

Scale Soaring UK

The forum for all your modelling requirements relating to scale gliders
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Slingsby T.50 Skylark 4-BC Sorting

<https://scalesoaring.co.uk/phpBB3/viewtopic.php?f=12&t=2213>

Re: Slingsby T.50 Skylark 4

Page 1 of 1

by **B Sharp**

Posted: **08 Mar 2019, 20:23**

Thanks guys. To address the comments in order.

Yes Chris, 1/5 rules, especially on cost and ease of transport.

Multi tasking photography? The answer is my wife's small camera held upside down in m left hand and Tx in the right watching the plane through the LCD screen. Results - 20 odd images and only 2 usable.

Stephen, my local slope and only 10 minutes drive from my house. Not a great slope by any means but a fabby view.

Thanks Barry. F86!

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **StephenB**

Posted: **08 Mar 2019, 20:00**

Excellent! Well done on the maiden Brian and kudos for the multitasking feat of flying and snapping at the same time.

A very nice slope you have there too 😊

Re: Slingsby T.50 Skylark 4

by **Barry_Cole**

Posted: **08 Mar 2019, 18:07**

Well done Brian, looks good.. What's next??



BC

Re: Slingsby T.50 Skylark 4

by **John Vella**

Posted: **08 Mar 2019, 17:30**

Brian, well done. To do a maiden flight and take those pictures at the same time is impressive stuff. I am sure those lovely long wings will take some abuse. Just remember when rolling do not pull hard at the same time. Regards John. 😊

Re: Slingsby T.50 Skylark 4

by **FrankS**

Posted: **08 Mar 2019, 17:28**

Looks lovely, top result

Re: Slingsby T.50 Skylark 4

by **chris williams**

Posted: **08 Mar 2019, 16:49**

Well done Brian...5th scale rules!

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **08 Mar 2019, 14:37**

The Skylark 1V had it's maiden flight this morning. It was cold, overcast and did I mention it was COLD. The wind was out of the South West and as I arrived at the slope it was only about 5 or 6 mph, however that increased to around 12 to 14 mph as the morning progressed. I had three trimming flights which saw me adding 5 clicks of down elevator and 3 clicks of right aileron. The C/G is pretty much in the right place at 33.3% of the root chord although I might move it back slightly in future flights.

The Skylark flies very well and is not in any way difficult to control. The stall is a non-event and the speed range is nice and wide thanks no doubt to the choice of Quabeck 3.5 -14 to 12 as the wing section. The landings are easy due to the stability of the aircraft and the effectiveness of the brakes.

On the third flight I managed to bag some photos (shown below) - Tx in one hand and camera in the other. I did throw the skylark about a bit (sorry purists - it's just my nature) and it will perform loops, stall turns, chandelles and rolls (the rolls are a bit slow).



Pre-flight pics at my local hill this morning.



Wind around 6mph and underwear nice and clean.



Proof of flight.



Wind now around 14mph and underwear still clean!

All in all the Skylark is a rather nice aeroplane and at 1/5 scale it is easy to carry up the hill.

Brian. 😄😄😄😄😄

Re: Slingsby T.50 Skylark 4by **Andrew Ray**Posted: **02 Mar 2019, 19:30**

2 in stock at [https://rcworld.co.uk/acatalog/Full-Bod ... N4566.html](https://rcworld.co.uk/acatalog/Full-Bod...N4566.html)

I have a couple of these and good value for the money they are too.

Re: Slingsby T.50 Skylark 4by **StephenB**Posted: **01 Mar 2019, 23:44**

A canny buy that Brian 😊

Meanwhile for the rest of us, the search for a sensible money pilot figure continues

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Re: Slingsby T.50 Skylark 4by **Barry_Cole**Posted: **01 Mar 2019, 22:41**

Discontinued, B****r



BC

Re: Slingsby T.50 Skylark 4by **B Sharp**Posted: **01 Mar 2019, 21:39**

Sorry guys, that was a bit of misinformation. The company is Hanger 9 and the details are (J-3 Cub 1:4 Scale Full Body Posable Pilot Brand: Hanger 9 Part Number: HAN4566 £14.09 Web Price.) It appears to be out of stock at present.

Further to the Skylark: it weighs in at 7lb 5oz (3.34kg) which give it a wing loading of 16.6 oz/ft² Much easier to carry up the hill!

I will post further info once I have chucked it off a hill - however the forecast for the next week is a bit iffy up here.

Brian 😞

Re: Slingsby T.50 Skylark 4by **Barry_Cole**Posted: **01 Mar 2019, 21:26**

Brian,
Could you give us a link to that pilot, or the SKU number.

Thanks. BC

Re: Slingsby T.50 Skylark 4by **B Sharp**Posted: **01 Mar 2019, 20:45**

Thanks guys!

Stephen, the pilot is a Hobbyking 1/4 scale Piper Cub pilot. Scaled at 1/4 the full size pilot would be 5ft 2in, but scaled at 1/5 the full size pilot would be 6ft 2in tall. So this is a cheap pilot figure that works for many aircraft.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **StephenB**

Posted: **01 Mar 2019, 20:33**

Looks lovely Brian, finish and build are immaculate. Looking forward to the update on her maiden.

What have you used for the pilot?

