

# GLIDEPATH



The Journal of Wessex Soaring Association. June 2020  
BMFA Club No 2759

## From the Editor

As you should all be aware although we are (at the time of writing) not allowed to organise formal events members are now permitted to go flying at any of our sites provided the following procedures as detailed by the BMFA are followed.

- Social distancing in accordance with government guidelines **ensuring the minimum 2 metre (and preferably greater) separation** from other people (unless from the same household) is always maintained, including in the carpark, pits and pilot box. *I would also suggest that if you do wish to have an extended conversation with somebody, as well as maintaining the 2m separation it would be safer if you positioned yourselves cross wind relative to each other, so that any droplets you may emit are blown downwind away from both of you. Ed)*
- Latex/Nitrile/Vinyl gloves to be worn or hand sanitiser used immediately before and immediately after opening/unlocking and closing/locking access gates and padlocks
- No sharing of model flying equipment and aircraft (apart from by those sharing a household).
- Hand sanitiser should be considered an essential item in every model aircraft flyer's flight box.
- Anyone displaying symptoms of COVID-19, or who shares a household with any individual displaying symptoms, or anybody who has been told to self isolate, must not fly and should stay at home.

I am also pleased to report that this is another bumper edition of Glidepath which I hope you enjoy.

## From the Chair

Hopefully all of you are well and looking forward to things settling down to some sort of "new normal". As I hoped last month restrictions on our movements have been lifted somewhat and few of us have been lucky enough to be able to fly again. Thanks to Doug and Pete for contacting the relevant farmers etc and checking they are happy for us to return. This also coincided with some lovely flying weather and I managed two maidens and some slope flying.

### Slope and E soaring events

As things stand at the time of writing, we are not allowed to organise anything. This will change the way we do things for a while and the usual WSA e soaring series will also need to adapt. I have a few ideas on that and hopefully when we are allowed to get things going we can still run some events.

### Slope tour

The annual slope tour has been somewhat side-lined, however I hope to run one as soon as I can to help anyone find their feet around our slopes.

If you would like to come along please drop me an email at [martinburr9@gmail.com](mailto:martinburr9@gmail.com)

## **The track**

The track up to Horses, as has been mentioned on Google Groups is sadly very poor. Care is needed to get up but most SUV type cars seem OK and even some smaller "normal" cars are fine with care. The route in from the opposite direction is very good apart from two large depressions, I am hoping we can investigate the possibilities of getting these filled in some way.

Ok, so onward to a brave new future. I sincerely hope all of you are well and that we can make the best of the current situation. I know of quite a few new projects underway and I have another one up my sleeve as well.

## **Slopeside by Pete Carpenter**

What we believe to be the situation on each slope is as described below, however it is not always possible to contact every landowner each month and we have no wish to pester them. For Sallowcliffe and OXO please take extra care when parking, and do not drive down past the brow of the track in wet conditions or you may get stuck. If in doubt, walk onto the field and track first to check! Please use your own common sense and apply the countryside rules. Therefore if things look different at a site, particularly if it involves crops or livestock, please do not enter and contact me on [pete.carpenter12@gmail.com](mailto:pete.carpenter12@gmail.com) or 01722 328728.

- 1) Winklebury (W to NE wind) - Available.
- 2) Norrington Down (S to SW wind) - Available.
- 3) Donkey Valley (SE wind) - Available.
- 4) Swallowcliffe (NW to NNE wind) - Available. No access into the field, fly from the slope side of the fence.
- 5) Quarry (W to WNW wind) - Available. Access to the slope must be via the Stony Down / Berwick St John route only. Launching and landing from the slope face is OK, but the slope is perfectly flyable from the Berwick St John field. You may encounter some paragliders as they also have permission from the farmer to fly there. In this case it is best to have a friendly chat with them and see if you can agree separate airspaces for models and paragliders.
- 6) Oxo (WNW to NW wind) - Available.
- 7) Horses/Barbara's Field (WNW to NW wind):- Available.
- 8) Daltons 1&2 (NW to NNW wind) - Available.
- 9) Crockerton (NW to NNW wind) - Available subject to rules in slope guide.
- 10) Death Valley (SW wind) - Available till mid August
- 11) Berwick St John (SW wind), Stony Down (ESE to SE wind) - Available. Code on gate padlock is 5823 . Please do not over fly the parked cars on your landing approach at Stony Down.
- 12) East Bowl (NEE to E wind) - Available. There is a gate with a keycode, which is 7850. The shepherd is Mr.Fletcher (red Toyota pick-up) and he has asked that anyone parking on the track put a little note on the dashboard of their car, letting him know that they are a WSA member.

