JUNE/JULY 2018

SAILPLANE &GLIDING

VOL. 69 NO.3

WHY THERMALS ARE NOT ALL ABOUT HOT AIR

IS DG-1001 CLUB NEO THE IDEAL CLUB TRAINER?

HOW TO ENHANCE LEARNING WITH A GLIDER SIMULATOR

THREE MUSKETEERS

Great results for UK pilots competing in Ventus 3

£4.50

ISSN 0036-7235

LX AVIONICS AND PILOT SUPPLIES

Visit our New POOLEY'S FLIGHT EQUIPMENT Pilot Shop at Turweston

LX Avionics are delighted to have been appointed Sole UK agents for MarS Emergency Parachute. Offering great build quality and comfort, EASA Certification, a 20 year life and excellent value for money. Clubs, contact us for special club offers.

From £1,416.00 Inc. VAT

From £1,476.00 Inc. VAT

From £1,464.00 Inc. VAT

The original LX company, producing first class gliding instruments for over 40 years

Easy to use all-in-one variometer and air navigation device.

- 2.5" high contrast display
- Task Navigation, Final Glide
- IGC flight recorder with ENL
- New LX One chip
- 8 Gb internal Memory
- TP, APT, TSK support
- WiFi and Bluetooth 4.0 + BLE
- Integrated G-meter (G-force accelerometer)
- 3-axis gyroscope and accelerometers
- 2 rotary knob with push function, for simple effective handling integrated GPS receiver
- Built-in voice module
- OAT probe input (temperature)
- External SD Card interface
- Built-in rechargeable back-up battery (up to 3 hours of autonomy)
- Power consumption: 150mA @ 12V

Future digital variometer with analogue needle.

- Transflective, High Contrast Display
- Task Navigation with Final Glide
- IGC Flight Recorder with ENL
- New LX One Chip
- 8GB Internal Memory
- WiFi and Bluetooth 4.0 + BLE
- Integrated G Meter (G-Force recorder)
- 3-axis Gyroscope and Accelerometers
- Rotary knob with Push Function
- Integrated GPS receiver
- Built-in voice module
- OAT probe input (temperature)
- External SD Card Interface
- Built-in rechargeable back-up battery (up to 3 hours of autonomy)
- TP, APT, TSK navigation
- Airspace support
- Power consumption: 150mA @12V

We will match any like for like written quotation.

Sales and Support 01280 700020

info@lxavionics.co.uk www.lxavionics.co.uk

Our Address: LX Avionics Ltd, Hangar 10, Turweston Aerodrome, BRACKLEY, NN13 5YD

VAT: GB 793 1777 86 Company number 4417407 E &OE

CONTENTS

CLUB

FEATURES

MEMBER OF THE ROYAL AERO CLUB AND THE FEDERATION AERONAUTIQUE INTERNATIONALE

THE MAGAZINE OF THE BRITISH GLIDING ASSOCIATION
JUNE/JULY 18 VOLUME 69 No 3

EDITOR: SUSAN NEWBY
C/O BRITISH GLIDING ASSOCIATION, 8 MERUS COURT, MERIDIAN BUSINESS PARK, LEICESTER LE19 1RJ

EMAIL EDITOR@SAILPLANEANDGLIDING.CO.UK

***S&G* TEL**: 01763 246657

COVER STORY
Three Ventus 3s flown by (left to right) Steve Jones, Phil Jones and Derren Francis. They were getting in some good early season practice, competing in the 52nd Hahnweide competition. See the story on page 5. (Max Kirschner)

DEADLINES

Aug/Sept 18
Articles, Letters, Club News: 5 June
Display advertisements: 21 June
Classifieds: 5 July

Oct/Nov 18
Articles, Letters, Club News: 7 Aug
Display advertisements: 21 Aug
Classifieds: 6 Sept

PUBLISHER
British Gliding Association, 8 Merus Court, Meridian Business Park, Leicester LE19 1RJ
tel: 0116 289 2956 fax: 0116 289 5025
www.gliding.co.uk
email: office@gliding.co.uk
To advertise in S&G: Debbie Carr
debbie@gliding.co.uk
To subscribe to S&G:
office@gliding.co.uk
Or subscribe at *www.sailplaneandgliding.co.uk/subscribe*
UK £25.75 Overseas airmail £41.50

› BGA Vice President David Roberts has retired, as planned, from all aviation representative roles, including the Europe Air Sports presidency. The BGA is enormously grateful for all that David has achieved for gliding and other air sports across Europe and in the UK, and wishes him a happy 'retirement' from the many volunteer roles he has so successfully filled. More detail on David's enormous contribution will be reported on in the future.

› Congratulations to Ollie Sleigh, this year's recipient of the Alex Ward Memorial Fund award. The fund makes an annual award to encourage young Cambridge pilots under the age of 25 to enter competitions and undertake more adventurous flying.

› DG is now making neo winglets available for LS4 gliders. The development follows an aim to keep maximum cockpit load as it is and to carry as much water ballast as possible with this configuration. *www.dg-flugzeugbau.de*

› The CAA intends to provide updates of airfield frequencies as they convert to 8.33 kHz frequencies during 2018. The first version of a supplement was published during mid-February, along with a NOTAM, and is updated on a weekly basis. See 'Updates' on the CAA's 8.33 webpage: *www.caa.co.uk/General-aviation/Aircraft-ownership-and-maintenance/8-33-kHz-radios/*

› The exemption to permit gliders and SLMGs from a requirement to use secondary surveillance radar transponders at and above FL 100 up to FL 195 in designated areas has been reissued as ORS4 No.1258. Pilots intending to use the exemption must ensure that they fully understand the published details. *http://publicapps.caa.co.uk/docs/33/1258.pdf*

› Schempp-Hirth has updated its website for the new Ventus to include FES, self-launch and 15m. See *www.schempp-hirth.com/Ventus*

› Congratulations to US pilot Keith Essex, who has set a 500km 15m Class out-and-return world record in New Zealand with his ASG 29 Es. During a February flight of 1,300km, Keith achieved an average speed of 255km/h over a 500km section of the course, setting a new FAI world speed record for out-and-return flights.

› FLARM has released a new a customer portal. It can be found after logging in to *www.flarm.com* under 'My Account'. The customer portal is a central point for all things FLARM related.

Photo: Richard Vining

■ It's the end of an era at the Upward Bound Trust as the sun sets over its Haddenham airfield. The trust is a registered charity that has been teaching young people to fly since 1965. The club has been given notice that it needs to leave its current site after 30 September. It is now looking for a suitable field, or existing farm airstrip, in Oxfordshire or Buckinghamshire. As a weekend-only winch launch club, noise and disruption are minimal. Agricultural rates can be paid for fields and commercial rates for a small hangar. Can you help? Contact *thomas@simple-kitchens.co.uk*

Hus Bos to inspire the next generation of female pilots

AS REPORTED in the last issue, the UK has been chosen to host the Women's World Gliding Championships in 2021.

The bid, submitted by the Gliding Centre and the BGA, beat off competition from rival nations and Hus Bos will now host the 11th WWGC in three years' time.

BGA Chairman Andy Perkins plans to use the event to showcase how aviation is accessible to women as a sport and as a career in the flightdeck.

Andy, a senior first officer with British Airways who trains 777 pilots, said: "We are excited that the International Gliding Commission has recognised our bid and we are delighted that our passionate focus to bring the Women's World Championships to the UK has paid off.

"Britain was a pioneering nation for all of aviation and we can't wait to welcome the world's best women pilots from around the globe to compete in this prestigious international event."

Women Glide UK continues to encourage women of all ages to discover gliding. Liz Sparrow is co-ordinating the project: "Women Glide aims to encourage women of all ages to discover gliding whilst supporting existing female pilots to aim higher and progress their gliding skills through coaching, mentoring and, ultimately, competition."

Women Glide is already delivering results. Kristina Samuels from Trent Valley GC started learning to glide when she was 35 years old. Now, just two years later, she is preparing to enter regional competitions after being selected to take part in the women's training programme.

Kristina said: "I flew with British gliding team members for a week at Bicester last year and learnt so much as part of the Women Glide coaching and mentoring project. I now need to put in the effort and focus on flying faster."

Kristina Samuels (back) is coached by British team member Liz Sparrow

UK PILOTS BRING HOME INTERNATIONAL MEDALS

BRITISH pilots achieved some great results against top international pilots in the 52nd Hahnweide competition held in southern Germany, 4-12 May. Current 18m world champion Russell Cheetham won the 18m Class, flying his JS3. Other UK pilots finishing in the top 10 of the 18m Class – and all flying the Ventus 3T – were Steve Jones (5th), Phil Jones (6th) and Mike Young (10th). Howard Jones shared second place in the 15m Class, flying his Discus 2a, while Tim Scott, flying an ASG 29, finished in fourth place. Derren Francis was also in the 15m top 10 (8th), flying his Ventus 3T.

Howard Jones also received the prize for the fastest pilot in the 15m Class (116.56km/h).

The International Hahnweide Gliding Competition is intended to be an international cross-country soaring competition. The competition offers the opportunity for glider pilots of all nations to share their experience of flying together, encouraging and furthering their camaraderie and international friendship. The main focus of the Hahnweide Gliding Competition is on having fun!

Full results are on Soaring Spot.

Howard Jones (left) was the fastest pilot in the 15m Class; Russell Cheetham (centre) took home Gold in the 18m Class (Max Kirschner)

DATES

NATIONALS, REGIONALS AND OTHERS

Competition Enterprise	Aston Down	30/6-7/7/18
18m Class Nationals	Hus Bos	7-15/7/18
20m multi-seat Class Nationals	Hus Bos	7-15/7/18
Worlds	Ostrow Wielkopolski	8-21/7/18
15m, Standard, and Club Classes	(Poland)	
Worlds	Pribram	28/7-11/8/18
Open, 18m and 20m multi-seat Classes	(Czech Rep)	
Club Class Nationals	Dunstable	4-12/8/18
Open Class Nationals	Aston Down	18-26/8/18
Standard Class Nationals	Aston Down	18-26/8/18
15m Class Nationals	Aston Down	18-26/8/18
Junior Nationals	Lasham	18-26/8/18
Two-seater comp	Pocklington	19-26/8/18
UK Mountain Soaring Champs	Aboyne	2-8/9/18
Glider aerobatic competitions		
Saltby Open	Saltby	20-22/7/18
World Glider Aerobatic Champs	Zbraslavice, Czech	2-12/8/18
Aerobatic Nationals	Saltby	23-26/8/18

DUNSTABLE REGIONALS
16-22/6/18

SHENINGTON REGIONALS
23/6-1/7/18

BIDFORD REGIONALS
7-15/7/18

BICESTER REGIONALS
21-29/7/17

BOOKER REGIONALS
21-29/7/18

HUS BOS CHALLENGE CUP
28/7-5/8/18

INTER-SERVICES REGIONALS
4-12/8/18

NORTHERN REGIONALS
12-18/8/18

LASHAM REGIONALS
18-26/8/18

■ **BGA Club Management Conference, Sunday 28 October 2018 at Highgate House, Northampton**
■ **BGA Conference and AGM, 2 March 2019 at the Belfry Hotel, Nottingham**

Airspace changes branded unsafe

THE All-Party Parliamentary Group (APPG) on General Aviation has voiced significant concerns about the potential dangers of proposed airspace changes around London Oxford Airport and RAF Brize Norton, branding the proposed changes 'dangerous'.

The group highlighted the "widespread concern that the changes will damage the interests of the majority of those involved in general aviation," and that the rationale behind the proposed introduction of large scale Class D controlled airspace does not appear to take into account the resulting significant reduction in safety outside of the newly proposed controlled airspace.

The APPG has identified alternative airspace designs, which would address the operational needs of both RAF Brize Norton and London Oxford Airport, without vastly expanding the existing area of controlled airspace.

The Airspace Working Group also said that it will conduct an inquiry into the UK's lower airspace. A report to ministers will be produced after Hearings in due course.

APPG Chair, The Rt Hon Grant Shapps MP, said: "The attempt made by these two applications to get under the radar by using the previous rules is not acceptable to those of us in Parliament."

Pete Stratten, sector chair of the Airspace Working Group, said: "Inward looking airspace changes made in isolation do little to establish airspace that reasonably meets the needs of all stakeholders. Without a lower airspace strategy, and one which ensures that everyone's needs are considered, we will get airspace that is unsafe, unfit for purpose and damaging to UK aviation as a whole."

■ See *www.generalaviationappg.uk/news*

Waypoint update

TIM Newport-Peace has published an update to the BGA Waypoint Database.

Minor changes have been made to: Cragganmore **CGN**; Leominster NW **LMW**; Shobdon NW **SH2**; Shobdon **SHO**; and Thame Airfield **THM**. Six Mile Bottom **SMB** has been reintroduced as a waypoint. See: *www.newportpeace.co.uk/waypoints/97al21a.htm*

■ THIS stunning painting is one of three entered for this year's Guild of Aviation Artist's exhibition by Black Mountain's Robbie Robertson. Entitled *Ralph's Racing Finish*, it depicts the late, great Ralph Jones in his big Nimbus finishing at Nympsfield during the Western Regionals in the 80s. The exhibition takes place at London's Mall Galleries 9-15 July. Opening hours are 10-5pm Tuesday to Saturday, with a 8pm late opening on Thursday. On the final day (Sunday, 10-12.30pm) there will be walkabout tours and painting demonstrations. More details at: *www.gava.org.uk* (See more of Robbie's work at *www.theartof soaring.net*)

Futuristic scene

IT'S good to see that gliding is still around in James Tseng's vision of 'Flying in the Future' (below). That was the theme of this year's FAI art competition. James took second place in the seniors (14-17) category. See *www.fai.org/fai-young-artists-contest*

Movie magic at Nympsfield

FILMMAKER and glider pilot Joanna (Joey) Beard, pictured above, is shooting a 20-30 minute drama, *Airborne*, this summer. The coming of age drama is due to be shot on location at Bristol & Gloucestershire GC.

In collaboration with UK Junior Gliding, the BGA and Women Glide, it is hoped this film will continue to spread the message that anything is possible.

Joanna was born into a flying family steeped in aviation history involving spitfires, airships and tiger moths, but said that these exciting stories begin and end with gliding, with four generations of glider pilots in her family.

Producing and directing drama short films since 2007, Joanna is now undertaking a Masters Degree at the School of Film and Television in Falmouth and hopes to make this film as her final thesis submission.

She is seeking additional funding to really get the project off the ground. You can support her by visiting the crowdfunding page via *www.airbornethemovie.co.uk*

MARKETING OFFICER IS HERE TO HELP

RACHEL Edwards is the BGA's new marketing officer. Regional forums and improved communication with temporary members are the key focus for this new marketing role.

"At the mention of marketing, many people think of advertising, leaflets and flyers," said Rachel. "But it's much more than that. It's about the whole process of promoting and selling a product or service, or, in the case of gliding, the experience."

Many of the things clubs are already doing fit into this activity: pricing structures, places where customers can buy the 'product', promotion through welcoming signage, airfield greeting and communicating what is on offer through a mix of channels, and public relations.

Potential new members are buying into an experience which begins from the moment they discover a club – a drive-by drop-in, a gift purchase online, a work colleague's enthusiasm about a trial lesson, or a social media post and review on club websites.

Rachel said: "For long-term sustainability and future growth, clubs should consciously consider these

Rachel Edwards with Darlton's Craig Hobson at the Wolds Gliding Club

elements and key messages within their development plans, just as the BGA is weaving the principles within its 10-year strategy.

"Membership figures recently released show a fall in club membership last year and of those members more than half are aged over 51, with fewer than 7 per cent women. We need to do more to attract, recruit and retain new people into the sport and widen participation."

Rachel has a background in marketing, communications and media having worked in both the private and public sectors. She also volunteers with the Royal Air Force Charitable Trust.

She says proactive communication with temporary members and the areas they interact with will be a key focus of the role alongside the facilitation of regional forums to assist clubs with a joined-up strategic approach to their marketing.

"It's about working with clubs within a supportive network; we recognise clubs are independent entities, but we as a sport need to evolve to attract new members and the BGA is here to assist with that," Rachel added.

Glide Britain has generated fresh interest in gliding by producing videos of club activities to promote the sport. The team's latest footage showcases gliding over the spectacular Scottish landscape and was filmed during an Inter-club competition in April. (See pages 38-40.)

■ To contact Rachel, email *rachel@gliding.co.uk*

Photo by Steve Codd

RAF 100 Baton visit to Kenley

SURREY Hills GC welcomed the London bus visiting 450 ATC sqdn at Kenley on 11 April as part of the RAF 100 Baton Relay.

One of the many events to celebrate 100 years of the RAF, the Centenary Baton Relay sees a specially designed baton visit 100 sites associated with the RAF in 100 days. The RAF 100 Baton Relay will visit every region of the UK and several overseas locations, including the Falkland Islands, Washington DC, the Middle East and Afghanistan. Twenty RAF sports associations are involved in the Relay, which will see the RAF 100 Baton carried on a variety of RAF aircraft, vehicles and sports equipment by personnel from the RAF, RAF Reserves, RAF Air Cadets and wider RAF Family.

'No viable future' leads to closure

AS this issue goes to press, Portsmouth Naval Gliding Centre (PNGC) is in last-minute talks with Fareham Borough Council (FBC) regarding the proposed closure of the club at the end of May.

PNGC, based at Lee-on-the-Solent, recently received FBC's eviction order from its hangars, a new tenancy offer for land only, and sharply increased new tariffs and further flight restrictions imposed by the Daedalus airfield management, Regional and City Airports. These demands no longer allow a viable, affordable future for the club.

Despite BBC publicity and thousands signing a petition calling on the council to save the club, which is an armed forces charity, club manager Tony World said the last-minute meeting was unlikely to have a positive outcome. PNGC, founded in 1948, has been a core part of aviation for young people. Many have gone on to join the armed forces and aviation firms.

SAILPLANE &GLIDING

Andy Davis
Competition flying

Paul Whitehead
SLMG

Howard Torode
Airworthiness

Derren Francis
Tugging

Mike Fox
Instructing

Dr Peter Saundby
Medical

Andy Holmes
Winch operating

John Williams
Airspace

Alison Randle
Development

Bruce Stephenson
Vintage gliding

S&G is privileged to be able to call on the advice of some of gliding's leading experts. If you have a question for our experts on any of the subjects listed above, contact the editor (details p3).

EXPERT ADVISERS

FROM FLARM TO BALLAST – A QUESTION OF SAFETY

AS ALWAYS, the April/May *S&G* was an interesting issue. I agree with all Tim Freegarde's comments on electronic conspicuity (*Letters*, p7). I will confess that, in choosing the replacement ATC transponder for the Grob, my priorities were:

- Same physical footprint in the panel (although we did change the connector).
- Elimination of the remote altitude encoder, which is required for Mode C. The TRT 800 connects to the aircraft static plumbing directly, removing the altitude encoder and its 12-wire bundle, then re-routing its static pipe, saving a few pounds of dead weight.
- Extended squitter (the ability to send extra aircraft parameters to ATC) via the Mode S replies.
- Oh yes, and price...

But what we – all GA in fact – really, really need is ADSB-IN, ie traffic information from outside onto a cockpit display, which is what I have in part via FLARM on the Oudie. The airlines have it already with TCAS/ACAS.

On the subject of FLARM installation, (*FLARM: ideal for gliding?*, pp20-22, April/May), we compensated for the fact that the Grob seating is side-by-side and flown from the left, by installing the FLARM antenna forward and on the right hand side, so that its field of view was better on the P1's 'blind' side. The FLARM range tool mentioned in the article confirmed that design decision was valid. (I used it at the time of installation.)

Concerning electronic surveillance, the UK CAA (in my opinion quite rightly) has indicated that while it acknowledges the availability of data from FLARM and ground-based ADSB receivers and from data integrators and their Apps (such as Flightradar 24), these "are for educational or recreational purposes" and not to be used for safety purposes.

The full text is at *www.caa.co.uk/Commercial-industry/Airspace/Communication-navigation-and-surveillance/Display-and-use-of-surveillance-data-from-unapproved-systems/*

Again this emphasises that phone, tablet or PC-based Apps may look nice and appear to do the right things, but cannot be verified as having sufficient (if any) integrity when it comes to use for flight safety.

I apologise for being a killjoy, but just because something appears to work, that does not make it safe.

Too many people live their lives with the erroneous impression that "if it hasn't failed, it must be safe".

Unless something has been designed, developed and certificated to be safe (and even then....), then the realistic phrase is "if it hasn't failed, it hasn't failed yet".

Finally, on the subject of water ballast, (*Get up to speed with ballast*, pp12-14, April/May), here are some open questions, based on my ignorance:

Are there any gliders where lateral control is difficult (impossible?) should water drain only from one wing?

Secondly, would/should there be advice about use of flaps in such cases, since in some gliders flaps reduce aileron effectiveness?

Finally, how would a pilot know of imbalance, since there is never any indication and (s)he will be slowing down and probably manoeuvring just before landing, after commanding a "dump", so the pilot's cues may be "hidden" by manoeuvring "loads" plus fatigue?

We don't use water at Aboyne when wave flying due to the potential for freezing. I suppose one could use antifreeze if found to be compatible – think of the speed possibilities.

I ask this for two reasons:

- once I confirmed by radio during a competition to someone that they were dumping water from both sides, and
- a knowledge that lateral imbalances in airliners have actual limits, beyond which they may no longer be controllable, especially as speed reduces. Indeed, in the case of the A380 where an engine blew up causing multiple failures, including a major fuel leak, had they not landed when they did, the developing fuel imbalance would have killed them long before the fuel was exhausted.

David Innes, Deeside GC

BGA Aim Higher coach Kevin Atkinson responds: *You raise a couple of very valid questions. Firstly, there is no truth in the rumour that the French use antifreeze and*

it is not recommended. Very few manuals mention the effect of asymmetric water dumped from the wings, although one manual suggests that if dumping is seen from only one wing then stop dumping; a policy that we adopt on the ASH 25. Several manuals mention that during the landing roll-out it might be impossible to prevent the heavy wing from dropping. Given an option, it is better to have any crosswind blowing onto the heavy wing.

I have discussed these questions with many experienced pilots during a recent trip to Sisteron. Several have landed with asymmetric water for various reasons, including an undetected leak, and not noticed an issue until low speed on the ground. No airborne handling issues were reported at normal speeds.

One pilot landed an LS6 with one side full and the other empty and it was not an issue. Of course, stronger surface winds help aileron effectiveness with low ground speeds before the glider slows, or stops, with the inevitable wing drop. One 'incident' resulted in small/gentle ground loop. This is more likely in calm conditions.

DBS checks – just more forms, or a neccessity?

THE sport of gliding is part of society and we share that duty of care. The safeguarding of children and vulnerable adults is rightly a 'thing' now, wherever and whenever adults sponsored by an organisation come into contact with them.

People still tend to trust those placed in a position of responsibility as part of an organisation. People, like us instructors, get the privilege of introducing novice members of the public to the amazing experience of gliding only because our club and the BGA sponsor us to do it; these organisations lend us their credibility and put their faith in us to do it safely.

In return it seems reasonable to me that they be able to make such basic background checks as permitted by law to try to validate and protect their investment of reputation.

Of course, a clean DBS check can't be seen as a guarantee of no future criminality, any more than a clean medical can be seen as a guarantee of future health, or a clean ARC or MOT as a guarantee that nothing will go wrong with aircraft or car.

Still I accept all of these, including DBS checks, as tedious but useful processes; they make us at least look for the obvious signs of something not right. If we don't look, we can't see.

In the event of a safeguarding incident where a history came to light after the event, people might justifiably raise an eyebrow and say to a club "why did no one ask the question?". I understand that in matters of safeguarding, a club and its directors are liable under law and need to be able to show that due diligence has been performed.

By carrying out DBS checks, we help show the public that we in the sport generally and our own club in particular have our eyes open to the risks and are doing what we can to mitigate them.

Phil Swallow, Ass Cat, Black Mountains GC

Karon Matten, BGA Child Protection Lead, responds: *DBS checks have been around for some time now and are a first point of safeguarding and protecting children and vulnerable adults who, as Phil says, trust in those who are in a position of responsibility.*

The checks are, in effect, an additional part of the risk assessments we all make within this sport. Whilst safeguarding is everyone's responsibility, those who are in a greater position of trust, not just instructors but also, for example, Child Protection Officers and Junior Gliding officers should accept that their role in gliding requires additional checks as a part of their individual responsibilities.

WHAT'S THE IMPACT OF SMS?

SAFETY management systems are now a requirement in air transport and, in the UK (via CAP 1059) and Australia (CASR Part 149 draft), are also used in the gliding world. As an airline engineer, I am familiar with the introduction and use of SMS, believing it to be an advance in safety as it moves beyond simple compliance with regulations to requiring aviation players to identify their own particular hazards and take appropriate action to mitigate risks to a level which is as low as reasonably practical.

As the Australasian representative on the OSTIV Board, I am interested to understand how well SMS has worked in practice: has it delivered on its potential or is it just a box-ticking exercise? What are its strengths and weaknesses? To answer these questions, I propose to conduct a survey similar to that which I conducted on the use of simulation in gliding, using SurveyMonkey as the mechanism.

I invite any clubs or individuals with perspectives they believe worth sharing to contact me with their experience and ideas, so that I can better formulate the survey. Like all of us, I have a limited amount of time available, so you may reasonably expect that our exchanges (whether by email or Skype) will be succinct and not use too much of your own valuable time. Naturally, the goal is to share the collective experience for the benefit of all.

I am equally happy to share the paper which I presented at the OSTIV Congress at Benalla in January 2017 on the use of simulation: please feel free to contact me if you'd like to see it.

Gerard Robertson, Auckland, New Zealand
bungeegerard@gmail.com

BGA Chief Executive Pete Stratten comments: *Gerard is correct in noting that the BGA uses an SMS. The BGA SMS, which is reviewed annually, was developed at our initiative some years ago as part of our continuing efforts to support the membership. Protecting third parties is at the top of the safety priority list. We took expert advice to ensure that our SMS works for us and is not a box-ticking exercise. Has it delivered? The signs are good, but it's probably too soon to identify what impact our collective SMS has had on long-term safety performance.*

Please send letters (marked 'for publication') to the editor at *editor@ sailplaneandgliding.co.uk* or the address on p3, including your full contact details.
The deadline for the next issue is 5 June

AERO 2018

S&G reports on the gliding interests at Europe's biggest aviation fair, held in Friedrichshafen in April

■ Trig's UK marketing manager Jon Roper (above centre) was kept busy talking about the company's range of compact and stack radios as 8.33 becomes a reality. Also of interest was Trig's TN72 GPS Position Source (pictured right). Easy to install and an ideal upgrade to a Trig transponder, the TN72 is an easy way to become ADS-B Out equipped. Recent EASA approval of the TN72 to ETSO-C199 means that the TN72 is available to order now. It costs £299. ***www.trig-avionics.com***

■ German rapper and pilot Smudo (Michael Schmidt) visited the Garmin stand to promote the new D2 wristwatch. This aviator watch features on-wrist situational reference and backup navigation in your cockpit. You can pan and zoom the watch's moving map to quickly expand your view of airports, waypoints, terrain, obstacles or weather activity along your route of flight. Expect to pay at least £600 for the D2. Smudo is a member of German band Die Fantastischen Vier (Fantastic Four), which has just released its new album, *Captain Fantastic*. ***www.garmin.com***

■ GP Gliders launched its GP15 SE Jeta, with retractable electric self-launching system, 4m/s climb rate. An evolution on the GP14, it has a similar fuselage (available in both standard and slim), but new design for wings and stabiliser. It is said to have an aspect ratio of 29, unseen in the 15m Class, plus a best L/D over 50:1. A prototype of the slim cockpit version was on display, with its grey colour demonstrating the composite technology that allows GP Gliders to play with colours.