Re: Slingsby T.50 Skylark 4

by **Andrew Ray**

Posted: **01 Mar 2019, 19:51**

Crikey, I haven't been on here for a while and shocked to see I have missed the build, I need to go back to the beginning and catch up!

Beautiful job Brian, of one of my favourite gliders.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **01 Mar 2019, 18:59**

Thanks, but not so fast Cliff.

I had another look at the calculated C/G locations and was a little concerned that they were located a bit further aft than I expected. I checked the advertised location on the plan and that worked out at 25% of the root chord. (a bit too far forward for my liking) I then calculated the 15% static margin C/G position and that worked out at 39% of the root chord. (a bit too aft for my liking) I have now opted to go for a 33.3% root chord C/G position and work from there. This is the second time that my C/G calculation software has given me a C/G location which is too far aft for reasonable stability. The last time was on my MU28 glider and that made for a very exciting first flight. I know I have flown gliders in the past with the C/G back at 40% - 43% root chord but these were competition thermal soarers which are a very different animal to a scale glider. Experience tells me that 33% is a safe starting point and I can work the C/G back (or forward) from there.

Brian. 😊😬😬😬😬

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **01 Mar 2019, 16:32**

Today I have managed to erect the Skylark in it's semi- complete state for the first time. It all went together quite nicely and I think it looks smart.

A session on the balancing rig saw me setting up C/G locations at 86mm, 92mm and 96mm back from the leading edge at the centre section. This equate to static margins of 15%, 12.5% and 10% respectively. I first added lead to the nose to get the C/G at 96mm back (10%) and then added two other lumps which will bring the C/G to 92mm (12%) and then 86mm (15%). After first flight I hope to be able to remove these two additional lumps to achieve the trim that I desire.





I still have control surface checks to carry out and some programming on the Tx before the maiden but we are nearly there.

Brian. 😊😊😊😊😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **28 Feb 2019, 22:27**

Robbie, I just had to man-up and get out my feather duster.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **RobbieB**

Posted: **28 Feb 2019, 00:20**

B Sharp wrote: ↑27 Feb 2019, 19:43

'I have now returned from a month sunning myself on a rock in the Atlantic.....'

Ye Gods Brian, how did you cope with the trauma of a months dust settlement in the workshop when you got back?

Re: Slingsby T.50 Skylark 4

by **StephenB**

Posted: **27 Feb 2019, 19:54**

Soon be airborne 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **27 Feb 2019, 19:43**

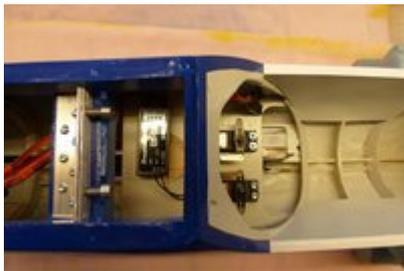
I have now returned from a month sunning myself on a rock in the Atlantic and at last I can report further progress on the Skylark.

This afternoon I have installed the receiver and all the fuselage servos as well as the wiring

harness. In the photos you will see the receiver mounted up at the top with the elevator and rudder servos mounted below. The servo lying on its side in the bottom of the fuselage is the aerotow release servo.



Front view.



From the top.

The two white coloured tubes in front of the receiver channel the twin aerials upwards in hopefully the optimum position for good reception. I have now to find a suitable spot for the switch before I locate the battery in a cosy little space in the nose.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **30 Jan 2019, 22:24**

Thanks guys

Brian . 😊

Re: Slingsby T.50 Skylark 4

by **roo Hawkins**

Posted: **30 Jan 2019, 13:31**

Looking really nice Brian

Re: Slingsby T.50 Skylark 4

by **Stuart Ward**

Posted: **30 Jan 2019, 10:05**

Looking forward to seeing it in the air in May, Brian

Stu

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **18 Jan 2019, 14:36**

Not so fast Stephen, there is still a whole pile of finishing and radio installation to do. However I hope to have the Skylark in the air by Easter. 😊😊😊😊😊

The plans for the next project are already on the drawing board! 🤪

Brian 😊

Re: Slingsby T.50 Skylark 4

by **StephenB**

Posted: **18 Jan 2019, 14:27**

Very tidy job Brian. You must be almost home and dry with this now and looking toward your next project 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **18 Jan 2019, 14:04**

All of the masking has now been removed and I am fairly satisfied with the results. You can see I have chosen a colour scheme with a red under surface and blue upper, the aircraft modelled being BGA1117 - BPC.



Fuselage masked and painted with red under side and blue top side.

I will now have to set the fuselage aside for 48 hours to allow the paint to harden off before I do any more work on it.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **17 Jan 2019, 22:19**

Yep Stephen. At this scale a £7 can goes quite a long way.

I have just been out to the workshop and it all appears fine. Tomorrow I will take off all the tape and newspaper and see how it looks. (now that IS exciting Vince) If it is not up to scratch I will just have to rub it all down and do it again. (NO - JOKING - that's never going to happen!!!!!!!!!!)

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **StephenB**

Posted: **17 Jan 2019, 21:19**

Rattle can paint job Brian?

