GLIDING AUSTRALIA MAGAZINE

Issue 52 June - August 2020 magazine.glidingaustralia.org

ELECTRIC SKIES

TAURUS ELECTRO G2

CONDOR SOARING - JOEYGLIDE - CROSS COUNTRY PLANNING - WINNING THE MENTAL BATTLE - INSURANCE

GLIDING AUSTRALIA MAGAZINE

No. 52 June - August 2020

COVER: SIMON HACKETT LANDING HIS TAURUS ELECTRO G2 AT 'THE VALE' IN TASMANIA BY ANNA HACKETT

2 FROM THE GFA & PRESIDENT
Read all the essential updates from the GFA President, Executive Officer, Board Members and Association Departments.

10 NEWS - EVENTS, BADGES
As the 2019/20 gliding season winds down for winter, check for upcoming events in your state, coaching opportunities and competitions.

12 A FLIGHT TO REMEMBER
Dominique Brassier shares experiences from one of her first cross-country flights – challenges, decision-making and how she'll do it better next time.

15 SA STATE CHAMPIONSHIPS
Nine pilots competed in a Formula 1-style competition held at Stonefield, SA, coping with late afternoon starts in windy, dusty conditions.

16 CONDOR - FLY LIKE A CONDOR
Grounded pilots around Australia are learning to satisfy their desire to fly and compete by becoming ace Condor Soaring Simulator pilots instead.

22 MURRAY BRIDGE GLIDING CLUB
Across six decades, MBGC has continuously evolved to match members' skills and interests. Right now, it has become a motorglider-only club.

24 ELECTRIC AVENUE - TAURUS ELECTRO G2
Simon Hackett talks about his 15m two-seat self-launching Taurus Electro G2, powered with electricity he manufactures on his farm in Tasmania.

28 JOEYGLIDE
James Nugent and Michael Keller talk about that special atmosphere at JoeyGlide, from mateship and fun relaxed competition to top coaches.

31 CROSS-COUNTRY PLANNING
Matthew Cameron delivers expert tips on the single most important factor in successful cross-country flying - planning.

34 VINTAGE
Paul Dickson competed at Lake Keepit Regatta in the comp's only wooden glider. Vincent Crockett built a perfect 1:3.5 scale model of the Zephyrus.

39 SAFETY
Sidney Dekker advises pilots to ensure they are current and competent before returning to gliding, and tells why it's important and how to do it.

41 TRAINING - WINNING THE MENTAL BATTLE
Bernard Eckey reminds pilots that undivided focus is critical in the cockpit, and why positive thought and problem solving are key attributes.

43 EXPLAINING INSURANCE
Dave Shorter sets out the elements of an insurance policy in plain language to make risk management and liability cover a bit less scary.

46 OCCURENCES

48 CLASSIFIEDS

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

WELCOME TO THE NEW GLIDING AUSTRALIA MAGAZINE

Due to the lock-down measures curtailing gliding over the past months, the print edition of Gliding Australia has been suspended. However, you can now read your favourite magazine and all its content in 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
Editor

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 $47 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 Fédération Aéronautique International (FAI) through the Australian Sport Aviation Confederation (ASAC)

Print Post Publication Number PP 381712/02675

FROM THE PRESIDENT

OUR SPORT'S FIRST FULLY DIGITAL MAGAZINE

Here it is, the first digital only magazine. There will be many thoughts on this, some sad, some not. But both the financial imperative and this brave new world we are entering needs a rethink of some of the 'old' ways'.

Personally, I like to look through old magazines, not only in the gliding world. I often read the items that interest me, then put them aside to read more fully sometime later. It's been suggested we share them with friends from other parts of our lives to give some free advertising to our sport, which I might do with my current stack.

COVID-19

As I am writing this, we appear to be entering a new phase of the COVID-19 epidemic, that of opening up the economy again, slowly but carefully. We we need to consider how that will affect us, or if it will.

Currently, in some states, travel is so restricted that it is effectively stopping any flying. That is probably good for the health of some of our pilots in the older demographic, but intensely frustrating for those younger folks who just want to do it.

The Executive and Board have been grappling with how to support our members in this situation, and have decided to simply advise members to take the Federal and State government advice. To attempt to add our own advice would simply confuse the issue, as each state and territory has their own rules. Where they are considered useful, we are also sending out operational and Airworthiness advice and conducting safety seminars.

Everything is so variable at the moment. My club, based in South Australia, has been conducting Instructor solo flying and is now branching out very carefully into solo flying for their non-instructors, with the permission of the police and health departments. It's about planning for the future and keeping a level of currency to minimize the risk profile as we emerge from isolation, whenever they be.

Unfortunately, that is not the normal situation in the eastern states, and each club will need to manage risks that are identified during these times. I know there are some self-launchers flying, sometimes with family members. Good luck to them – perhaps they will form a core of instructors to support your club as it slowly gets back to whatever the new normal will be.

MODERNISING IT SYSTEMS

In an effort to modernise our IT systems, Go Membership is now well underway. It took a while to bed it in, but it seems to be pretty well accepted by now. Allowing people to accept and adapt to anything new needs time. One of the main reasons for this type of change is to minimise the risk of a single point of failure in purpose-built systems. Sometimes these types of systems are not exactly what we want, so we need to adapt a little to get the best out of them. I have recently updated a number of my credentials in Go Membership and, surprisingly, found it quite easy to use and do.

TRAINING COORDINATOR DISCUSSION

A topical discussion at the moment at the Board level is the role of training coordinator. I am not sure this is a good thing, as it may add another level to the general bureaucracy that we have to overcome, a level that may slow down quality changes that need to be implemented with a minimum of fuss. On the other hand, if implemented properly it may bring some well needed standardisation to our system. Anyway, it is being discussed and will have probably been decided by the time you read this.

MINIMISE IMPEDIMENTS TO SAFE AND EASY FLYING

Back onto my usual theme – we need to minimise unnecessary disruptions that slow or stop members from learning and flying. Sometimes these are simple, like making an AFR into a BFR, as in other forms of aviation in Australia.

Another no brainer is changing the Instructor numbers to reverse what they are at the moment, meaning that an AEI will be a Level 4 instructor, a Level 3 will be what used to be an assistant Instructor, a Level 2 will remain the same and a level 1 will be what was previously called a level 3 with specific duties such as club checks etc. Why is this good? It simply puts us in line with all other aviation disciplines in Australia. What a great thing. Can you think of

anything that will help us make it easier for you?

ARTICLES OF ASSOCIATION POTENTIAL CHANGES

A group is also planning to make some changes to our articles of association to make them more representative, hopefully to actually allow the members, instead of the Board, to vote for their President and Vice President. We will see. Regardless, I have decided that I will not be contesting for the President's position at the next Annual General meeting. I simply have other things to do with my life now, and some opportunities I want to take.

I have no regrets. I believe I have done what I could to change the GFA into a more responsive and reasonable entity, despite what some people clearly think. If some of you can put your hand up and support the GFA through the transition to a new world, please base it on a premise of 'what can we do make it better and easier for our members'.

MARKETING AND LOGOS

You will probably have seen our new logo. How fantastic is that! When it is married to the new group of slogans based on the word extraordinary, it really tells it like it is. We need to remember that we do extraordinary things in extraordinary ways, and our new marketing team are also extraordinary.

MEMBERSHIP

Membership is also on all of our minds. The Board, with a view to assisting members through the Corona virus, elected to give a 6 month membership extension to all full members and some adjustments to short term memberships. This was based on the fact that we would surely miss some members who were badly affected if we attempted to target our initial response. We also simply did not know who would be affected - it was a way to temporarily ensure that our membership would not have to choose between gliding and their families.

Back in 2015/16 or so, members may remember that I warned that if we didn't do something different, we would effectively have no one left in GFA by 2040. Last night some of the executive and Board had a deep dive presentation on membership, and it revealed a number of facts. One item we need to be very clear about is that GFA has limited or no control over club activities. GFA members are individuals, and clubs and regions are affiliated organisations.

Not so long ago, we were advised that we had about 100 clubs. Currently, we have 65 or so, since individual members seem to have largely moved to bigger clubs. About 20% (1 in 5) of our current members are new members, which means they don't have a long history or a detailed depth of knowledge, and therefore need more support than a long-standing member with good knowledge who can work through issues. I wonder how clubs are addressing this aspect of their membership.

It appears that those who start with courses tend to fly more, but determining whether this equates to members who stay in the long term needs further work. Members also leave our sport for a number of reasons, but the one thing I continually worry about is those members who leave because of club politics. We need to be more sympathetic to our volunteer administrators, but in this age of Twitter Nazis, where anyone and everyone is fair game on social media, I doubt if that will happen.

