GLIDING AUSTRALIA

Issue 56 June - August 2021 magazine.glidingaustralia.org

NARROMINE ADVENTURES

1000KM IN VICTORIA - BENDIGO GC - VINTAGE RALLY
GLIDER MAIL - VSA STATE COMP

GLIDING AUSTRALIA MAGAZINE

No. 56 JUNE - AUGUST 2021

COVER: ATTILA BERTOK FLYING HIS ASW20 FROM NARROMINE JANUARY 2021

WELCOME TO GA 56

As we head into winter the outlook for the next soaring season looks brighter than it did at this time last year. After a wet and lockdown-affected year, we are all hoping that the health measures in place will succeed in allowing a full return to our beloved sport.

This is the fifth issue of GA in the new formats. As long as you have an internet connection on your device of choice, you can read GA wherever and whenever you like. Go to magazine.glidingaustralia.org.

You can also download a PDF version of GA from magazine.glidingaustralia.org/past-issues.

You can order a very special DIGITAL PRINT copy of the magazine as well. Each magazine will be ordered and printed just for you, so it will be a limited edition – rare and collectable. Order your very own copy here bit.ly/2TUkFs5

I would love to hear what you think about the new formats and the magazine in general so please contact me any time. Or you can leave me a message on the website at bit.ly/2McMqYu

I hope you enjoy this edition of Gliding Australia Magazine.

Sean Young

Sean Young
Editor
sean@glidingaustralia.org

Adriene Hurst
Deputy Editor
adriene@glidingaustralia.org

EDITORIAL SUBMISSIONS
We invite editorial contributions and letters.
email sean@glidingaustralia.org
Other large files and photographs and can be uploaded at
www.glidingaustralia.org/ga

DISPLAY ADVERTISING & MAGAZINE ENQUIRIES
sean@glidingaustralia.org

GLIDING AUSTRALIA
www.glidingaustralia.org

Tel 0490 502323

GLIDING AUSTRALIA

MEMBERSHIP & CLASSIFIED ADVERTISING
AIRCRAFT REGISTRATION & related
Tanya Loriot tanya@glidingaustralia.org

AIRWORTHINESS & GFA TRAVEL
Fiona Northey **fiona@glidingaustralia.org**

RETURNS
If you are sending documents they must be emailed to
returns@glidingaustralia.org

SHOP The GFA Online shop has a range of useful products including a Form 2 kit,
www.store.glidingaustralia.org

GFA OFFICE
Before calling the GFA office, please check out our website www.glidingaustralia.org to buy items, find documents and other information, and renew your membership.

9am-5pm Monday - Thursday, 9am-3pm Friday

Tel: 03 9359 1613 Fax: 03 9359 9865
C4/ 1-13 The Gateway
Broadmeadows VIC 3047

SUBSCRIPTIONS
Non GFA members are welcome to subscribe to Gliding Australia.
1 year is $64 inc. GST. www.glidingaustralia.org/shop1

WS Media Design & Publishing Services info@westsunsetbooks.com

Official publication of Gliding Australia - Gliding Federation of Australia Inc.
ABN 82 433 264 489 (GFA).
The Gliding Australia ia a member of the Féderation Aéronautique International (FAI) through the Australian Sport Aviation Confederation (ASAC)

Print Post Publication Number PP 381712/02675

FROM THE PRESIDENT

Summer is over and I have already had enough of winter, but there again, winter does give us the opportunity to attend to all those things that we need to get in place in preparation for the next season. The long warm days of a new soaring season are indeed something to look forward to.

CHANGE

It seems that change is a constant and if change provides improvements, then change is good and something to be embraced. The new Integrated Training Program has been in development for some time and will soon be trialled in the real world, followed by a national roll-out later this year. For successful implementation it will be essential that clubs, training panels, instructors, coaches and students all understand and support the program. The changes will challenge us all and the benefits will be real with a seamless student path from first flight to becoming a competent and confident cross-country pilot. The team that has been working on this program are a group of highly motivated and skilled people and they have done a magnificent job – thank you!

MORE CHANGE

You have all heard about Part 149, so I am not going to bore you with any further specific detail. Part 149 will require some mandated change to our organisational structure and while we are considering these issues it makes sense to have an overall look at our current management structure. Part of that consideration might be how the roles of the Board and Executive interface and how we could re-structure to make these important areas of our organisation work more efficiently.

Currently the Executive and elected Board members all sit on the Board. This results in there being no distinct separation between the Board, which is largely responsible for policy and direction, and the Executive, which is charged with the day-to-day running of the organisation. Naturally, any change to the Articles (constitution) will require member support which must be sought at an AGM or EGM. We will keep members informed as these ideas develop.

S2F

Gliding Australia's S2F program, led by Mandy Temple, has been heavily promoted over the past 3 years. The Board has decided to move the ideas that S2F has developed into business as usual, meaning that you will no longer read or hear about S2F, but rather you will see all of the fabulous ideas and programs that S2F has developed just become an integral part of Gliding Australia's day-to-day activity – modernise, standardise and prioritise. Thank you, Mandy, for the huge effort that you have put into this initiative.

SAFETY MANAGER

Under Part 149 legislation, one of the four CASA mandated management positions is that of Safety Manager. Sid Dekker has been filling this role for some time but would prefer to put his effort to other areas within the gliding movement. Consequently, we are eager to hear from members who have a background in safety related matters and would be keen to work with our Airworthiness and Operations departments to help develop and lead a Part 149 compliant Safety Management System. If you have an interest in this area, or you know someone who may have, I would be pleased to hear from you.

GOVERNANCE AND INTEGRITY

From time to time, we hear of complaints from members about various behaviours seen in some clubs. The GFA Board has a Governance and Integrity Committee that is reviewing all our policies relating to governance matters including member and child protection. Gliding Australia actively promotes good governance at all levels, including clubs. To this end we have arranged several webinars on these topics, and we strongly encourage clubs to take a stand to ensure member behaviours are appropriate for a harmonious club environment.

THE AIR WE FLY IN

Most members would be aware of Airservices Australia's (AsA) proposal to reduce the lower limit of Class E airspace along Australia's eastern seaboard. As proposed, the new levels would have a major impact on many gliding clubs. It is vital that we protect our freedom to fly. Consequently we have formally communicated, in a robust manner, our concerns in a response to AsA, The Deputy Prime Minister and CASA, detailing how the proposal is flawed and highlighting the negative impact its implementation would have on gliding and the broader sporting aviation community.

Other members of the Australian Sports Aviation Confederation have posted similar responses. AsA has many hoops to jump through before its proposal could be implemented - it is important that we maintain our vigilance and continue to voice our objections.

Be kind to each other and fly safely,
Steve.

STEVE PEGLER
PRESIDENT
President@glidingaustralia.org

FROM THE EO

GFA OFFICE

After 12 months working from home, GFA Office staff are now back in the office. We have made some improvements to the environment and file storage system. The staff are quite flexible and can revert back to working from home as required, should random Covid incidents make it necessary.

Tanya has reduce her hours of work so the office is not staffed every second Friday. The simplest solution is to make direct contact with the office Monday to Thursday 9am-3pm. Email to returns@glidingaustralia.org gets good results as all staff members can see and respond.

BADGES AND CLAIMS

A few members have complained about the difficulty of submitting a badge claim for Silver, Gold and Diamond badges. There has been a review of the system with significant improvement expected in the next couple of months.

You are encouraged to talk to your Official Observer about the requirements listed in the FAI Sporting Code. Key issues with claims often revolve around recent changes to the rule on Silver Distance, and the definition of release point and start point.

You will need to provide a .igc file for all badge claims other than a duration flight, and if you can load a declaration onto your flight recorder it will reduce the amount of information that you have to write into your application.

GPC TRAINING DOCUMENT CHANGES

Operations and Soaring Development have been developing a range of new resources for Instructors and Coaches (now referred to as Trainers) to use in delivering training through to the Glider Pilot Certificate. These documents provide details about what the trainers have to deliver and the performance standard required, and also provide detailed information to the Student pilot.

The first stage has been shared with some Instructors and coaches so that the project team can get feedback on what has been developed so far. This will then allow trialling of the new content and resources across a few clubs over the next few months. The plan is for a launch to all clubs with training to commence before the end of the year. This will mean consistent training, no matter which club you fly from.

The aim of our training system is for all members to achieve their Glider Pilot Certificate (GPC).

THE GPC QUALIFIED GLIDER PILOT:

- Can fly and soar the glider safely at the required standard,
- Is aware of the Threats and Errors that may arise and can manage these,
- Has the skills to soar the glider and to competently and safely fly outside of gliding range of their takeoff airfield, navigating to a selected site and complying with all aviation regulations within the limits of their authorisations.
- Can fly independently subject to maintaining their competency.

As you can see, this goes well beyond just flying the aircraft, with the soaring aspects taking on a more important focus. This soaring aspect is more likely to entice the new member to stay in the sport and develop their skills further.

GFA FEE CHANGES FOR 21/22

The GFA board met in April to consider our financial year results and the budget for our new year, which runs from May to April.

The Executive and Board have had a few meetings to look at budget options and agreed to a number of changes, which includes a CPI (2%) increase in membership and other fees. The key change was to increase the membership fee to $328 for adults and $170 for Juniors. Form 2 kits have increased to $240.

You will notice that the Regional Association fee of $12, which is passed on to your Regional Association, has previously been charged separately, but is now included within your membership fee. This makes renewals a little simpler.

You can see all of the new fees on the GFA web page. Go to **Member Area/ Documents/Admin docs then Membership and AW fees 2021 2022 ADMIN0012.**

MEMBERSHIP NUMBERS AND CHURN

GFA currently has 2,635 members compared to 2,644 in March 2019, so we appear to have survived Covid 19 fairly unscathed. Of these members, 2,300 are flying members.

For Junior memberships, our number of juniors remains fairly constant at approximately 350, but the number of AAFC memberships has dropped from 170 down to 46. Given that AAFC is now back flying again we are hopeful that this number will return to the previous values over the next year.

A common expression used is that of 'churn', which reflects the process of people joining GFA but then leaving within two years, and currently accounts for about 70% of new memberships. We should expect that some people will join and decide later that the sport is not for them, or they cannot devote the time and money required to continue, but 70% seems excessive.

Managing churn places a heavy load on club volunteers who deliver the training. We have been encouraging clubs to review the service that their members receive to ensure that club practices are not turning members away, such as lack of flying opportunities, multiple instructors, late starts to the day and so on.

The increased focus on GPC skills is one way to encourage members to stay in the sport. If you have other suggestions on how to address this issue we look forward to hearing from you.

TERRY CUBLEY AM
EXECUTIVE OFFICER
eo@glidingaustralia.org

NARROMINE WORLD CHAMPIONSHIPS DECEMBER 2023

Australia won the right to host the 2022 World Gliding Championships for Club, Standard and 15m classes, but with Covid impacting world championship scheduling, this championship has been re-scheduled to December 2023. The event will be held at Narromine and the organising committee is already preparing for the event. This will once again provide an avenue to display Australia as a great gliding location and promote the sport to Australian residents. The Narromine GC web page advises dates and is calling for volunteers to assist with the operation.

CASA PART 149

CASA Part 149 specifies the requirements for aviation administration organisations involved in sport and recreational aircraft activities. As a result, all sport aviation organisations (gliding, parachuting, paragliding etc) have been requested to become Part 149 organisations.

GFA has contracted Peter John to assist with preparing our Exposition, which explains how GFA is structured and identifies the responsible officers. A small team led by Anthony Smith is finalising the Exposition and looking at our Safety and Management systems to align them better with CASA requirements. At the same time, this is enabling us to review and improve our systems in alignment with other aviation organisations. We plan to submit the Exposition to CASA before the end of the year. It will provide an opportunity to update the GFA and we hope that members will support and participate in these improvements.

VALE DAVE SHORTER

TERRY CUBLEY

Dave Shorter was a valuable contributor to gliding, nationally through his role as treasurer, and within the Lake Keepit Soaring Club.

Dave was GFA treasurer for seven years, from 2014-2020. He also established the GFA investment Committee and led this group over the past three years, taking responsibility for investing GFA funds in order to get a better financial return. In this he was very successful, delivering significantly better returns than we had received previously. Since Dave retired from the role last year, the investment committee has decided to seek external professional advice on investments, given that Dave was no longer available to take on this responsibility.

Dave was also insurance officer and led the Board discussions on improving our insurance policies to ensure better outcomes for the GFA.

Dave had previously been LKSC treasurer, receiving many accolades from his club for his work in this area.

He was a good contributor to the Board's decision-making and will be missed.

CHRIS BOWMAN

Sadly, we have to report the passing of Dave Shorter.

Dave has been a great contributor to the sport ever since he commenced gliding more than 30 years ago at Grafton Gliding Club. Once solo, he quickly progressed to become an Instructor and then Chief Flying Instructor at that Club.

Grafton gliding camps at Lake Keepit Soaring Club convinced Dave to move his flying inland where cross-country possibilities are greater.

Dave became a keen competitor from the time he bought his first glider. He was a ferocious opponent, regularly beating some of Australia's best, and was a constant on the podium.

He became Treasurer of Lake Keepit Soaring Club 15 years ago and served for seven years. During his tenure, Keepit's Membership grew in numbers from the mid-70s to more than 140 and he left the Club with robust finances.

In 2014, Dave became Treasurer of the GFA and made a great contribution in that capacity until last August. He continued his association with the Federation as Chairman of the Investment Committee, and in that role, he guided our finances into an ever stronger position.

In addition to his financial contributions to the sport, he was a regular task setter, weather forecaster and all-round contributor to the harmony and success of the sport. He regularly wrote articles on his experiences, including frank lessons from incidents. Many of his features will be valuable reading for years to come.

Dave was winning days at Keepit Grand Prix events until a month ago.

He leaves his wife Carol, four children and 10 grandchildren, and will also leave a gap in the sport.

NATIONAL COACHING DIRECTOR

We are looking for expressions of interest to fill the important role of National Coaching Director. You would become an integral member of the Soaring Development Panel (SDP) in a voluntary role, supporting a group of Soaring Development managers.

Please contact
Jenny Thompson, Chair of the Soaring Development Panel
CSDP@glidingaustralia.org

FAI GLIDING BADGES

1 MARCH - 31 MAY 2021

BERYL HARTLEY
FAI CERTIFICATES OFFICER
faicertificates@glidingaustralia.org

A CERTIFICATE

ERIC DINES	BEVERLEY SC
BEN JAMES	NORTH QUEENSLAND SSC
MAURICE PONTT	BUNDABERG GLIDING
HAMISH SCOTHERN	SOUTH GIPPSLAND GC
JAMES SPENCER	SOUTH GIPPSLAND GC
ASHLEY SIRR	THE GLIDING CLUB OF WA
OLIVIER LAPIERRE	SOUTHERN CROSS GC
NICK NEYNENS	KINGAROY SC
MARK KEECH	THE GLIDING CLUB OF WA
ZENON BUSSENSCHUTT	ADELAIDE SC
LEO NELSON	BATHURST SC
THOMAS CLARK	GRAMPIANS SC

B CERTIFICATE

SCOTT CREW	ADELAIDE SC
ADAM MECHLER	GEELONG GC
MATTHEW SWINN	MELBOURNE GC/VMFG
BEN JAMES	NORTH QUEENSLAND SC
MAURICE PONTT	BUNDABERG GLIDING
ASHLEY SIRR	THE GLIDING CLUB OF WA
NICK NEYNENS	KINGAROY SC
ZENON BUSSENSCHUTT	ADELAIDE SC
JONATHAN BLOOMFIELD	SOUTH GIPPSLAND GC
RYAN ROGERS	ADELAIDE S

C CERTIFICATE

ZAC MALAKELLIS	BATHURST FLIGHT
KASSANDRA COLE	WARWICK FLIGHT
ERIC DINES	BEVERLEY SC
MARC HUGELSHOFER	MELBOURNE GC /VMFG
MAURICE PONTT	BUNDABERG GLIDING
ASHLEY SIRR	THE GLIDING CLUB OF WA
NICK NEYNENS	KINGAROY SC
ZENON BUSSENSCHUTT	ADELAIDE SC
RYAN ROGERS	ADELAIDE SC

GFA CALENDAR

Use the Contact GFA menu at **www.glidingaustralia.org** to send event details to the GFA Secretariat for publishing online and in GA.

2021 BUNYAN WAVE CAMP1
8 - 25 September 2021
Canberra Gliding Club - Bunyan Airstrip, Monaro Hwy, Bunyan NSW
For further details email:
bunyanwavecamp@iinet.net.au

QUEENSLAND STATE CHAMPIONSHIPS
26 September - 2 October 2021
Kingaroy Soaring Club
See **kingaroysoaring.com.au** for registration details.

MULTICLASS NATIONALS
4 - 11 October 2021
Kingaroy Soaring Club
See **kingaroysoaring.com.au** for registration details.

CARTER CUP - GCWA
30 Oct – 7 Nov 2021
Gliding Club of WA, Cunderdin Airport, Cunderdin WA
Competition Organiser **Cameron McDonald 0400 581 132**

NSW COACHING WEEK - NARROMINE
14 – 20 November 2021
Narromine Gliding Club,
All suitably rated pilots are welcome to enter and improve their cross country skills.
Contact Armin Kruger – NSW SDM
0477 945 387

NARROMINE CUP
21 – 27 November 2021
Narromine Gliding Club
The Narromine Cup will be running this year. **Contact Beryl Hartley on email arnie.hartley@gmail.com** for futher details.

NSW STATE CHAMPIONSHIPS - NARROMINE
28 November – 4 December 2021
Narromine Gliding Club
Contact **Mick Webster**
mick260649@gmail.com f
or further details

VICTORIAN STATE GLIDING CHAMPIONSHIPS - BENALLA
4 – 11 December 2021
Competition details will be published shortly at
glidingclub.org.au
and on the comp web site
glidingcomp.flights/vsa2022

CLUB AND SPORTS CLASS NATIONAL CHAMPIONSHIPS:
12 - 19 December 2021
Sun 12th is a practice day, leaving 7 comp days. See
glidingcomp.flights/cs2021/

WORLD GLIDING CHAMPIONSHIPS NARROMINE
November - December 2023
Narromine was the venue for the 2015 Junior World Championship, which was very successful, flying on 10 out of a possible 11 contest days. It was the venue where Australian glider pilot Matthew Scutter became World Champion in Standard Class. Narromine Gliding Club is honoured to be selected by the IGC and we look forward to hosting an amazing gliding competition.