There are also a number of public slope sites, particularly in the Purbecks that anybody can fly from. A list of these is maintained on [Christchurch Club's website](#) so please have a look there for details.

## **Flat Field Update**

If you are the first to arrive at Chalbury go to the green box in the farm yard.

1. The field number is shown on the small plate on the box front . LEAVE THAT WHERE IT IS.
2. Remove the large red plate from inside the box and place it on the box front. It indicates the WSA are on site.
3. Also take the required equipment out of the box and to the flying field, i.e peg board, bungees etc.
4. If it is an event where you are expecting a large number of people take the corresponding field number out of the box and place it on the fence hook at the road entrance to the drive. There is no need to put the number on the hook if you are flying there alone or with just a few other people
5. The last to leave the site, ensure everything is replaced in the box, including the red plate and number on hook if used, but LEAVING THE FIELD NUMBER INDICATOR ON THE BOX FRONT.

Be aware of the field condition, e.g. after rain. Do NOT leave wheel spin marks. If in doubt, park off the lane outside the field. Leave space for farm traffic.

Be aware of footpaths across the fields, Do not launch if walkers are on the paths. Do not launch if horse riders are nearby.

No low flying over power lines. **No flying over farm buildings and the cottage, AT ANY HEIGHT, or immediately upwind of the farm complex.**

Fly SAFELY at all times. Especially launching and landing. Do not launch over cars and do not approach a landing over other flyers, fly a proper circuit.

Report any problems to the flat field rep, Doug Bowmann.

### **More Electricker** by David Camp

As well as the Innovation model I described last month I have now also built a Höllein 'Climax Evolution'. This is a discontinued kit design from Höllein, it being a conventional tailed (i.e. not V-Tail) version of a small range of thermal soarers, basically all wood construction, but with carbon tube spars and overall strength to cope with winch launches and 'Alpine' soaring. The Evolution is 2.5m span with flap/aileron equipped 3 piece wing, wooden box like fuselage and all balsa sheet tail surfaces. All wood is high quality laser cut, pushrods and glass fibre sheet control horns are supplied along with plastic moulded wing servo covers. A full size plan is provided that also has all the component parts drawn on it, so if by accident multiple laser cuts parts drop out of the sheet it is easy to identify them, or even make replacements; all this is typical of a Höllein design. The Evolution also had a set of English instructions.

The wings are based on a carbon tube of about 12mm diameter with maybe 2mm wall thickness. Ribs are threaded on, laid over the plan then slowly with care and an engineers square, cyanoed in place. Then a pre notched and chamfered trailing edge is added and a carbon rod leading edge fixed to give a basic wing. Riblets drop into place and that is about it. The wing is 3 piece and the outer panels use a main brass tube in the inner panel and fixed steel rod in the outers. The plan called for short steel locating pins at the trailing edge, just locating into wood. In the interests of longevity I added brass tubes, plus an additional leading edge locating pin. The aileron servos connect via a 3 pin Multiplex plug/socket and then at the centre I gathered all the leads together onto a 6-pin Multiplex connector to link to the main wiring from the receiver. The photo below shows the basic early wing structure, with the start of fuselage construction, before butchering for electrics.



The fuselage was the area that needed some thought/attention/guesswork. Obviously there would be a lump of motor weight plus battery and speed controller, so the standard glider nose would need to be shortened; plus I reckoned a few degrees down-thrust would need to be built in. For the nose length after looking at some video footage of an electric version and a bit of guesstimation, I cut off about an inch and a half from the fuselage nose. Then to mount the motor I used the kit nose-block

turned through 90 degrees and, learning from the 'Innovation' design, I bought a good quality hole cutter a fraction larger than the motor diameter to make the required hole. Then a 3mm ply front former to mount the motor was installed to which was added 4 slots for a bit of airflow via the spinner. After that it was just normal finishing off except in my enthusiasm I glued the tail plane/elevator on upside down! Does not really matter as it is only a flat plate, but the chamfer to allow down elevator is now for up elevator.

For covering I used Oracover and although transparent coloured film was initially considered for the complete wing I had a feeling that at height (thinking positively here) it would be better to have some solid area, so the centre panel is standard white film with transparent for the outer panels. Now all the surface hinging is based on the covering film and also given the minimal leading and trailing edge area, the wings are covered with panels that wrap right around. The Höllein instructions were very good in giving the sequence of working, it is different between outer and inner panels as the ailerons are of course top hinged but flaps bottom hinged. I slipped up a bit and my flaps will not reflex very far as I did not make the right allowance during covering.

