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July
2022

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EDITORIAL

With Dave Calderwood

COLUMN

Strip flying: a different world

1 June 2022

Writing the cover story about strip flying brought back memories of when I started flying microlights – first flex-wing, later fixed-wing – at a tiny airfield at Sandy, Bedfordshire. It was (and still is) just behind the village which we had strict instructions not to overfly. The airfield operator even marked out a curved approach with big white arrows on the ground to steer us towards the threshold and keep us away from the village.

At the time I thought this was normal, and the fact that the longest runway was 550 metres didn't strike me as unusual either. There were a couple of other hazards too, which we students just glossed over and accepted. A small river ran adjacent to the airfield and occasionally anglers would be casting fishing lines just a few feet below us. Then, on the northerly runway the approach was over tall trees just before the threshold of the shorter, 350m runway.

The good thing about microlights is that they are light and can operate at relatively low speeds, and thus need shorter runways. Even so, we should probably have been more aware. Phrases such as 'Threat and Error Management' didn't exist back then, at least not to us newbies. We were caught up in the all-consuming excitement of learning to fly.

So, flying farm strips with Matt Coles (see '**Welcome to the Strip Club'**, not my headline, honest) was a bit of a wake-up call. Landing on grass didn't faze me, but dodging a tree on short final did.. As did turning 90 degrees at low level around a tree to line up with a steeply sloping upwards farm strip. On a scale of one to ten of challenging strips, that one was 'Dix Points'.

A good chunk of this issue is about strip flying and short take-off and landing. It's a different world from operating from regular aerodromes with nice, long, hard runways and full support but, as Matt says, it sharpens up your skills. There's a good debate about strip flying going on the *FLYER* Forum as well. **Find that thread here.**

Welcome to the July 2022 issue of *FLYER*, the second in our new format since going 100% online. I hope you enjoy it and the new website. If you have any suggestions for improving either, don't hesitate to let me know.

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***FLYER* Club Members Save money!**

FLYER's free landings are available to Club members via their account dashboard

NEWS

Sonaca Aircraft stops production of S200 trainer

23 May 2022

Sonaca Aircraft is stopping production of its S200 two-seat training aircraft after delivering 57 aircraft.

The Belgian manufacturer was created in 2016 as a subsidiary of aerospace engineering company Sonaca to develop, certify and market a training aircraft, based on a Sling kitplane.

Sonaxa Aircraft says it will “refocus on services and after-sales”.

It’s a decision by the Board of Directors of Sonaca made today to stop financing the loss-making activities of its subsidiary Sonaca Aircraft. However, financing has been granted to fulfill all its obligations and to facilitate the continuity of essential activities for customers, i.e. services and after sales.

Yves Delatte, CEO of Sonaca, said, “The cessation of Sonaca Aircraft’s production activities is a necessary decision. The Covid-19 pandemic, which will globally impact the aviation sector until 2025, has strongly affected general aviation, especially activities related to pilot training and education.”

This has resulted in an order level well below the break-even point for Sonaca Aircraft, said a statement. During the last months, Sonaca has approached many strategic partners to help its subsidiary enter new market segments, unfortunately without reaching an agreement.

“We have to focus all our strenghts on our expertise in aerostructure, where Sonaca aims to become world leader by 2025,” continued Mr Delatte. “The know-how of each Sonaca Aircraft employee will be a real asset to reach this goal.”

Sonaca

NEWS

Breighton to stage 2022 Vintage Aerobatic World Championship

19 May 2022

Photo: Chris Hall

The 2022 Vintage Aerobatic World Championship (VAWC) will be staged at Breighton Aerodrome from 18 to 21 August – the first time it has been held in the UK.

The four-day event has an emphasis on elegance and refinement in the flying with 'normal' aerobatic sequences rather than extreme manouevres.

There are three categories:

- Vintage category, for aircraft with type certificate (or alike) before 1955 and a least 65 years old
- Classic category, for aircraft with type certificate (or alike) before 1975 and after 1955, and a least 45 years old
- Replica category, for replicas of Vintage or Classic aircraft, and/or re-engined/modified vintage and classic aircraft.

Both powered and glider aircraft are welcome. 'Borderline cases' will be decided by the VAWC committee.

Charles Sunter, chairman of the organising Real Aeroplane Club, said, "The Vintage Aerobatic World Championship unites the world of vintage aviation with an exciting and prominent showcase event. Bringing together contestants, family and friends for a few days of fun, laughter and excitement.

"Vintage aviation isn't for everyone, and quite often the draw of shiny home build kits means that the skill, flair and passion required to fly vintage aircraft is a being lost. To fly aerobatics well in such aircraft requires more than just a basic understanding of energy management, it requires the pilot to be truly at one with their machine.

"You don't have to be an aerobatic ace to take part, in fact it can be more fun if like me you are not. All we ask if that you fly safely and enjoy the experience."

Breighton Aerodrome, home of the Real Aeroplane Club. Photo: Andy Wood

Breighton Aerodrome is in the corner of a WW11 heavy bomber RAF base, in the East Riding of Yorkshire.

"With over 35 years of vintage aviation heritage and approximately 90 vintage aircraft within 13 hangars we have a real synergy with the VAWC," continued Charles.

"With an 800m grass east/west runway and a flying zone in front of our new

300sqm café/ bistro, competitors and their partners, friends and support crew can expect an incredible atmosphere and a warm Yorkshire welcome.

“As for the Saturday night party, bad weather days, day trips for those who wish to visit local attractions, we have all that covered.

“With more than 35 years of organising the most amazing parties and being in an area full of both historical and aviation history, we will be looking after everyone, no matter what they wish to do (including shopping trips!).

“Don’t be overwhelmed by the event. After you have registered to take part you will receive a welcome pack with all the information you need.”

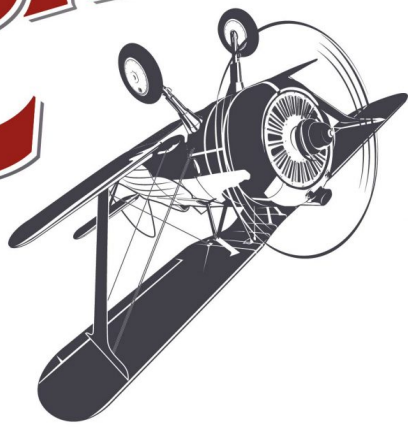
For insurance reasons, the VAWC event is not open to public spectators. ONLY members of the Real Aeroplane Club will be allowed airfield access to watch this amazing event. Membership for the remainder of 2022 can be purchased for £20.

“Come and immerse yourself in grass roots vintage aviation and passion,” added Charles.

To register for the **Vintage Aerobatic World Championship 2022, click here**, or contact Charles Sunter, t: +44 (0)7903 112542, e: **chairmanrealaero@outlook.com**

Cklick here to join Real Aeroplane Club

VINTAGE AEROBATIC



WORLD CHAMPIONSHIP

NEWS

Five aircraft up for grabs in Spanish state auction

24 May 2022

One of the aircraft up for auction, a Rallye 180T

Five aircraft are being auctioned by a state-owned company in Spain – with a starting price of just 150 euro each.

The aircraft can be viewed on 13 June at Ocaña airfield, and the auction, which is live now, will close on 16 June.

The aircraft are:

- Two single-engine Avions Pierre Robin DR400-180R used previously as glider tugs
- Two single-engine Socata Rallye 180T, also used for glider towing
- A two-seat ASK21 glider.

Two Robin DR400s are up for auction

The Robin DR400 were manufactured in 1986 and are adapted for glider towing. The total flight time is 8575:05 FH and 7726:10 FH. The number of landings is 66,534 and 58,575 respectively.

The Socata Rallye 180T were manufactured in 1981. Total flight time is 5365:15 FH and 4918:10 FH, and the number of landings made is 34,326 and 29,305 respectively.

The ASK21 glider was manufactured in Germany in 1987. Total flight time is 9009:29 FH, and the number of landings made amounts to 22,878. The lots also include spare parts.

ASK21 glider also up for auction

The auction house says all the aircraft are registered and have valid documentation, including airworthiness certificates, maintenance manuals and technical data sheets, and comply with all applicable airworthiness directives. Both the interior and exterior condition of the aircraft achieved a score of 8 out of 10.

SENASA, the ministry of finance and transport in Spain, is also offering four Magicar Ultra, Ultra1 and Ultra 2 class trailers for auction. Their year of manufacture is 2002. They are offered for sale at a minimum price of 150 euros each.

Open day

Escrapalia, the auctioneer, has organised an open day so that interested people can inspect the aircraft. It will take place on 13 June, morning time, at Ocaña airfield, Toledo, located 60km from Madrid.

Auction

The online auction until 16 June is open to professionals and individuals from any country by registering for free at Escrapalia. A deposit of 2,500 euro is required to place bids. The deposit will be returned at the end of the auction to all non-winning bidders and deducted from the winners' final invoice.

More details on the aircraft here
More details on the trailers here

NEWS

British Aerobatics offers chance to try aeros

11 May 2022

Photo: Keith Wilson

British Aerobatics will stage its next Get into Aeros event at Fenland Airfield on 25-26 June. The event is aimed at PPLs who have tasted aerobatics and want to learn more, and those who are looking for ways to make their post-PPL flying more exciting.

This year the event has been opened to all age groups. The programme will involve two aerobatic flights with one of our experienced aerobatic instructors, and a chance to fly a short simple aerobatic sequence in front of a panel of judges.

In between there will be presentations on aerobatic topics and a chance for an audience with Nigel Lamb, eight times British aerobatic champion and Red Bull

Air Race Championship winner. There will be demonstration flights of all levels of aerobatics and plenty of aerobatic pilots to chat with.

To join the event, the cost is £199 which includes all flying and activities. Free camping pitches are available on the airfield and food and refreshments will be available from the Fenland airfield restaurant.

The event is limited to 16 participants to ensure that everyone gets plenty of time to explore the sport.

Click here to register your interest in the event giving an idea of your flying experience to date and your interest in aerobatics. The lucky 16 will be contacted by the selection panel and invited to the event. The closing date for initial applications is 22 May.

Steve Todd, British Aerobatics Chairman, said, “Aerobatics is a fantastic way to improve your flying skills, understand the capabilities of your aircraft and explore the full dimensions of the sky. Our Get into Aeros events are extremely popular and offer a great opportunity to taste aerobatics in a fun and informative environment.”

British Aerobatics is the national governing body of sport aerobatics in the United Kingdom, recognised by Sport England and the Royal Aero Club. It arranges aerobatic competitions throughout the UK and sends teams to European and World championships.

NEWS

Goodwood Air Race cancelled

30 May 2022

The organisers of the Air Race World Championship have cancelled the first event due to be held at Goodwood on 10-11 July.

In a statement released on social media, the organisers say, “It is with a heavy heart that we have had to make the difficult decision not to race at Goodwood in July 2022. There are a number of factors that have contributed to this, including significant logistics challenges that have arisen.

“Whilst it’s a disappointing loss for the 2022 race calendar, we very much hope Goodwood Estate will feature as a race venue in 2023.

“With sad news comes some exciting news however – we’re talking with potential strategic multi-national partners in relation to the growing UAM/eVTOL market. As a result, we hope to be adding Korea, Japan and other parts of South East Asia to our race calendar for 2023.”

It means the 2022 world championship will be three events, starting with Malaysia on 10-11 September, followed by Indonesia and Australia. The Goodwood event was announced in March.

Air Race World Championship

NEWS

Govt extends Electronic Conspicuity rebate... again

16 May 2022

SkyEcho

The UK govt scheme to refund 50% of the cost of purchase for an Electronic Conspicuity device has been extended again – this time until 31 March 2023.

The scheme was launched in October 2020 by the Department for Transport (DfT) and is open to the UK's General Aviation (GA) and Unmanned Aircraft Systems (UAS) communities.

The UK CAA's website which handles the rebate scheme says it will remain open to applications until 31 March 2023 or until the funding is used. Those meeting the requirements can claim a 50% rebate of the purchase cost of an EC device to a maximum of £250.00 (including VAT), per applicant.

Requirements:

- Funding is for carry-on or aircraft-fitted devices only. Ground system components do not qualify for this scheme
- Applicants can claim once for a single rebate of 50% – up to £250 – on EC equipment purchased. Organisations/charities can claim for multiple devices on the same rebate terms
- Applicants to claim for equipment purchased up to 31 March 2023
- If the funding allocated (up to 3,500 rebates) is used before 31 March 2023 an earlier closing date will be agreed and published
- You must produce a proof of purchase receipt

In addition. you must hold at least one of the following UK issued pilot licences (UK or EASA part FCL):

- Private Pilot's Licence (PPL)
- Commercial Pilot's Licence (CPL)
- National PPL (NPPL)
- Sailplane Pilot's Licence (SPL)
- Balloon Pilot's Licence (BPL)
- Light Aircraft Pilot's Licence (LAPL)

* Or be a registered member of the British Gliding Association (BGA), holding a current 'Pilot' or 'Club Pilot' rating, or a registered pilot of the Association of Paragliding Pilots and Instructors (APPI) and a UK resident.

* Alternatively, if you are UAS/UAV operator then you must hold an authorisation issued specifically to them by the CAA (i.e. a permission, exemption or "operational authorisation"). General Exemptions, permissions or authorisations which are aimed at a wider and non-specific group of operators are not included.

Acceptable equipment

The main equipment able to be used on an aircraft for EC purposes currently available (and that a refund can be claimed against) includes:

- ADS-B Out capable transponder inclusive of GNSS position source (Mode S ES Enabled)
- ADS-B Out capable transponder without GNSS position source (Mode S ES)
- Certified GNSS source for Mode S ES transponders (Including a GNSS position sources in line with the recently published AIC2019Y141, example being Trig TN72)
- FLARM
- Power FLARM

- Pilot Aware Rosetta
- Sky Echo 2

Requests from device manufacturers for alternative or newly developed equipment to be added on a case by case basis. At a minimum, devices need to be emitting and/or transmitting position and speed information on a dedicated frequency.

Full details

See also:
***FLYER*'s Electronic Conspicuity device test from October 2020**
Other news on Electronic Conspicuity

NEWS

AAIB: Cherokee on club fly-out to Le Touquet disappeared in IMC

13 May 2022

Photo: AAIB

The Air Accidents Investigation Branch has published a Special Bulletin concerning the loss of Piper Cherokee Arrow II (G-EGVA) that went missing approximately 20nm west of Le Touquet, France, on 2 April.

G-EGVA was one of seven aircraft taking part in a club 'fly-out' from Wellesbourne Mountford Aerodrome to Le Touquet in France.

The AAIB bulletin says:

A line of highly convective cloud was forecast on the intended route in the English Channel. As they approached the middle of the Channel, one of the pilots of G-EGVA, which was operating under Visual Flight Rules (VFR), reported to London Information that they were in cloud. Neither of the pilots onboard was qualified to fly in cloud. Shortly after this transmission the aircraft disappeared from radar.

An extensive search of the area was coordinated by the UK and French Aeronautical Rescue Coordination Centres but neither the aircraft nor its occupants were found. The available evidence, at the time of issue of this report, suggests that control of the aircraft was lost when it entered cloud.

This Special Bulletin is published to remind pilots of the danger of entering cloud when not qualified to fly in IMC (instrument rating), and highlights the guidance available in the CAA Skyway Code and Safety Sense leaflets.

Crispin Orr, Chief Inspector of Air Accidents said, "This was a tragic accident and our thoughts are with the loved ones of the missing pilots at this time.

"The accident highlights how hazardous it is to fly into cloud when not suitably qualified or when not in current practice in instrument flying.

"Sadly, the AAIB has investigated numerous accidents when control of an aircraft was lost in these circumstances.

"Pilots are reminded of the importance of pre-flight weather decision making and always having contingency plans just in case the weather proves to be worse than expected."

The Investigation continues to examine operational, technical, and human factors which might have contributed to this accident. A final report will be issued in due course.

The full Special Bulletin is available on the **AAIB website.**

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Model H10-13.4

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NEWS

How to own a share of a Catalina flying boat

23 May 2022

Photo: www.langenfeld.fr

The operator of the well-known, Duxford-based, Catalina flying boat *Miss Pick Up* is holding an Open Day on 16 October at Duxford.

It's an opportunity for pilots and non-pilots to spend a day with some of the owners and crew and learn more about getting involved in share ownership.

