

**Message started by Jim Bow on 28. Oct 2011 at 20:40**

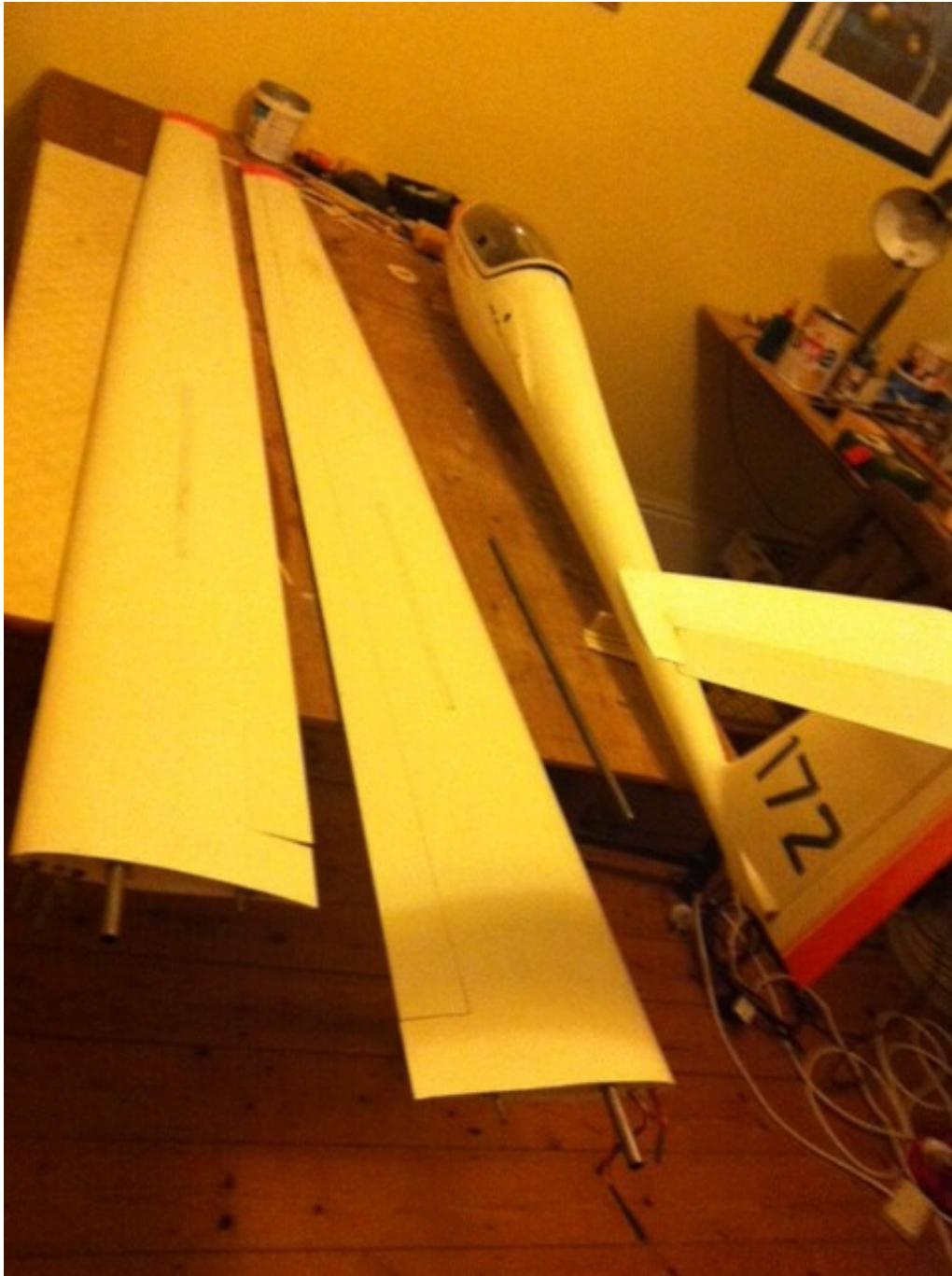
Title: **ASW 20L**

Post by **jimbo** on **28. Oct 2011 at 20:40**

Just starting a build/resto/flying log of my ASW20L by Glas Flugel Ltd. Span is 4.15 metre. Here are some pics, its needs some TLC, a possible paint, radio install, set up, generally in dated but 'good for the year' as they say in the motor trade i think.

