® Forum Software © phpBB Limited

All times are UTC  
Page **1** of **1**