"This method of owning and flying a large 'warbird' has proved very successful and we are keen to open up the opportunity to get involved as a shareholder to more individuals," said David Legg for **Plane Sailing Air Displays**, which operates the aircraft.

"Share owners get the opportunity to fly in the aircraft and there are

opportunities to become qualified on the aircraft as co-pilot or captain."

Anyone interested in finding out more and attending the Open Day should contact **pby5@btinternet.com** for more details.

NEWS

New owner is sweet music for Enstrom Helicopter

31 May 2022

Enstrom Helicopter has a new owner. It is Chuck Surack, founder of Sweetwater Sound, an online retailer of musical instruments and professional audio equipment.

Matt Francour, President & CEO of Enstrom, said, “Earlier this year, it looked as if MidTex Aviation would step in and buy Enstrom, but when they had unexpected problems securing the funding, Chuck was able to step in and save the company.”

Surack’s history with Enstrom dates to 2008 when he learned to fly helicopters and, before even obtaining his pilot’s licence, he purchased a brand new Enstrom 480B. One of the company’s first tasks is to deliver new spare parts to existing operators.

The Enstrom Helicopter Corporation joins Surack Enterprises' portfolio of aviation-related businesses, including Sweet Aviation, which provides charter flights, training, and rental for fixed-wing aircraft; Sweet Helicopters, which does the same for rotorcraft and is the official helicopter services provider of the Indianapolis Motor Speedway; and Aviation Specialty Insurance, which insures the aviation industry including corporations, light aircraft, flight schools, drones & UAVs, and more.

Enstrom Helicopter

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INSTANT EXPERT

With Ed Bellamy

COLUMN

Except for take-off and landing...

Ed Bellamy takes a closer look at the 500ft rule after coming across a thread about strip flying and its legalities in the *FLYER* forum

13 May 2022

I sometimes review the *FLYER* forum for monthly inspiration and recently noticed a thread about strip flying that had taken on a legal dimension. Under discussion was a video from a well-known American Youtuber about having his licence suspended by the FAA, after making a low pass to inspect a possible landing site.

Now, there may be more to the story than described, but at face value it seemed a rather stringent interpretation of the '500ft' rule and may call into question the common practice in the US of making a low pass before landing at an unfamiliar 'off airport' location.

The FAA alleged that during the pass the aircraft came within 500ft of persons or structures and that because the manoeuvre was not 'necessary for take-off or landing', the rule was breached. Various witnesses and security camera footage were apparently used to support the allegation. I understand the case is still under appeal.

So, you may be wondering if this has any relevance for the UK, for example in the context of flying into private strips? The rules in this area are similar to the US, but there is some additional detail in the UK that might protect similar manoeuvres, assuming they were conducted in accordance with normal aviation practice.

While I suspect being prosecuted for low flying is not something that most GA pilots will have to worry about, the relevant rules should be considered when

operating into strips and when conducting practice forced landings.

Minimum heights

Under the European Standardised Rules of the Air (Part-SERA), the two VFR 'minimum height' rules in SERA.5005(f) are that:

'Except when necessary for take-off or landing, or except by permission from the competent authority, a VFR flight shall not be flown:

(1) over the congested areas of cities, towns or settlements or over an open-air assembly of persons at a height less than 300m (1,000 ft) above the highest obstacle within a radius of 600m from the aircraft; or

(2) elsewhere than as specified in (1), at a height less than 150m (500ft) above the ground or water, or 150m (500ft) above the highest obstacle within a radius of 150m (500ft) from the aircraft.'

Note that when overflying congested areas, there is also the requirement under SERA.3105 to be high enough to enable landing in the event of an emergency, without undue hazard to people on the ground.

The '500ft rule'

As many will be aware, the actual '500ft rule' in the UK is that 'aircraft must not be flown closer than 500ft to any person, vessel, vehicle or structure except with the permission of the CAA'. The exception for take-off and landing still applies. The variation from the SERA rule is via a general permission under SERA.5005(f) and published in CAA **ORS4 1496.**

ORS4 1496 (para 8) also permits aircraft to come within that 500ft distance 'if practising approaches to land at or checking navigational aids or procedures at an aerodrome'.

If anyone queried a low pass or go around at strip, perhaps coming within 500ft of a farm building, para 8 is probably a viable defence, assuming the pass was genuinely to practice an approach to land and not an unsolicited 'beat up'. Note that in the practice forced landing scenario, you are not excused from the UK 500ft rule, unless it happens to be conducted at an aerodrome.

Practically speaking, most strips will have accepted procedures for minimising the overflight of people or structures (and possibly livestock) and assuming these are followed, all will normally be well. I suspect, in the case of our Youtuber, he may have fallen foul of some local politics between the landowner and a neighbour. It is always worth checking whether there are any issues like this when going to an unfamiliar strip.

What is an aerodrome?

An obvious follow-on question is what qualifies as an aerodrome, would a strip count? The definition is quite broad and, in this context, no distinction is made between licensed and unlicensed locations.

The Air Navigation Order defines 'aerodrome' as 'any area of land or water designed, equipped, set apart or commonly used for affording facilities for the landing and departure of aircraft'.

The full definition has some additional elements, but the above is sufficient in this context. I would suggest most strips meet this definition, assuming they have some established use, although I am not aware whether that position has ever been legally tested.

The SERA definition is similar – 'a defined area (including any buildings, installations and equipment) on land or water or on a fixed, fixed off-shore or floating structure intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.'

Other considerations

A caveat with these discussions is that both the ANO and SERA contain an 'endangerment' offence, which could be invoked if danger had been caused either to those on the ground or the aircraft itself.

The case law on this subject is variable but common sense and normal aviation practice should guide interpretation. The other context in which the low flying rules come up is with regard to 'congested areas' and the rules for overflying them, but that is probably a discussion for another day.

More info:

www.caa.co.uk/skywaycode
www.caa.co.uk/sera
ORS4 1496

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PILOT CAREERS

Resilient Pilot wins gold for pilot mentoring and coaching

12 May 2022

Resilient Pilot, the not-for-profit organisation established in May 2020 to provide support for pilots and crew around the world, is marking its two-year milestone with a gold!

Resilient Pilot has been accredited at Gold Level as an organisation that provides International Standards for Mentoring and Coaching Programmes (ISMCP). The accreditation is conferred by the European Mentoring and Coaching Council (EMCC).

The ISMCP Gold Level is the highest possible independent accreditation awarded to organisations designing, delivering and evaluating mentoring and/or coaching programmes. It is an integral and essential step on the path to establishing the professional credibility and status of good mentoring and/or

coaching programme management.

It ensures programmes are:

- Thoughtfully designed
- Systematically managed
- Significantly contributing to the development of participants.

Resilient Pilot founder and CEO, Stuart Beech, said, “This is testament to the calibre and commitment of our amazing team of volunteer mentors and specialist coaches.

“We believe this accreditation is unique in the airline industry and it further endorses our credibility worldwide. It is also recognition of the interest in personal resilience development shown by our members.”

Co-founder of Resilient Pilot, Stuart Beech

Resilient Pilot has provided free mentoring and coaching to hundreds of pilots around the world since it launched in 2020. The organisation has always aligned its methodology to the EMCC competencies and has a blended approach to mentoring, coaching and facilitated self-development.

Pilots and crew come to Resilient Pilot for help with a range of challenges from juggling life, managing change and safeguarding wellbeing, to researching career and training options, preparing for Direct Entry Pilot and Command interviews and refreshing competencies.

In recent times, the team reports that not only are they continuing to provide support for pilots still out of work, but they are also seeing an increase in operational pilots joining to enhance their skills alongside the training offered by their airline employers.

Resilient Pilot confirmed mentoring and coaching support for individual pilots and cabin crew around the world will continue to be offered for free, regardless of career phase and current employment position.

The team also hosts free weekly webinars on a variety of aviation related topics. Additionally, members of the 'Resilient Crew Room' can benefit from included or discounted monthly technical, non-technical and 'Competency Development Scenario' virtual workshops.

Furthermore, the 'Resilience Development Programme' provides a pioneering, virtual experience that aims to enhance continuous development, self-evaluation skills, resilience and – ultimately – operational performance and safety.

Beech continued, "I am very proud of how Resilient Pilot has responded to industry needs and evolved over the past two years. To be in a position to announce that we have achieved Gold Level on our second anniversary, is an added bonus! We look forward to what the future holds for personal and professional continuous development and self-evaluation in our industry."

Resilient Pilot

PILOT CAREERS

Virtual Reality simulator approved for helicopter training

31 May 2022

A new way of learning to fly helicopters has been approved by the European Aviation Safety Agency (EASA) using a Virtual Reality (VR) simulator.

EASA, VRM Switzerland and Airbus Helicopters have qualified an Airbus Helicopters H125 flight training device (FTD) Level 3 with Virtual Reality (VR) technology at Helitrans in Norway.

This training device is approved by Airbus Helicopters and meets FTD Level 3 requirements. It will be used for pilot training and will provide training credits.

The H125 virtual reality simulator is a brand new approach to training that uses virtual reality technology to make training not only more affordable for operators, but also provides a level of 'realness' allowing them to feel like they're in a real H125 in all phases of flight and during emergency situations.

“Today, operators execute, as per regulation, manoeuvre-based proficiency checks mostly on real helicopters,” says Fabi Riesen, CEO of VRM Switzerland which developed the VR sim.

“With this simulator, pilots can learn more purposefully in scenario-based trainings completely without carbon emissions and at a lower cost.

“With FTD level 3 EASA qualification, this device is now approved for proficiency checks, type ratings according to EASA part FCL, and parts of an instrument rating.”

Airbus Helicopters says it is striving for zero safety incidents and, as the majority of accidents are linked to human and organisational factors, training has a major part to play in improving safety throughout the industry.

“With this type of simulator, you can put the pilot in operational situations which would be very risky in real flight but which bring a significant added value to training,” said Gilles Bruniaux, Head of Product Safety at Airbus Helicopters.

“It is true for emergency procedures but also for scenarios like flying in weather conditions that gradually deteriorate.”

David Solar, Head of General Aviation and VTOL department at EASA, added, “The EASA and Rotorcraft Industry commitment and objective back in 2018 when endorsing the Rotorcraft Safety roadmap was to have visible and concrete results within five years.

“The VRM H125 FTD qualification is one of the tangible outcomes of the Rotorcraft Safety Roadmap, paving the way for more affordable and potentially more versatile training devices that can be used for enhancing overall rotorcraft safety. It also shows that collaboration between a regulator and within industry is the best way to get all stakeholders to move forward.”

Airbus Helicopters
VRM Switzerland

PILOT CAREERS

L3Harris to train UK and European cadets at Florida academy

12 May 2022

L3Harris Technologies has expanded its US Airline Academy to enable cadets from the UK and Europe to train at the Orlando Sanford International Airport facility.

This allows cadets training towards pilot licences from the UK's Civil Aviation Authority (CAA) and the European Aviation Safety Agency (EASA) to complete basic flight training at the US Airline Academy. The first UK class began training in May 2022.

The move, in response to commercial airline industry and cadet customer feedback, allows L3Harris to expand its UK and European training and maximise its international Academy footprint.

"It has been a long-term plan for us to offer our cadets the opportunity to train

for their UK and European qualifications at our US Academy," said David Cox, US Flight Academy Director, L3Harris.

"It will allow us to more efficiently use our world-class facilities, while providing cadets an exciting opportunity to live and fly in ideal weather conditions and be close to world-famous tourist destinations and beaches."

L3Harris Airline Academy

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I GET PAID FOR THIS

Championing women in aviation

Travelling around the world, meeting new people, and seeing new places, Captain Kristin Long is also passionate about fostering potential and helping other women believe in their own abilities

Yayeri van Baarsen | *23 May 2022*

Captain Long, right, with First Officer Christina Dethmers, on an International Women's Day flight

How did you get into flying?

My mum worked as a ticket agent and my dad as an airline dispatcher, so I grew up surrounded by the aviation industry. As a kid, I wanted to be a flight attendant, but aged 12 and good at maths, it dawned on me that I could be the pilot!

At university, Air Canada was hiring students as flight attendants and that's when

I discovered I loved the airline lifestyle. It's great I got to realise both my dreams: becoming a flight attendant and then a pilot.

Tell us about your job?

I'm a WestJet Airlines pilot. Based in Toronto, Canada, I work as a captain on the B737. The Boeing 737 is the best-selling commercial jet airliner in the world and it's wonderful to fly. Our flights usually range from one to five hours.

We fly within Canada, US, Mexico, the Caribbean, Central America, and since the 737's range has increased, even Europe. Our flight pairings vary from one to five days, and from one week to the next, our schedules can look very different.

We always fly as a crew, so strong communication skills are essential. Airline pilots also need good decision-making skills, leadership, attention to detail and the ability to react and adapt to rapidly changing situations.

I enjoy experiencing new things, so when getting to a destination, I try to soak up the culture, whether it's trying the local food or visiting a local festival.

When flying to St. John's, Newfoundland, for example, I try cod cheeks, listen to local live music, and hike up Signal Hill, where Marconi received the world's first wireless transatlantic signal.

Also great about my work is getting to know different people. In cruise, you're monitoring flight progress, weather, fuel use, etc., but when all that's OK, you have a chance to talk to the co-pilot and flight attendants. If you love people and love travel, this is an amazing job.

Based in Toronto, Canada, Kristin works as a captain on the B737 for WestJet Airlines

What training did you have?

I obtained my PPL in 1997, got my commercial IFR in flight college in 1998, and in 2001 I qualified for ATPL. My first job was flying for Perimeter Aviation, which I did from 1999 until 2003. Since 2004 I've been flying for WestJet on the B737, first as First Officer and then as Captain. Every six months, we receive recurrent training.

In my flight training and first job there weren't many other females, so I felt quite isolated. That's why in 2002 I launched a Chapter of Women in Aviation International (WAI). We need more women in aviation. It's been great to connect them and for me, the mentorships that come out of it are very valuable. As my career progressed, I got to mentor other women starting out on theirs.

What's been your favourite flight?

A red-eye flight in the winter of 2013, from Edmonton, Alberta, to Halifax, Nova Scotia. Normally, the red-eye flights aren't desirable, but this time we saw the most amazing display of Northern Lights. They moved across the sky, green, purple, and even some red: it was mesmerising to watch.

Since we were on a very Northern Route and there wasn't much traffic, we felt such a sense of peace and quietness. It was a once-in-a-lifetime experience.

And your favourite airfield?

Palm Springs, California. Partly because of its challenging approach – it's on the Special Pilot in Command Qualification Airport List because of the mountainous terrain – and you really have to use your pilot skills.

Also because of the beautiful desert landscape and the open-air terminal building in art deco style. Palm Springs Airport has a lovely Californian vibe.

Do you get to fly much outside of work?

No, I don't. Between my job, my family and my various volunteer jobs, there isn't much time left to go flying.

What's your most valuable career advice?

Don't be in such a rush to get to your final career destination that you miss out on all the experiences that are right in front of you. Sometimes people get so focused on their long-term goals that they forget there are opportunities for learning and growth at every step of the way.

FLYING CV

Passionate about getting more women into aviation, in 2002 Captain Kristin Long launched the Northern Spirit Chapter of Women in Aviation International.

STARTED CURRENT JOB	January 2004
NOW FLYING	B737
FAVOURITE AIRCRAFT	B747. 'It is such an iconic aircraft with a feeling of nostalgia for the glamourous days of air travel'
HOURS AT JOB START	4,370 (of which 2,700 PIC)
HOURS NOW	More than 15,000

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UNUSUAL ATTITUDE

With Dave Hirschman

COLUMN

When aviation regulations heighten risk

The idea behind aviation regulations is that they are meant to enhance safety – but sometimes they do the opposite…

8 May 2022

Aviation regulations are meant to enhance safety – but sometimes they do the opposite. A recent flight to Elkhart, Indiana, provides an example. It was a dreary, rainy day with a 700ft ceiling and east wind at 10kt gusting to 17. I was in the right seat of a Cessna Citation checking out a highly experienced corporate pilot who was new to this aeroplane type.

We were aware before we started the trip that a Notam had been issued for construction on Runway 9 at Elkhart and that it might not be available.

The other pilot called the tower controller at Elkhart and was told that construction had been cancelled for the day due to rain and Runway 9 would be clear of people and equipment at our scheduled arrival time.