FLYING

Please, when you come to fly again, build your skills up before you get to the point of needing them. Don't leave those little things undone, and ask if you don't know or don't remember.

PETER CESCO
PRESIDENT
president@glidingaustralia.org

FROM THE EO

WEBINARS FROM SPORTS COMMUNITY

S2F work with clubs has revealed that some clubs have non-compliant, outdated constitutions, and some are not being run in accordance with the relevant legislation. We are also seeing an increasing number of disputes and disagreements between club committees and members that escalate to Board level. To assist clubs to better manage their affairs we are arranging with Sports Community to run a series of Webinars with topics such as

- Conflict resolution
- Club constitutions
- Strategic planning
- Communication
- How to run a meeting

Several others are available, plus an overview of successful S2F initiatives at member clubs. Clubs will be invited to sign up and GFA will reimburse against invoices when clubs re-affiliate.

S2F 2020

S2F is ongoing with a new name S2F 2020, a funding restructure and the aim to help more clubs get involved. At the last Board meeting it was noted that the S2F clubs have been making headway with increasing their membership and participation levels. Most clubs in Round 2 of the S2F project were from Queensland, and found there were significant benefits when they cooperated on their approach. Since it worked so well, and since most applications for Round 3 have been from NSW, it was decided to focus mainly on NSW for this next round.

GFA STAFF SUPPORT

All staff have been working from home since early April and this has been working quite well. We are having regular on-line meetings in order to share any issues and to ensure we retain our sanity. For most of us, this was just business as usual but for the office based staff it was quite a change. With suspension of flying in nearly all states, and the extension of membership for 6 months, and even a small reduction in Form 2 activity, the workload has reduced a little. This has enabled us to catch up on some long standing issues. Nearly all staff are reducing their hours of work now to accommodate this decline in business and also to help with our cash flow situation. The plan is to absorb these reduced hours even when business returns to normal.

The GFA office will be closed every second Friday but you can still get your questions answered by sending an email to returns@glidingaustralia.org and we will respond as soon as we can.

Some member have asked us how they can pay their membership as normal and ignore the free 6 months. We appreciate this support. If you want to arrange this, please send an email to returns@glidingaustralia.org or eo@glidingaustralia.org.

GO MEMBERSHIP

GM for members: You are in complete control of the information that GFA has regarding your address, name and so on. Click on the blue 'My Profile' tile, and you can update details at any time.

Check your Credentials and Qualifications (see link under your photo) and if you are missing any or if they have expired, then you can apply for a new credential – click 'add credential' at the top of the list. Members can list the names of all clubs that they belong to, and must then indicate which is their primary club.

If you click on the Green 'Documents' tile, you will see a list of documents that will explain how to work with Go Membership. The document Qualification and Credential evidence will list the evidence that you need to provide in order to claim a credential or qualification.

GM for clubs: All clubs have their own section within Go Membership and members who are listed as Club Admin will have access to this section and all of the club details. The club can appoint any number of Admin people, so speak to your club Secretary if you would like to take on this responsibility. The Club Admin can update office bearers and other general information. They can also print a whole series of reports – Membership list, Instructors list, GPC holders etc.

Membership payments: All membership payments must be paid by card through GM. The previous option of paying your club and the club invoicing the GFA has been removed. If you pay your club then the club must pay GFA by card.

continued over page

VIRTUAL MEETINGS

Due to Covid-19, the GFA and Regional Associations and many clubs have moved to on-line meetings. These are certainly easier for people to participate in and significantly cheaper, and they can be very successful if managed efficiently.

The GFA uses a system called Go To Meeting, which works well, although we are likely to move to Zoom in the near future, which is a little cheaper and equally effective.

The recent Safety Seminar was run using GoToMeeting Web, which enables up to 250 participants.

We had initially planned to use Google Meet but this had some issues with people using Mac computers joining, so we changed at the last minute.

The Safety Seminar involved 130 members, all sitting at home but listening to the great presentations, which delivered some valuable information for all of us as we move back to flying. You can see the video of this seminar – just go to the GFA web page glidingaustralia.org and you will find the link on the front page.

Our Annual General Meeting is normally run in August and it is unclear if travel restrictions will still be in place, so we either have to delay the meeting or conduct it online. A virtual meeting appears to be possible but we are waiting on confirmation from Corporate Affairs. If this does take place then it will mean that many more members can participate than is normally achieved with a face to face meeting.

JUNIOR MEMBERSHIP

The Australian Junior Gliding Club (AJGC) advised that many young members have been struggling to retain their GFA membership when they turned 18. Unless they had 20 hours of classes each week, they were not considered to be students and, therefore, were forced to take out adult membership.

As a consequence, many have been forced to resign as they typically are not earning a high income and only getting part time work. The GFA board has decided to remove the Student membership category, and has extended Junior membership through to age 25. This means that our younger members can now benefit from reduced fees through to age 25. When they renew their membership next, they will be able to select Junior membership and pay the Junior rate.

AJGC

The Australian Junior Gliding Club are actively promoting and supporting our younger members.

Their key offering is the Joeyglide Junior Nationals and Coaching which is scheduled for January, but they have also organised a Junior Instructors course in which suitably qualified young members can attend and be trained/assessed as instructors. Many of us were instructors in our late teens and early 20s and we really need a new group of young people with the enthusiasm and skill to further develop our sport.

Any member under 25 is able to join the AJGC and the GFA will even pay your membership fee.

TERRY CUBLEY AM
EXECUTIVE OFFICER
eo@glidingaustralia.org

FAST TRACK YOUR SKILLS

Weekend flying at your gliding club can be good fun, with good social interaction and a range of people willing to pass on their skill and knowledge. It can also mean slow progress with developing your skills, getting solo and getting your Glider Pilot Certificate (GPC).

If you would like to accelerate your progress, you should look for opportunities to attend a Flying Start (going for solo) course, which is often held over 5 to 7 days, when you are given priority access to aircraft and the attention of one or two instructors to lead you though that early training. It will cost $2-3,000 but that Is not much more expensive than 3 to 6 months of training at a gliding club, so well worth investigating.

If you are solo but have stalled in progressing to your GPC, then you can also consider a Flying Further course. All regions will be holding courses. Again, it is a week of accelerated progress as you are taken through the remaining units of your GPC. Completing this should enable you to do some early cross country flying and work towards your Silver C and Gold C badge, and becoming an Independent Operator. Talk to your club instructors or coaches, or contact some of the larger clubs in your region to see what they offer, or look for adverts for these courses.

You can be a competent glider pilot in a much shorter time than you may think is possible.

GOVERNANCE

Governance is defined as the overall guidance, direction, oversight and stewardship of organisations, associations and clubs.

So why have governance with relevant policies and procedures?

- A well-run organisation is attractive to new members
- Good governance supports growth and development
- Funding agencies, potential sponsors and government look favourably on well managed organisations
- Good governance reduces risks.

An organisation needs to continually monitor and review its governance and compliance with both federal and state legislations for the benefit of all members to ensure that it is following the rule of law and acceptable standards of behaviour to reflect the times we live in. To this end, the Board have embarked on a review of all Member Protection policies and procedures along with other related policies.

Policies and procedures, written and unwritten, are used in organisations to guide decision-making and provide transparency. Irrespective of size, all gliding clubs should adopt a series of basic policies and procedures. Most of these can be re-drafted or directly taken from the documents at state and/or national level.

Clubs should have a set of base line documents that members can refer to and usually would contain policies such as:

- Member protection
- Codes of conduct for members, committee, officials, coaches, volunteers and parents/guardians
- Judicial process and dispute resolution

The combination of these policies applied to activities at your club will also assist in dealing with certain risk management issues, as many policies outline preventative measures for the issues addressed.

The policies under review by the GFA will encompass but not be limited to Member Protection, Child Protection, Social Media, Inclusion and Diversity and/or Gender Equity Policy, Anti-Discrimination and Bullying, Fair Play Codes and Codes of Conduct, Reporting Conduct that May Bring Gliding into Disrepute Rule Policy, Integrity Framework and Conflict of Interest Policy. Along with a review of policies, procedures will be examined in relation to Grievances and Complaints.

A Task Force has been formed of Vic GFA Board Member Vivienne Drew, Gliding Queensland President Jenny Thompson and NSW GFA Board Member Chris Stephens, along with input and consultation from NSW *Member Protection Information Officer* (MPIO) Anita Taylor and Victorian MPIO Alf McMillan. The Scope of Work will be in three stages. Stage One is the Member Protection Policy, which is due to be completed by the end of July 2020.