Thanks very much to Chas for helping me get my grubby hands on this beauty! Jimbo.





Title: **Re: ASW 20L**

Post by **jimbo** on **28. Oct 2011 at 20:59**

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Of course i forgot the assembled Pic!

Here she is.

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Title: **Re: ASW 20L**

Post by **jimbo** on **29. Oct 2011 at 18:53**

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Does this count as a pilot?

Donated by my son.

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Title: **Re: ASW 20L**

Post by **jimbo** on **29. Oct 2011 at 18:54**

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Here is she on the local pimple.

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Title: **Re: ASW 20L**

Post by **jimbo** on **06. Nov 2011 at 21:13**

A little progress. Ive completed the rewiring of the ASW20L. The loom is ready to accept the servos. The retract is working but i probably wont use as im going to flying only from the slope. It will be taped up until i need it.

The parts i need have been ordered ready for the kit out next week, a few new servos and linkages which a getting a rework.

Im going to do a little repair on the wings, some minor filling and painting.

The elevator is getting a rework. Im adding a digital servo 5245MG and moving it outboard of the centre, and fitting an new alum rod and the servo horn is going to be steel. Should give me slop free accurate pitch control.

Title: **Re: ASW 20L**

Post by **Jolly Roger Brown** on **06. Nov 2011 at 21:26**

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*jimbo wrote on 29. Oct 2011 at 18:54:*

Here is she on the local pimple.

That smooth grassy hill always reminds me of the Teletubbies set, which it turns out was filmed not far from there. Just one of many Little Known Facts right here on scalesoaring.co.uk. :)

Rog

Title: **Re: ASW 20L**

Post by **Adrian** on **07. Nov 2011 at 10:40**

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And the hill is?

Title: **Re: ASW 20L**

Post by **jimbo** on **07. Nov 2011 at 13:51**

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There are two sites we use. Avon dassett country park and edge hill.

Heres a vid of edge hill. I'll prolly maiden the asw here.

[http://m.youtube.com/index?desktop\\_uri=%2F&gl=GB#/watch?v=PM5sx8B4lsc](http://m.youtube.com/index?desktop_uri=%2F&gl=GB#/watch?v=PM5sx8B4lsc)



Title: **Re: ASW 20L**

Post by **Adrian** on **07. Nov 2011 at 14:50**

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thanks, have been to both, just didn't recognise the pics.

Title: **Re: ASW 20L**

Post by **jimbo** on **08. Nov 2011 at 20:24**

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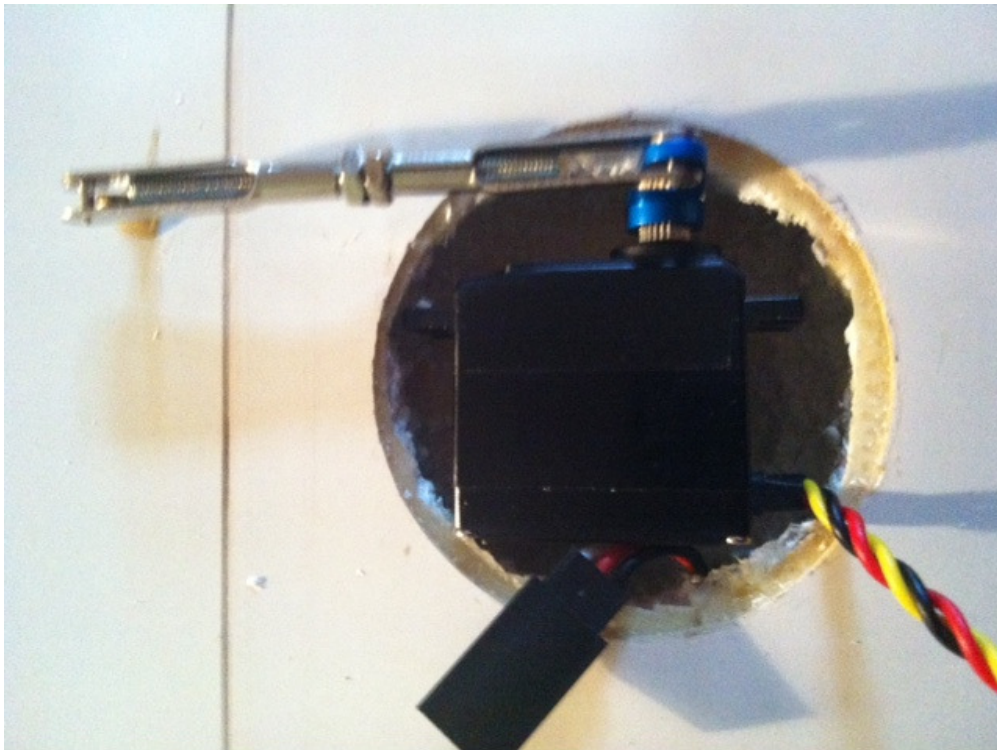
Some bits arrived today. I bought some hitec 5245 digis for the install, flaps, ailerons and elevator.