Our flight was uneventful until we got within 50 miles, and the automated weather at Elkhart (KEKM) confirmed Runway 9 at 5,500ft was our best choice. I checked in with South Bend Approach and asked for an RNAV approach (LNAV plus V) to Runway 9 – and that's when things started to go awry.

The approach controller said that approach was unavailable because the lights on Runway 9 were out due to construction and the airport was operating under instrument flight rules.

I let him know that we'd spoken with the tower controller and had been assured that Runway 9 was available, but the approach controller was unmoved.

“I can’t clear you for an approach in IFR conditions knowing that the runway lights are out of service,” he said. “I can clear you for an RNAV approach to Runway 36.”

I told him we could make the approach and landing on Runway 9 ‘at our own risk’, but those sometimes magical words were rejected out of hand.

“We didn’t like the idea of declaring an emergency because there simply wasn’t one. Doing so, and forcing ATC’s hand, felt like an abuse of a pilot’s emergency authority”

Runway 36 – the one being offered – was 4,001ft long, wet, and cursed by a direct crosswind. A 4,001ft runway is usually more than enough for a Citation M2, but today it was soaked, and cursed with a gusty crosswind.

I entered the landing data for Runway 36 into the aeroplane’s flight management system and it let us know the aeroplane would require 3,500ft to touch down and stop. That meant we’d have to touch down no more than 500ft from the runway threshold and brake aggressively to keep it on the pavement – and that assumed this new-to-the-citation pilot’s technique was flawless, and that the aeroplane’s anti-skid braking system worked perfectly.

The other pilot and I discussed our options and none filled us with joy:

1. We could attempt a short-field landing on R36 and go around if the aircraft didn’t touch down before the 500ft runway mark
2. We could make an approach to R36 and then circle to land on R9
3. We could declare an emergency and use that authority to fly an approach to R9
4. Or we could divert to South Bend, Indiana, about 32 road miles away.

I didn’t like option one. This pilot was new to the aeroplane, and this was the strongest crosswind he’d encountered during his brief experience with it. A short-field landing on Runway 36 was out.

The other pilot didn’t like option two. A circling approach with a low ceiling and moderate rain at an unfamiliar airport in a heavily loaded aeroplane seemed a lot to ask. Lots of aviation accidents have happened during circling approaches, and the pilot had never performed one in this aircraft. The circling approach was out.

Neither of us liked the idea of declaring an emergency because there simply wasn't one. Doing so, and forcing ATC's hand, felt like an abuse of a pilot's emergency authority. We simply wouldn't do it.

We knew our passengers wouldn't enjoy diverting. They had just purchased this Citation, and a big part of the multimillion-dollar jet's appeal was that it enabled them to fly directly to their destinations and avoid big airports. Now, on the first trip in their jet, we were about to drop them off at a busy, airline-served airport at least a half-hour's drive from the place their hosts were waiting to pick them up.

But there seemed to be no other choice. I was just starting to gather the airport information for South Bend when ATC threw us a lifeline.

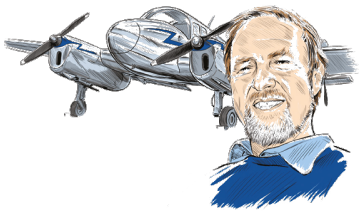
A new weather report at Elkhart said the clouds were now scattered at 700ft agl, so an RNAV approach to Runway 9 was back on the table.

We quickly accepted and were cleared for the RNAV approach to Runway 9 and the Garmin G3000 avionics suite guided us to a straight-in, 10-mile final to the big runway. It was just what we'd hoped for all along.

Aviation regulations are made with safety in mind, and the rationale for requiring runway lights in IFR conditions is easy to understand.
I'm sure it was written with the purest intentions. But even this benign rule had the unintended consequence of increasing risk when combined with the circumstances we were dealt that day in Indiana.

What kind of tortured logic concludes that a circling approach in rain and reduced visibility is OK, but not a straight-in approach to the same runway? How does anyone reach the absurd conclusion that a crosswind landing on a wet, narrow, and barely-long-enough runway is acceptable… but a long, wide runway aligned with the wind is out of bounds?

Pilots and controllers should get a 'common sense waiver' that they can activate whenever aviation regulations heighten the risk they were meant to reduce.
Where do we sign up?



FULL THROTTLE

With Mark Hales

OPINION

Aviational influence...

Aviation aerodynamics and sticking cars to the ground

31 May 2022

This is a magazine concerned with flying in general and light aeroplanes in particular, but the principles which govern both now manage the passage of air over most things that move by their own power.

The flush glass, which is essential in a modern car, is a drag reducer in search of greater fuel economy. Same for the wing on a lorry's cab which directs the air up and over the box. Look closer at the trailer and you might spot the rounded and raised edges which direct air out and away from the flanks to reduce skin friction.

When you cover many thousands of miles, these things become important for the bottom line, as well as the environment.

It's also a tiresome fact that the modern motorsport, which is still as close to my heart as anything that flies, is now more about how the car moves through the air – and more important, sticks to the ground – than anything to do with how the tyres grip the road.

I still have a foot in both camps, so to speak, but I was trying to forge a career on four wheels about the time aerodynamics really began to influence how race cars were built, and equally significant, how they were driven.

I remember one young buck politely pointing out that I was slowing the car too much on the brakes and I had to get off the pedal and let the aero do the work. All very well, except that the car I was driving had already tried to spit me off while travelling beyond three figures in fifth gear. The young man's advice was to leave it in sixth and not disturb the car's aerodynamic balance...

“Aerodynamics really began to influence how race cars were built, and equally significant, how they were driven”

How this sort of thing all came about is an interesting footnote. In 1966, American racer and pioneer race car builder Jim Hall installed a huge barn-door wing on the tail of his Chaparral World Championship sports car, mounted directly to the suspension uprights rather than the body.

The wing was, in aircraft terms, upside down, so it produced downforce rather than lift.

Such things are familiar now, even to those who have no interest in either cars or aircraft, but in the mid-1960s, we didn’t have the internet and motorsport was as parochial as everything else, so Hall’s genius apparently went unnoticed in the Formula One firmament.

Folklore says that around the same time, Colin Chapman, boss of Team Lotus Grand Prix, spotted a homebuilt single-seater in one of the support races for Australia’s Tasman series, sporting a section of the rotor blade from a Hughes helicopter mounted on stilts above the car’s rear axle.

The blade was up there in clean air like Hall’s Chaparral wing, free from the turbulence created by the wheels and the rest of the car. Something similar duly made its first appearance in Formula One on Graham Hill’s Lotus 49 at the 1968 Monaco race.

The stilts proved as fragile as they looked, and although the rest of the constructors swiftly followed suit, wings on stilts were banned the following year, but the further application of aerodynamics was very much a genie which Messrs Hall and Chapman had released from the bottle.

Wings in some form became an essential feature at both ends of all top-level race cars, but in 1977, Chapman’s Lotus 78 appeared, sporting a pair of ground effect sidepods.

The world of motorsport would never be the same, again… Ground effect, as all pilots know, is the sometimes annoying, sometimes welcome, cushion of air which balloons below your Cherokee’s wings, and which makes it float along the runway instead of settling on like you intended.

In the Lotus 78, the effect was harnessed by a wing section in the sidepod, creating a low-pressure area that effectively sucked the car to the ground.

How this was discovered is the subject of many official histories, but the unofficial one that I prefer, comes verbatim from aerodynamicist Val Dare-Bryan – later to invent the aforementioned truck top and trailer wings.

Val was working on a method to stop racing hydroplanes flipping when the slipstream caught the bridge between the hulls and he came up with a wing section that would reduce the pressure between the bridge and the water.

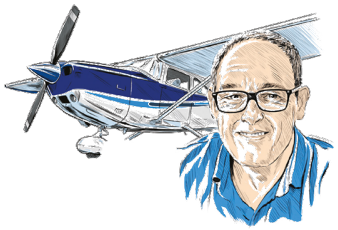
He apparently mentioned his findings to fellow aero man Peter Wright, then working at Lotus, and the rest as they say, is history. Mario Andretti took next year's fully developed ground-effect Lotus 79 imperiously to the 1978 world title.

Jim Hall wasn't a pilot, which somehow makes his inspiration all the more remarkable, but Chapman was a keen flyer – piloting his JPS liveried Cessna 414 and Piper Navajo to and from all the European races.

After his untimely death, Lotus the company, went on to develop several aircraft projects that its founder had started – notably the Stargazer Canard Microlight, initially developed with Burt Rutan, and the modular two and four-cylinder four stroke aero engines which could so easily have done what Rotax eventually accomplished in the early 1990s.

Both projects foundered for commercial rather than technical reasons, and the engines – which drove the propeller via the 2:1 reduction for the camshaft – are on display in the Lotus technical museum next to the factory, built on the former American WWII Hethel airfield.

The same place from which Colin Chapman flew his Navajo, whatever the weather…



SQUAWKS

With Ian Seager

OPINION

It would never happen to me!

Don't be tempted to rely on the 'well that would never happen to me' school of thought...

29 May 2022

Pilots all do a thing. Some of us do it very privately, some of us do it loudly, and some even do it on YouTube, but we all do it. We all spend time speculating about the cause of an accident, often a long time before we have all, or perhaps even any of the facts.

Speculating, or running through some likely scenarios helps us reflect on our own decision making, our own skill sets, our own mitigations. Rather than the hypocritical tutting we often hear, I generally think it's a good thing. There's also a trap, and it's one that we have all fallen into once or twice.

That trap is allowing the 'well that would never happen to me' line run through your mind without ruthlessly chasing it out, giving yourself a good talking to, and re-establishing the indisputable fact that every single one of us is capable of making the most basic of mistakes if circumstances conspire against us.

I recently gave myself an unintentional practical lesson in this very subject. I'd been having some electrical problems with the C182, which manifested themselves with a low voltage warning. While the electrical system was putting out some amps, it wasn't producing enough of them to run everything without discharging the battery.

The flight time between base and maintenance is about 15 minutes, so after having diagnosed the likely culprit as being a duff alternator, I planned to fly back to base (using a jump start if necessary) where I'd recharge the battery and return to maintenance once a new (outrageously expensive) alternator had been delivered.

As luck would have it, the weather for the flight back was largely clear, there

were some isolated heavy showers about, as well as a strong gusting wind that was, of course, across the runway but nothing too difficult.

Before departing I made sure that all of the unnecessary electronics were off, leaving myself with the GTN750 (comm 1), the two G5s (which both have a four-hour battery) and the transponder. I pulled the CB for the autopilot to disable Garmin's ESP… and took off.

The flight itself was a bit of a physical workout but 10 minutes after taking off my GTN750 started behaving as if it were my grandparent's old TV, so I turned it off and turned on the other radio (which given the audio panel is basically software controlled via the GTN now became comm 1).

Then the G5 started flashing warnings about the ARINC429 power supply failing. Oh well, although a shower had gone through recently, the way back to base was clear and it was now in sight.

The gusty wind favoured Runway 10, which as luck would have it, has a little bit of a (possibly now wet) grass downslope. It also has a road and fence just before the threshold along with an understandable request not to fly a too low, too shallow approach.

"The flight was a bit of a physical workout, but 10 minutes after taking off my GTN750 started behaving like grandparent's old TV"

And so to the next decision. With a backdrop of failing instruments, gusty turbulent conditions and a possibly wet and slightly downhill runway, what was I going to do about flaps? Did I have enough power left to run them, and would I have enough power to raise them again should I need to go-around?

Leaving them up would mean a faster, shallower approach – and there'd be an extra few knots, thanks to adding half the gust factor too. Using flaps would likely use much of my battery's remaining power with no way of knowing if there would be enough left to bring the flaps back up, or if I'd be stuck with maybe full flap for another circuit or diversion.

In the end I split the difference, used 20° of flap, made an approach that wasn't too fast or too shallow, and had just enough electrical power remaining to bring the flaps up after landing.

Shutting down outside the hangar I took a few minutes to think about what was effectively just a short local flight. None of the elements were super challenging, but all of them needed thinking about, and all of them took a little bit of capacity.

It was not difficult to imagine how interesting things could become with a couple of additional problems or distractions.

Accidents are rarely caused by single isolated events, and while I'm sure none of us would ever make a silly mistake in isolation (or from the comfort of our keyboards), we're perhaps all safer once we accept that there's no place for the 'well that would never happen to me' school of thought.

SPECIAL FEATURE

Welcome to the strip club...

What's all the fuss about farm strip flying? Dave Calderwood finds out on crammer course with strip instructor Matt Coles

Words Dave Calderwood. Photos Ed Hicks and others | *1 June 2022*

Sometimes, strip flying is the only thing the other guys on *FLYER* talk about. "There's a new strip at..." "Easier when the wind's from the west" and, of course, "Strip's too wet and boggy to get out of." Blimey, what's up with these guys? What's wrong with a nice hard runway at a proper airfield?

Clearly, I needed to go strip flying but with someone safe, someone who could point out the essentials, and with access to a good strip aircraft. Matt Coles, that's who. When he's not flying as a commercial pilot, Matt runs Farm Strip Flying, instructing other pilots into the world of strip flying.

And as an added push, the CAA has just issued an updated and revised Safety

Sense leaflet, SS12, on Strip Flying. The leaflet's intro says, "The use of airstrips can bring new destinations and challenges to your flying. However, many require special planning and consideration for their use.

"Most strips will have 'threats', such as obstacles or poor surfaces, and are less tolerant of 'errors' such as inaccurate flying speeds. Each one needs identifying, considering and mitigating as appropriate."

So, when I met Matt at his base strip, Berrow, close to the Malvern Hills, the plan was to work through the chapters in the Safety Sense leaflet, taking in a couple of other strips to illustrate various points.

"I want to encourage people to go and fly into strips," said Matt. "I think it's absolutely brilliant, you'll become a much better pilot, because you have to operate to a higher standard, you'll be exposed to lots of different challenges. That will increase your flying ability, but it's not without risk."

First, we walked the Berrow strip which, at first glance, looked like a nice, straightforward grass runway. However, potential hazards weren't far away.

Matt asked, "So what can you see here that you wouldn't see at a regular airport?"

Matt's Piper L4 Grasshopper that he uses for instructing on farm strip flying

Is this the very definition of farm strip flying? PPR and a briefing essential

Ask the operator about the state of the strip. If it's been wet, it could be soggy

Make use of every yard of the available runway!

Me: “Well, the wires.” Yes, a row of electricity pylons marched across the field to one side of the runway.

Matt: “Yes, we’ve got wires. The geography of the ground as well – it’s not flat. I would say, on the excitement scale, it’s maybe a six out of 10. So it’s not completely crazy, we’re not landing on the side of a mountain. But equally, it’s not totally benign, we’ve got an undulating strip. There’s a dip in the middle, as you can see, we’ve got trees around us as well.

“Now, it’s not just the fact that there is an obstacle but how is that going to affect the operation? If we have a southerly wind today, how is that wall of trees going to change the effect of wind on the approach?

“For example, we could be on an approach, which is nice and clear, up until about 200ft with 30° of crab, then all of a sudden those trees mask the effect of the wind. It’s things like that that can catch people out.

“Next is the surface of the runway. This is actually quite nice as it gets mown every week. It’s fairly smooth. But it’s not just the smoothness of it. It’s the softness of it. When people come to do sort of farm strip flying with me, we look at different techniques according to what surface you’re operating off.

“An obvious question is, how are you going to know what the runway surface is like if you’ve never been there before?”

“If you’re flying a nosewheel aeroplane, like a PA28 or Cessna, the engine thrust line is angled down slightly and that has the effect of compressing the nose, and

can dig in a soft surface and increase your take-off distance."

An obvious question is, how are you going to know what the runway surface is like if you've never been there before?

"One of my biggest tips for farm strip flying is to get on the phone before you go anywhere. Number one, it's a courtesy to lots of these privately owned strips. Quite often people live next to them as well. So it's really important to get PPR.

"Also, the landowner or strip operator will have a far better idea about what their strips are like. The owner will be able to say 'watch out for that village on three-mile final because there's a really grumpy person who lives in that house so make sure you fly an offset approach'. Or, 'be careful because it's slightly soft at the moment because we've had a lot of rain'... or 'the pylons are to the right of the runway'.

"Be honest with them about your experience. Because if you say, 'I'd like to fly in with my Cessna 182 with four people and full tanks', the chap might say, 'I don't think that's a good idea. You might get in, but you might not get out'.