The initial review has already commenced and drafts have been formulated.

Further updates and information will be included in future editions of Gliding Australia.

VIVIENNE DREW
PRESIDENT, VICTORIAN SOARING ASSOCIATION

S2F

"YOU'RE NOT THE BOSS OF ME"

That's something my young nephew used to say to me when I was trying to get him to do something he didn't want to do, or something he thought I didn't have the right to make him do.

In gliding, this concept applies when GFA tries to get clubs to change how they do things. We have continuing discussions at the Board level about how much GFA can and should try to influence the behaviour of individual clubs.

We know from Member surveys that not all members are completely satisfied with the services they receive from their clubs. They complain about lack of consistency between instructors, about lack of progress, they complain about a clear path for progression and they complain about Club politics. We know that retaining and even increasing membership is a crucial issue, particularly in these strange Covid driven times.

So how can GFA as the umbrella organisation influence the behaviour of individual clubs? Indeed, should GFA try to influence club behaviour? Is that what Members expect? These questions are often discussed at Board level and one reason for writing this article is to start a conversation with the membership and invite feedback through the form at this link - https://forms.gle/S5TmeMdD7UaBYBrP6

We know that our members are smart, independent people with good ideas and strong opinions. We know from our surveys that members understand that we need to increase membership to replace the members we lose due to our aging demographic. We know that members expect GFA to "do something" to increase membership. Yet we also know from the surveys that many of the problems that are limiting membership or causing people to leave gliding are fundamental issues at the club level.

The Soaring to the Future (S2F) initiative was the first time that I am aware of that GFA has attempted to influence club behaviour directly. This initiative sees clubs opting in to adopt change, being paid and supported to change while being assisted by a professional external organisation – Sports Community – to change. This has proved to be successful but it is certainly a major change of direction for the Board.

It seems that successful clubs have good communication among their members, and conduct regular member surveys for feedback to see how they are going. Other traits of successful clubs are regular club camps and social events away from the home airfield, encouraging interaction with members from other clubs. Successful clubs also run intensive courses to satisfy their member's needs. They have a diverse membership with a good mix of male, female and junior members.

Conversely, we know that some clubs are run by a closed shop with an 'old guard' who do not want to change.

Is it GFA's role to support members in this latter group to effect change, or is it reasonable to expect members to force change on their own?

S2F has discovered clubs that don't have a compliant constitution, lack good communication among members and are poor at conflict resolution. These are clubs that have put their hands up to adopt change – so you'd expect them to be the better clubs, certainly not the worst.

How can GFA best serve our members and give them what they want while allowing clubs to be appropriately independent?

These are all important questions and I'm interested to hear what members think. As I said at the beginning, when we study the response to the GFA Member surveys every two years, there are many comments asking for help to increase membership, while at the same time showing that, in some cases, membership is limited by the behaviour of club committees, club attitudes and club biases or member behaviour.

This is not an easy problem to solve without treading on some toes. Soaring to the Future (S2F) is the GFAs first foray into 'Club Land', and recent statistics show that it has been successful but is not something that is welcomed equally by all club committees.

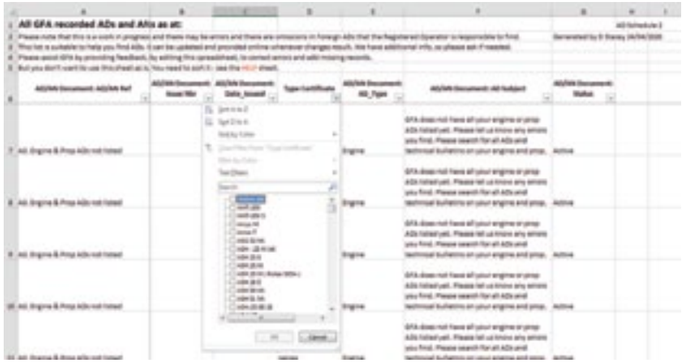
The question is – should GFA insist on certain minimum standards for all clubs? We have standards for airworthiness, for Instructors and coaches. Should we impose minimum standards on Club Committee behaviour?

Go to bit.ly/3ewRnrz to complete a very short survey with your opinion on this issue.

MANDY TEMPLE
CHAIR S2F
s2f@glidingaustralia.org

GFA investing in clubs

FINDING YOUR AD SCHEDULE



A common complaint from members is that GFA no longer provides a set of Airworthiness Directives (ADs) with the Form 2 kits each year. A second complaint is that it is difficult to find the list of relevant ADs, also referred to as the AD Schedule, for your aircraft on the web page.

Significant legal changes were made in 1998 and in October 2009, EASA changed the international systems for airworthiness. Unfortunately, the GFA missed these changes. It wasn't until a CASA audit in 2013 that we realised that there was a significant problem in the way we were doing our business.

In the past, GFA Airworthiness was receiving ADs from foreign countries and 'rebadging' the ADs under a GFA letterhead. This process has stopped as it was wasteful, could introduce errors and wasn't legally compliant after October 2009, as the original AD from the country of manufacture now has legal precedence over the AD issued by GFA. This makes it very difficult for the GFA Airworthiness team to track all of the foreign ADs for all of the aircraft types registered in Australia. Compounding the issue are ADs issued by engine and propeller manufacturers, which are relevant to those with self launch or sustainer aircraft.

It is the legal responsibility of the Registered Operator (RO) to ensure that the ADs are complied with each year. To make it easier, the GFA Airworthiness team maintains a list of all known ADs and the aircraft types. While all effort is made to ensure that the schedule is as up to date as possible, the Registered Operator should still check with the type certificate holder's web page, as the Registered Operator is legally responsible if anything is missed.

To find your AD schedule:

(1) Go to the Gliding Australia web page
(2) Click on the 'Docs/Forms' tab
(3) From the Documents list, click on 'Airworthiness'
(4) Click on the first sub folder 'AD Schedules'

This brings you to a page where you can download an Excel spreadsheet titled GFA AD-AN-AWA Register YYYY-MM-DD.xls. The spreadsheet is updated regularly and the date at the end of the file name gives the date when the file was last updated. There are reasonable instructions on how to use the spreadsheet on this page as well.

(5) Download the file "GFA AD-AN-AWA Register YYYY-MM-DD.xls" and open it.

When you open the file you may need to click on 'Allow Editing' depending on your security settings.

When the spreadsheet opens, you will see a number of column titles across the top of the worksheet.

(6) Click on the down arrow icon for 'Type Certificate' in column D. This pulls up a list of all of the aircraft, engine and prop types listed in the spreadsheet.

(7) Deselect the tick box in the list at Select All.

(8) Scroll down the list and find your aircraft, engine and prop type and click in the tick box as required.

This has now produced a filtered list of all of the ADs that GFA Airworthiness has knowledge about for the selected aircraft, engine and prop type. You can now find the GFA ADs from the 'AW Directives' folder (after Step 3 above instead of 'AD Schedules'). You may also need to search the EASA or type certificate holder's web page for the ADs listed in the schedule from those sources.

ANTHONY SMITH
CHAIR AIRWORTHINESS
cmd@glidingaustralia.org

MARKETING AND PROMOTIONS

The sport of gliding is extraordinary. From your first time thermalling with a bird, going solo, sharing a fun 2-seater flight, outlanding far away, having a drink at the clubhouse after a long hot day – and everything in between – gliding brings a range of experiences and emotions. It means a lot to pilots for a number of reasons. But what we don't do very well is sell this amazing sport.

We are diverse. We tailor for aviation buffs, Air Experience Flights, people starting out in aviation careers, people flying with their families, people looking to race, some looking for relaxation, socialising and many other variations.