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **17 Jan 2019, 21:11**

Is getting excited about some blue paint wise at your age Vince? 😊😊😊

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **VinceC**

Posted: **17 Jan 2019, 19:29**

This is getting exciting

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **17 Jan 2019, 19:18**

I am now at the stage of putting paint on the fuselage.



The fuselage all masked up and the first flood coat of blue.



The cockpit canopy masked off and the primer sprayed.

The basic white coats of paint are on and I am now starting to hit it with colour.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **Nigel Argall**

Posted: **10 Jan 2019, 17:57**

Whoaa! Impressive! No more ugly screws for me.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **10 Jan 2019, 00:03**

Nigel, the covers are held in place with good, old fashioned, invisible, Diamond Tape. The fact that you didn't see it proves it's worth. 😊

Brian 😊

Re: Slingsby T.50 Skylark 4

by **Nigel Argall**

Posted: **09 Jan 2019, 21:49**

Great work Brian. Not sure if I missed this earlier but what holds those servo hatch covers shut - shock cord or something??

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **09 Jan 2019, 11:29**

John, no I have NOT. We Scots are famous for buying the best whiskey and the best covering material that we can afford. We are also famous for being very cautious on the price of everything else! 😊😊😊

Stephen, yes, the ailerons were designed to be top hinged. I bottled out of trying to get five small pinned hinges on each aileron to line up correctly and then seal the gap. I used my favourite invisible tape to do the job instead.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **StephenB**

Posted: **09 Jan 2019, 11:17**

A very nice job Brian, are the ailerons simply top hinged with tape?

Re: Slingsby T.50 Skylark 4

by **john greenfield**

Posted: **09 Jan 2019, 11:15**

B Sharp wrote: ↑09 Jan 2019, 10:52

Chris, I know that profilm is pricy but I love working with the stuff. I have tried most of the alternatives but profilm is still my favourite.

Brian 😊

Brian

Have you changed nationality !!!!!

AEB

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **09 Jan 2019, 10:52**

Geoff, I am very good at making a mess, I do it all the time. However I am also very, very good at clearing up afterwards.

Chris, I know that profilm is pricy but I love working with the stuff. I have tried most of the alternatives but profilm is still my favourite.

Brian 😊

Re: Slingsby T.50 Skylark 4

by **chris williams**

Posted: **09 Jan 2019, 02:33**

Profilm, Brian...? Did you take out a mortgage? 😊

Re: Slingsby T.50 Skylark 4

by **Geoff Pearce**

Posted: **09 Jan 2019, 00:50**

Hey Brian I was lead to believe you didn't make a mess? 😊😊😊😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

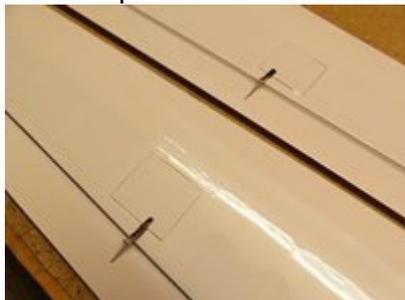
Posted: **08 Jan 2019, 22:02**

Well, my last post was in 2018 and it is now a brand spanking (am I allowed to say that?) New Year. So I will start of by wishing you all a Very Happy New Year.

I have not been idle over the festive (falling down) season. I have completed the ailerons and covered the centre section of the wing and also the wing tip panels with white "Profilm" and snazzy coloured wing tips. I made epoxyboard horns for the ailerons and got them all hooked up with the minimum of fuss. The servo hatches were formed from 1/32 ply with a "Profilm" covering. Job Done!



The completed and covered wing panels.



Tip panel detail showing the servo hatches.



Pushrod / horn detail.

My next job will be to attach the canopy glazing to the frame. This is always a fiddly job and is one I always dread, it is just so easy to make a mess.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **30 Dec 2018, 18:25**

Well, I've been and gone and made up my mind on the ailerons.

Today I have carved a new aileron from a length of 2 inch by 1/2 Balsa TE stock. Once it was fully shaped I clamped one end of the built up and also the solid aileron to the bench and then applied approx. equal amounts of torsional force to each. The built up and reinforced aileron had a twist of +/- 30 degrees. Under similar pressure the solid aileron had a twist of +/- 5 degrees. Sorry folks, but that is "No Contest" to me.

On the negative side it is not a scale structure and it weighs double the built up structure. On the positive side it is less likely to flutter if I get the aeroplane going a bit fast and also at 50ft no-one will ever notice (except maybe the Scale Police).

Brian. 😊😊😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **28 Dec 2018, 18:06**

While I continue to ponder the way forward with the ailerons I decided to get the fuselage finished to the point of painting.

The glass/epoxy covering to the fuselage was rubbed down with wet and dry. Upon inspection

there were a number of holes and other flaws all over the surface as well as patches of open weave. I was interested in the thread on filler elsewhere on the forum and was surprised to read that it was possible to thin P38 filler. I scraped P38 into the worst of the defects and gave then a quick sanding. I then thinned a large batch of filler, mixed in the red hardener and then painted a thin coat of filler all over the fuselage. I gave a second coat over areas which I felt it was required before the first coat set. After another session with the wet and dry I was very happy with the final finish which is now ready for primer.

I have now also added the nose skid and tail skid to the fuselage and have started to fair these into the fuselage underside.