"From the air, this strip just looks like a lovely straight 600 metre strip. You can't tell, for example, that slope there, you get a really good idea of what's around by coming to visit it first. The Safety Sense leaflet says go to visit on foot first and it's a really good piece of advice.

Landing at Berrow where there's a wall of trees at the end of the runway... and a hidden road crossing left to right

Dave, in the back, looking happy and a bit apprehensive all at once...

“It’s so tempting on a lovely summer’s day, to say ‘let’s go and visit that farm strip’. And, to be fair, some of them, you might be able to do that and be perfectly fine. But your local flying club will have an instructor who’s landed on grass before and they can just take you to go and do a couple of circuits on a grass runway.”

This seemed a good moment to admit that I learned to fly at RAF Henlow which is all grass and the surfaces were good but, “It was finding the airfield that was hard.”

Matt: “That’s a really good point. Because, particularly in the summer, when everything’s green, they do merge into one and you can find yourself lining up with the wrong field.”

There were two more hazards which I hadn’t spotted up to this point. First was the wall of trees at the end of the strip.

Matt: “If you’re used to flying out of a nice long runway with clear departure and no obstacles, all of a sudden you’re flying towards a wall of trees that might lead you to a premature rotation. One of the fun things is getting people to fly towards that with reference to their airspeed, not fixating on the obstacles.

“Farm strip flying is brilliant because it forces you to operate to a higher standard to learn a new set of skills and use techniques that actually expand your capacity.”

Just then, a completely unexpected hazard appeared. A van just drove across the runway, from one side to the other. I spluttered to Matt, “Did you see that van?”

Extra threats

Matt: “Oh, yes, there’s a road crossing about a quarter of the way from the end. It’s a good example of what you would never see at a licenced airfield. You need to have an awareness of all these extra factors, all these extra threats, if you like. The CAA loves ‘threat and error management’ – what extra things are going to affect our operation. And that’s kind of what the farm strip course is all about.

“Supposedly, you’re on your take-off roll and you’ve reached this point. It’s probably about the earliest you could see that van. What would you do? One of the things I find people lack is a standard brief at the start of the day. ‘This is what I’m going to do at this point, if I’m not airborne’. ‘This is what I’m going to do if the engine quits at this point on departure’. That’s not really farm strip specific, although it becomes a lot more relevant.

“I flew out of here yesterday and there were pheasants all over the runway. What

am I going to do if all those pheasants suddenly fly up at me, and it causes me to have an engine failure?

“It’s about setting bottom lines: this is the last point at which I’m going to make this decision. For example, on a grass runway like this, you want to make sure that you’ve got the right airspeed by a certain point, or you reject the take-off.

“Going back to the road, I’m at this point. I’m doing maybe 40kt. I would probably, at this point, abort the take-off.

“These are not dedicated airfields designed with pilot safety in mind, they are a runway and somewhere for us to land. They might have lots of different factors, obstacles, different runway surface conditions, funny little characteristics, like roads going across it. They are riskier environments. And that’s why people should seek training.”

That blinkin' tree right on the threshold of this strip...

So, where is the strip in this pic? You need to be sure you're landing in the right field

Back to Berrow and there's sporting crosswind on approach

This is all looking pretty good

Part of the training is checking take-off and landing performance, again with the

help of the CAA's Safety Sense leaflet. This has a matrix of factors influencing take-off and landing performance, such as weight, aerodrome elevation, temperature, dry and wet grass, slope, and soft ground or snow. You multiply the factor(s) by the book figure in the Pilot's Operating Handbook to get the distance you're likely to need.

For example, wet grass is a whopping 35% increase in landing distance. In the dry, the book figure might be 400 metres so that's 400 x 1.35 = 540 metres. That's getting close to the overall length of the Berrow strip and you only need a little bit of float, through being, say, 5kt too fast on approach, and there's your safety margin gone.

"I recommend doing an overhead join and, subject to noise requirements, to fly an approach to landing, particularly if you've not been in there before, expecting to do a go-around."

Getting to grips with strips...

Our walk down the strip over, we headed back to Matt's aircraft, a 1943 Piper L4 Grasshopper – basically a military version of the J-3 Cub. The plan: go fly some strips.

However, there is an immediate issue. As if getting my 6ft 2in into the back seat of the L4 wasn't hard enough, my size 12 trainers were struggling to operate the rudder pedals either side of the front seat. They were just too big and wide for the available space. So Matt would have to steer and balance the aircraft since he insisted I make the take-off and fly the aircraft as much as possible.

Anyway, take-off went OK and the wall of trees at the end of the grass strip wasn't an issue – dry grass, firm soil, middling headwind – and we were off over the lush countryside and stunningly gorgeous Malvern Hills. If you've never flown over this part of England, I urge you to do so.

The first strip Matt had in mind was probably a seven on the scale. Reasonably flat, but with trees on the approach not far from the threshold. And I admit to being fixated by one tree in particular.

It was right in line with the strip, and I found that was all I could concentrate on, almost to the point of ignoring the rest of the strip. As it turned out, although close, there was ample runway length to roll out without needing the brakes.

Take-off was back the same way, aiming for the trees until airborne, then a gentle turn to the left to avoid them.

During the short flight to the next strip, which Matt casually admitted was one

of the more challenging ones, we talked about always having a plan. What to do if the engine failed when making a turn to final at low level, for instance. Or, if the picture out of the screen didn't look great.

Sometimes, you've just got to know where the strip is...

Be aware of what hazards there could be. In this case, rocks marking the runway, and a wall and small hill on approach

Turned out there was a good reason for this discussion because strip three was on an upwards slope out of a valley. The approach had to be at 90° to the strip, with the turn to short final made at about 20ft around a dead tree.

Straighten up after the turn and the strip, which is a euphemism for 'back lawn', was right there, with just time to start the flare.

Of course, Matt was handling the aircraft at this point, and we didn't land, just treated it as a go-around. I was quite thankful for that, because if we had landed that would have meant taking off downhill towards the dead tree and rising ground.

What was the plan should something go wrong on an approach or take-off from a strip like this? Well, in my head, it would have been to look for the least worst place to put the aircraft down… and brace.

Recently mown grass helps for a smooth take-off

Terrifying strip over, we headed back to Berrow which looked lovely, inviting and not at all difficult. However, we had to crab about 30° on approach because of a crosswind, and, as Matt had suggested earlier during our walk up the strip, as we dipped below the treeline, the crosswind fell away needing adjustment.

The undulating surface was also apparent on roll-out so what had looked flat as a cricket pitch from the air, suddenly felt very different.

So what did I learn in this concentrated session? Ring ahead for permission and a briefing. Don't fixate on one thing, i.e. the tree on approach. Be conscious of air speed at all times. Be ready for undulating surfaces.

Have an exit plan for all circumstances, even if it's 'least worst crash'. Fly with an instructor who has strip experience. And stick to strips within your comfort and experience zone. That third strip? Nope, that's not for me.

If you fancy flying with Matt, Farm Strip Flying has a website **here**.

Matt offers Tailwheel Conversions and SEP Revalidation as well as a Farm Strip Flying course.

Want to learn more about strips?

CAA Safety Sense leaflet Strip Sense (SS12) can be downloaded free **here**
Strip Flying is an active thread on the *FLYER* Forum. Find the discussion **here**.

Does flying get much better than this?

FLIGHT TEST

Putting the Super in STOL

If you've ever dreamed of keeping your own aircraft at home and flying from your back garden, but don't own a huge country estate, then this STOL supremo kitplane could be for you...

Words Ian Seager Photography Ed Hicks | *30 May 2022*

What do you get when you create an aircraft with wings designed to maximise lift, a massive energy-absorbing undercarriage, and a max weight of 600kg? The answer is the Just Aircraft SuperSTOL. It's an aircraft which, in the right hands, wins competitions with take-offs of around 77ft and landings that are shorter than the length of a Cessna C172.
The SuperSTOL is a machine which I don't mind admitting that, before flying it, made me a little nervous, thanks to the edges of its flight envelope being steep angles and slow speeds a fair way beyond the edges of my aviation comfort zone!

Just Aircraft, the South Carolina-based company behind the SuperSTOL,

designed it to sit in the USA's Light Sport Aircraft (LSA) category, so that means a maximum weight of 1,320lb (600kg) a clean stall speed of 45kt or less and a maximum speed of 120kt. The SuperSTOL is Just's development of the Highlander, which followed the Escapade, an aircraft developed in conjunction with Escapade UK. The Escapade's DNA can be found in the Sherwood Scout, and that's now built by The Light Aircraft Company in Norfolk.

In the US, the SuperSTOL can be supplied as a ready-to-fly LSA, or you can buy a kit and build it yourself. In the UK, only the self-build option is available through Bob Pooler, director of Avalanche Aviation, Just's UK dealer, and it was his aeroplane, G-SSTL, which we flew from its base at Sleap Airfield. (*Editor's note: Since this was first published, Avalanche Aviation has ended its UK agency*)

The aeroplane that turns gardens into runways...

> *"It's an aircraft which, in the right hands wins competitions with take-offs of around 77 feet and landings that are shorter than the length of a C172"*

Big shoes

Even though it's a relatively small, two-seat LSA, the SuperSTOL is pretty imposing, mainly thanks to its tall undercarriage and huge tyres. G-SSTL has a pair of 29in Airstreak Bushwheel tyres fitted to its diminutive-looking Matco wheels, and although they definitely add to the look of the aeroplane, they also bring some practical benefits.

In a traditional GA aircraft you have three elements, namely the wheel, the tyre and the inner tube. The tyre's bead is seated on the wheel's rim, and is inflated via a valve which protrudes through the wheel.

The Bushwheel is tubeless so there are just two parts, the wheel and the tyre. Rather than the valve pushing through the wheel, it's moulded into the tyre's sidewall. With this set-up, any movement of the tyre on the wheel's rim, which is more likely at low tyre pressures, wouldn't see the valve ripped out, so you won't get stranded.

Typically, a bush tyre will run pressure of 6-12 psi, so they're super-soft (think of a kid's Space Hopper), play an essential role in the suspension and easily roll over rocks, stumps, holes and, rather unhelpfully, chocks. I'm told that they also make waterskiing in an aircraft much easier.

Of course, you don't get something for nothing, and there are a couple of downsides to having such big shoes. The first is cost, as while a couple of 'normal' 21in tyres for the SuperSTOL might set you back $300 a pair, the 29in variety are closer to $3,000, and as the slick rubber compound is very soft, they wear out pretty quickly when used on hard runways.

The wheels and tyres sit at the end of some impressive-looking, long-travel 400psi gas struts, which are similar in layout to those on the Pilatus PC-6 Porter. Watch some online videos of the SuperSTOL in action and you'll see that one landing technique is to drag the aeroplane in and then just cut the power so that it drops to the ground from a few feet, using the gas struts and tyres to absorb all of the energy, without being handed it all back in the form of an embarrassing bounce or three.

The gas-strut gear and big tyres make simple work of rough ground

Even the tailwheel has 350psi gas-strut suspension

Bob Pooler, SuperSTOL wrangler...

Plenty of lift

If the undercarriage and tyres are there to soak up the bumps, it's obviously the wings which take care of the heavy lifting, and they're some impressive devices.

Running all the way along the leading-edge are free-moving slats, which float in and out under aerodynamic load – there are two per side and they move forward and outboard when their time comes. If you're familiar with the slats fitted to the legendary Helio Courier, these will be recognisable. Enormous Fowler flaps cover about two-thirds of the wingspan.

On G-SSTL the ailerons are supplemented by optional spoilers, which are said to reduce adverse yaw and aid roll control in gusty conditions. They can be found on top of the wing, ahead of the ailerons and look a little like glider airbrakes, but obviously operate independently, with the ailerons.

If those wings aren't complex enough for you, I should mention that they can be folded back for road transport or storage, without having to disconnect any controls. And should you be wondering about what amount of space the SuperSTOL needs when its wings are folded, the answer is something like 8ft 6in wide by just over 20ft in length.

The fuselage looks like it's a bit short-coupled, and perhaps thanks to that and the ridiculously slow speeds at which you can fly, the tailplane and rudder are proportionally large control surfaces.
This particular aircraft is powered by a 100hp Rotax 912 ULS, driving a two-bladed, fixed-pitch Catto prop. The cockpit is spacious, with adjustable seats and a large, no, make that a huge, baggage area to the rear, which is good for 70lb-worth of whatever. The doors are top-hinged and the instrument panel big enough for anything you'd want to install for a bit of VFR bush-flying fun.

Getting in is simple, or at least it is if you aren't me, but like most things I imagine that it gets easier with practice, which I'm basing on the fact that Bob Pooler hopped in with the elegance of a ballet dancer. Inside, you'll find comfortable and adjustable seats, a couple of sticks, a central vernier throttle,

the obligatory Rotax choke control, and rudder pedals with toe brakes. Between the seats, there's a very long flap handle and a basic but functional trim lever, and forward of that there's a tailwheel lock and an Andair fuel valve.

The panel in 'SSTL is very simple – there are two iPads, the one on the right running SkyDemon and the one on the left acting as a PFD, plus a backup altimeter and ASI, an engine monitor and a radio and transponder.

The visibility upwards is pretty spectacular, although it does make for a hot cockpit on a sunny day

Spacious, simple and everything you need in a 'fly me for pure fun' machine

Super-smooth, full-span leading-edge slats

There's a cavernous baggage area that's good for up to 70lb

Bob very diplomatically pointed out that the STOL characteristics would be perhaps a little subdued, given that we'd be operating on a hot day at mauw. Before we flew together, he offered to demonstrate the aircraft solo, so that I could see what it was capable of at lighter weights. That suited me just fine, so Ed and I watched as Bob applied full-power, lifted the tail then raised the nose to what looked like a climb angle you might only match with a rocket, and seemed guaranteed to be followed by a stall and spin.

Happily, it wasn't and the demonstration was repeated a few times so that Ed could take photos, with each departure followed by a less dramatic but perhaps even more impressive landing.

Fly the SuperSTOL with power on the back of the drag curve and it advances very slowly indeed, and with so little energy once the wheels are down that it's stopped almost instantly, and this was on a day with very little wind!

Demos done, it was my turn to fly, and although I'm not particularly short I found the view ahead to be a bit limited, thanks to the deck angle when taxying. There are some slightly larger seat cushions in the pipeline and the cabin has plenty of headroom going spare to accommodate them. Until then, it's a case of weaving along and, as the castering tailwheel isn't steerable (it's that big rudder and a bit of differential brake instead), being careful not to scrub off too much valuable bush tyre rubber on hard surfaces which, luckily, I wasn't.

Take-off technique

There are various take-off techniques, with extreme versions which call for simultaneous application of flap and backward stick – how Bob had been flying – or even a levitation with full flap applied from the outset. However, none of them make sense for a first take-off on type, so we opted for the fairly standard technique of one stage of flap, stick-forward to raise the tail and then back to break ground at the appropriate time.

I didn't raise the tail enough, and I allowed us to accelerate a bit more than was strictly necessary, but even with my very cautious flying we were still off the ground much sooner than I'd imagined. I'd like to say we climbed away at a

constant 500fpm but we didn't, partly because there wasn't quite enough rearward trim available, but mainly due to the fact that I was struggling to calibrate the pitch angle and airspeed required with the mental picture which had been burnt into my brain from many hours flying 'normal' aircraft.

We eventually had enough height to look at the full-flap stall. Vfe, the max flap extension speed, is 75mph, and we were at about 70mph when I reached for it. The aerodynamic resistance on those huge flaps felt quite high, and although I could've hauled on the long flap lever, I was worried that I might bend it. The easy answer was to slow down, and the best way to do that is to raise the nose, again to an angle which takes some getting used to.

With flaps deployed and speed decreasing, there was suddenly a whoosh and tremor through the airframe, which was the leading-edge slats deploying – a pretty obvious sign that things are getting slow.

Eventually, the stick was full-back, the ASI reading 30-35mph and we were stalled. The wings were level the nose was bobbing up and down, so gently and serenely that you could almost forget you've got the mother of all descent rates going on. No matter how tough the undercarriage is, you don't want to be hitting the ground at that rate so then it's stick-forward and apply power to turn the descent into a climb.