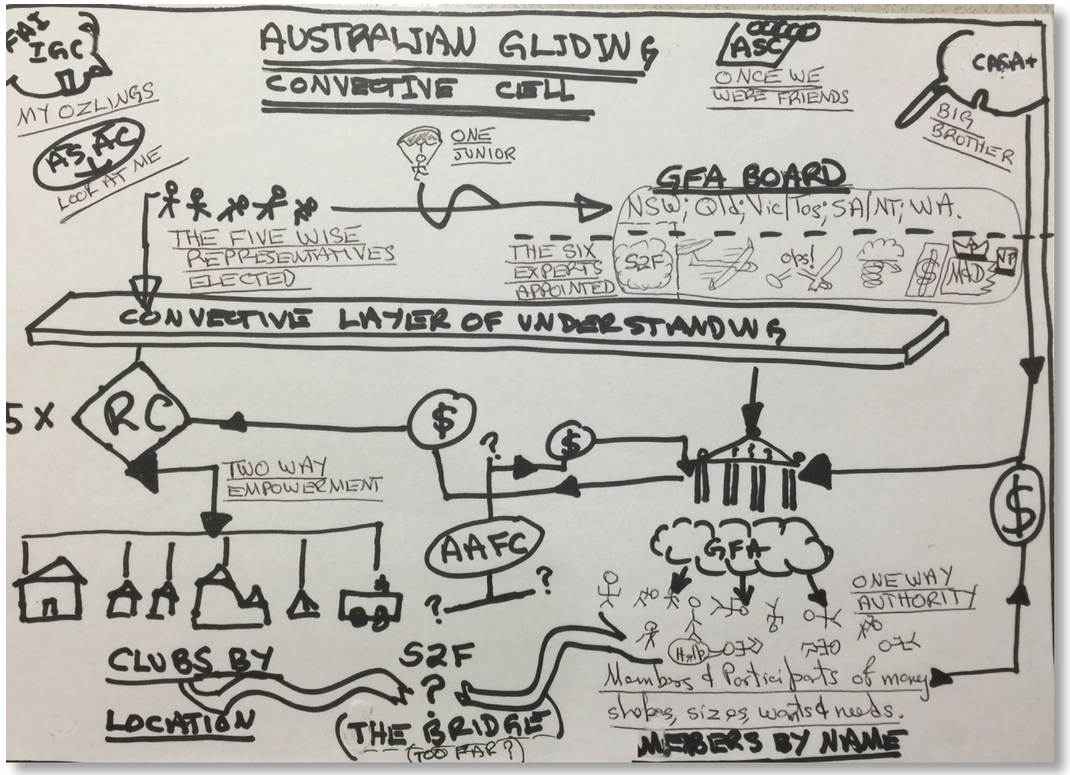
With all that in mind, the plan moving forward will be to standardise the approach to marketing and give clubs and regions the resources they need to promote their clubs and the sport.

- On the new website, there will be a dedicated resources page for clubs to download promotional material including FAQ, posters, postcards, stickers, banners and social media posts.
- We will be rolling out webinars for marketing clubs region by region.
- Assistance will be available to clubs who want to work more closely with schools.
- As a national body, we will look for events and promotions to attend.
- Importantly, we will be improving communication and access to information for members, so that when we get members, we keep them.

As well as increasing awareness of our amazing sport, we also need to make sure we are putting our best foot forward, and that starts with everyone, our pilots, members and clubs. What do you love about gliding? If you have a story to share please get in touch cmd@glidingaustralia.org and be a part of growing and sharing our wonderful sport. It's a team effort!

SARAH THOMPSON
CHAIR MARKETING AND DEVELOPMENT
cmd@glidingaustralia.org

GFA CORPORATE GOVERNANCE AND COVID-19



Our sport of soaring continues to decline while the costs of participation increase and low membership retention, regardless of the reasons, retards growth and club sustainability. In the most recent Gliding Federation of Australia survey, members included club issues and frustrated flying plans as problem areas. Most members had little idea what the GFA actually is or how Regional Organisations contribute to our freedom to fly. Then along came COVID-19.

The late Maurie Bradney once said of GFA numbers, "The rusted on 2,000 will always be there." That may have been true, but we are largely the same 2,000 as then, despite thousands joining and leaving since. We are declining through natural attrition and other causes.

If we, the remnants of that 2,000 in 1990, are not replaced, there likely won't be an understanding of GFA, meaning that future glider pilots would be flying under a very different corporate sky and lacking many of the freedoms and exemptions we currently enjoy. So what the heck is GFA and why do I say GFA is critical to our freedom to fly?

YOU AND ME

GFA is you and me. Not clubs, not regions. It's constituted by 'persons'. Each person may vote at the GFA Annual General Meeting and must be a member of a club affiliated by GFA. Some clubs have been refused or had affiliation cancelled. It's not automatic. That's it, essentially. We could end this article here, except that's not all there is to our freedom to fly.

To protect and grow our freedom to fly, GFA has to deal almost daily with external authorities and organisations. The Civil Aviation Safety Authority and Fédération Aéronautique Internationale are two examples that readers should be familiar with. There are more. So the two core functions of GFA are visible one as a regulatory body the other as a national sporting organisation.

These core functions compete for resources, which are mainly members' annual subscriptions, although CASA does partly fund the regulatory role. Naturally, there is never enough. To manage their resources, GFA members ratify, elect or appoint other members to a board of management through various indirect means. Additionally, the operations, airworthiness, sport, marketing & development and Australian Junior Gliding Club departments nominate other members from within their expertise. All this happens at the GFA AGM – except it's not as simple as that. It never is, I hear you say.

BEHIND THE SCENES

I noted above that the GFA board of management is ratified, elected or appointed "through various indirect means". Each area of expertise and Regional Organisation does this in their own way. There is no GFA-wide direct election – and that is a deliberate feature of the 2010 and later the 2015 GFA Objects and Articles of Association. This process happens in both explicit and undefined ways. Some have found the lack of consistency a problem while others say it reflects the federated nature of Australia and consequently GFA. Think of the very different COVID-19 restriction regimes across the nation.

Once the board has been formed, at a meeting immediately following the AGM a President, Vice President and Treasurer are elected in an almost normal way.

Any GFA member may nominate for one of these three positions, subject to approval from two board members. The President, VP, Treasurer, operations, airworthiness, sport, marketing & development heads become an executive within the board. The executive runs GFA business on a day-to-day basis for all members, but as directed by the whole board.

DELIBERATE IMBALANCE

Above, I stated that the executive "is elected in an almost normal way". The regional board members have two votes each, making 10 all together, and each executive member only one each, making 7. This apparent bias is also deliberate. The regions collectively have the votes to overrule the executive on any issue, 10 to 7. It's not usual but also not unheard of for this authority to direct or overrule to be used. Normally, the fact it exists is sufficient to bring about a consensus.

There are also non voting board members, such as the GFA Executive Officer who is ex officio GFA Secretary, S2F and AJGC persons, but let's leave that for another day.

So now you understand how the GFA board is formed and structured, and its two core functions. Again we could end the article here and the last 10 minutes would have been a worthwhile read. But there's more.

The role of all boards is to provide strategic guidance for the organisation, set measurable performance goals, monitor management performance and report back to the organisations' owners. The GFA board has a strategic plan. It's used to measure performance, allocate tasks and keep the board in regular communication with its owners, that is, the GFA membership. That's getting better I hope.

REGIONAL ORGANISATIONS

While their board-like roles are the same, RO meet both, one, neither of the GFA core roles or do something else. That is not a criticism. Often in different ways, often shaped by historical views and local culture or differing constitutions, RO are driven by their membership needs. Clubs, not persons are RO members. The core RO role is to support Gliding Clubs in their region. They carry out Financial and State/Territory Government tasks, course supplementation, marketing & development, arrange competitions, grant trophies, open events or share equipment. These are but a few examples.

RO are intended to be the bridge between GFA, clubs and their individual members. That's why GFA operations, airworthiness, sport and marketing & development officers are required to work in consultation with and report to their RO as well as their GFA executive head. It's why the real test of how well a GFA executive is functioning is how well the regions and clubs are flying. Remember, the 10-7 balance is intentional.

In the main, Club Committees function at the tactical/operational level, with only occasional strategic considerations outside their own plans. They are entitled to and should rely on their respective RO for strategic guidance and delivery of services and associated resources, such as State/Territory funding and training needed to comply with prudential and regulatory requirements.

INTERDEPENDENCE AND TRANSPARENCY

The S2F program works through RO to deliver to clubs. I am a strong S2F supporter. A lack of clarity of these functions has been one cause of GFA membership leakage, often generated by frustration at the individual level. Remember the recent GFA survey.

Organisational interdependence between the GFA board and each RO creates a corporate governance compact, the nature of which is complicated, as you have read, by differing GFA executive departments, individual views and different paths to board, RO and club committee positions. This system of corporate governance works surprisingly well.

However, it is less than transparent and defies simple description, resulting in misunderstanding of both role and responsibility within the GFA board and across the whole gliding movement. For example, the GFA President position has been loaded up so much over the years that it is now effectively a full time job.