If you would like to be a part of the organisation and running of this World Championship Competition please go to the Contact Us page and tell us about yourself and how you can help.

JUST CULTURE 1.0

PROFESSOR SIDNEY DEKKER
National Safety Advisor

There is a link between people's commitment to report safety-critical events or near misses on the one hand, and how an organization (CASA, the GFA, your club) handles the aftermath of those events on the other. Responses that are perceived to be punitive or retributive obviously put a damper on people's willingness to share their stories.

Nobody wants to unjustly sanction members for their involvement in an incident. Nobody wants to jeopardize organizational learning by threatening people who disclose their mistakes. Unreflectively or arbitrarily punitive regimes destroy the opportunity to report safety issues without fear of reprisal. This is why you want to put a 'just culture' policy or program in place. It might seem so simple. But justice, accountability and trust are all hugely difficult to define and agree on.

I wrote the first book 'Just Culture' in 2007. At the time, just culture was itself mostly understood in retributive terms. We have come quite a distance since then. A retributive just culture tries to draw a line between what it will accept and what it won't accept. If something happens that it won't accept, it tries to assign proportional, fair consequences to whatever transgression was committed.

REAL WORLD MESSINESS

The idea is that it is simple to say what you won't and will accept, and that it's easy to recognize this in the messiness of events in the real world. As it turns out, this is far from simple. The supposed 'line' that a retributive just culture draws actually only exists after it has been drawn, not before.

Suppose that you don't accept a wilful violation. What is wilful? Philosophers have broken their brains over the status of human intention and free will for millennia, and last I checked, they weren't quite done yet. Or suppose that you don't accept negligence. Sure, that sounds simple. But what is 'negligence'?

It turns out that there actually is no such thing as 'negligent behaviour' because negligence is a legal judgment, not a psychological category. So you can judge behaviour to have been negligent if you are legally qualified, but even that isn't so simple. Just look at the following definition:

Negligence is conduct that falls below the standard required as normal in the community. It applies to a person who fails to use the reasonable level of skill expected of a person engaged in that particular activity, whether by omitting to do something that a prudent and reasonable person would do in the circumstances or by doing something that no prudent or reasonable person would have done in the circumstances. To raise a question of negligence, there needs to be a duty of care on the person, and harm must be caused by the negligent action.

In other words, where there is a duty to exercise care, reasonable care must be taken to avoid acts or omissions which can reasonably be foreseen to be likely to cause harm to persons or property. If, as a result of a failure to act in this reasonably skillful way, harm/injury/damage is caused to a person or property, the person whose action caused the harm is negligent.

JUDGEMENT CALLS

That makes it patently obvious, no? Of course it doesn't. Because the definition itself is a whole series of judgement calls:

What is 'normal standard'?

- How far is 'below'?
- What is 'reasonably skillful'?
- What is 'reasonable care'?
- What is 'prudent'?
- Was harm indeed 'caused by the negligent action'?

Just see if you, for your own flying, can – objectively, inarguably – define things like 'normal in the community,' 'a reasonable level of skill,' 'a prudent person,' or that you could achieve 'a foresight that harm may likely result.' What, really, is normal, prudent or reasonable – objectively and inarguably? Don't we all want to improve safety precisely because the activity we are engaged in can result in harm? Of course, research has shown us a long time ago that once we know the outcome, we overestimate the amount of foresight we, or someone else, could and should have had.

WHAT, NOT WHO

These are all judgement calls that someone will have to make. So who is that someone? It is not that we can't, at some point, make these calls. But many of them will remain forever contested, also inside of gliding clubs. The important question, then, is who is going to make that judgement. Whom do you trust to do this fairly, equitably and well? Don't count on CASA to be all those things. But what about your own training panel? Your CFI? The Regional Manager Ops?

Retributive just culture approaches are organised around finding out who did something wrong and how to deal with that individual, rather than asking what was responsible for things going wrong and how to fix that as a community. If the response focuses on the individual, the who, then underlying conditions that gave rise to the problem in the first place can be missed and left unaddressed.

In the next issue of *Gliding Australia*, we'll look at the robust alternative to this kind of retributive just culture.

FLARM-AZING

BY DAVID JANSEN

Did you know that every registered aircraft in the world is assigned an ICAO (International Civil Aviation Organization) 24bit binary code that is linked to the aircraft registration?

When a glider is registered, CASA send the Certificate of Registration holder a letter containing a code that looks similar to this - **011111000001111011100001.**

This 24bit binary code is also converted into Decimal Code, Octal Code and Hex Code.

There are various web sites around that can do the conversion for you, or you can get in touch with CASA, give them your VH-xxx registration, and they will forward you a letter with all the information. Their web address is here **bit.ly/3i3iCyR**

What we as glider pilots are after is the Hex code beginning with the combination of 7Cxxxx.

'7C' is the prefix for Australia and is used to specifically identify your aircraft.

Your Flarm uses this Hex code and your Flarm code should match your aircraft registration.

FROM THE CASA WEB SITE

"If you are using your EC device on a registered aircraft with an existing ICAO 24-bit address, you must program this address into your EC device. Contact the civil aircraft register if you don't know the 24-bit address for your aircraft."

What is an EC (Electronic Conspicuity) device?

An EC device transmits Automatic Dependent Surveillance-Broadcast (ADS-B) information about the position of an aircraft to other airspace users operating similar equipment.

While Flarm is not technically an EC device (No ADS-B Out) it behoves us as aviators to match our Flarm IDs (Hex Code) to our VH registration numbers.

With the advent of Flarm tracking through such services as the OGN (Open Glider Network) and commercial sites like FlightRadar24, our aircraft are becoming more visible.

The OGN maintains a database of our Flarm Hex code, which you may sign up to voluntarily, and uses this data to identify you as you are tracked. If you have not signed up, you are still tracked, just not identified.

The OGN database can be accessed at this location **ddb.glidernet.org**

We have a growing number of voluntarily maintained OGN receivers going around Australia, as well as FlightRadar24 receivers – which also receive your Flarm – so it's time for us to start thinking about surveillance and making the numbers match. Eventually, you might see this as a Form 2 amendment in addition to confirming you have the latest Flarm software each year.

WHAT ARE THE ADVANTAGES?

Checking your Flarm installation!

Ever heard someone ask, "Why can't I see you on my Flarm?" Go to this web site and click on the inverted tear drop near the Kingaroy OGN receiver.

Glider Tracker bit.ly/3bZMfNA

Explore the information in the top right info box and you will see that the Ditto base station, a Flarm in itself, has a signal strength around 42.0 dB. The higher the number, the better the Flarm reception or, in other words, the better your Flarm is transmitting. With today's modern Power Flarm and a good aerial install, it is typical to see a glider as far away as 140km from the receiver – and that is great news if someone is looking for you near last light.

As an aside to this, if your club uses DittoLog, the Ditto base stations should also have a 7C prefix. CASA will give you a code for a ground station if asked. Kingaroy is waiting for the assignment of a 7Cxxxx code at the time of writing this article.

RESOLVING AIRCRAFT ID

So, what happens if you do NOT have a 7Cxxxx Flarm code in your Flarm? The Flarm database in my glider sees your Hex code, which might have been registered by an ASG29 owner flying out of Poppenhausen in Germany, with a registration of D-2929. My LX9000 tells me your rego is D-2929 and you are an ASG29, when in fact you are an Astir from Lake Keepit.

If I can see your registration electronically, but I'm not close enough to visually identify you, at least I can have a go at contacting you if needed. I believe the GFA is in the process of defining a default cross country frequency, so if a glider from Narromine meets a glider from Bathurst somewhere over the plains, we can at least talk to each other in the thermal we share. Wouldn't that be nice? (Maybe try 122.7 until that is actually written in the MOSP?)

SEARCH AND RESCUE

There are websites out there that keep a record of your flight track. If for some unfortunate reason you are not home at the end of the day, where will we start to look? Have you ever just gone flying or changed your task in the air? The ground receivers are watching and can help locate you if you are in distress.

AIRMANSHIP

As the airspace becomes more congested and Air Services Australia pushes Class E airspace ever lower, we need to present a professional image to all those that might like to shut us out. Ever heard the Ed Kilbourne gliding song 'The Last One Up' that goes "When the FAA puts a TCA over every place that we soar, and keep out signs all are posted on our ceilings and our floors, when the privilege to fly the ridge, comes from Washington DC.." You get where we are going here.

If we can keep our operation as professional as possible, we keep a voice that matters in the big picture.

Go for it….and stay safe for yourself and those around you.

FURTHER READING

wiki.glidernet.org
ktrax.kisstech.ch/devices
Glider Radar bit.ly/3fRYDjN
Glider and Seek bit.ly/3yPRgSW
flightradar24.com

OPERATIONS

In Issue 54 of the Gliding Australia magazine, I wrote of an incident where an aircraft was cleared for flight after a hard landing despite suffering substantial structural damage. The damage resulted in the flight crew experiencing aileron control difficulties during the subsequent aerotow launch.

Incidents involving sailplanes that have been flown with undetected damage following a hard landing are not uncommon. The Airworthiness Department frequently receives reports from Inspectors who have discovered undetected hard landing damage while conducting an annual inspection.

A hard landing occurs when a sailplane hits the ground with a greater vertical speed and force than in a normal landing. However, the forces involved may not always be apparent, so for most pilots if they have to question whether that previous landing was ‘hard’, it probably was! Any landing where tyres or wheels are deflated or damaged should raise this question.

Sailplanes are designed to withstand flight and landing loads within specified limits. If design limits are exceeded the structural integrity of the sailplane structure may be jeopardised and safety could be impaired. Any report or evidence on the sailplane which suggests that the design limits have been exceeded or equipment damaged should, therefore,

CHRISTOPHER THORPE
Executive Manager, Operations
emo@glidingaustralia.org

be followed by a careful inspection appropriate to the nature of the occurrence and in accordance with the sailplane manufacturer’s approved data.

The following advice is provided as guidance for special inspection requirements to certificate of registration holders, pilots and individuals involved in the maintenance of sailplanes. It is not possible to provide precise details of inspections to be adopted after every type of incident due to glider design differences and the varying nature of the stresses that may occur.

Where the sailplane manufacturer provides for special inspection requirements, those inspections must take priority over the guidance material in this bulletin. Should the manufacturer’s inspection requirements be found to be deficient the following advice is provided to supplement the manufacturer’s recommendations.

The inspection process must be to such a scope as to ensure that all defects, including sub-surface defects, or limitations in control functionality are detected. By virtue of their design, sailplanes differ in the manner in which an abnormal load may manifest itself. Wrinkling or distortion of fuselage or wing skins may well be an indication that structure deformation or failure has occurred, and a full investigation should be carried out. Any jamming, binding or limited travel of controls must be fully investigated. A wing frequency check should also be conducted in accordance with paragraph 3.3.4.1 of GFA publication Basic Sailplane Engineering (AIRW-M005).

Should the inspection process reveal that the sailplane has suffered major damage, the Maintenance Release must be endorsed that the sailplane is unairworthy (i.e. enter a Major Defect in Part 2). The Maintenance Release will then cease to be in force pursuant to paragraph 19.5.2 of MOSP 3 until the defect has been cleared by an appropriately authorised person.

If a sailplane has been flown through conditions of severe turbulence, or has been subjected to flight manoeuvres in excess of the manufacturer’s recommended limits, or has suffered a hard or overweight (e.g., with water ballast) landing, including a ground-loop, the sailplane must be taken out of service and assessed for damage. The inspector must understand the loads which the sailplane is likely to have been subjected to so that the inspection can cover the likely damage points. A person holding an Annual Inspector or higher authority is authorised to perform the inspection and release the sailplane to service.

The inspections and actions recommended prior to further flight are detailed in Chapter 25 of the GFA publication ‘Basic Sailplane Engineering’.

ORDER A PRINT EDITION OF GA 56
BIT.LY/3C7X0CP

VICTORIAN STATE CHAMPIONSHIPS

BY TERRY CUBLEY

When the VSA were looking for a club to host the State Championships, now that flying was almost back to normal following the various lockdowns, the Gliding Club of Victoria committee suggested that we could run it. I was just too slow and ended up agreeing to be the Competition Director. The critical rule is that the CD and the Safety Officer cannot fly.

Bruce Cowan was CD for Horsham week in February and wasn't available to help with the State comps – other than actually flying. Luckily, members of his management team agreed to keep working in their roles at Benalla, so we had Tim Shirley doing the weather forecasts, John Orton setting Tasks and Neil Campbell scoring.

It was easy having a well honed team, all I had to do was speak at Briefing. Fortunately, Gary Cropley agreed to be the Safety Officer for the event, as he is well experienced and capable for that role.

GOOD TURNOUT

As it was late in the season after such a delayed start, I initially thought that we would struggle to get many entries. Neil Campbell set up our web page and Rhonda did some promotion on social media, and of course she contacted all GCV members to encourage them to participate.

By the time the competition started we had 21 entries, many more than we had hoped for. We had three competitors from other clubs – Tocumwal, Bendigo and Horsham – plus Keith Willis from Bordertown who just wanted to go flying and volunteered to be the 'sniffer' – launching early and providing feedback on conditions so that the launch could proceed.

The practice day was held on Wednesday 3 March with approximately half of the competitors taking part. A short Assigned Area Task (AAT) was set but the weather was less than optimal and no one completed the task. John Orton travelled 104km to achieve the maximum distance. At least it gave us a good run-through of the launch, start and scoring, so we felt well enough prepared to start the competition on the next day.

WHAT IS AN AAT?

Gliding competition is about racing against your fellow competitors to see who can complete the set task at the fastest speed. Originally, tasks were fixed. For example, you would fly from Benalla to Katamatite and then Corowa and come back to Benalla. A fast glider might achieve this flight in 2 hours, while the slow competitors might take 4 hours, meaning that they have to start early and/or finish late when conditions are weak. The AAT sets a time for the task and the competitors fly as far as they can within this time by flying to a series of areas where the scoring system identifies one point in each area to maximise the distance achieved.

THE FLYING AND OUTLANDING

The first competition day on Thursday, 4 March was meant to be a straightforward flight but the weather did not cooperate. Three pilots in Ballasted Class made it around, with Tobi Geiger winning at only 74kph, which indicates how difficult the day was, just ahead of John Orton and Arnold Niewand (Horsham). Three pilots in Unballasted Class also made it around with Jack Hart (Bendigo) winning at 59kph with Garry Stevenson and Mark Goodley also completing the trip. This meant that 12 gliders either landed out or used their engine to get back, and 66.6% failed to complete.

Outlanding, typically a safe exercise, is always possible with cross country flying and you get to meet all sorts of people. The best stories often result from experiences with outlanding. Competition flying does slightly increase the chances of outlanding because you get to fly on days when you might otherwise leave the glider in the hangar. Even so, two-thirds of all competitors landing out is a little careless on behalf of the organisation.

In previous weeks we have had lift to 10,000ft and quite a number of cumulus days, but the State comps was consistently blue with climbs to 4,000-5,500ft, and many days where the lift got weaker and lower as a pilots tried to get home into the cool Southerly wind. We have days like that reasonably often, but it is cruel when it happens day after day.

Each of the first four competition days were lowish and generally blue, with the occasional cumulus. Speeds were typically below 100kph, and often below 70kph. The final day was a marked improvement with climbs to 7,000ft. It was a short day with thermals predicted to end at 5pm, and reports indicate that this was the case. So short tasks were set, but were still very competitive. Ballasted Class was fairly well determined before the last task, as long as Tobi did not outland. Tobi won the last day at 116kph to confirm his overall win.

In Unballasted Class the overall scores were still very much in play with podium places up for grabs. Jack Hart won the last day at 92kph, which ensured an overall win. He was just ahead of Matt Woodhouse and Mark Goodley on the day.

NEW COMPETITORS

Four pilots were flying their first competition at this event. Flying a comp is not that difficult – the good thing is that someone tells you what the weather is and where you have to fly. By talking to other pilots, you can get good advice on how to plan the flight. The actual flying just takes practice to develop the techniques – some two-seat coaching is a real benefit in developing this. Actually flying the comp is a great experience and all of the new pilots commented on how much they learned over the five days.

On the flip side, many of the remaining pilots were very experienced and skilled. This included Australian team pilots Tobi Geiger, Ailsa McMillan and Bernie Sizer, plus many others with extensive skill developed over many years.

DAY WINNERS

Ballasted Class: Tobi Geiger, Tim Wilson, John Orton, Tobi Geiger, Tobi Geiger

Unballasted Class: Jack Hart, Mark Goodley, Kirk Amos & Steve Hobby, Ailsa McMillan, Jack Har

PRESENTATION DINNER

The final night was on Wednesday 10 March and Sue from Absolutely Delicious opened her restaurant which was well attended by all pilots, organisers, ground crew and friends. We spent a very pleasant evening, with Viv Drew (VSA President) closing the championships and presenting the trophies and prizes – a great end to an enjoyable but challenging week.

STATE COMPS AND NATIONALS IN DECEMBER 2021

The 2021/22 State comps will also to be held at Benalla, from Friday 3 December to Friday 10 December – a much better time of year for weather.

glidingcomp.flights/vsa2022/

The Club and Sports Class National Championships will be held a week later from Saturday 11 December to Saturday 18 December, so we should receive a good number of entries for both events.

glidingcomp.flights/cs2021/

VICTORIAN STATE CHAMPIONSHIPS BENALLA

4 - 10 MARCH 2021

UNBALLASTED

1 FQC	JACK HART	BENDIGO GC	MOSQUITO	3,713
2 AJ	AILSA MCMILLAN	GCV	LS 4B	3,568
3 MU	MARK GOODLEY	GCV	HORNET WL	3,434

BALLASTED

1 VG	TOBIAS GEIGER	GCV	VENTUS 2 AX	4,034
2 DW	JOHN ORTON	GCV A	SG 29/18M	3,729
3 N2	MATT GAGE	GCV	VENTUS 2CXT/18M	3,407

Full results at soaringspot.com
bit.ly/3fUZY9P

JUNIORS AT SOUTH GIPPSLAND GLIDING CLUB

South Gippsland Gliding Club operates at Leongatha Aerodrome with a fleet of four gliders – two Twin Astir and two Astir CS. Our club is a VSA Accredited Youth Gliding club and we have a number of junior pilots. In the first two weeks of April we sent two of our junior members solo, both age 15.