The price for the GP15 SE Jeta starts at €94,000.

■ GP Gliders has now partnered with MGM Compro, which develops the electric propulsion system for gliders, and the companies have worked closely on the GP15 SE Jeta. Its first flight is due this summer, but it is not known when we will see this in the UK. ***www.gpgliders.co.uk***

■ The e-flight-expo is taking an increasingly prominent role at AERO. As part of an e-flight demonstration, several aircraft were presented in the skies over Messe Friedrichshafen, including Lange Aviation's Antares 20E (left). On the ground, Lange Research Aircraft GmbH also presented its glider-inspired E2 (see p13).

Diana 2 with FES will cost €102,000. Without FES €75,000 (excl VAT)

Diana 3 aims to compete with JS3 and Ventus 3. (Inset) the Diana 3's centre stick. The Diana 3 FES will cost €123,000. Without FES €98,000 (excl VAT)

■ Avionic introduced its new gliders at Friedrichshafen: the 'new generation' Diana 2 – 15 metre with front electric sustainer (FES) made by LZ design, and its bigger sister, Diana 3 – 18 metre and also FES powered.

The Diana 2's nose has been modified to fit the FES motor in the glider. With 185kg of empty mass, the Diana 2 can be self-launched without water ballast. After take-off, the battery remains ready to keep the propeller running for another half an hour, which seems to be enough to avoid a landout.

Currently Avionic is awaiting for FES system certification, which it hopes should be sorted soon.

The 18m Diana 3, with empty mass of 306kg, is definitely not a self-launcher. This is a completely new glider with similar wing shape, but a unique elliptical tail plane. Both gliders have more differences than similarities.

Doctor of Aerodynamics, Professor Krzysztof Kubrynski, has designed a new wing for the Diana 3 and he is very enthusiastic about this new glider. The Diana 3's performance was calculated with some margin, just in case, and yet is still very promising. He has no doubt that this beautiful glider will become a competitor to the JS3 and Ventus 3 in the 18-metre flapped class.

The wing of the Diana 3 is not only a refinement of ideas used in the design process of previous Diana 2 wings, but the new wing profile is said to be a 'high-tech mile step in to the future' thanks to current simulation software.

"There are some unique and more advanced aerodynamics solutions in it," said Professor Kubrynski. "For example, there is a different pressure distribution on the wing profile to well-known solutions, with resulting different properties giving better characteristics for lift force."

The Diana 3 promises to be a good climber in thermals and its wing profile will be highly resistant to dirt and rainfall, the same as the Diana 2's wing. Pilots will notice a very slight loss of performance while flying through the rain.

Not just a bigger copy of the Diana 2, in addition to improved wings, the Diana 3 offers other new features. For example, a classic main spar and there's no need for a special trailer, which was common for older Dianas built before the transfer of production rights to Polish company Avionic in October 2016. Apart from a new main spar, it's worth mentioning that there is no side stick in Diana 3, but the more popular centre stick instead.

Other features are: a new surface – fuselage transition with depth interception; different tailplane, elliptical shaped; wings can be folded into four sections; and the cockpit offers significantly more room for bigger pilots.

There are also some tech features like electric retractable landing gear, which provides extra room in the cockpit.

The Diana 3's lift to drag ratio is about 55:1 and descent 1.4~1.5m at 200km/h based on current calculations. Avionic will confirm all data as soon as possible, as all test flights have already been finished.

During the summer, the Diana 3 will fly her first competition. The certification process is anticipated to be finished by the end of this year.

Currently, Avionic is working on an Open Class glider, planned to be introduced by the end of 2020. According to Professor Kubrynski, this glider will be a game changer.

www.diana2sailplane.co.uk

■ Next year's AERO (a 'gliding' year) will be held at Friedrichshafen in Germany, 10-13 April, 2019

› AERO 2018 PHOTOGRAPHY BY SUSAN NEWBY

› TURN TO P12 FOR MORE AERO NEWS


SF23C Sperling

Mü 13D


Mü 13E


Spatz A


Zugvogel III

■ Two of the gliders on display are owned by the Interest Group Scheibe Aircraft (IGSF) and were brought to Friedrichshafen by IGSF Members. Hartmut Sammet flew the Sperling to/from Friedrichshafen and Jörg Reichle assisted with a second plane as an airtaxi. The IGSF currently has five airworthy gliders and a recently restored SF25 (A-Falke).


SF 27M

■ *www.vintagegliderclub.org*
■ *www.ig-scheibe-flugzeuge.de*

■ The theme chosen by the Vintage Glider Club for this year's AERO stand was "Scheibe Aircraft". The VGC's Gere Tischler describes the gliders on display:

As most people interested in vintage gliders will know, Egon Scheibe started his pre-war career at the University in Munich. In the Akaflieg Munich (acronym: Mü) he was responsible for the design of the Mü 13D.

The first flight of the Mü 13D was in 1936. The type was built in series at the Schwarzwald Flugzeugbau at Donaueschingen, Germany, during WW2.

The example at AERO was built in 1941; after the war it was retrieved as booty by the French and flown there for a couple of years. After a long storage it was bought by the actual owner and, with 4,500 hours of work, restored to its former glory.

Also on display at AERO was the two-seater Mü 13E designed by Egon Scheibe after the war, in 1951. This plane was the first he produced in his newly-founded company. To create space for the backseat within the C of G, he designed a complex steel structure in the wing and fuselage.

The Mü 13E has had some accidents with broken wings and fittings, which grounded the whole fleet. After intensive investigation it was found that the glider was well designed, but the pilots were not operating it within the guidelines... they made aerobatic flights with the large glider (17.2m wingspan).

The wingspan was reduced to 15.76m and Plexiglas windows were installed for the daily inspection of the steel fitting in the wing. With these modifications, the Mü 13E was airborne again. At the moment, only "shortwing" Mü 13Es are flying.

The Spatz A was the first single-seater high performance glider for the new market and was designed parallel to the Mü 13E. It is a very agile and light glider with good performance. Many 300km triangles have been flown with the small Spatz.

The Spatz A was the start of the successful Spatz family, with more than 500 built.

The SF23 "Sperling" was the only two-seater motorglider designed by Egon Scheibe. It was a multifunctional model for cruising, aerotow and for simple aerobatics. It started in 1958 with the Model A, which has no flaps, and the Conti C90 with 90 HP. Model B, in 1960, introduced flaps and a more powerful engine with 100 HP. The Model C, which was on the VGC stand at the exhibition, has the last engine upgrade to the Lycoming O235C1 with 115 HP.

Only 30 SF23 were built and just six are still in flying condition.

The Zugvogel, also known as the Kaiser Ka 5, was designed by Rudolf Kaiser during his time working with Egon Scheibe. The series starts with the Zugvogel I in 1954 and ends with the Zugvogel IV in 1957.

The glider at AERO was the Zugvogel IIIA, a high performance glider with 17m wingspan and a glide ratio of 35 at 80km/h. It was successful in many competitions, but with rule changes in the early 60s the Zugvogel was outclassed.

To have a competition glider in the new 15m Class, the SF27 was designed from the Zugvogel IIIB. It first flew in 1964.

Pioneer Alois Obermeier, from Ilertissen, used the SF27 for his vision of a self-launching glider with retractable engine. Egon Scheibe and his team were inspired by Alois Obemeier's ideas and designed the SF27 M, the first series-built self-launching motorglider with retractable engine in the world. Its first flight was in 1967.

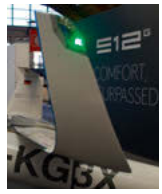
It was driven by a Hirth F10 – two stroke four cylinder engine with 500ccm and about 26 HP. The glide ratio was only a little bit worse than the SF27.


The S12-G is top of Stemme's S12 range


The S12-SW is the new entry level model

■ Stemme's S12 was launched at AERO in 2015. This year the company launched the S12-SW and S12-G. The S12-SW (Sky Cruiser) is the new entry level model and is a shortwing variant with 21.7m wingspan. The S12-G (Grand Tourer) is the new top model and features a state-of-the-art Garmin glass cockpit variant with a wingspan of 25m. All three models of the Stemme S12 family are now available to buy. Prices are dependent on versions and equipment chosen, but start at just under €300,000, excluding VAT.

LED lighting is now integrated into designs (right) and is in the final stage of the certification process. It is hoped to offer this to customers from 2019 onwards. *www.stemme-uk.com*




Virus is EASA certified


Pipistrel's Taurus

■ Pipistrel displayed its Virus SW121, which now has a full EASA Type Certificate for Night VF, Intentional Spins and Glider Towing; the Alpha Trainer; the ultralight class Taurus 503, self-launching glider; and the Sinus ultralight motorglider. Pipistrel's Alpha Electro trainer was also at AERO. *www.flyabout.co.uk*

■ LZ Design showed the FES system on a Discus 2 FES (below). Deckchairs (right) displayed good advice and offered a place to rest while considering luxury interiors by Delux by Gagula. *www.front-electric-sustainer.com*

■ Lange Research Aircraft GmbH presented the E2 (above). Based on a glider, it features six electric motors, each driven by a propeller. They are powered by a fuel cell. With a 23m wingspan, the E2 will cruise at 135kts. Used for research or surveillance purposes, it can fly manned or unmanned and is intended to stay airborne for up to 40 hours, all while staying CO2 neutral. It is expected to take its maiden flight in summer. *www.lange-research.com*

■ Anyone attending the BGA's conference in February will no doubt have seen the range of clothing and accessories for pilots produced by IDE-FLY. They make Sebastian Kawa's flying kit. Kamil Dojlido (pictured above) reported a very busy show, with approaches from several countries looking to set up exclusive distribution deals. *www.ide-fly.eu*

■ The award-winning sky[nav]pro mobile navigation and tracking system was at the exhibition. It combines in-flight weather, planning and navigation, collision avoidance, plus planning and tracking. sky[nav]pro will be at AeroExpo, Wycombe Air Park, 14-16 June. *www.skynavpro.aero*

■ Air-avionics showed its newly designed multi-function display – AIR Control Display. It controls radios and transponders, and is a fully certified altimeter. Available for €899, it is said to be vibration proof, reducing the need for regular calibration. *www.air-avionics.com*

■ LX Navigation had an extensive range of products on show, including FLARM EAGLE and new generation variometers. *www.lxavionics.co.uk*

PHYSICS IS NOT JUST HOT AIR

Think you know how thermals work? Think again! Tony Cronshaw asks coach Kevin Atkinson why thermals are not all about hot air

Utilising lift generated by a pig farm (Kevin Atkinson)

'THERMALS ARE DRIVEN SIMPLY BY HOT AIR' IS LIKELY TO REMAIN THE DICTIONARY DEFINITION FOR SOME TIME, UNLESS WE INVENT A NEW WORD (HUMIDALS? HUMITHERMS?)

SEASONED soaring pilots seem to have a nose for finding strong lift, a skill built on years of experience: They know where to go, but can't always explain why. Tony Cronshaw talks to leading coach Kevin Atkinson to discover how physics can guide us to find the best thermals.

TONY: ***One of the speakers at the BGA conference in February mentioned something rather surprising, in fact very perplexing, about the temperature inside thermals. What was your interpretation of the graphs showing the temperature and humidity within thermal bubbles?***

KEVIN: The graphs, admittedly a limited data set so far, showed that the air temperature within thermal bubbles tends to be LOWER than the temperature outside the bubbles. This is the exact opposite of what most glider pilots would have predicted from conventional theory. Actually, I wasn't at all surprised to hear that! I've been telling people for years (and in Aim Higher courses) that hot air is only part of the story. There are other physical effects going on in thermals, and importantly sink (generated by clouds) controls/determines the structure of the thermic sky.

TONY: ***Are you saying that conventional teaching is wrong regarding hot spots on the ground producing bubbles of warm air that rise up like giant hot air balloons? And that the name "thermals" is therefore misleading?***

KEVIN: I'm saying it is too simplistic and doesn't always fit reality. We mustn't allow ourselves to be blinkered by conventional teaching and "group thinking". Otherwise we'll miss a lot of useful information. An increasing temperature is, of course, very helpful when a bubble forms initially next to the ground: Note that every 1°C rise in the bubble means that the bubble can hold seven per cent more humidity. Hence water vapour starts to replace some of the gases in the bubble, and the bubble becomes less dense (ie more buoyant). NB: water vapour is a lot less dense (around 18g/mol) than dry air (around 29g/mol) [1], a fact that most people are not aware of. Picking up humidity and thus additional buoyancy (see figure right) can be a relatively fast process – assuming there is moisture available – faster than waiting for the sun to make the air buoyant simply by heating.

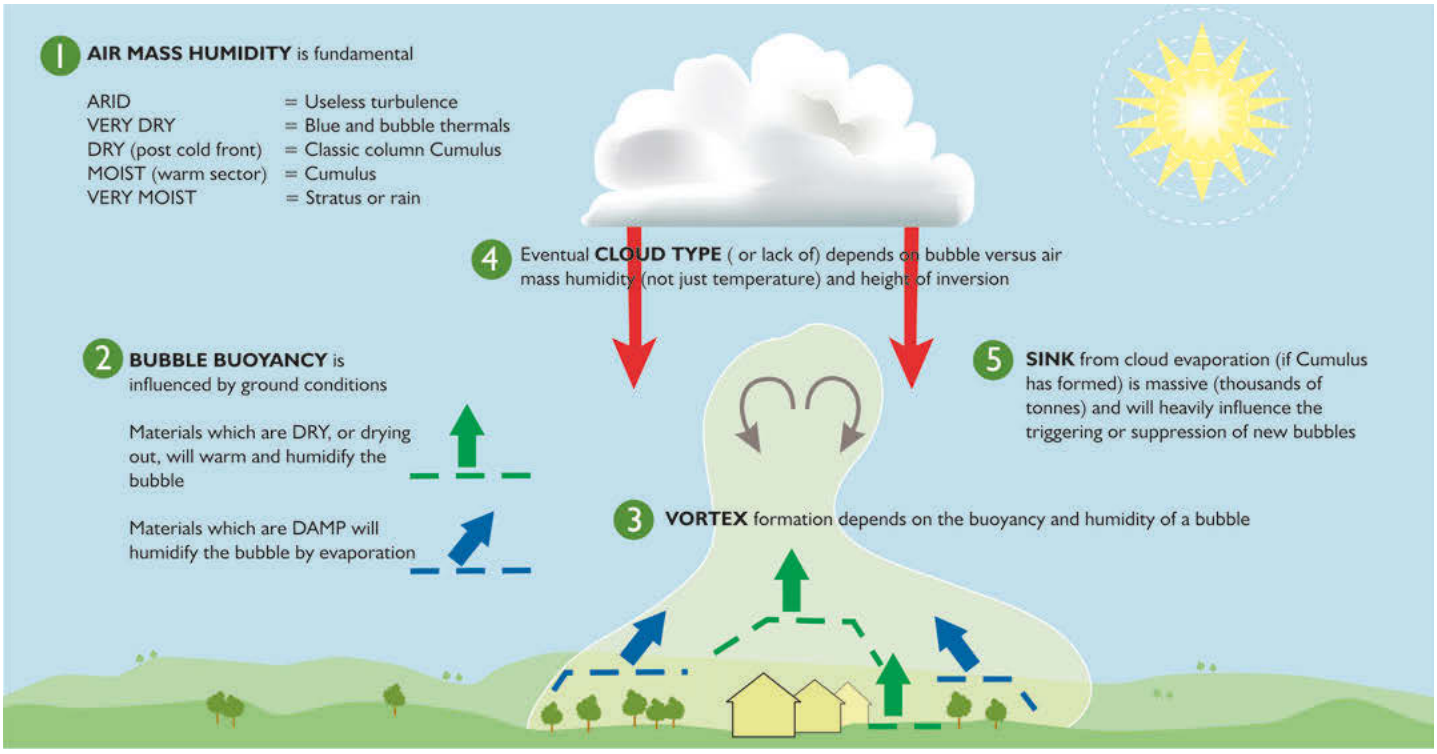
TONY: ***Why does knowing that thermals are buoyant through humidity help us? A soarable bubble is just a soarable bubble surely?***

KEVIN: That's fine once you've found a good climb, but what I'm talking about is improving your odds on finding that climb. You can tilt the odds in your favour by reading the sky to find humid type thermals with a classic toroidal vortex structure [2]. To identify active cumulus clouds, look for the rapid evaporation of the water in the drier air around the edges despite the considerably colder conditions at and above cloudbase. Conversely, at lower levels we can read the ground to locate weaker thermals, again driven by humidity.

Understanding the physics can also help explain a number of apparent anomalies which conventional teaching leaves unanswered.

TONY: ***What sort of anomalies are you thinking of?***

KEVIN: A good example would be predicting classic soaring conditions after a cold front, despite rain having fallen as the front passed. Conventional logic says that the ground must dry out to give hot ground conditions, then hot bubbles can rise in the new cool air mass. In reality, within an hour of the rain clearing we could have a sky lit up with beautiful cu rising from a damp landscape. What's happening is evaporation of the damp surface by strong sunlight in the new clear drier air, and the formation of humid/buoyant bubbles



How thermals work – a better model (Illustration by Steve Longland)

at the surface. Think of clothes on a washing line: The clothes don't get warm until they are dry, in fact they are chilled initially by evaporation. The bottom line is that post cold front thermal/bubbles are driven by their HUMIDITY (relative to the DRYNESS of the new air mass) and not very much, if at all, by their warmth relative to the cold air mass generated by the few dry areas.

TONY: ***Could this also explain why thermals are weaker in a warm sector (and cloudbase is significantly lower) than the post cold front situation?***
KEVIN: There will be a weaker contrast between ground feature/bubble humidity and warm sector air humidity, so thermals will be less strong. By comparison, in the post cold front situation, thermals can be reinforced by the development of the column thermal caused by the descending cold air generated by the evaporation of cloud above – and reinforced by the humid thermal rising into drier air.

TONY: ***Are these humid bubbles a result of our northern European climate? Would "hot bubbles" be the norm in hotter climates?***
KEVIN: My work has taken me to many places in the world, including some very arid areas where you would expect superb examples of hot bubble thermals, eg in the Middle East. In such places there is intense surface heating from the sun and formation of hot bubbles – but it turns out that this type of dry thermal is a sad disappointment, too transitory and too fragile: It seems that without water vapour, the vortex has poor stability/longevity and generally all that we find is a lot of useless turbulence within the convective layer.

To give another example nearer home: Thermals rising from solar farms are relatively hot and dry compared with normal thermals. They are narrower, more fragmented, rise less far and often difficult to exploit. Any cu forming is ragged and decaying inwards like an early morning thermal, breaking the rising bubble vortices. It fails to become the type of established cu that we like.

On the other hand, highly humid thermals rising from pig farms are stronger than the norm, even capable of punching through the inversion on a blue day. Hence we find self-regenerating cu (reinforced by a tube of sink) giving strong climbs.

TONY: ***I noticed cu forming over the sea when I was flying long-haul recently. Why does cu form over the sea?***
KEVIN: My flying career has frequently provided examples of thermals forming in places and at times that conventional theory would not predict. Clouds and streets forming over the ocean (despite being hundreds of miles from land) are examples of humid thermals driven by evaporation. I sampled

Kevin Atkinson is the club coach lead for the BGA's Aim Higher (*www.gliding.co.uk/bgainfo/aimhigher.htm*). He started gliding at age 13 at Ouse GC (now York), flying his first solo on his 16th. Kevin has over 4,500 hours gliding, including competing in UK national and regional competitions. He also has more than 7,500 military jet hours (Tiger Moths to Typhoon)

■ Kevin's book *Gliding in Lift and G-SINK* is available at *www.bgashop.co.uk* or direct from *kratkinson@yahoo.com*

Tony Cronshaw is an Ass Cat instructor at Cambridge Gliding Centre with over 1,500 hours gliding. His enthusiasm for helping the next generation of pilots includes running courses for visitors and members, and supporting CGC's recruitment and retention sub-committee

■ In the next issue Tony talks to Kevin about finding the optimum bank angle to maximise thermalling climb rate, in part 1 of a new series of Aim Higher Coaching features

some streets in a powered aircraft over the Irish Sea, and found the lift reasonably strong but lowish – inaccessible for gliding purposes unless the glider is amphibious!

TONY: ***Or you operate from an aircraft carrier!***
KEVIN: Another example would be thunderstorms (complete with classic CuNim) in the night when there is no sun on the ground. Or perhaps you've seen cu over sewage works in the winter when the sun is too weak to create hot bubbles – bubbles form from the humid and slightly warm material!

TONY: ***Phew! So that's what you mean by "having a nose" for it. So could humidity also explain why woods often generate lift in the late afternoon?***
KEVIN: That's a good question. The air trapped between the trees becomes increasingly humid during the day due to transpiration. Transpiration is the process by which moisture is carried through plants from roots to small pores on the underside of leaves, where it changes to water vapour and is released to the atmosphere – hence providing a key ingredient for photosynthesis. These processes accelerate when the sun is high in the sky and warmth and humidity builds during the afternoon. By late afternoon there will be a reservoir of humid air which gently releases, but only piecemeal due to the trees acting as a sponge preventing one big bubble triggering. We therefore find weak lift, without a vortex, which may be helpful on final glide or when low late in the day.

TONY: ***I thought I understood thermals – now it seems that the conventional teaching we all received was not quite right!***
KEVIN: It may take some time for measurement data to become available, and even longer for people to absorb this and adapt their thinking – including from Aim Higher courses. "Thermals are driven simply by hot air" is likely to remain the dictionary definition for some time, unless we invent a new word (humidals? humitherms?). Remember, for centuries people believed that the earth was flat and the earth was the centre of the universe. Some people still believe that.

[1] https://en.wikipedia.org/wiki/Density_of_air
[2] Bubbles, toroidal structure, columns: S&G Aug/Sept 2015 pp10-11, Dec 2016/Jan 2017 pp8-10, Oct/Nov 2015 pp10-11

VERSATILE ADDITION TO FLEET?

Pilots from Yorkshire and Oxford gliding clubs give their feedback on the DG-1001 club neo as a club trainer, following its UK tour

Oxford's Oscar Eldridge tries the front seat for size (Paul Morrison)

HERE at Sutton Bank we have been flying DG two-seaters since 1990, starting with the DG-500 18m trainer, which is still part of the fleet, and a DG-1000 S, which has been with us since 2003. This glider was bought for stall/spin and cross-country training and we selected the long retractable undercarriage version. This makes it less suitable for students, and so we were interested to see how the DG-1001 trainer compared with our two K-21s.

The general handling of the DG-1001 is noticeably better than the 1000 S and, according to Stefan Goldner at DG, this is largely down to the new winglets. In its basic form the aircraft is lighter as there is no water ballast gear and the demonstrator we flew had a fixed undercarriage. With the undercarriage positioned slightly further back, ground handling was better, with less weight on the tailwheel.

Bob Beck and myself flew with as many YGC members as possible, from instructors to early solo pilots and everyone was impressed with the handling in 20m configuration with launches by aerotow. Due to weather and time issues we didn't get to compare it with the 1000 S when winch launching or flying it in 18m mode, but I would expect the 1001 to be at least as good as the 1000 S.

In my view, the DG-1001 trainer is suitable for basic training, and it can be used to teach all the stall/spin exercises in the BGA syllabus, then through solo, aerobatics, and onto cross-country training. A very capable glider indeed and a very strong contender for future fleet upgrades at the Yorkshire Gliding Club.

John Carter,
DCFI, Yorkshire GC

"FROM a student's point of view, I found that it was very nice to fly, I liked it as a trainer. The only problem I found was if you had big boots on in the front it was difficult to operate the rudder."

Oscar Eldridge,
pilot under training, Oxford GC

"I WAS very impressed by the DG-1001 club neo. I flew it in 18m and 20m mode, from front and back seats, and was

surprised by both the ease of handling and performance. In my opinion, an ideal training aircraft; the glider was easy to rig and came well equipped. Many members were interested in the anti-collision light in the nose, which brightened up an otherwise overcast flying day.
Alex Rose, BI, Oxford GC

I'VE FLOWN both the Perkoz and the DG-1001 and would be happy to instruct in either. Both are very easy to fly, don't seem to be slippery like other glass two-seaters, and both do the full syllabus, including spinning – but only when prompted, not unintentionally like some older types.

Both seem well built; the visibility from the back in the Perkoz was exceptional, but the DG was fine, too (smaller front headrest than the DG-505!). Both seem an easier step from instructing in K-13s than other glass two-seaters like the DG-505, which should make it less intimidating for students (and for instructors not used to glass).

The only real downside of the Perkoz were the mass-balance weights sticking out from the tips of the elevator, which leaves them at risk of being ripped off when landing in long grass.

All in all, of all glass training two-seaters currently available, the DG-1001 club neo would be my choice.
Claudia Hill,
Full Cat, Oxford GC

I ONLY flew the DG-1001 in 20m mode. First impressions were that the build quality was outstanding, with lots of nice extras such as the warning buzzer when the rear canopy is not locked and you lock the front, the ballast weight system in the tail with warning lights on the panel, and the high vis warning on the nose, to name a few.

Flying-wise, I was particularly impressed with how light it was on the controls and it flew more like a single-seater than a big 20m trainer. Role rate was superb and stall and spin were gentle. It spun easily enough, even in 20m mode,

A worthy contender as a K-13 replacement without doubt, as it's much easier to land than the DG-505. With the T-tail it hasn't the risk the Perkoz has if landing in tall grass with its low tail and vulnerable mass-balance tabs sticking forward just asking to be snapped off.
John Hanlon,
Full Cat and ex-CFI, Oxford GC

I WAS very impressed by the DG-1001 and found it easy and comfortable to fly on a typical, if less than ideal, UK winter day. It handled nicely, did not appear to have any nasty characteristics even when mis-handled and I would be happy to allow students to get more out of shape in this than a

Paul Morrison (front), with McLean Aviation's safety pilot Russel Hardcastle, prepare for a flight in the DG-1001 club neo at Oxford Gliding Club (Liisi Laks)


To further enhance safety, a flashlight for the DG-1001 family was designed, which is integrated into the sailplane's nose. The red flashlight significantly adds to crash prevention (photo: DG)


Putting the DG-1001 club neo through its paces at Weston on the Green (Liisi Laks)

DG HAS DONE AN AMAZING JOB OF RETAINING ALL THE GOOD BITS OF THE 505 WHILST CREATING A GLIDER THAT IS ALSO SUITABLE AS A TRAINER

TECHNICAL DATA

Wing Span: 18m
Wing Area: 16.72m²
Length: 8.57m
Height: 1.8m
Max Speed: 270 km/h
Min Speed (at 550kg): 67km/h
Glide ratio: >1:40
Min Sink (single-seated): 0.62m/s
Empty Mass (incl basic instruments): 410kg
Water Ballast (optional): 160L
MTOW: 750kg
MTOW for aerobatics Category A: 630kg
Basic price: €87,000

- *www.dg-flugzeugbau.de*
- *www.mcleanaviation.co.uk*

(photo courtesy of DG)

The trim box positioned in the vertical tail is a unique feature of the DG-1001 family and enables you to optimise your crew's individual weight and balance. DG states that it is not only useful for spin training, but also enhances the glider's handling characteristics in level flight or while thermaling. The allowable centre-of-gravity range can also be utilised without employing the ballast box. A good feature during training: When on one day you have several students lined up for instruction you may not want to change the number of trim weights after every single winch-launch. The easiest way to ballast the glider is to mount your trim weights according to the lightest instructor-student combination and then leave them in the box for the rest of the day. For aerobatics the trim box should be stocked according to the chart, enclosed with the glider, though.