This fact is a disincentive for many candidates and limits matching skills, willingness and ability with functional delegations. The high quality of past GFA presidents has saved the gliding movement more than once, but it still creates a single point of failure and forces acceptance of risk beyond the tolerance any healthy organisation should accept.

OPTIMISING OPERATIONS

I doubt any of us would agree that we, as a gliding community, are operating optimally and delivering the best possible outcomes and value for money to ourselves, other members and clubs. I believe it is time we invest in our organisational development. Other national sporting organisations have done this with board performance improvements as a result. I'm not saying start afresh, since too much corporate memory would be washed away.

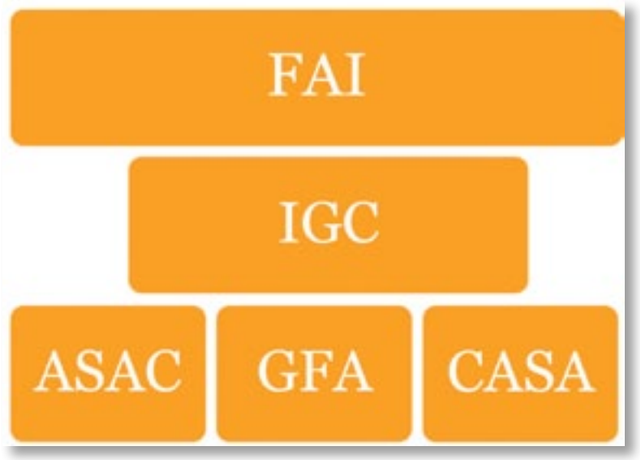
Some years ago a GFA board realised it was entering a downward performance spiral and recovered before entering a spin by meeting at an unfamiliar place with that one agenda – board performance. A respected facilitator was engaged from within GFA. For those who may remember, it was known as the Cobity Accord.

I think the new GFA board should repeat this after the upcoming 2020 AGM – I mean the whole, new board under a fresh president, not parts of it or a selected few. COVID-19 forced us to hit a pause button. Before singing all clear, we must ensure the pilot has a realistic flight plan towards membership delivery and our strip is clear of organisational obstacles, even the ones we are accustomed to working around.

CHRIS STEPHENS

Chris Stephens is the NSWG GFA board representative. He has been a club president, treasurer, secretary, GFA councillor, NSWG committee member, competition pilot, instructor and remains a cross-country pilot. Call sign G2.

IGC AND BADGES



Have you ever wondered how the system works behind the gliding badges issued by the FAI? A recent presentation by Australia's new IGC delegate Mandy Temple gives an overview of the roles of the various organisations involved in the sport of gliding. You can download the full presentation at bit.ly/3d65dAx

FAI

The Fédération Aéronautique Internationale (FAI) is a non-governmental and non-profit making international organisation with the basic aim of furthering aeronautical and astronautical activities worldwide, ratifying world and continental records and coordinating the organisation of international competitions.

- FAI activities include the establishment of rules for the control and certification of world aeronautical and astronautical records. FAI establishes regulations for air sporting events which are organised by member countries throughout the world. FAI also promotes skill, proficiency and safety in aeronautics.
- Within the framework of FAI, each air sport has an International Commission which is responsible for making the rules for competitions and which generally oversees the activities of their particular air sport.

IGC

The International Gliding Comission (IGC) is the international governing body for the sport of gliding. It is governed by meetings of delegates from national gliding associations. It is one of several Air Sport Commissions (ASC) of the FAI.

- IGC is the FAI commission responsible for the international competitions, records and badges that apply to gliders and motor gliders.
- GFA is represented at IGC meetings by Mandy Temple

ASAC

AIS Sport Australia Confederation (ASAC) is a national body, formed by a number of national air sport organisations. It represents some 15,000 active air sport members, and over 200,000 participants. ASAC is run by a board on which each air sport member has a delegate.

- In its FAI role, ASAC is Australia's representative, and is referred to as the National Airsport Control, or NAC.
- ASAC is recognised by the Australian Sports Commission as the National Sporting Organisation for Air Sports in Australia and is an affiliate of the Australian Olympic Committee.
- ASAC has a pivotal role in representing its members' interests on air space and regulatory bodies. ASAC is represented on a number of committees and reference groups that deal with such matters. As well, ASAC's members have an active role in supporting the relevant authorities in setting and monitoring operational and safety standards in their respective air sports.
- GFA is represented by the Chair of Soaring Development Panel

CASA

The Civil Aviation Safety Authority (CASA). CASA is the government body that regulates Australian aviation safety.

- GFA manages gliding in Australia under the authority of CASA. Currently we operate under an exemption – CAO 95.4 but in the future we may transition to Part 149.

PREPARATION FOR A BADGE FLIGHT

Many badge and record flights fail due to lack of preparation. Failure to conduct the flight with the necessary declaration and submitting the required information in the correct manner can lead to the claim being rejected.

There are several books and much information you can find to help you through the process.

ONLINE RESOURCES

Be sure to visit glidingaustralia.org Docs/Forms before you fly.

Badges & Record Forms bit.ly/2TJodgH

Badges & Record Documents bit.ly/3gjNo34

FAI Badge Declaration bit.ly/3c4Xkdq

FAI GLIDING BADGES

TO 25 MAY 2020

BERYL HARTLEY
FAI CERTIFICATES OFFICER
faicertificates@gliding australia.org

A BADGE

DANIEL BRAY	DDSC
ANDREW MURRAY	ADELAIDE GC
PHILIPPE FREIDEL	ALICE SPRINGS GC
ANTHONY HALL	CENTRAL QUEENSLAND GC
ANDREW KING	BEVERLEY SS

B BADGE

MAXYMILIAN DZIECIOL	BEVERLEY SS
CHEUK YIN LEE	SOUTHERN CROSS GC
MARC HUGELSHOFER	MELBOURNE GC /VMFG
ANDREW MURRAY	ADELAIDE SC
MANON PARDO	LAKE KEEPIT SC
ANTHONY HALL	CENTRAL QUEENSLAND GC
ANDREW KING	BEVERLEY SS

C BADGE

ALEXANDER BOLEK	GEELONG GLIDING GC
MELYSHA TURNBULL	SOUTHERN CROSS GC
MELYSHA TURNBULL	SOUTHERN CROSS GC
MELYSHA TURNBULL	SOUTHERN CROSS GC
ANDREW MURRAY	ADELAIDE SC
MANON PARDO	LAKE KEEPIT SC
ANDREW KING	BEVERLEY SS

SILVER C

RONALD CICHON	GLIDING CLUB OF VICTORIA

GOLD BADGE

RICHARD WILLIS	SOUTHERN CROSS GC

1000 KM

TERENCE CUBLEY	GLIDING CLUB OF VICTORIA

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.

CANBERRA GLIDING CLUB 2020 WAVE CAMP

Canberra Gliding Club - Bunyan Airstrip
12 - 19 September 2020
Contact: David McIlroy dmcilroy@me.com

MULTICLASS NATIONALS KINGAROY

Kingaroy Airport
4 - 11 October 2020
Contact Kingaroy Soaring Club
info@kingaroysoaring.com.au

MELBOURNE CUP VINTAGE GLIDER RALLY & GLIDING MUSEUM OPEN DAY

Bacchus Marsh Airport, Parwan VIC
31 October - 3 Novmber 2020
The Melbourne Cup Vintage Glider Rally and Australian Gliding Museum Open Day will take place at Bacchus Marsh Airfield near Melbourne from 31 October to 3 November 2020.
The Australian Gliding Museum Open Day, including Lunch and the AGM, will be held on Sunday 1 November 2020. All members and friends are welcome.
Contact Dave Goldsmith at 0428 450475
or daveandjenne@gmail.com

AUSFLY 2020

Narromine NSW
8 - 10 October 2020
AusFly is a relaxed, traditional Aussie fly-in event where aircraft owners, pilots, builders, industry supporters and enthusiasts come along and soak up the true spirit of Australian general aviation. AusFly is a non-commercial event, focussed on all aviation supporters, wherever you come from, to get together and have a tonne of fun. ausfly.com.au

NSW COACHING WEEK

Narromine NSW
1 - 7 November 2020
For further details contact Armin Kruger
0477 945 387 kruisa@ozemail.com

NSW CHAMPIONSHIPS LAKE KEEPIT

Lake Keepit NSW
14 - 21 November 2020
For further details
Contact: Tim Carr
president@keepitsoaring.com
Website: keepitsoaring.com/

NARROMINE CUP

Narromine NSW
21 - 28 November 2020
For further details contact Arnie Hartley
on email arnie.hartley@gmail.com
Web narromineglidingclub.com.au/

CLUB SPORTS CLASS NATIONALS-TOCUMWAL

Tocumwal Airport NSW
12 -19 December 2020
Contact Allan Barnes 0403 948 928

F1GP

Leeton NSW
28 December 2020 - 5 January 2021
Club & Old Open Class
info@f1gp.com.au

JOEYGLIDE 2021

Leeton NSW
1 - 16 January 2021
Junior Nationals & Junior Coaching Program
Contact: admin@juniorsoaring.org
See: joeyglide.juniorsoaring.org for more information.