James Spencer is from Leongatha South and Hamish Scothern comes from Wattle Bank.

We incorporated the use of our two seat simulator into their training during our wetter months, which aided in their progress. The simulator was built with funding assistance from VSA and technical assistance from Alby James of GCV.

Having keen young members gives the club a breath of fresh air and they are all very integral to our club. We have asked Hamish, James and Josiah, who is age 14, to put their experiences into words, below.

HAMISH SCOTHERN

"My name is Hamish and I am 15 years old. I am a recent scholarship holder at the South Gippsland Gliding Club, and I also sit on the club committee as the junior member. In this role, I represent the other junior members of the club by speaking on their behalf at meetings. I can't even begin to say how much I love and enjoy gliding. The fact that I am able to fly still blows my mind. Gliding makes me realise that I am able to do whatever I put my mind to, even if at first, I don't think I can.

"I have made many close mates within the club, both junior and senior members. I see my instructors as mentors both in flying and in life and I know that I could talk to them about anything I might need, not only in the air, but on the ground as well.

"There is always something to do at the hangar to help out, and everyone is so friendly and willing to teach and pass on their knowledge of how things are done. This sharing of knowledge enables us junior members to also teach others who might be new to gliding. The overall environment of the club is very welcoming and you always feel respected, seen and valued as a part of the whole 'team.' I always feel like I get so much from club days, not only regarding my flying skills and knowledge, but also from the time spent with all the people I meet and learn from."

TOP LEFT: Instructor Kevin Owen congratulates James Spencer after his first solo.

BOTTOM LEFT: Hamish Scothern on take off first solo.

ABOVE: Hamish Scothern (centre) after first solo with instructors Kevin Owen and Ian Shadbolt.

JAMES SPENCER

"I'm James Spencer. I am 15 years old and a junior member in the South Gippsland Gliding Club. I have just completed my first solo flight and it was the biggest thrill. I have been training under great instructors, Kevin (Kiwi) Owen and Max Speedy. Currently I am working on my A certificate and have three out of the required five solo flights to go. One of my check flights must have the altimeter and airspeed covered up.

"I got into gliding after attending the Avalon Airshow in 2019 with my dad and grandad. I was lucky enough to get a ticket on an F/A 18F Super Hornet simulator. The instructor supervising the simulator trains fighter pilots. He advised that a great way to get into flying is to start with gliding. The club has built a simulator in the hangar. It is made out of an old K7 glider that the club once flew. After the club finished building the simulator, Hamish and myself started our training. Previously to the simulator, I had only started doing upper air work in the Twin Astir. The simulator helped me out immensely when we started flying again. I was doing most of the flying and some of the landings.

"My future ambitions include something related to flying such as the Air Force, agriculture, even aerobatic flights or competitions. There are many opportunities for my future. I want to buy an aeroplane one day, and tow gliders up, explore and go on holidays to places I've never been before. The coolest thing I have done in a glider so far would have to be a loop. I have always wanted to feel positive and negative g-force and when I did the loop, it was the best feeling when I got to experience it. Even after I have achieved my aeroplane licences, I would to still love to continue gliding as it was the start of my flying passion."

JOSIAH WELLS

"I am Josiah Wells and I joined the South Gippsland Gliding Club this summer with my dad. I have enjoyed gliding from my first flight, because of the amazing view from Inverloch and Phillip Island to Wilson's Prom, as well as feeling in control of the glider. I have had 20 flights and logged just over six hours, and I am currently working towards being able to fly solo. The club is fantastic. It's great to hear the adults share stories and advice, and they're always so kind and willing to help you. I learn so much every day at the gliding club and during school I often find myself studying the cloud base. I would definitely recommend gliding to anyone who wants a fun challenge."

GA

GLIDER MAIL – HISTORY YOU CAN HOLD!

BY JOHN PATTERSON

Image 1

Aerophilately is the branch of philately that specialises in the study of airmail. Since the beginning of aviation, enthusiasts have created, collected and studied paper ephemera relating to all aspects of the transport of mail by flight.

This ephemera can take many forms including official government issued flight related postage stamps, unofficial privately produced non-postal stamps (often referred to as vignettes or cinderellas), envelopes or specially created cards carried on important flights or in aviation competitions and often signed by the pilot, aerogrammes and even baggage labels.

Within aerophilately there are numerous popular specialist areas of interest such as pigeon mail, rocket mail, balloon mail, parachute mail and air crash mail. The latter one – as the name implies – is mail that has been retrieved from a crashed aircraft.

Not unexpectedly, there is also a sub branch of aerophilately known as glider mail. To qualify as glider mail, the item in question needs to have been transported in a glider at some point in its journey to its ultimate recipient, and should include some physical indicator to confirm that.

In addition to the ephemera listed above such as official and unofficial stamps, pilots' signatures and specially created envelopes and cards, other characteristics commonly found on glider mail include custom made rubber stamps known as a cachet promoting the flight or an associated event, printed glider related imagery, a written indication of the type of glider used and/or the name of the pilot, and occasionally even a standard 'Par Avion' type of air mail label.

Some glider mail will be transported through normal mail channels after having been carried on a flight and will thus also include the non aviation related postal stamps and cancels. Occasionally, a piece of glider mail will have all of these characteristics.

A glider mail cover can be like a little package of clues that, if properly interpreted, can provide quite specific insight into the origin and purpose of the artefact. To a gliding enthusiast, they can provide a direct link to important moments in gliding history and trigger whole new avenues of glider research.

To demonstrate these various forms of iconography, here are some interesting examples of glider mail originating from outside Australia that are available on a popular auction site at the time of writing:

Image 2

IMAGES 1 & 2

An extremely early example of German glider mail dating from November 1924, this card was carried by glider from the town of Buchelburg to the town of Lehningen, a distance of about 50km as the crow flies. This trip is indicated by a hand-applied rubber stamp. The card was then transported a few kilometres to the town of Neuhausen where it entered the postal system and was delivered to its ultimate destination, most likely the town of Gorlitz, some hundreds of kilometres further away near the Polish border.

The card obviously had some money raising purpose for the publisher, the Aviation Club of Pforzheim, because the text indicates that any profits will be used to further aviation activities.

The card is also a promotion for the featured aeroplane, a Roter Teufel (Red Devil) brand machine of the model type Hols der Teufel, which translates as 'Devil Take It' or just 'Go To Hell'. Wikipedia has this to say on the Hols der Teufel:

The first glider to be named the Hols der Teufel was the influential Djävaler Anamma, designed by Alexander Lippisch in 1923. Its key structural feature was an A-frame which carried wire braced wings and linked to a flat girder rear fuselage. It later evolved through the Schneider Grunau 9 into the very popular Zögling, which avoided the controversial "skullsplitter" forward member of the A-frame with a vertical strut behind the pilot.

This plane was the first series production undertaken by famed sailplane designer and manufacturer Alexander Schleicher after he started his own business. Interestingly, he also has a connection with the next item.

Image 3

IMAGES 3 & 4

Another very early glider mail item, this illustrated letter card was prepared for the 6th German gliding competition in August 1925 and was flown about 5km on 31 August from the well known gliding centre of Wasserkuppe to the nearby town of Gersfeld. Information available on the web indicates that "the mail was transported by the well known Rhone veteran Gottlobb Espenlaub who dropped the mailbag in front of the post office at Gersfeld". From Gersfeld it was transported through the German mail system to its final destination in the nearby town of Fulda.

The front of the card features a fascinating photo of people watching early gliders in action, with a hand written attribution to a gliding meet at Gersfeld. The reverse features a printed cachet with an eagle on the left that promotes the competition as well as the name of the event sponsor, the Rhon Rossitten company. This company provides the link to Alexander Schleicher mentioned above – he worked on sailplane construction for the Rhon Rossitten company at Wasserkuppe before going out on his own and building the Hols der Teufel.

On the right side of the reverse is a postal cancel mark created by the German Reichspost as a one-off for this flight. Apparently this cancel was designed by a member of the Vereinigung ehemaliger Feldfliegertruppen (Association of Former Field Pilots), which would account for the fairly militaristic nature of the cross and eagle imagery. This connection points to the important role that ex-members of the German air force played in the development of aviation, and particularly gliding, in their country in the years following World War 1.

The reverse also features a very early German Mit Luftpost (By Airmail) sticker and a small red hand stamp identifying the item as having been flown by glider between Wasserkuppe and Gersfeld.

The pilot Gottlob Espenlaub was himself a noted early sailplane designer who is co-credited, along with Gerhard Fieseler, as the first person to demonstrate the effectiveness of the aerotow – their demonstrations lead to the eventual broad adoption of the launch technique. Espenlaub went on to spend much of the rest of his career designing rocket-propelled gliders – which sounds like a tautology to me.

Image 4

IMAGES 5 & 6

These two covers dating from 3 August 1934 are artefacts carried on the 'Lustig Sky Train' – a remarkable experiment to test the potential effectiveness of the glider as a regular mail and goods delivery service. A powered plane took off from New York towing three Franklin PS-2 Gliders. This sky train flew to Philadelphia, Baltimore and Washington DC, releasing one glider over each city carrying mail intended for that city. Figure 5 shows a cover flown to Philadelphia, while Figure 6, a cover flown all the way to Washington, has been signed by all four pilots on the sky train and thus is considerably scarcer.

Image 5

Image 6

IMAGES 7 & 8

These two fabulous Polish covers dating from 1958 and 1963 each feature a dazzling array of iconography, including printed envelopes, special vignette stamps, numerous stamps referencing Glider Mail, the model and call number of the

continued over page

aircraft used, a specially designed cachet, Express Post designations and postal cancels indicating subsequent transmission through the postal system. As if that wasn't enough, Fig 7 also carries two official Polish postage stamps with a design featuring a glider. Figure 7 was created in conjunction with a philatelic exhibition held in the town of Leszno, and Figure 8 is associated with the 9th Polish Gliding Championships, also held in Leszno. I liked Figure 7 so much when I saw it that I bought it!

Image 7

Image 8

Image 9

Image 10

IMAGE 9

This rare example of an official Government sponsored glider mail release is a 1972 cover produced for carriage by glider as part of the 60th anniversary celebrations of the British Royal Flying Corp. As well as the red ink cachet, the flight details and the pilot's signature, the cover features a British Forces Postal Service cancel designed specifically for postal material associated with the 60th anniversary celebrations. The cover also shows a large printed image of two RAF Airspeed Horsa gliders from No 298 Squadron under tow in 1944.

IMAGE 10

This 2007 cover was produced in commemoration of the 50th anniversary of the Auerbach airfield in Germany. The cover was transported by normal post from Qatar using a Qatar 100th Anniversary of Aviation postage stamp which features an image of a very early pioneering glider design.. The cover also features a printed photo of a modern glider. Upon arrival at Ellefield in Germany the cover was transported to the Auerbach airfield where it was carried by glider before receiving the green cachet stamp.

AUSTRALIAN GLIDER MAIL

Aerophilately is a popular pastime in Australia so it is no surprise that a number of glider mail articles have been produced here.

IMAGE 11

This marvellous and very scarce cover was created to commemorate the first Sailplane Flight in Australia that took place during the Empire Air Day at Kingsford Smith Airport on 29 May 1937. 125 covers were flown by Pilot M Warner. The covers were individually numbered and each was signed by the Pilot.

IMAGE 12

Also created in 1937, this cover was one of 600 carried by pilot PJ Pratt on the inaugural glider flight from Geelong to Melbourne. The image on the cover would suggest that the glider was under tow most of the way. The cover proudly proclaims that the glider used was the first to loop the loop in Australia. The cover was created in co-operation with the Geelong Philatelic Society and is signed by both a representative of the society and the pilot.

The recipient of both this envelope and that displayed in Figure 11, Ernest Crome, is regarded as one of the three towering figures in Australia aerophilately. The other two are Nelson Eustis and Tom Frommer.

IMAGE 13

A number of glider mail articles was created for the 14th Gliding World Championships held in Waikerie, South Australia during January 1974. On 21 January 1974, the Polish team organised the transport of 442 covers by Polish Team member Franciszec Kepka on a 455km competition flight that followed the course Waikerie – Spalding – Robertstown – Laxton – Waikerie. Kepka placed third that day. On arrival at Waikerie, the covers were officially cancelled at a special mobile post office that had been set up at the airfield, thus allowing them

Images 11 - 12

to enter the postal system for transmission to their ultimate destinations.

These individually numbered covers feature a specially produced envelope design, the flight details, a hand stamp of the pilot's name in lieu of an autograph, a specially designed Australia Post cancel and one of four different coloured privately produced vignette stamps created for attachment to the glider mail.

IMAGE 14

These are the four different coloured vignette stamps produced by the Polish team for attachment to their glider mail carried at the 1974 World Championships. Sadly, glider mail vignettes are rarely produced in Australia.

IMAGE 15

In addition to the items shown in Fig 13 and Fig 14, the 1974 Gliding World Championships at Waikerie also saw the creation of another series of covers carried during the competition. 36 pilots from 18 different countries each carried around seven covers. Each of these featured a specially printed envelope that also carries the flight details, the pilot's signature and the same official postal cancel issued by a special mobile post office that had been set up at the airfield. In common with Figure 13, once cancelled, these covers were then transmitted through normal Australia Post channels.

I hope you have enjoyed this brief introduction to glider mail. It is an area that allows enthusiasts to own tangible relics of notable events in world gliding relatively inexpensively and can also trigger some quite fascinating avenues of research, especially with the magic of the internet at one's fingertips.

If you would like to find out more about the subject, you could look out for the book 'Glider Mail - an Aerophilatelic Handbook' written by Simine Short and Dan Barber (Published 1987 Amer Airmail Society). I should add that although I haven't seen this book, I suspect it would be worthwhile pursuing. For information on every aspect of Australia's aerophilately, including glider mail, your best resource is the 8th edition of The Australian Air Mail Catalogue, a relatively recent edition by Nelson Eustis and Tom Frommer. This book is a magnificent production which would be of interest to most aviators, not just those interested in aerophilately.

I would be interested in seeing any other examples of Australian Glider mail that you may own. Please email if you have any examples you would like to share.

About the Author: John Patterson is a Sydney based records officer and amateur antiquarian. He has been interested in gliding ever since 1975 when Rob Hall became his stepfather.

Image 13

Image 14

Image 15

GA

BENDIGO GLIDING CLUB IS TAKING OFF!

BY MARK KERR

The last 12 months has been a year full of doom and gloom in most pursuits, including gliding. However, things are looking bright for Bendigo Gliding Club, which is progressing in leaps and bounds.

The Covid epidemic affected everything and everyone, but BGC came through looking stable and strong. Naturally, flying revenue ceased over the full lockdown period, and then partially resumed with local members only, while Melbourne members were stuck in the city.

The lack of flying revenue was offset by the club's monthly Infrastructure Levy that supports our outgoings, including loan payments. This allowed us to meet our ongoing obligations without full flying revenue and, after the lockdown, we quickly settled back into normal gliding operations and social activities.

Rather than shutting shop and retreating, the club chose to remain confident and committed to its long list of plans, some of them quite major. Many of these were set out as 'Strategic Goals & Objectives' crafted under our S2F plan.

For example, BGC continued with its plan to purchase adjacent land to create an East-West strip to complement the current North-South strip already owned by the club.

The club has wanted to make this purchase for some time, and making it happen has required a great deal of work and effort from members and the committee. The new runway will assist our operations considerably, creating a much safer environment for avoiding troubling crosswinds. The tuggies are very enthusiastic about the idea!

There will be more flying days available, wind direction changes will have less effect on planning landings after a long flight and the extra space will make catering for large numbers of gliders and tugs easier and safer.

The new runway is approximately 1.2km long and about 120 metres wide, shaped in such a way to permit easy positioning of new hangars.

Speaking of hangars, the club already has three eight-glider hangars on the existing strip with a new eight-glider hangar in the late stages of planning for the new strip, which we hope to erect later this year. There is space for at least another five hangars on site and currently a second hangar on the new land is being investigated.

With so many gliders around, we need to consider maintenance, so the creation of an onsite maintenance workshop is proceeding. This development is not only geared to provide maintenance, but also aimed at teaching and training.

TOP LEFT: Lineup of gliders on the N-S runway.

BOTTOM LEFT: Signing the E-W runway contract.

TOP: Working on the Bocian in the new workshop.

ABOVE: East-West runway plan.

In addition, the club is continuing with its plans to construct toilets in closer proximity to launch areas, rather than go on with the current long walk to the clubhouse.

These may be needed especially as BGC has seen a dramatic increase in membership. On 30 June 2019, total membership was 36 but has risen to 49 by 28 February 2021.

This is not too surprising though. Bendigo Gliding Club has much to offer cross-country glider pilots. There are few airspace restrictions and the area generally has excellent soaring conditions, being situated in Central Victoria. From Raywood pilots can head in almost any direction to encounter good lift for long cross-country flights. In a worst-case scenario, the many small country towns dotting the area are equipped with airstrips, while the farm paddocks are big and flat!

Anyone interested is encouraged to visit our website at: **www.bendigogliding.org.au**

GA

NARROMINE ADVENTURES

BY ATTILA BERTOK

I was really looking forward to the 2021 flying season after my friend Tomas Suchanek and I bought our ASW20 last year. I am getting used to flying famous gliders. I still have my Standard Cirrus, Zulu Romeo, made famous by Ingo Renner. This particular '20 was owned by Arnie Hartley and at one stage by John Rowe. There is also a story in the book 'The Road to Narromine' that describes how to hit a powerline with a glider and stay alive.

That was our UKI. At least we have a lucky glider. I've already had some nice flights from Lake Keepit in November, and even visited some paddocks with it, but I was really looking forward to taking the glider further west into some stronger weather and longer days. Of course, nothing went to plan. I skipped the entire season due to Covid and the unusually wet weather. I have also had the glider with me and unfortunately, with older technology, there is always one more thing – or three – to fix.

I ended up having two short trips to Narromine with a two-week break between them.