Oxford GC pilots found the DG-1001 club neo an excellent all-rounder (Paul Morrison)

DG-505. On approach and landing it does not have the mass and energy that can make an 'arrival' in the DG-505 so exciting, so it would make a suitable K-13 replacement in my opinion.

Paul Morrison,
Ass Cat and ex-chairman, Oxford GC

IT WINCH-LAUNCHED nicely and was an easy, well balanced and comfortable glider to fly, with good visibility from front and rear. When testing poor control inputs, I felt it responded with sufficient warning for student pilots and didn't seem to bite at any point.

The minimum speed, full brake round out was much better than our DG-505 at the upper end of the weight placard and it had less momentum on the ground. It would be nice to have slightly more effective airbrakes, but they were still sufficient.

The canopy gas struts are a nice idea, but they could do with being much stronger. However, the 'canopy open' warning buzzer add-on was temperamental and best not there.

Overall, as expected it was very nice, well built and flew well. It would be a great versatile addition for training and much more if you can justify the price. Buy one, get one free?

Jon Christensen,
Ass Cat and ex-vice chairman, OGC

I ONLY flew the neo briefly, but I was impressed that a glider seemingly so similar to the DG-505 was so much more user-friendly. We had been told all along that it was suitable for training and early-solos, but it wasn't until I flew it that I could understand this.

It's hard to pinpoint exactly what it is about the neo that makes it this way, but DG has done an amazing job of retaining all the good bits of the 505 whilst creating a glider that is also suitable as a trainer. It really is an excellent all-rounder.

Martin Brown,
Ass Cat and chairman, Oxford GC

Time to reflect at OGC (Paul Morrison)

The BGA Shop

BRITISH GLIDING ASSOCIATION

www.bgashop.co.uk

YAESU

FTA-250L

The perfect low cost handheld or panel fit ultra compact (2.1"W x 4.1"H x 1.2"D) radio. Comes packaged with our largest capacity battery yet, at 1950mAh Li-ion battery it's sufficient for the heaviest radio users. Along with AC and DC charger and cradle, Antenna, Belt clip, Headset adaptor and bundled YAESU SSM-10A Speaker Microphone.

Save £20 with a Bundle Price £250

Including Postage

In Flight Plumbing
Eco Friendly "*Plastic Polution Free*"
(Your Comfort is Guaranteed!)

Don't go Hypoxic, Get a personal 'Oxymeter'

£16.95

Note:- This is not a medical grade instrument

The BGA Shop - our goal

Our commitment is to supply a diverse range of items to meet the needs of clubs and pilots along with an excellent level of service. Watch our website for the newest gliding essentials!

Visit us on-line at **www.bgashop.co.uk**

Come see us at **Bicester airfield** or

Call us on **044 (0)1869 571814**

Image © Ron Smith Photography

http://www.flickr.com/photos/ronsmithphotography

Leaving Port Pirie, South Australia's city of dreaming lead smelter stacks, to cross the wet stuff beyond (photographs by John Clark)

ALICE SPRINGS MICRO SAFARI

John Clark reports on an Australian gliding safari with a difference – visiting Maralinga, the site of nuclear testing in the 50s and 60s

FOR some time I have been thinking of putting my wife up for a Kitty Wills award "For services to gliding and glider pilots above and beyond, etc…" In 1938, over the Easter holiday, Kitty drove 1,280 miles towing a glider trailer in something like a Standard Vanguard.

In the past decade, my wife Geraldine (AKA the Princess) has driven tens of thousands of miles towing a trailer through Australia's outback and made the annual gliding safaris of a small group of us possible. Unlike Kitty, the Princess was in a modern four-wheel drive and wasn't towing a old glider trailer, but she was travelling in remote areas, often on roads with less than one car an hour and, most of the time, without phone signals. So perhaps she does deserve an award.

Of course, there's a danger that an award of any sort alerts the recipient to the fact that what they are doing is out of the ordinary and they decide to stop, so I put the award idea on hold for a while.

Our safari in 2016 was one of the less arduous. We'd set out for Alice Springs,

perhaps a 5,000km round trip by road, but made it only to Clare Valley in the wine growing region of South Australia, about half way. Over a series of relaxed dinners, and there were many since the weather was unusually bad, one of the other pilots was pushing the idea that the Princess get a CRM114, which was either a gadget from Dr Strangelove or a very expensive French turboprop aircraft. Over the course of the safari, the idea of a 'noisy' aeroplane in which she could to some extent experience the joys of remote area flying was planted.

The Princess is more than usually suspicious of aircraft, especially those which make noise, but the idea of a touring motor glider with wings big enough to slow its plummet from the skies should the noise stop, and with fuel consumption enough to satisfy a greenie such as herself, seemed to be acceptable.

One of the carrots was that we could travel together and go to places which were too far for gliding safaris, such as Alice Springs and Ayers Rock. The former mid-week manager at Lake Keepit Gliding Club, Ian Downes, had gone to Alice with his wife, leaving Lasham's Val Phillips in control. As a result of frequent misprints and helpful corrections by me to his newsletter manager's reports, Ian had dropped in on the Princess and I at a remarkably early hour at an outback motel during the last safari while he was on the way to set up house in Alice, so payback or revenge was in order.

The initial idea, inspired by the film *Steelyard Blues*, was an elephant poo drop on their house. Falling faecal matter doesn't seem to be illegal, but the baggage restrictions in the Ximango made this unlikely. However, another idea presented itself.

Hands up anyone who remembers Maralinga? Maralinga was established in the 50s as Britain's main nuclear testing site on Australia's mainland. After a series of atmospheric tests and further experiments, in 1967 Maralinga was cleaned up and handed back to its traditional owners, leaving more than 22 kilograms of plutonium lying on the ground.

While looking at a possible route to Alice for the gliding safari, I had discovered that tours were being done at Maralinga. It's a place which has always fascinated me, but it's so far away from anywhere that if you were going anywhere close, you'd have to take the tour… wouldn't you? It looked like the perfect place to get a house warming present for a friend.

"So m'sieur, are you going to give the safaristi a blow-by-blow, day-by-day account?" Bated breath... (smoked salmon for lunch).

It's long been a tradition that I do an email account of the trip for the Lake Keepit club newsgroup. The initial idea behind it was to try and encourage more people to try this form of adventure soaring, but the emails have now got a life of their own.

And so we embarked on our safari. We made reasonable time to Cobar, New South Wales, for refuelling… reasonable based on the traditional safari headwind. The next leg was a bit touch and go. I'm not used to looking at some computer thingy and having it say that you'll be in the circuit at such and such a time and then actually being there.

It's fascinating to fly so easily over places where you have suffered… and I guess most safarians have places on the road to Broken Hill where we have suffered, from the swamps of despair near Nygan to the cliffs of insanity towards Broken Hill.

We made Broken Hill about 15 minutes before sunset, tied down and went to the Princess Suite as usual. The forecast for the next day was a bit confusing, but the winds were forecast to drop towards the west.

At one point during the flight, Geraldine asked whether we were across the border and then panicked… she had three uneaten mandarins. She was nearly arrested for interstate transportation of illegal avocados one year and, even though we were at 6,000ft, the mandarins had to be eaten before we crossed into South Australia.

More of a problem was the peel. Being an relentless greenie, she would not throw the peel over the side, and left that up to me. There then followed a big argument about what would happen if a piece of peel fell on a horsie, somewhere near… well, near nowhere in particular.

We had strong headwinds that day and made slow progress westwards. It's long been known that the prevailing winds are from west to east and the meteorologists involved in the bomb tests were concerned to make sure that radioactive plumes did not drift downwind over prominent population centres, so it was either Brisbane or Adelaide which got clobbered.

We flew into light rain and heard a

Above: These straggly plants are all that has re-grown around ground zero. A few kilometres away, there are moderately tall trees. The ground was turned to a sheet of green glass which was scraped off in one of the many clean-ups, leaving just the attractive lumps which remain… as the ideal house warming present?

Below: perfect for experiencing the joys of remote area flying

I'M NOT USED TO LOOKING AT SOME COMPUTER THINGY AND HAVING IT SAY THAT YOU'LL BE IN THE CIRCUIT AT SUCH AND SUCH A TIME AND THEN ACTUALLY BEING THERE

Geraldine Clark during the tour, which is limited to the site of the major blasts

■ The tour... well, it started at 9:30 and ran until about 4:30 and there was never a dull moment. Robin, who is 99 per cent of Maralinga Tours and seemed to know almost everything about Maralinga, didn't attempt to politicise the tour. He just took us around, told the stories and let us make up our own minds. From my later reading, he was never factually wrong.

The British nuclear tests don't reflect well on anyone apart from the wretched servicemen, who had to slave away in 45 degree heat to build the place. And it was men. No woman was allowed to put a foot on the ground.

It wasn't just the British. Menzies, the Australian PM, gave the British permission to do the testing on the basis of a 15-minute phone call... and didn't tell parliament for another three months. The tests were held first in the Abrollos Islands, then at Emu Field some 400km north of Maralinga, which was deemed to be too remote.

After the nuclear test ban treaty, the major tests stopped and only minor trials were carried out. These, however, were more polluting than any of the major blasts. Surprisingly, the radiation from a nuclear explosion does not last particularly long... certainly nowhere near as long as the radioactivity from elements such as plutonium and uranium, which have a half life of 25,000 to 4.1 billion years.

The British wanted to know what might happen in the event of a nuclear accident where a truck or a plane carrying nuclear materials crashed. The so-called minor trials involved 'Broken Arrow' experiments, such as wrapping plutonium with dynamite and wood to see what happens if you set fire to it and then blow it up. And that was how 22 kilograms of raw plutonium were spread around Maralinga.

It's possible that the local aboriginals never lived at Maralinga, but they certainly moved through regularly. It was the responsibility of the sole Native Patrol Officer to clear them from the area before the tests... his patrol area stretched from Kalgoorlie to Parkes – about the same as Paris to New York.

There are many stories, discounted by the authorities then and now, of a serviceman discovering a group of aboriginals camping in a crater just days after it had been formed by a nuclear blast a hundred metres or so above.

The land has been given back to its traditional owners, but they won't return. They believe it's been poisoned and maybe it still is. The area of the tour is limited to the site of the major blasts. We didn't visit the sites of minor trials.

Nobody appears to have been sick at Maralinga apart from one person, who was treated with milk and iodine for food poisoning... but then the hospital records were lost. Even later, none of the often mysterious illnesses and deaths of the servicemen who worked there were, according to the various governments, due to radiation exposure although the NZ government seem to count four times as many odd cases as other governments.

report on the radio about strong winds on the ground, 25 gusting to 35. No mention of knots, or kilometres, or location. I had a close look at two airstrips, but they were narrow dirt strips with a strong crosswind and I doubted my – and the Ximango's – ability to cope so we aimed for Port Pirie, which has three cross runways, and landed straight into a benign six knots.

We talked to the pilot of a Flying Doctor Kingair at Port Pirie, South Australia's lead poisoning capital, who had glowing reports about the tour at Maralinga though he said he would not go there if the wind was very strong.

The leg from Port Pirie across the water to Whyalla was brilliant. We don't get to glide enough over the sea! The gap is pretty narrow and, at the climb rate of the Ximango, within glide angle back from the middle. We landed at Ceduna around lunchtime and, after refuelling, we had lunch by the sea in town and were fairly quickly back in the air.

The first third of the leg to Maralinga is over billiard-table-flat farmland at the edge of the Nullarbor Plain. Beyond that, the terrain changes to strange and uncomfortable striated ridges, covered by scrub in a giraffe skin pattern. I presumed that these were remnants of old sand hills but perhaps, bearing in mind the direction of the ridges, they were caused by one of the Maralinga blasts? Beyond this, things fairly abruptly changed to a more typical flat, treeless plain.

We were flying pretty much into the sun, which meant we could not enjoy any glow from the terrain. When the single strip loomed up, it was a bit of a surprise. Not only far bigger than I had imagined – it's supposedly cleared as a space shuttle emergency strip – but also nicely bitumened (back in 1956). And, according to locals, never repaired since.

We had been asked to 'buzz the village' and, because the Rotax is not as loud as a Lycoming, we went over at about 300ft, which P2 thought was a thousand feet too low. The strip was so long that I started the final leg over the piano keys and still managed to get lost after touchdown, looking for the taxiway.

The tour guide, Robin, had been waiting two hours or so (the phone reception is patchy!) in case he missed the plane. We tied down to some heritage concrete blocks which had been used to tie down one of six Mustangs which were placed in the path of the blasts to see how they fared. The

Above left: That's not an airstrip, THIS is an airstrip. The Princess authorised me to land there, considering the size

Above right: Inspecting mysterious heavy containers, which presumably contain weapons grade plutonium

aircraft were recovered some years later, decontaminated, and apparently most are flying today in the USA.

Now, I don't usually organise anything more complicated than dinner so it was not a complete surprise to discover that catering is strictly 'bring your own' at Maralinga. One of us had not read this on the website and told the other one and, regrettably, the emergency muesli bars and nuts were left in the Ximango, a 6km walk away in the dark… although there's no real dark around here what with one thing and another. In fact, they generate power by pointing solar panel like things at the ground rather than the sky!

Both of us can lose a few kgs and we're not strangers to an alcohol-free night, even if never on safaris. Being one of the stolen generation (English boarding school) and growing up with rationing, I am no stranger to starvation either, unlike Geraldine, who grew up in a time of plenty and a land of plenty. However, it is me who was panicking. The nearest shop is four hours away by road!

Priscilla, Queen of the (Maralinga) Desert, the wife of the caretaker, came to our rescue with a box of food. Of course, everything out here is deep frozen and most 'food' that's deep frozen isn't. In fact, real food was talked about and things were looking quite good until Geraldine mentioned the V word. I would have gratefully downed a chop or two, but once the vegetarian word escapes, it's misery all around.

Things took a turn for the worst after 'dinner'. Our daughter, Zoe, sent me a text message along with a picture. The phone coverage out there is so slow that in the 10 minutes it took to download the picture, I discussed with the Princess whether Zoe's news might be that she'd got a new kitten to replace the 'needy' one she gave away, but no. She was expecting a baby of a different kind. This caused the Princess to go into a major panic, saying she would not be allowed to hold a baby if she came back all radioactive.

We woke, part hungry, to the eerie glow that's Maralinga in the pre-dawn, clutching our stomachs, and got ready for the tour. I did not think this would be an important part of the culture of my people, but it turned out to be a chapter of shame for both the UK and Australia.

After the tour, back in our donga, the Princess made some excuse about getting up early the next day and had a decontamination shower. I resisted a little and had a nervous one shortly afterwards with a good scrub. If we'd had more than one set of clothes, we probably would have burned our old ones!

The following day, we set off northwards to Cadney Homestead, which is a roadhouse on the Stuart Highway serving Avgas, Mogas, and bacon and egg rolls (of which we ate a few). Most of the terrain we flew over was quite daunting and some of the most 'interesting' I'd seen. I'd bought two books on Maralinga before setting off, but decided not to read them just in case the facts put me off doing the tour. Now I was sufficiently disturbed that I had to.

And a souvenir house warming present? To tell the truth for once, when we visited the site of one of the low air-burst bombs where the sand had melted into glass I could have picked up a few lumps, but was by that stage almost too nervous to breath the air, let alone stir up any dust! We settled on a few layers of melted glass from an observation post, which had melted while being burned during the 'clean up' of 1967. It proved to be sufficiently convincing that the recipient would not touch it and I assume it's still glowing away on the kitchen table in Alice.

WE WOKE TO THE EERIE GLOW THAT'S MARALINGA IN THE PRE-DAWN AND GOT READY FOR THE TOUR

John Clark was transported to Australia in the late '60s, where he discovered the sun, sailing, surfing and hang-gliding. After 30 years of flexwings he moved over to sailplanes and has about 1,000 hours, 850 of which are on his DG-808C. John says he chose to learn to glide at Lake Keepit because it is surrounded by good outlanding opportunities

This page, clockwise from top:
Approaching Monte Viso on the French Italian border (Paul Smith)

First soaring flight of the year in EB28 '13': south of Didcot, with snow still stuck in the hedgerows, on 21 March (Steve Lynn)

A turning point not on the BGA list: taken during a sight-seeing trip from Kenley on 9 May. The mast is the Crystal Palace transmitter and the 02 dome can be seen at the top right of shot (Steve Codd)

Flying the flag in the Alps: Taken during a recent trip to Serres. Gliders belong to Paul Smith – 277, Richard Hall – 147, Jon Hunt – DG, and Dave Bray – HLK (Paul Smith)

Facing page:
Flying from Cairngorm GC during some "fabulous crazy Scottish weather" at the end of April (Andrea Venturini)

■ If you would like your previously-unpublished photographs to be considered for inclusion in Gliding Gallery, send them to: *editor@sailplaneandgliding.co.uk* or upload to: *www.sailplaneandgliding.co.uk/dropbox*

Chris Gill gets to grips with the SPOT Gen3, flying from Denbigh

SPOT THE

Denbigh GC's CFI Chris Gill reviews a pocket-sized device for rescue, tracking and messaging

I'VE been thinking about getting one of these trackers for a little while now and I jumped at the opportunity to test out the SPOT Gen3. I've got no experience of trackers, so I'll be able to test how simple it is to operate and how suitable it is for glider pilots.

Firstly, the looks of the SPOT Gen3...
It's a good size, the buttons are big enough to actually see and press, but small enough to clip to your parachute without getting in the way. The SPOT Gen3 is clearly quite rugged, I think it would take quite a beating to actually break it – handy for glider pilots!

It comes with a Carabiner and Velcro strap, which is sufficient to attach to your parachute or whatever. However, I think it should have a clip attached to the back of the SPOT tracker which can attach to your parachute without it dangling down, or cracking you in the chin when you're flying through rough air.

Moving on to operating it...
The SPOT Gen3 has a few different features. As you'd expect, it has the SOS feature which transmits a SOS notification with GPS location to GEOS International Emergency Response Coordination Centre. Fortunately, I haven't had the need to test this function out, but I'll assume it does the trick! To press the SOS button you first have to open a little flap, which will prevent accidental activation!

There is a 'Check in' button, 'Track' button, 'Message' button and 'Help' button. These buttons are personalised, so for example you could set the 'Message' button to send "I've landed out and I'm safe"; you could set the 'Check in' button to say "I've landed safely back and will be home

soon". The 'Help' button is there to ask your nominated person(s) to come and help you, but without asking the emergency services to get involved. These messages will be sent to whoever you want; they can be sent via text message, email, or even social media. You can set the SPOT to send to any one of those options, or more than one.

The tracking option shares your progress using Google Maps, so if your bored/worried spouse is wondering how you're getting on, then it's simple for them to check!

I've tested these functions and the texts seem to come through within a minute or two.

I connected it up to my Facebook account, and you can upload the same personalised messages and it'll put on your coordinates, which will open on Google Maps with a click of a button, making finding the glider on a retrieve much quicker!

To edit these personalised messages, it's rather simple – even a glider pilot could manage! Simply log on to *www.findmespot.eu/en/* and just work through the options.

Battery life is approximately twice as long as previous SPOT devices, so you'll be able to just leave it in the glider/parachute and not have to worry about it for quite some time.

There is a SPOT App which works alongside the device and saves you needing to be at a computer to view progress, etc.

The pricing seems reasonable too...

The RRP of the device is €145 + VAT (£128 on Amazon), and the basic service is an annual subscription of €179.99 + VAT, which is all we'd really need in my opinion. This includes 200 messages for the year; it'll cost you about 15p per message after those 200, which is very reasonable.

So for the cost of an aerotow every two months, you have a device that may well save your life. We are advised that you will get signal in even the most remote areas, where your phone signal will probably not reach.

In conclusion...

To conclude, I think it's a super device which ticks all the boxes for a reasonable cost. I'd thoroughly recommend it.

A SUCCESSFUL TRACK RECORD

GLOBALSTAR reports that its SPOT family of products has initiated more than 5,000 rescues sinces its launch in 2007. These rescues have taken place on six continents and in over 89 countries.

A SPOT Gen3 was carried by Sacha Dench during the 2016 filming of *Flight of the Swans*, during which Sacha followed the Bewick's swans' migration path from Arctic Russia to northern Europe by paramotor.

With tracking set for every 10 minutes, thousands of people followed her flight daily during the three-month trek. Although Sacha didn't need to press the SOS button, it provided peace of mind for the Wildfowl and Wetlands Trust team and Sacha's family.

"I love the SPOT Gen3, it totally saved my bacon. It was light and easy to use even in extremely cold temperatures," said Sacha. "The batteries lasted well despite all the use. I only got through three sets during the entire three months."

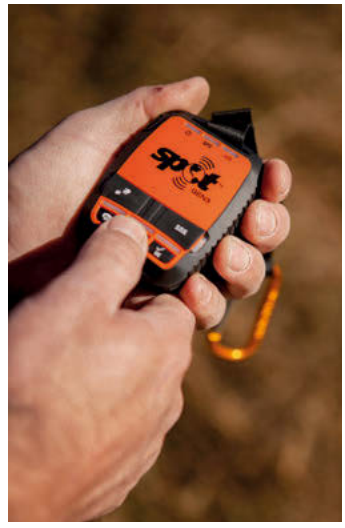
Dennis Behnke, a member of the German national gliding team, is also a fan of the SPOT Gen3 and carried it in the 2017 Europeans in the Czech Republic.

"Safety is one of the biggest reasons why we always carry the SPOT Gen3," said Dennis. "It is particularly important in mountainous regions because there are often limited landout opportunities and no alternative communications."

At the Europeans, SPOT also helped Dennis stay connected with fans: "SPOT's tracking capability was great for helping our followers to track us and enabled more people to connect with the team via social media," Dennis reported.

"With SPOT, we can let our families know that we've had a good day and landed with no accidents; this is really important for us."

The other SPOT function Dennis values is the ability to instantly send SMS messages following safe landing. He said: "We often use this to let our friends know we had a good landing, and so it's time for them to get the beers ready!"



■ For more information on the SPOT Gen3 see: *www.findmespot.eu/en/*

Service plans can be found at: *www.findmespot.eu/en/index.php?cid=103*

Chris Gill, 25, originally flew from Sutton Bank. He moved to Denbigh in February 2017 to manage Denbigh Gliding and the Lleweni Parc site. Chris has over 800 hours. He flies a DG-1001M and offers coaching on flying Denbigh's wave/ridges and cross-country flying for inexperienced pilots. Chris is a Full Cat and Denbigh's CFI

LIFESAVER

THE EFFECTIVE TEACHING TOOL

David Innes looks at how we can use glider simulators to enhance the learning experience

Maddy Draper using Deeside GC's simulator for training. The picture shows the size of screens and field of view

■ In this article, David Innes provides some guidelines as to how to exploit unique features of simulators to improve and hopefully accelerate the learning-to-fly process, and comments on features of popular gliding simulation packages. (All key commands referred to are for Condor.)

■ In future issues, David will report how he and his team built a "pretty good" simulator for about £2,000. He is happy to assist other clubs.

TO ME there are some obvious issues in teaching while flying; since it is a dynamic environment, you can't just stop to review a point or event. Often the choice is to either explain what happened, and replan/brief if necessary, and/or take over and demo.

Some pupils suffer from sensory overload, perhaps well into their flying career. Reviewing a flight is primarily by memory and it can be challenging to repeat any point, to ensure the lesson is absorbed – but not in a simulator.

Classrooms can be dry and boring, with no sensations, no interactions, just words and pictures. People learn by doing. For example, the "rolling around a heading" exercise is primarily designed to develop "muscle memory" of the required hand and foot coordination. You can't do that in a classroom, although I have seen interesting exercises using floorbrushes.

Simulators are a compromise and, while they have their limitations, they have unique features which you can exploit to improve the learning experience.

The obvious limitations include a limited field of view (ours is 150 degrees, centred around dead ahead, but is still not enough), lack of the sensation of sideslip, changes in G, or of control forces with speed, no vibration or buffet (stall warning), but it is also rather hard to loop a classroom. We do, however, introduce random traffic and insist on a lookout to avoid bad habits becoming established.

So here are some of the advantages and examples of how you could use these advantages to assist in lessons and give you new "tools" to teach with:

Ability to set the environment:

- You want a crosswind to teach crosswind landings, so just hit the weather tab and set the windspeed, direction (and level of turbulence).
- Set the time of day, season, etc.
- Cloudbase, cloud cover.
- Wave, if it exists, instability, wavelength, and size of lenticulars.
- Thermals – strength and probability.

Without the "kick" on hitting the thermal edge in the simulator, what can be taught is more procedural/instruments, but without the corresponding "feel". Personally I would not teach thermalling this way, except maybe the theory to back up previous flight demonstrations.

Ability to train no matter the time of day, weather, runway/aircraft status and in different glider types.

Ability to train for functions which may not be available in the club training aircraft, such as flaps, water, or retractable gear.

Practice – multiple repeats of points (at no cost/easily set up) **so that key points of a lesson are learned and can be reinforced.** The flight in the glider is then the "consolidation" of the lesson.

Vary aircraft characteristics:

- Several aircraft models are available, and more will be added.
- Centre of gravity, to show spin susceptibility, and handling differences within the limitations of the simulator characteristics.
- Add water ballast to show the effect.
- "Scare them" exercises, such as flutter, excess G, wing flex, blackout, red-out (but only if necessary).
- Gross out of position on aerotow (but sadly there's no tug wake effect, no catapult effect with Condor. I prefer Silent Wings for this.)

Features unique to simulators

- **Ability to pause – key "P"**, so you can show Bloggs, after pausing, for example: "Rather than turn onto base leg, you have pointed the glider straight at the runway end, so turn away to the right through 60 degrees, then turn left to aim to intercept the extended centreline about 400 metres back."

One feature unique to simulators is the ability to pause during a flight

Then hit P again to unpause and continue the approach… I would be too tongue-tied to get that out to "rescue" an approach.

- **Stop in the sky and look around**, so you don't just see the view ahead, but from several positions outside, each side, in trail, head on, from tug, tower or "fly by".
- **Or look at any exercise from outside** – flying an aerotow from behind really does emphasise the effects of bank "mis-matching". Same for watching stalls or high G from the wingtip, especially with the Duo.

Observe landings from behind, or the side, so you can see the shadow getting close.

- **Ability to repeat scenarios.** We have set up, for example, flight starting points ½ mile back at 500ft AGL, so that if you were focusing on approach judgement, you can start exactly from that point, ie wings level after turning finals, do the approach exercise and simply hit "REFLY". You don't need to do unnecessary flying around, to pre-position, just to repeat that exercise. Even allowing for a quick debrief/rebrief in between, we can do four or five approaches in 15 minutes – thereafter the pupil usually needs a break. The instructor could also vary winds, turbulence, etc, to add to the challenge.
- **Ability to replay a flight – just save it.** We are also working on the ability to refly an IGC record from an actual flight. This needs internet access, which we will implement when the simulator is relocated closer to the clubhouse.
- **Ability to look around**, especially when paused. You don't have to look just from the cockpit, but you can using the little joystick on the instructor's panel, or hold the left button on the mouse and move around. So you can show the pupil where they are, not just from their "seat", but how the outside world looks, and what the glider looks like, from the ground or the tug, etc. Commands F1 to F7 give different views. F1 gets you back to the cockpit facing forward.

If you turn on **wingtip smoke**, key T, you can see the flight path flown using this ability – especially when used with "outside views".