HORSHAM WEEK

Horsham VIC
6 - 13 February 2021

A FLIGHT TO REMEMBER

BY DOMINIQUE BRASSIER

I thought this flight was going to be one of the first flights of a promising gliding season. I could not have known that, between having to return to France to my elderly sick mum's bedside and returning to Australia in March to a world at a standstill, this flight in late November was actually going to be one of my last of the season.

AUSTRALIAN WOMEN'S PILOTS ASSOCIATION (AWPA)

ABOVE: WIG 2019 flight line at Lake Keepit. (photo: Ada Lim)

I originally wrote this article for the AWPA magazine *Airnews*. I wanted to give AWPA readers an idea of what it was like to fly cross-country in a glider and what my thought process was.

Thanks to the AWPA cross-country Soaring Scholarship, of which I was the proud recipient in 2019, I was able to enjoy the start of the cross country gliding season by attending the Women In Gliding (WIG) camp in Lake Keepit October 2019.

Although I did not achieve a distance badge nor any speed record on that particular day – far from it! – this was a very interesting flight. It is a good illustration of the glider pilot's decision making process and what a cross country flight in a glider might actually look and feel like.

As every day, we lined up on the runway waiting for our turn for an aerotow launch, Kerrie Claffey leading the pack in T1.

As you can see from the picture opposite, top right, I had first planned to head east toward Manilla (turn point to the east). However, the active fires in that area were still creating a lot of smoke to the east, reducing visibility and lift, so I decided head northwest instead towards my second turn point Narrabri (turn point to the northwest).

The picture opposite, below, shows that for the first third of the first leg to the northwest I took quite a few thermals to try to get higher and higher but, for the last two-thirds of that leg, the trace shows a straight path without any thermalling. However, the corresponding altitude graph shows I stayed at around 3,000m, or 10,000ft. The reason for that was probably that I encountered a kind of convergence that gave me significant constant lift for 50km or so, possibly created by the storm to the right of my track.

As I was reaching Narrabri, I could see that the clouds from the storm were heading west and I was afraid that, by the time I reached Narrabri and turned back, the clouds would have moved across my path, creating shadowy areas and destroying lift in the process. Therefore, I decided to turn away before reaching Narrabri toward my next turn point Tambar Springs, the southern-most point of my task.

A quarter into my second leg towards Tambar Springs, the conditions changed. The air mass was different compared to when I was closer to the storm and I had to take a lot of thermals, fighting hard to stay above 6,500ft, fighting to do so more by instinct than by any weather knowledge.

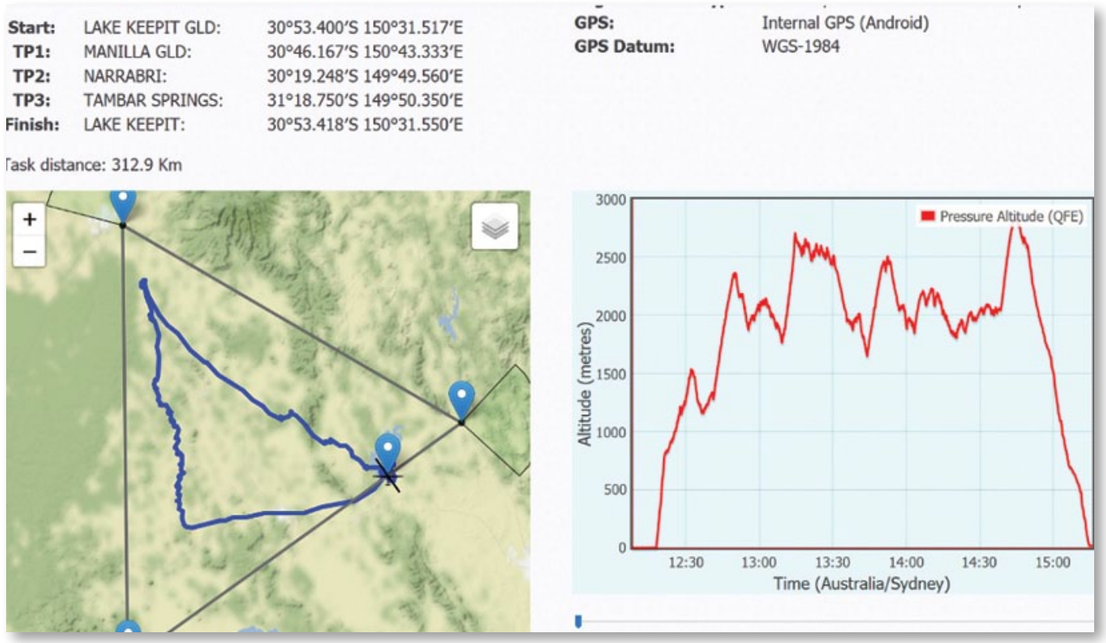
After trying many disappointing thermals with 1 to 2.5 knots of lift and losing a lot of time in the process, I finally encountered a 6 knotter that took me to 10,500ft.

I knew spending so much time in weak thermals was against all my cross-country coaches had tried to teach me, however, I had this urge to try to stay high no matter what. Perhaps it was me being overprotective of my recently acquired Discus b JE.

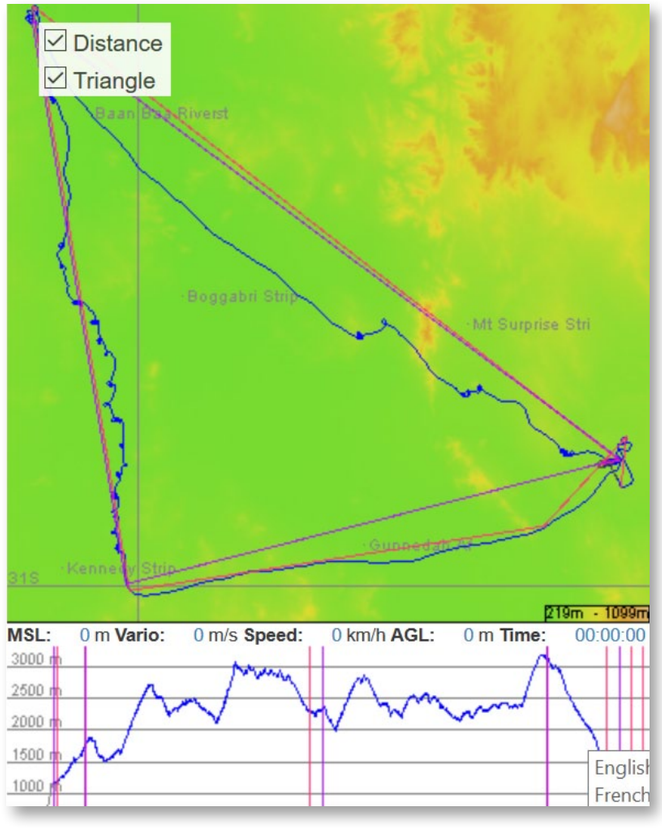
Anyway, since I was now so high, I was well and truly on track to reach the Tambar Springs turning point and was about to head straight there. It was then that I heard Kerrie Claffey making an outlanding call, and she landed in a paddock. Kerrie was on the 2020 Gliding Woman World Championship Australian team, and an outlanding call from such an experienced glider pilot was definitely not good news.

Minutes later, Kimberley Olsen was also calling on the radio announcing that she too was struggling and might have to land out, doing so 10 or 15 minutes later. I then took the decision to abandon my next turn point and go straight home. There was no point pressing on just to clock up more kilometres and finding myself also on the ground in a paddock on my way back. You can see from the trace in the picture to the left that I had final glide at that point, meaning that I did not need to thermal at all to get back to Lake Keepit.

By the time I got back, Jennefer Goldsmith and Ada Lim had also outlanded, as well as a couple of the guys that had taken a launch as well that day. All of these out landings were in the general Gunnedah area. It turned out that the storm I had instinctively moved away from was sucking the air



ABOVE: I had originally planned a 312km task which, given the day's forecast, was achievable. But, as always when gliding, and when flying in general, conditions have to be constantly re-assessed and plans possibly changed, and this particular flight was no exception.



