

# Scale Soaring UK

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

## Foka 4 (1/4 scale)

<https://scalesoaring.co.uk/phpBB3/viewtopic.php?f=12&t=1424>

### Re: Foka 4 (1/4 scale)

by **Nigel Argall**

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Posted: **17 Sep 2018, 22:01**

Well done! I was worried you had stopped and taken up golf or something. Great to get to that 'nearly done' moment.

### Re: Foka 4 (1/4 scale)

by **Martynk**

Posted: **17 Sep 2018, 13:47**

....continued



and



Continuing with the canopy ---I thin put off the "pull" for another 5 weeks. 1mm PETG was sourced - 5 sheets 750mm long. It took me 4 attempts and I ended up using number 3 following Roo's (IIRC) method of heating in the oven and forcing down over the plug. The plug was supported on two lengths on M10 studding and clamped in the workmate. I couldnt get the pointy bit at the front right

This is how it ended up.. Not too bad but about as imperfect as the rest of the model so it doesn't look out of place,



The front was cut off and I made up a solid section out of laminated Lime. Sanded and filled etc



## Markings



This weekend, I started work on the markings..



and



(not sure why this image has come out as a thumb nail)

For some reason the mask left some adhesive residue on this side. Comes off with careful finger rubbing.

All masks were done in CAD except for the -----FOKA 4 ----- which was sampled. However, the sample didn't account for the compound curves so its not exactly right. The right side had to be guessed as I didn't have a photo

So nearly there. Weight so far with noseweight is just under 5kG but it needs more noseweight 🤔 I reckon another 500gm should see it airworthy

Martyn

## Re: Foka 4 (1/4 scale)

by **Martynk**

Posted: **17 Sep 2018, 13:37**

mm Cant believe its over 9 months since I last posted an update. Most of the time has been spent doing covering and painting etc. Not the most exciting thing to write about and then I err forgot...

So a brief catchup



The original idea was high build > grey primer > white primer then a 2 pack white as a base



I had this slight indentation to get rid of first where the sheet had pulled inwards around the underside of the front of the fus. Not spotted until after I had glassed the inside. So a liberal coating of epoxy with micro alloons and sanded back. The dent is still visible but nowhere near as much.. And its underneath. Who looks underneath? 😊



What did take a long time was smoothing out the hanger rash and errors in my crap construction. This seemed to be an endless cycle of paint > fill > paint etc. Not helped as I was adding dings as fast as I could fill them

Eventually, I gave up on the filling and applied the 2 pack, which due to an error on my behalf, congealed in the spray gun when I was half way through and I ran out of paint.. So I eventually finished it off with Halfords Rattle Cans

This is what I am after



and this is what I ended up with. Masking the fus sides was very difficult and its definitely not correct around the nose.



I needed to make a canopy. Something I had been putting off for months as this was new territory



The plug was straightforward:

Ply frame, fill with light foam and sand to shape, cut back foam and fill with plaster of paris than sand smooth



etc.

More to come - run out of attachment options

Martyn

## Re: Foka 4 (1/4 scale)

by **Andrew Ray**

Posted: **02 Jan 2018, 20:45**

Lovely job Martyn and looking forward to seeing this finished.

## Re: Foka 4 (1/4 scale)

by **Martynk**

Posted: **02 Jan 2018, 09:57**

Happy New Year

Apologies - I have been a bit slow with the updates.

Sheeting wings is not what I consider exciting work so no progress photos..

Both wings have now been fully sheeted and are more or less completed bar a little filler and final sanding. I still have the aileron servo hatch covers to make and still pondering the best way of doing this...

However, I have managed a dry assembly.



Have to admit that I really felt a sense of achievement at this point..

So disassembled and back to the workshop.

Wing was carefully aligned and the upper fus over the wing bit (not sure what the proper name is) was assembled from 1/4" balsa. The bolt access hole is lined with aluminium tube. I'll probably add a plug so its not too visible



and with a bit of epoxy plus micro-balloons then lightweight filler to get a blend



Next job is to finish off the nose area - the shape isn't quite right, final sand and then glass the fus and wing (and build the aileron servo hatches)

More to come.

Martyn

## Re: Foka 4 (1/4 scale)

by **Martynk**

Posted: **12 Dec 2017, 11:16**

How do you embed a YouTube movie?

## Re: Foka 4 (1/4 scale)

by **Martynk**

Posted: **12 Dec 2017, 11:14**

A bit of progress. I have been mainly working on the brakes for the past few days. I decided on a single Schemp type brake opening at the top. There just wasn't enough space available for a double. Basically, I followed the design that is published here but reworked it for a single blade and reduced it in size

The blade and actuating arms and horns cut from 1/16" Fibreglass board



The blade is 300mm long by 20mm deep



The box is 1/16 ply sides, balsa end caps

Basically - here is a bench test

[https://www.youtube.com/watch?v=5H9\\_uh-bJR8](https://www.youtube.com/watch?v=5H9_uh-bJR8)

and installed in the wing with a 1/16 ply cap

<https://www.youtube.com/watch?v=plZT833iCyM>

The rest of the work has mainly been about cracking on with the starboard wing which is catching up with the port wing.