- **Pre-conditioning pilots to events.** While most should have received a demo stall during their introductory flight, we can do a series of demonstrations of all stall types, so flight training goes faster. For spinning, it is even better, because a nervous pupil can be "desensitised" to the visual effects and have confidence in the ability to recover, before experiencing the dropping and turning sensation of a real spin, or high G of a spiral dive.
- **Quick "save"** from accidental breakup due to high G, or to recover height loss – although Bloggs should be beaten soundly for breaking the virtual aircraft **(Press Q)**.

Teach procedures away from the aircraft

- It is amazingly wasteful to teach checklists (or, dare I say it, instructors' patter) in an aircraft. The simulator can be used to

THE BGA COMMENTS:

ALTHOUGH you absolutely can't beat the real thing, there's enough bad weather around, serious training value, as well as huge amounts of fun to be had to indicate that a club simulator is a reasonable investment. Ridge racing through the virtual Alps/Welsh Hills/Appalachians surrounded by mates all offering 'advice' isn't a bad way to spend a wet Saturday afternoon, with or without beer. With so much IT expertise around and reasonable prices for hardware, it is surprising that so few clubs have one. A couple of years ago, we sought club interest in bulk-buying glider simulators. There wasn't enough interest to make it viable. Are your members missing out?
Pete Stratten

IT IS AMAZINGLY WASTEFUL TO TEACH CHECKLISTS (OR, DARE I SAY IT, INSTRUCTORS' PATTER) IN AN AIRCRAFT. THE SIMULATOR CAN BE USED TO LEARN, WITH THE ONLY ISSUE THEN BEING MINOR LAYOUT DIFFERENCES WITH THE AIRCRAFT, BUT THAT CAN BE REGARDED AS 'TYPE CONVERSION'

NO NEGATIVE TRAINING

Only teach what can be taught in a representative manner on your simulator. Do not teach simulator-specific techniques, nor work-arounds. Every lesson must be focused on adding to the ultimate goal of learning to fly a glider correctly. No distractions, Bad habits linger...

David Innes is an Ass Cat instructor, MGIR and tuggy at Deeside Gliding Club. He has Silver C, got his Gold height in a Capstan, and Diamond height, in 1976, in a Swallow. David is also chairman of the Scottish Gliding Association

Simulators let you observe any exercise from outside, such as flying an aerotow from behind. The colour bands on the above and the first picture are the result of an interaction of the projectors and digital camera used. What the pupil actually sees is shown on the previous page

learn, with the only issue then being minor layout differences with the aircraft, but that can be regarded as "type conversion". (Indeed we had two Puchacz and, while the primary controls were the same, instrument panels – even location of the wheel brake control – were different.)

- **Major aid for B module for Assistant Category instructor training and BIs.** Much training for these is procedural/patter rather than actual flying skills. We have already done this for three BIs.
- **Teaching instrument flying** with no hazard, no feeling of constraint by the use of "foggles" or equivalent vision-limiting devices. Again, this task is mostly "procedural" and obviously saves much flight time.
- **Teach circuits away from base.** The scenery in Condor 2 is so good one can navigate by using ground features. This could be counter-productive, since pupils may fixate on these ground features – especially those transitioning from power flying. So while it is nice to fly somewhere familiar, it might be best to teach circuits at, say, Plockton (remote, short field near the Isle of Skye), which most trainees will not have visited. That is, teaching circuits according to one's relative position to runway, and not just by ground features.

Conversely we can land at a large airfield – we use Oban, wider and longer, but with a very different perspective and surrounding terrain.

- **Rehearse cross-countries or expeditions.** In both these cases, depending on the terrain model fidelity, you could practise en route or 'local' flying, the latter as long as you were briefed on local practices. A hint of familiarity will reduce workload and stress.
- **Field landings.** With no retrieve costs! Although field selection is impossible due to lack of fine slope or surface details (at present) on our terrain models.
- **Launch failures.** At any point, with no risks, no long walk back or retrieve, any wind/weather…
- **Ridge flying.** Portmoak's ridge works well with Condor, but the close-up detail to the rocks is poor, so stay clear – the simulator may crash if you catch a wing.

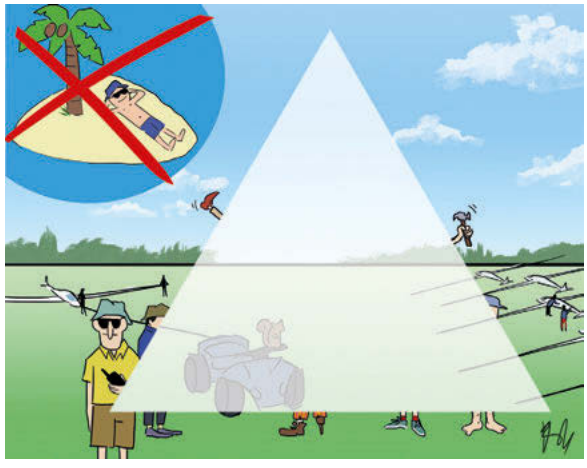
A simple summary

Use the manuals, ask those who have worked on the system and, most of all, use your imagination. Just think how you could use some of these capabilities to improve the effectiveness of your teaching.

ADVISORY 6: THE BERMUDA TRIANGLE

...AND HOW TO ESCAPE IT

Questions newish pilots want to ask... but never dare to! Ebenezer Grimshaw breaks taboos, dispels myths and restores reality



THAT STRANGE ZONE WHERE GLIDER PILOTS SEEM TO MYSTERIOUSLY DISAPPEAR

HOLD it… put away the loud shirts and dark glasses… I didn't mean the real Bermuda. You won't need any sun-tan oil. I'm talking about that strange zone, where glider pilots seem to mysteriously disappear. And just as the 'real' Bermuda triangle has, ostensibly, three vague points between which pilots apparently vanish… so too does ours. Mind you, 'apparently vanishing' sounds like a contradiction in terms! Can you appear to not appear? I'm afraid this is the kind of syntax problem where 'O' level Latin is no help at all! So where are these three points in gliding then?

■ ***Point 1: Going solo.*** All these advisories have been leading up to this Great Day! It's what much of the launch queue has been training for and with you it's finally happened!

■ ***Point 2: Getting your Bronze badge.*** Much could be said about badges and, if I can gently sing the editor to sleep, perhaps much will… later…

■ ***Point 3: Joining the local golf club… or the tiddlywinks team… or well… who knows?*** That's the whole problem really… we don't know where these missing pilots go! Where the heck IS point 3?

The fact is that here you all are… poised on the very brink of becoming what the CAA calls 'the commander of an aircraft' and yet a number of you will shortly decide to throw in the towel and just slip away back down to... er well… somewhere on the ground! Are you mad?

It's a big worry right across the gliding world… and the BGA… along with many clubs… have had think-tanks running on this for ages. The whole basic training programme requires keenness and commitment. Instructors and students alike have each put in serious effort. Yet despite this, after going solo… *poof*… a number of perfectly successful students simply disappear... and we've no idea why or where!

Now I've not been in on any of these high-powered discussions but, needless to say, Grimshaw has his own pet theories. The trouble is most of them go deep into the human psyche and get us into hot water very quickly! But two basic ideas tend to overwhelm any points of detail:

- Perhaps the student never really 'got' flying in the first place… he or she was only really chasing a paper certificate to add to all the others… skydiving… bungey jumping… surf-boarding… gliding… tiddlywinks… disgusting… quite appalling…
- The student simply got bored with all the hanging about. Let's face it… attention spans are going down these days… I blame the telly.

Right... what are we going to do about it? Or more to the point what are you… freshly soloed pilot… going to do about it? Grimshaw will tell you. After you've recovered from your celebratory hangover and every morning thereafter you will recite the following mantra:

*"Flying is the best possible thing I can do in life. Understanding the air makes me rise above my fellow men. All men and women respect a pilot. In any case I have worked long and hard to free myself from the ground. I'm b*gg*r*d if*

I'm going back down. I am not mad. I will not go down into the grey, the foggy and the ordinary when I am destined for greater, loftier things."

Right… next: Pull up a chair into a quiet corner facing into the room and meditate positively. Consider what you've achieved so far. You've learned how to control the world's most efficient and beautiful flying craft with precision and understanding. You've learned how to deal with emergencies… situations that would make ordinary people blench just to think about them. So you're already a hero! And you've begun to understand clouds and air masses. You've even worked out how to deal with nervous instructors.

You've come a long, long way. And you've come into contact with people who can take you even further. Why waste all that hard-won knowledge and opportunity? Think what wonders… what future adventures await you! Mountain flying… ridge running… wave soaring… the Pyrenees… the Alps! Soon you can cut the airfield umbilical and begin heading off into the blue… clean over all the traffic jams… over the endless beige surburbs… except hopefully with some cumulus!

Next, turn your chair round and face into the corner for negative considerations. It's confession time. Covering your wall with certificates fools no one. It's a compensatory activity. Wise friends will see you not as a man of action… *but as a man of paper*! So we meditate now on the folly of our merely terrestrial distractions. I can't go through every possibility but here are the usual ones:

FOOTBALL: No intelligent man should be part of a herd. Least of all one that concerns itself with the kicking about of an inflated pig's bladder… incredibly embarrassing…

GOLF: If you must waste time whacking a ball about… at least make it bigger than that!

FAMILIES: Yes, but a man should have his family under control… like his glider. They need to be proud of you and support your higher calling! Just think… at your funeral would you prefer your nearest and dearest to rock the Crem with a re-telling of your hilarious land-out stories, or just mumble the usual vague unsubstantiated waffle about what a great dad you were?

GIRLFRIENDS: turn into families if you're not careful. See above.

BOYFRIENDS: If yours doesn't fly… or can't be persuaded to… drop him and find a better specimen more worthy of you. The best and sexiest men are all flyboys… and older, greyer men are so much wiser and more skilful… in *everything*. And there are loads to choose from!

POLITICS: History shows that most major ventures were a mistake and today's news tells you this isn't going to change. Who on earth are you kidding? If you're out to fight for sensible airspace then that's OK, but you'd be far more convincing as a pilot!

CASH: OK, fair dos… gliding does cost a bit. But not as much as many distractions I could mention! If you are young, there are schemes to help you afford to fly. If you are not young… have you thought about downsizing the house? Or begging?

I think that's most common distractions covered, but whatever yours happens to be just think how naff it really is compared to flying!

Right… finish your repentance… put your chair back and go to the window. Look up. It's not always that grey! Waiting for the right day… picking your moment… is a part of life. Our 'instant' society is an illusion. Why not spend time waiting to fly *thinking about flying*? And *reading* about flying… there are some terrific books. And what better subject is there to talk about? At home all you get is a 35-second timer on faces whenever you want to tell them about flying. No matter how gripping the subject… even where to put boundary layer turbulators… after 35 seconds they all switch off! But at the club you can talk about turbulators all day long… it's completely marvellous! What other bar area would teach you so much?

In the launch queue you should not be bored either. You should be closely observing the launches and studying the wind conditions. You should be thinking through all possible launch failure procedures… an excellent example of something routine and sensible that's not at all boring!

Finally… if all else fails… I suppose we could fall back on sex… everyone else seems to… if I can gently tip-toe round the editor. Look… the plain fact is that gliding is very, very sexy. The aircraft are lovely… quite beautiful in fact. Sailplanes are sleek and streamlined and superbly controllable… responding marvellously to the slightest touch. Just think for a moment: Is your girlfriend or boyfriend anything like that? On the ground it's never that good. Aerodynamicists have long puzzled over a baffling anomaly… the most streamlined

JUST AS THE 'REAL' BERMUDA TRIANGLE HAS, OSTENSIBLY, THREE VAGUE POINTS BETWEEN WHICH PILOTS APPARENTLY VANISH… SO TOO DOES OURS

'Now look laddie… this poxy wee thing fell out of your pocket…'

GLIDING GIVES YOU THE PERFECT EXCUSE TO STAY OUT OF THE HOUSE FOR LENGTHY PERIODS

■ All cartoons by Ross Martin

girls always offer the most resistance… but gliders aren't like that at all!

People don't like to talk about this… unless fairly drunk… but gliding can be the answer to many pair-bonding difficulties. If you're a chap and getting nowhere with the girls, you could become an instructor… they always seem to do better than anyone else with… how shall we say… 'social' opportunities. If you're a girl then a sleek modern sailplane will enhance your image no end and there is no more heartening sight than seeing fit, rugged men all rushing up to help you in or out of an awkward cockpit! And of course there's the fabled *Naval Marriage* effect for those already heavily obligated. Husband or wife at sea… or away gliding… for a lengthy period means that when they *are* finally home… whambo! Well that's the theory at any rate. If it doesn't work (and 60 per cent of marriages don't) then gliding gives you the perfect excuse to stay out of the house for lengthy periods. It's *much* cheaper and far nobler than divorce! In other words… either way you win!

Have I convinced you yet?

Well let me put it this way… I won't be around for ever… but I shall still be watching! And the last thing you will want is a spectral Grimshaw pointing a ghostly finger at you just when you're about to do something unworthy… like save money or something.

It'll be strange but true… like many things in gliding… as you will find out!

Ebenezer Grimshaw

J'accuse!

■ Next time: Becoming a Badger…

Filming over Feshiebridge in April

Jago Roberts over Lasham in a picture being used by Glide Britain to promote the excitement and fun of gliding

GLIDE B

BRITAIN

Glide Britain's national video campaign is raising awareness and inspiring more people to experience gliding

A CAMPAIGN is using a series of short films to share the experiences and passions of men and women who go gliding to tempt more people to give the sport a try. Led by Simon Grice and supported by the BGA, the Glide Britain campaign has involved 11 gliding clubs across the UK.

It was developed by Simon, with a group of volunteers, and the BGA. The team followed a K-21 on a 1,200km journey across the UK during a two-week tour last summer, filming gliding activities at each of the clubs visited. The glider was accompanied by a professional film crew with the objectives of producing a promotional video for the sport and for the clubs involved, a series of videos for use by the gliding community introducing all aspects of gliding, including the different launch methods, types of lift, vintage gliding, aerobatics and cross-country flying, and a series of videos introducing the participating gliding clubs.

The project was financed with funds from the BGA, the clubs participating in the project and also from commercial sponsors and from the gliding community using crowd funding.

The launch films on YouTube are being showcased online and across social media, providing an unrivalled, privileged view of Britain's vast and varied landscape where the sky and clouds become a playground. Social media has played a major part in the campaign, with trailers of the club videos typically reaching 4-5,000 people on Facebook. There is a Glide Britain YouTube channel, with the Lasham video

Twitter is a useful tool, using photos and text to promote club activities. In this case, BBC Radio Lincolnshire's Melvyn Prior tweets from his Trent Valley visit (Melvyn Prior)

■ Clubs involved in the Glide Britain tour: Buckminster, Burn, Cambridge, Cotswold, Herefordshire, Lasham, Mendip, Midland, Trent Valley, York, Yorkshire

Glide Britain team (l-r): Dorian Bury, aspiring filmmaker and member at Bristol & Glos; Simon Grice, marketing secretary at Rattlesden; Dave Latimer, member of BGA Exec and chairman of BGA Development Committee; Jago Roberts, Ridgewell; Ben Jacobson, independent filmmaker; Alex O'Keefe, CFI Rattlesden

■ Subscribe to Glide Britain's YouTube channel at: ***www.youtube.com/channel/UCAsyazUSKdSl3yHjvzH5nag to see the latest videos***

■ ***https://en-gb.facebook.com/glidebritain/***

K-21s on Sutton Bank ridge

quickly hitting 1,900 views.

Many videos have been posted by clubs on their website's home page, bringing increased exposure and views. A significant increase in visits to webpages was recorded when the club videos were released and promoted, watched and shared through social media, as well as on Glide Britain's YouTube channel.

In terms of external media, there have been successes at several clubs:

- Some clubs promoted the launch of their video with their open day, inviting local TV.
- Clubs are featuring their videos on their website's home page to promote their offer.
- BBC and independent radio stations featured the release of Glide Britain videos as lead news stories within bulletins and programming, including soundbites taken from the clubs' footage.
- Local newspapers ran the story with pictures as page leads and followed up by sending a reporter along to the club to experience gliding prior to running an additional in-depth feature article at a later date.
- Media outlets posted the story in full with pictures and video content in digital editions.
- Media outlets posted the story, photographs and video on their social media channels which clubs shared with their members, who then shared with their followers.
- Readership and listener figures highlight an audience demographic that is 52 per cent female and 48 per cent male, and of those around 41 per cent are aged 35-54 years.
- The BGA promoted coverage through social media posts.

Clubs are asking visitors where they heard about them to research the campaign's reach and to inform future advertising and promotion.

What's next?

The aim is to continue to keep gliding in the spotlight, proactively publicising news stories, events and photographs with the media.

The Glide Britain team was back on the road in April, visiting Cairngorm GC to film six clubs taking part in the Scottish Inter-Club competition. A resulting video will highlight the Inter-Club as a friendly competition, where newer pilots are encouraged to go cross-country and it all takes place in a very sociable setting.

Three other videos are due for release. One on how gliders work, another on how clubs work, and the final one is on gliding misconceptions.

Journalist Shelley Marriott is introduced to gliding with a flight with Trent Valley's Dave Bieniasz for an article to appear in Lincolnshire, Nottinghamshire and Derbyshire newspapers (Rachel Edwards)

FOUR SEASONS

Events keeping juniors flying and having fun all year around

THE finals of the UK Junior Gliding Winter Series 2017/18 took place at Shenington, 13-15 April. Congratulations to Martyn Cobham, this year's winner, who was presented with the beautifully engineered trophy, awarded to the Junior who has made the most of the Winter Series events.

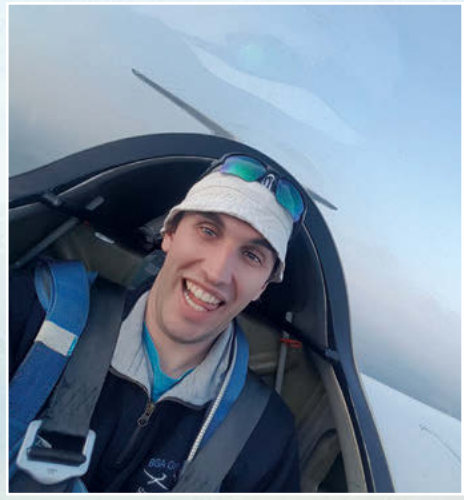
Round Two took place at the Long Mynd. Jago Roberts said: "Once again the Long Mynd laid on the perfect weekend, with stunning scenery, company, outstanding food and challenging flying. We managed more than 120 flights over the weekend – not bad given the interesting mix of snow, ice and rain present at various points.

"The Winter Series could not have been possible without the outstanding generosity of both clubs and individuals, who lend gliders and help out with everything from towing to instructing. Although I am bound to forget someone, it would be remiss not to mention some of the fantastic people who make these weekends happen. Without further ado, I would like to thank Tim Robson (620), Luke Dale (KPE), Chris Gill (SOR), Peter Hibbard (A7), Matt Page (KNK), Ben and Tim Dews (EZE) and Ross Morris.

"Last, but most certainly not least, on behalf of all Junior Gliding I would like to send a huge thank you to the Junior Development Group who ran such a successful Winter Series at the Mynd this year. Benedict Smith, Ben Hughes and Saz Reed, all of your hard work resulted in a wondrous weekend."

■ The Winter Series events were formed back in 2012 and they have been running ever since. So far 17 Winter Series events have taken place, with three rounds each year. This has brought great success to our sport as a whole, as each and everyone's contribution has been invaluable. Since the beginning of this tremendous event the presence and involvement of young pilots has thrived.

■ Following the success of the first summer training weekend last year, UK Junior Gliding has now launched the Summer Series. Two events in 2018 will concentrate on training for pre-solo and pre-Bronze juniors: 12-13 May at Aston Down and 4-5 August at Tibenham. The aim is to complement existing UKJG events with a combination of training, development and social. **https://en-gb.facebook.com/ukjuniorgliding/**



The smile says it all (Danny Richmond)

Martyn Cobham, Winter Series winner (Lucy Wootton)

Wheelie good toy? Benedict Smith at Shenington (Chris Wilson)

Finn Sleigh comes in to land at the Long Mynd (Clement Allen)

Round three of the Winter Series at Shenington (Chris Wilson)

On the way to a memorable Winter Series weekend at Midland Gliding Club (Clement Allen)

Competing in the Winter Series 17/18 Finals (Martyn Cobham)

Emily Syson takes part in the Winter Series in Shenington (Danny Richmond)

Bradley Soanes ready to launch at Midland GC (Clement Allen)

Glide Britain's Jago Roberts at Shenington (Chris Wilson)

IS PLANKING IT IN THE GENES?

Al Nunn takes a scientific approach as he contemplates an answer to the question that has continued to haunt him... why he has never won a nationals comp

I AM a scientist by training and spend a lot of time writing complicated stuff that neither I, nor my readers, always understand. Still, it pays the bills. I started gliding in 1980 and moved to be near Lasham, which I have frequented for most of my career, even when I should have been at work – apart from a year and a bit flying out of Deeside when I was supposed to working at the university in Edinburgh.

An 80s reject

As I sit here contemplating where the 80s, then the 90s and then the noughties went, including my flared jeans, the question of why I have never won a nationals continues to haunt me (but is probably not a puzzle to many others!). I have been flying comps since the early 1990s, and – despite doing a fair few hours each year and slowly clawing my way up to owning a competitive glider – I seem to have reached my peak, with my national's rating hovering around the 30-100 mark.

I have managed to win a few regionals, but once into the big boys' (and girls') league, I am, well, simply outclassed. The top bods seem to make better second-by-second decisions, both on the good days, but especially on the more difficult days, and I usually suffer the ignominy of coming home to the depressing sight of their gliders already tucked up in their pyjamas, and the owners relaxing by their caravans drinking tea with the BBQ already on the go.

Now where I am going wrong? Do I simply have no talent, or is there a large dollop of being born in the wrong circumstances? Is my plank index (an inverse metric to the nationals' one) dictated more by nature or more by nurture? Can I blame my parents?

Nature or nurture – more plastic than thought

This is, of course, a question that has puzzled humankind for millennia and, in scientific terms, has seen huge budgets for large scale genome-wide association studies. These have looked at how mutations in genes affect a particular characteristic, such as weight, or IQ, and in particular, the propensity to develop disease. Now while it is clear that genes are important, for instance, they might explain some of the difference between say, Trump and a tangerine, it is turning out that your phenotype (your physical and mental characteristics) is very heavily influenced by the environment; at the current time, research suggests that only about 20 per cent of our IQ is determined by genes.

The discovery of epigenetics, which literally means above genes, has confirmed this; there is a whole layer of re-programming of your genes that happens during your lifetime that is dictated by the environment. It can even be passed on down to your

children. So what you do in your lifetime not only affects you at a molecular level, but how your kids might turn out; it gets imprinted on our genes. What all this basically means is that our systems are far more plastic than many people thought. The classic example of this is that millions have been spent trying to identify the gene(s) for "fatness"; while there are certainly alleles (effectively variations of a gene) that lead to a small predisposition to becoming blobby, the reality is most people get fat because they eat too much and don't exercise. It may surprise you that some of these "fat" genes don't modulate your metabolism, but control your IQ. I'll leave you to work out which way the correlation goes, but I will give you a clue – there was a correlation between BMI, or body mass index, and the propensity to vote one way or another in the Brexit referendum.

Traits and curves – born not made, or made not born?

Classical genetics will tell you that a "trait" (such as height or IQ) of a population will follow a normal distribution (or Bell curve). For example, 68 per cent will cluster fairly closely around the average, but there will be 2 per cent "outliers" and beyond at either end displaying an extreme. So in terms of IQ (yes, I know, it is a bit contentious, but keep with it), something like 68 per cent of us will have a value between 85-115, while 2 per cent will be brainy nerds with an IQ above 130 and, unfortunately, there will be 2 per cent with an IQ of less than 70 (for fear of libel, I won't say who they are). This has led, for a long time, to the notion that you are born not made.

So if someone did well in a sport or business, everyone assumed it was down to their genetics. OK, there is certainly an element of truth in this. For example, the type of muscle you are born with (slow versus fast twitch), the shape of your skeleton, or your eyesight; if you are only 5ft tall and extremely short-sighted with a club foot, then it is unlikely you will play in a major basketball league, but you might still be really good at something else. But the psychology of this can be devastating – it simply means many people just give up.

However, evidence is now turning the tables; it is becoming clear that many people, within reason, have far more potential than they realise. For example, combining physical exercise with mentally demanding tasks induces the brain to grow and make more connections – we can make ourselves smarter, faster, and more coordinated even into older

Al Nunn wonders if this will be his lucky competition day

age. But of course the reverse is true; if we don't use it, we lose it. This adaptive process is called hormesis, and is key in evolution and everyday life – without the ability to adapt, life would not have got very far. Its roots can be found in pure maths relating to how order can arise out of chaos due to perturbation. In effect, we exist because stress induces molecules to organise; one of the key elements is the incorporation of information that provides a selective advantage under natural selection. In simple terms, practising something that challenges us makes us better at it. Not doing it slowly makes us worse.

The mediocre nationals pilot – practice, practice, and, eh, practice?

So back to Al Nunn, the so-so nationals pilot; can he ever become national champ? I, of course, have been asking myself this for years as I use the last thermal of the day provided by my competitor's BBQ to get around the last control point (thinking of the last day of Euroglide 2016 – and, no, I didn't make it).

My family knows all about this, and they always ply me with books on winning in gliding, ranging from Brigliadori to Reichmann, as well as sports performance books, including one by Malcom Gladwell. Last year they got me a book called *Bounce, the myth of talent and the power of practice* by Matthew Syed. They have also wanted to supply me with my own noose after I have planked yet another day. Anyway, that aside, there is something in this practice lark, especially if you start to incorporate the science. You have probably heard of the 10,000 hour rule about mastery. And that got me thinking.

A very wise and senior BGA coach once said to me that if wanted to get good enough to get into the British team, I would need

I USUALLY SUFFER THE IGNOMINY OF COMING HOME TO THE DEPRESSING SIGHT OF THEIR GLIDERS ALREADY TUCKED UP IN THEIR PYJAMAS, AND THE OWNERS RELAXING BY THEIR CARAVANS DRINKING TEA WITH THE BBQ ALREADY ON THE GO

SO WHAT IS THEIR SECRET, IS IT PURE TALENT AND GENERAL AWESOMENESS? MONEY? GOOD LOOKS? OR JUST MASSES OF THE RIGHT KIND OF PRACTICE AND HUGE DEDICATION?

to be doing about 150 hours (plus) a year of relevant flying. And there is the first clue, lots of hours of the right kind of flying. Syed's book suggests that successful people often accrue huge amounts of relevant practice at a young age – when compared to their less successful colleagues. Other things that fall out when studying these people: they have the right opportunities and support to do this practice, and they are also highly motivated – and in many cases, so are their parents. People then look at them and go, "gosh, they are just so talented". And in that phrase they do themselves in psychologically. In turns out that "raw talent" may have less of a role that previously thought.

The grisly history

OK, so let's look at my gliding history: started learning in 1980; solo in 1983 (don't ask, mainly money issues); Bronze 1984; Silver 1986; instructor by 1987; Full Cat by 1989; Gold 1990; all three Diamonds by 1994; and finally, the holy grail of gliding, the 750km badge in 2006 (in the UK, I might add). It took me 12 years to go from doing a 500km to a 750km; I had made several attempts, but I was just too slow to begin with.