A NARROMINE FEELING

On the first trip at the end of January, I rolled into Narromine after a short nine-hour drive from Coffs Harbour. I've always liked to fly here, and I always liked to come back. It was great to meet my friends again, Arnie, Beryl and everybody else. As they say, there is something about the place and that feeling sort of hits you. I think it is the feeling of anticipation of what might happen in the next few days. Thankfully, a lot happened and mostly in a good way. I just try to give a general sense here of my modest adventure instead of a circle-by-circle description.

I arrived a few days late, considering the weather. The Australian top guns, David Jensen, Adam Wooley and John Buchanan were just about done with their annual renewal of all sorts of Australian records, but it was still nice to mix a little with these great pilots. I have enormous respect for them. Nowadays people tend to talk about the technology of the gliders more than the people in them, but it is still the pilot who does the most work.

Anyway, my plan was to get going early, fly as far away as I can and try to come back, maxing out the conditions. This is what I do on most days, since I don't fly competitions in gliders (yet). I usually drive a few hours to Keepit or Narromine, so I must make it worthwhile. However, 'must' is the wrong expression – I just love to be up there.

SENSE OF ACHIEVEMENT

This type of flying gives me an enormous sense of achievement, especially when I get home on possibly the last thermal, right on a few minutes after sunset. I'd better not be late, because otherwise Beryl gives me a debrief. When you put your glider away in the darkness, you know it was worth coming even for this one flight. Then eat, sleep, repeat!

Some flights are more memorable than others, but I think the day I turned home north of Bourke just a little before 5pm and made it back was one of the highlights. When I started to work my way back, I thought there would be no way to make it, but finally I did. On the way home, I enjoyed some incredible scenery, like seeing the rainbow next to a huge storm cloud and a wall of dust.

It is also more interesting when the mobile phone reports being out of memory, just when I could have taken the photo of my lifetime… Looking at the last few clouds when the light is hitting them from below because the sun is so low is also one of the memory slivers which will sit in my mind for a long time. As a bonus, I could even climb high enough to get home. Adam was on the radio on the way as a source of encouragement and I was glad for it. He was on site for a few weeks when we had many long chats comparing the notes of a glider and a (mostly) hang glider pilot – me, that is.

One day, as it was a bit windy, we went to Forbes to test-fly my new hang glider. Adam offered to keep me company on the trip. It was also a good day for other reasons as well, such as survival.

ALL-DAY FLYING

In general, this Narromine trip was great practice, since people who only fly in the middle of the day don't know the feeling of a fully ballasted glider when there is not much lift to stay up, such as at the beginning of the day. I am getting better at fighting 'water ballast greed', when I finally drop some ballast instead of going all the way down.

This phase of all-day flying is exciting without exception. I had a few days when I could just barely manage to stay up, because it was a little too early and I sank down to below 800ft. On the other hand, when it feels easy to stay up, you know that you are late and have wasted at least half an hour or more. Flying with flaps was also new, but I have found it fun. Finally, I've managed to put the gear down on every landing.

My last flight on the first trip was also memorable, especially since I landed out at the end. This put a fair-sized dent to my ego, but it really was fun. The always-helpful Adam came to get me. On the way home, we experienced the true meaning of a mouse plague. We were driving for hours and there were mice everywhere.

continued over page

LEFT TOP: Showers developing near Narromine.

LEFT BELOW: In contrast to the last several years the normally dry lakes are green and full of water.

BELOW: There were dust devils in every second paddock.

ATTILA BERTOK
HANG GLIDING WORLD CHAMPION

I started flying hang gliders when I was 15, nearly 40 years ago in 1981 in Hungary after seeing a poster from a local club. My father was a glider pilot in the '50s and his stories surely left a lasting impression on me.

I flew my first hang gliding competition in 1984 and finished somewhere in midfield with our homemade glider that my father and I built together. I was Hungarian National Champion four times and at one stage, much later, I held all the records in the country. I think there were 14 of them including the longest flight made by a Hungarian anywhere in the world, 407km flown from Wilcannia to Swan Hill. Back then, this flight was 80km shy of the world record and, considering I did it in 5 hours 45 minutes, it made me think about what is possible. This is still my longest flight.

I came to Australia in 1991 to work for Moyes Delta Gliders and fly during the Australian competition season. This was no easy feat, because the airfare cost about the same as my salary for two years. I moved between Hungary and Australia for several years.

In Australia, I flew several international competitions including the Bogong Cup, Forbes Flatlands and the Nationals in Tumut. In 1992, I went for my first major competition in Norway for the European Championships and it really just gave me an appetite to get up to bigger and better things.

I went to the Pre-Worlds in the Owens Valley, California. I got a glider from Moyes, which was great, but otherwise I was quite ill prepared, especially having only US$300 for the trip after paying the entry fee and other costs. I remember using oxygen only every second day because I couldn't afford the daily $10 for the refill. We were getting up to 17-18,000ft regularly, so I could have used a bit more of the stuff. I was eating $2 pasta salad every day and slept behind the toilet block in a dusty storage room. I was a bit tired, hungry and sick, but I was happy just to be there.

My big international breakthrough came in 1995 when I won the Australian Open in Hay, NSW. It was notable because my friend and three-time World Champion title holder back then, Tomas Suchanek, came 2nd place. After this, I steadily improved but didn't win too much for a while.

I have now flown 13 world championships and have six top 10 placings (1, 4, 5, 6, 8, 10).

In 2005 things started to look up, because I won the Gulgong Classic, then the Bogong Cup. I also won the Pre-Worlds in 2006, and then thought that I couldn't top that.

My best result came in 2007 when I became World Champion in Big Spring, Texas. At this competition, everything fell into place. After winning the first three days I stayed in the lead and after seven days, I won the championship.

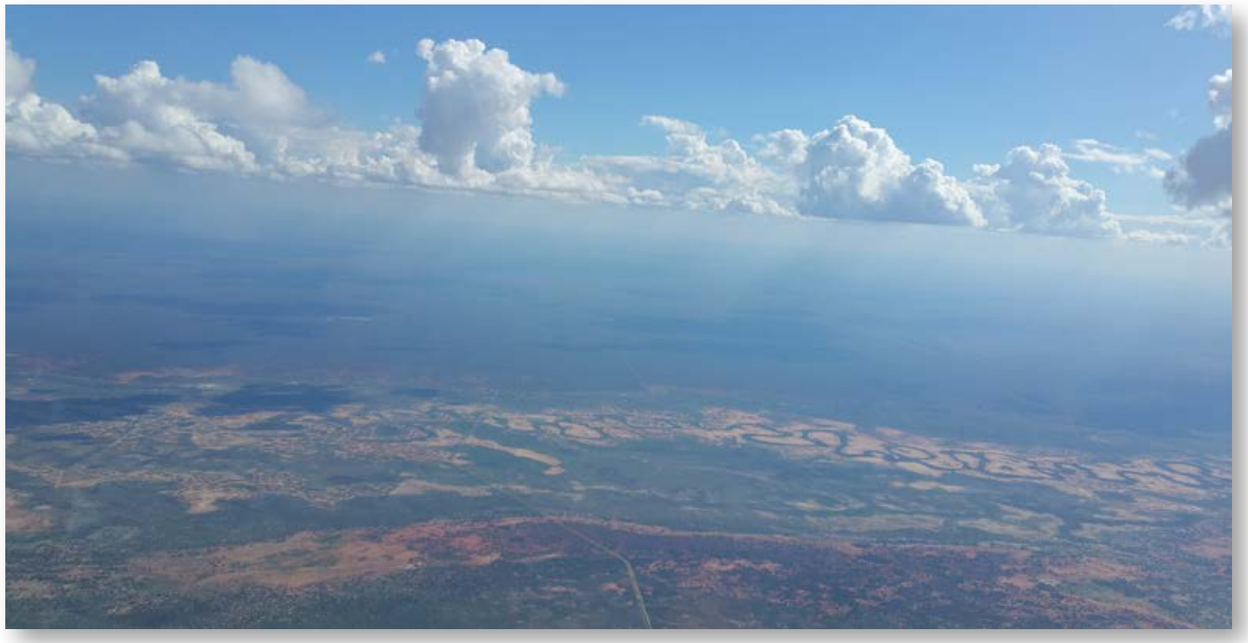
The last day provided some excitement when I had a complete instrument failure. I wasn't sure whether the backup system in my custom made instrument panel would work, and had to pull it apart halfway through the course to reset the system. I am very proud of this result because I have never flown as a professional pilot, and I achieved this while working full time.

My other notable result came in Ager, Spain at the European Championships in 2010 when I finished 3rd. I am mostly self sponsored, but Moyes Delta Gliders always gave me a glider and paid for the transportation as well.

I've always wanted to do more record flying, but apart from a camp in Wilcannia in 2000, I never could give it a real shot. At least there I did a 200km triangle speed world record, which still stands today. We also flew a 300km triangle for speed then, but it never got ratified because we didn't file a preliminary notification. Whatever, it was still good fun.

I went back to the States in 2013 and 2018 and won their Nationals in Big Spring again, so four out of four. My American friends say that they like me, but I can stay at home now.

I've also won the Gulgong Classic four times out of five tries and came second once. I've also won the Canungra classic at least three times. I've also managed to win the El Penon classic in Mexico before the Worlds and came 5th on the real thing. Last but not least, I've managed to win the Forbes Flatlands last year in January 2020.



We've even seen some huge white owls. They could barely get off the road, I guess because they had gained too much weight. Too much food around!

Talking about mice – a few days before I came, Ikemi Ichikawa found a visitor in the cockpit during a flight. Since it showed some unfriendly traits, Ikemi let this particular visitor out the window. I don't know what I would have done, but congratulate her for keeping her cool.

STATISTICS

The statistics of the trip looked quite good at the end. I think I've spent 6 and a half hours daily in the cockpit on average. The longest flight was 808km, and the shortest was 450km. I must say that I was hoping for a 1,000km flight, but I am not unhappy, because the cloud base was nowhere near as high as we are used to here. Sometimes far away from home, I've seen 10,000ft, but not for long.

I've managed to fly on days even when it was predicted to be not so good. Although I had a few strong climbs, conditions were nowhere near as good as in a 'normal' year, but these things come together anyway. This was due to the dampness of the ground and the general weather pattern. We also have the luxury of much better weather forecasting, such as Skysight, which helped a great deal in planning.

DEVILISH

I went back for another three days trip a few weeks later. This turned out to be as good and picturesque as the first, even compared with the various other parts of the country I've visited. One of the highlights was the flight down to the south of Hillston. Here, I had the opportunity to sample some great lift.

There were dust devils in literally every second paddock and I was very tempted to fly to Hay, but returned to my senses and turned around. Great help came from some enormous fires because the farmers were burning their fields, making quite a sight when climbing in these thermals and looking down to the big nasty black dust devil. It really looks devilish.

On the other day I went to the south. It was an example of a sky that looks better than it really is. The wind was also very strong from the south and for a few hours I thought I had forgotten how to thermal. After getting very low north of Temora I decided to go into the bigger looking sky and turned at Ardlethan.

It was a little late and it started to rain on me at West Wyalong. I didn't mind this at all because the glider was climbing just fine in the rain and this acted as a natural bug wiper. After 3 minutes of glide I was dry again, so none of the horror stories proved to be true about what happens to older gliders when they get buggy and wet, though I haven't yet flown a PIK20. After nearly going down in Forbes again, I was up high and enjoyed some glide ratio improvement from the evening sky.

FINISHING THE ADVENTURE

On the last day, the forecast predicted even stronger winds, so I was tempted to pack up, but finally I was rewarded with a great flight to Woodstock and back, including a fairly close look at Mt Canobolas near Orange. When I was back at Dubbo, it was obvious that it was going to be challanging to finish because of the strong head wind. Actually, the finish was OK, but it made no sense to fly for distance any longer because of the wind, so I went down and packed up. Wow, what a great three days this was. I can't wait to be back!

On the way home, I went to Keepit to drop off the glider, and found the Regatta was in full flight, so to speak, so I decided to rig again and fly. It was great to meet the Keepit crowd again and some other faces because of the other event. This time I was rewarded with a flight up to the Queensland border and back. It was great to visit my hang gliding friends on Mount Borah, and I then proceeded with the rest of the flights. I just made it back before the bad weather hit Keepit from the south. It was a perfect finish to the adventure.

GA

1,000KM FAI TRIANGLE IN VICTORIA

BY TOBIAS GEIGER

Over the years I have made many attempts at a 1,000km flight in a 15m glider. With the LS4 I managed flights of over 980, 970 and 960km, but never quite made the 1,000 mark. When I bought a Ventus 2ax from the US in 2018, I hoped to finally break through that ceiling, given the Ventus' superior performance compared to the LS4. Finally, on 4 January 2019 I did my first flight over 1,000km with a distance of 1,038km.

ABOVE: Late morning Cumulus cloud west of Benalla on 5 January 2021 at the eastern flank of a high-pressure system over the Bight. This marked the beginning of the build-up to a couple of hot and unstable days forecast to arrive ahead of the hottest day on 11 January.

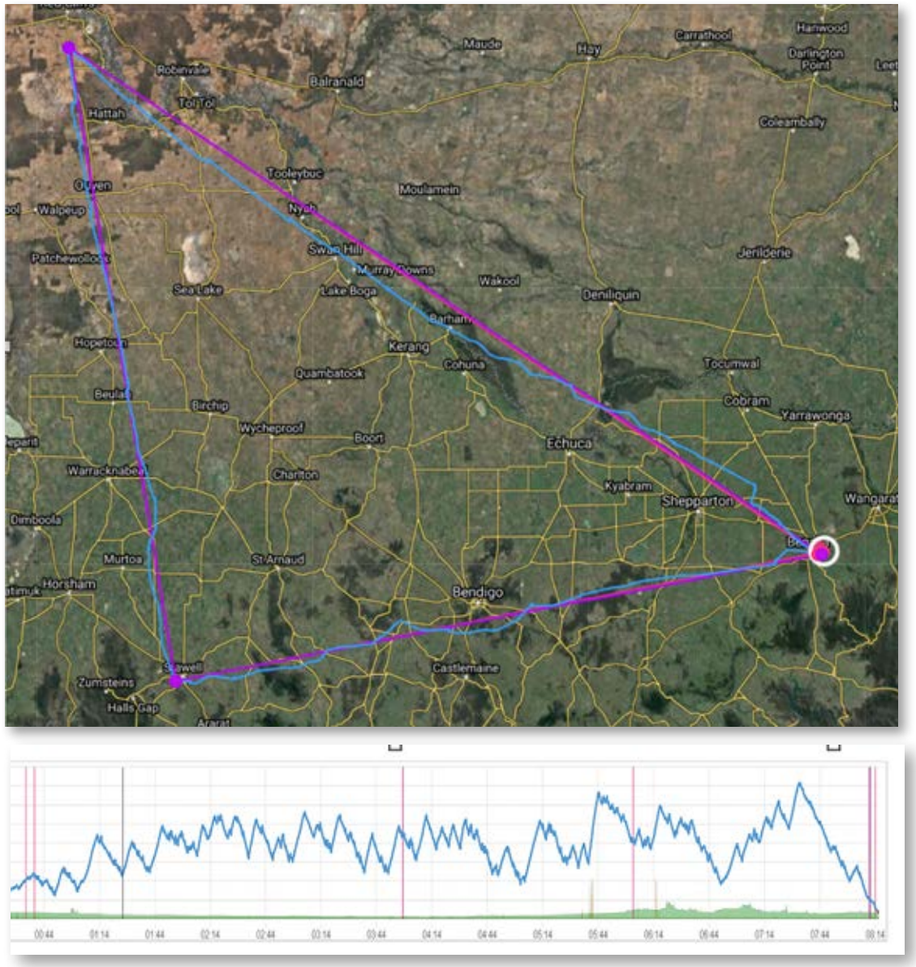
RIGHT: Declared task and trace of the 1,008km FAI triangle over Victoria on 10 January 2021.

Now I had my eyes firmly set on achieving a declared 1,000km flight to get the 1,000km Diploma from the GFA and FAI. Due to rolling lockdowns and border closures triggered by various Corona virus outbreaks across Australia, my annual leave this season would be spent on a holiday at my home airfield at Benalla. It seems fitting that, when I wrote this article, we were in lockdown again in Victoria and instead of gliding, I was sitting at home in front of my computer. How sad is that in February?

NARROW ESCAPE

Prior to Christmas, we had an escapee experience that left a lasting impression when we travelled to Sydney for work, with a holiday planned to follow in Bellingen. We made it as far as Nambucca Heads, when the news about border restrictions on re-entry into Victoria for people who had been in the greater Sydney area became more and more worrying. We made a rushed 15-hour drive from Nambucca Heads back home, and we were fortunate that, after a night and a day in isolation at home and two negative COVID tests, we could move freely in Victoria again. Had we been delayed just two days more, we would have been stuck in NSW for weeks and missed Christmas at home with family and friends.

I arrived at Benalla late on Christmas Day and was really looking forward to three weeks of long distance flying. Boxing Day turned out to be a good day and I managed a flight of over 786km. Then the weather turned a bit stable for a few days and I went overnight hiking in the Alps instead of flying. This was a great break from it all, as 2020 had been a very difficult year for our business. Having a couple of days by myself in the bush helped me process a lot of things and put life and work into perspective again. After my time with nature, my head was free and ready for some gliding adventures.



With the border still closed between NSW and Victoria, task planning was heavily focused on turnpoints within Victoria, very little flying over NSW and only within glide range back to Victoria. At the time, an outlanding in NSW could have meant an uncertain waiting period somewhere in NSW until the Victorian border opened again and two weeks hotel quarantine upon re-entry. As many would know, most long-distance flying from Benalla goes into NSW. As a result, a big re-think in task planning happened among the group of cross-country gliding pilots at Benalla.

SERIOUS CRACK

Following on from a couple of good flights, the day to give a 1,000km flight a serious crack finally came on 7 January 2021. I attempted a triangle starting on the leg at Benalla, first turnpoint was Cheshunt in the hills to the south east, then Avoca, Nangiloc and back to Benalla. The first partial leg went really well with Cu's popping in front of me when I needed them on my way to Cheshunt.

But just short of the turnpoint, I found myself at the wrong end of a cycle and effectively had to 'park' there, losing a valuable 10 minutes. From there onward, my average speed remained below the speed I needed to complete the triangle. According to my flight plan, I would need to turn Nangiloc by 4.30pm if I was to have a reasonable chance of making it back home. Nevertheless, at 4.53pm I turned about 45km short of Nangiloc as it was clear I wouldn't make it there and back to Benalla in time before the day shut down. The day ended with a very interesting 968km flight and a landing at Benalla just before 8pm.