Radio installation turned out quite tight as 2 Graupner mini servos just fitted side by side in the fuselage. Then with a 2200 mAh 3S LiPo in front of the speed controller (sitting on a platform to allow wires and airflow), I was a bit stumped for receiver location. Anyway I squeezed a MPX 7 Ch. Synth receiver in the fuselage just behind the servos, well at least there is good separation from the electricrky up front. All assembled I found it a bit nose heavy at the stated CG location, but that is better to start with. I could not shift anything to help and I am very wary of these LiPos, ensuring both some protection and air gaps. All up weight is about 1.6Kg (56 oz), but nothing can be done about that and I have not worked out the wing loading.



So to the flying I went on my own to Chalbury mid-week in September 2018, managing to find a reasonably sunny day with light wind. I chanced a hand test glide (a great way to break a model) and that just showed it was likely a bit nose heavy, but not too bad. So with some apprehension I went for a power launch, well it need to be pitched up to a 45 or so degree climb, but was very steady. My transmitter beeped a 20 second warning so I killed the power. It was definitely a bit nose heavy but the glide was lousy even without that but then I saw the prop was still turning. I double checked I had cut the power, not that I had doubted it, and then tried raising the nose thinking that would surely stop the prop to allow the blades to fold. Nope. Oh well, landing was mandatory whatever and the blades did fold as I skimmed the top of the grass. Double checking things I guessed that the brake function had not been set. Grrrr., never had this problem on a winch, just line tangles! Of course I needed to

go back home to read the speed controller instructions for programming the brake, which I was sure I had already done. No matter and now I have bought a Roxxy programmer (more expense).

So on a second session it was much better. The glide is pretty good and penetration upwind is good even without reflex (a Selig 6030 or similar section I think). Cruise with a few mm of thermal flap is good and then once in a thermal, coupled flap/elevator works for me, though maybe not to everyone's taste. Crow braking is good but I must admit one aspect I am very wary of is heavy arrivals; certainly no sticking the nose in for spot landing. I did a bit of a heavy landing once and it knocked the motor shaft, giving great worry when powering up for the next flight. I am also a bit wary of nicks or scratches on the carbon prop blades. I guess the one annoyance was, to my horror, I have had to add a bit of lead to the rear end to sort the CG, but I guess at least I got fairly close to right with my conversion.

In a later session I did have a few good thermic flights. I reckon the launch is moderate winch like , (not full F3J/F3B) which I am happy with. I had a couple of flights of about 30 minutes, yes the thermals were good, which gave enough satisfaction.

So there you have it – a shame the kit is no longer available but I would recommend looking at the 'Introduction' and 'Inside F5J' designs sold by Höllein ; Alan Butterworth will likely back that up.

The electrickery bits used were:

Motor – Hacker A-30-14L (800 U/min/v)

Prop – 13 x 6.5 Aeronaut CAM, aluminium Hub assembly

Speed controller – Robbe 'Roxxy 940-6

Battery – 3s 2200 mAh Overlander

### **AndREaS Follow Up by Martin Burr**

As I have finished the plane and covered it, I thought I would share some of the things that if I were building again I would look at.

#### General fit of parts

Reading on the forums it seems that some of the parts although labelled the same, can fit better as a left or right side, I would check this next time as some things did not seem to fit as perfectly as I would have liked. Having said this do not be put off, generally everything fits really well, just keep an eye out.

#### CoG

Also reading on the forums, (and both Alan and I had the same situation) the plane is a little nose heavy so you need to add around 10g to the tail to get anywhere near the advised 72mm CoG. Alan used the suggested Hacker geared motor and I used a direct drive motor from Hyperflight (an ADH-300L-FM); a much cheaper option at about £15. This motor weighs about 40g and I think the Hacker is around the same. If I was doing the build again I think I would look at shortening the nose by about an inch. In my installation there is plenty of room behind the motor, but this may not be the situation with the geared setup however.

#### General installation

Firstly I suggest you install whatever motor you use before doing the top sheeting just behind the motor mount, I had to cut mine open to make sure that the wires were safely out of the way of the spinning bits. I also placed my speed controller underneath the servo tray and mounted my rudder and elevator servos on top, 90 deg different to what is suggested. My setup brings the ESC and the servos aft to help with the nose heaviness and makes it easy to install. Just make sure you have servos that are not too tall; I used Hitec HS 55.

### Pushrod tubes

Mine seem to bind, I did a nice smooth install following a very gentle curve and the 0.8mm wires seem very draggy in the tubes, I think they will cause double centre issues. I would suggest checking this before the top sheeting goes on, and maybe using a better product. I purchased thinner wires from Hyperflight and this sorted the problem.