In the circuit, speed control was straightforward, with a bit of care needed not to get too slow – the back of the drag curve may be the way to win competitions, but it's bad form to be doing it on a mile-and-a-half final at 500ft or so.

I came over the 'real' hedge at about 65mph, slowed further, thought I was getting a little too much so and added a bit of power, which of course only served to move the touchdown point further into the strip, and there was plenty of it left.

Tyres and gas struts make for soft landings, even if you do arrive with a little, erm, vigour. It takes 40kg of force to lift the tail, so the SuperSTOL doesn't feel like it's trying to stand on its nose with every dab of the brakes

Visibility from the cockpit is good, thanks to fully glazed doors

The 29-inch Airstreak Bushwheel tyres are about ten times the price of 'mere' 21-inchers, but they can run really low pressures (6psi) for soft or very (very) wet runways

Count the high-lift aerodynamic features – spoilers ahead of the ailerons help with adverse yaw and roll response

Mental adjustment required

The SuperSTOL is an aeroplane which forces you to mentally adjust your flying paradigms and without doing so you'll be forever tugging a heavy flap lever, floating along the runway, bleeding excess energy, or failing to climb because Vx and Vy seem to want to put the nose way too far above the horizon.

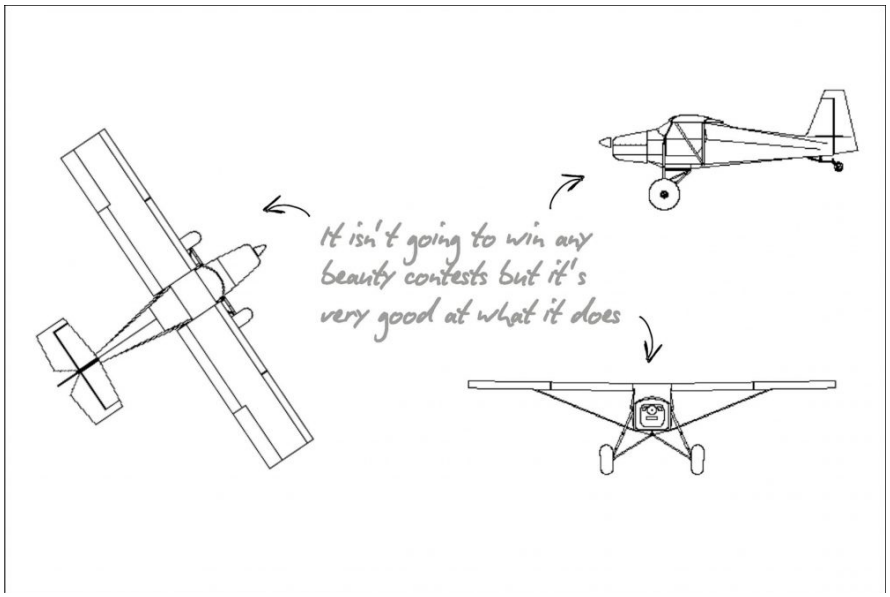
In competent hands, it starts flying before you'd expect, keeps doing so when most types would fall out of the sky and stops in distances which are measured in tens rather than hundreds of metres. In skilled and current hands, the SuperSTOL is capable of doing all of that, but even slower and even shorter.

The flipside of the STOL coin is the cruise performance. If you don't have too far to go, the 70kt relaxed cruise is just fine, but if you live on the south coast and dream of flying to the Orkneys at weekends, you probably won't want to be making that trip on a regular basis!

The bottom line is that this aeroplane is about fun, adventure and exploration. It'll open up hundreds of sites which just aren't practical with most types. Those who are good at making friends will likely find all sorts of off-piste possibilities, from fields to farm tracks, and if they can find themselves a garden big enough, there's a bit of aviation paradise just waiting for them...

Want to build one?

On the face of it, the SuperSTOL should be relatively easy to build. The fuselage arrives in one piece, with all welding done, and although you can buy the bits to build the wings yourself, you can also purchase 'Stage 3' versions, which arrive ready to cover, with the fabric and adhesive also being included in the kit. Although a kit is undoubtedly easier than building from plans, it does seem to demand a decent amount of time and effort. That said, having something which looks like an aeroplane from the moment when you take it out of the shipping crate must offer a significant psychological advantage.



Tech Spec

Performance

MAX SPEED (VNE)	104kt
CRUISE SPEED	87kt
STALL SPEED	(clean) 32kt (full flap) 28kt
TAKE-OFF DISTANCE	Next to nothing
LANDING DISTANCE	Even less
RATE OF CLIMB	1,000fpm
SERVICE CEILING	13,000ft
MAX RANGE	390nm
FUEL BURN	18 litres per hour
LOAD LIMITS	+4.4/-2 g

Weights & loadings

SEATS	2
MAX TAKE-OFF	600kg (1,320lb)
EMPTY	340kg (750lb)

PAYLOAD	265kg (570lb)
BAGGAGE	32kg (70lb)
FUEL CAPACITY	90 litres

Dimensions

WING AREA	9.17m (31ft 3in)
WING AREA	12.3sqm (147sq ft)
LENGTH	6.05m (19ft)
HEIGHT	2.55m (8ft 4in)
WIDTH (WINGS FOLDED)	2.4m (8ft 6in)

Spec

AIRFRAME	Steel tube-and-fabric fuselage, aluminium-and-fabric wing
ENGINE	Rotax 912 ULS
MAX POWER	100hp
PROPELLER	Two-blade, fixed-pitch, wood and composite, 2.08m Catto
AVIONICS	VFR to suit
UNDERCARRIAGE	Fixed, tailwheel

Manufacturer

Just Aircraft LLC, 170 Duck Pond Road, Walhalla, South Carolina, 29691, USA

www.justaircraft.com

Price

Airframe kit from $41,700

Big wheels, control surfaces and suspension equals a huge grin

LAA

Light Aircraft Association

GRASS ROOTS

Fly-In

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Popham Airfield
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www.laa.uk.com

FIRST SOLO

Natascha Wirth, Slowbirds

During Natascha Wirth's first solo, there was a huge thunderstorm looming in the distance...

Yayeri van Baarsen | *7 May 2022*

How did you get into aviation?

It was a childhood love story. My parents took me aeroplane watching at Bern Airport and already, by then, I was fascinated by the warbirds. However, instead of becoming a pilot, I studied chemistry and got a job in that field.

Four years later, thinking there must be more to life, I decided to get in the air. I became a flight attendant with Helvetic Airways, believing that at 27 I was too old for the cockpit. Turned out I wasn't, so I started flight lessons.

How did your flight training go?

Although I'd spent many hours in the cabin of the Fokker 100, I'd never flown in a

small aircraft. It was all new to me and I needed some time to feel ahead of the aeroplane. However, already on my first lesson I knew this was where I belonged.

The Cessnas and Pipers were more expensive, so I trained in an Aero AT-3, a small Polish two-seater. Learning about engines and airframe came easy because I was very interested in the technical part. Air law took longer – I wasn't interested in the legal side, I just wanted to fly!

Tell us about your first solo?

A few hours before, my instructor already said I was ready, but I told him I'd need more practice. He gave me that time, but eventually pushed me.

I think many women can relate, they're ready to solo, but don't feel confident. Sitting in the aircraft by myself, I needed a few minutes. I felt completely happy, yet at the same time had a lot of respect for the situation.

As soon as I was airborne, everything was forgotten. During the first circuit, it started raining.

Seeing a big black thunderstorm looming in the distance, I didn't feel comfortable and landed. "Rain is OK, it doesn't affect the aeroplane," my instructor convinced me, so I did another two circuits and all went well.

"For me, hands-on flying isn't just a passion, it's also a huge part of being a pilot"

What's Slowbirds all about?

Sharing our passion for warbirds. Slowbirds consists of Roland Ginggen, with whom I've flown formation in the Pilatus P-3 for five years, my partner Clemens Rüb, who joined us two years ago, and myself.

Together we have lots of fun in old aeroplanes like our Piper L-4. We all have the same love for the P-3 – there aren't many people who share that passion. It's our dream to add to the Slowbirds fleet and one day own a P-3 and a Bücker.

The Slowbirds Pilatus P3

Why warbirds?

Because of the technique. For me, hands-on flying isn't just a passion, it's also a huge part of being a pilot. With autopilot and the new avionics, you give away some of that passion. True, iPads make flight planning easier and I also use them, but overall, when it comes to electronic equipment in the cockpit: less is more.

I like my aeroplane to be as original as possible and that's exactly what warbirds are. You need to hold them, hear them, feel them, use all your senses – for me, that's the most fascinating part of flying.

How did you come to own the Piper L-4?

Clemens did his pilot licence in this aircraft back when he was 16. He flew it a lot and got attached to the aeroplane, which was later bought by his flight instructor.

Four years ago, after meeting him for the first time, his flight instructor said I could fly it as well. I was overwhelmed. It's such a special thing when someone lets you fly his pride and joy! We were overjoyed when we had the chance to buy it last year.

What aircraft would you have in your fantasy hangar?

Either a Curtiss P-40 or a Spitfire, great aeroplanes with an unbelievable history. Since I've never flown them myself, I'd have to try both before I can choose! I'm currently gaining experience in the T6 Harvard, which is incredible.

What do you love about flying most?

Having the possibility to handle a machine in three dimensions. This connection between machine and human is truly fantastic. I feel so privileged that I'm able to just get into an aircraft, turn on the engine and fly away.

More info here

NATASCHA WIRTH

Natascha shares a passion for warbirds, together with Clemens Rüb and Roland Ginggen.

WHEN	2 March 2012
WHERE	Bern Airport (Switzerland)
AIRCRAFT	Aero AT-3
HOURS AT SOLO	17hr 20min
HOURS NOW	Approx. 700

SPECIAL FEATURE

Don’t panic… Channel ahoy!

Just about to coast out across the Channel, the engine of Dave White’s Jodel started to vibrate…

Dave White | *28 May 2022*

It was one of those bemusing conversations you sometimes hear on VHF. Lille Information was dealing with a pilot who was insisting he absolutely was going to land on a runway that Lille was even more adamant didn’t exist.

I was chuckling to myself listening to this confused debate. while preparing in about five minutes to coast out at 4,500ft on my way home from a thoroughly enjoyable solo VFR trip to AERO Friedrichshafen. With 11h 15m in the air over seven legs and a little over 975 nautical miles in France and Germany, banishing memories of lockdown and seeing lots of old friends for the first time in two-and-a-half years. All in all, a most satisfying end to the trip.

Hangared in Le Treport

I was happy that all was checked and I was ready for the Channel crossing when, like flicking a switch, my teeth began to rattle in my head.

Had I flicked a switch, inadvertently?

Nope – both mags were ON, fuel pump ON, fuel's OK, mixture to fully RICH and carb heat to HOT. Nothing. Maybe it was a magneto – but it never rattles like this on a power check – so let's try switching those off one at a time. OFF… one… two… ON… and again for the other one.

Nope, no change.

Right, well, that English Channel ahead needs avoiding for a start. And I need to get on the ground smartish, in case whatever it is gets worse. Where's available?

A glance down to the SkyDemon tablet mounted just below my eyeline, and… oh look, right ahead of me, Eu Mers-Le Tréport just on the coast. OK, that's where I'm going. Adjust track and look out to find it. Best tell Lille I am diverting.

"Right, that English Channel ahead needs avoiding for a start. And I need to get on

the ground smartish…"

But they are still engaging with *M'sieu Confused*, who is still determined to go to his phantom runway. Wish they'd stop discussing this. I need to talk to Lille and tell them…

Ah, forget it – this is a daft long conversation – I need to catch attention. Wait for a pause in the chat and… "PAN-PAN, PAN-PAN, PAN-PAN Golf Alpha Yankee Lima Charlie has a rough running engine. I am diverting to Eu Mers, Lima Foxtrot Alpha Echo".

An immediate – and I mean immediate – response from Lille: "Roger Golf Lima Charlie. The airfield is in your 11 o'clock, 10 miles."

Fantastic! That is one switched-on cookie at the other end of this chat. I relax a bit (maybe), concentrate on planning an approach and finding the necessary airfield info I will need.

I also get a very short transmission on frequency from friends in an aircraft about 20 minutes ahead of me: "Check mags." Thanks Tim, appreciated – have done that.

Those hours spent familiarising with the amazing SkyDemon have paid off. Click on LFAE and select 'Route Direct'. Now I have a heading and a comforting magenta line to follow, just like a real airline pilot…

Another click on the airfield, and select the 'Information' option. Up comes the airfield plate so I have runway directions. Oh, and it's 900m paved, sweet, and a frequency. Ah, Air-to-Air in French only – OK, that's workable and… ah, whatever. I'm going there regardless.

"Those hours spent familiarising with the amazing SkyDemon paid off"

By now I have set up for a straight in approach but… wait, isn't that the downwind runway? A glance to check on SkyDemon (from the forecast info downloaded before flight) and from the wind arrow then, yes, it will be. But no problem, I have lots of height, so adjust to join on high downwind for the into-wind runway.

"Lille Information. Golf Lima Charlie has Eu Mers airfield in sight two miles.

Request frequency change to 123.500."

"Roger Lima Charlie. Call me when on the ground. Can you copy a telephone number?"

Can I? Nope, my brain's full. "Golf Lima Charlie negative. I'll find it later."

"Roger, frequency change approved. Bon chance."

Thanks, Lille!

Bringing speed back...

How's the height? Still good – looks like my aiming point is a third down the runway as all those instructors recommended. Bit high, do you think? Yes, a bit, so first stage of flap. Bring the speed back a bit more.

Call Final in execrable French, but hey, it's almost the same word. Yep, made the runway so full flap, and flare and... would you believe it? A lovely gentle landing. Obviously, there will be nobody around to see it, given that it was a good one.

Taxi off the runway onto the grass parking, try a call (squelch off) just in case Lille could hear me (no) and shut down. Phew.

Well, I was right. Not a soul around to see that landing. Oh, wait – somebody's coming out of the club house. In short order, after I explained the situation, I was in front of a very welcome, very strong and very black coffee. And I don't drink coffee.

"A lovely gentle landing. Obviously, there will be nobody around to see it, given that it was a good one"

A bit of faffing around on my phone trying to read the relevant parts of the French AIP (again, facilitated by the omniscient SkyDemon) to find the phone number for the Lille supervisor was rendered moot by an incoming call from them (who had my number from my VFR flight plan). They already had a message that I was down safely, relayed from my friends in the aircraft ahead of me, whom I had been able to contact by WhatsApp in mid-Channel!

Vibration damage to cowling…

Bad vibrations…

After I had taken the cowlings off and seen nothing immediately obvious, other than some clear vibration damage to the upper cowling, Manu at the aero club generously allowed the aircraft to be put safely into the back of a secure hangar. I was provided with contact details for an engineering organisation at Le Touquet (a little over an hour away by road), and then the club arranged a local hotel for me and even more kindly drove me there with a tentative plan to meet back at the airfield the next morning.

At the hotel – you won't tell my AME this, will you? – the first beer lasted about 20 seconds.

In the morning, after breakfast, I was all set for the 20 minute walk to the airfield but the hotel manager wouldn't hear of it, and gave me a lift. Frustratingly, when I got there it was deserted and locked up and it remained so all day, which meant I was unable to have a more relaxed look at the aircraft. I couldn't get the Le Touquet engineer on the phone, either.

I sat in the sunshine reading my Kindle and exchanging messages with friends – so many of whom offered help and their time in support. At 3 o'clock that afternoon Simon, whom I had last seen at dinner on the shores of the Bodensee two nights previously, dropped in to pick me up in his RV-6 and eventually

dropped me at home.

So, a quiet weekend placating my nervous wife – as well as pondering with friends about what the problem could be. Not magnetos, surely? They wouldn't fail simultaneously. Could it be something else to do with timing? But how would that fail in a moment? Could it be baffles collapsing on one side of the exhaust? But the exhaust was rebuilt only 20 hours ago.

I was back at work on Monday when I received an apologetic email from Le Touquet: "Too busy to drive to Le Tréport with a couple of staff off with Covid. Pardon, m'sieu."

Fair enough. How about my LAA Inspector? "Sorry, not got a passport".

Well how about…? "Sorry, I'm retired."

Oh! Of course, there's… "Really sorry, going on holiday tomorrow."

I had amazing offers such as, "I can fly my engineer out if you like." (Had that more than once. You know who you are – I thank you again!), but I was loath to do that until I had a better idea of what we were dealing with.