The nose skid in place.



The tail skid.



Aft of wing covers being attached.



Aft of wing covers.



Aft of wing covers.

On Mike's plans he stipulates adding 1/64 ply covers over the wing/fuselage joint just aft of the wing mounting area. I decided to use 1/32 ply for these in the interest of durability and adjusted the shape to get a more desirable line. I have still to add a little glass cloth reinforcement to the underside of these and also to fair in the top of the joint with filler but they should be ok in operation.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **John Vella**

Posted: **19 Dec 2018, 14:22**

Brian, maybe the construction of my long MU13 aileron might help. The aileron is 3ft 7in long and 2 in plus wide. The facing is from 1.5mm Balsa on 5mm sq spruce. The front box is top and bottom 0.4 mm ply.



Root view.

The TE is balsa /0.8mm ply/balsa sandwich. The cap strips are 0.4mm ply. The structure is torsionally stiff and weighs 3 ozs. Regards John.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **19 Dec 2018, 01:16**

Robbie, the braced aileron is faced with 1/32 ply. The one furthest away is yet to be completed, I.e no leading edge facing.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **RobbieB**

Posted: **19 Dec 2018, 00:17**

Brian, are the leading edges faced or is that the bench I can see through the LE of the front one?

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **18 Dec 2018, 21:04**

That's the problem John, there is still very little torsional rigidity as it can still be twisted through almost 90 degrees.

Brian. 😡

Re: Slingsby T.50 Skylark 4

by **John Vella**

Posted: **18 Dec 2018, 19:22**

Brian that looks fine. Surely bendy is alright with Torsional Rigidity. I seem to remember the full size was not very aerobatic. What do you want to do with your Skylark ? Regards John.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **18 Dec 2018, 18:39**

Having taken heed of all your comments I have committed surgery on one of the ailerons and fitted it out with diagonal ribs as suggested. The aileron panel is now slightly stiffer but not what I would call adequate. It is still as bendy as a “long bendy thing”. I am waiting for a timber delivery from Balsa Cabin and when it arrives I will form a solid aileron and compare the stiffness of the two before proceeding further. (Question: can you get Viagra for balsa structures?) 🤔🤔🤔🤔🤔



Bendy and very bendy!



I have spent the afternoon rubbing down the epoxy/glass surface of the fuselage with 240 grit wet and dry. This is not one of my favourite jobs!!! The fuselage is now relatively smooth and ready for a coat of filler before finish sanding. However I now have a sore shoulder and no fingerprints. 😞

Brian.

Re: Slingsby T.50 Skylark 4

by **John Vella**

Posted: **17 Dec 2018, 13:15**

Brian, if that was my build I would cut out carefully the bottom cap strips with a Swan Morton blade. Then I would fit my diagonal bracing and reglue the cap strips. A relatively easy job and structurally much better than from solid. Regards John.

Re: Slingsby T.50 Skylark 4

by **Jolly Roger**

Posted: **17 Dec 2018, 01:18**

Are you covering with Solartex? That should improve torsional strength significantly. You could give it a go and peel off if it's still twisty.

Just a thought...

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **16 Dec 2018, 23:38**

I still think I am going with my original idea of a solid aileron. However, I was considering adding 1/32 balsa leading edge, trailing edge and cap strips on the upper surface so that they will show through the covering film and give the impression of the original ribbed structure. I did this once before and it looked quite convincing. By the way, at the moment I can hold one end of the aileron and rotate the other end through nearly 90 degrees. Bendy or what!

🤔🤔🤔 Brian.

Re: Slingsby T.50 Skylark 4

by **Peter Balcombe**

Posted: **16 Dec 2018, 23:22**

Brian,

If you cannot get straight bits of diagonal in place under the cap strips, what about using two thicknesses of thin ply,

You can flex them to get them in, then glue both together once in position to make a more rigid brace.

Just a thought 🤔

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **16 Dec 2018, 22:37**

Unfortunately Chris I have already added the top and bottom capping strips so diagonals would be a bit of a problem. The structure is so long, narrow and fragile that I have no confidence that it will not twist in the air.

Brian. 🤔

Re: Slingsby T.50 Skylark 4

by **chris williams**

Posted: **15 Dec 2018, 21:57**

Pin the aileron to the board, Brian, and add diagonals...works every time

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **15 Dec 2018, 20:21**

Thanks Guys for the comments. It's not an aeroplane that I got to "fly back in the day" so I cant comment on it's performance good or bad. However as they say "if it looks right it will fly right" and I feel that this one "looks right". 😊😊😊

Having just said that, I have faced up the aileron cut-out on the wing and it seems good and strong. However the aileron itself, after facing with 1/32 plywood, is still too bendy for my liking. The aileron is 1/2 inch thick, 1.5 inch chord and just over three feet long. Even with the horn mounted close to the centre of it's span I suspect that there will too much twist at either end when in flight. I am also worried about flutter when my flying gets "enthusiastic". I have ordered up some hard straight grain balsa and I will form up solid ailerons from that and see how they perform by comparison. I know that its not strictly scale but I would prefer a machine which handles well without too many limiting factors. 😊😊😊

Brian

Re: Slingsby T.50 Skylark 4

by **John Vella**

Posted: **15 Dec 2018, 12:33**

Good build Brian. I hope it flies as well as the full-size. I have happy memories of the "Wooden Nimbus" ,with Phil my CFI flying his Skylark4 and me in my Discus scratching together in light conditions on Edge Hill. Regards John.