### Spoilers

Others have had issues with these twisting or not closing nicely. Mine were trying to twist but I think I have them under control now with the usual heat treatment. Mine also did not want to close nicely and I found the suggested method of actuation a total nightmare. I gave up and did a far simpler setup, where the servo just directly pushes the surface up and a small magnet keeps them closed. I used this method on one of my other planes and it was totally reliable and simple. One of the problems with the original suggestion is that the spoiler closes onto 5 ribs and it is difficult to ensure that all 5 are perfectly in line and that the underneath of the spoiler is exactly the correct curvature along its length,. So I cut away the top surface of the 3 middle ribs so that the spoiler only rests on its two ends, this, plus the positive closure of the magnet near the centre seems to be doing the trick.



### Powertrain etc

Alan's and my plane both ended up with a balanced ready to fly weight of 550g, but to achieve this I did not use the steel joiner but used two carbon rods instead in the provided tubes. You could use two steel rods for ballast if you wanted, which would add around 50g to the AUW.

To have enough power to pull through the air to launch height needs around 200W per kilo so for a weight of 550g this leaves us needing about 110W. The motor I bought is capable of around 120W using an 8x4 prop, I have an 8x4.5 and it does give around a constant 115W once the initial enthusiasm at the start of the test subsides. It is always nice to have a bit in hand if it is windy, so I will also try a 9x5 which is the maximum for the motor. The prop came from West London Models who also supplied the two Hacker 500mAh 3s Lipos; these are about £9 each. I have used Hacker Lipos

from WLM for a few years and they have all proven excellent in use. They even have a handy power checker on the end. The spinner I used is also from Hyperflight and is a 30mm HyperSpinner "POWER" for 3mm shaft. This POWER version has a longer more streamlined appearance and the nose cone finishes flush with the rear face of the yoke for a neat fit next to the motor mount. I happened to have a proven 20A ESC so I used that underneath the servo tray as I said, however a 15A version may be a little lighter and it all counts at the front !

The original design for the plane gives a ballast box just aft of the main spar. If I use ballast it will be in the form of wing joiners as I have said, so I made use of this area by fitting a very small 6ch Fr-Sky Rx and RC Electronics height limiter, also two short servo extensions that emerge in the provided holes in the fuselage to join to the wing spoiler leads.

#### Overview before maiden

I enjoyed building the kit and the general standard of parts etc is excellent, it also looks really nice. The spoiler linkage they suggest is overly complex, and as far as I can see achieves nothing except smoke from the ears! The suggested servo installation in the fuselage leaves little or no room for an ESC especially if using a geared motor. The plane was originally designed for bungee launch and there are quite a few areas that seem over strong, the main spar for instance seems over engineered for the low stress electric launch. I expect to keep costs down the manufacturer produces one overall version with an electric fuselage option, speaking of which brings us to the CoG issue. Whilst adding 10/12g to the tail is not the end of the world, it is rather a shame when making a lightweight plane to have to add this, especially to a fairly fragile area. After balancing I thought I could put this dead weight to better use, so I cut back the covering and added an aluminium cheek to the side of the fuselage on the non-pushrod side. This area looked a little flimsy to me during the build, so this will beef it up and reduce the amount of lead needed; the piece of aluminium weighed 5g plus a bit of glue. Or as I suggested earlier, maybe a shorter nose when using a direct drive motor.

Well, that brings us to the maiden on Thursday 14th May, Chalbury Farm, 11.30 am (ish)

The situation allowed us to return to Chalbury which amazingly also coincided with a nice calm day. After assembly and a final check over, it was time for the first flight, a gentle launch into the breeze showed a pretty flat straight true glide, all looked promising. I picked it up and walked back up the field and tried again, as I did not have the benefit of a launcher due to Covid regs. I launched as before, but then applied the motor progressively so that I could get my fingers back on the sticks. Every glider I have launched with an electric motor has always risen its nose to a greater or lesser extent requiring some sort of preset down elevator or compensation and this one was no different, I just needed to hold in a little down elevator on the climb.

So what did she fly like? Well, I suppose it was rather uneventful (good). A little bit of down elevator trim was needed, and also the elevator throws were too much but the rudder was fine. It flew pretty well (possibly quite fast) and showed promise. When the spoilers on the wings were deployed the nose dropped quite severely, so when I landed I gave them less movement and also added some up elevator compensation to the mix.

The next, and subsequent flights allowed me to get the feel of her, and I can say that she seems to handle well, circling quite flat in thermal turns. I set the rudder at maximum available throw, and this seems fine. The CoG I left as advised at 72mm, however I will probably experiment with this as time progresses.