Heres a dry run on the flap install. Will start on the install when i get a bit of time.

I am also putting a direct drive digi on the horizontal tail (stab) and junking the linkage that is there at present.

Rudder is closed loop and looks good so far, will go with big stock futaba.

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Title: **Re: ASW 20L**  
Post by **jimbo** on **11. Nov 2011 at 21:23**

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Update -

Wing servo install is done (dry run awaiting epoxy).

Still need to do the elevator servo.

Question - I have set up my tranny to give full crow, up ailerons, down flap, up airbrakes and down elevator on tje landing condition proportional on the throttle stick. Ail to rudder is also mixed for landing.

Is this what one does with such a set up? Bearing in mind I'll be flying slope.

With tje addition of airbrakes does this affect the final approach height/glide in angle? Bearing in mind I've never used airbrakes before.

Title: **Re: ASW 20L**  
Post by **Anthony** on **12. Nov 2011 at 00:43**

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Hi Jim, personally I would just have the airbrakes and ele' compensation on the throttle stick, maybe with some down flap ala full size, keep the ele/flap mixer open so you can test it out in flight in case it pitches nose up or down on deployment. Start with about 5% comp' and go from there. When and where will the maiden be. Ant.

Title: **Re: ASW 20L**  
Post by **Chris Jesshope** on **12. Nov 2011 at 07:27**

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Jimbo,

I set up my ASW 20 with full crow and airbrakes for a slope landing and it dropped like a stone :)

I now use just airbrakes with full span flaps (a bit more than for thermal) to come in slow.

I have flap on a slider and have programmed flap compensation on the elevator to keep attitude. If you do this, be wary of pulling out flaps quickly if you decide to go around again for any reason. You are likely to stall.

Title: **Re: ASW 20L**  
Post by **jimbo** on **14. Nov 2011 at 08:55**

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with 5mm as you suggest.

Elevator is done. I've installed and set up the rudder servo. Some epoxy arriving this week and I can glue.

Then she needs some minor body maintenance, I may try Tcut, a few dings repaired and the gear doors taped up(I won't use the gear).

Re maiden who knows, all these lousy easterlies , I've been grounded for ages... Maybe next spring :( prolly at either edge hill or long mynd.

Title: **Re: ASW 20L**

Post by **Anthony** on **14. Nov 2011 at 14:26**

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Hi Jim. the 5% is down ele trim when the airbrakes are deployed not flap...! Ant.

Title: **Re: ASW 20L**

Post by **jimbo** on **14. Nov 2011 at 15:53**

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*Anthony wrote on 14. Nov 2011 at 14:26:*

Hi Jim. the 5% is down ele trim when the airbrakes are deployed not flap...! Ant.

I thought airbrakes up made the nose drop. Doesnt that mean up elevator trim?

Together with the upward pitching moment from the down flaps, the should cancel each other out a bit? But clearly some compensation would be required possible on some sort of curve since the affects of each in not linear.

Title: **Re: ASW 20L**

Post by **Chris Jesshope** on **14. Nov 2011 at 16:23**

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I think trim adjustment with airbrake depends on where the brakes are in relation to the centre of lift on the wing. On my ASW airbrake compensation is quite neutral (with no or little flap). However just putting flaps downmakes it balloon significantly and she needs some down elevator trim for compensation.