LEFT: Dominique's trace on OLC

☛ continued over page

down all the way to the Gunnedah area, a long way south from its location.

I flew straight over this particular area on my way back to Lake Keepit, but I think my saving grace had been to catch that last thermal to 10,000ft, keeping me well above the altitude where the storm was sucking the air down. Deciding to turn home at this stage had been wise. I was in time to secure my glider, gather a team, grab Ada's glider trailer and car and go to retrieve her. Thank you, Ada, for the yummy Thai dinner after the retrieve!

This shows how storms can have a strong impact far away from their location, sucking all the air down and all the gliders around with it. This is another reason to have the utmost respect for our strong Australian weather conditions!

I hope you enjoyed the article. Bear in mind that I am still a beginner learning about cross country flying with so much more to learn and that this flight could have been managed much better with much better speed and distance outcomes.

Dominique Brassier with coach and prior AWPA Soaring Scholarship winner Ailsa McMillan, also a National Australian Gliding team member, at the 2018 WIG WA week in Narrogin.

I would like to thank Wendy Medlicott for organising the WIG camp in 2019, GFA NSW for supporting NSW participants, the Lake Keepit Soaring Club, their members and staff for their warm welcome, and Grant Nelson of Keepit Glider Tech and Nigel Holmes for their help with JE. Thanks to all the girls and partners participating in the camp for their friendship, support, experienced help and tips – and for all the laughs. In particular, thank you, Harry Medlicott for the talks and advice – I did try to apply the tips – and Kerrie Claffey for sharing her wealth of experience with the girls.

AWPA SCHOLARSHIPS

AWPA offers a number of scholarships and awards to learn how to fly and to improve flying skills for female fixed wing power pilots and helicopter, as well as glider pilots at any age and experience level. Please check the website awpa.org.au/scholarships-and-awards

One of the gliding specific scholarship is the Soaring Scholarship, a $500 scholarship to assist a female glider pilot to enhance her cross-country skills. Scholarship funds can be used for but are not limited to assisting a sailplane pilot with towing charges, glider hire or retrieval costs. Applicants must be a permanent resident of Australia; hold a silver C badge and a current GFA membership and medical credentials.

Another one is the Gliding Award (Perpetual Trophy and memento Albatross). This award is made for the most meritorious gliding flight carried out by a female glider pilot during the previous year, or for an outstanding contribution to the advancement of gliding in Australia. Membership of AWPA is not a requirement. The 2020 award went to Jo Davis who was leading the 2020 Women's World Gliding Championship till the last day, finishing in 4th overall. This was the best performance by an Australian woman ever at a Women's World Gliding Championship. Congratulations, Jo.

Please have a look at all the AWPA scholarships and apply for a scholarship or nominate someone for the Gliding Award. We are working hard at the AWPA to raise funds to offer these scholarship and love to help ladies improve their flying skills and to recognise lady pilots' achievements so please apply and nominate. GA

SA STATE GLIDING CHAMPIONSHIP

The State Championship at Stonefield in March 2020 was eventually conducted on five days over a two-weekend period, due to members' unavailability to maintain a continuous weekly activity. The airfield has massive runway proportions with safe options to suit the Formula 1 style event and competition finishes. Good hangar space and accommodation was also available on site.

Participants were Craig Vinall, ASG 29 VNL; Leigh Stokes ASW20 OTR; Sidney Nankivell LS3 WUD: Phillip Ritchie GRY Mosquito; Peter Cesco GZ Libelle; Heath L'Estrange TX Libelle; Sam Woods KYR Speed Astir; Dereck Spencer (Coach) VU Janus and Michael Scutter IZE LS4 – with Pawnee Tug HZY. Missing were Jenny Ganderton and Robert Smits, who had trailer towing problems from Lake Keepit to Stonefield.

The competition was handicapped using the F1 trackers in each glider and the results followed on livetracking.com from the start line until all crossed the finish 1km circle. Livegliding.com provided the daily winning results. Each evening became a sociable occasion when all could discuss the day's challenges and enjoy appetizers, Craig's fine wines, some beers and club dinners.

Day 1. Task C: Stonefield, Farrel Flat, Burra, Stonefield 176.4km. Placings – Craig VNL, Sidney WUD and Heath TX.

Day 2. Sunday was cancelled when the trough line came early with increased winds gusting above 25 knots and lines of raised dust.

The remaining three days were completed successfully, tasking 102.6 km, 136.6 km, 124.6 km

Day 3. GZ, WUD, TX – winning order.

Day 4. VNL, OTN, TX – winning order with one outlanding.

Day 5. GRY, OTN, WUD – winning order.

Tasks were of modest duration due to the cooler weather in the tasking area and late afternoon starts to use the strongest conditions available. Launching nine gliders with a single tug in an hour was a tug pilot challenge, followed by a delayed start of 20 minutes from last release to start line opening by 3pm. The performance gliders managed the windy conditions and low heights more favorably and most days were challenging to task fairly in the remaining afternoon conditions.

Phil Ritchie excelled, winning the last day after making the wrong turnpoint on the previous day. All completed the day and presentations were made for daily winners with a State Trophy awarded for the outright winner.

Final results were Craig Vinall in 1st place with 20 pts, Leigh Stokes 2nd place with 18 pts, Sidney Nankivell and Peter Cesco made 3rd place with 17 pts. I thank all participating pilots and crews, tuggies, organisers and helpers for their commitment, as without them there would not be a competition.

BRIAN RAU COMPETITION DIRECTOR

GFA APPROVED MAINTENANCE ORGANISATIONS

AEROSWIFT COMPOSITES	BALLARAT	JOE LUCIANI	0428 399 001	comcom2@bigpond.net.au
AUSTRALIAN AIRCRAFT KITS	TAREE	OLE HARTMANN	0429 165 498	aircraftkits@bigpond.com
AVIATION COMPOSITE ENGI	TOCUMWAL	PETER CORKERY	0439 842 255	corkerys@bigpond.com.au
AVTEC AVIATION	BOONAH	ROGER BOND	0409 763 164	avtecaviation@bigpond.com
CAMDEN SAILPLANES	CAMDEN	MIKE DUGAN	0418 681 145	camdensailplanes@bigpond.com
GVC WORKSHOP	BENALLA	GRAHAM GREED	0428 848 486	gcvworkshop@benalla.net.au
HOLMES HOLDINGS	BRISBANE	PETER HOLMES	07 5464 1506	holmbros@gmail.com
JONKER SAILPLANES	SA	MARISKA NORTJE	+27 82 879 8977	mariska.nortje@js1.co.za
KEEPIT GLIDER TECH	LAKE KEEPIT	GRANT NELSON	0417 843 444	keepitglider@outlook.com
LOCKWOOD SAILPLANES	BENDIGO	PHIL ORGAN	0407 315 511	
MADDOG COMPOSITES	IPSWICH	ANDREW MADDOCKS	07 3143 3131	andrew@maddogcomposites.com.au
MORGY'S GLIDER WORKS P	WAIKERIE	MARK MORGAN	0427 860 992	morgans@sctelco.net.au
NORTH EAST AVIATION	LACEBY	DIANNE	0408 440 172	neaviation@optusnet.com.au
SL COMPOSITES	TEMORA	SCOTT LENNON	0438 773 717	scottl@internode.on.net
T & J SAILPLANES	TEMORA	TOM GILBERT	0427 557 079	tnjgilbert@internode.on.net
ULTIMATE AERO P/L	BOONAH	NIGEL ARNOT	0437 767 800	nigel@ultimateaero.com.au

Test Instruments: Conrod Bearing Clearance Tester (CGCT) required for 50 hour maintenance of 2 stroke engines

John Amor jbamor@optusnet.com.au 0408 178 719 03 9849 1997. Bert Flood Imports david@bertfloodimports.com.au 03 9735 5655

FLYING LIKE A CONDOR

BY GLENN GORE-BROWN

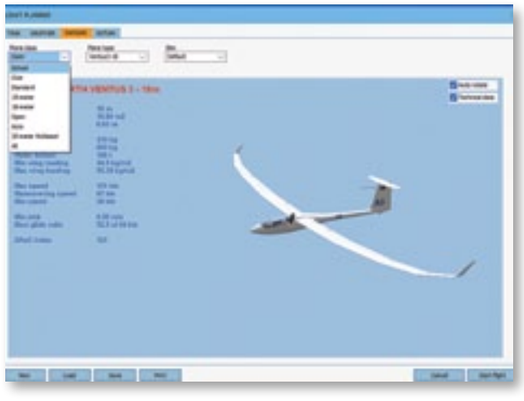
I was recently at Flight Level 230 in Chile doing a 300km task in wave flying a Ventus 3 in the 15m configuration. How was I doing this under lockdown? Let's have a look.