What about comps? Well, I entered my first regionals in, I think, 1989 and nearly came last; on one day I think I came 5th, which I thought was terrific, until I realised that I had been so slow that I had missed the shower that brought all the leaders down in a field. I bought my first share in a glider in 1990 (a third share in a jam jar 1). I then started flying regionals fairly regularly and entered the odd nationals, but never really did that well and got terribly depressed.

Looking back, during the 1990s and the early noughties I did, however, do a great deal of instructing, ran a group at Lasham, became a tuggie and went on the committee (never again!). I was doing about 5,000km cross-country and 80-120 hours a year – a lot of which was sitting in the back seat telling people how to do it. In the noughties I then started flying the Club Class, as well as a regionals and the Open Class (in different gliders; they wouldn't let me enter the Nimbus 3 in the Club Class, unfair, really – I promised to fly it empty), and in the process started doing less teaching and administration, and more cross-country flying. And guess what, I started to get a little better, although never quite being "good".

As time progressed, I ended up with shares in two gliders, a Nimbus 3 and an LS6, and had all but given up teaching. I was regularly flying 10,000km and 120-140 hours a year, mostly cross-country. At this point, not only did my nationals rating start to improve, but I managed to win a few regionals and not embarrass myself too much in the nationals (moving from the bottom third to the top third). As I started to do better, I had a total of about 3,000 hours in gliders. Today I fly a JS1 and have managed to consistently finish in the top 10 of the Opens (ironically, much better than I ever did in my 25m+ Nimbus, even though my JS1 is only 18m), but have had variable luck in the 18m (ranging from 6th to 23rd).

Alas, I have never got close to winning a nationals. The main reason is, I think, that these comps are generally flown by most of the British team – in particular, the 18m. And, as we know, they are probably the best in the world at the moment – and have been for many years. So what is their secret, is it pure talent and general awesomeness? Money? Good looks? Or just masses of the right kind of practice and huge dedication?

The analysis

So let's have a look at me. Today I have a total of about 4,000 hours – accrued over 36 years; so nowhere near 10,000 hours! The next thing is that for the first 15 years of my gliding career I spent a great deal of time instructing, and I missed the boat with regards flying in the juniors (too old) – this was largely down to my career choice (I did a PhD, and never had any money, so teaching was really the only way to get one's bum in the air). I then made a very slow start in the competition scene, and was not flying a great deal of kilometres – a lot of this was due to having low access to a glider and competing interests. For example, I used to run a high-maintenance classic car, which

Al Nunn finishing during the 2015 Open Class Nationals at Gransden Lodge. No BBQs required! (Steve Langford)

always broke down, and had little money. Of course, then there were the women.

This all changed when I left mainstream science and started working in industry and sold my soul (regular hours, more dosh and not living in London, and I met the right women), so my whole situation changed, enabling me to come flying more often. By this time I was in my late-30s. By my mid-40s, I started to take cross-country more seriously, reduced my instructing load still further and put in a lot more time of the right kind of practice. Critically, I started to learn how to fly faster and always tried to fly with water (a top tip from Andy Davis), and was able to appreciate how others went so quick; importantly I also started to mingle more with the serious competition folk. So that explained why I suddenly improved; I did a lot more of the right type of flying and moved into the "competition" set. OK, what about the team guys?

The first thing to notice about the current British team is that most of them have been in the team either consistently, or on and off, for many years. Most started when they were young, and some of them were born into gliding families. They have also flown an immense number of competitions, both here and abroad – often from a young age. They are therefore highly motivated and very competitive, and have probably engineered their careers to support their gliding.

Some of them do coach, but many don't seem to have been active instructors for any length of time. I don't know how many cross-country hours they have, but for some of them it must be well in excess of 5-6,000 hours – probably more. Thus there are several important factors here, but the most obvious is that they have done a lot of the right kind of practice, are clearly motivated, some certainly had the right social support, and once they got into the team, they got "boot-strapped" up to a higher level of training (in effect, they moved into a highly supportive structure). In short, they did a lot of the right type of practice and, in most cases, when they were young. One of the most important findings of successful sportsmen and women is that once they get to a certain level, the correct kind of coaching can have a massive impact on their future success.

Hence, if we compare my flying career with that of similarly aged team members, the most obvious difference is very likely to be that I didn't really get into the competition scene until my mid- to late-30s. By this time, most of these guys (and gals) were already in the team, or close to it, and had probably covered two to three times the right kind of cross-country kilometres compared with me. They were then in the right coaching environment.

Cartoon by Ross Martin

I have never, ever been coached in cross-country flying; like many, I was, once I had my shiny Bronze, entirely self-taught (badly, I suspect; I can only blame my alter ego – "Let's have a beer instead, Nunn"). A long, slow process, as getting it wrong generally puts you in a field and that ends the day's practice. It is clear to me that in today's gliding world there is probably a better system to encourage and support younger folk. How do I know? They are thrashing the pants off me! Sigh. Something that may help is an engine, but that is a discussion for another day.

The learning – and the effect of age

So, what can we take from this? The first and foremost is that to get to the top level in gliding does require the right circumstances, ambition, and masses of the right type of practice. It does suggest that, although there is probably some genetic predisposition, which has probably has a lot to do with good hand-eye coordination, depth perception and intelligence, and, particularly, genuine interest, the majority of the skill comes from a lot of the right kind of practice and environment. This kind of supports the idea that it is much more about practice than innate talent.

If I had to make a guess, I suspect the mix is about 10 per cent talent, 20 per cent being in the right support group, 30 per cent motivation and 40 per cent of the right kind of practice. Which, of course, leads us onto a rather interesting question – at what age

IT IS CLEAR TO ME THAT IN TODAY'S GLIDING WORLD THERE IS PROBABLY A BETTER SYSTEM TO ENCOURAGE AND SUPPORT YOUNGER FOLK. HOW DO I KNOW? THEY ARE THRASHING THE PANTS OFF ME! SIGH. SOMETHING THAT MAY HELP IS AN ENGINE, BUT THAT IS A DISCUSSION FOR ANOTHER DAY

Al Nunn started gliding in 1980, became a full cat instructor in 1989 and managed to scrape all his Diamonds together by 1994. Eventually, in 2006, he managed to plod around a 750km. Al has managed to win a few regionals, but never a nationals (sigh). In 1995 he discovered the joys of using an engine, and now does the odd spot of towing. He probably has over 4,000 hours total flying time. He has been both a group leader and a committee member at Lasham, taught at Deeside for a year and a bit, and managed to survive the one and only Scottish regionals (including a close inspection of a few pine trees). He now owns a JS-1b, but has had shares in a Jantar 1, an ASW 17, an SZD55, the LS6 (yup, that one) and a Nimbus 3. He still has ambitions towards doing well in a nationals and one day completing a 1,000km.

does one's current performance start to become undermined by the ageing process? Is there an age, to be frank, where we are simply too old and wobbly to boot-strap ourselves up to team level?

Gliding does require money and, generally speaking, the older one gets, the more disposable income one might have to buy a more competitive glider. This has to be balanced with a family and the kind of job one has. The only class where this is less applicable is the Club Class, which as long as you have the time is why it is so popular. Hence, it is heavily, but not exclusively, populated by younger pilots (although there are a few older ones; G Dale is perhaps the most inspirational pilot in this category).

However, the average age of the British senior team is probably somewhere in the 50s, which in many ways is terribly encouraging for us older folk, as it suggests many who take up the sport can, if they get their practice right, keep improving well into middle age. The British team won the team prize at the Worlds, and many of their competitors were probably a lot younger. Thus, what it actually takes to get near the top is motivation, the right support, and a lot of practice, rather than raw talent, so it is probably a lot more about nurture than nature.

The advice – and perhaps a little insight: "flying hormesis"

My advice, if you want to win? Get up there and practise in the right way, and mix it with like-minded individuals. In particular, choose your parents well. Failing that, my top tip is always fly heavy when practising, and go and fly on the more difficult days. Perhaps most importantly, enter competitions – but then don't fly too heavy. Trust me on this latter point: I have fallen for the macho practice of flying heavy just to impress the girls and psyche out the competitors – it doesn't work. Watching all your competitors fly over the top of you as you sit in a field is soul destroying, especially as you got there 30 minutes before them and hadn't dumped your water as the day weakened.

The science behind flying a little heavy to practise, but then flying in a competition at the right weight is fairly straightforward; it is pretty similar to athletics training. Those of you who do fly with water will know how it feels when you dump it – you may have to fly slower in a straight line, but everything becomes better and the air becomes easier to feel, and the climbs so much stronger! Flying hormesis I call it. To paraphrase Nietzsche – what doesn't land you out makes you stronger.

And finally, feeling good about your flying – manage your expectations

As for me and, I suspect, many others, our nationals' rating is probably directly correlated with how competitive we are, and how much commitment we are prepared to apply. One has to balance the commitment and sacrifices that have to be made to win with everything else in life: the real ticket here is to enjoy it, and the key here is to be as good as you can be for the amount of commitment that life allows you to have – and accept that your nationals' rating and, it has to be said, your Ladder rating, will reflect that.

It is my experience that most pilots who compete do accept this and, while they may grumble when they don't win, they continue to enter comps and post flights on the Ladder because they enjoy the flying and accept they don't work as hard at it as the top folk. Those that truly want to win will make the change in their lives to accommodate the dedication required – and it can be pretty humongous.

Thus, I think, planking it is probably not as genetic as most people think, and winning probably does have a very large dollop of nurture – and is, perhaps, down to how we assign our life priorities. No right or wrong, just different and, maybe, it is down to what we perceive as being truly important. With regards the author, well, I have begun to accept that my love of science and fast cars, as well as my family life and interest in Tai chi, has focused me in a slightly different direction from trying to become world gliding champ.

The truth is that my nationals' rating, and position on the Ladder does reflect the amount and type of flying I do, and I am happy with that – although it would be nice to at least win one… I should have 10,000 hours by 2045. Here's hoping!

THE DUNTMETER

Peter Saundby describes a variometer used by the RAF in 1922 – predating the invention credited to Lippisch and Kronfeld

THE invention of the variometer is usually credited to Alexander Lippisch and Robert Kronfeld in 1929, being used secretly at the Wasserkuppe in 1930. But, according to my father, a variometer was in use by the Royal Air Force several years earlier.

In 1922 my father was a pilot in No 24 Squadron RAF stationed in Egypt and flying Vickers Vernon aircraft. The Vernon was a biplane transport aircraft developed from the First World War Vickers Vimy bomber, with an enlarged fuselage for either freight or with seats for 11 passengers. Following the Vimy, the Vernon was powered by two Rolls Royce Eagle engines, each of some 300 horsepower. Compare this with the Soviet Antonov An-2, a modern biplane of similar carrying capacity and performance, but with a single engine of 1,100hp. Therefore the Vernon was seriously underpowered, although deployed to operate in the high temperatures of the Middle East. Later versions of the Vernon were fitted with Napier Lion engines with increased power although reduced reliability.

My father's squadron was tasked with establishing an airmail route between Cairo and Baghdad; this reduced the transit time from seven days to 12 hours. As might be expected, flight over the desert and especially over the mountains of southern Jordan encountered strong desert and ridge thermals with the inevitable large vertical displacements of the air. Contemporary accounts showed that the pilots employed ridge lift to get over the high ground and were extremely concerned with the risk of being forced down into valleys where they could be trapped with insufficient power to climb out. Areas of descending air were locally known as 'dunts'. The squadron experimented with flying at night to enjoy cooler and stable air, but this brought further difficulties.

At that time the Royal Aircraft Establishment, Farnborough, was developing blind flying instruments. One idea was that when an aircraft makes a turn, the outer wing travels faster than the inner wing, therefore if pitot tubes are fitted to both wingtips, in a turn the outer wing pitot will travel faster and experience a higher pressure. The difference can be sensed by a flowmeter connected between the two pitot tubes, the needle indicating the direction of turn.

Perhaps because of their problems with night flying, sets of these pitot tubes, together with a very sensitive vane type flowmeter which read in either direction, were shipped out for service trials. In practice the idea did not work, minor inaccuracies of flying or mere turbulence made for large random fluctuations. In a very steep turn there is minimal difference between the wingtip velocities so the pressure difference decreased as the rate of turn increased!

However, one of the mechanics serving on the squadron realised that the instrument could solve another problem. He connected one outlet pipe to an empty, but sealed, four gallon petrol tin, the other being open to cockpit ambient pressure. The instrument was then mounted on its side to indicate vertical motion by sensing the flow in or out of the petrol tin as air pressure varied with altitude.

This changed use proved a great success as it permitted early recognition of hazardous descending air. Because these areas were known as dunts, this new instrument became known as a duntmeter.

Dr Peter Saundby's father (pictured above) was Air Marshal Sir Robert Henry Magnus Spencer Saundby, KCB, KBE, MC, DFC, AFC. An RAF officer whose career spanned both World War 1 and World War 2, he distinguished himself gaining five victories during World War 1, and was present during the air battle when Lanoe Hawker was shot down and killed by Manfred von Richthofen, the "Red Baron". He is chiefly remembered for his role as Deputy AOC in C Bomber Command under Sir Arthur 'Bomber' Harris during the latter part of World War 2.

Vickers Vernon, with examples of the petrol cans used in the Duntmeter

BITE-SIZE GLIDING

BRIDGING THE GAP

'Bite-size gliding' requires a marketing focus on the people, process and product areas of gliding to identify opportunities for growth and long term sustainability for clubs. Last year saw a fall in membership. Like gliding across most countries, there is also a molar-shaped profile to our demographics, with around 60 per cent of members aged over 51. Other sports don't tend to get the higher age peak, they just experience a tail-off with age.

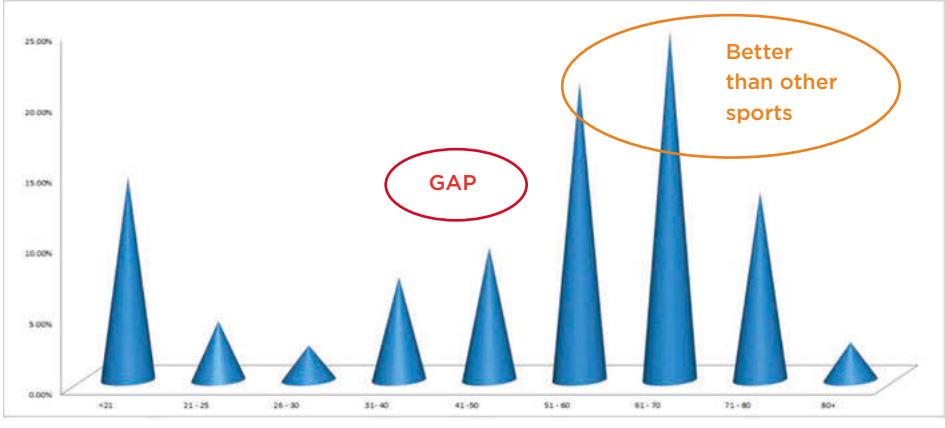
So who and where are the missing 31 to 50-year-old members? Professionals with established careers who haven't had children, with disposable income and some leisure time to play with? Professionals with teenage children looking to engage in sporting activity together? Whatever we do to attract these new members involves a change in the way we 'do' gliding – we can make it okay to do a half day at the gliding club.

Rachel Edwards,
BGA Marketing Officer
rachel@gliding.co.uk

WHAT do we do with a problem like real life? After a few years of relative stability, the 2017 annual returns show a 3.5 per cent fall in full members. Real life is affecting UK gliding and it is one of the major factors preventing people from taking part. How do we know? In the past couple of years there have been two detailed participation surveys: recent solo pilots; and women who do and don't glide (some of whom used to). In both, respondents say time is an issue. Clearly the recent solo pilots have been able to take part, but of the women 28.8 per cent of the 194 cited time as preventing them from doing more gliding. One said: "I'm quite lucky in that it's only lack of time that is a block now." How can that possibly be thought of as a positive by someone who wants to take part in a sport?

Some of the survey respondents talk about the guilt of letting people down if they can only stay for half a day. People don't want to give up gliding, but sometimes they feel guilty about not being able to commit to full days, so don't turn up as often, do less flying and get out of the gliding habit.

So what would be the simplest way to create more time for gliding? Being very busy or having commitments outside the sport is not a gender specific issue. How about giving people the option of shorter sessions? This is not quite the same as bookable training, which some clubs use. Clearly everyone should commit to either setting up the field or packing the hangar. There is one immediate problem – it just isn't how 'we do things here'.



UK glider pilots in 2017, by age

As Kierkegaard says, "Everyone wants improvement, but nobody wants change". If we want to increase participation in gliding, something has to change, so why not reduce the level of expectation we place on everybody who takes part?

The usual time of first launch and the launch rates are excellent indicators of club vitality. People planning to fly 500km (or further) often spend a significant part of their planning process the week before to make sure they can get launched at first thermal. What if launching were to get going early as a matter of course? In addition to the expectation that people hang around all day, there is the often slow pace that accompanies a group of people who have a whole, long, enjoyable day of gliding ahead of them. For the busy person, this lack of urgency is incredibly frustrating, especially when the pace picks up to support visitors to fly, and club members go home knowing that they got less flying than they could have (or should have). Imagine the pace of people who know that they are only there for a few hours.

Is this just about attracting new members? No. One of the pressing issues for most clubs is that they have fewer instructors than they would like, and for those that they have, there is an increased frequency of duties. Whilst some will prefer to do a whole day, this is about removing barriers for people who want to take part, but don't feel that they can easily fit into the current system. What if the half-day concept applied to instructors, tug pilots, winch drivers and duty pilots? What could that do to the club? Perhaps the place to start is people sharing duties? Why not have a discussion with the groups of volunteers and find out what they would like to do? It is a question of what small cultural changes could be shifted and tweaked at your club. A gliding club is a community of volunteers sharing a common interest – each club has their own way of reaching consensus on how activities happen. It will be interesting to see how the half-day contributes to the future of our sport.

Alison Randle,
BGA Development Officer
alison@gliding.co.uk

An update on the latest EASA regulatory developments

SIMPLER RULES

THIS article is one of a series that aims to update readers on EASA regulatory developments that are likely to affect them, ***writes BGA CEO Pete Stratten***

EASA sailplane rulebook

Under its GA Roadmap initiative, EASA agreed some time ago to produce simpler rules for balloons and sailplanes. The balloon work started ahead of the sailplane work. The sailplane operations rules have been drafted, consulted on and accepted. The sailplane licensing rules are work in progress with delivery estimated for 2020, when the revised rules are expected to be published by EASA in an easy-access 'Sailplane Rulebook' format, including the latest versions of sailplane certification, maintenance, operations and pilot licensing rules.

EASA sailplane pilot licensing continued opt-out

As previously reported, work is under way at EASA to develop simplified pilot licensing rules for gliding. To provide the time for the work to take place, EASA has agreed to delay the implementation of Part-FCL rules applicable to sailplanes for two further years, ie to 2020. However, a delay in the publication of an expected amendment to the Aircrew Regulation by the European Commission meant that unless the UK CAA came up with UK exemptions, a lot of glider pilots would have found themselves stuck on the ground when the existing opt-out ended from 8 April 2018.

The good news is that the CAA GA Unit published a series of exemptions ahead of 8 April, which describe how pilots of EASA sailplanes, including powered sailplanes (which include TMGs), can continue to operate under UK national arrangements, ie no change.

The exemptions are time limited. And please note that they ONLY apply in the UK; pilots must comply with the pilot licensing requirements of the country they are visiting. It is expected that the European Commission will publish its extended opt-out details during 2018.

You can read the UK CAA's Part-FCL exemption detail at *https://members.gliding.co.uk/2018/04/05/part-fcl-licences-caa-exemptions/*

Medical developments

Pilots of EASA aeroplanes have since 8 April 2018 been required to hold a Part-FCL licence. There is a UK CAA exemption in place (see link above) allowing continued use of national licence privileges under certain conditions when flying EASA aeroplanes. But, at the time of writing, only until June 2018.

Hand in glove with EASA pilot licence requirements come EASA medical requirements. The EASA medical requirements for recreational pilots are generally understood to be disproportionate. Some time ago, EASA proposed to the EASA member state CAAs that a trial should take place allowing national pilot medical requirements for EASA licenced recreational pilots. This was supported by the UK CAA and, we understand, one other member state regulator. Others did not support the initiative, so it was shelved. The UK has quite a lot of experience of using medical self-declaration, which achieves a very similar level of risk as experienced by holders of medical certificates.

Pilots attending AERO Friedrichshafen put their questions directly to EASA representatives

In early April, the CAA GA unit published time limited exemptions (see earlier link) that permit certain groups of pilots of EASA aeroplanes to self-declare medical fitness rather than comply with the EASA medical requirements. It is anticipated that this will provide further data to support a future proportionate approach to recreational pilot medical requirements by EASA.

Towing with EASA aeroplanes

As widely reported, pilots of EASA towing aeroplanes need to hold a sailplane towing rating. Tug pilots were encouraged to include the privilege during their licence conversion. With new tug pilots in mind, the BGA has drafted a sailplane towing course programme that it is intended can be delivered at suitable sites under a BGA Declared Training Organisation (DTO) by aeroplane flight instructors and class rating instructors who hold a towing rating. The DTO rules have been delayed by the European Commission. As soon as the rules are in place and the course has been approved by the CAA, we'll advise. Towing with non-EASA aeroplanes with UK licence privileges continues as before.

Inspectors and maintenance

EASA draft rules for glider inspectors under Part-66 are still being worked on. It is anticipated that revised maintenance rules, ie Part-M Light and the Part-66 rules, will come into force around the same time as the revised sailplane pilot rules. Once we know more, we'll advise. Other than a gradual implementation of self-declared maintenance programmes that is currently under way, it's business as usual.

Derek Piggott (front) prepares for a flight with Matt Cook in a Lasham K-21

■ On Saturday 14 April, Derek Piggott arrived at Lasham for an 'old timers' reunion, a regular event held through the season and organised by Marjorie Hobby. I intercepted Derek and his partner Maria as they arrived and asked Derek if he would like to fly, ***writes Graham Garnett***. He smiled hugely and said yes! I asked Matt Cook, as a Full Cat instructor, to fly with Derek. Matt reported that Derek did all the flying from take-off ground run to landing, Matt just sat and enjoyed the view. Derek had a huge smile when he landed; he loved every moment. He hadn't had a chance to fly for a year, so it was fantastic to see him enjoy it so much. Derek will be 96 this year and is one of just three honorary life members of Lasham still going strong, along with Charlie Kovak and my father, Patrick Garnett.

❶

❷

This page:
❶ Peterborough & Spalding GC's secretary Mike Newton teaches schoolchildren about gliding (Tim Beasley)

❷ A wintery spring day in Snowdonia –Chris Gill took this from a DG-1001M on 19 March

❸ Wrekin members wonder who gave the 'All Out'?!

❹ Shropshire Soaring Group evening flying from Sleap (Paul Cooper)

■ If you'd like to submit your previously-unpublished photographs for possible inclusion somewhere in *S&G*, please email them to: *editor@sailplaneandgliding.co.uk* or upload to: *www.sailplaneandgliding.co.uk/dropbox*

❸

❹

This page:

❶ K-13 prepares to launch at Haddenham Airfield (Richard Vining)

❷ Heavy rain has seen flooding around the Pocklington Canal and River Derwent – and, briefly, produced a large puddle on Wolds' runway (George Morris)

❸ The annual dinner for Buckminster Gliding Club was held at Belvoir Castle. CFI George Rizk (left) is pictured being given an award for his outstanding achievement at the club, which was presented by His Grace, the Duke of Rutland (Tim Beasley)

❹ John Norman (left) presents the Les Hooper Cup to Eddie Room at Wolds GC's annual dinner (George Morris)

■ Our thanks to all the photographers and to our *Club News* contributors for sending these in.

❶

❷


❸


❹

■ David Braham's obituary in the Feb/March issue prompted a wonderful letter from our old CO from 616 Air Cadet Gliding School, John Allan, ***writes Peter Valentine***. I hadn't seen him since around 1984 and he was invited down to Upwood from his home 'Up North', where he still flies with Northumbria GC. On 8 May, we scattered David's ashes on our runway and, at the same time, we had a reunion of former 616 VGS instructors. David was, of course, a well regarded instructor at 616 (he taught me to spin a T-21b there in 1958!). Those of us who are currently NVGC members got to fly with our old friends and our log book entries have names flying together for the first time since the early 1960s. The photo shows (l-r): Roger Morrisroe (NVGC), Alan Wyse (NVGC), Peter Kirk, Peter Valentine (NVGC), Richard Cheshire, John Allan, Michael Muir (NVGC) and John Bennett (NVGC). In the background is a T-21B, DAR, which lives at Upwood together with a T-61, which also lives at Nene Valley GC and which, coincidentally, was a 616 Henlow-based aircraft until bought by an NVGC syndicate. (Photo by Beth Aston)

JUNE/JULY 18 _VOL69 NO3

CLUB NEWS

AGC WYVERN (UPAVON)
WWW.WYVERNGLIDINGCLUB.CO.UK
511712N 0014700W

DESPITE the best efforts of the never-ending winter weather, Wyvern delivered its first five-day basic course of the season to 10 Military Bandsmen from the Rifles, although day one flying was abandoned due to a -8° wind chill and solid ice on the airfield. The next course is mid-May. The Skylaunch winch has had a thorough winter refurbishment and the glider maintenance is in good shape, all set for the soaring season. At the time of writing, Service members of Wyvern are getting ready for a joint trip to Sisteron in the latter part of April with RAF and Navy colleagues. We are hoping the French Alps are having a better spring?

Paul Jessop

BANBURY (HINTON IN THE HEDGES)
WWW.BANBURYGLIDING.COM
5204355N 00118784W

WITH the inclement weather we are spending a lot of time getting ready for the soaring season (when it comes), making sure the aircraft are in tip top condition and all the paperwork is organised and in place. The proposed change to the airspace around Oxford is causing us all concern and we are wondering how it will affect the future. We have set the date of 23 June for our Friends and Family Day, hoping for a full day's soaring with our visitors. Further to our intention of making the club more member focused, we've moved the majority of our trial lessons to Mondays, leaving the weekends free for members. Looking forward to better weather.

David Sibthorp

BANNERDOWN (RAF KEEVIL)
WWW.BANNERDOWN.CO.UK
511858N 0020631W

PREPARATIONS are under way as we get ready to host the Inter-Services GC at Bannerdown. The contest is open to all, not just military personnel, so do consider entering for a great atmosphere plus the chance to soar with spectacular views of Salisbury Plain and some of Wiltshire's white horses. We congratulate Kevin Constable on going solo. Finally, we are excited to watch our kitchen undergoing a refit. Happy landings everyone. We are hosting the Inter-Services on 4-12 August.

Alison Arnold/Debb Hackett

BATH, WILTS & NORTH DORSET (THE PARK)
WWW.BWND.CO.UK
510742N 0021445W

THE task of radio equipping our fleet has been completed by Stuart North and his team. Our AGM and safety evening have been held, the latter much enlivened by a dummy bale-out practise that I cunningly evaded by going abroad. The workshop team is working to get our fleet of two-seaters up and running, KAN unfortunately needing some glass-fibre work on the fuselage before being put back into service. Meanwhile we have the use of EZE again, on loan from Tim Dews with our thanks. We were lucky to have the help of Kevin Atkinson, who delivered an advanced course encouraging pilots to 'Aim Higher'.