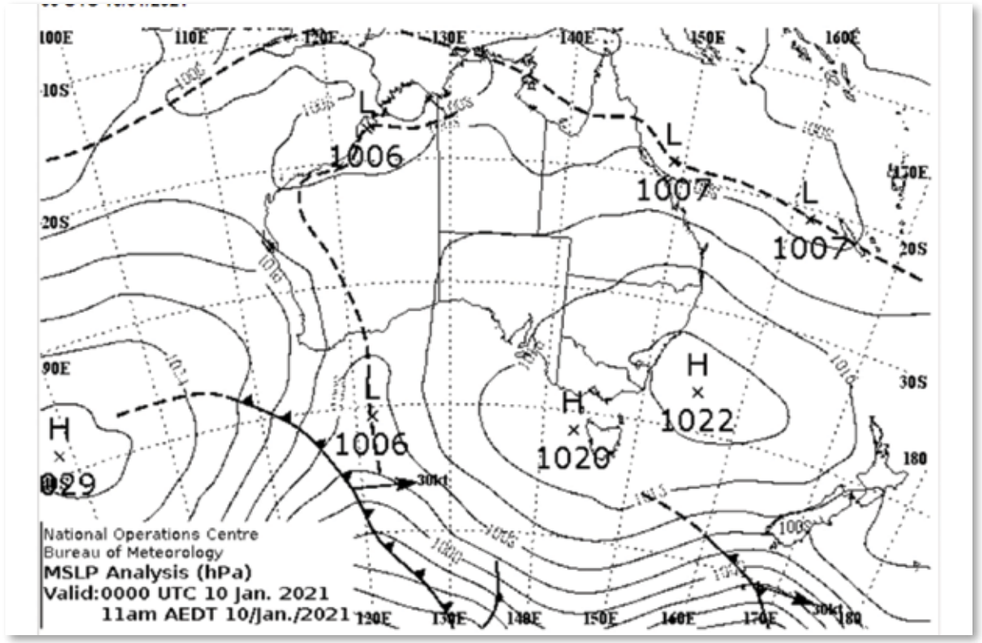
SEIZE THE DAY

The next opportunity for the magic 1,000km came on 10 January. Many speculated that the 11th would be the best day of this cycle with a trough approaching from the west and hot temperatures forecast, combined with very high cloud bases and strong thermals. However, thinking that the wind speeds at altitude forecast for the 11th were too high for a very long distance flight, I decided to give the 10th a go instead. Too many times I have heard the words, "You should have been here yesterday".

With mostly blue thermals, 10 January didn't look like a particularly strong day. On the other hand, it was forecast to be a long day with light winds, thermals topping out around 9,000ft during the main part of the day and with Cu's and cloud bases up to 12,500ft forecast later in the day to the south and southwest of Benalla.

Good enough, I thought, to give it a good go and fill about 150 litres of water into the wings. That gave me a wing loading of about 52kg/m2, which for me is a good balance in the 15m Ventus 2ax, when you need to find the cores of thermals in the blue reasonably quickly yet want to cruise at 100 to 110kts between thermals. I find it hard, and probably quite inefficient, to stay in the core of thermals when the core moves around and you have to constantly chase it with the Ventus' wing loading at its maximum of 55kg/m2.

continued over page



RIGHT: Synoptic mean sea level pressure chart for 10 January 2021. Victoria remained under a large high-pressure system with light north-westerly winds in the task area and no high level disturbances (no Cirrus).

FAI TRIANGLE

At the launch point, there was an atmosphere of excitement and Ryan Driscoll had already lined up the LS7 when I arrived there just before 11am. He would do his first 750km flight that day. When I released from the tug at 11.23am I thought I was already behind schedule. However, both Ryan and I had to mill around the airfield for another 15 minutes before we had climbed to 4,000ft MSL and I eventually crossed my start line at 11.39pm at around 3,800ft. Ahead it was all blue on track. The air seamed reasonably buoyant up to 4,000ft MSL though, which gives you a workable height band above the general ground level of 600ft around Benalla in the early part of the day.

The task I had set for myself on that day was again an FAI triangle with the start point at Benalla. The first declared turnpoint was Carwarp south of Mildura, then Stawell just north-east of the Grampians and then back to Benalla. I had again set times by which I needed to be at the two turnpoints in order to achieve the required average speed to complete the task. I was to reach Carwarp by 3pm and Stawell ideally by 5pm but no later than 5.30pm. I assumed that I'd find thermals until around 7 to 7.15pm and that it was going high enough and there were remnant Cu's to allow me to stretch the glide until about 8pm as I did a few days earlier.

Ten minutes after I had left Benalla, I took the first decent climb for the day that took me from 2,000ft MSL to 4,200ft with an average climb rate of around 6kts. From there I headed towards the Dookie Hills where, surprisingly, a small wispy Cu had formed over Mt Major, the main hill. By the time I arrived there, though, the Cu had disappeared.

FOLLOWING WISPS

However, another two small wisps started to form about 5km off track to the north. The first one seemed pretty disappointing, with climb rates around 2 to 4kts. But I had descended to 2,300ft MSL and wasn't sure I'd make it to the next wisp in time and high enough before it dissipated again. Yet, 2 to 4 kts climb rate were too little to get to the average speed I needed to achieve.

So, I left that climb after searching for three turns and kept tracking 90 degrees off track to make it to the last wispy Cu there was. Thankfully that one didn't disappoint, as I climbed with an average of around 5 to 6 kts from 3,300ft to 7,200ft and left that climb about 40km into the flight at 12.13pm. Now the race was on!

For the next hour I managed to stay in a height band between 4,000 and 8,000ft and had a good rhythm between good blue thermals with average climb rates around 5 to 7kts. As I approached the Murray River, the next few wispy Cus started to appear ahead and I zigzagged for the next 30km or so to extract as much energy as I could while avoiding too many turns in thermals. This allowed me to gain altitude and for the first time I saw 9,000ft on the altimeter at around 1.15pm over the forests that straddle the Murray along the border between Victoria and NSW.

GATHERING SPEED

My average speed had by now increased to more than 100km/h. From here on in though there were no more signs of any Cu for the next 500km. Nonetheless, the thermals worked quite reliably in the blue and I continued with a good run straight down the line in a height band between 4,000 and 9,000ft.

By the time I reached Carwarp at 2.58pm, my average speed since crossing the start line – about 3 hours 20 minutes earlier – had improved to 125km/h and I figured that if I could maintain that speed, I should be able to finish the 1,000km in about 8 hours in total and be on short final 20 minutes to 8pm. My confidence grew and I became excited that for the first time I might be able to complete a declared 1,000km task.

At the beginning of the leg towards Stawell, I could see that, far in the distance, the sky was filled with nice looking Cu's and I hoped that they would still be there by the time I reached Stawell. The thermals over the Mallee kept pumping reliable 6 and 7kts climbs and my average speed kept going up slowly. I was typically cruising at 110kts between climbs by then. Approximately 50km north of Stawell I finally connected with the first real plum Cumulus cloud of the day and it produced a very welcome 10kts average bottom to top climb from 5,000 to 11,000ft.

BALLAST BENEFIT

Now I could finally use the full benefit of the water ballast and cruise in good energy lines under the Cus. I reached Stawell just after 5pm and the average speed on the second leg was 142km/h. The average speed for the flight overall had just improved to over 130km/h and the wind remained a fairly moderate northwesterly.

I was very pleased that I had a very small tail wind component on the way home, as I was cruising over several wind farms north of Ararat. Working in the wind energy industry, I knew quite well which windfarm was which, what turbines are installed there and how long the journey has been for all those wind energy projects – probably as long as my 10-plus years of attempting to fly a 1,000km. Great to see them finally spin and pump electricity into the national electricity grid.

As I approached the area southwest of Bendigo, I saw that I was at the tail end of the cycle that had produced a number of good looking Cu's. They were no longer working by the time I got there, and I found myself down to 3,000ft MSL (2,000ft AGL). Not the place you want to be when the cloud base is at around 12,000ft and the next 15km are very tricky for an outlanding.

LOOKING FOR BUBBLES

I chose to accept a weak 2kts climb and hoped that the trigger for the decaying Cu that I was under now would soon produce another bubble. When I reached 4,000ft it finally did, and a fresh bubble improved the average climb rate to 5 to 6kts. I left in 6,500ft as the sky ahead looked more promising again and I could easily make it beyond an area dominated by little hills and ridges, small patches of bushland and even smaller paddocks dotted with hobby farms and power lines.

Thermal by thermal I increased my altitude again before I climbed to final glide altitude at just under 12,000ft a little past the Colbinabbin ranges. It was 6.30pm now and the distance to Benalla was around 95km.

You made it! On this long final glide I took some small deviations to follow energy lines under Cu's. About 20km short of Benalla I flew into a 3kts climb and started turning as I thought I could stretch this flight a bit further. After a couple of turns I thought, "This is too much work. I should go home instead, put the glider away, have a nice dinner and a well-deserved beer with friends."

UNKNOWING RECORD

I arrived nice and high back at Benalla, flew a big circuit and landed at 7.15pm. The LX9000 showed me an average speed over the 1,008km task of 134km/h and I was very pleased with that. Little did I know at that stage what that average speed meant. As I towed the Ventus to the hangar I saw my official observer Craig Blunt open the hangar door for me. I was very thankful not just for the open hangar but also Craig's great support in getting the paperwork sorted out. Thanks a lot Craig, really appreciate the help and support that you always lend freely to your friends!

As I sat among my club mates enjoying a cold beer, someone mentioned this could be a national record. I didn't believe that at the time, as I didn't think it was a particularly fast day nor had I pushed particularly hard. Craig, who flew 769km that day in his ASW17, also said that while in his view it was a good day, it wasn't that good.

Anyway, I thought I'd better check the GFA list of Australian records and I was very surprised when I saw that the previous 1,000km speed record for the FAI triangle in a 15m glider stood at 120km/h, achieved by Greg Beecroft in a LS8 many years before. So I put in a claim for the 1,000km diploma and the speed record in 15m class for the 1,000km FAI triangle.

CONFIRMATION

Thanks to GFA's all-electronic system, I had confirmation within a few days that I had successfully achieved both claimed performances – and all of that, except for a short section north of Echuca, south of the river Murray in Victoria.

No doubt we will continue to explore the west of our state more often now out of Benalla than we have in the past. With or without border closures, the countryside there is far less scary when you get lower than the Hay Plains. My next big challenge in long-distance gliding might now be 1,000km with a significant proportion of the flight over the picturesque mountain landscapes of the Australian Alps – although, it looks much scarier there when you get low than the Hay Plains. Maybe I should re-consider that idea... **GA**

EASTER VINTAGE REGATTA

HUNTER VALLEY GLIDING CLUB 2 - 5 APRIL 2021

BY PAUL DICKSON PHOTOS BY PHILLIP BROWN

2021 marks the 10th anniversary of the Hunter Valley Gliding Club Vintage Regatta. Thankfully the recent flooding rains in Eastern Australia had abated and great autumn soaring weather arrived for the regatta. The airfield was looking a picture after the recent rain, and visitors from Victorian and other New South Wales clubs joined in for a fun Easter weekend of social flying.

The vintage aircraft that arrived for the regatta included an ES56 Nymph (1955), SZD 9 Bocian (1964), Schleicher Ka 6E (1965), Slingsby Type 51 Dart 17R (1966), Carmam M200 Foehn (1967), Scheibe SF 27M (1970), SZD 36A Cobra 15 (1973), Hütter Hü 28 (2021) and lots of plastic gliders. The diminutive and very pretty Hü 28 attracted lots of attention as it was a new build by Peter Rundle with the first flights only completed in March.

The best weather of the weekend was on Friday and Saturday with light winds and thermals and Cu to 5,000ft. A total of 71 flights took place on these two days for a total flight time of 84 hrs and the good cloud streets tempted some to venture further afield.

VINTAGE CROSS COUNTRY

The best vintage cross country flight of the regatta was Andrew Dickson's 147km in the Dart, while Jenne Goldsmith also took her Ka6E for a trip around the valley and clocked up 100km. Peter took his out Hü 28 and stretched its wings for a 74km flight along the edge of the ranges. The plastic gliders may have gone further than the vintage but the only outlanding of the regatta, only about 10km from the airfield, was also a plastic glider.

On Saturday, a couple of vintage DH.82 Tiger Moths also visited from the nearby Luskintyre Flying Aviation Museum. While the Tiger Moths were on the ground, they were eyed up greedily by some of the older gliders as a potential tow plane.

On Sunday morning all of the attending pilots formed up for a group photo in front of the clubhouse along with the Hü 28 and the Nymph. The attending vintage gliders then nudged together for position in a group photo at the flight line. Much confusion followed as the pilots jostled to get the prettiest glider at the front of the pack. High cloud cover moved over the valley through the morning but this was a great opportunity to get a good view of the vintage gliders in attendance while going round and round together in weak thermals to only 1,800ft AGL.

IMPROVING CONDITIONS

By Monday, most of the high cloud had moved away. Conditions looked more promising for the gathering and the relaxed atmosphere of the regatta continued as happy faces were seen sitting in gliders on the flight line. Lots of people were flying new types. The M200 and the Bocian were especially busy as friends went up together in the two-seaters. Dave and Jenne Goldsmith flew the Dart and in return, Paul and Andrew Dickson

TOP LEFT & TOP RIGHT: Hütter H28 VH-HAU Peter Rundle's beautiful gull-winged Hutter 28 was recently built from a pre-World War 2 design.

BELOW LEFT: Foehn M200 French two-seater flown by HVGC member Rob Moffat.

BELOW: Dave and Jenne Goldsmith's single seat Ka6E from Victoria.

continued over page

tried out their Ka6E for comparison. One of the biggest smiles came from Grant Nelson from the Lake Keepit Club who was waiting all day and finally got a flight in the oldest glider at the regatta, the 1955 Nymph.

During the evenings, the social activities continued in the HCGC's spacious clubhouse with catering and entertainment provided by the club members. Among the entertainment was a talk by Peter Rundle on the Hü 28 build and a hotly contested quiz night run by James Moffatt.

HÜTTER HÜ 28

The HVGC People's Choice trophy is awarded each year to the best attending vintage glider, voted for by all those attending. The trophy, made by Don Hardiman and Peter Raphael, is a reproduced section of wooden wing detailing the methods of construction, on which a cast Minimoa model mounted.

This year, the Dart 17R received the most votes. However, the fact that the Dart had received more votes than people attending the regatta caused some consternation and it was subsequently disqualified due to the owners' enthusiastic voting. Consequently, the trophy was justifiably awarded to Peter Rundle's magnificent Hü 28. It was somewhat symbolic that the trophy, which includes a casting of a gullwing Minimoa, was won by the gullwing Hü 28.

TOP LEFT: Peter Rundle's Scheibe SF 27 single seat motor glider from Germany.

BOTTOM LEFT: Polish Bocian two-seater brought from Bendigo, Victoria by Peter and Helen Raphael.

ABOVE: Cobra 15 Polish high performance single seater owned by Phillip Brown.

BELOW: ES-56 Nymph an Australian single seater designed by Edmund Schneider with a first flight in 1955.

AROUND THE CLUBS

During the autumn months, glider training has continued at a rapid pace as many new pilots achieved first solos around the country. Here are a few of them.

Congratulations to Ian Balmer for going solo! Well done. Ian will be soaring the skies of Tasmania soon.

Congratulations to David of Adelaide Soaring Club on his solo following a return to gliding.

Congratulations Lilly of Darling Downs SC on your AEI rating... Looks like a tough first passenger!

Ethan Woolford of Adelaide University Gliding Club converted to his first single seater and launched straight into a 78-minute soaring flight.

On 26 April, Jean-Yves Provost flew solo for the first time at Southern Cross GC.

A joint event was held in April between Sydney Recreational Flyiing Club and Southern Cross GC at Camden.

On 5 May at South Gippsland GC, two junior pilots, Hamish and James, achieved two A Certificates.

Michael Gomola flew his first solo at Southern Cross Gliding Club on 2 April.

Congratulations Andrew C of Melbourne Gliding Club on your first solo! Onwards and upwards!

James Spencer flew his first solo on 5 April at South Gippsland GC at age 15.

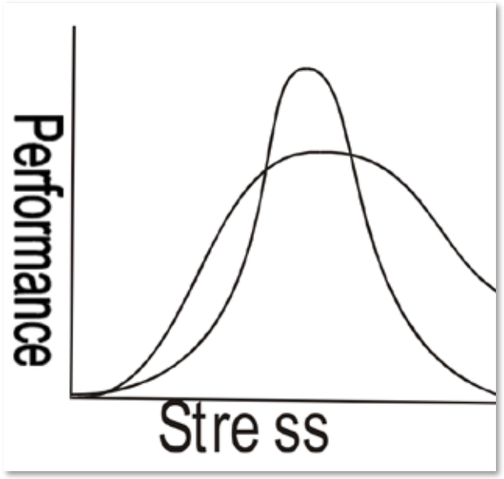
Gliding Tasmania is enjoying a steady growth in membership numbers and the arrival of three new gliders. On 2 May, Harley went solo in the Twin Astir.

Tim Button completed his first solo on 2 April at NT Soaring Alice Springs.

STRESS

BY JAMES COOPER

I wonder how many times you have seen a pilot, competent or even highly competent, make a stupid mistake. Over many years of flying, I have seen accidents and incidents that fall into this category. Then, of course, relatively inexperienced pilots can make what appear to be silly mistakes, despite their training. Why is this, after all the training and experience?



After about 4,000 hours of solo flying, I believe I have found one of the answers and solutions.

I am not a psychologist by any means, but stress is a subject that should come up regularly in conversations. I feel, however, that subjects revolving around stress are not brought up enough and the solution never mentioned. I will discuss my thoughts and what I have learnt over the years.

WHAT CAUSES STRESS AND HOW DOES IT AFFECT DECISION MAKING?

A stressed-out glider pilot will not be able to concentrate on the job in hand, and therefore their performance will drop. I believe three-times World Gliding Champion Helmut Reichmann said. "A glider pilot needs to make a conscious decision every 30 seconds." If the pilot is stressed, they will not be good gliding decisions. What helps to bring on stress or reduce it?