Overall I am very pleased with it, the magnet assembly of the wings is very convenient and makes life easy at the field. My motor setup is capable of getting it to 150m in 25sec and on a 500mAh battery this gives two climbs and a bit left over for flying. When I did my earlier motor power tests I was using a much bigger battery (1800mAh) this gave me a slightly false picture. Using the 500mAh battery and a 9x5 prop this showed about 120W on the meter, which is adequate but not generous. 150W would be better, however the small battery is needed to keep things in balance. I will see how it goes but I may get a slightly bigger prop to try.

I hope all the above helps anyone thinking of building this plane, I have very much enjoyed the experience and I like flying it as well.

## Electric Conversion by Martin Burr

Following on from the Andreas build, I have converted my old plane, a Sirocco built many years ago (25+) from a Roy Pitts plan. The plane is a rudder elevator T tail design with all built up construction to 100" span. Over the years it has suffered from hangar rash and a couple of unplanned landings, so I elected to not only convert to electric launch but also to strip, repair and re-cover. I had a motor and ESC combination in my parts bin which should do the job. I also decided to keep the original full size Futaba servos, they give me a grin every time I see them knowing how small some modern ones are !

The first job was to strip back the orange solarfilm on the fuselage and see what lurked underneath. This was a trip down memory lane in itself as I found various modifications that I had totally forgotten about. The original plastic canopy was pretty much only fit for the bin so something would have to be made. I would not like to put the plane through a bungee launch again so no need for the hook and I never liked the skeg under the front so that went as well.

The nose section came away from the front bulkhead without a fight and I extended the nose with plywood, cutting a hole through the inside to accommodate the outrunner. It was quite tight, and would have been easier with a narrower motor, I also made provision for the wires to route past the rotating can. I moved things around a bit in the fuselage to allow space for the battery, with the Rx under the trailing edge the servos under the front half of the wing and then to power battery and finally the ESC and motor. After the Andreas' slim proportions it was rather nice to be able to get my fingers in.

The plane weighed 1135g/ 40oz ready to fly in its "pure" form, so I was interested to see how it finishes up after the conversion. It has a wing area of 720 sq in, so the original wing loading was around 8oz per sq. ft. I was expecting an increase, possibly 150g/5.3oz which will increase the wing loading to around 9oz/sq. ft.

I stripped back the wings, solarfilm as you probably know is clear but the glue is coloured and can leave behind a stain. I found the best method was to leave in the sun, find the original overlap, tease this back then try to pull back as much as possible in one go. I did not think heating it helped, it seemed to try to re-stick itself. For the remaining stubborn bits I used a mixture of sandpaper, heat gun and thinners. In the end it was not too bad a job, removing the covering left a pretty sound pair of wings, a couple of cracked ribs and a bit of surface damage, but nothing that a bit of glue, filler and a light sanding could not sort. Without doubt the worst area was the T tailplane which looked rather fragile, so I elected to add a couple of carbon spars which has made it acceptable.



I ordered some Oracover in red and white to give the old girl a new livery; I never liked the orange and thought the new colour scheme would be easier to see. Adding the covering it brought the AUW to 1205g/ 42.5oz so around 8.5oz per sq/ft (yep I know I'm mixing units, but that's how I think !). Interesting to note that the conversion to electric only added 70g to the overall weight.

I took the model along to Chalbury on 14<sup>th</sup> May and after the success of the Andreas I was feeling brave enough to launch her into the sky. The last time the old girl flew must be at least 5yrs ago and probably off a slope, so this would be a new adventure for both of us. The test glide was very promising, she just flew straight and true with quite a shallow glide angle, must remember no brakes! So I picked her up and walked a long way back up the field to give her a go with the motor, as before a gentle launch then apply motor progressively. This was a bit more scary than with the Andreas, as anything over about half throttle causes the nose to rise severely needing large amounts of down elevator to compensate. When I had enough height I gave her full beans to see what would happen, this resulted in an unplanned sort of loop/ belly flop thing, not pretty, but high enough not to cause any trouble.

I had mounted the motor flat on the front bulkhead, but in hindsight I should have given it some down thrust. Thankfully, I can give it some down elevator compensation to help, and not use full throttle; the climb rate is perfectly adequate at about  $\frac{3}{4}$  anyway.

It was rather nice seeing it fly again and it brought some admiring glances from those present. It was a trip down memory lane for me and the landing is much more of a challenge than the modern "mouldies" that I usually fly, the rubber band attachment of the wings always was a saviour !