Chris Basham

BIDFORD (BIDFORD)
WWW.BIDFORDGLIDINGANDFLYING CLUB.CO.UK 520803N 0015103W

OUR AGM was held on 24 March. David Findon gave an excellent presentation on the state of the club. Our Wings & Wheels event is scheduled for 28 May and we are praying for better weather than last year. Mike Pope had some superb gliding in New Zealand. Flying in the Duo Discus with Justin Wills, they managed a 600km flight in four hours. Both the Scout and Pawnee are back in action after they suffered from a service bulletin from Lycoming requiring the bushes in the connecting rods be replaced. Our competition will start on 14 July and is fully subscribed.

Mike Pope

BLACK MOUNTAINS (TALGARTH)
WWW.BLACKMOUNTAINSGLIDING.CO.UK
515848N 0031215W

AFTER a terrible spring, it was reassuring to hear treasurer Mike Stringer confirm at the AGM that we are still on a sound footing, but some better weather would be more than welcome. Solar panels have been fitted to the hangar and, with energy efficient heating and lighting installed in the clubhouse, we hope to see a drop in our bills. Daisy, our backup tug, is virtually complete as is the refurbishment of another K-13, thanks to Keith Richards and a stalwart group of members. We are on seven days a week operation and are always glad to welcome visitors to Talgarth.

Robbie Robertson

BOOKER (WYCOMBE AIR PARK)
WWW.BOOKERGLIDING.CO.UK
513642N 0004830W

OUR spring expedition to Sutton Bank was a great success, with plenty of members joining all or part of the two-week trip. Yorkshire GC made us very welcome and everyone enjoyed ridge, thermal and wave flying over beautiful scenery. It was also an opportunity to learn new skills, as most visitors hadn't flown from a hilltop site before. Back at Booker, the Easter Egg Cup Aerobatic comp planned for April was postponed until the weather improved, but the instructor training week – so successful last year – is going ahead. Planning is already in hand for the Booker Regionals (21- 29 July).

Jane Moore

BRISTOL & GLOS (NYMPSFIELD)
WWW.BGGC.CO.UK
514251N 0021701W

THE club welcomed Jordan Richards as the staff instructor for 2018. A series of dedicated learning weeks is planned, with small groups of club members and visitors having exclusive access to the instructor – contact the club for details. The awards evening provided an excuse to celebrate some significant achievements; well done to Andy Davis, Trevor Stuart (best height gain), Tim Macfadyen, Alex Fordham and Xtophe Mutricy, amongst others. The collaboration with Bristol University continues, with many aerospace students flying. Bronze lectures were held with a number of candidates sitting their exams. The committee continued to plan improvements to the clubhouse.

Greg O'Hagan

BUCKMINSTER (SALTBY)
WWW.BUCKMINSTERGC.CO.UK
524912N 04228W

WE have said goodbye to our office manager Angie after 11 years. She'll be missed and we offer our thanks for all her good work. We had our annual dinner at Belvoir Castle followed by prize-giving and a great evening, until everybody tried to leave. The mini Beast had arrived and made journeys challenging. April 1st is the start of our new operational year and the re-join rate has been pretty good. Glider work continues with Alan doing a splendid job assisted by keen members. We did a bit of flying off our hard runway, but not enough due to the weather.

Danny Lamb

(Left to right): The Duke of Rutland presents **Buckminster**'s Les Merrit an award for longest flight (Tim Beasley); Sebastian Taylor, 14, sent solo by **Burn**'s instructor Tony Flannery; Kyran Coates after his first solo flight, with **Cambridge** instructor Peter Baker



BURN (BURN)
WWW.BURNGLIDINGCLUB.CO.UK
534445N 0010504W
WE are excited to host the Northern Inter-club league in May. We have around 30 gliders signed up for the competition so far. It's not all flying – Artur Klapa, instructor Keith Springate, Steve and Eileen Scouthern, taking a break from the K-13, have been enjoying some skiing in Poland recently. The refurbishment of our 50-year-old K-13 is close to completion with just the final paint coats to go on and some fittings. Many thanks to Eileen and Steve Scouthern for all their hard work under Bob Baines guidance. Finally, our new tea bus is ready for the soaring season, thanks to Ralph Jones.
Russell Walsh

CAMBRIDGE (GRANSDEN LODGE)
WWW.CAMGLIDING.UK
521041N 0000653W
DESPITE some inclement weather, flying continued during the winter and congratulations go to cadet Kyran Coates (solo). Congratulations also go to Tony Cronshaw (BGA Diploma), to Wendy Head (won the California Cup in England for the fourth time), and to both Tony and Steve Longland (nominated for Royal Aero Club Certificates of Merit by the BGA). We used the winter to refurbish the club kitchen to a professional standard (many thanks to Chris Lewis) and have expanded the office building to accommodate our new simulator (thanks to Richard Maskell and team). Plans for the summer include our Cloud Rally, the Inter-club League, and much soaring.
Chris Davis

COTSWOLD (ASTON DOWN)
WWW.COTSWOLDGLIDING.CO.UK
514228N 0020750W
MARCH, the month of four-foot snowdrifts against the hangar doors, also marked the start of our weekly flying courses and we welcome back Don Puttock as instructor. Our opposition to airspace changes at Brize Norton and Oxford has been co-ordinated by Graham Turner. Hopefully efforts will neutralise this 'airspace grab". Over winter we have had a good clean up. David Roberts has announced his retirement from aviation administration at club, national and international levels, and we thank him for his hard work over very many years. With sadness we report the death of Tony Housden and send our condolences to his wife Ruth and son, Simon (see obit p71).
Frank Birlison

CRANWELL (RAF CRANWELL)
WWW.CRANWELLGC.CO.UK
530231N 0002936W
WE had our first thermals, just the one day at the time of writing. Many of us thought that a rubber flotation ring might be included as part of the pre-flight, given the amount of wet weather that we have been subjected to. However, we are hopeful of better things to come. There is little to report so far. Here's hoping that by the next issue things will have improved. Happy soaring season!
Zeb Zamo

DARTMOOR (BRENTOR)
WWW.DARTMOORGLIDING.CO.UK
503517N 0040850W
AFTER a very wet start to the year the airfield is looking remarkably well due to a massive effort by hardworking members: 200 tonnes of hard core and scalpings have been added to the track, and extra drainage added. Thanks to all involved. The instructors are now back in the swing of things and we thank our neighbouring club DSGC for all the help during this transition period with flying and training. Club members are taking part in four ICL weekends that are planned and two of the regional competitions; these events will hopefully get better weather than the start of the year.
Richard Roberts

DEESIDE (ABOYNE)
WWW.DEESIDEGLIDINGCLUB.CO.UK
570430N 0025005W
WE started seven-day-a-week operation in April and welcome back instructor Jakub Hlavacek, with tug pilot Levente Molnar. Alistair Cunningham, Dave Moore and Kieren MacGregor have their BI ratings. Alistair also has his Standard Aerobatic Rating. Maddy Draper has Bronze endorsement. We are well into instrument upgrades on our gliders, and in the clubhouse we have upgraded the fire alarm and fuse box. We welcomed an expedition from Portmoak in February and they left with Gold heights and Silver distances. Another visiting expedition in March left with Gold and Diamond heights. Booking forms for 2018 wave season are available online.
Glen Douglas

DENBIGH (LLEWENI PARC)
WWW.DENBIGHGLIDING.CO.UK
531239N 0032312W
WE'VE had some very good weather over winter, providing us with some epic wave days (a number of flights over 20,000ft were made) and also lots of days soaring the mountains in Snowdonia. If you'd like some soaring coaching in our self-launching, high performance two-seater then get in touch, you won't be disappointed. We have also purchased an LS7 WL as a club glider, which is now available for visiting pilots as well as club members.
Chris Gill

DERBY & LANCS (CAMPHILL)
WWW.DLGC.ORG.UK
531818N 0014353W
MARCH went out like a lion with several good days, one with thermals and wave to 5,500ft, one with the first 300km of the year by Mike Armstrong, leading the BGA Ladder. We welcome Alan Jolly back until September, but the start of our summer seven-day operation saw a considerable snowfall. We were saddened to hear of the death of past instructor Bill Elrington after a long illness. Two new gliders have arrived on site, a Discus and an LS4, and the vintage group Sky and Oly 463 have been re-syndicated and are looking forward to the Vintage Rally in June.
Dave Salmon

DEVON AND SOMERSET (NORTH HILL)
WWW.DSGC.CO.UK
505107N 0031639W
IT has been a very wet and snowy spring in Devon, but there have been a few flyable days with thermals, ridge or wave lift. We said goodbye to R37, our last K-13, as it was aerotowed to its new home at Mendip Gliding Club. One of our K-21s has returned from Poland in a shiny blue livery. We are looking forward to flying our new Perkoz very soon, which will complete our modern all-glass club fleet. Our monthly five-day courses are all fully booked, and we look forward to recruiting more trainees at our open day.
Jill Harmer

DORSET (EYRES FIELD)
WWW.DORSETGLIDINGCLUB.CO.UK/DGC
504233N 0021310W
WE are trying not to do too much damage in the mud, while keeping our pilots happy. Jon Marshall and Mike McLeish have done

(Left to right) Chris Booth took this image with a Samsung gear 360 at **Cranwell**; great new track at **Dartmoor**, just missing the gliders (Richard Roberts); latest metal skid for K-13 at **Lincolnshire**, welding by Paul Keenan (Dick Skerry); spring got off to a good start on 25 March at **Nene Valley**




a sterling job overhauling the guillotines on our winch. Our K-18 and K-13 have both now completed their CofAs, thanks to Barry Thomas and by Alan Coatsworth. Our 180 Super Cub is proving a willing workhorse, and we now have five tug pilots checked out, plus one in training. Andy Grant managed to stay airborne for 35 minutes from a winch launch on a day with very minimal lift. Jon Davis has soloed in a K-8.
Colin Weyman

DUMFRIES & DISTRICT (FALGUNZEON)
WWW.DUMFRIESANDDISTRICTGLIDING CLUB.CO.UK 545638N 0034424W
NOT a very busy time flying-wise, but it has given all our members a chance to catch up with jobs that really need doing. All we need now are some thermals and decent flights for our flying week in August. The club passed a significant milestone in March with the first 'home-grown' aerotows from our site carried out successfully. A big thank you and congratulations to Peter Jackson for becoming suitably qualified. Congratulations to Allan Wales for bringing in a sixth Skylark to join the five already flying from our site.
Wendy McIver

EAST SUSSEX (RINGMER)
WWW.SUSSEXGLIDING.CO.UK
505423N 0000618E
ALTHOUGH we flew right up to Christmas, the spring rains prevented us from flying, as areas of our field remained waterlogged. It was April before we were able to get back in the air. We have received planning permission to upgrade our drainage and to create two narrow strips with improved structural surfaces for launching and landing. Each area will take about year to complete and we will lose approximately half our 72-acre field to the contractors during the two-year project. While we'll endure some disruption, we have made it clear to them that we must maintain a full flying programme.
Mike Jeater

EDENSOARING (SKELLING FARM)
WWW.EDENSOARING.CO.UK
544152N 0023506W
THE season will be upon us as you read this. Club expedition bookings, as well as trial lessons, are keeping us busy throughout the first three months of the new season. Our own expedition to Lleweni Parc to start things off for 2018 in mid-April went well; the hospitality of Lleweni Parc was appreciated by all who attended. This year we are planning a members' development year with regular cross-country tasks from our Skelling Farm site. Visitors to our own Skelling Farm airfield are always welcome to join in the fun with or without a glider. Check us out at *www.edensoaring.co.uk*
John Castle

ESSEX (RIDGEWELL)
WWW.ESSEXGLIDING.COM
520253N 0003330E
WE'VE been making sure there's a good fleet of gliders ready for the season. Instrumentation is being upgraded and all gliders fitted with radios and G-meters. Many thanks to Vince Earl, our technical officer for organising this and to Allen Cherry for the wiring, fitting and testing. We are planning some exciting improved club facilities, which will be a great improvement appreciated by all. Our AGM took place in April with awards and cups given out: our CFI Dave Hertzberg retired, with Alex Harris taking over. We thank Dave for his dedication and excellent instruction. Dave will continue as deputy CFI.
Cathy Dellar

ESSEX & SUFFOLK (WORMINGFORD)
WWW.ESGC.CO.UK
515630N 0004723E
THE season starts with the AGM. Bob Godden has retired after five successful years as chairman by ordering a Perkoz to update the fleet. Apart from the officer's reports, the prize-giving is looked forward to. The successful pilots are John Gilbert Jnr, winning the 200km triangle in a Skylark 3, longest handicapped flight 520km and the club ladder; Paul Rice with 100km and 300km triangles; Richard Hayhoe, best four ladder flights for pre-300km pilots; Jake Gazzard, the wooden ladder trophy and Bob Ivermee Rose Bowl; Les Jordan the Instructors' Cup; and Brad Bradford the Members' Cup. Congratulations to everyone.
Paul Robinson

HEREFORDSHIRE (SHOBDON)
WWW.SHOBDONGLIDING.CO.UK
521429N 0025253W
ROSE Johnson has taken over as CFI from Mike Dodd, who served 19 years in the post. We thank Mike for his remarkable work and welcome Rose. We held a very successful spring meeting, with lively discussions about short and long-term plans that are under way. The next day was the best thermal soaring day for months and many people took advantage of it, with long flights and some cross-country flying. We are liaising cautiously as plans for parachuting at Shobdon are being finalised. New gliders joining the fleet are Andreas Jelden's Ventus b, Steve Hopkins' Sport Vega and Jerry Henderson-Newton's Swales.
Diana King

HERON (RNAS YEOVILTON)
WWW.HERONGLIDINGCLUB.MOONFRUIT.COM 51006N 002384W
HERON Gliding Club is back and flying. By the time that this issue is printed, Heron GC will have hosted their first Fleet Air Arm Officers' Association Scholarship Course of 2018. The club would not be flying again without the help of a range of club members – thank you. We are also very happy welcome back Andy Farr as CFI. We're ready for a great soaring season in 2018 – bring it on!
Sam Franklin

HIGHLAND (EASTERTON)
WWW.HIGHGLIDE.CO.UK
573508N 0031841W
SPRING has finally sprung with lots of stonking thermal and wave after a wet and miserable winter. One consolation for the poor winter weather is that our hard-working maintenance team have most of the fleet ready for the season ahead. Congratulations to our chairman Robert on gaining his multi-engine and instrument CPL ratings. Congratulations also to 14-year-old Francesca, who on her sixth solo flight thermalled for over two hours.
John Thomson

KESTREL (RAF ODIHAM)
WWW.KESTREL-GLIDING.ORG.UK
511403N 0005634W
THE AGM was well attended in January, with a number of new committee appointments. A number of members are pursuing instructor status with various modules attended and are busy working through the syllabus with the club's instructor coaches. They are in high demand, so a new generation of instructors is in the making to aid the old guard! The first of these is Nick Killick, who has already made a very useful and much needed addition to the instructing team. We said goodbye to our

(Left to right): Ross Morriss with Mike Fox during instructor training at **Crowland (**Tim Beasley); the end of an evening for **Shropshire Soaring Group** (Paul Cooper); Stuart Smith celebrates his 80th birthday at **Staffordshire**; keen seven-year-old local schoolchildren at **Hus Bos**


K-18 in February, but have replaced it with an additional K-21 to improve the training fleet.
Neil Armstrong

LAKES (WALNEY)
WWW.LAKESGC.CO.UK
570752N 0031549W
THE recent cold weather has made Peter Thomas' work on the IS28 more difficult to do, but progress is still being made. We usually welcome the easterly winds as we have wave and better thermals. Consequently, we have had some good flying. Ben Moate has flown the LS3, so drinks all round!
John Martindale

LASHAM (LASHAM)
WWW.LASHAMGLIDING.CO.UK
511112N 0010155W
AS the season opens, Lasham once again became Splasham over Easter. Despite this, there have been some very good early season cross-countries in recent weeks by the usual suspects. We bade a sad farewell to our Super Cub, G-ATRG, which has been sold to the Dorset Club. Romeo Golf had been in service at Lasham since 1966. Is this a record? We had a successful AGM with Gary Pullen becoming our new vice chairman. Congratulations to Colin Watt for recently celebrating his 10th anniversary as our CFI.
Mike Philpott

LINCOLNSHIRE (STRUBBY)
WWW.LINCSGLIDING.ORG.UK
531836N 0001034E
WE managed to fly when the weather permitted as we have some hard runway and now await the spring! At the recent AGM we confirmed Katharine York as our new treasurer, taking over from Eddie Richards. Agnes Zebracka has taken on the publicity portfolio. Voucher sales continue to thrive and we have enough students to keep the instructors busy. Bring on the weather (please).
Dick Skerry

LONDON (DUNSTABLE)
WWW.LONDONGLIDINGCLUB.CO.UK
515200N 0003254W
CONGRATULATIONS to Richard Brown, who has re-soloed after 26 years. David White, Matt Doyle, and Stephen Kingham have achieved RT licences and Peter Hicks his NPPL. Guy Corbett has won the chairman's prize of a pint of beer for the first cross-country of the year, on 15 February. Our thanks go to Martin Smith for leading our pilot development course, and to Mark Newland-Smith for leading the soaring course. At the end of the season we have expeditions to Llanbedr and to Talgarth. As always, guest pilots are very welcome at the Dunstable Regionals (16- 22 June). See our website for the details.
Andrew Sampson

MENDIP (HALESLAND)
WWW.MENDIPGLIDINGCLUB.CO.UK
511544N 0024356W
OUR annual club dinner in Cheddar was very well attended. Many thanks to David Close for organising. Annual trophies were awarded to Patrick Hogarth (best gain of height and furthest cross-country flight from Halesland). Best ab-initio progress was awarded to Conham Whitelaw-Jones and the most meritorious flight went to Nick Patterson. Jeff Green and his team were awarded the Mac McCollum trophy for their selfless dedication to the clubhouse refurbishment. Our tongue-in-cheek red ball trophy for cock-up of the year went to Tom Hogarth for landing out in a locked sports field. We have another K-13 to replace CCY.
Barry Hogarth

MIDLAND (LONG MYND)
WWW.MIDLANDGLIDING.CLUB
523108N 0025233W
WINTER returned with a vengeance in March, with extremely low temperatures causing havoc in the clubhouse. A brief spell of very good flying weather followed before more snow. Luckily an expedition from Cambridge reached the club and enjoyed some flying – once the drifts had been dug away from the hangar! Our AGM was in March, followed by our rescheduled Christmas dinner. We had a great evening, superb food and, of course, Christmas decorations and crackers. Bungey launching at The Mynd was featured on a recent episode of *Beyond Bionic* on CBBC. Congratulations to airline pilot Andrew Rands on his first (gliding) solo.
Steven Gunn-Russell

NENE VALLEY (UPWOOD)
WWW.NVGC.ORG.UK
522612N 0000836W
WINTER has been a busy time with a lot of maintenance work being carried out on the glider fleet and the ground equipment. The RAF GSA at Marham has been unable to fly due to work happening there and we have been pleased to welcome their members here on a reciprocal basis until they can go home. They brought their K-21 and their instructors have been assisting ours. Our annual open weekend will be 16-17 June. Spring got off to a good start on 25 March, with several members rigging and flying their aircraft for the first time this year.
Peter Valentine

NORFOLK (TIBENHAM)
WWW.NORFOLKGLIDINGCLUB.COM
522724N 0010915E
THE fleet is all fettled and ready to go, the parachutes have been repacked, the new charts are to hand and the club members are itching to enjoy a new season. The new hangar is proving very popular and the very heavy rainfall endured by us all, which has made lakes everywhere, has not stopped us flying as our hard runways have really come into their own. Peter Carter returned from a very damp junior squad training weekend over Easter at Lasham – good luck to him in his progress.
Adrian and Barbara Prime

NORTHUMBRIA (CURROCK HILL)
WWW.NORTHUMBRIA-GLIDING-CLUB.CO.UK 54560N 0015043W
YET another report where the weather dominates our view of recent (lack of) activity at Currock Hill and very few opportunities to commit to aviation. Gary is keen to press on with his basic instructor training; John and Ian are hoping to start their MGIR training and everyone is keen to stay current. With hopes that the weather improves soon, we're planning to start the season with some evening presentations to help pilot development at all levels. Club members are considering plans for the annual expedition. Arrangements are being made for an inter-club competition at the end of May – let's hope we manage to fly before that and do more than a few circuits to polish our cross-country skills.
IAN MCFARLANE

NORTH WALES (LLANTYSILIO)
WWW.NWGC.ORG.UK
530239N 0031315W
WE will be very glad to see the back of this winter. After one snowstorm we found a build up of snow outside our T-hangar had damaged an aileron on one of our K-13s. Our

(Left to right): Edward Vining is sent solo at the **Upwood Bound Trust** (Richard Vining); club K-13 launching on a blustery day at **Haddenham** (Mike Clark); Matthew Rands, sent solo at **Wolds** by Patricia Ridger; Aaron Harvey, sent solo at **Wolds** by Dave Tagg (Craig Scott)



AGM was well attended. The committee was unopposed and remains unaltered, figures showed that we flew a record number of trial flights last year allowing us to buy outright our extra K-13. Gareth Jones was awarded the first solo of the year cup. In May we have a day to welcome back some former members for flying and socialising. Here's to better weather and safe and enjoyable flying.
Brian Williams

OXFORD (RAF WESTON ON THE GREEN)
WWW.OXFORD-GLIDING-CLUB.CO.UK
515249N 0011311W
THANKS to the efforts of CFI Neil, we were lucky enough to have the DG-1001 club neo on site as a potential replacement for our K-13s (see p18). Closer to the ground, Jacek is leading a team of volunteers to refresh our launch point vehicle. Congratulations go to Lukasz Nazar on his BI Rating. At least the recent wet weather has given our members the chance to submit their comments on the Oxford Airport and Brize Norton ACPs that are a real threat to our continuing existence. In less serious news, we were surprised to learn on 1 April that WOTG has been selected by the RAF as the test venue for its new circular runway concept.
Norman G Nome

PETERBOROUGH & SPALDING (CROWLAND)
WWW.PSGC.CO.UK
524233N 0000834W
AN ever-resourceful crew of instructors has managed to sustain club interest in our flying agenda. Our new launch point vehicle has proven to be invaluable, allowing much needed shelter. We are thrilled to congratulate Ross Morriss on being awarded the BGA Instructor of the Year. Ross has been involved in gliding since going solo on his 16th birthday. Our club secretary, Mike Newton, has handed back the baton after five years. We would like to express our gratitude for all the initiative Mike has shown.
Tim Beasley

SCOTTISH GLIDING CENTRE (PORTMOAK)
WWW.SCOTTISHGLIDINGCENTRE.CO.UK
561121N 0031945W
CONGRATULATIONS to Ben MacLeod, 14, for going solo; his dad Gordon (aged a little more) soloed last year. The winter glider maintenance programme has advanced well and now we have two K-21s with a life extension from 12,000 to 18,000 hours and one Junior with a life extension from 3,000 to 6,000 hours. There are plans to refurbish our DG-505 and for Walking on Air to refurbish its K-21. The visitor season is now under way, and the Ulster Gliding Club had some good soaring in ridge and thermal lift. The annual pilgrimage of the English Universities to Portmoak did not see the good weather they had experienced in previous years.
Chris Robinson

SEAHAWK (RNAS CULDROSE)
WWW.SEAHAWKGLIDING.CO.UK
500509N 051520W
ONLY one decent soaring day since our last report, when Nick Barretta managed 45 minutes in the air. Otherwise the weather has blown us out or put a real dampener on things. Club morale at home was not helped by regular emails from Jake Matthews sunning himself in Australia while picking up tug hours and flying hundreds of cross-country kms in a Discus! Meanwhile, George Kosak and his merry band have been progressing annual maintenance and ARCs with our DG-505, Puchacz and Pegase, which is back from having the wings refinished, all done. The tug's 50 hours is complete so we are all ready to go if, and when, the weather finally relents!
Chris Bryning

SHALBOURNE (RIVAR HILL)
WWW.SHALBOURNEGLIDING.CO.UK
512014N 0013239W
WHILST the rain over Easter was more Old Testament than New, we still got some flying done, both home and away. Portmoak is now a firm favourite for club expeditions and was well attended over Easter. HCF has been re-finished and is looking great. In other news, work is proceeding well on the new winch shelter. As always, many thanks to everyone whose hard work helps keep our club running smoothly.
Claire Willson

SHENINGTON (EDGEHILL)
WWW.SHENINGTON-GLIDING.CO.UK
520507N 0012828W
CONGRATULATIONS to George Darby on gaining his Full Cat rating. We had our AGM in March and big thanks must go to outgoing committee members Christine Bell, Job Carlton, Terry Turner and Bob King. We welcome new committee members Brent Sigley, Andrew Fleming and Iain Symon, and have a new chairman in Paul Duffy. Our midweek operation has already started so we will be operating seven days a week. Our Inter-club League is starting in May and we'll be hosting the first weekend. Following that we have the 10th Shenington Regionals, which is fully subscribed.
Tess Whiting

SOUTHDOWN (PARHAM)
WWW.SOUTHDOWNGLIDING.CO.UK
505532N 0002828W
THE cold bleak mid-winter tripped the fuses in the clubhouse, but Oscar Warrington thawed out sufficiently to solo and Jim Fleming qualified as a tug pilot. Kevin Dart relieves Will Greenwood as the facilities manager. Jim Heath, our longstanding technical manager, has been awarded the BGA Diploma for services to gliding. Those who could fled abroad for some sunshine, including Paul Marriott, who now spends the winter instructing at the Canterbury Club in New Zealand. The talk at our AGM was the threat to the airspace in our region; this is a battle affecting all clubs in the South East.
Peter J Holloway

SOUTH WALES (USK)
WWW.USKGC.CO.UK
514306N 0025101W
WE hope that recent soaring flights are the sign of a good season to come after a rather damp and frustrating winter. The Grob Twin 3 is now modified for spin training and our Grob Twin 2 returned from Cotswold Gliding Club, where we had been flying from their splendid tarmac runway. We have had talks from Pete Burgess on the use of radios in gliders, and from Rod Weaver on soaring, speed-to-fly, and the polar curve. Our BBQ season started on 5 May and Chris Tooze is already planning a members' course for the end of August.
Stuart Edinborough

STAFFORDSHIRE (SEIGHFORD)
WWW.STAFFORDSHIREGLIDING.CO.UK
524940N 0021212W
CONGRATULATIONS to Stuart Smith on his 80th birthday, welcome to Mark Clayton, and well done to Chris Jones for attaining his Ass Cat rating. A successful AGM was held at the clubhouse on 25 March, where an encouraging financial position was reported. Thank you to Monica Hodgetts for catering. Peter Gill takes the early bird trophy with

(Left to right): Congratulation to **Wrekin'**s Colin Haynes on passing his NPPL SLMG; first flight for **Wrekin'**s new member Tony Hackett; Upavon Airfield – day 1 of **Wyvern** Basic Course in March; what a difference day makes: day 2 of **Wyvern**'s Basic Course (Paul Jessop)




a soaring flight of 108km in his Libelle on 26 March. The Beast from the East Mk 2 is behind us, the snow has melted, the airfield grass is about to receive its first cut, and the tug is back in action after its annual.
Malcolm Taylor

STRATFORD ON AVON (SNITTERFIELD)
WWW.STRATFORDGLIDING.CO.UK
521406N 0014310W
THE winter lecture series organised by our chairman has been very well attended. Hopefully there'll be many successful Bronze exam passes to report soon. Well done to Bob on converting to his first single-seater, a Junior. March saw the start to our soaring season, but also saw the sad passing of three members: Martyn Davies, Mary Benton and Harry Williams. All of them gave so much to the club and they will be very missed. Our Skylaunch has returned from an extensive service and so we are all set for what we hope will be a great summer of flying.
Peter Capron