Re: Slingsby T.50 Skylark 4

by **RobbieB**

Posted: **15 Dec 2018, 01:05**

Ah those Skylarks, don't you just love 'em.

Looks really nice Brian.

Re: Slingsby T.50 Skylark 4

by **Jolly Roger**

Posted: **14 Dec 2018, 23:43**

Looks lovely Brian. If you fancy chucking it off the hill the full-size first flew off... just drop in.

Probably worth covering it first though. 😊

Keep posting - happy to watch your progress.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **14 Dec 2018, 17:31**

I have now completed the second wing outer panel and finalised all the joiners. This afternoon I managed the first full assembly of the airframe and it appears to be pretty much Ok. In fact I am quite chuffed with the look of the glider at the moment. Also, it is very light! 😊😊😊



I have also now cut the right aileron from the wing panel. The wing still feels quite ridged but the aileron is very floppy. I will continue to face it up in the hope that it gets a little stronger.



Brian.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **02 Dec 2018, 15:25**

I have now dealt with the wing fixing problem. Mike Trew had originally detailed a hidden system constructed with plastic brackets on the underside of the wing and threaded plastic blocks bolted into the fuselage. Most of these off the shelf items no longer exist so I opted to adopt a similar system but using custom made metal brackets instead.

A custom metal bracket is screwed to the underside of the main spar. This has holes on its front face for 5mm “alan key” headed bolts” to pass through. A custom metal bracket is screwed to the internal structure of the fuselage. This also has corresponding holes in its front face which

have been tapped for 5mm bolts. When the wing is in place the faces of the two brackets sit within 1mm of each other. The “alan key” headed bolts are inserted from the cockpit and screwed into place. It all seems tight and secure.



Wing Joiner bracket screwed into the fuselage.



Wing Joiner bracket screwed to the wing.



View from the cockpit with the wing screwed in place.



Over-wing fairing.

I have also spent some time creating the over-wing fairing which will eventually be glued to the wing. This will get some final sanding once the canopy glazing has been fixed to the canopy frame to provide a guide.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **29 Nov 2018, 01:31**

Well spotted GW ! It was all part of a retro fit completed on the 35th February of next year.

Brian 😊

Re: Slingsby T.50 Skylark 4

by **GeeW**

Posted: **28 Nov 2018, 20:37**

I hope that is not a water ballast tank thermometer that appears at the bottom of the

instrument panel? 🤔

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **28 Nov 2018, 16:22**

My timber order has arrived and wing building has been able to proceed. The centre section of the wing is now complete and sanded to shape. The airbrakes open fully and close down and lock in place. I still have to create the fairing that fits over the centre of the wing to fare it into place with the fuselage. That will probably have to be tackled next. 🙄



Completed centre section



Brakes Open



Instrument panel

While I was waiting on the arrival of my timber I spent a little time on the instrument panel. I

am not after total scale accuracy, I just wanted something that looked reasonably like the full size. An hour or so with my camera and photoshop produced a respectable replica.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **VinceC**

Posted: **27 Nov 2018, 10:56**

Very smooth

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **25 Nov 2018, 19:05**

Work on the wings has come to a temporary halt as I have run out of materials. Right at the start when I was working out my materials I made the classic schoolboy error of ordering enough 1/16 medium sheet balsa for the left wing and not doubling it up for the whole wing. Duh! That nice lady Vanda at Balsa Cabin has jumped into action to sort me out with timber and covering materials but the package will not arrive till Monday evening. 🙄



In the meantime I have started covering the fuselage with 81 gm/m² glass cloth and resin. It has gone round the complex curves quite nicely with a plastic roller and the occasional cut with a knife. 😊

Brian.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **20 Nov 2018, 21:05**

All the wiring, airbrakes and their servos have now been installed into the wing centre section. I have gone for a set of commercial top surface brakes as opposed to the over and under brakes of the original on grounds of practicality. I have only one aircraft with built up, over and under brakes, my Oly 463.





On my usual slope site I have to slap the brakes away at the very last moment so that the lower blades do not get wiped off in the heather and rough grass. The brake units themselves are commercial units which I had in my spares box. They are slightly oversize and I suspect that the model will be over-braked but perhaps that is no bad thing.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **17 Nov 2018, 14:31**

The most used tool in the workshop is the brush and pan Peter.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **Peter Balcombe**

Posted: **17 Nov 2018, 11:56**

I just wish that my bench had a similar 'auto clean' feature 😂😂

Don't look at any of my build threads Brian unless you are sitting down first 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **17 Nov 2018, 11:21**

8ft 6in Vince. Plus another 4ft 6in bench behind the camera going across the end of the workshop. It's still not big enough!

Brian 😊

Re: Slingsby T.50 Skylark 4

by **VinceC**

Posted: **17 Nov 2018, 10:42**

That's a nice long workbench. Wish I had one like that

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **16 Nov 2018, 20:30**

Progress on the Skylark has been slow but steady. I now have the whole wing structure constructed including the wing joiners. I have just finished adding the underside sheeting.