### **Eagle Sounds Module Update** by Frank Bayes

To increase the sound volume from my Eagle (Glidepath April 2020) I tried a larger speaker with the original sound module, after extracting it from a Mini USB unit, which I simply added in. This gives a super increase in sound volume and quality and with a small cardboard tube above it sounds quite impressive. It imagine that in the Eagle, with maybe a couple of cardboard tubes from the speaker exiting to the outside the sound may be adequate.

I tried adding in a 99p amplifier to increase the sound even more, but so far I have not got that to work. Total weight of the assembly less the battery supply and the original small speaker is 61grams, the speaker magnet being the main weight. The power could be supplied by a 5V UBEC from the main battery in the model.

The switch operates the MP3 files one at a time, so you need to find a way of switching that remotely; a Turnigy R/C on/off switch may work which is what I will try next. 4MB of memory gives a terrific amount of playing time with MP3 files. I have some great engine sounds from a Catalina with the Pratt and Whitney Wasp engines that were also used in the DC3 Dakota, so I intend to try this in my Dynam Catalina as I do not have an Eagle, yet

Details of the various equipment used can be found at

MP3 Recordable Chip 4MB MP3 memory £12.95

[https://www.ebay.co.uk/itm/MP3-Re-Recordable-Sound-Chip-Module-4MB-USB-Transfer-Model-making-crafts-gifts/292682749183?ssPageName=STRK%3AMEBIDX%3AIT&\\_trksid=p2057872.m2749.i2649](https://www.ebay.co.uk/itm/MP3-Re-Recordable-Sound-Chip-Module-4MB-USB-Transfer-Model-making-crafts-gifts/292682749183?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2057872.m2749.i2649)

Mini USB speaker £2.39

[https://www.ebay.co.uk/itm/A10-S09-S28-TD-V26-Micro-USB-Stereo-Portable-Speaker-Music-Player-FM-Radio/401965323842?ssPageName=STRK%3AMEBIDX%3AIT&\\_trksid=p2057872.m2749.i2649](https://www.ebay.co.uk/itm/A10-S09-S28-TD-V26-Micro-USB-Stereo-Portable-Speaker-Music-Player-FM-Radio/401965323842?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2057872.m2749.i2649)

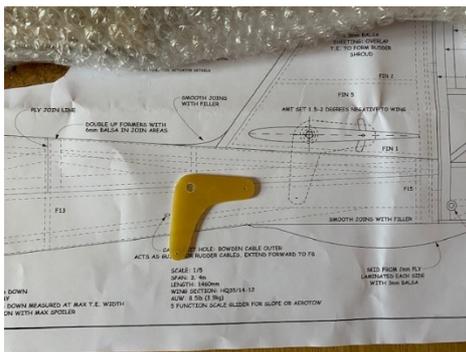
Amplifier I could not get to work( so far) 99p

[https://www.ebay.co.uk/itm/PAM8403-Mini-2-Channel-3W-Stereo-Class-D-Audio-Power-Amplifier-Module-Board-UK/262752767520?ssPageName=STRK%3AMEBIDX%3AIT&\\_trksid=p2057872.m2749.i2649](https://www.ebay.co.uk/itm/PAM8403-Mini-2-Channel-3W-Stereo-Class-D-Audio-Power-Amplifier-Module-Board-UK/262752767520?ssPageName=STRK%3AMEBIDX%3AIT&_trksid=p2057872.m2749.i2649)

## Slingsby Type 13 Petrel 1/5 scale by Andrew Rose

Just as lockdown began I quickly looked for a build that I could attempt; my work space is limited and I was very torn between sub 3m span models and a 1/5 scale Petrel. I do not really have a scale model in my collection so after a bit of logistics with the work space I decided to go for a Sarik Hobbies kit (plan, laser cut parts and wood pack). The kit arrived within two weeks from order, which was enough time to organise my work bench and read through some existing threads. One thread by Chris William is on scale soaring for the 1/4 scale version which seems pretty much the same, the other by Trevor Hewson. These combined give a pretty comprehensive guide and on that basis decided not to put together my own build thread. Chris also kindly sent through additional photos of the build to supplement the build threads. I started the second week in April making the AMT control horn, all journeys begin with small steps.

After that I started with the fuselage which is constructed in one half on the board, then sufficient ply planking in the canopy area to keep the structure stiff enough to enable it to be taken off the board and then construct the other half. Most parts went together with little tweaking, just some sanding to make sure the formers touched around the centre runners as gaps could easily result. The bracing was added as one of those therapeutic exercises and I changed the direction of the bracing as there seemed to be me a potential clash between the diagonal braces and wing joiner. The fuselage is finished with ply planking in the canopy area and then 1.5 mm ply sheeting for the rest; never done this before. The sheet is applied in 4 parts, 2 around the fin and 2 larger sheets for the main body, so made a template out of stiff card, measured, cut measured and cut. The 0.8mm ply was pre bent by steaming and taping; next time I will add a couple of wooden pegs to keep the ply aligned. After a bit of a wrestling the ply slid into place, then I taped and walked away. The result was OK but not perfect.