Each person responds to stress differently. Some will be stressed easily and others less. For some pilots, the effects of stress will be great and for others, little. The effects of excessive stress result in loss of feel of the glider, inability to be intuitive, loss of concentration and the ability to take in the broader picture – all leading to poor decision-making. Most stress-related accidents happen when the pilot ends up focusing on just one thing and not taking in all of their options.

The graph indicates the effects of stress on the performance on two people. With very low stress, in the semi sleeping state, the performance is low in both cases. Now, as stress increases, the performance of both actually increases, although A needs less stress to increase their performance, whereas B needs a bit more stimulation to perform well. However, A does not reach as high a performance as person B but in turn maintains a higher performance under high stress than Person B, whose performance drops abruptly under high stress.

These two graphs give you an idea that different people react to stress in quite different ways but in principle, as stress increases, performance will improve initially and then deteriorate. Practice and visualisation will help the curve. How do you perform in response to stress?

We can also look at the graph and apply some scenarios. If you are fully relaxed as you step into the glider, you could be sitting at the far left of the graph. Your performance may be low and if something goes wrong during the launch you may not be able to perform well. So, make sure you do your checks. Visualise all the things that could go wrong and how you are going to respond.

LIFESTYLE STRESS

There are in fact two types of stress. Some are driven by your lifestyle and affect your state of mind and concentration, even before you step into the glider. I will look at these first. In effect, this type of stress will make your mind wander. Recalling Reichman's comment, instead of making a gliding decision on a regular basis, you will be thinking about the stress you left behind or will be receiving when you land. Activities affecting stress levels are listed below.

GOOD FOR STRESS	BAD FOR STRESS
Exercise	Club Bitching
Sex	Work Problems / Finance
Laughter	Poor Health
Gliding	Landing Out
Socialising	Unusual Aircraft
Practice	Smoking and Stimulants
Visualisation	Stress at Home
Checklists	Getting Low

These lists could go on forever, but you get the idea. If your life is stressed generally, your mind is unable to concentrate on the subject in hand. Your whole flying tactics will be poor and important things like lookout will deteriorate. While I cannot, in this article, give advice on many of the items in either list – there are plenty of books that can help – I can say that the more you fly and the more you have landed out, the less stress you will experience.

I will also touch on the last two items in each of the lists above.

VISUALISATION

Visualisation is the practise of picturing a scenario in your mind. For example, I was talking with a friend who did not like getting low. He was highly experienced but once he was lower than 3,000ft, he began to stress. "I don't like it here." So I suggested that he picture himself flying down to 2,000ft, having headed for a good thermal source, feeling the pre-thermal cobble stones, the surge, turning the glider into the climb and soaring away.

I also suggested that he picture the many times he had soared away from the back of the tug. In other workds, if you can keep in your mind that you can climb away from a low, but safe altitude, then you won't get stressed and you'll fly well. Visualisation allows you to place yourself in a situation, in your mind, where you have not been to physically before. Visualising jumping out of your glider may therefore be useful one day. Let's hope you'll never have to go there, but if you have visualised it, that experience could save your life.

CHECKLISTS AND MORE

Checklists are a simple way to prevent stress. If you have not used a check list when flying, things may well start going wrong. Is your oxygen switched on? have you brought your maps, hat and sunscreen? For motor glider pilots, is the fuel on? You can avoid missing out on hundreds of things by using a check list. There is no excuse for launching with being fully checked out, but if you choose not to use check lists, expect to be put into stress one day. Furthermore, with the latest LX you can put in as many check lists as you want.

Getting low is perhaps the most common cause of stress. The solution is simple. How many times have you landed back at the club with a 2,000ft tow? Hardly ever. Now, remember that when flying cross-country, you have a greater search area than at the club, as you are not tied to the airfield. So why the worry? You've done it before you can do it again. If you're in trouble, so are the rest. If you got away, maybe they did not. Don't stress. Each of the items of stress can generally be dismissed as either irrational or irrelevant. Concentrate on what is relevant. Relax and feel the glider. It's meant to be fun.

Stress at home can occur when, after a good day flying, the last thing you want to do is go home to your family who have been slaving in the heat of a hot WA day, while you have been having a great time. Look after them now, take them out, buy flowers and do what you should. It will make it much less stressful next time you want to go to the club. A stressful relationship is a lot more stressful than stressful flying.

RELAXATION ROUTINE

As glider pilots over a long competition week, particularly comps directors, the build up of stress can be considerable. Stress is cumulative. How do we get rid of stress over these long periods? A relaxation routine can be very good.

Lie on the ground, on a towel bed or what takes your fancy. Don't get stressed out by what people think of you! Relax your body starting at your feet and working your way up your body, firstly by stressing the muscles in say your feet then relaxing them. Do this a few times before moving up each muscle in the leg. Follow that with the fingers, then arms, in sequence, stressing then relaxing each part of the body.

After about ten minutes you will feel quite relaxed. Think about things that would make you feel happy. Imagine flying the glider into a strong thermal, pulling up, getting the core first go, nice tight turn, nose up, yaw string in the right place, a little top rudder, beautiful. When John Buchanan did this at a training camp I was attending, one of the pilots was snoring within 10 minutes!

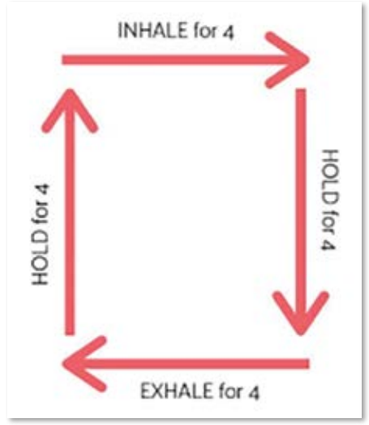
Relax in the cockpit by doing stretching exercises. Rotate the shoulders, move the back. It makes you feel much better.

I have found another great stress reliever. One year, I had a goal to win the state championships. However, on one day when all the others got round, I landed out and my goal was blown. I was not a happy chappy. Off I went into the caravan to sulk, out came Calvin and Hobbs – problem solved.

ON THE WAY TO AN ACCIDENT

The stress we have talked about up to now I will call background stress The second type of stress is the type that builds up due, generally, to unexpected and unusual situations. Near misses, landing out certainly for early hour pilots, flying over unfamiliar terrain and equipment failure are other examples. There is the more common cause, pushing yourself beyond your ability as well, like getting low on final glide, not understanding your instruments and painting yourself into a corner.

How do you recognise these triggers and prevent them from turning into an accident? This type of stress does not just make you less competitive, but can also become fatal. It can be cumulative and last well after the initial stress began. This type of stress will put you into the 'fight or flight' mode – and not the soaring type of flight.



In principle, fight or flight is a survival instinct in which the body puts more blood into the muscles so that you can either fight or run from a predator. The problem is that it takes the blood from the brain and makes you stupid. Our brain will go into neutral and generally not consider any other options than the one that it is fixated on. 'Get-there-itis' is the normal scenario. My personal example follows below.

BIG WING LANDING

I had been used to flying a 15m SZD 55, but had recently purchased a new ASH 31 Motor Glider. A 21 meter glider with flaps is quite a different animal to the lively go cart I had been accustomed to. Despite all the landings that I had made, I was still not 100% confident with my landing with big wings and powerful landing flaps. That was stress factor 1.

On my second cross country flight on a not particularly good soaring day, I was about 150km from home. I had flown many days like these. I got a bit low, selected a paddock but then decided to fire up the engine. It failed to start, due to a sensor issue. That made stress factor 2 – remember, stress is cumulative.

So I did the right thing by going into gliding mode and forgot about the engine. I climbed away and set off to the nearest gliding airfield with the aim of landing there if things did not improve. As hoped, the conditions improved a little and I then turned for home. Shortly after the computer screen went blank and as the area I was in had few clear marks to indicate the distance from the home airfield, I was not sure of my final glide in the new glider – which was stress factor 3.

At last I was clearly on final glide for the airfield, but with a straight-in approach. No problem. I had done that many times before. I even recall saying to myself, "OK, a stressful day, concentrate and get this landing right." I went through my prelanding checks and clearly remember looking at the undercarriage leaver, which had been cycled a few times in the flight. As I rounded out, the glider got lower and, with a horrible scraping sound, ground to a halt. I had reached my stress limit and not been able to get out of it. I had become stupid.

RELEAVING STRESS

So after my incident I was keen to find out how to resolve this problem. I knew I was under stress – but how do I stop the body going into fight or flight? It was not until I read G Dale's books, 'The Soaring Engine', that I discovered what to do. Those books are a must for glider pilots.

G Dale's method to relieve stress is known as Box Breathing, commonly used by people who naturally become stressed. In cycles of 4 seconds, Breath in / Hold your breath / Breath out / Hold your breath. Repeat a number of times. It works!

Practice the technique regularly so that if you become stressed, it comes as instinct. I have done some flying over the north of WA where there are very large expanses of unlandable terrain. I don't need to be stressed. Box breathing does help. GA

WINNING THE MENTAL BATTLE IN GLIDING PART 5

BY BERNARD ECKEY

In part 4 of this series of articles we looked at various proven methods of eliminating 'butterflies' prior to venturing beyond the gliding range for the first time. Today we will expand on this topic and deal with 'Confidence and over-confidence' as well as 'Commitment and self motivation'.

CONFIDENCE AND OVER-CONFIDENCE

Although an unshakable confidence in our abilities is vital for success in any sport, it is especially relevant in gliding. Regardless of whether we look at the sport from a competition or from a recreational perspective, it always shows that a healthy dose of confidence and goes hand in hand with success or achievement.

Of course, we can only expect to be confident if our ability matches the task at hand. An early solo pilot lacking confidence in his or her soaring skills is unlikely to remain airborne for any length of time. Equally, a cross-country pilot lacking confidence will either turn around at the first sign of trouble or outland frequently. Confidence can only develop over time and with repeated and regular accomplishments. Unfortunately this psychological aspect of our sport is often underestimated. But how can low confidence pilots get on the road to success? Let's start with a few suggestions for early solo pilots:

- Choose to fly when the conditions are not too difficult – nothing is more disheartening than performing two or three consecutive circuits only to see your fellow club member climb into the same glider during the better part of the day and disappear for a lengthy flight.
- Remain airborne for as long as possible and remember that slowly weakening conditions at the end of the day present first class chances to fine-tune our soaring skills.
- Ask your coach (or a pilot with proven soaring skills) to fly with you in a two-seater, share the flying and try to copy successful and proven soaring techniques.
- Never make the same mistake twice and never fly through the same patch of sinking air more than once. It's not only the dumbest thing one can do but it is also a frequent reason for disappointment and failure.

For budding cross-country pilots the following suggestions have proven to be good confidence boosters:

- Deliberately move just beyond the gliding range of your airfield and far enough away to need more lift for a safe return to the home airfield. Making it back is bound to contribute greatly to an increased level of confidence but making it back real easy will instil a tremendous sense of achievement. It also provides encouragement to repeat or even top this success at the very next opportunity.
- Try to convince your more advanced peers to take you on a 'lead and follow' flight. Closely observe pilots with proven soaring skills and take mental notes on where they locate lift and how they find the core of the thermals.
- Fly on days when most other pilots prefer to spend the afternoon chatting away in the clubhouse. Successfully keeping the glider airborne in demanding conditions will boost your confidence levels and convince you to rely on your own skill and judgement in future.
- Analyse your less successful flights even more thoroughly than the successful ones in a bid to avoid the mistakes that have lead to an unsatisfactory outcome. Learn from mistakes and become your own coach.

Now let's turn our attention to overconfidence. Confident pilots can properly assess their own limitations, and may sometimes say 'No' in a marginal situation. This is not an admission of inadequacy, but expresses a realistic, responsible, and mature attitude. In contrast, we occasionally find pilots who, after a successful flight or two, seem to think they know it all. In their own minds, they are ready for long distance flying and believe that records are no longer safe as soon as they can get their hands on a competitive glider. These pilots need just as much help as their more timid counterparts. Disappointment is waiting around the corner and may soon cause them to drop out of the sport without the successes they imagined. When overconfidence is paired with a disregard for safety, the alarm bells must ring. An attitude like, 'Rules are for others to follow', and "I'm too good, an accident won't happen to me!" is a sure recipe for disaster.

COMMITMENT AND SELF-MOTIVATION

People who excel in our sport are usually highly committed and motivated. Their persistence and determination to go through adversary is a big part of their success! They are habitually fully committed and they know how important gliding is in their lives. With focus and persistence, they find a way around all obstacles, and they have realised that without it success will remain an elusive dream.

We are spoiled for choice when it comes to aviation activities, but we have decided on gliding. It is a time consuming sport and family or friends often apply pressure to spend more time with them, or on other non-gliding activities. On top of that spare time is usually in short supply and therefore we are often forced into a delicate balancing act. Failing to commit to the sport during our post-solo flying is all too often the reason for slow progress or even dropouts. Two steps forward and one step back are undesirable in any sport, but in gliding it is especially counterproductive. What matters most is to quickly capitalise on opportunities for skill enhancement, which is critically important during the early part of our gliding career. Every now and then we must take ourselves aside and investigate whether our commitment is as high as it should be and what we can do to remain motivated.

If we strive for longevity in gliding advanced soaring skills are of primary importance. Advanced skills will inevitably turn into tangible progress, which helps to remain motivated and become increasingly more competent. If, on the other hand, motivation wanes and our skills plateau, there is a real risk that our commitment suffers well before we reach our full potential.

Every person is unique - what motivates one pilot might not work for another.

We probably know of plenty of fringe dwellers in our sport, which only remain long-term club members for social reasons or for a general love of aviation. That's obviously enough motivation for some of us, but there can't be any doubt that achievement is by far the best motivator of all. Role models, coaches, friends and teammates are good examples of external motivators. If we socialise with dedicated pilots we are placing ourselves in an environment that is likely to lift our level of motivation and commitment further. Mixing with top achievers will provide additional learning opportunities, which further benefits our level of commitment. The usual result is unexpected success and a string of positive experiences. Setting and achieving even a small goal energises us and becomes an extremely powerful motivator and so does meeting gliding heroes and learning from them.

We also have to draw on our inner being for internal sources of commitment. In team sports coaches and other training staff provide the motivation. They all know that it makes the difference between what people will do and what they can do. However, soaring is a sport of individualists, so the strongest and most consistent form of positive motivation and commitment must come from within. Setting personal goals helps to enhance motivation and clearly underlines that our internal 'fire' is a much better motivator than any external source. If we keep the big picture foremost in our mind and focus on enhancing our skills through regular and ongoing training, we will pass up any temptations for distractions. We will eventually be rewarded by the many wonderful experiences that gliding offers to those who have acquired above average skill and knowledge. Just think of the freedom, joy, and excitement coming your way after you reach a level of skill that allows you to take full advantage of the tremendous performance of today's superb gliders.

Exercising the highest level of commitment is what our top pilots do in preparation for record flights or during participation in competitions. It makes these pilots different from most others but being successful at this level is all about being fully focused on the task at hand. Top achievers simply do things more thoroughly and an undivided commitment is a big part of this. Put differently, our sport tends to reward highly motivated and deeply committed pilots by better flights.

LEARNING FROM THE EXPERTS

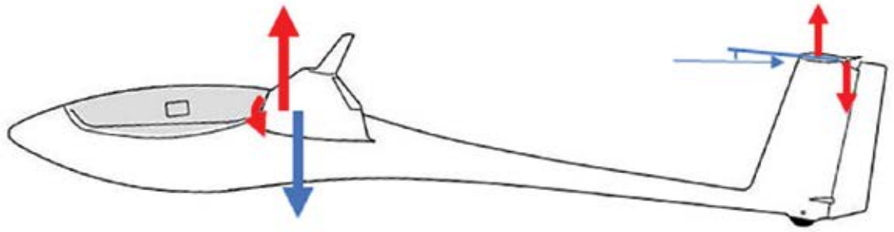
Many newcomers tend to be motivated and greatly enthused by active cross-country pilots, the so-called "pundits". After all, these pilots usually possess a tremendous amount of knowledge and when they consistently outperform others they are obviously doing something right. They might be more skilled and more experienced but whatever the case may be, it is always a good idea to learn from better pilots and let them help us. Admittedly, there are isolated cases where achievers hold back their winning formulae in an attempt to remain at the top of the pack. However, most top pilots are only too happy to share their wealth of experience with others and pass on their accumulated knowledge.

It is always best to take the initiative and ask quite specific questions. Just saying, 'How come you were so fast today?' is unlikely to extract a usable answer and will most probably not lead to great revelations. If, on the other hand, we are more specific we stand a very good chance of entering into very informative discussions. Be diplomatic and if necessary admit what your perceived weak points are. More often than not such tactics will make experienced pilots sympathize and useful hints will soon emerge.

Also, like most people, top pilots often like to underline their recommendations by referring to examples or episodes from some of their past flights. Provided we draw the correct conclusions we can learn a great deal – regardless of whether we hear of stories of success or failure. But don't be disheartened if not everything clicks straight away. After all, during your first year of nuclear physics study you cannot be expected to be on par with Einstein. .

CG POSITION FOR LEAST TAILPLANE DRAG

Anthony Smith
Chair Airworthiness Department
cmd@glidingaustralia.org



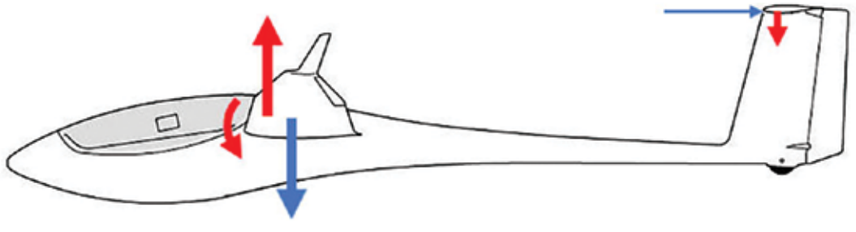
This article was developed during the rewrite of the Weight and Balance Manual when the airworthiness team felt a short section on the CG position for optimal performance needed to be included. As a result, I did a technical analysis for two sailplanes – a standard class and a racing class sailplane. Note that this is not a full analysis for best sailplane performance. Rather, it is a simplified set of calculations to determine the least tailplane drag. This will give a solution that is very close to optimal sailplane performance.