It is now time to add all the innards such as the wiring, servos and airbrakes before I start on the top surface sheeting.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **08 Nov 2018, 11:22**

I have partially completed the right wing tip panel and have spent some considerable time setting up the joiner system between the outer and inner. Because of angled spars it was a bit of a messy job at times and it would have been perfectly possible to get it wrong.



That done, it's now time for the left tip panel to be started and repeat the whole process.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **02 Nov 2018, 14:16**

After much deliberation I decided to shorten the cockpit area and also the canopy frame by just over 1/8 inch. A piece of 1/8 hard balsa sheet was glued to the rear of cockpit bulkhead and shaped.



1/8 spacer added to bulkhead and everything resized.



The canopy frame was disassembled and rebuilt to fit the altered space. Of course this meant alterations to the side frames, the back frame and of course the magnet catches. So after 24 hours I have returned to where I was 24 hours ago - but now the wing will fit!

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **VinceC**

Posted: **31 Oct 2018, 17:53**

Don't worry Brian, that sorts the men from the boys

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **31 Oct 2018, 16:55**

I clearly forgot the old adage that you should check everything twice before cutting when I started building the wing. I fitted the centre section to the fuselage and found that the mounting area on the fuselage is shorter than the finished wing chord by about 1/8 inch (7mm). I checked the wing plan and then the fuselage plan and elevation and each has a different measurement. B****r!!!! (Translation: Oh Golly Gosh) 😞

I cannot change the wing chord! I cannot move the former at the rear of the wing seat backwards! I can only shorten the cockpit area slightly to make room for the leading edge!!!! 😞



Not enough room for a leading edge!



So I have had to pull apart the freshly finished cockpit frame and shorten by 7mm then fill in the gaps at the rear! 😡

Not Happy! 🙄🙄🙄🙄🙄

Brian.

Re: Slingsby T.50 Skylark 4

by **RobbieB**

Posted: **30 Oct 2018, 12:50**

Definitely tip sections first Brian - or at least just part sheet, bottom only perhaps.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **30 Oct 2018, 12:31**

The internal structure has now been completed for the whole centre section. All dihedral braces, webs, joiner tubes and strengthening braces have been fitted.



I am presently debating whether to sheet this structure now or will I build the wing tip sections onto the centre so that everything can be properly aligned before sheeting.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **23 Oct 2018, 21:03**

I needed a little break from balsa bashing so I covered the finished tailplane, elevator and rudder. The tailplane and elevator were covered in "Profilm" white while the rudder was covered in "Glostex" white. These have now been hinged with "Robart" hinge points. 😊



Covered tailplane, elevator and rudder.



Right wing centre section being built over the plan.

In the last day or so I have started building the wing centre section panels, starting on the right. As I said at the beginning of this thread Mike used a wing section which is not unlike the full size NACA63-620 which works out at 22% thick on the plan. I felt that using this would give a fairly narrow performance envelope so I am changing it to HQ3.5/16 at the root transitioning to HQ3.5/14 on the centre section. The tips will transition further to HQ2.5/12 at the wing tip. The upper surface of HQ3.5/16 is fairly close to that on Mikes plan is considerably shallower. Because of this I have had to make adjustments to the plywood joiners at the centre. All of the ribs and spars occupy the same positions on the plan but everything which has a “depth” function has had to be modified. 😊

Hey Ho! One of my builds wouldn't be one of my builds without a few mods here and there. 😊
Brian.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **16 Oct 2018, 18:13**

Spot On Chris.

Re: Slingsby T.50 Skylark 4

by **Barry_Cole**

Posted: **16 Oct 2018, 15:39**

Don't you have a Minimoa to spray slow setting paint on?????



BC

Re: Slingsby T.50 Skylark 4

by **chris williams**

Posted: **16 Oct 2018, 13:27**

You'll forget all that when the time comes to carry her up the hill! ΨΨΨΨΨ

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **16 Oct 2018, 13:11**

Thanks Vince. Actually my choice of 1/5 scale has made things a little more difficult. I am finding that producing fine detail with my sausage fingers is trickier than with 1/4 or 1/3.5.
Brian 😊

Re: Slingsby T.50 Skylark 4

by **VinceC**

Posted: **16 Oct 2018, 10:21**

Very nice and clean work Brian. I have just finished the tailplane/fin fairing on my model, so thanks Ray for the link, just what I needed to hold mine on

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **15 Oct 2018, 13:43**

Good idea Ray. I will use the same size as I used to secure the back of the canopy.

Thanks.

Brian.

Re: Slingsby T.50 Skylark 4

by **Ray Watts**

Posted: **15 Oct 2018, 12:04**

Hi Brian

Rather than rely on hope and that spoil what will turn out to be a nice model, how about a couple of tiny magnets front and rear just to hold it in place such as the ones on the link below in various sizes?

I don't know that I've used this Co before but I have bought magnets from eBay before and they are very strong. Don't go too big so that the fairing will separate easily on demand

<https://www.ebay.co.uk/itm/VARIETY-of-S...0505.m3226>

Ray

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **15 Oct 2018, 11:38**

Well that wasn't too bad. I managed to construct the tailplane fairing without any difficulty and it fitted perfectly after a little fettling. No one is more surprised than me as it usually takes up to four discarded attempts before I get a fit that I am happy with.