Whether compensation is linear or not on flaps is another can of worms, but as I only use about 10--20 degrees of flap on landing, I assume linear compensation.

Another problem I had with both crow and brakes was getting the compensation right. I had brakes and crow on the throttle stick and it most certainly was not linear. Flaps change the centre of lift at large deflections and that also means compensation for brake changes as well as the effect of the flap.

Title: **Re: ASW 20L**

Post by **Anthony** on **14. Nov 2011 at 16:52**

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K. I. S. S.

Title: **Re: ASW 20L**  
Post by **Chris Jesshope** on **14. Nov 2011 at 19:31**

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The simple message is use airbrakes or crow but not both :)

Title: **Re: ASW 20L**  
Post by **Anthony** on **14. Nov 2011 at 19:35**

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*Chris Jesshope wrote on 14. Nov 2011 at 19:31:*

The simple message is use airbrakes or crow but not both :)

Agreed. Ant.

Title: **Re: ASW 20L**  
Post by **jimbo** on **14. Nov 2011 at 21:50**

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*Chris Jesshope wrote on 14. Nov 2011 at 19:31:*

The simple message is use airbrakes or crow but not both :)

I was not going to raise the ailerons. Raise the airbrakes and drop the flaps by 3-5 mm as Chris suggested. I think I'll need some compensation. Not sure which will have the most effect, so I guess I need to move the wheel on the tx while flying. Any guesses as to whether up Or down is required.

Title: **Re: ASW 20L**  
Post by **chris williams** on **14. Nov 2011 at 22:18**

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Raised ailerons in conjunction with brakes is an unbeatable combination. The problem with flaps as a landing aid is that if you decide you are a little short on the approach and raise them to stretch the glide, not only does the model immediately lose altitude, the stalling speed goes up too...

Title: **Re: ASW 20L**

Post by **chris williams** on 14. Nov 2011 at 23:35

A picture for all occasions... without the the up-going ailerons, the Bergfalke would have ended up in the back of my car. (Pic from this weekend)





Title: **Re: ASW 20L**

Post by **Anthony** on **14. Nov 2011 at 23:51**

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I'll give that a try next time (year) Chris.....how much travel with full airbrake ? Ant.

Title: **Re: ASW 20L**

Post by **jimbo** on **15. Nov 2011 at 08:34**

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A lot depends on the aircraft. That berg has v small airbrakes quite outboard and no flaps. My asw has huge flaps and huge airbrakes in the lift inner section. The wings on the asw are a lot skinnier too. If anything on the asw, I could probably go with just the airbrakes and the elevator comp. I don't want to drop her like a stone. Raising the ail will lose authority and in my case probably not make much difference. I'll post a pic of the setup once I finish the servo install.

Title: **Re: ASW 20L**

Post by **chris williams** on **15. Nov 2011 at 21:48**

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*how much travel with full airbrake ?*

You don't need the ailerons all the way up; halfway will do; there should still be plenty of authority and the effect will pretty obvious. (Some would argue that the up-aileron creates a form of washout giving added protection from tip-stalling. Not sure about that one myself :-/)

Title: **Re: ASW 20L**

Post by **jimbo** on **15. Nov 2011 at 22:01**

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*Chris Williams wrote on 15. Nov 2011 at 21:48:*