SURREY HILLS (KENLEY)
WWW.SURREYHILLSGLIDING.CO.UK
511820N 0000537W
WITH one of the wettest beginnings to the year we can remember, flying at SHGC has been more limited than usual. However, we have flown when possible and most members are still current thanks to our Tarmac runways. So, we had time on our hands and the result is a new clubhouse roof, a new porch, and anything that did not move got cleaned and tidied up or painted. Thanks to everyone who helped. We have also added a Slingsby Vega to the fleet to satisfy the growing need for a glass single-seat aircraft.
Chris Leggett

THE GLIDING CENTRE (HUS BOS)
WWW.THEGLIDINGCENTRE.CO.UK
522626N 0010238W
DESPITE the soggy start to the year, we have managed to keep flying – thanks to our hard runway. We now have five potential new instructors in the pipeline and membership shows a steady increase. Our tug fleet is fully up to strength, with four Supermonk tugs, and our DG-505 will be on line any day now. It's now confirmed that we will be hosting the Women's Worlds here in 2021. We recently hosted the local school and our briefing room was filled by many keen seven-year-olds.
Alan Smith

UPWARD BOUND TRUST (HADDENHAM)
WWW.UBT.ORG.UK
514635N 0005630W
CONGRATULATIONS to Edward Vining (solo in February), Oliver Dudley-Heidkamp (Bronze) and Fabio Valente (Cross-Country Endorsement). There has been shock at the club having being told by the airfield landowner that we must vacate by 31 March 2018. After negotiations, it has been agreed that we can stay until the end of September, after which we will cease flying operations at Haddenham. We are in the process of searching for a suitable alternative site. Further updates on our progress will be given via our website. A trip to Talgarth is planned for early April and we've all been busy practising our aerotowing!
Chris Scutt

WELLAND (LYVEDEN)
WWW.WELLANDGC.CO.UK
522758N 0003430W
THE hangar fairies have completed essential maintenance on winches, tractors, mowers, and buildings. Sometimes even gliders. The mole draining worked wonders for two winters, but the spring deluge overwhelmed it. Thankfully the bog-snorkelling season ended just as the soaring and social season began. Our fettled Acro will return to service shortly, so new BI Gregg Taffs has sharpened his elbows. Discussions are progressing on a cross-country challenge with Crowland and Upwood to encourage post-solo development.
Andy Burton

WOLDS (POCKLINGTON)
WWW.WOLDS-GLIDING.COM
535532N 0004740W
CONGRATULATIONS to Matthew Rands and Aaron Harvey (solo), and Jonathon Richardson (BI). Despite the recent cold and wet weather, we've continued flying by making more use of our hard runways and have enjoyed some good soaring days. Another successful annual dinner saw CFI John Norman presenting the trophies. Notable, as the club approaches its 50th year, was the new Les Hooper Cup donated by Audrey, widow of our long-time member and former chairman. This will be awarded for services to the club over an extended period and, fittingly, the first recipient was Eddie Room, an active member now and since the earliest years.
George Morris

WREKIN (RAF COSFORD)
WWW.WREKINGLIDINGCLUB.CO.UK
523824N 0021820W
WITH the departure of Tristan Serres, it's all change with Nigel Readman taking up the reigns of OIC Wrekin Gliding Club. Nigel's had a long association with the club dating back to 1977. This year's spring expedition saw us join with friends from Midland Gliding Club at Lleweni Parc. Unfortunately, the Beast from the East made for a disappointing week. However, WGC's Mike Osborn, an ex-CFI at Lleweni Parc, was on hand with local knowledge that was needed on the days that we couldn't fly. Congratulations to Colin Haynes (NPPL SLMG), reflecting a year of hard work and study.
Geoff Catling

YORK (RUFFORTH)
WWW.YORKGLIDINGCENTRE.CO.UK
5357100N 00111332W
AS the season starts we are looking forward to flying our new K-21. This is an important addition to our training fleet and part of our modernisation. The winter has meant we haven't been able to use the grass extension to our east/west runway, but hopefully as conditions improve we will start to see the benefits. Two exciting events to look forward to: the Inter-club League will be held at Burn in May and we are planning our summer expedition to the Borders at Milfield in June. Similar past events have been well supported and we are expecting a good group for both.
Andy Carden

YORKSHIRE (SUTTON BANK)
WWW.YGC.CO.UK
541338N 0011249W
DESPITE all the wintery conditions, we flew more than a third of the days in the run up to spring. A two-week expedition from Booker straddled the revisit of the Beast from the East causing a briefly snowbound airfield. However, guests were able to sample several ridge soaring days with a hint of the thermals. End of March saw the first thermic cross-country flights. Our courses are filling up very nicely and gliders are appearing back on the field in anticipation of soaring days to come. A highlight this year will be the Northern Regional Championships, a seven-day competition starting 12 August.
Ken Arkley

***S&G*'s thanks as usual to Debb Evans for editing Club News – Susan Newby, editor**

CLUB FOCUS

KESTREL

AT A GLANCE

Membership:
Full: £60pa
Associate: £180pa
Junior: £60pa

Launch type:
Winch: £4
Aerotow: £20 (2,000ft)

Club fleet:
2 x K-21, K-13, Discus, Astir, SF25C motor glider

Instructors/Members:
10/40

Types of lift:
Thermal

Operates:
Weekends and public holidays

Contact:
Tel: 07930 756064
Info@kestrel-gliding.org.uk
www.kestrel-gliding.org.uk

Long and Lat:
511403N 005634W
Radio: Kestrel Base, frequency 119.225

KESTREL is based at RAF Odiham in Hampshire and is a member of the RAFGSA, operating weekends and bank holidays, with the odd weekday available.

Our fleet comprises three training gliders and two single-seat gliders, while an SF25C motor glider provides aerotow and power roles, including NPPL training. Winch and aerotow are available, with the club operating from both grass and hard surfaces.

The club has good ground facilities with a purpose-built hangar situated on the south side of the airfield, large enough to house the club fleet, winch and MT, while the clubhouse provides classroom, office and kitchen facilities.

Thermal activity is good with open airspace to the west, but, sitting so close to Farnborough, activity to the east is heavily restricted and can curtail activity due to ILS traffic. With Lasham only 8km to the south, we have on occasion been mistaken from the air by those not familiar with the area, but the large Military hangars and the odd Chinook helicopter parked around the airfield, coupled with the lack of glider trailers, should be enough to convince you that you're not where you think you are!

The club offers a full range of gliding opportunities for the budding pilot from solo up to instructor, with NPPL also available along with aerobatic instruction. As a registered Junior Gliding Centre, we have a flourishing youth wing who keep the instructors on their toes with an unceasing appetite for knowledge.

The club also offers a number of introductory gliding courses at weekends covering winch, aerotow and motor gliding to give students a taste of what is available. Various task weeks and expeditions in support of station personnel are also organised to help further the gliding message, while attendance at the yearly station family day helps raise the profile of the club and Service gliding on the site. As a Service club, membership is limited, but we do have openings for those that feel they have something to offer and are prepared to invest their time in support of the club.

Neil Armstrong

The BGA Team and General Information

BRITISH GLIDING ASSOCIATION

Executive Committee

Chairman
Andy Perkins
chairman@gliding.co.uk

Vice Chairman
George Metcalfe

Executive Members
David Latimer, Bill Craig, Nick Bowers, Lisa Humphries, Anthony Smith, Bill Britain and Richard Brickwood

Treasurer
Anthony Smith

Company Secretary
Anthony Smith

HQ

Tel: 0116 289 2956
Fax: 0116 289 5025
office@gliding.co.uk
www.gliding.co.uk

Chief Executive
Pete Stratten *pete@gliding.co.uk*

Office Manager
Debbie Carr *debbie@gliding.co.uk*

Accounts
Peter Bishop
accounts@gliding.co.uk

Administration
Lizzie Pike *lizzie@gliding.co.uk*
Sheila Weston *sheila@gliding.co.uk*

FAI Badges Officer
Basil Fairston *basil@gliding.co.uk*

Chief Technical Officer
Gordon MacDonald
cto@gliding.co.uk

Airworthiness Quality Manager
Keith Morgan

Magazine Editor
Susan Newby
editor@sailplaneandgliding.co.uk

Child Protection Lead
Karon Matton *karon@gliding.co.uk*

Performance & Development

Competitions & Awards
Liz Sparrow

Team GB Manager
Graham Garnett

Development
Dave Latimer

Development Officer
Alison Randle
alison@gliding.co.uk

Marketing
Rachel Edwards
rachel@gliding.co.uk

Aim Higher
Kevin Atkinson

Schools and Colleges Lead
Yvonne Elliott - *via the BGA office*

Operations

Safety
Pete Stratten

Airspace
John Williams

Instructing
Colin Sword

Training Standards Manager
Mike Fox
mike@gliding.co.uk

SLMG
Paul Whitehead

Technical
Howard Torode

Flying Operations
Peter Moorehead

CAA SLMG Instructors and Examiners

A number of CAA authorised SLMG examiners are appointed via the BGA to support SLMG activity under the management of the BGA SRE SLMG. Contact details are at https://members.gliding.co.uk/examiners

Gliding Examiners

BGA gliding examiners are appointed regionally and directed by Senior Regional Examiners. Coaching and tests can be arranged via SRE's who are listed at https://members.gliding.co.uk/pilot-resources-flying-training/examiners/

Safety Guidance

There is extensive safety guidance including a toolkit for club safety officers at https://members.gliding.co.uk/safety

Airworthiness Inspectors

There are a number of BGA inspectors across the UK. A proportion of them are approved to issue an ARC and are listed by region at https://members.gliding.co.uk/arc-signatories
Regional Technical Officers can be contacted via the BGA office.

Airworthiness Guidance

Extensive guidance for owners of non-EASA and EASA aircraft is at *https://members.gliding.co.uk/airworthiness*

Other Information

Courses *and Seminars*
BGA courses and seminars information is at https://members.gliding.co.uk/courses/

Fees
BGA fees are detailed at https://members.gliding.co.uk/fees-and-charges/

BGA Office Contact Details
8 Merus Court, Meridian Business Park, Leicester, LE19 1RJ
tel: 0116 289 2956 fax: 0116 289 5025 email:office@gliding.co.uk

A VINTAGE BLEND OF OLD AND NEW

News and updates for your 2018 vintage soaring calendar

MANY of you will have heard by now about the sad eviction of the Upward Bound Trust from Haddenham airfield, ***writes Bruce Stephenson***. Haddenham forms an important chapter in the story of British gliding and is a long-standing feature of the VGC rally calendar.

When Winston Churchill ordered the formation of 'airborne forces' (based at Ringway, site of today's Manchester airport) on 17 June 1940, gliders became an intricate part of the airborne plan. It was soon discovered that landing gliders and parachutists didn't really mix, so New Year's Day 1941 saw the arrival of the Glider Training Squadron at its new home at Haddenham.

Initially equipped with almost the entire production-run of Slingsby Kirby Kites, the unit was re-equipped with Hotspur training gliders in early 1942. However, by early 1943 glider operations at Haddenham had come to a halt, with the field being occupied by the Air Transport Auxiliary right up until the end of the war.

Blanik being pushed back to the launch point at Haddenham

After the war, the airfield became home to a major aircraft engineering firm, Airtech, which substantially expanded the facilities with a complete new infrastructure of hangars and various workshops. In the early '60s, the then Lord Mayor of London, Sir Frederick Hoare, was keen to promote 'Youth and Leadership'. This served to highlight an astonishing fact that there was little or nothing being done to stimulate young people in the adventure of the air.

The idea developed rapidly and, under the guidance of Brigadier George Chatterton (Chatterton had commanded the Glider Pilot Regiment during the Second World War), a proposal was put forward to form a Trust to allow young people between the ages of 16 to 21 to experience and train to become glider pilots.

From that moment on, things moved fast and soon Airtech Ltd were approached for the use of facilities at Haddenham. In 1965, the Upward Bound Trust was founded and formally recognised by the Ministry of Education and Science. Initially staffed by volunteers from the Glider Pilot Regimental Association, the Trust has been based at Haddenham for almost 50 years. It has been very successful in introducing hundreds of young people to the joys of gliding, and fostering a love of the air for many who might not otherwise have had the opportunity.

On 13 July 1996, the Upward Bound Trust received a cheque for £28,200 from the National Lottery to enable the fleet to be upgraded

But the pursuit of profit within business has caught up with Haddenham, with profits speaking louder than opportunity for our youth.

Despite hammering home the final blow to a proud aviation history at Haddenham, it hasn't consumed the Upward Bound Trust just yet. Our friends at Haddenham have been given a brief respite as they search for a new home and we all wish them the very best in their quest.

** With thanks to the Upward Bound Trust website.*

Northern theme

Whilst on the subject of opportunity, and on a brighter note, the UK VGC calendar this year takes on a bit of a northern theme! First up is some exciting news regarding this year's VGC National Rally. It's only taken 45 years, but the VGC is finally heading north of Hadrian's Wall! Thanks to the foresight of the Scottish Gliding Centre at Portmoak, we are excited to finally have the opportunity to converge on such a beautiful and very different venue.

With its stunning vistas of Loch Leven and beyond, Portmoak offers rally goers a taste of Scotland and its famous culture. Once airborne, you will be rewarded with some of the most stunning scenery these isles have to offer, with Bishops Hill but a short

hop (even for a GB!) to the north of the field, whilst drinking in some lofty views of Kinross House and Loch Leven, where the hauntingly beautiful Loch Leven Castle marks the spot where Mary Queen of Scots was imprisoned in 1567.

For the VGC, I sincerely hope that this marks an historic moment in as much as it may inspire other clubs in Scotland to become more active in the vintage scene and maybe open up other possibilities. In doing so, it may serve to remind older members of the colour and spectacle of where we have come from and, for the younger generation, introduce yesterday's machines and a whole new world that often possesses the translucence and colour of a dainty dragonfly.

An opportunity too good to miss, don't let this event pass you by, for it may take another four decades for the opportunity to come around again! So if you have a vintage or classic glider, why not join in the fun at Portmoak on 26 May?

Of course, it doesn't end there! There are plenty of other vintage rallies to choose from this season. For those of us residing in the UK, we have our established regular hill site rallies at Camphill (22-30 June), while our friends at the Midland GC are hosting their Wooden Week at the Long Mynd (7-15 July), with the special chance of getting a bungey launch into your logbook. Not to end the fun there, the other significant hill site is the gorgeous Sutton Bank (25 Aug-02 Sept). All offer stunning views, hill soaring and wave opportunities.

Now to something a little different. A special event well worth mentioning for all you Swallow flyers out there: the Strubby-Stubby-Swallows at the Lincolnshire Gliding Club, on the edge of the beautiful rolling hills of the Lincolnshire Wolds. Why not join in on the intimacy of this small event between 6-10 August, at Strubby Airfield? Finally, to round up the UK calendar is another small, but friendly event, Whispering Wardrobes Rally at Booker on 22-23 September.

Further afield

Maybe your wanderlust inspires you to go further? For the more adventurous, there is plenty to choose from, with quite literally dozens of European vintage venues; the main focus being the VGC International, this year being held at Stendal, near Berlin.

Stendal, with its historic medieval town, saw the construction of its present day airfield in 1934. After the war, the field was taken over by the Soviet Air Force, which based a Soviet ground attack regiment there, installing a 2km concrete runway, apron and numerous buildings. In 1992 the airfield was again handed back to German authorities and today serves a more peaceful role as a civilian gliding and aeroclub. Stendal is well located for many local attractions, with its cathedral, old churches and museums, and Berlin just an hour's drive away.

Of course, no International is complete without its Rendezvous. This year it is more than worth mentioning as it will be held in Anklam, home town to the father of gliding, Otto Lilienthal. Another a historic medieval town, it lies on the Kleines Haff, the western part of the Stettin Lagoon. 'Otto Lilienthal Anklam e.V.' is a delightful and friendly field, boasting a 1,200m concrete runway for powered aircraft to the north of the field, whilst to the south, is a 1,200m grass runway for gliders.

With a myriad of activities and sightseeing opportunities nearby, the area boasts several sites and a museum dedicated to Otto Lilienthal. Other aviation-related sites of interest include Hangar 10 in nearby Heringsdorf (the largest exhibition of airworthy historical warbirds in Germany) and historic Peenemünde, the cradle of space exploration. An event not to miss!

And finally… remember if your travels this summer are taking you to America and beyond, there's always a vintage rally that you can take in.

Stunning views of Loch Leven from Portmoak's resident T-21 (Richard Lucas)

FOR THE MORE ADVENTUROUS, THERE IS PLENTY TO CHOOSE FROM, WITH QUITE LITERALLY DOZENS OF EUROPEAN VINTAGE VENUES

■ Check out the smorgasbord of events around the world on the VGC website: *www.vintagegliderclub.org* What are you waiting for?

BGA CLUB ANNUAL STATISTICS

1 OCTOBER 2016 TO 30 SEPTEMBER 2017

	MEMBERSHIP						FLYING			NEW PILOTS		
	Full Flying Members	Under-21	Female Members	Temporary Members	Affiliated Members	Non-Flying Members	Winch Launches	Total Launches	Total Hours Flown	Solo	Bronze Endorsement	Cross-Country Endorsement
Airways Airsports	New club - no stats to end Sep 17											
Andreas	8	1	1	8	0	0	91	142	24	0	0	0
Anglia	34	3	4	75	0	5	765	905	340	3	2	1
Banbury	44	3	3	130	0	0	0	838	354	0	0	1
Bannerdown	82	12	7	125	8	4	2725	2989	1346	4	1	1
Bath, Wilts & North Dorset	82	16	7	119	55	34	2523	3054	1360	5	3	3
Bicester	128	19	28	1027	76	40	7434	9662	4609	11	6	6
Bidford Gliding & Flying	68	8	7	310	0	11	0	1108	564	3	1	1
Black Mountains	71	10	6	378	0	3	0	1696	2274	2	0	0
Booker	114	17	6	766	0	13	0	3862	3708	11	4	2
Borders	95	9	5	148	0	17	0	1834	1799	2	1	0
Bowland Forest	100	28	12	189	0	40	2866	2866	1122	3	5	2
Bristol & Gloucestershire	138	17	18	338	12	34	2714	3712	2844	10	4	1
Buckminster	95	13	4	277	50	4	1740	3219	1477	2	2	1
Burn	96	13	1	110	0	16	2243	2877	846	7	3	3
Cairngorm	42	7	4	78	0	3	37	899	1079	1	1	0
Cambridge	189	31	15	693	389	78	6384	8102	4900	11	11	11
Channel	23	6	0	153	0	1	1129	1141	116	4	2	0
Cotswold	160	36	14	478	160	12	6158	6679	2953	5	6	0
Cranwell	66	13	9	31	10	2	4079	4511	1247	8	3	0
Darlton	64	9	2	212	0	2	2520	3066	1160	3	1	2
Dartmoor	37	1	2	78	0	1	1955	1962	316	2	0	2
Deeside	76	14	10	382	12	8	0	2780	2238	10	7	6
Denbigh	5	0	0	0	0	0	128	223	800	0	0	0
Derby & Lancs	137	24	11	342	0	25	4641	4641	1692	1	2	2
Devon & Somerset	168	21	11	170	300	52	4756	5578	2181	5	3	3
Dorset	43	5	1	144	0	15	545	1272	350	2	2	1
Dumfries	15	1	0	0	0	5	309	309	129	0	1	1
East Sussex	86	14	3	277	0	54	1742	2908	908	4	0	1
Eden Soaring	38	0	1	224	13	0	1228	1228	783	0	0	0
Essex & Suffolk	134	21	7	250	0	9	6401	6470	2306	11	4	4
Essex	56	7	5	300	0	0	1697	2004	440	2	3	1
Fenland	12	0	0	0	0	0	455	607	159	0	0	0
Fulmar	19	8	1	0	0	3	See Highland			0	0	1
Herefordshire	36	2	3	71	0	11	0	600	678	2	0	0
Heron	42	17	2	25	0	2	212	740	259	4	0	0
Highland	27	5	4	38	0	10	99	790	633	2	0	0
Kent	106	8	4	383	0	5	2428	3145	368	7	3	2
Kestrel	47	17	5	78	12	0	1142	1327	266	2	2	3
Lakes	26	1	2	69	0	9	0	333	159	0	0	0
Lasham	787	117	72	683	45	101	15283	23742	5025	35	18	10
Lincolnshire	22	2	4	55	0	3	1537	1537	279	1	0	0

London	186	26	14	740	0	33	10000	15900	6000	10	4	2
Mendip	52	4	2	210	0	4	1875	2011	439	3	4	0
Midland	103	12	6	415	0	10	4882	4909	2424	7	4	4
MotorGlide	16	2	2	54	0	0	0	500	800	0	0	0
Nene Valley	89	32	7	255	0	14	2808	2840	749	2	3	3
Norfolk	74	12	2	282	0	14	1877	2878	1297	3	1	1
North Devon	5	0	1	69	0	2	126	126	70	0	0	0
North Wales	28	3	2	189	0	1	1644	1644	177	0	1	0
Northumbria	61	13	5	131	0	2	0	1102	520	1	0	0
Oxford	78	14	6	273	0	21	2351	2351	791	2	1	2
Oxfordshire Sport Flying	82	0	3	32	0	4	0	1670	766	0	0	0
Peterborough & Spalding	53	5	3	291	19	3	0	1551	840	1	2	1
Portsmouth Naval	79	6	3	125	0	12	1531	4049	1237	5	3	2
RAFGSA Chilterns	59	9	5	96	19	0	1760	3423	1294	3	2	0
Rattlesden	71	16	9	288	0	21	1672	2458	1019	1	0	1
Sackville	2	0	0	0	0	0	0	60	30	1	0	0
Scottish Gliding Centre	209	22	10	244	18	5	13042	16544	6700	10	7	11
Seahawk	22	3	3	0	0	3	878	1009	187	2	0	0
Shalbourne	63	7	5	180	0	2	2661	2661	845	3	3	1
Shenington	83	7	10	462	0	14	3477	4021	1419	8	5	3
Shropshire Soaring Group	12	0	0	5	0	0	0	63	46	0	0	0
South Wales	79	14	4	111	0	2	1461	2110	890	5	1	2
Southdown	196	46	10	329	0	54	748	4021	3080	4	3	1
Staffordshire	100	17	4	203	0	34	2510	3261	1110	3	4	2
Stratford On Avon	107	10	9	399	0	10	4401	4568	1030	3	1	1
Surrey Hills	58	7	4	149	0	8	2738	2738	500	3	0	1
The Gliding Centre	216	30	9	174	0	33	2671	5400	3200	1	2	2
Trent Valley	58	0	2	445	0	0	2207	2807	1443	6	2	2
Ulster	48	6	4	120	40	3	0	561	330	1	0	0
Upward Bound Trust	34	8	2	63	0	0	1406	1430	281	2	1	2
Vale of White Horse	17	1	1	25	50	0	0	346	210	0	0	0
Welland	35	4	0	126	0	12	817	990	332	1	1	0
Wolds	137	23	13	722	50	32	4449	6004	2438	6	4	3
Wrekin	22	0	2	67	0	0	1019	1052	313	2	2	0
Wyvern	61	3	4	184	0	4	2968	3190	911	2	1	0
York	196	25	4	363	20	3	260	1728	1286	3	5	3
Yorkshire	190	34	11	850	290	30	591	4931	2418	5	3	3
Totals	6599	977	482	17885	1648	1022	166796	242265	101513	294	171	125

Total Flying Membership	**6599**
Total Club Membership	**9269**
Total Participants	**26132**

Note – Air Cadet new pilots not included during 2017

The British Gliding Association (established 1929) is the governing body for the sport in the UK, representing and furthering its interests in an increasingly competitive environment. Its mission statement is "to provide effective leadership and continuity of gliding and soaring in the UK". You can use the interactive map at *www.gliding.co.uk/findaclub/ukmap.htm* to locate the club you require. University gliding clubs are listed at *www.gliding.co.uk/findaclub/university.htm*

BGA accident/incident summaries

AIRCRAFT				PILOT	
Ref	**Type**	**Damage**	**Date, time**	**Injury**	**P1 hours**

139 PW5 minor 10/08/17, – none 5
Wing drop during winch launch. The pilot released, but the wingtip caught the ground and the glider groundlooped into the adjacent field, losing the wingtip skid and damaging the gelcoat. As it was a first flight on type, the briefing instructor had asked the winch for a slow acceleration after all out. The reported wind speed was calm.

140 Discus minor 10/08/17, 16:00 none not reported
Wheel-up landing after a local soaring flight, resulting in scoring to the underside of the fuselage.

141 Grob 102 substantial 11/08/17, 12:30 minor 467
Landed in gorse short of runway. After the wave lift died off, the pilot recognised that the glide to the hilltop airfield was marginal, but he elected to test the ridge lift before either landing at a nearby airfield or returning to the club. There was just enough reduced sink to entice the pilot to continue to the club, but not enough lift to climb to a safe circuit height. Rejecting a downwind landing, the pilot continued along the ridge before turning onto a very low base leg for the into wind runway. Losing height behind the ridge, the pilot was careful to maintain a safe speed, but felt the glider hit some trees while turning onto final approach. A wingtip caught on a bush while rounding out short of the runway, yawing the glider which then touched down sideways. The pilot suffered some severe bruising and went to hospital for a check up. The glider fuselage was severely damaged around the cockpit.

142 Discus minor 13/08/17, 18:10 none not reported
Wheel-up field landing. The pilot heard the undercarriage lever disengage while turning finals. He looked down to see the lever moving forward so pulled it back and locked into place, subsequently landing with the wheel up.

144 Nimbus 3 substantial 15/08/17, 17:00 none 1,450
Violent, loud banging and shaking while on final glide, approx 10km from the airfield. After landing, the pilot found a large crack through the rear of the fuselage at the base of the fin. A previous owner had groundlooped the glider, necessitating repair to the rear fuselage.

145 Puchacz substantial 16/08/17, 13:30 none/none 900
Canopy opened during aerobatics. The canopy had been confirmed as locked shut during pre-flight checks. The P2 had been practising side slips, the canopy came open during a stall turn. The perspex damaged the wing root and tailplane after detaching from the frame.

146 HpH Shark substantial 10/08/17, 13:20 none not reported
FES battery caught fire during landing. A CO2 extinguisher had little effect, the fire was put out using a foam extinguisher. AAIB investigation.

149 JS1 substantial 19/08/17, 17:10 minor 3,000
Competition field landing crash following failed engine start. After rounding the final control point, the pilot was heading back to the airfield, uphill into a strong wind. He tried to start the engine at about 3km and 320ft aal. When that failed to start he flew a hurried circuit into the field below, but did not have time to dump the water ballast or lower the undercarriage. The glider landed heavily and caught a wingtip, groundlooping and damaging the fuselage, wing and tailplane.

150 K-13 substantial 19/08/17, 15:25 none 15
Glider landed in field adjacent to the runway. The low airtime pilot appeared not to sufficiently allow for the gusty crosswind, some 30° off the runway direction. The glider drifted downwind of the runway on approach before landing heavily in a recently harrowed field. The landing bent one of the fuselage frame tubes.

151 LS4 destroyed 20/08/17, 13:15 none 50
Overshot field landing. The 440m long field might have been adequate, but the light wind, slight downslope and wires at the upwind end were not in the pilot's favour. The circuit was flown too close to the small field and, despite flying a 360° turn on final approach, the glider crossed the threshold still 200ft agl. After floating down the length of the field, the glider hit the top of the boundary hedge before falling onto an access road on the other side. The port wing broke off in the impact.