Once the tailplane is bolted to the fuselage, the fairing slides in sideways behind the fuselage former and under the lower fin. It is a friction fit and I hope it stays in place in flight.



Fairing and fuselage





Final assembly

I think the next job on the fuselage is the covering with glass cloth. However I am going to wait till the centre section of the wing is constructed before I do any more with the fuz.

Brian.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **12 Oct 2018, 14:12**

I have spent a pleasant morning completing the canopy frame. I intend to hold it in place at the front with a short length of dowel and with magnets at the rear.

I have now started on the fuselage fairing that fits over the tailplane. I usually make three or four of these before I get one that fits anywhere near properly.



Canopy frame construction complete.



The frame fitted in place.

I have to say that I am thoroughly enjoying working with balsa, spruce and ply once again.

Brian. 😊😊😊

Re: Slingsby T.50 Skylark 4

by **Stuart Ward**

Posted: **12 Oct 2018, 09:57**

😊 . 😊😊😊

Re: Slingsby T.50 Skylark 4

by **Barry_Cole**

Posted: **11 Oct 2018, 21:20**

I don't care, you have mess and that is all that matters.

However, I must say that your mess, is tidier than my tidy.

😊😊😊😊

BC

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **11 Oct 2018, 20:47**

That was the "during" shot Barry, check out the "after" shots - even the glue bottles are standing to attention.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **Barry_Cole**

Posted: **11 Oct 2018, 18:24**

Brian has MESS



The is human after all

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **11 Oct 2018, 18:15**

Its about time I posted the latest progress on the Skylark.

I glassed the inside of the fuselage in the cockpit and nose area. This involved cutting out lots of little glass cloth patches which fitted between the formers and longerons and pasting them into place with laminating epoxy. It was a bit of a "faff" but it will add a lot to the future strength.

The nose planking was finished and a pile of laminated 1/2 inch balsa slices added to the nose before carving down to shape. I have been able to add a couple of blocks of lead inside the nose and still leave room for more if /when necessary. It took me a couple of mornings of sanding to get the nose cone to what I felt was the right shape.



The cockpit all glassed up.



Work in progress on the nosecone.



The completed front end.



The canopy frame in the build.

I have now started on forming the canopy frame. More on that when it is complete.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **02 Oct 2018, 21:51**

Tidy is the only way I can find stuff Simon.

Brian 😊

Re: Slingsby T.50 Skylark 4

by **Simon WS**

Posted: **02 Oct 2018, 21:38**

Loving the order there Brian - you put us all to shame!

Simon

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **02 Oct 2018, 21:01**

It has been a little while since I last posted but life keeps getting in the way of progress. I now have most of the fuselage sheeted, planked and sanded down.





The section at the nose has been left open until I have applied some glass fibre reinforcement to the inside of the fuselage over the first few bays. That's going to be my task in the next few days.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **Jolly Roger**

Posted: **15 Sep 2018, 23:10**

Coming along nicely Brian. Pristine carpentry as always.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **15 Sep 2018, 13:05**

Another little bit of work done this morning.



I have cut and loose fitted the trays for the receiver, rudder/elevator servos and the aerotow servo. These will be finally glued in place once the fuselage sheeting is complete.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **14 Sep 2018, 21:23**

I have got a bit more done to the fuselage this afternoon. I have coaxed some of the 1/8 medium balsa sheeting round the front section of the fuselage with the aid of lots of pins and a bit of water on the outside of the sheeting.



The sheeting started on the fuselage.

Pins out this evening and a little bit of sanding done.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **14 Sep 2018, 10:29**

I'm back from vacation and the build continues.

The next task was to frame up the fin, to sheet it and then to add leading edge and top capping. I was dreading this task as it would be very easy to build it squint.



The basic fin skeleton.



Sheeted and with LE added.



A trial fit of the completed fin.

However by taking my time and being verrrrrry careful it all came out straight and true. There are some images of the process below.

Brian 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **28 Aug 2018, 21:14**

This afternoon I completed the tailplane mounting and was soooooo pleased to find it sits straight and true.

I have now started on the task of fettling the formers so that the 1/8 balsa sheeting will fit smoothly.



Tailplane now bolts neatly in place.

A few require to be reduced in places while a couple require to be packed out a little.

Brian. 😊😞😞

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **28 Aug 2018, 14:44**

I have now mounted the formers on the jig and added the top and side longerons and few of the other ply parts. There was not too much adjustment to do to the structure and the whole lot have been glued in place with cyano.



Structure all glued up on the jig.



The structure is all nice and square and feels quite rigid.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **26 Aug 2018, 17:36**

I have spent a few happy hours this week in the company of a sheet of 1/8 ply and my Dremmel jigsaw. As a result I now have a pile of plywood parts required to build my Skylark fuselage. With reference to Ciff's comments regarding hand drawn versus CAD plans I am under no illusions that I will require to do a fair amount of fettling on these formers once assembly has started.



All the fuselage plywood pieces ready for fitting.



The "Robbie" jig ready for use.