Overall the parts for the fuselage were good. The last former needed some modification but nothing major. Fuselage alignment was good but you need to take some care in the rear of the fuselage as it did tend to move a bit (I had made the last former a single piece as it needed modifying). The nose is car filler, with a little lead fixed to the ply nose formers. I added a multiplex tow release just in case this thing flies and I venture from the slopes.

## Memories of Stefan Hollein by Carl van Vloten

The article from Dave Camp in last months Glidepath mentioned models from Höllein which brought back good memories for me of the beginning of F3J. The late Neil Webb had promoted UK open class at the FAI to become an international class. He did a good job but the Europeans were not enthralled with landing together in the same circle so it was accepted as a provisional class with a maximum flight in 10 minutes working time but with every competitor having his or her own landing spot with a measured tape of 10 meter length.

the first comps were organised in 1992 by Fairlop in London, in Houthalen in Belgium and in Roudnice in the Czech Republic. We had visited the Fairlop and in preparing our Holland Glide in 1993 and competed in Roudnice. The following various disciplines were flying simultaneously; full size gliders, model gliders, full size helicopters and planes, among them an Antony II double-decker to bring up the parachutists, who were still jumping with cupola chutes like the military.

On this comp we met the late Dave Jones, writer and editor, Steve Harvey who later with Terry Stuckey and Rob Ashley formed the Banana team that trained on our Wessex field. They flew Valenta models that Steve Harvey together with Neil Webb imported from the Czech Republic. Karl Hinch, a few times German champion was there flying an Algebra 1000, a Dick Edmonds model of 2.5 m span

with moulded fuselage but built up wings instead of his usual foam veneer design. The other German present was Stefan Höllein flying his own design.

At the time I was flying my trusted Green Piece, named because at an auction I had bought some rolls of grass green covering material together with lots of various bits in one lot. Green Piece was a 3.6m rudder, elevator and airbrakes model with moulded pot and fishing rod fuselage. Because in those days you could only buy 1 m balsa and spruce it had a 1 m centrepiece wing and the tips were 40 cm extension of the centre piece with steel joiners and 90 cm dihedral tips. We were flying on 27 MHz AM as was usual in those days with standard servos costing about £30 quid each. With it I won the 1993 comp at Herenthals in Belgium, the only comp I ever won in my life and after that period F3J was taken over by fully moulded models.

At Roudnice Stefan Höllein flew one of his own design models that he damaged on the Saturday. The evening was great with a huge campfire with three, quarter circle wooden structures with stepped seats and high backing that could be moved around the fire so the smoke disappeared through the fourth quarter. We roasted sausages on sticks and there was much drinking of Pilsener and Slogovitsch; all of which meant Stefan had no time to repair his model.

On the Sunday morning we both had to fly in the first round at 9 am and Stefan had to change to a 1.5 m chuckie and Dave will be delighted that Stefan won the slot circling tightly in the heat coming out of the chimney of the clubhouse where breakfast was being prepared! We met him later on various competitions where he flew but was more interested to man his sales stand. We also visited his nice model shop in Bamberg a few times where he was one of the first to be active in on-line sales.

Because I am 87 now I assume he must have retired with his son now running the shop. In our model club in Zoetermeer we used his kits to teach the youngsters to build models. Although there must be usable slopes in Switzerland we have not found them yet. Flat field is power only with electric scale jets containing enormous battery packs such as 5 cell 6000 mAh and impellers; the models being able to do vertical take off, high speed aerobatics and the rest.

3 years ago I did some flying with my Miles 2m model in our neighbours field but we live on a 45 degree slope and moving became difficult. Last year my right knee was replaced and in March just before the lock down my left knee was done so I hope with better movement I can resume flying. After converting a Gentle Lady and a Scout to electric I started on a 2.3 m Westland Lysander, my first ever power plane. I was happy to be glueing balsa and light ply again and finding it very difficult to keep the weight down, specially with this bulky fuselage build behind an enormous 9 cylinder radial engine. Hope to keep you informed in future and wishing you all happy thermals



## **A Trip Down Memory Lane**

Thinking there may be a lack of matter for Glidepath during lockdown Geoff Collins has sent me some copies of old editions so we can compare our currently activities with those that took place in yesteryear. The article I have reproduced below was published in August 1989 Glidepath but is actually a report on a very early radio 'controlled' competition that took place in August 1968