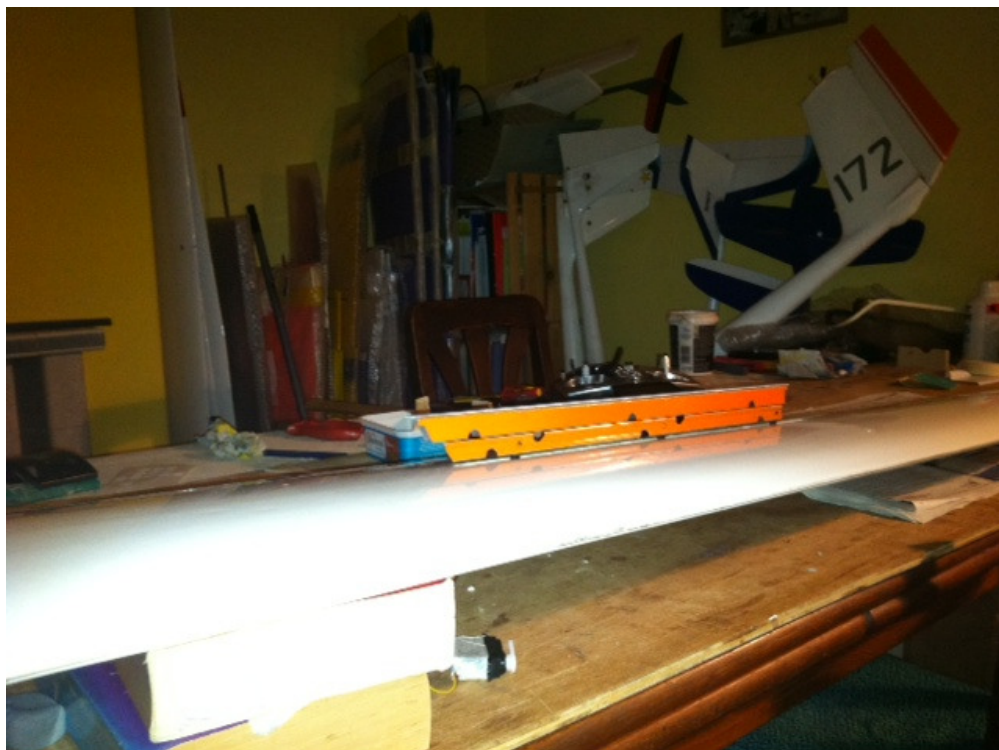
*how much travel with full airbrake ?*

You don't need the ailerons all the way up; halfway will do; there should still be plenty of authority and the effect will pretty obvious. (Some would argue that the up-aileron creates a form of washout giving added protection from tip-stalling. Not sure about that one myself :-/)

The airbrakes are chunky. They are gonna be like hitting a brick wall. Especially in our polluted, heavy, sinky air..

The question is to i even risk raising them all the way up!

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Title: **Re: ASW 20L**

Post by **jimbo** on **16. Nov 2011 at 16:13**

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Wing done.

Wait for it to cure and set up tommorrow. Will she be ready for the weekend and the return of 15mph westerlies?



Title: **Re: ASW 20L**

Post by **jimbo** on **17. Nov 2011 at 10:14**

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Title: **Re: ASW 20L**

Post by **jimbo** on **18. Nov 2011 at 22:40**

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Fuze/wings are in my workshop drying after paint today.

I've sprayed/lacquered the ding on the top panel and sprayed a few dings on the fuz/tailplane.

Title: **Re: ASW 20L**

Post by **jimbo** on **19. Nov 2011 at 22:34**

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Setting tje old girl up today.

I have two landing conditions, one with full crow and no airbrakes, and one with airbrakes, a few mm of down flap and some initial up elevator compensation. That way I can try both and land with the one I like.

Also have a thermal condition and a speed condition with reflex, up comp and coupled flaps ailerons.

Here she is. She's a beauty, I hope I can keep her in good shape.

Phooaww.

Title: **Re: ASW 20L**

Post by **Chris Jesshope** on **20. Nov 2011 at 10:04**

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So when and where will you be throwing your pride and joy to the wind?

I am waiting for some westerlies to maiden my HP14C the other slopes at the Mynd are either a bit small or too far to walk!

Title: **Re: ASW 20L**

Post by **jimbo** on **20. Nov 2011 at 10:47**

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*Chris Jesshope wrote on 20. Nov 2011 at 10:04:*

So when and where will you be throwing your pride and joy to the wind?

I am waiting for some westerlies to maiden my HP14C the other slopes at the Mynd are either a bit small or too far to walk!

I think this will be maiden at the mynd or edge. Not sure where just yet. Good blows on edge are rare, and the landing is rubbish.

I think this is a consideration because without a retract, I'm going to have to be careful with landing. Plus the big wide fuse is a lot weaker than all my other stuff, and my landings (if fast are usually heavy).

So I may go for the heather on the mynd option.