152 Cirrus substantial 20/08/17, 15:20 none 50
Competition field landing. On his second flight on type, the pilot selected a field and started the circuit at a suitable height. The circuit was cramped and did not adequately allow for the crosswind, resulting in the pilot flying over the chosen field and landing in an overshoot field. The glider groundlooped after landing in crop, breaking the fuselage.

153 Astir minor 20/08/17, 12:00 none 342
Heavy landing broke undercarriage door.

BGA accident/incident summaries *continued*

AIRCRAFT				PILOT	
Ref	**Type**	**Damage**	**Date, time**	**Injury**	**P1 hours**
154	Puchacz	substantial	25/08/17, 11:40	serious	89

Airbrakes came open during aerotow take-off. The tug pilot tried to radio the glider pilot, but the glider pilot had not turned on the avionics before take-off. The tug pilot, concerned about clearing a line of trees, released the rope. The glider hit the top of the trees before landing heavily, fracturing the pilot's lower back. A cockpit camera suggests that the pre-flight checks were not performed fully.

155	T-61	substantial	29/08/17, 16:30	minor/none	4

Heavy landing. The report suggests that the pilot may have rounded out a little high and lost energy before touching down.

157	K-13	substantial	20/08/17, 16:00	none/none	518

Aerotow rope struck the glider after release. A bow developed during the tow, the instructor took over and released before the bow straightened out. The end of the rope struck the canopy before hitting the tailplane and fin.

162	K-21	substantial	31/08/17, 13:20	none/none	3,440

Heavy landing and groundloop in field. Returning after a cross-country training flight, the glider flew into heavy rain a few miles short of the airfield. The P1 set up an approach into a known field near the club. On final approach, the P2 warned of cables in the field. The instructor was aware of the cables and knew them to be parallel to the landing direction but, with visibility restricted by the wet canopy, elected to turn away to be safe. While turning at low level, with wet wings in poor visibility, the instructor was unable to round out properly and the glider struck the ground nose first before groundlooping. The nosewheel was forced up into the fuselage and the tailplane detached during the groundloop.

163	K-13	substantial	31/08/17, 11:30	minor/minor	7,000

Hard landing. The P2 rounded out too high so the instructor prompted the student to lower the nose. The student then moved the stick too far forward and although the instructor took control he was unable to prevent the glider from impacting heavily on the mainwheel. Both pilots suffered back injuries, the glider had fuselage and wing damage.

168	Supercub	substantial	24/09/17, 13:40	none	378

Prop strike. At the end of the take up slack, the tug pulled the glider forward slightly, leaving some slack in the rope. When the all out signal was given, the tug accelerated until the rope became tight again; the tug slowed while the glider lurched forward, the tug then tipped onto its nose, damaging the propeller.

Incidents

143	Ventus	substantial	13/08/17, 9:15	–	3,000+

The pilot accidentally drove over the glider's wingtip, destroying the winglet and damaging the outboard part of the wing.

147	PA 18	none	13/08/17, 10:50	–	–

Tug exhibited poor acceleration and directional control. After helping to launch a competition grid, it was discovered that the port wheel parking brake was engaged.

148	Duo Discus	none	13/08/17, –	–	–

The tailplane was found to be not secured while performing positive control checks. Although the rigging tool had been removed, the securing pin was not through the tailplane lug, the tailplane was sitting proud of the fin and the front of the pin protruded through the front of the fin. The glider had been rigged and flown the previous day.

156	K-21	minor	17/08/17, 19:30	–	–
	K-21	minor			

One glider was towed to the back of the launch queue. The pilots were preparing to disconnect the tow rope when the club mule tow vehicle lurched forward, pulling the attached K-21. A wingtip struck the mule, the other tip struck the parked K-21 rudder.

158	K-13	none	27/08/17, pm	–	–

Tug upset at about 350ft ato. The glider P1 moved the stick forward after losing sight of the tug, but could still not see the tug. He reached for the release, but it seemed not to work; looking down he saw the airbrakes were open and then pulled the release before closing the airbrakes. Both aircraft landed safely on the airfield. The pilot had been flying his own glider for two hours, only being asked to fly this trial flight as there was a shortage of instructors.

159	Astir	none	27/08/17, –	none	6

Wheel-up landing.

Continued on p68

BGA accident/incident summaries *continued*

AIRCRAFT Ref	Type	Damage	Date, time	PILOT Injury	P1 hours
160	DG-500	none	27/08/17, 14:40	none/none	350

Wheel-up landing. The P2 felt ill a few minutes into the flight; the P1 made an expeditious return to the airfield, but forgot to lower the undercarriage.

161	Discus	none	27/08/17, 15:30	none	74

The canopy was not properly locked before take-off, despite the pilot's pre-flight checks.

164	Supermunk	minor	06/07/17, 17:15	none	–

Engine cylinder cracked during tow. Tug and glider returned safely to the airfield.

165	DG-505	none	16/09/17, 13:30	–	1296

The P1 demonstrated how to correct for crosswind drift during a winch launch. The P2 continued the correction and by the time the glider reached the top of the launch it was upwind of the airfield. The weak link broke and the strop and hardware fell into the club car park, fortunately without injury or damage.

166	K-21	none	06/08/17, 14:00	none/none	700

Glider landed off the airfield after simulated winch launch failure. The instructor pulled the release at 400ft agl as part of a pre-briefed exercise, the P2 recovered and elected to land ahead. Realising that they were running out of airfield, the P1 took control and made a safe landing in a crop field adjacent to the airfield. The wind had been light and variable, the club changed runway after the incident.

167	ASW 20	none	15/08/17, 11:00	none	–

Heavy landing. The glider dropped a wing at the start of the winch launch, the wingtip scraping the ground for a few seconds. The launch signaller gave the stop signal but the pilot raised the wing and continued the launch. There was enough momentum in the cable to accelerate the glider to flying speed, but the glider then ran out of energy at about 6ft agl before landing heavily. The BGA *Safe Winch Launching* booklet advises launchpoint controllers to give the stop signal immediately if a wing goes down; the CFI's report suggests that signallers should continue to give the all out signal even if the wingtip touches the ground.

During BGA Club Safety Officer seminars it was proposed that, to further encourage reporting, it would be a good idea to remove site names from summaries. This has been reflected in the summaries on these pages. Edward Lockhart continues to provide a little extra detail, where available, in these listings. We would also like to publish (anonymously) your stories of particular flights that have taught you a valuable flying lesson. Please send details to *editor@sailplaneandgliding.co.uk* or by post to the address on p3.

AAIB BULLETIN: 2/2018

THIS is an abridged report of the UK Air Accident Investigation Branch report into a fatal ASW 24 accident. The full report can be found in the AAIB Bulletins at *www.aaib.gov.uk/publications/bulletins.cfm*

Aircraft Type and Registration:
Schleicher ASW 24, G-CFNG
Year of Manufacture: 1988 (Serial no: 24015)
Date & Time (UTC): 4 December 2016 at 1235 hrs
Location: Brentor Airfield, Devon
Injuries: Crew – 1 (Fatal)
Nature of Damage: Destroyed

Synopsis

During a glider winch launch in turbulent conditions the weak link parted. The pilot attempted to fly a circuit to land near the launch point, but the glider encountered significant sink and had insufficient energy to complete the intended circuit. The pilot sustained fatal injuries in the impact with the ground. The pilot was an experienced sporting glider pilot with substantial hill and mountain soaring experience both in the UK and other countries.

Analysis

Factors in the accident:
The winch cable weak link parted due to a load application that was in excess of its yield strength. Weak link separations in turbulent conditions are not uncommon and it is highly likely that the weak link parted due to the turbulent conditions.

The weak link parted at around 120ft aal, though with a comparatively high speed at the separation point and with the additional energy the aircraft climbed to a peak of approximately 280ft aal. At this point the pilot promptly began a turn to the left. Very soon after starting the left turn it appears that the aircraft was affected by a significant downdraft and probably a significant decay in airspeed due to wind shear. As a result, the aircraft did not gain airspeed for several seconds despite a pronounced nose-down attitude. This increased the rate of descent to a very high value and at this point the situation was beyond recovery.

From the glider performance calculations, up to the point where the pilot turned to the left, there would have been sufficient strip remaining for a landing ahead to be safely executed, even with half airbrake. However, given the achieved height, the performance of the aircraft and the pilot's experience it is clear he believed that an abbreviated circuit to return to the launch point was viable.

It is not possible to determine which factors contributed to the pilot's decision to turn. One way his decision making may have been influenced was by the fact that a landing ahead would have stopped further launches and also resulted in a lengthy retrieval exercise. Two other possible factors may have been that, at an unfamiliar airfield, he was concerned about the unforgiving terrain beyond the winch end of the strip, if he over-ran, and that a locally-based Discus glider had managed an abbreviated circuit earlier that day, in what appeared to have been worse conditions.

As it was, the pilot in G-CFNG did not fully adopt the aircraft recovery attitude recommended by the BGA, probably because his airspeed was already close to a normal approach speed. However, part of the philosophy of this recovery attitude is to offer the pilot a clear view of a prospective area in which to land ahead. In this case the aircraft still had sufficient speed to manoeuvre, though the higher-than-recommended pitch attitude would have constrained the pilot's view of the remaining length of airfield. He may therefore have had a false impression of the landing area ahead and this may have contributed to his decision to make an immediate turn.

The pilot chose to make a turn left toward the downwind leg of the circuit and this meant that his initial turn was upwind and therefore contrary to general BGA teaching.

BGA teaching is to make an initial turn away from the wind, this allows the aircraft to be into wind after a smaller amount of turn should a crossfield landing be possible and also gives a reduced groundspeed during the base leg portion of the circuit. However, in this case the merits of turning right, away from the wind, would have been more limited than in the general case.

Conclusion

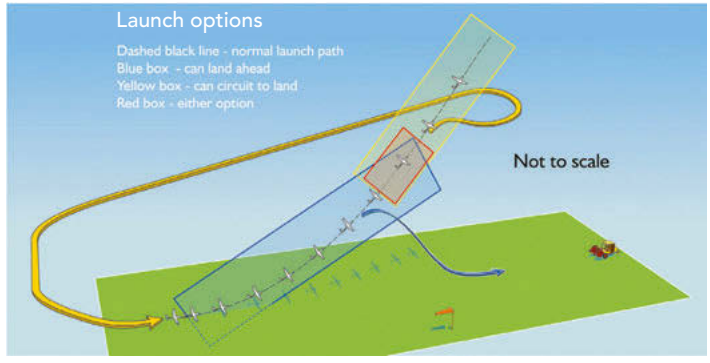
When the winch launch failed there was sufficient distance available to land directly ahead and turning away from the landing area committed the pilot to attempting a circuit in unpredictable conditions. Assessment of the data from the Discus B shows that there were regions of significant sinking air. While it is difficult to be certain of the exact conditions for the accident flight, the general meteorological situation remained and therefore it is highly probable that there would have been significant areas of turbulent and downdraughting air in the area at the time of the accident. Sinking air of a similar magnitude to the conditions encountered by the Discus B would have removed any chance of completing a circuit from the height achieved by the accident aircraft. Regardless of the pilot's significant experience, the area of sinking air meant that the glider did not have the performance to complete the circuit safely.

The BGA's winch launch safety campaign has significantly reduced the accident and fatality rate from the typical forms of launch failure. While this accident was somewhat unusual, given the highly turbulent conditions, the overall guidance in the Safe Launch Initiative remains relevant.

Safety actions

Following this accident the BGA has issued additional guidance related to launch failures and the hazard associated with sink during the circuit. In February 2017 the BGA published a leaflet 'Safe Winch Launching – Land ahead if safe to do so' and this material was put on the BGA website. In October 2017, the BGA updated and published the leaflet titled 'Safe Winch Launching', in its 6th edition.

■ *S&G* extends its profound sympathy to the family of the pilot involved.



(Illustration by Steve Longland)

AAIB BULLETIN: 3/2018

THIS is an abridged report of the UK Air Accident Investigation Branch report into a fatal SZD-55-1 accident. The full report can be found in the AAIB Bulletins at *www.aaib.gov.uk/publications/bulletins.cfm*

Aircraft Type and Registration:
SZD-55-1, G-CKLR
Year of Manufacture: 1993 (Serial no: 551193056)
Date & Time (UTC): 8 April 2017 at 1045 hrs
Location: Currock Hill Airfield, Northumbria
Injuries: Crew – 1 (Fatal)
Nature of Damage: Extensive

Synopsis
During a towed launch, the glider was seen to climb rapidly. After disconnecting from the tow rope with a very high pitch angle, the glider rolled to the right and descended before hitting the ground in a nose-down attitude. The pilot was fatally injured.

The investigation determined that the elevator control connection had not been correctly made when the glider was rigged and this condition was not detected prior to the flight. Consequently, during the launch, the glider would have had no effective elevator control and the pilot would have been unable to control the pitch of the glider.

It was found that an historic and unapproved modification to the glider significantly increased the opportunity for mis-rigging. As a result, the European Aviation Safety Agency have taken safety action to mandate an inspection of similar gliders. In addition, one Safety Recommendation is made.

Analysis
Introduction
From the examination of the aircraft, it is evident that when the glider was rigged prior to the accident flight, the elevator lever did not correctly engage in the elevator mechanism, but instead entered the empty space behind the mechanism. The mis-rig was not identified prior to flight.

In this condition, while the glider was on the ground prior to flight, the elevator surface would have moved upwards when the control stick was moved aft. Forward movement of the control stick would have resulted in the elevator surface moving downwards under gravity, but only to a position above neutral.

During the take-off, airflow across the elevator's surfaces would have caused it to move upwards and this movement would have been entirely independent of control stick position. Consequently, during the launch, the pilot would have had no effective elevator control in either direction and therefore would have been unable to control the pitch of the glider.

Tailplane rigging on the day of the accident
While the presence of the enlarged elevator slot significantly increased the potential for an elevator mis-rig to occur, the investigation determined that the enlarged slot had been present since at least July 2006. The owners of G-CKLR before the accident pilot were not aware that the slot had been enlarged, and therefore there is no reason to believe that the accident pilot or co-owner could have been aware either. However, the glider had been rigged successfully many times since 2006, both by the previous owners and on at least 41 occasions by the accident pilot/co-owner, without a mis-rig occurring. It is important therefore to explore what might have been different on the day of the accident.

The accident occurred on the first flight following extensive maintenance being carried out on the glider by the pilot. It was not possible to determine the full extent of the work performed by the pilot as it was not documented in the technical log, but it is known that the work included the installation of a new transponder, radio, associated wiring and the replacement of some other avionics units. Examination of the wreckage did not reveal any obvious indications that work had been carried out on the elevator control run, but the possibility that the pilot had adjusted the elevator control run or control stick in some way which subtly changed the position of the elevator mechanism during rigging, could not be ruled out. However, this in isolation would not have caused the mis-rig, but could explain why the outcome of the rigging on the day of the accident was different from previous occasions.

The pilot was keen to get airborne and test the new equipment he had fitted to the glider. He arrived at the gliding site in good time to rig his glider and prepare for the launch. During the rigging, the pilot left the glider to perform another task before returning to conclude the process. The BGA Safety Briefing Leaflet 'Is your glider fit for flight?' highlights that interruption, distraction and forgetfulness are key factors in rigging errors. The pilot interrupted his rigging process with the best of intentions yet, in doing so, the risk of not completing the process, or introducing errors, increased. However, it is not possible to determine whether this was a factor in this accident.

There were no witnesses to the rigging process. Having only flown the glider once in the preceding four months, it is possible that the pilot was less practised in the rigging process. Furthermore the pilot's medical condition, which resulted in a loss of strength to his right arm and shoulder, may have affected the manner in which he was able to hold and position the tailplane, if doing so alone.

Conclusion
The SZD-55-1 glider was designed with automatically-connecting elevator controls, and the design includes features intended to prevent the possibility of a mis-rigging condition. An historic modification which enlarged the elevator slot on the tail fin of G-CKLR, degraded the protections of these design features and created a situation whereby the elevator connection could potentially be mis-rigged without any visible means of detecting it. On the day of the accident, the elevator connection was mis-rigged and this condition was not detected before flight. Consequently, during the accident flight, the pilot had no effective elevator control and was therefore unable to control the pitch of the glider.

Safety actions
EASA intends to issue an Airworthiness Directive to mandate an inspection of the SZD-55-1 glider, and other types, where applicable, to verify that the dimensions of the slots in the horizontal rib of the tail fin are within design dimensions.

A positive control check could have identified the mis-rigged condition. Guidance material published by the BGA suggests that positive control checks, which are intended to detect control mis-rigging, are not required to be performed on gliders with automatically-connecting controls. Therefore, one Safety Recommendation has been made to review and, if appropriate, amend this guidance.
■ *S&G* extends its profound sympathy to the family of the pilot involved.

TONY HOUSDEN (1948-2018)

MANY of you will remember Tony Housden, a valued club member, who has sadly passed away. Tony first learnt to fly at Doncaster, going solo in a Swallow in 1971.

He and his wife Ruth later moved to Dumfries and for a time flew in the sea air at the Solway GC before moving to Aston Down in 1973. Tony's flying progressed rapidly following the move to Aston Down; he completed his Bronze almost immediately and then flew Silver Distance in 1974. During this time he also flew at Chambery and started to take an interest in aerobatics, an enthusiasm which stayed with him.

Tony was a gifted member of the community, a Cotswold GC Life Member, and both a serious cross-country pilot and an excellent Full Cat instructor. He loved the sport and inspired many. As a photographer, he always had a good audience when he put on slide shows of his gliding and en route photographs.

As a one-time syndicate partner, in the SHK, he would often grumble about rigging it – it is not the lightest of gliders – but would go off cross-country in it with reasonable regularity. He, along with Ruth, also put in a lot of work when it came to repainting and re-profiling the wings on the SHK.

Together with Ruth (a gliding record holder and ex-CFI at Cotswold GC), Tony contributed hugely to the development of the club in its early days and helped it become the beacon of excellence we enjoy today.

Tony and Ruth left Aston Down in the early '90s to move to Aboyne. He carried on instructing at Aboyne for several years and was again regarded as one of the best instructors – brooking no nonsense like "pudding stirring with the stick". On one memorable occasion, Tony was flying late when the club had lost contact with another glider. He went in search and took advantage of being high to include radio calls – I'm glad to say that both returned safely before dark.

Tony also carried on with cross-country over the mountains, sometimes pair-flying with Peter Coward, but, owing to an injustice to an outspoken club member (he felt kinship there!), Tony decided not to continue flying there until it was put right.

Unfortunately this took several years, so he had mostly lost interest in being an instructor and cross-country pilot, becoming accomplished in England instead. Hence, visits to Aston Down, where he did enjoy flying, but work-life balance meant continued living in the North, despite an increasing feeling that it was too cold in winter.

Chris Swann (with contributions from others)

DAVID RYDER (1940-2018)

DAVID RYDER died in January following a long battle with illness. He was an electrical engineer by trade and worked first in the coal mines and then for the NHS before retiring to the Lincolnshire coast. Dave had a love of showing cats, particularly Siamese, and was a national level show cat judge.

He joined Lincolnshire Gliding Club around the year 2000 with his first wife, Christine, who was a regular attendee and student pilot. Dave progressed through the training system and got a Bronze C and cross-country endorsement.

He bought a share in the Astir, which he eventually bought outright and commenced to fly on every opportunity. He was devastated when Christine was killed in an accident, but returned to gliding sometime later.

Through a bereavement group he met his second wife, Jean, and she became boss of the log sheets when David was on the site. His engineering skills were often tested with the usual gliding club ground equipment.

Our condolences go to Jean.

Dick Skerry, Lincolnshire GC

SAVE THE DATE

BRITISH GLIDING ASSOCIATION

■ The BGA Conference and AGM is on Saturday 2 March 2019 at the Nottingham Belfry hotel

BGA BADGES

No.	Pilot	Club (place of flight)	Date
Diamond Goal			
2-2582	Kristina Samuels	Trent Valley	10/08/2017
Diamond Height			
3-1817	Geoffrey Forster	Borders	15/10/2017
3-1818	Chris Gill	Denbigh	24/12/2017
Gold Height			
	Miles Bailey	Bicester (Lleweni Parc)	31/12/2017
	James Davidson	Lasham (Aboyne)	11/10/2017
	Mark Bradford	SGU (Aboyne)	16/02/2018
	Lachlan Sloan	SGU (Aboyne)	16/02/2018
Gold Distance			
	Graeme Cooksey	Wolds (New Tempe)	13/01/2018
	Kristina Samuels	Trent Valley	10/08/2017
Silver Badge completed			
	Paul Holahan	London	13/08/2017
	Thomas Willson	Kestrel	18/06/2017
Silver Height			
	Sean Maciejewski	Norfolk	04/06/2017
	Paul Holahan	London	13/08/2017
	Mark Bradford	SGU (Aboyne)	16/02/2018
	Lachlan Sloan	SGU (Aboyne)	16/02/2018
Silver Distance			
	Thomas Willson	Kestrel	18/06/2017
	Colin Law	Heron	24/03/2018
	Sean Maciejewski	Norfolk	17/07/2016
	Paul Holahan	London	13/08/2017
	Lloyd Finlay	Lincolnshire (Pocklington)	02/07/2017
	Thomas Willson	Kestrel	01/06/2017
100k Diploma Part 1 & 2			
	Graham Stallard	Lasham (Parham)	29/11/2017
Cross Country Endorsement			
	Matthew Doyle	London	03/02/2018
	David Tappenden	Essex & Suffolk	09/03/2018
	John Marshall	Cairngorm	24/03/2018
	William Dean	Wrekin	25/03/2018
	Nicolaas Gelder	Wolds	01/04/2018
	Andrew Shearn	Bristol & Glos	30/03/2018
	Lauri Pesonen	Cambridge	05/04/2018
	Craig Scott	Wolds	07/04/2018

INSTRUCTOR RATINGS

Basic	
Lukasz Nazar	Oxford
Gregory Taffs	Norfolk
Nikolas Markert	Booker
David Moore	Deeside
Jonathon Richardson	Wolds
Alistair Cunningham	Deeside
Danny Richmond	Anglia
Assistant	
Mark Williams	Cranwell
Full	
Jordan Richards	SGU
George Darby	Shenington

Classifieds

Please send the text of your classified advert to Debbie Carr at the BGA office (not to the editor) – *debbie@gliding.co.uk* The deadline for classifieds to be included in **Aug/Sept 18** is **5 July 2018**.

Text: 80p/word, minimum 20 words (£16). Black and white photographs: £6 extra. Box number: £3 extra. All prices include VAT.

FOR SALE

OIL PAINTING by Michael Murfin, 1994
› oil on canvas, 60"H x 48"W
› £2,000 ono
› can be viewed in London NW1
› contact: *penny.ibbs@gmail.com*

INDEX TO DISPLAY ADVERTISERS

EASA LAPL Syllabus and Training Programme

The EASA LAPL (A) Syllabus and Training Programme from AFE is the only publication to consolidate the various EASA requirements and guidance for the EASA LAPL (Aeroplanes) into one document which can be used in everyday training by both the student pilot and ATOs, DTOs, RTFs and glider clubs.

Designed to assist the pilot through LAPL training and assist the Training Organisation in meeting EASA and CAA requirements, the EASA LAPL (A) Syllabus and Training Programme meets CAA and EASA training programme specifications.

Quickfind: EASALAPLASYLLABUS **£18.95** C

ICOM IC-A25NE 8.33kHz VHF Airband Transceiver

The IC-A25NE is the latest development in airband radio technology from ICOM, featuring built-in Bluetooth, GPS and VOR navigation functions. Featuring 6 watts of output power, this stylish modern design, easy-to-use interface and large 2.3-inch LCD combine to provide stress-free programming and easy in-flight operation. The handheld includes a 2350mAh Li-ion battery providing up to 10 hours operating time.

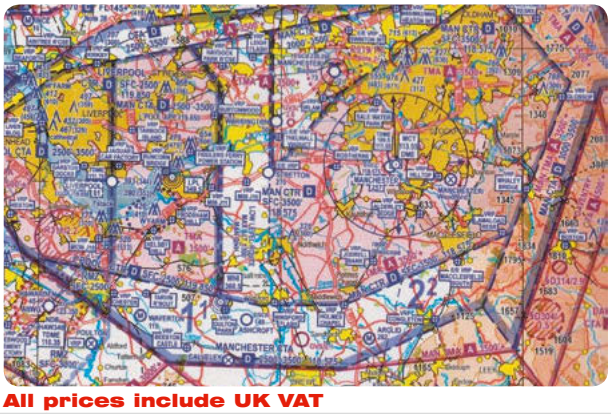
Supplied accessories include BP-288 battery pack, BP-289 battery case, BC-224 rapid charger, BC-06 AC Adapter, CP-20 Cigarette Lighter Cable, OPC-2379 headset adapter, FA-B02AR antenna and hand strap.

Quickfind: ICOMICA25NE **£539.95** G

Key features of the new A25NE include:

- 6 Watts High RF Output Power
- Easy-to-use Interface - via ten-key pad
- 2.3-inch Large High Visibility LCD - high contrast LCD display with user-friendly, graphic screens
- "Flip-Flop" Channel Recall - stores the last ten channels used.
- Built-in Bluetooth for Hands-Free Operation
- Intelligent Battery with Detailed Battery Information - provides up to 10 hours of operating time.
- 300 Memory Channels - in 15 memory groups), with 12 character names
- VOR Navigation Functions
- Near Station Search Function
- Built-in GPS with Simplified Waypoint Navigation
- Flight Planning via Android/iOS App

1:500,000 Northern England and Northern Ireland CAA/NATS VFR chart, 2018 edition



The 2018 edition (ed 41) of the 1:500,000 Northern England and Northern Ireland VFR chart will be released on the 26th April. Widely acknowledged as the most accurate and user-friendly VFR charts available, CAA/NATS charts are fully revised and updated to display the latest aeronautical information.

With hundreds of airspace, radio frequency, facility and typographical changes between every edition, there have never been more reasons for making sure you are not flying with an out-of-date chart.

Quickfind: NORTHED41 **£15.99** D

All prices include UK VAT

southernsailplanes

• Supply
• Maintain
• Repair
• Certify

Membury Airfield,
Lambourn Woodlands,
Hungerford,
Berkshire RG17 7TJ

tel_ 01488 71774 fax_01488 72482
evenings_ 01488 668484
mobile_ 07774 429404
email_ office@southernsailplanes.com

Waiting to launch?

The ground breaking **Ventus 3M*** allows you to launch whenever you choose. After a long day racing or exploring, its world beating performance will give you the best chance to get home without the engine, and if you want to land at another airfield, you know that getting a launch in the morning will be no problem at all.

* Find out more about the all new **Ventus 3M** and its impressive self-launching and cross country performance by contacting Philip Jones.

For more information on the new Ventus 3F, Ventus 3M, the Discus 2c FES, Arcus or any other Schempp-Hirth masterpiece please contact Philip Jones: phil@southernsailplanes.com

SCHEMPP–HIRTH *Performance without equal.*

SOLE UK AGENTS FOR SCHEMPP-HIRTH | GLIDER SALES, PARTS SUPPLY & SUPPORT | INSPECTIONS & ANNUAL MAINTENANCE | COMPLEX REPAIRS & INSURANCE WORK | APPROVED FOR ANY EU-REGISTERED GLIDER | GLIDER COMPONENT REPAIR | SOLO ENGINE INSPECTIONS | OEHLER PROPELLER REPAIRS | EASA PART M SUBPART G APPROVED | EASA PART 145 APPROVED | CALL US FOR FURTHER DETAILS: 01488 71774