Back again…

Then Simon again (bless him) offered to fly me back on a day trip the following Sunday with a tool kit and we'd have a proper look around before inevitably (we assumed) going back with an engineer to fix whatever it was, and so that's what we did.

Arriving at Le Tréport, via Calais for Customs, we were soon in the hangar with the cowlings off and immediately I spotted the obvious thing my somewhat bug-eyed-self had evidently failed to see the previous week.

The rocker covers look different somehow...

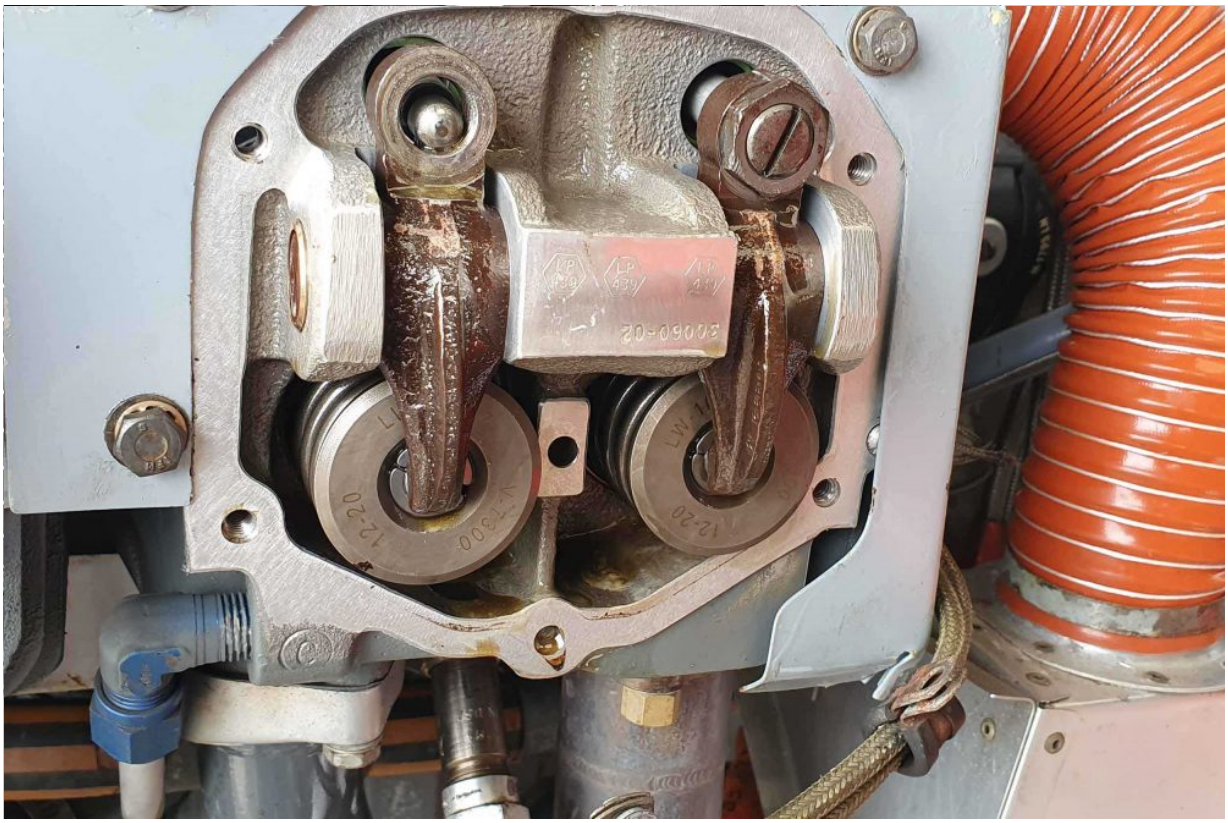
Oh, that's not good...

Ah, well – nothing to be done but brace ourselves and remove the damaged rocker cover to reveal...

Oh, look what's missing! The inlet arm on the left should have an adjustment screw and locknut – like the outlet on the right does.

The inlet adjustment screw and its lock nut had come loose, and had evidently migrated over to the outlet rocker where one item at least must have been mashed against the cover and punched the hole.

Amazingly, offering up the adjustment screw and locknut to their location revealed that neither had been damaged and they went back in place nicely.



Something's definitely awry

Cheap – but it works!

We removed both plugs from that cylinder, made sure there was no pooled oil, cleaned what residual oil there was off the lower plug, and had a good look inside using the cheap, but effective, Lidl borescope I had taken with me.

A couple of phone calls to my Inspector in the UK, accompanied by images via WhatsApp, led to a list of further things to check, and then pulling through by hand showed that everything apparently now worked as it should.

The holed rocker cover was placed against an anvil (aka the hangar door rail) and bashed (stop me if I am getting too technical) with a handy peening hammer, which amazingly sealed it such that a test with avgas resulted in zero leakage. It's not pressurised particularly so it was agreed that it should work as a temporary repair.

OK, let's take the other covers off and then everything – but EVERYTHING – checked for torque (yes, Simon had brought a torque wrench), security, gap adjustment (yes, I had taken feeler gauges) etc, and with my Inspector's remote blessing I got in for a ground run.

Sweet as a nut! All OK, so deep breath and…

Test flight, at climb power above airfield, careful orbits for some time within glide distance of the field then a further deep breath and…

About to leave Le Tréport, with gratitude

At Calais, prepping for Channel crossing homeward

Off we go

Head to Calais (40 mins or so, with 4x diversion options en route). At Calais, cowlings off, triple-check everything again, have a restorative snack then EXTRA deep breath and… go for the Channel crossing home.

Friendly coast ahead…

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Gallagher

SkyDemon's glide range circle showing I could make it – just! – if the engine quit mid-Channel

Mile high and therefore always – albeit, in mid-Channel, only just – within glide distance of land. I cannot tell you the peace of mind provided by SkyDemon's blue circle showing terrain and wind adjusted glide range when over water.

Once home, cowlings off and another thorough check of everything. All good.

Time for reflection: Well, how fortunate was that?

Not only that the failure occurred five minutes land-side of the crossing (20 minutes later would have been even less amusing), but that the resulting damage was comparatively minor.

What next? Well, a new rocker cover for a start! (A replacement rocker cover was £20 + gasket). And sincere thanks to many and reimbursement to some.

Conclusions include:

- The training works… who knew? Fly the aircraft, manage the problem, use all resources available to you and make a positive decision (being ready to change it if circumstances change)
- The international aviation community is an extraordinarily generous and supportive lot. That's you, that is…
- SkyDemon: I am an even bigger fan than previously. And my habit when

outside the UK of changing the display to show both airfield name and ICAO locator helped a lot, especially since I told Lille that I was going to “Eu Mers” whereas it’s actually known as Le Tréport – following up on the PAN call with the ICAO code ensured no ambiguity

- If you only think it’s tight, it might not be. Check it again! The engine had a new top-end only 25 hours previously.

Back home, tucked up safe and secure

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SPECIAL FEATURE

D&D: How we help a lost pilot

Had the young pilot known what was in store later that today, he'd probably have preferred to stay in bed...

Words by Flt Lt Jason Bowditch | *11 May 2022*

Jack was coming to the end of his PPL training in June, and he was to conduct his first solo flight cross-country. Jack's flight training was based at Oxford, he decided to take the ambitious trip to Norwich Airport.

The weather wasn't the best locally, the better weather was forecast on the east coast. VFR flight plan was sent, and he made his way in excitement to Oxford-Kidlington Airfield for his first cross-country solo.

He signed out the airframe, refuelled it and conducted his pre-flight checks prior to departure. He was one of the schools' top students. He always followed the checklists and never took any shortcuts, this flight was well within his skillset.

As he rolled for departure the weather was overcast but the cloud base was over

4,000ft, which was above his intended cruising altitude. Jack was on his way, and as he left the range of Oxford Radar he elected to receive a basic service with London FIR.

Jack's been flying now for roughly 80 minutes and passes what he believes is Bury St Edmunds, he's been following an A road but he's not confident which road he's actually following.

Jack: "London FIR, this is G-STUK, I'm unsure of position, but believe I've not long passed Bury St Edmunds. I'm not sure though…"
London FIR: "G-STUK, London FIR, Roger, Squawk 0030."

As the squawk is selected, this would ordinarily cause D&D's Emergency Alert Group (EAG) to start alarming. FIR would then call D&D to inform it of the lost pilot and request permission to send them to D&D on 121.500MhZ (just in case

D&D was working any higher priority emergencies). G-STUK were then transferred onto 121.500Mhz for a Fixer Service.

D&D was unable to see G-STUK on radar, so the EAG didn't alarm, and D&D couldn't transpose the information from Radar to Auto-T.

Jack: "London Centre, G-STUK transferred from FIR for a position fix. Unsure of position."
D&D: "G-STUK, London Centre, only one line of DF observed and nothing seen on Radar. Request your current altitude."
Jack: "I'm at 1,500ft on Chatham 1012."
D&D: "G-UK roger, are you visual with the ground?"
Jack: "Affirm, G-UK."
D&D: "Are you able to accept a climb to 3,000ft?"
Jack: "No, I can't fly into the cloud. I can probably get up to 2,300ft."
D&D: "OK, remain visual with the ground, and look out for other aircraft. Let us know when you're level."

As Jack starts his climb he comes into cover of the Secondary Surveillance Radar. D&D let's Jack know we see him on Radar and start to transpose the location onto Auto-T.

D&D: "G-UK, squawk observed, your position indicates 2.5nm North-East of Stowmarket, approaching the A140."
Jack: "I can see the road ahead of me. Request a steer for Norwich."
D&D: "Steer for Norwich, 020°, 27.5nm. If you turn left and follow the A140 it'll take you straight to Norwich Airport."
Jack: "Thank you very much. No further assistance required."

Jack has now reset his squawk and, after D&D confirmed, he is happy to continue on his own towards Norwich. Jack contacts Norwich and passes the details and intentions to land at the airfield for a refuel.

As he approaches, the weather starts closing in from below. Jack starts to get a little panicked and disorientated as he finds himself surrounded by cloud. He decided that the safest thing to do was to pull up to get above the met conditions and hope he could find a gap to get back down.

As he got VMC above, his heart sank as there were no obvious signs of a break in the cloud base to get back down safely. He informs Norwich who instructs him to Squawk Emergency. On Norwich's liaison with D&D, it's decided the best course of action is to come back onto 121.500Mhz for assistance.

To assess the full picture of what the cloud is doing in the vicinity of Jack, D&D liaise with Norwich and other nearby aerodromes to understand the local cloud base. D&D asked Jack what altitude the cloud ceiling was. It then managed to liaise with a pilot, also working in Norwich, in the same location as Jack to ask what the cloud base was. Unfortunately, it was below the terrain safe altitude, so descent through the cloud in that location was too risky.

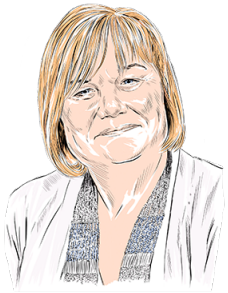
After getting the endurance of G-STUK, D&D then spoke to the civil sectors of the airliners transiting in the airways above to see if they could spot any breaks in the cloud. Fortunately, there was a break in the cloud roughly 15nm off the coast of Norfolk, near Great Yarmouth. G-STUK had the endurance and was happy to transit to the area of good weather and make a cloud-break descent. When he was safely below cloud D&D handed the aircraft to Norwich to make a safe landing.

In this scenario, Jack got caught out by the fast-changing weather. Despite getting lost and stuck above cloud, he did the right thing in communicating it with someone, rather than stubbornly persevering in an attempt to save embarrassment or save face.

There is always someone listening out on 121.500Mhz. If in any doubt, please give us a call in D&D. We are here to serve YOU! Stay safe all!

Previous articles in this series

Distress & Diversion: Who you gonna call?
You make an SOS call… what happens next?
Practice Pans make perfect
Tracing Action: how D&D kicks into action



ACCIDENT ANALYSIS

With Cat Burton

SAFETY

Pressure to deliver...

Safety editor Cat Burton looks at how 'get there'-itis can have fatal consequences...

22 May 2022

I am Cat Burton, *FLYER*'s safety editor. I'm a veteran of a 45-year career as a British Airways captain, and now senior flight instructor at Cardiff for a professional flight training school, so I shall be trying to bring my wide perspective to these pages. I'll look at incidents and analyse what went wrong, and what might have saved the day. I emphasise that these are my own analyses. They may agree, or disagree, with any official accident report, but I will try to draw lessons we can all learn from. Some may be brief and some much longer, depending on what suits the particular incident.

In this article we're going to look at an accident that happened in New Zealand, but the lessons definitely apply closer to home.

The aircraft involved was a Van's RV-12 and it was flown by a 78-year-old pilot who held a valid and current NZ Recreational Pilot Licence and a NZ PPL. He had a total of 2,287 hours experience. Both the aircraft and the pilot were qualified VMC only.

The pilot was on a mission. He had a doctor's appointment in Ardmore and some spares to deliver to a maintenance shop at Ardmore Airport.

To give context, This is a 2hr 15min drive around the south of the Firth of Thames, or a 23 minute flight.

The weather was low cloud and fog over the whole region, but it cleared at the departure airfield. However, looking west, a deep bank of cloud was clinging to the tops of the Coromandel Range. New Zealand Met Office calculate the tops at above 4,000ft. Meanwhile, the destination airport remained in thick fog as the pilot departed.

The aircraft was well equipped with Dynon EFIS, GPS and ADS-B. The Dynon equipment was NOT certified as primary navigation equipment but as an aid to visual navigation.

It was apparent that, for much of the flight, the aircraft did not comply with Visual Flight Rules, which require, in Class G airspace and at or below 3,000ft – clear of cloud, in sight of the surface and 5km forward visibility. The cloud covered Coromandel Range usually has visibility of less than 500m.

"The pilot was on a mission. He had a doctor's appointment in Ardmore as well as some spares to deliver"

Having crossed the Firth of Thames at 3,000ft, the pilot seems to have realised that his destination was still unworkable. He flew south, possibly towards an alternate, for a while, then turned direct to his departure aerodrome, in an unerringly accurate straight line at 2,400ft. This suggests that he was now navigating by GPS and flying on autopilot.

He had flown between the two airports many times before, as evidenced by the Dynon's memory and previous ADS-B traces. However, his more southerly return track took him directly over one of the peaks of the Coromandels which reaches 2,388ft.

Unfortunately, the peak is tree covered and, in the thick cloud, he hit a tree and ended up being stopped by another tree. The wreckage was found the next day by a search and rescue team, the pilot having not survived.

So what factors were at play?

'Get there'-itis. Undoubtedly, the pilot was heavily motivated to make the flight.

IMSAFE*****. Friends reported that the pilot, increasingly, was suffering from fatigue. On occasion, he was unable to egress the aircraft after a flight. He had been diagnosed with two serious medical conditions. He was also taking medication with drowsiness as a known side effect, though toxicology showed only trace levels.

Local pilots reported that the pilot had experienced VMC to IMC incidents in the past and was 'relatively comfortable with them.'

The accident report concluded that this was a CFIT (Controlled Flight Into Terrain) incident.

How could this tragic accident have been avoided?

1. Conduct an IMSAFE audit before every flight. If you're ill, on unsuitable medications, stressed, have used alcohol, are fatigued or haven't eaten, think again.
2. Don't get so attached to the plan that it becomes a contributor to unsafe behaviour.
3. Know the limitations of your skills and your equipment. An autopilot will just as happily fly you INTO a hill as over it. Uncertified GPS is just an aid to visual navigation. And self authored let down procedures are death traps.

***Footnote*:**

***IMSAFE** is a common mnemonic for self assessing fitness before flight:
* **Illness** – are you suffering from any?
* **Medication** – are you taking any?
* **Stress** – are you suffering from any?
* **Alcohol** – when did you last drink?
* **Fatigue** – are you well rested?
* **Eating** – have you eaten recently?

From CAP 1535 *Skyway Code v3*

ACCIDENT REPORTS

With Cat Burton

SAFETY

Check, check and check again...