I may bite the bullet and invest in a 9 channel rx. That would give me the retract. Not sure it's worth it though as I'll be slope flying.

Another pic.





Title: **Re: ASW 20L**

Post by **Chris Jesshope** on **20. Nov 2011 at 11:52**

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I use a reversing Y-lead on my brakes (they come with a trim to adjust centering on one servo). Then I can do full house and brakes with a tow release (no retract) on 8 channels.

Maybe we can meet up on the Mynd sometime.

Chris

Title: **Re: ASW 20L**  
Post by **jimbo** on **20. Nov 2011 at 12:24**

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*Chris Jesshope wrote on 20. Nov 2011 at 11:52:*

I use a reversing Y-lead on my brakes (they come with a trim to adjust centering on one servo). Then I can do full house and brakes with a tow release (no retract) on 8 channels.

Maybe we can meet up on the Mynd sometime.

Chris

Yes. Sounds good. Dual maiden perhaps? :)

I'm nearly ready. I just need to remOve a little slop I have on my rons at moment and secure the hinges. This plane has some strange internal fixing. I think tape might work as long as the wiper is not fouled.

So is a retract not required on the mynd on pole cott?

Yes, I could go for the reversing lead option. Which unit do you use? Link please?.

Thx, jim.

Title: **Re: ASW 20L**  
Post by **jimbo** on **20. Nov 2011 at 12:51**

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I w thinking of adding a Swiss flag livery. le On the rear fin. I have some red/yellow and orange vinly. What would the authentic look be for a Swiss plane? Thx.

Title: **Re: ASW 20L**  
Post by **Anthony** on **20. Nov 2011 at 12:52**

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Pole Cottage is adorned with long soft heather so a retract is not needed. Ant

Title: **Re: ASW 20L**  
Post by **Anthony** on **20. Nov 2011 at 13:13**

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This is my 1/3rd scale Discus with authentic Swiss registration. There's a full size "20" V5-GDE with KF on the tail in Swiss colours on the Google Images page. Ant.





Title: **Re: ASW 20L**

Post by **Chris Jesshope** on **20. Nov 2011 at 13:20**

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Hi Jimbo,

I used the servo shop: <http://www.servoshop.co.uk/index.php?pid=PFSSRY&area=ACCS>

Not sure if this link will work, if not just search for "lead"

Y-Lead with Servo Reverse - JR                      £6.99   X   2 = £13.98

Let me know if and when you are going to try out the mynd PM me here I check messages most days. I am not far away.

Chris

Title: **Re: ASW 20L**

Post by **jimbo** on **20. Nov 2011 at 14:14**

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Thanks Chris/ant.

I will stick a flag on the back and perhaps on the wings. Will help with Vis too.

Chris, how does one tell if the mynd is covered in mist/fog? Do you use this web cam?

<http://www.lmsa.org.uk/modules.php?name=Weather>

Is reflective of the weather on top of pole cott?

Thanks.

Title: **Re: ASW 20L**

Post by **Chris Jesshope** on **20. Nov 2011 at 17:26**

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I usually look at XCweather for a forecast but this time of year its not that reliable. The weather cam shows the weather over the NE slope (resevoir) but does not show the top, so that can be clear and Pole cot can be in low cloud. But its a reasonable indication of conditions.

Title: **Re: ASW 20L**

Post by **jimbo** on **20. Nov 2011 at 18:55**

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Is Reservoir flyable with the 20?

Title: **Re: ASW 20L**

Post by **Anthony** on **20. Nov 2011 at 19:49**

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Wait for a Westerly.....acres of soft heather. Ant.

Title: **Re: ASW 20L**

Post by **Chris Jesshope** on **20. Nov 2011 at 20:56**

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Reservoir is a nice summer slope when the wind is light but I would not want to maiden a 4m+ model there. Pole cot will work round to SW without any problems and I even flew my DG300 when the wind was almost southerly.

Title: **Re: ASW 20L**

Post by **jimbo** on **20. Nov 2011 at 21:17**

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The ASW has gone Swiss. I like the colours and it will help with visibilty in our UK grimey and murky skies.

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Title: **Re: ASW 20L**  
Post by **jimbo** on **25. Nov 2011 at 21:30**

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Well the wind was wsw, which was unfortunately not on the big hill but the pimple was flyable.