Many competition pilots want to optimise the performance of their sailplane by having the operating CG at a particular point. A popular myth among many competition pilots is that flying with the CG very aft yields the best performance for every aircraft.

There is no magic position for the in-flight CG position, which is a single point optimum for ultimate performance. Rather, there is a modest range of CG positions within the allowed flight CG limits that yields best performance.

TAILPLANE DRAG

A close-to-ideal solution for sailplane performance arises when the tailplane has minimum drag – but not quite ideal as it does not consider the tailplane lift or downforce impact on the wing induced drag. Many interpret this as the tailplane having zero load, which results in the least tailplane induced drag. However, this neglects to consider the profile drag from the elevator deflection. At higher speed the tailplane induced drag will be very low while the tailplane profile drag will be significantly greater. A shift in CG to produce a small amount of lift or downforce at the tail will have very little impact on the tailplane-induced drag, but a noticeable change in profile drag with the change in elevator deflection.



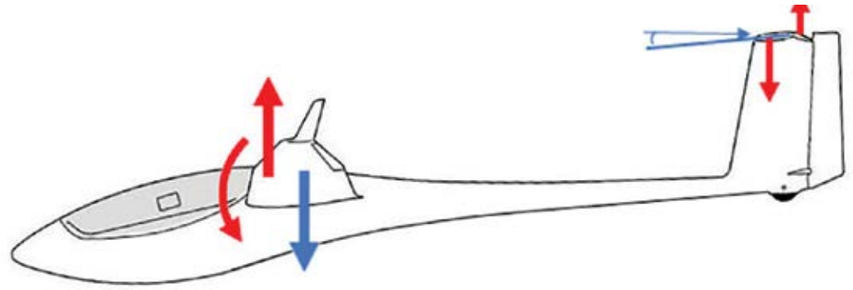
To achieve zero tailplane induced drag, the pitching moment of the wing must be balanced by the sailplane mass pitching moment around the 25% point of the Mean Aerodynamic Chord (MAC). As the pitching moment coefficient of the wing will change depending on angle of attack, the balance point for the sailplane CG will shift either forward or backward to compensate. Typically, the wing will have a nose-down pitching moment that will become increasingly more nose-down with decreasing angle of attack (ie higher speeds).

CALCULATIONS

This gets further complicated if the sailplane has flaps, as the flap deflection will significantly affect the wing pitching moment and hence the balance point for the sailplane CG. Positive flap deflection will increase the nose-down pitching moment, and negative flap deflection will reduce the nose-down pitching moment. In extreme cases, negative flap may produce a nose-up pitching moment.

Calculation of the elevator deflection and resultant profile drag is difficult and time consuming unless you have an accurate computer simulation. With modern sailplanes it can be difficult to get the aerodynamic data for the custom designed airfoil used on the tailplane. Typically a modern tailplane airfoil will have very small changes in profile drag for elevator deflections a few degrees either side of neutral.

The methodology of estimating the optimal CG position is to calculate the CG position required to balance the wing pitching moment such that the tailplane needs to generate zero lift. Then estimate the elevator deflection and tailplane lift coefficient across a range of CG positions either side of the CG balance point to estimate the tailplane profile drag and induced drag. This is used to create a tailplane drag polar similar to that of the entire sailplane.



THE STANDARD CLASS SAILPLANE

For the example standard class sailplane, I chose to model the ASW-24. This was because it is a relatively modern design for which quite a few technical papers have been written. As a result, I had sufficient data on the pitching moment of the DU84-158 wing airfoil and the profile drag of the tailplane airfoil.

It will surprise many pilots that the optimum CG for slow or thermalling flight is at the forward end of the CG range. At high angles of attack, the wing pitching moment is small and the CG position to produce zero lift at the tail is very close to the 25% MAC point. The tailplane is also at a high angle of attack and will produce lift unless the elevator has a large negative (upwards) deflection. The deflection of the elevator increases the profile drag and it was found the least tailplane drag was produced with a CG postioned a little aft of the zero tail lift balance point. This reduced the profile drag for a minor increase in the tailplane induced drag. This results in the tailplane producing an amount of lift.

Figure 1(top left) Slow speed flight at high angle of attack. Small pitching moment from wings results in optimal CG being forward with minimal lift at tailplane.

At best L/D speed it was no surprise that the optimum CG was at 50% of the CG range. While the nose-down pitching moment from the wing is greater, the tailplane incidence was set slightly negative to produce 0 degrees elevator deflection at this speed. This was designed to produce minimum drag and give the best possible L/D. At this point the minimum tailplane drag is with the CG positioned to give a small downforce at the tailplane.

Figure 2 (bottom left) Best L/D speed. Moderate pitching moment from wing results in optimal CG being at centre of CG range. Nil elevator deflection for this sailplane design at this speed.

At cruising speed with a lower angle of attack the wing produces a much greater nose-down pitching moment and the CG position to produce zero tailplane lift will be further aft. At very high speeds it will be aft of the CG aft limit. At these speeds the tailplane induced drag is very small and the tailplane profile drag is significantly larger. Reducing the positive elevator deflection by moving the CG forward from the zero lift position had a much greater effect on the total tailplane drag. In these cases the tailplane produces a down force.

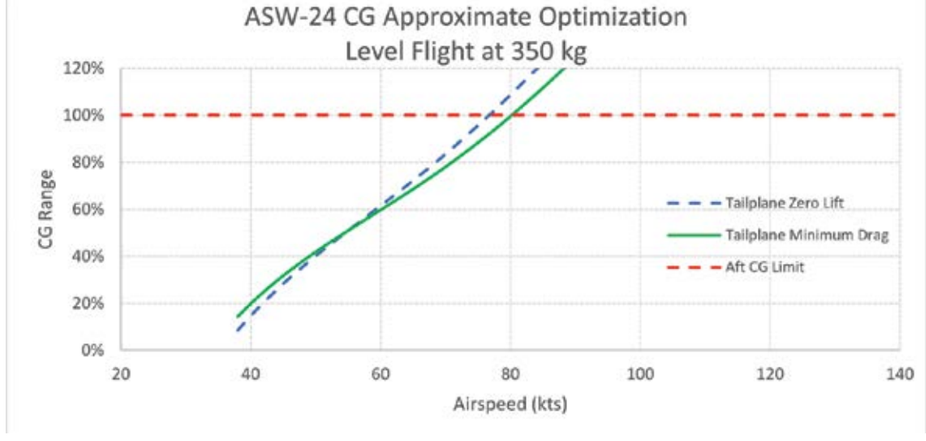
Figure 3 (above) High speed flight at negative angle of attack. Large pitching moment from wings results in optimal CG being aft with minimal lift at tailplane. In general the CG can not be moved aft far enough for stability reasons and the tail will generate some downforce.

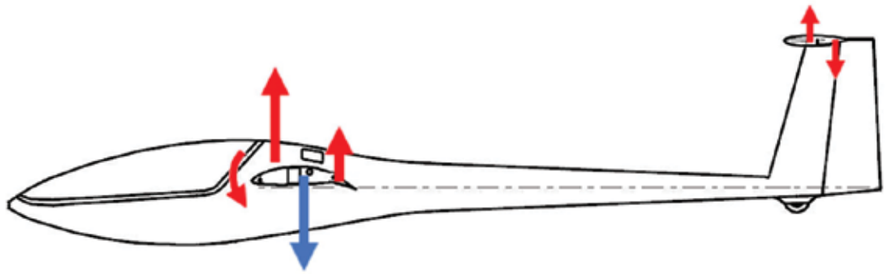
CHARTING THE RESULTS GIVES THE FOLLOWING:

Figure 4 (below) Chart of Optimal CG Position

While it looks to be best for a strong soaring day, flight at the aft CG limit is risky. The aircraft is less stable and there is a greater risk of entering a spin. If a spin is entered, it is likely to take longer to recover with greater height loss. This height loss will be far greater than the performance gain. The intangible effect of flying at the aft CG limit and with a less stable sailplane is increased pilot fatigue, which can lead to poorer decision-making and worse competition performance.

continued over page





The best position for cross country performance will be a compromise depending on what percentage of the flight is spent cruising and what percentage is spent thermalling. As a generalisation, optimal in flight CG position is approximately 70%-80% of the CG range depending on the sailplane type and the soaring conditions. If weaker conditions with a greater precentage of the flight spent thermalling are expected, the CG should be adjusted further forwards. If stronger conditions or streeting is expected with greater time spent cruising, the CG can be tweaked a little aftwards.

THE RACING CLASS SAILPLANE

For the example racing class sailplane, I chose to model the DG-200. Although an older sailplane, it used the FX67-K170 airfoil which was also used on the Mosquito, Mini-Nimbus and PIK-20 sailplanes. The results for the DG-200 will be broadly applicable to those sailplanes as well. I did not have the aerodynamic data for the DG-200 tailplane, so I used the FX71-L150/30 airfoil. It is very similar to that used on the DG-200 and is what the airfoil used on the Mosquito and PIK-20. Unfortunately, the data I have neglects the drag curves for the +/- 5 degree deflections and I suspect my tailplane profile drag results are slightly skewed as a result.

The optimum CG for slow or thermalling flight with positive flap was in the middle of the CG range. The wing is operating at the upper end of its angle of attack range and the wing nose-down pitching moment is small. The positive flap deflection also produces an additional component to the nose-down pitching moment. Similar to the standard sailplane model I expect the optimal CG position for minimum tailplane drag to be a little further aft than my estimates show.

Figure 5 (above) Slow speed flight at high angle of attack and positive flap. A moderate combined pitching moment from the wing and flaps results in optimal CG being central in the CG range with minimal lift at tailplane.

With the flaps in neutral and the angle of attack lower, the wing produced a similar nose-down pitching moment as the slow speed flight and the optimum CG range was again in the middle of the CG range. While this is the best L/D setting for the sailplane, the 0 degree elevator deflection was designed to occur in the higher speed range with negative flap. This was a choice of the designer to reduce drag at higher speeds rather than at best L/D.

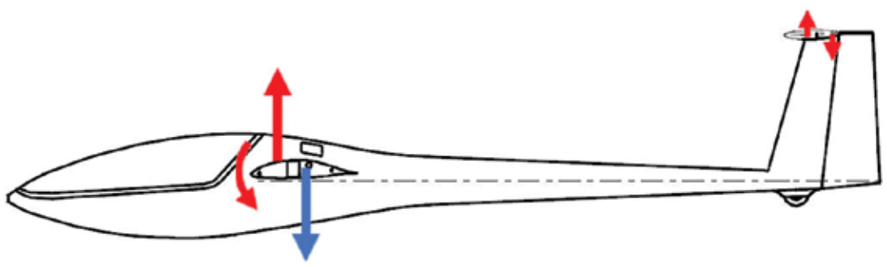
Figure 6 (below) Neutral flap. A moderate combined pitching moment from the wing due to the lower angle of attack results in optimal CG still being central in the CG range with minimal lift at tailplane.

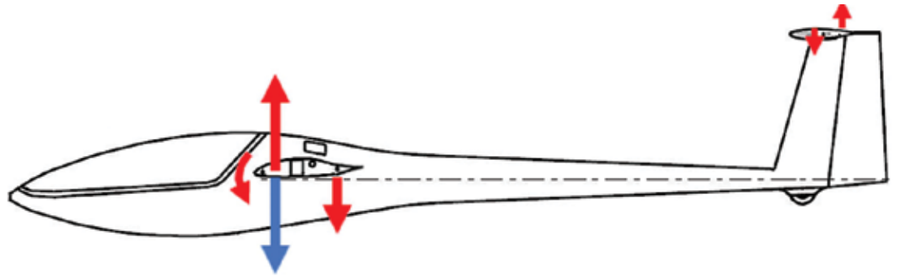
The flaps in negative produce a nose-up pitching moment. This almost cancels the wing pitching moment and the optimum CG range moves increasingly forward in the CG range as the flaps are set at more negative settings.

Figure 7 (right top) Negative flap. The flap produces a nose-up moment that counters the wing nose-down pitching moment. The optimal CG is in the forward CG range as a result.

CHARTING THE RESULTS GIVES THE FOLLOWING:

Figure 8 (bottom right) Chart of Optimal CG Position (solid line represents minimum tailplane drag, dashed line represents zero tailplane lift).





The best position for cross country performance will be a compromise depending on what percentage of the flight is spent cruising and what percentage is spent thermalling. As a generalisation, optimal in-flight CG position for this flapped sailplane is approximately 40% of the CG range for stong conditions (depending on the sailplane type). For moderate conditions with greater time spent thermalling, the optimal CG is further towards the middle of the CG range.

It is important to not confuse elevator forces at the control column with tailplane drag. Control column forces are the result of airspeed and control deflection. An example would be flying with an aft CG at low speed in a non-flapped glider. This will produce low stick forces because the elevator deflection is small. However, the tailplane will be producing a lot of lift and induced drag that is only slightly offset by the reduced profile drag from the lower elevator deflection.

NOTE FOR ALL FLYING TAILS

These results assumed a conventional tailplane with elevator. For an all-flying tail, the tailplane minimum drag occurs at tailplane zero lift as the tailplane will be at 0 degrees angle of attack, which results in both minimum profile drag and minimum induced drag.

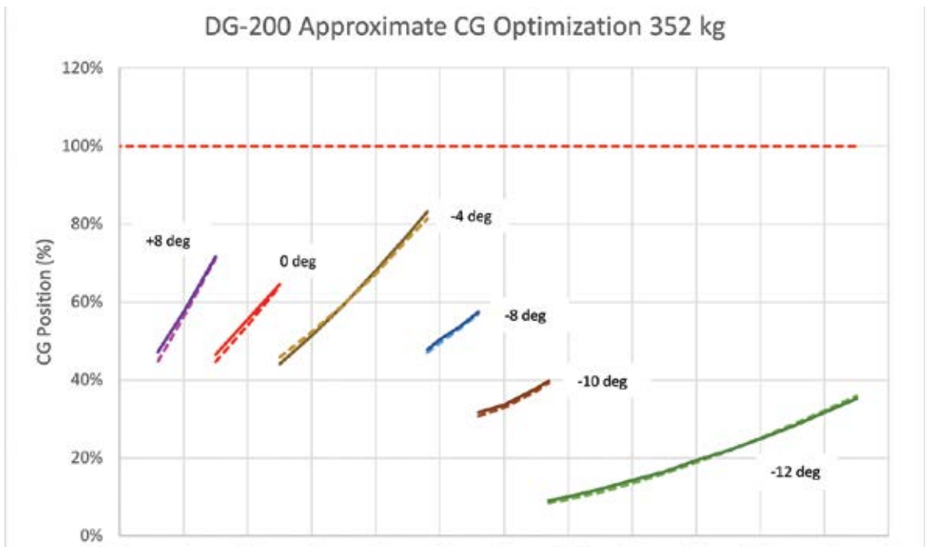
CONCLUSION

The optimal CG position depends greatly on the conditions of the day and the aircraft type. The effect on pitch of flap settings mean that flapped sailplanes have optimal CG positions that are opposite to that of non-flapped sailplanes. This is contrary to a lot of popular opinion.

The above results use a number of simplifications to make the calculations easier. These simplifications may shift the results slightly. However, studies have shown that the decrease in performance with the CG a little to either side of the optimal position is very small, so these simplifications won't alter the results significantly.

Different sailplane types use different airfoils and have different tailplane incidence settings. Different airfoils will have different pitching moments for the wing which will shift the optimal CG position. Most modern sailplane flight manuals now include a section discussing the optimal CG position for performance and this advice should be heeded.

GA



Occurrences & Incidents

All clubs and GFA members are urged to report all occurrences and incidents promptly, as and when they occur, using the GFA's occurrence reporting portal at **glidingaustralia.org/Log-In/log-in-soar.html**. This is always best done while all details are fresh in everyone's mind.

You can read the full SOAR report at tinyurl.com/ltmko56

Reports noted 'Under investigation' are based on preliminary information received and may contain errors. Any errors in this summary will be corrected when the final report has been completed.

5-JAN-2021 VSA
STANDARD CIRRUS
GROUND OPERATIONS

What Happened

The glider had been taken to regional gliding site and rigged with the assistance of members from another visiting gliding club. A positive control check was undertaken, and the glider was then tied down. The following day while the pilot was preparing the aircraft, a member of the local club noticed that the tailplane was not properly locked in place and brought this to the attention of the pilot. The pilot locked and secured the tailplane.

Analysis

The elderly pilot had taken this glider to other gliding sites on several occasions over the preceding years and was familiar with the aircraft rigging process. On the day the glider was rigged, the pilot had driven two hours from his home to the regional gliding site. After positioning the glider trailer in the glider tie-down area, the pilot sought the assistance of members from a visiting gliding club to help attach the wings. The members assisting were not familiar with the rigging process and relied on the pilot's knowledge. The pilot fitted the tailplane himself but failed to lock and secure the tailplane. It is possible fatigue played a factor. This oversight was not identified during the subsequent positive control checks on the aircraft conducted by the pilot and another person who was unfamiliar with the aircraft. The following day, as the pilot was preparing the glider for flight, a member of the local club noticed that the locking lever was protruding through the slot in the upper surface of the tailplane and was resting against, and forward of, the safety pin and was thus unlocked. The pilot properly secured the tailplane, and a further positive control check was undertaken to ensure correct rigging. The following is a description of the Standard Cirrus 75 tailplane control system using photographs taken from AAIB Bulletin 6/2020 dealing with the investigation into a fatal accident in the UK on 27 July 2019 caused by similar mis-rigging of a Standard Cirrus 75 tailplane.

Safety Actions

The aircraft operator has since applied the markings in accordance with the Technical note and will take the following action:

1. Compile rigging notes with guidance for all club gliders that will be kept with the relevant trailer; and
2. Ensure members taking gliders away are current and competent at rigging and derigging the glider.

5-JAN-2021 NSWGA
DISCUS B
WHEELS UP LANDING

What Happened

Following release from aerotow the pilot noticed the ASI appeared to be faulty and decided to join circuit for landing. Distracted by faulty ASI, the pilot did not perform their pre-landing checks and landed with the undercarriage retracted.