There should be a couple of images below with the pile of cut wood and also the "Robbie" jig set up with the upstand supports fitted ready for the construction to begin.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **15 Aug 2018, 22:17**

The Skylark build continues (slowly).

I have enjoyed putting the rudder together today. I haven't had quite so much satisfaction with the fuselage formers. Each former has had to be measured against the plan, adjusted, then the notches for the stringers further adjusted accordingly. F18 and F17 (the funny little ones on the left hand end) took me over two hours to produce.



The rudder - a pleasure to build.



The ***** formers - not such a pleasure.

They all have to be measured (twice) before any wood can be cut. Hey Ho, this is real 1980's building.

No more posts for the next few days as I am heading off to fly toy aeroplanes this weekend.

Brian.

Re: Slingsby T.50 Skylark 4

by **RobbieB**

Posted: **15 Aug 2018, 12:00**

Ahhhhhh, the tidiness is breathtaking.....

See you at Leek Brian.

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **14 Aug 2018, 18:52**

Thanks for the "heads up" Roo, but I really want to enjoy the build on this one so I will be building the wooden fuselage from the plan. It will take a while but just so long as it is ready to fly next spring.

Thanks for the comments Andrew, we can form a mutual appreciation society.



Tailplane ready for top sheeting.



Finished tailplane and the elevator.

As tradition dictates (my tradition anyway) I am starting with the tailplane elevator and fin. I find this helps me check out how accurate the plan is and it gets my banana fingers back into the way of working. I didn't have to look far to find my first inconsistency on the plan. The rib outline for the tailplane centre section was ok but the tip was drawn 11mm too short to fit on the plan view. Ok so we now have to measure everything twice (or even three times) before cutting.

The tailplane and elevators have gone together quite well and weigh not very much. So far so good!

Brian.

Re: Slingsby T.50 Skylark 4

by **Andrew Ray**

Posted: **13 Aug 2018, 19:51**

Interesting Brian. I have the original MT plan for this that I have scaled up to 1/4 scale just because it kills two birds so to speak. I have started a build thread on here that needs updating. I have stuck with the plan wing section. I am looking forward to seeing yours come together.

Re: Slingsby T.50 Skylark 4

by **roo Hawkins**

Posted: **12 Aug 2018, 21:51**

Hi before you start. Sarik vac forming are going to do glass fuselages for the mike trew gliders I have seen the Jantar and asw plus pl all ready. Maybe worth checking to see if they are doing the skylark also. Have a look at the Sarik visit post on this forum. Roo<http://scalesoaring.co.uk/phpBB3/download/file.php?id=12991&sid=d4ed4ec390de521822cb03bda5b902c5&mode=view>

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **12 Aug 2018, 21:45**

Nice one Chris, ta.

Genius solution, but don't tell Smallpiece that!

Brian 😊

Re: Slingsby T.50 Skylark 4

by **chris williams**

Posted: **12 Aug 2018, 16:16**

These might help, Brian... BTW, Smallpiece has come up with better solution than the sliding

tubes. A small letterbox gap on a rear former allows a carbon pushrod through.





A ball link on the end of the pushrod allows the elevator actuating pin to be easily inserted and with no unnecessary slop....

Much easier to set up and little fear of binding 😊

Re: Slingsby T.50 Skylark 4

by **B Sharp**

Posted: **12 Aug 2018, 16:04**

Hi Rog.

I don't know that the build is going to be all that exiting but I will do my best to inform and entertain!

Thanks for the offer of pics, the cockpit interior and instrument panel would be good.

Brian. 😊

Re: Slingsby T.50 Skylark 4

by **Jolly Roger**

Posted: **12 Aug 2018, 14:25**

How exciting Brian. I'll follow with interest.

I'll also photograph any Skylark 4's that turn up for Slingsby Week at the Yorkshire Gliding Club at the end of the month. Let me know if there's any specific close-ups you'd like.

Rog

Slingsby T.50 Skylark 4-BC Sorting

by **B Sharp**

Posted: **12 Aug 2018, 14:14**

I felt that I was in dire need of a new balsa bashing session and was looking around for a subject I hadn't tackled before. I wasn't up for a large and heavy model at present; something around 4 metres and under 6 kilos, but still large enough for a good performance. I chanced upon a 1:5 scale model of the Skylark 4 by Mike Trew which seemed to fit the bill. I also decided to do this build log as I hadn't done one for a while and I find that it helps me keep the build moving along.



Nice new plans for the Skylark 4



Nice new plans for the Skylark 4



Possible colour schemes for the model.



Possible colour schemes for the model.

Having received the plans I decided to make a few changes (as usual). These plans were drawn nearly 30 years ago and radio and techniques have moved on since then. Mike used a wing section which is not unlike the full size NACA63-620 which works out at 22% thick on the plan. I felt that using this would give a fairly narrow performance envelope so I am changing it to HQ3.5/16 at the root transitioning to HQ3.5/14 on the centre section. The tips will transition further to HQ2.5/12 at the wing tip. I will modify the wing hold-down arrangement and use Chris William's sliding square tube method for actuating the elevator. The ailerons will have servos way out on the tip panels rather than long pushrods and bellcranks and I will install electric brakes for simplicity.

I have even picked possible schemes for the finished model and they should appear below.

Brian. 😊 😊 😊