I maiden the Nyx Furio (wow epic that was). I also did a dry run set up the Asw 20 . Cliff maiden his Acacia 3 as well.



Vid of the day - footage of the asw20 is half way through.

<http://youtu.be/Revxks3h5E8>

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 photo\_002.JPG (79 KB | )









Title: **Re: ASW 20L**

Post by **jimbo** on **28. Nov 2011 at 15:12**

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A little movie with some appropriate music.

<http://www.youtube.com/watch?v=zJqQCNNKnxc&feature=youtu.be>

Title: **Re: ASW 20L**

Post by **jimbo** on **06. Jan 2012 at 20:04**

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Finally, clear clear skies(ish) and the Asw 20 maiden by glasflugel (see my build log).

Wind was 12-15mph cold damp but flyable.

Anyway she was set up, checked over and duly chucked.

She flew perfect straight as a die no trims required.

Truly amazing, docile when you wanted her, lifty and went up fast with thermal switched in.

Then once you got the speed up, and she was fast, just great. Hammering up the slope, fast passes, loops and stall turns.

You know those days when you fly plane and it feels perfect. She is one of those. Grippy, accurate, lifty and fast.

Andy launched her and commented 'She wanted to fly straight out his hands!'.

She did great thermal turns without any bother.

But she's no pussycat, once you get the speed up she rips and covers the slope at a Good old click. I did some aeros straight away, she flew so well, a real confidence booster. I was thinking of rolling but will wait for a but more wind/warm air better lift, aileron response was excellent, accurate and crisp.

The looks were of course great as the asw20 is one of my favourite shapes.

Oh and the whistle, the fly pasts were truly epic.

Landing was easy, responded well to both crow and airbrakes, airbrakes most effective.

Roll on summer. This is a great machine and I'm going to enjoy it.

Happy Jimbo.



Title: **Weight**

Post by **jimbo** on **10. Jan 2012 at 13:17**

I weighed her - she comes in at 5.4kg.

The calculated wing loading is 27 Ozs / Sq ft, the vortex was 19 and i thought that was heavy!

Perhaps this is why shes a howler?



wingloading.jpg (60 KB | )

Calculate Wing Loading, Area & Stall Speed		
Wingspan:	<small>inches</small> 78.7	<small>mm</small> 2000
Wing Root Chord:	<small>inches</small> 9.1	<small>mm</small> 230
Wing Tip Chord:	<small>inches</small> 4.3	<small>mm</small> 110
Or the Average Chord:	<small>inches</small> 6.7	<small>mm</small> 170
Or the Wing Area:	<small>sq.in</small> 527.3	<small>sq.dm</small> 34
Model Weight:	<small>ounces</small> 190.6	<small>grams</small> 5400
Max Lift Coefficient:	1.0	
Click To Calculate		
WING LOADING:	<small>oz/sq.ft</small> 52.05	<small>g/sq.dm</small> 159
CUBIC LOADING:	<small>oz/cu.ft.</small> 27.2	
STALL SPEED:	<small>mph</small> 35.7	<small>Km/h</small> 57.5
Clear		



Title: **Re: ASW 20L**

Post by **Jolly Roger Brown** on **10. Jan 2012 at 14:57**

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Hi Jimbo,

I could be wrong but the calculator you used needs you to put in the average wing chord, rather than just the average of the root and tip chord.

If your wing was straight taper, these two averages would be the same. But I think your wing has a change of taper around 40% out from the root. So your actual average chord is greater than 6.7", your wing area is bigger and your wing loading is less (guessing <25oz/sq.ft).

But who cares... it flies great!

Rog

Title: **Re: ASW 20L**

Post by **jimbo** on **10. Jan 2012 at 22:10**

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Thanks roger,

Yes you're right there is a taper as you suggest.

It was something I did with the vortex and only took a few minutes.

It was Interesting to do the maths as it has a higher wing loading than the vortex!

I've heard that big planes can cope with a higher loading and still perform well.

Title: **Re: ASW 20L**

Post by **jimbo** on **11. Jan 2012 at 23:31**

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Today was a fun day on the mynd with the 20.

<http://vimeo.com/34922262>