Always ensure that a pre-flight inspection is carried out, says Safety editor Cat Burton. Plus Car has a rant about the whizz wheel

Cat Burton | *20 May 2022*

Low level wind shear

JUST AIRCRAFT HIGHLANDER
N419SD
WEST COBB, ARKANSAS
INJURIES: ONE, SERIOUS

The pilot was practicing for a STOL race to be held at the airport. He turned final at 60ft and experienced a severe gust. Despite a 16kt buffer above the stall and full flap, he experienced an uncontrollable wing drop and lost all lift, subsequently pancaking and coming to rest upright, but substantially damaged.

A review of the met data confirms thunderstorms and likely wind shear in the area.

Cat's comment. We practice wind shear go-arounds in the simulator regularly. In a 777, flying into a reducing headwind/increasing tailwind event causes initial speed loss followed by extreme rates of descent.

Applying maximum power and pitching up *might* get you through it. We have indications on the PFD of maximum angle of attack and we tuck the pitch right under them.

This results in an airspeed way below the normal Vref and, in the scenarios our cunning trainers devise, accurate flying at the limits of aircraft performance will let you survive. Just. In anything with lower performance, just avoid those conditions.

NO light aircraft can outfly a 4,000fpm downdraught.

Fuel mismanagement

PIPER PA32-260
N130GH
HANCOCK, MINNESOTA
INJURIES: ONE, MINOR

A Piper Cherokee 6 pilot asked for his left tank to be filled before departure.

He departed using the left tank, his engine failed and he executed a forced landing into a field, which resulted in substantial damage to the right wing and fuselage.

Post-accident, an inspection revealed that the left tank was empty.

The pilot reported that he assumed all his tanks were full but did not confirm the fuel, either by looking into the tank, or by looking at the gauges. The engine stopped when the 6.6 gallons in the left tank were exhausted. He did not use any fuel from the right tank.

Cat's Comment. OK. This one is down to the pilot on several levels. Never assume. Do a proper pre-flight. And that engine failure drill we all learned in training.

The way I teach it, the diagnosis phase starts on the left bulkhead with CHANGE TANKS. It could be empty. It could be contaminated, but you have another!

TIME TO DROP THE WHIZZ WHEEL

WHAT
Dalton computer

COST
various

This nonsense about whizz wheels being vital to grasp the basic concept of DR navigation has got to stop.

The original Dalton Computer was designed to simplify the calculation of the wind triangle, not teach basic concepts. If you want basic concepts taught, then we should be teaching plotting. Manually drawing the heading/airspeed, track/groundspeed and wind direction and speed, to scale, on a chart. I know my basic grasp of the triangle of velocities stems from learning plotting from my father at about the age of 6.

Why we seem to have decided that a technology developed in the 1930s is some sort of holy grail while technologies developed since are somehow a bit iffy is beyond me.

A Dalton Computer has two uses. The PPL written exams and the ATPL written exams. Even there, an electronic version is allowed at PPL and some of the EASA authorities also allow electronic at ATPL level. Technology should be used properly, not abused in the name of tradition. The sooner such devices are consigned to a module called, “The history of navigation,” the better.

FLYING ADVENTURE

Finding your own Alaska... flying STOL

When it comes to Flying Adventures, for Ed Smiley-Jones it is Short Take Off and Landing (STOL) all the way with his faithful Husky...

Words & Photography: Ed Smiley-Jones | *21 May 2022*

Like many others, I learned to fly in a Cessna 152, but on a grass strip in Rutland. My instructor, an owner of a Piper Super Cub and an advocate of Short Take-off and Landing (STOL), was keen to prepare me for that unavoidable short field landing that I may have to make one day. This led to many of my training flights to out-lying grass strips throughout Rutland, Leicestershire and Lincolnshire which had challenging approaches and take-offs to test me and to improve my skills.

During my training I was introduced to the concept of STOL flying and told

about the legendary STOL pilot Frank Knapp. Frank Knapp landed his highly modified Piper Cub in a distance of just 10ft 5in and took off in 13ft 8in – how was this possible? I also followed the North American STOL pilot video bloggers such as Trent Palmer, Mike Patey, Kevin Quinn, Cory Robins and the website www.tacaero.com, which focuses on STOL training.

I was captivated by their adventures and the finer points of STOL flying within the backcountry, including Alaska, along with the highly competitive and exciting STOL drag races that they organised. For those who don't know, STOL Drag is when two pilots race side-by-side down a 2,000ft track 75ft apart. They land on or after a marker, come to a complete stop before turning around and then fly back down the course landing on or after the marker, coming to a complete stop at the start/finish line. The pilot to stop first wins.

My fascination with these aeroplanes and the skills of the pilots intensified, and my goal was to perfect the short landing and take off. This all came out during my Skill Test and the subsequent debrief by my CAA examiner where he jokingly said to me (in a sort of Michael Caine accent, think *The Italian Job*), "I know I asked you to make a short landing, but you didn't need to do it that short!"

Author Ed Smiley-Jones loves STOL flying

I saw STOL flying as a way to keep my long-term interests in flying alive and stimulating. Early on in my pilot training I was given some advice, which was to decide on which style of flying was of interest to me, create missions to explore

the UK, go to challenging airstrips… because if you don't, you could end up having no purpose to your flying apart from going from A to B for a cup of tea! With this resonating, my mind was set on the idea of STOL flying and this drove me to complete my tailwheel differences training a few weeks after qualifying and I have not looked back – in fact I haven't flown a tricycle aeroplane since.

As my STOL bug intensified and grew into an obsession I knew I needed to buy a STOL aeroplane. I was flying a 1980s Super Cub which was an ex-Israeli military spotter. I loved everything about this aircraft – highly capable, fun and also customisable. However, I soon came to realise they're expensive and difficult to find, and when I did find one for sale the combination of the price and refurbishment just made it too expensive for me. Luckily as one door closes another opens, and thanks to hours of research and a chance meeting with a bush pilot I was introduced to the Aviat Husky.

This aircraft springs from 1985 when Christen Industries developed the Christen (Aviat) Husky, a purpose-built STOL aeroplane with a stall speed of just 45mph. As it happens, my chosen aircraft is an Aviat Husky A1 and is fitted with 26in Goodyear tyres, which help with rough surfaces, floatation during the winter months and the inevitable harder landing. The Husky is extremely capable and can handle the job with ease (far more capable than me!) – together with its 180hp engine, a constant speed propeller and Fowler flaps. It will land within 350ft (and shorter with a stronger headwind) and take-off within 200ft – skilled STOL pilots can improve on this significantly. I believe the Husky, along with the Piper Super Cub and the Maule are the perfect aeroplanes for the UK.

I fly my Husky from a 225 metre grass strip, slightly downhill one way and with a typical Leicestershire hunting hedge at the other end – good for the Duke of Rutland's hounds, but adds another obstacle for me! Saying that, I have always seen this hedge and the short grass strip as a way to improve my skills… it definitely sharpens my focus!

Creating a community

I constantly reflect on how lucky and privileged I am to be a pilot, and how I get to couple this interest with my love of the countryside. This blend of flying and the countryside allows me to pursue my passion and fascination for STOL and backcountry flying. I felt that to get the most from my flying I needed to be part of a community.

Calling it 'backcountry flying' in the UK is probably a bit of a stretch so I like to call it, 'hinterland flying'. I believe this is more suited to the UK landscape and scale. This led to me creating Hinterland Pilot, my social media brand to promote flying and unite a group of like-minded pilots.

From this platform, I reached out to fellow pilots and within a week I had 20-plus new flying contacts all keen to meet up. They were from all over the UK and even included one pilot from Tanzania. Surprisingly, Hinterland Pilot also started to draw an audience from North America, who were also keen to understand the UK scene.

I joined the Flying Farmers Association, a group of 250-plus grass strip pilots who share my passion. I quickly discovered some of the members flew tailwheel aeroplanes and were looking to broaden their horizons. This culminated in me organising a STOL event, which included a talk and flying demonstration for the members at Belvoir Castle.

"This blend of flying and the countryside allows me to pursue my passion and fascination for STOL and backcountry flying"

Out of the blue I was contacted by Peter, who wanted to connect, having seen my YouTube channel. Peter explained that he was based at a private strip called Glenswinton, nestled in a valley surrounded by dense woodland, on the south-west side of Scotland – in essence, a one way in and out strip!

A few weeks later, Peter dropped into our farm strip in the East Midlands to talk backcountry flying and Aviat Huskys, and invited me to visit his strip in Scotland.

Through the Flying Farmers, my social media and a few articles I've written, I have made contact with a number of backcountry pilots and landowners who are based throughout Scotland. After a few text messages, and a couple of phone calls, with my flying buddies Graham, Edward, Jeremy and Wes, we had a trip planned.

The route was to leave our respective strips in the East Midlands, head north over the Lakes to Glenswinton, on to the Isle of Mull, up to the Orkney Islands, back across to Aberdeen and home. However, the best laid plans are not always followed to the word and the adventurous spirit took hold of us!

Heading in to Glenswinton

Ready for departure… rain stops play!

It was 8am on a Friday, on what should have been a perfect day in mid-summer. The Husky was loaded with fuel, tent, sleeping bag, stacks of chocolate and some gifts of Stilton cheese and pork pies for our hosts – I live near Melton Mowbray – the home of the famous pork pie and the king of cheese.

Unfortunately, the weather was shocking and I couldn't even think about taking off. The cloud was circa 300ft and it was pouring with rain. There was a static weather front sitting over Melton Mowbray and it didn't move all day. I contacted my flying buddies who were also experiencing serious precipitation and a blanket of cloud – the joint decision was that unfortunately the trip would be delayed!

Take two… Saturday morning dawned dry but the cloud was still only a few hundred feet high. I couldn't fly but kept everything crossed that it would clear soon. Two hours later the cloud was slowly shifting, and as I knew the skies were clear to the north west, I coordinated with the others and we were finally on our way.

The clouds and weather conditions in the East Midlands were far from perfect but Peter (based in Scotland) had texted to say that Scotland was bathed in sunshine so I knew I was flying towards fabulous weather.

I powered-up the Husky, completed my checks and pointed the aeroplane down the grass strip, added full flaps, full power and off we went. Within minutes I was negotiating and weaving around the odd puff of low cloud, and I scooted around the north-east side of Nottingham. As I passed north of Derby I heard Graham talking to East Midland ATC – he'd just left home. This was great news, the trip was on!

The first leg of the trip took me through the 1,300ft low corridor between Manchester and Liverpool towards Winter Hill mast. I passed over the rolling hills of Derbyshire, then swooped down to this vast plateau that forges its way from the Irish Sea to Manchester. I felt like I was scooting along the deck over villages, towns and tree tops. The odd aircraft passed me in the opposite direction and a few jets powered over the top. I reached the end of the corridor and started to climb towards the mast en route to Lancaster and then on to Morecambe Bay.

Fuel stop at Kirkbride

Following the curve of the coast off to my left, the views of both the coastline and the Lake District were truly beautiful.

I continued to track the coastline until I reached Morecambe Bay before heading to Kirkbride for fuel. I didn't realise the scale of Morecambe Bay until I started passing over it. This was emphasised by watching the glide scope parameters appearing on my SkyDemon. What a handy piece of important information,

especially for where I was heading.

The next stop was Glenswinton, 21nm north-west of Kirkbride. Glenswinton is a privately owned farm strip 520ft above sea level, nestled in the surrounding hills and woodland. The strip doesn't have a 'go-around', as you are in essence flying towards a hillside and a forest. You have to get it right the first time!

On the day the airflow was being disturbed by the surrounding mountains and forest, and I was making good use of rudder, power and ailerons. Adding to this drama, there was also an occasional strong gust of wind. On final, I was clouted by a powerful right hooker of a gust – this wobble made the video footage look extremely dramatic, but we landed well.

After meeting my buddies at Glenswinton we were taken to some beautiful coastlines where we made some low passes over the beaches. We would have loved to have landed but unfortunately they were SSSIs, and then on to a number of farm-style grass strips. Following this mini adventure we headed north-west via Glasgow to the Isle of Mull and to stay at the Glenforsa Hotel.

Heading to the Hebrides and Highlands

We arrived on the Isle of Mull at 8pm and landed on the pristine airstrip that runs parallel to the Sound of Mull and Glenforsa Hotel. The lodge, food and accommodation were excellent and a real bonus was that the owners are serious aeroplane enthusiasts.

The sense of adventure, the freedom and sheer experience of flying over these mountain ranges, dipping into the valleys, over the sea and onto another island and repeating was thrilling, exciting, igniting all my senses. I may have just discovered my inner Alaska!

Overlooking the Sound of Mull at 10pm

Glenforsa runway

The next part of our trip was to head north to Orkney, and we had a few exciting stop-offs planned en route. The flight was magnificent as we were flying through the Great Glen and over the lochs where the awe-inspiring 4,400ft mountain ranges reached up on both sides and dwarfed our tiny bush planes. The thought did cross my mind as to where to land if I got an engine out… loch, mountain top or beach – what a choice!

Our first stop along the Great Glen was a privately owned strip located close to Fort Augustus called Glendoe. The strip has a stepped downward slope which we discovered when Graham landed and had to use the entire runway to slow down… there was no help from the wind as it was across the runway that day. Quick-thinking Graham called us just in time so we could change direction and approach the strip from the north – hugely helpful!

The following stop off was at Easter Airfield, the original site of *HMS Owl*. The airfield is in a military zone so we had to get PPR before flying in, but as always, the military was excellent and very helpful. However, their instructions were clear… “We will cease firing whilst you enter the range and notify us on landing so we can recommence.” Instructions we obeyed.

The day was long and our final leg was to head to Orkney along the eastern coastline via Wick with a landing at one of the smallest islands and airstrips of our trip at Lamb Holm.

The north-south runway approach at Lamb Holm is over the sea and along with this you’re faced with a cliff edge. On our arrival the winds were reaching 25mph and the Husky was almost hovering as I passed over the runway threshold. I came to a standstill in feet – by far my shortest landing!

Lamb Holm island is just to the south of Kirkwall and east of Scapa Flow. The island is linked via a series of causeways which were built by the Italian POWs during WWII. On the island is a chapel converted from a military Nissen hut by the POWs. It is worth visiting as the inside is hand decorated and resembles a scaled down version of the magnificent Sistine Chapel.

Easter Airfield, the original site of HMS Owl

The next leg of the trip was to Whiterashes, which was a whole new experience. Firstly you have to gain permission from Aberdeen and then they guide you in. The route in was strict and detailed: low level, many obstacles en route, such as wind turbines, and a few radio masts along with some hills and farm houses to avoid! This all sounds quite straightforward but when you add in a couple of slower aeroplanes in front of you it sharpens the focus. The last thing I wanted to do was to chew-up a Super Cub's tail…

Due to a weather front coming in from the west it was an early start so as to avoid an extended break in Scotland. Using local knowledge, and combining this with the latest weather update, we decided to take a coastal route as the Grampians and the Southern Uplands would hopefully keep the worst of the weather away. The route took us via Carnoustie to St Andrews, then Elie Ness across the Firth of Forth to North Berwick and on to Eshott, our final fuel stop and then home.

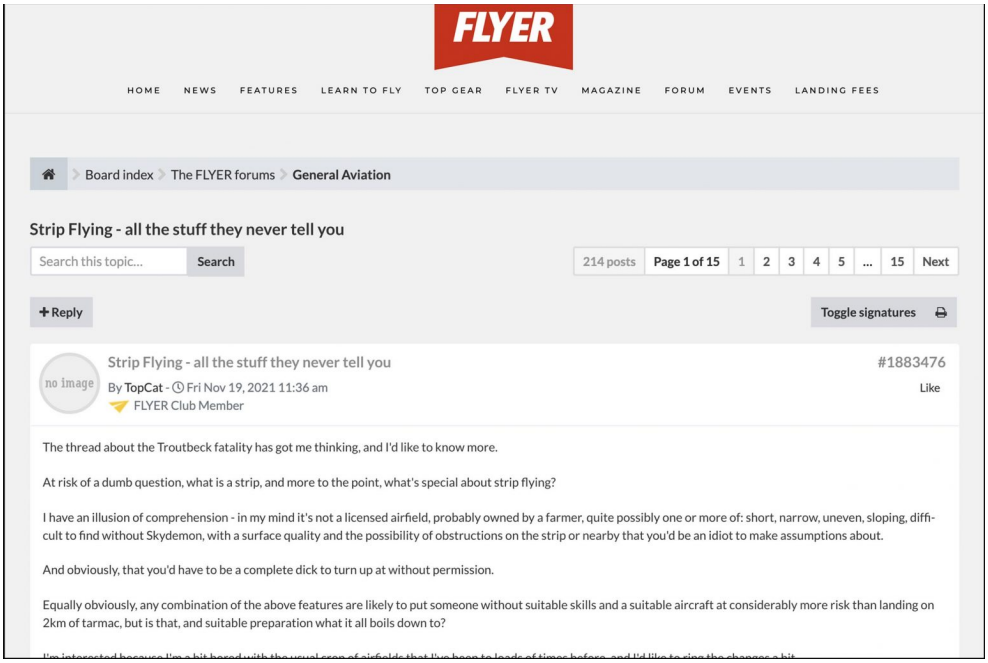
It was a thrilling adventure to take my Aviat Husky to places where there were challenging strips, difficult approaches, high winds and tiny island landings. It delivered what I wanted, an adventure which challenged me and improved my flying.