### **Radio Assisted Free Flight in Sussex**

August 18th 1968 may go down in aeromodelling history as the day a 'new' contest class was born in Britain, though similar events are established in Italy, France and Belgium. SMAE's southeastern area received 15 entries for their thermal soaring event near Lewes in Sussex. The entrants travelled from as far afield as Somerset, Suffolk and Hilversum. This support was most satisfactory and, perhaps encouraged by the first fine days for weeks, 100 others turned out to watch in the sun. The sun shone all day and a moderate westerly blew diagonally across the airstrip and reached force 4 by mid-afternoon. The lift was there from early on as the seagulls demonstrated but it soon became apparent

that as the wind increased, it was not possible to circle continuously in lift for any time otherwise the model would be carried downwind and not be able to return to the landing area. The area was about 100 ft square and set out just downwind of the launch point. All flights had to terminate in the landing area to score. A few, but only a few, good times were lost due to near misses but it was generally agreed that the size of the area was about right. The point in having one at all was to deter any Free Flight entrants !

The models were a mixed bunch, converted slope soarers being the most popular. Those with very high wing loading such as as Ken Binks' "Susy Que" were at an obvious disadvantage as were those with a very light wing loading; the latter because they lacked the penetration to regain the landing area after flying downwind.

It was good to see some 'specials' built for the event. By far the largest was Chris Foss' "Utopian" now fitted with 10 channel reeds. There were also a number of converted A/2s with a variety of radio gear, mainly single channel, and although this type were best at finding and staying in lift, they lacked the penetration necessary to score and ended up far downwind.

The APS 'Aires' represented a compromise solution and two were flown. Pat Teakle's had an under-cambered airfoil section and Skyleader digital radio gear, whilst Nick Neve's had some Galloping Ghost Gear with a pulsing rudder and trim only on the elevator off the Rand throttle arm.

The contest was similar to a free flight duration contest with the difference that 300ft tow lines or unstretched bungees were allowed and a six minute maximum was set, but never achieved. It became apparent that as soon as the stopwatch was started, all thermal activity ceased, consequently some of the beat times were put up in the practice. Pat Teakle achieved several flights over 3 minutes and at least one over 4.

Both methods of launch were used each having its own set of devotees. The 'Bungee Boys', preferring their solo method and refusing all offers for their models to be towed, did not seem to gain as much height as those who trusted others with towline. There were a number of experienced Free Flight men on hand some of whom had a busy time towing, having first received their instructions from the worried owners, rather like professional jockeys

Competition times were generally in the range 1.5 to 2.5 minutes which may seem low but it must be remembered that each flight had to terminate at the point of launch. David Hughes flew a model reminiscent of RF Goslings's and made the longest flight of the contest only to land 10ft short of the the specified area. Ken Binks found that the high wing loading of his 'Susy Que' was unsuited to the conditions until he borrowed some higher aspect ratio wings. Paul Newly also had a very high wing loading and was never able to get much height on the line. He claimed that he had been on his way to the slopes at the nearby "Long Man" but became so fascinated that he changed plans and entered.

The winner John Knight, flew a "Bjorn" he had built from a German Kit and fitted it with proportional radio gear. The model towed well and had an exceptional glide angle. He avoided the pitfalls of flying too close to the stall and demonstrated the advantage of having a 'clean' model. Veteran modeller H.J. Towner presented John with a beautiful barometer, which he had donated for the event. The winner also collected £1 from the sweepstake. One often asks why the practice of sweepstake is not extended to the Nationals. If done, the Open Glider class winner could easily collect £20 or so

What conclusions should we draw from all this ? Firstly, that this is a very weather dependant activity. Perhaps it should be run in conjunction with other Free Flight events rather than having to stand on its own. The line length of 300ft was too short for the day. A model can only be released within an inverted cone about its point of launch. The longer the line length the greater chance a model has to remain in lift if the breeze is strong. Clearly there is a lot to be learnt in technique, both launching and flying. No one type of model stood out as better than any other but clearly a 6ft or 8ft model with a wing loading of about 8-10 oz/ sq ft is a good performer in most conditions. However in light winds it could well be beaten by a lightly loaded model of the A2 type.

To win this type of contest both skill as a pilot and experience as a designer are required. No clear advantage was established by the use of expensive radio equipment and it would seem that proportional rudder plus trim on the elevator is sufficient

## **Calendar ( WSA events in bold (or should that be on hold) )**

The crystal ball is clearly slightly and is now just misty rather than foggy !

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