Safety Advice

It is likely the pilot had a general awareness of the inherent risks associated with distractions in the flying environment. However, like all humans, pilots are susceptible to becoming preoccupied and distracted with one task to the detriment of another task. As indicated in this report, a distraction can affect a pilot operating even a simple aircraft like a sailplane and can arise unexpectedly, during periods of high or low workload, or during any phase of flight. In essence, no pilot is immune to distraction. Because some interruptions and/or distractions may be subtle, the first priority is to recognise and identify them. Then, the pilot will need to re-establish situational awareness, i.e. identify what they were doing, and where they were in the process when they were distracted. Determine what action you need to take to get back on track – prioritisation is key. Remember: **Aviate, Navigate, Communicate and Manage.**

10 -JAN-2021 VSA
PHOEBUS C
COLLISION WITH TERRAIN

What Happened

Under investigation. During an aerotow launch and at about 700ft AGL, the towing combination flew through strong turbulence. The glider pilot, who was flying in the high tow position, reported that the glider initially climbed but then accelerated towards the tow plane resulting in a loop developing in the tow rope, which passed under the wing of the glider. The glider pilot released the rope to prevent breaking the weak link or potentially causing a 'tug upset'. The glider pilot then attempted to climb in a thermal but abandoned this action as the glider was in the tow plane 'climb out' area. The pilot flew parallel with the operational runway in search of lift but only encountered sink. Realising he would not be able to get back to the airfield, the pilot selected a paddock alongside a road and conducted an outlanding. Upon touching down the pilot found the grass was higher than anticipated and after the glider had rolled about 30 to 40 meters a star picket was observed in close proximity. The pilot raised his arms to protect himself as the glider impacted the star picket and rolled through two wires of an electric fence concealed in the grass. The top wire passed over the glider's canopy and broke on contacting the fin. The bottom wire snagged the ring on the TOST back-release and broke. The pilot was uninjured, but the glider suffered damage to the wing leading edge and undercarriage doors.

From 1/1/2021 to 28/2/2021

Date to: 28/02/2021

Damage	VSA	SAGA	NSWG	GQ	Total
Nil	8	3	8	4	23
Minor	5	3	4	2	14
Substantial	1		1		2
Total	**14**	**6**	**13**	**6**	**39**

Injury	VSA	SAGA	NSWG	GQ	Total
Nil	14	6	13	6	39
Total	**14**	**6**	**13**	**6**	**39**

Phases	VSA	SAGA	NSWG	GQ	Total
Landing	4	2	9		15
Ground Ops	1	1	1		3
In-Flight	4	2		3	9
Outlanding	4		2	1	7
Thermalling		1			1
Launch	1		1	2	4
Type of Flight	**VSA**	**SAGA**	**NSWG**	**GQ**	**Total**
Training/Coaching	1	1	3		5
Ground Ops	1		1		2
Cross-Country	4	1	7	1	13
Local	3	4	2	4	13
Competition	5			1	6
Total	**14**	**6**	**13**	**6**	**39**

Level 1	VSA	SAGA	NSWG	GQ	Total
Airspace	6	3		1	10
Consequential Events			1		1
Operational	8	3	12	4	27
Technical				1	1
Total	**14**	**6**	**13**	**6**	**39**

12-JAN-2021 GQ
HARD LANDING
ASTIR CS 77

What Happened

The pilot launched at 11:45 on a planned task along with several other pilots. After approximately two hours the pilot was unable to find a climb and was forced to land in a paddock north of Kingaroy. The landing was at approximately 10 degrees relative to the ploughed furrows. On the initial touchdown the glider bounced. Upon touching down again the glider yawed to the left causing it to skid sideways before coming to rest. Following the landing the main tyre was found to be deflated and may have been in this state before landing due to a leaky fixed valve extension.

Investigation

Discussion with the pilot and a review of the logged flight trace identified that the soaring flight was continued below normal circuit height, and that a proper evaluation of the outlanding paddock was not conducted. The result was a rushed low turn onto final, landing across the furrows causing the rough landing and minor damage to the undercarriage. The flat tyre may have contributed to the rough landing but is unlikely to be the main cause of the incident.

Corrective action / Recommendations

The instructor on duty spoke at length to the pilot about the necessity to terminate the soaring flight with sufficient height and time to conduct a proper inspection of landing fields and allow for a normal circuit. This was reinforced at a further briefing with all present on the day.

24-JAN-2021 NSWGA
STANDARD CIRRUS
LANDING GEAR/INDICATION

What Happened

During a cross-country flight the pilot conducted an outlanding at a regional airport. The pilot elected to land on the grass between the runway lights and gable markers. During the landing roll the glider's main wheel struck a small concrete structure sunken below runway strip level resulting in the gear collapsing.

Analysis

The pilot advised they chose not to land on the runway to avoid wearing down the glider's tail skid on the bitumen. While they assumed the grass verge was suitable for landing, it transpired that the area was unsuitable and the glider was substantially damaged. The pilot's CFI emphasised that when outlanding the main objective should be to conduct a safe landing, and a properly prepared runway is preferable to an unknown surface.

Safety Advice

This type of accident comes under the broad heading of convenience accidents, where pilots have modified their normal operating procedures, or abandoned accepted best practice, for no reason other than convenience. Good operating procedures and flying standards are developed over time and built on the experience of many pilots and many mistakes. Pilots should always be aware that even slight departures from standard accepted good practice can have severe consequences. There is no doubt that convenience can be a seductive force and very many pilots have been tempted into bad decisions and choices for no other reason.

25 - JAN - 2021 NSWGA
DUO DISCUS T
COLLISION WITH TERRAIN

What Happened

During a training flight an outlanding became inevitable over inhospitable terrain. The instructor, who was flying, selected the only suitable paddock that was situated between two hills and about 300 metres long. The instructor landed downwind and upon touchdown had to manoeuvre to avoid obstacles. During the ground roll the right wing hit a fallen tree causing the glider to ground loop and skid sideways into the boundary fence. The glider was substantially damaged, but the flight crew were uninjured.

Analysis

The command pilot was a recently trained Level 1 Instructor operating under the supervision of the Club's Duty Instructor. During a training flight the command pilot decided to fly cross-country to a town about 50kms South-East of the airfield and across hilly terrain. The command pilot did not brief for this exercise and did not have authorisation from the Duty Instructor to conduct a flight outside the training area. The command pilot, although assessed as competent to fly cross-country, was not experienced flying in hilly terrain. When about 23kms from the airfield the glider

continued over page

got low and the command pilot elected to return home. The glider descended below the glideslope and, although uncomfortable flying over the hilly terrain, the command pilot continued on a direct track to the airfield and did not consider diverting to fly over terrain more suitable for landing. When an outlanding became inevitable, the pilot was faced with conducting a landing in the best of several unsuitable paddocks. The pilot conducted three orbits of the selected paddock to determine the best way to approach and decided to make a downwind landing onto the 300-metre-long paddock due to high trees on the into-wind approach boundary. The command pilot reported flying through wind shear during the circuit and conducted a steep approach with full airbrake into the paddock. The glider touched down at speed and the command pilot manoeuvred to avoid obstacles while applying the wheel brake. During the landing roll the glider's starboard wing struck a fallen tree and the glider rotated 180 degrees and skidded sideways into the boundary fence. The glider suffered substantial damage to the starboard wing, fuselage and rudder, but the flight crew were uninjured. In the subsequent debriefing with his CFI, the command pilot accepted that his flight management and decision-making skills were inadequate. The command pilot was counselled, and his cross-country privileges were withdrawn pending remedial training.

Safety Advice

This incident provides a reminder to pilots to know their own limitations and those of the aircraft. This demonstrates the importance of thorough planning and preparation for every flight, of maintaining situational awareness, and by re-assessing when forced to deviate from the plan, such as when operating over unsuitable terrain.

4-FEB-2021 GQ
ASTIR CS 77
LANDING GEAR/INDICATION

What Happened

After releasing from an aerotow launch the pilot attempted to retract the undercarriage but found the lever jammed 3 cm short of the fully retracted position. After trying again several times the pilot returned the lever to the down and locked position. A nearby glider visually confirmed the main wheel was fully extended. After a local flight the landing was uneventful and the undercarriage remained down. The glider was towed to the club hangar to investigate the cause of the jammed undercarriage lever.

Analysis

The cockpit panels were removed to gain access to the workings of the undercarriage retract mechanism. The actuating lever behind the pilots' seat was found to be misaligned on the connecting rod due to a missing circlip causing the lever to jam. The missing circlip was found on the floor inside the glider. The suspect circlip was compared to a new circlip and found to be deformed so that the fitment on the connecting rod would have been loose allowing it to pass over the shoulder of the retaining grove when sideways pressure was applied. The deformation of this circlip may have been caused during a recent outlanding where the glider skidded slightly sideways before coming to rest in a cultivated paddock. A new circlip was installed, the undercarriage fully inspected, and the operation tested in a cradle before being returned to service and test flown. The glider has now completed several flights without incident.

8-FEB-2021 VSA
JS1 B
HARD LANDING

What Happened

While competing on day 3 of the Horsham Week gliding competition, the pilot commenced final glide at 2800ft AGL about 25 kms north of the airfield. The pilot's flight computer had calculated the glider would arrive at the airfield at about 1200ft AGL (700ft above the predetermined safety height of 500ft AGL). The glide progressed without any periods of unusual sink or good lift, and the airfield was in clear view and looking to be sensibly within reach. However, as the glider crossed the finish line 5kms from the airfield reference point at around 500ft AGL, the pilot realised an outlanding would have to be made and began to jettison the water ballast and configure for landing. The pilot chose to perform a straight-ahead approach to land near the southern end of a large paddock that was about 2Kms north of the airfield. The glider touched down at speed and bounced several times. Towards the end of the ground roll the pilot decided to veer to the right to give himself more clearance to the fence ahead of him, at which point the undercarriage collapsed and the glider slid to a stop facing about 110 degrees to the right of the approach path. The starboard undercarriage door separated from its hinges, and a winglet fixing pin was bent.

Analysis

Thermal heights for this day were around 3500 ft and most of the task was flown below 3000 ft. When the pilot commenced the final glide, he was confident of successfully completing the flight. Despite narrowing safety margins on the glide, the pilot remained optimistic that the glider would reach he airfield at a safe height. When it became obvious that the glider was not going to reach the airfield, the pilot was too low to conduct other than a straight-in approach and landing. The paddock selected was approximately one mile long and sloped down in the direction of travel, yet the pilot elected to land near the far end boundary where he felt the need to initiate a turn to avoid the boundary fence. Inspection of the landing area revealed five ground scars where the main wheel contacted the ground, each with a gap of four metres. The fifth mark was much wider than the other marks that is likely the point at which the undercarriage collapsed. The aircraft slid for a further nine metres to the right before coming to a stop about 75 metres from the boundary fence. Ground marks show that water ballast was still exiting the glider after it came to a stop. Subsequent inspection of the undercarriage system did not reveal any mechanical fault that would lead to a collapse, and the pilot believes he may not have locked it down correctly. The pilot is very experienced but had not flown for several months prior to the accident due to a period of medical unfitness and then the COVID-19 lockdown. His lack of currency and fixation on his flight computer to provide performance indicators and forecasts are contributory factors. The pilot's experience flying from the site contributed to his complacency and willingness to conduct an outlanding from low height without performing a proper circuit.

Safety Advice

For competition pilots the race to the finish is a high workload and dynamic situation. In such circumstances, being near the ground at a height where it is not possible to assess and check an available landing paddock is a high-risk situation that must be avoided. Human factors including decision biases, goal fixation and cognitive tunnelling in competition may lead to pilots eroding safety margins more than in normal non-competition flying. Being aware of the dangers of continuing into marginal circumstances, setting boundaries, having a sound knowledge of rules and procedures, disciplined adherence to minima and performance requirements, prioritisation of options, and planning to deal with potential situations will act as defences against unsafe conditions.

9-FEB-2021VSA
LS 8-T
AIRCRAFT SEPARATION

Under investigation While flying a competition task the experienced pilot entered a thermal at an altitude of approximately 4,000 feet. Another glider in the thermal widened his turn to provide clearance for the entering glider but as the pilot of the entering glider completed the first turn, he observed another thermalling glider immediately in front. The pilot initiated a violent evasive manoeuvre that involved tightening the turn and pulling back on the stick that led to his glider entering a spin. The pilot recovered from the spin within one turn below the other thermalling gliders..

23-FEB-2021 NSWGA
SZD-55-1
LOSS OF CONTROL

Under investigation The pilot was undertaking a wing-down aerotow launch in an 8-knot crosswind as there was insufficient crew at the launch point. The pilot put the into-wind (starboard) wing on the ground and deployed the airbrakes to improve aileron control at low speed. As the launch proceeded, the pilot found he could not raise the starboard wing due to the tug's prop wash and the glider began to veer to the right with the tail in the air. The pilot was about to release from tow when the starboard wing rose. Believing he could recover the situation, the pilot remained on tow. However, control inputs caused the port wing to strike the ground, and corrective action resulted in the starboard wing dropping back onto the ground. Unable to regain directional control, the pilot released from tow. The nose struck the ground as the glider came to a halt. While the pilot was uninjured, the glider was substantially damaged.

GA

CLASSIFIED ADVERTISING

Classified Ads can be purchased from the Gliding Australia website at magazine glidingaustralia. org Go to Classifieds then click on the link and complete the online form where you will need to provide the text for the ad and any photos, if required. The cost for the ad will be determined by the number of words and any photos you wish to add. You will then be taken to a secure payment area to process your payment. Your ad will be placed on the GFA website for a month from the date of payment. Ads that are financial at magazine deadline (1st of every second month) will appear in the GA Magazine. For any enquiries please contact the GFA office on 03 9359 1613.

SINGLE SEAT

VH-IUG Jantar 2B, recently refurbished.
Excellent cross country performance.

- 20.5m, 49:1 L/D,
- Perfect ballast tanks,
- New Compass
- New main tyre. Oudie.
- Winglets,
- Removable front canopy allowing easy access to instruments.
- Towball ground gear,
- Advanced rig gear and trailer.
- Excellent condition.

•Price $19,500. Contact **Rob Brown, 0394994275**, r**wb103@hotmail.com**

MOTORGLIDERS AND TUGS

VH XXF Nimbus 3DM serial No 005, dom 1988, 24.6m and 25.5m, Genuine hangar queen, in stunning condition for its age, 700 hours total time, eng 70 hours. Engine overhauled 2017, Trailer refurbished and re painted 2020. One man rigger, trailer winch for fuselage trailer insertion, B600, B400, Trig 8.333 radio, Mode C transponder, Flarm. Gelcoat is Aussie ferro gel in excellent condition. Arcus performance at one third the price. Mander assisted cockpit egress, oxygen, two canopy covers, Vertigo(UK)full glider covers etc it is all there. Preferred contact email **resanders@gmail.com**, **0488774557** may or may not be attended.

VH-ZHX Sundancer 13/ 15,
2 seat motor glider, LSA approval by GFA, 4 ½ years old, engine 85 hours, form 2 included, had a terrific time flying the morning glory with Ian McPhee September 2018, have to sell because of health reason, glider currently at Camden Sailplanes,
for more info call **Heinz 02 66492783** after hours or **0400 347412** Price $105'000 ono

VH-GVW Alpin DM8 2 Seat Motorglider by TeST
Fun and reliable soaring machine that is easy and cost effective to operate. Registered Experimental class with no life limitations. Rotax 503 and timber prop only 67.4hrs and runs well. Extension/retraction unit is electric worm drive and has been very reliable and simple to use allowing for quick air starts if required. I have owned this beautiful glider over the past three years and have approx 200hrs logged for only 5.5hrs engine run time over 70 flights. Average motor run time from start on ground to shut down in 1st thermal 6-10mins. I have logged plenty x-country flights in her with many 200-280km out and returns, a couple of 300km triangles and many 'Cats Cradle" type flights of around 180-200kms (as i like to stay within 50kms of home base for convenience). This is simple, one person operation, soaring fun on a very frugal budget that allows you to take friends flying and is ready to flyaway. Reason for sale is I have purchased a Super Ximango for touring and need the hangar space. Form 2 due 16-10-21. No trailer. Located Tara Queensland.
Price: $35,000 Negotiable Contact Jason **jasonr65@bigpond.com 0408 356185**

VH-GPH DG400 carbon fibre 15 & 17m.
1850hrs. Polyurethane refinish 2014 at 1700hrs flown little since, like new. Rotax 505 186hrs with auto park propellor, climbs 6knts. Instruments include Tasman vario, LXNav Nano4 and Flarm.
New batteries fitted June Form2. Comet clamshell trailer with new tyres. Self rigger gear. $72,000 (**0429)429539.**

VH-DXN Whisper Motorglider 16m.
Limbach L200 80HP and Hoffman V62R 3-position prop. Engine and propeller 12 hours TSOH. This is the original manufacturer's prototype built in 2004. Now more than 30 flying in the world. Total airframe time is approximately 275 hours. Comfortable cruising at 90 knots with minimal fuel burn or sound gliding performance at 1:28. AD687 completed. Currently located at Bindoon WA. Price

T & J Sailplane Services
Australian Agents for DG & LS

Tom Gilbert
call **0427 557079**
email **tnjgilbert@internode.on.net**
web **www.gliderstuff.com.au**
facebook **tnjsailplanes**

webstore online now - visit **gliderstuff.com.au** for tyres, tubes, tapes and more

In one glider you can have

- 20 metre tips with winglets, water ballast and retractable landing gear*
- 18 metre tips with Neo winglets.
- 17.2 metre tips for the full range of aerobatics.

* standard configuration

Other options include three landing gear configurations...

- Electrically operated main gear (or manual on request) with tail wheel.
- Three wheel layout with retractable main gear, fixed nose and tail gear.
-Three wheel layout with fixed and faired main and nose gear.
- Other great features include tail and cockpit ballast blocks to optimise C of G for XC and spin training.

The DG-1001 is available in 4 versions...

- DG-1001 Club with fixed and faired landing gear and 18 metre tips with Neo winglets.
- DG-1001S with 20 metre tips and winglets, water ballast and retractable landing gear.
- DG-1001T with sustainer engine.
- DG-1001M self launcher.

Also Available :

LS8-sc neo
Standard Class Racer

18m & turbo options available

DG-808C Competition
18m Self Launcher

outstanding self-launch performance