However, the important take-out for me is that flying is a huge privilege which I don't take for granted. These experiences have allowed me to be part of a community and share a passion for a particular flying niche.

If you've been bitten by the flying bug, and are looking for a real focus, I would strongly recommend having instruction in a STOL aircraft! It changed the game for me, giving my passion for flying a true focus and allowing me to spread my wings, connect with like-minded pilots and discover my very own 'Alaska' right here in the UK.

The team at Whiterashes, Aberdeen

"Strip flying… all the stuff they never tell you" is a hot topic of discussion on the FLYER Forum… read up and join in here!



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Have you had a Flying Adventure?

FLYER is always interested to hear from readers who have had a Flying Adventure of their own, whether that's across continents or within the UK. We can't publish all of them but if it tells a story we've not heard before, and comes with a good selection of photos, we'll certainly consider it.

The articles are best when between 2,500 and 4,000 words. Any more than that and you're writing a book! Photos are best when in landscape format (ie, not portrait or upright) and should help tell the story of the trip. We can also embed video which can be hosted on your own YouTube or Vimeo account, or you can send them to us for hosting. Please do not add music to the background unless it's your own copyright! So Harold Faltermeyer's *Top Gun Anthem* is a no-no!

Make contact with us by email: **dave.calderwood@seager.aero**

TOP GEAR

Yaesu FTL-850L handheld radio

After cracking the user interface and logic flow this is a reliable radio – as a primary a means of communication, or an effective backup…

Jonny Salmon | *31 May 2022* | ★★★★★

FROM £430 AVERAGE

The FTA-850L mounted on the panel.

The Yaesu FTL-850L is a VHF transceiver with everything you need to communicate while flying anything from flexwings to fixed-wing. Priced at £439.96 inc VAT (from Pooley's Flight Equipment, as an example), the unit is packed with features that will aid, not just communication, but also navigation although, as we'll come to it, some features are redundant in our airspace.

Opening the box, the radio unit is solid and comes with a substantial operating manual, DC adapter for powering in your car or aircraft, numerous wall plug adapters with charging cradle, USB to micro USB cable for PC programming and two types of portable power; 2200mAh lithium-ion rechargeable battery pack and a 6 x AA battery case – good for emergencies! Also included is a twin-GA plug adapter, to enable the use of your headset. An optional extra is a PTT button to mount on a stick / yoke.

The FTA-850L features a WAAS GPS receiver and logger, with 400 memory channels available, and both VOR and ILS navigation displays. US pilots can benefit from NOAA weather channel receive and alert functions, obviously not reasons to mark the Yaesu down at all, but a reminder of how things could be over here.

The unit is bluetooth capable, and also features noise cancellation of both transmission and receiving communications. For flexwing pilots, it comes with an IPX5 waterproof rating, which means it's fine when it comes to rain showers.

Developments over the FTA-750L feature the 2.4in full colour display, increased transmission power output from five watts to six, and a doubling of the memory channel storage capacity.

I had the FTA-850L in its charging cradle within two minutes of opening the box and left it for a couple of hours to charge before using it for the first time. Quickly tuning my local airfield from my desk (with a roof mounted aerial) resulted in clear communications from aircraft in the circuit.

As with most transceivers and receivers there is some logic to learn, you can dial and listen pretty fast, but saving to memory banks, scanning settings, and advanced features do need a read of the manual or, in my case, a quick look on YouTube.

The available PC software also does a good job of taking some of the fiddling out of setting up banks of channels. If you're buying a transceiver or air band receiver trust me, plug it into a PC and add frequencies that way, it saves a lot of hassle compared to button pushing and knob turning on the radios themselves!

My plan to test the radio was initially hampered by having a non-flying aircraft, but, when out in the field operating with the supplied whip antenna, the broadcast and reception of voice communications was excellent.

"The unit is bluetooth capable, and also features noise cancellation of both

transmission and receiving communications"

I used the radio for the first flight of our RV after upgrading the engine mount and refitting the engine, with me on the ground with the FTA-850L. Comms were clear, very legible through the built-in speaker and battery life lasted well, using it to the intensity that you might when flying in a circuit.

It also integrated to in-car bluetooth within seconds, which was a bit of a novelty, the feature being designed for use with headsets.

Fast forward a few days, and I was able to fly while listening to the radio being used from the ground and the vocal clarity inside my headset was absolutely crystal clear – definitely readability five.

The 850L's big selling feature is the VOR and ILS functionality, which I managed to put to the test. In order to navigate to a VOR or start flying an accurate approach, you simply punch in the frequency and, if the Yaesu detects the appropriate signal, will return with either a CDI display or glideslope and localiser on the screen.

I have no cockpit instrument with which to compare the ILS readout, but things looked broadly correct visually when flying nearby a local airfield, tuned to their ILS frequency. The radio also has a GPS logged and basic navigator, which can log your track for export to something like Google Earth after you've flown.

Would pilots make use of this in the real world? Perhaps not so much in the UK, where homebuilts and microlights (more likely to use this sort of radio) rarely fly IFR, but the FTA-850L will suit pilots flying low and slow who want the ability to navigate.

It's worth noting that there are no separate COM and NAV receivers, so you have to pick between navigating or communicating one at a time.

Is the FTA-850L good as a backup? It could certainly help you in a situation where avionics drop dead, and searching the internet shows lots of instances of its predecessor the FTA-750L being carried in IFR-capable aircraft.

Beyond this particular radio, what became apparent to me early on, was how useful a transceiver is when you fly from a farmstrip. The added situational awareness it can bring definitely enhances safety, and I've been particularly impressed with the Yaesu's abilities. I'll more than likely buy a Yaesu to have in my flight bag!

In short, once you get past the initial learning curve of user interface and logic flow, this is a strong, robust and reliable radio that does exactly what it says on the tin (or cardboard box) and offers features that could complement many different types of flying, either as a primary means of communication, or indeed a reliable and effective backup.

The radio comes with a sprung belt clip which makes it ideal for attaching to compatible bags.

The big colour screen is an improvement over the previous version.

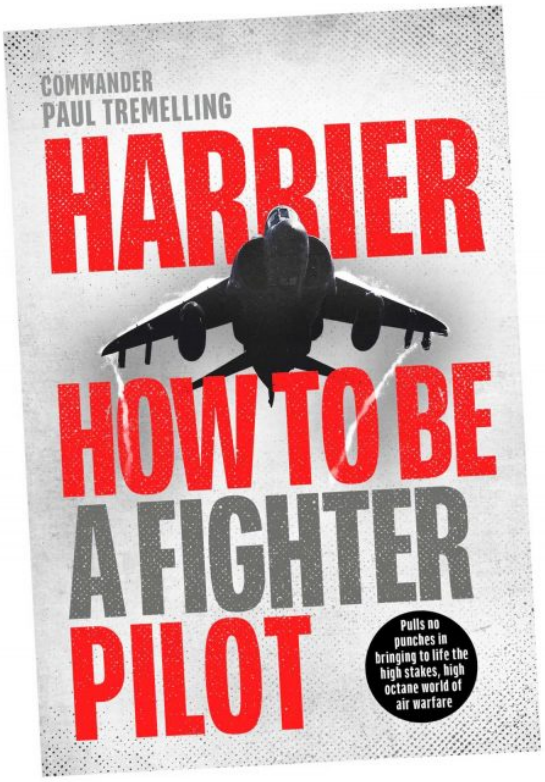
TOP GEAR

Harrier: How to be a fighter pilot

Dave Calderwood reviews Paul 'Tremors' Tremelling's story on how a fighter pilot trains, handles the aircraft and onboard tech... then fights

Dave Calderwood | *28 May 2022*

FROM £15.59 (HARDBACK, ONLINE RETAILER)



'How to be a fighter pilot' is a bold title to put on a book, but Paul Tremelling's account of his progress through selection and training, then combat in Afghanistan – flying Sea Harriers for the Fleet Air Arm of the Royal Navy – lives up to it.

It had been a lifelong ambition for 'Tremors' to fly the Sea Harrier, ever since seeing them at RNAS Yeovilton at Air Days as a seven-year-old, then following accounts of the Falklands War where the Sea Harriers were a key element of the UK strike force.

So, when sent to train to fly helicopters instead, despite coming top in basic training at the Joint Elementary Flying Training School, it was a huge blow – and unexpected.

Still, he followed orders and again scored highest marks at the Defence Helicopter Flying School, doing so well that he had a choice of assignments… and suggested a fixed-wing crossover. Luckily, that's exactly what happened and he was back on course with Basic Fast Jet Training a week later.

What follows is a fast-paced account of going through training, with any number of opportunities to cock it up, incredibly detailed accounts of training sorties, complete with footnotes (often hilarious).

Such as a VSTOL checkride, when the instructor took control of the flaps and prevented them from lowering. Paul had failed to notice that during pre-take-off checks, and what followed was a flap-less take-off at 99% power on a short runway.

Something that shouldn't have even been possible: "The most dangerous manoeuvre I would ever fly in a Harrier."

Clearly, the instructor should have not let the take-off go ahead.

From there, it's more training, including carrier landings and simulated battle with other forces, and then to Afghanistan. The stories – 'dits' in RN lingo – are fast and furious, detailed and although written in typically British self-deprecating manner, the hard edge, verging on arrogance needed by a fighter pilot, comes through.

For example (talking about a fellow pilot, Dunc Mason): "Yet another grade A human from the single-seat workshop of grade A humans."

However, perhaps the most compelling chapters are two about real live combat, and Paul's accounts are as close to being there as it's possible to be without breathing the hot air and dust, bullets whizzing past your ears.

A *Dusty Valley* takes the reader into a scary sortie to help ground troops taking heavy fire from Taliban. Not just one set of troops either – all hell was breaking loose that day with multiple calls for close air support.

But first they have to find the enemy, be sure it's enemy and not friendlies, then work out a low-level attack that keeps you clear of the rising ground… in seconds.

"We were knowingly breaking the rules. We had come up with the target

ourselves, didn't know where all the friendlies were, and we had no commander's permission. We were about to flagrantly smash through the golden rules. [But] Whoever wrote those rules probably didn't do it while listening to men fighting for their lives."

The second is called, simply, *The Big One*. It's going after a priority target in Afghanistan. That means a person, in this case a Taliban commander that the whole theatre was after.

This is a detailed chapter on going to war, from being woken up, to being briefed by 'Psycho Mike', the intelligence officer, joshing with the support crew, take off and immediately having a potential issue with the engine, resolved with common sense, then off on the mission using all the high tech available to find the 4×4 charging across the desert… and blow it to bits with a guided bomb.

This isn't a book for the faint-hearted. It is a book for anyone who appreciates insight into how a fighter pilot trains, trains more, thinks (fast), handles the aircraft and onboard tech… then fights.

Click here to buy this book on Amazon

FLYER CLUB LATEST

Out & About - Members' Photos

Where have members and readers been recently?

It's been another busy few weeks of flying as the country has enjoyed some good weather. Take a look at members' photos below – and don't forget to submit yours to **editored@seager.aero**

Not a member? Join the Club at **flyer.co.uk/membership**

31 May 2022

Tim Cook flying his familiar-looking Europa

HeliPilotJoel on Instagram doing some fair weather flying

Finn Catling giving cockpit tours at Solent Airport

Matt Lanham flying over Scotland

Riccardo De Nardis taking part in a disability flying day in Italy

Sean Link flying on a lovely looking day!

Steph Smith with a Bird Dog – and a real dog (Otis) – at Old Warden

Steve Hornsby landing at Eshott in a Chipmunk, completing his tailwheel rating

Ian Fallon dishing out grins

Keir Williams at Glenforsa on the Isle of Mull

Marcus Clarke heading to Jersey

Paul Thomas on finals at Solent Airport

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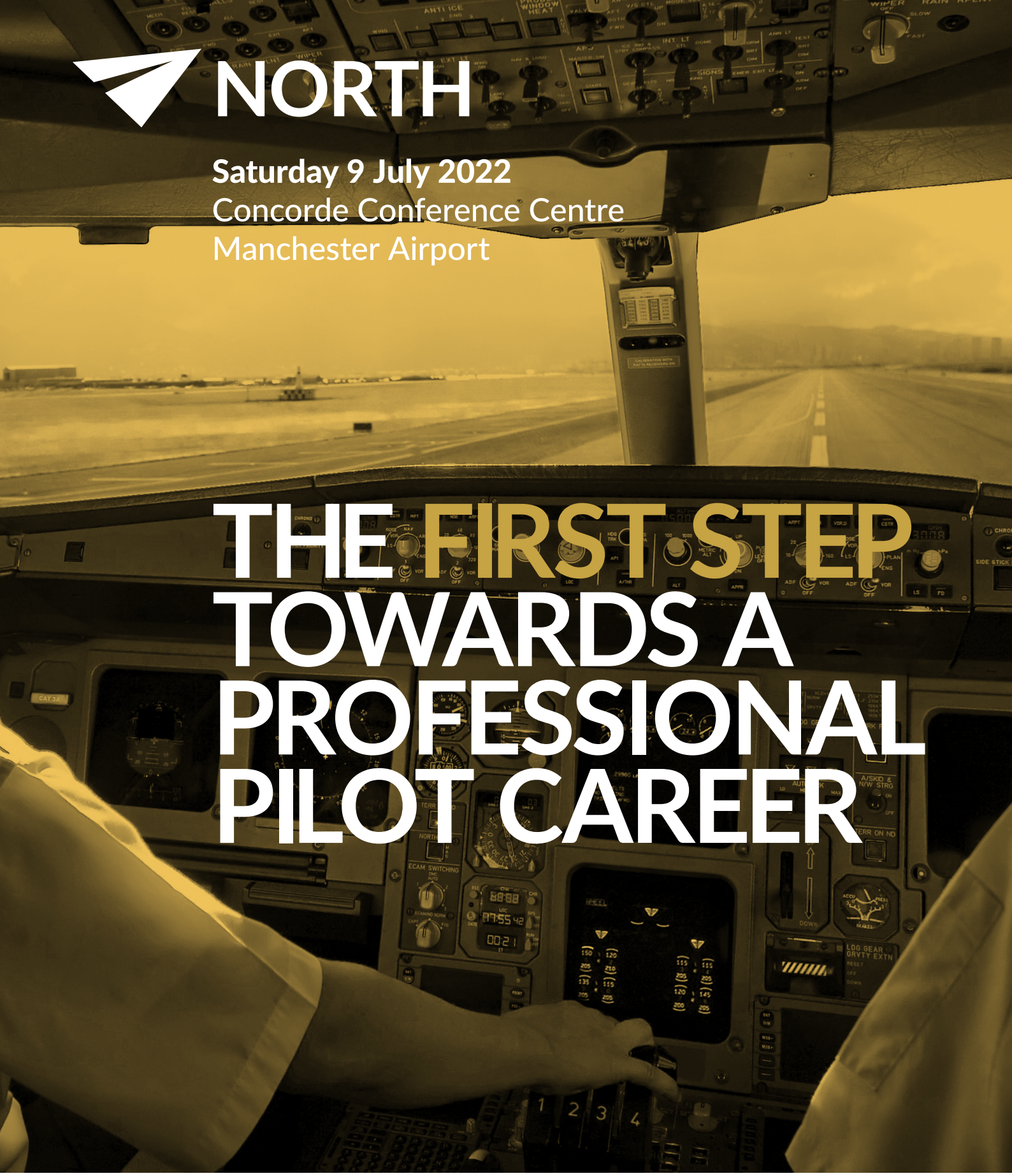

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