Need to build another Schemp brake now. The GF parts were cut at the same time so are hopefully identical. We will see. 😊

## Re: Foka 4 (1/4 scale)

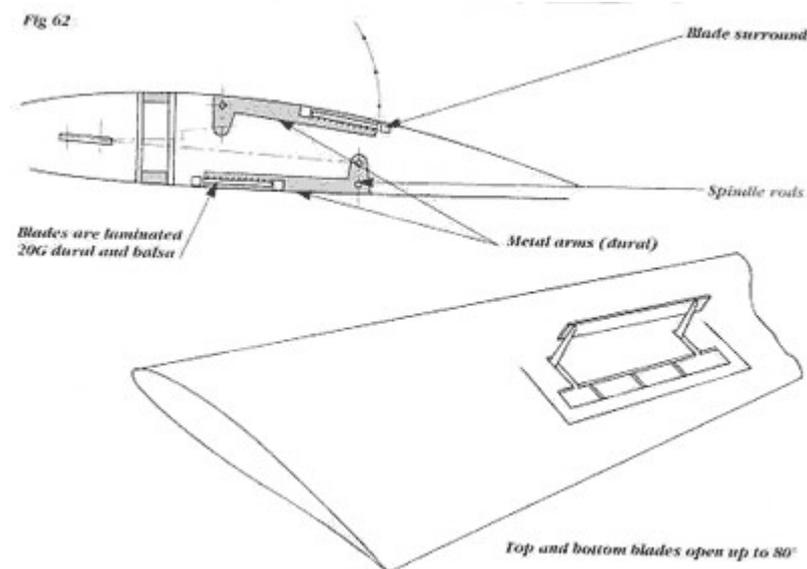
by **Martynk**

Posted: **04 Dec 2017, 13:32**

Thanks Chris

I have got the diagram for the Schemp brakes from here and I was planning on scaling that. They look straightforward enough to make, but the space I have available is rather limited and the blades and operating mechanism would be rather narrow.

I could do something like this quite easily and fit them upper and lower,



DFS Airbrake Installation MUI3-D3

DFS\_AB4.gif (9.96 KiB) Viewed 2294 times

(image off this site)

I think that would work and importantly would not weaken the wing

or possibly spend some cash (reluctantly) and get a commercial set from Gliders

<http://www.gliders.uk.com/images/1000.370.jpg>

Need to make a decision soon..

## Re: Foka 4 (1/4 scale)

by **chris williams**

Posted: **04 Dec 2017, 12:19**

Martyn, top and bottom brakes are best made up in one unit. However, they are the proverbial

son-of-a-female-dog to get to open and close properly.

Top spoilers, used in conjunction with up-going ailerons are very effective and simple to fit and operate. I won't tell anyone if you don't... 😊

## Re: Foka 4 (1/4 scale)

by **Martynk**

Posted: **04 Dec 2017, 11:57**

A bit more progress over the past week. The problem I have is that its been rather cold and despite leaving the heating on, the PVA glue doesn't always set properly. It stays rubbery and white rather than dries hard and clear.

Basically, its been a case of plodding along. No rocket science. The spruce main spars were extended out, webbing fitted (full thickness to about 1/3 span, then conventional vertical grain 1.5mm balsa for the next 1/3. The last 1/4 only has the carbon tube as a spar. This has given me a very nice strong and stiff wing which should have a nice gently bend when loaded up.



Rear spruce spars have been added and the aileron LE has 1/4 x 3/16 balsa top and bottom. When dry, the aileron was carefully detached and the cap strips added.

(Scale police please ignore this statement, the aileron is rather small so its been extended by one bay.. 😞 )



The top of the wing was sheeted at the wingtip

The rear edge of the wing was rebated to take a 1/32 ply shroud. I made up a little rebate tool and sanded a nice little recess



and



After a lot of messing around due to the slimness of the wing section at the wing tip, hinge blocks fitted and Robart hinges fitted and tested and actually turned out better than expected.





Not much space for a servo so the servo box has been started. Next job will be to fit a plat form and pushrod and horn in the aileron.



The gaps in the aileron and the shroud area all inlaid with 1/16 balsa. Very satisfying doing that



Finally, this weekend, I have made a start on the right wing panel while the weather has warmed slightly.



I now have a problem. I was planning on fitting the scissor air-brakes as per the original. Unfortunately, the space I have in the wing is really not deep enough - I would only be able to get a 12mm x 300mm blade in place (top and bottom) and I don't think this will be enough for a model of this size or mass. An alternative would be to add flip-up air-brakes/spoilers. These could easily be 25mm wide and would lay flat in a wing recess when not deployed. The scale police will be horrified but I would welcome your thoughts

## More to come

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