ABOVE: The view of your glider as you fly is one of the views you can toggle between in Condor.

BELOW: This screen shows the glider Glenn chose to fly, in this case a Ventus 3 18m.

As these trying times continue to keep us grounded, locked up in our homes, looking up at the sky, reading the weather, wondering when we will be able to pull the gliders from the hanger and enjoy this wonderful sport – well, there is a solution. We can still fly!

Many of you may have heard of Condor Soaring Simulator, and maybe some are currently using it or have heard about it but never tried it. It is really simple to setup, and you will be surprised at how few resources this simulator actually needs. It can run on almost anything.



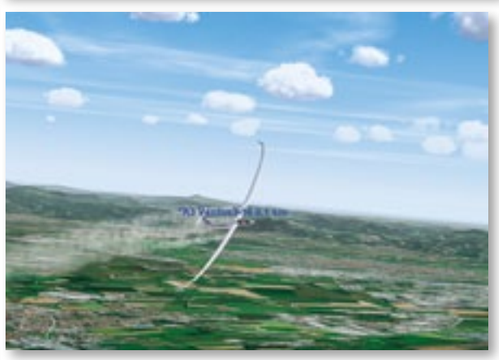
LAUNCHING WITH CONDOR

Talking about the hardware and set-up process, as mentioned above, Condor is a low resource simulator that provides a realistic soaring experience. From the comfort of your home, you can be ridge running through the European Alps to flat land soaring in NSW, enjoying wave in Chile or having a mixture of it all in Nephi, USA. Several sceneries are available to download and they are all completely FREE. Although most are quite large and may take some time to download, they are well worth the effort.

A program has been developed by the online community that automatically installs the sceneries you select. This program is called Condor Updater and is available free from Condor Club. Condor itself, though not free, requires a small, worthwhile investment of 49.99 EU + VAT for the standard version or 157 EU + VAT for the pro version. The main difference here is that the pro version comes with 22 gliders. Personally, I would recommend the standard version. A few gliders are already included, and you can then buy any others you may want to fly.

This leads me to the gliders. They are impeccably modelled, from their visual appearance to their handling qualities, and are all different and very accurate. You can add water or ballast weights and adjust the CG bias to make your glider perform as it should on any particular task.

For my personal PC, I've been building high-end water-cooled gaming computers for several years, and if you are into eye candy and fluid performance with high frame rates, a good system makes an amazing experience.



TOP: You can see your task in Google Earth view.

MULTIPLAYER SERVERS

There is a plethora of online multiplayer servers to test your soaring skills with the best in the world. These can be accessed from Condorsoaring.com Multiplayer tab, or if you just need some practice on your own, there is a lot to keep you busy in single player mode as well.

I have been in a multiplayer server where there were over 20 gliders in the sky at any one time, with gaggles everywhere, all getting the energy they need to begin their task over the Alps. It is recommended to have several landscapes installed and a few gliders in your hanger in oder not to limit yourself with whatever task might be available online. I have a glider for every class in my virtual hanger, allowing me to compete in anything. This adds flexibility and improves the overall experience. Glider prices range from 7.99 EU to 11.99 EU + VAT, and unlocking these gliders in-game is very simple.

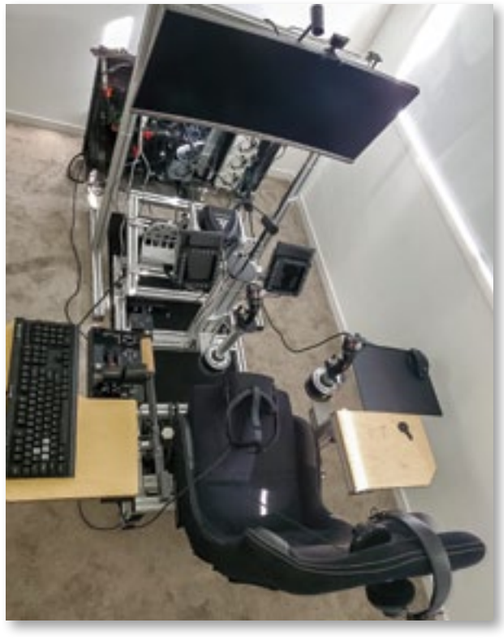
CONTROLLERS, HEADSETS AND MORE

Controllers! A controller is important and a must-have. Flying your glider with a keyboard is just not up to the task. There are several joysticks that you can buy, as always ranging from extremely high-end realistic devices such as the Thrust Master Warthog HOTAS priced up towards the USD500 mark, through to the more mainstream sticks such as the Logitech Extreme 3D Pro, which has a price tag of about AUD85. Cheaper ones are out there was well, but it is important to have a joystick that has a 'twist' axis on the stick itself so you

☛ continued over page

ABOVE: Your competitor identified and joining your thermal in multiplayer mode.

BELOW: Glenn's flying rig at home is very well spec'ed. However, you can also fly Condor from a laptop with a mouse.

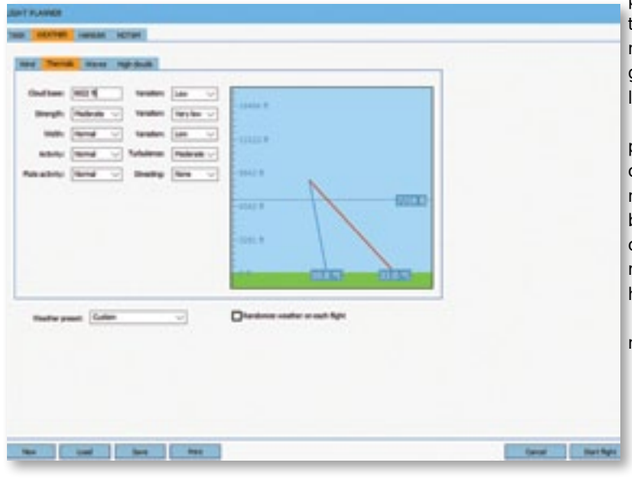


ABOVE: The view from your glider. The amount of reflection on the canopy can be adjusted.

can bind the rudder axis to it. Otherwise you will be adverse yawing all over the sky! These joysticks are USB and normally plug and play.

If you want to take your flying to the next level, Condor Soaring Simulator also can be flown in Virtual Reality. Several VR headsets are available to buy. I can talk more on this to those that wish to explore this option. But remember, with VR, you will need a relatively powerful PC to render a smooth enjoyable experience. Otherwise it can make some players initially feel a bit nauseous. If you do not wish to explore VR, another option is a head tracking device called Track IR by NaturalPoint, costing approximately USD130. Clipping this onto your headset or wearing a cap and attaching the sensor to the brim, gives you the freedom to look around as you would normally do, without using your keyboard. It's very handy indeed for those close races, dense gaggles and also to gaze at the incredible scenery.

BELOW: This screen shows the weather selection page where you can set the amount of thermal activity and many other parameters.



And for those that want the Epik experience – yes, that's Epik with a K – the 'close as I can get to real life' platform to soar? Well, I am involved with a secret project that's currently in development to bring you just that. A truly affordable, full motion VR system with replica glider controls... Stay tuned for more on this soon.

PROFICIENCY AND VALUE

As an airline pilot, I have been involved with training departments and synthetic training devices throughout my professional career. I have a keen interest in training standards, training to proficiency utilising affordable flight simulation system technologies. I have also been involved with gaming Flight Simulator platforms ranging from civilian through to advanced and incredibly detailed military sims like Digital Combat Simulator.

The proficiency you will gain from these platforms is priceless, from thinking ahead, strategies and handling to multitasking. From a personal standpoint, I have noticed significant improvement of my real-world general aircraft handling skills from gliders through to large transport jets.

Flight simulation is an amazing tool to keep pilots proficient, current and engaged during this lull and for continued use. On an economic standpoint, this will minimise the time and resources that would be required by a club to requalify, retrain and release proficient confident pilots into our skies. This could even be a recruitment tool to promote the sport. You've got to be happy with that!

Feel free to contact me on the email below if you need any help with the set-up.

See you in the virtual skies!

GLENN GORE-BROWN
glenngbsoaring@gmail.com

GA

WHICH SIMULATOR?

There are other simulators you can fly apart from Condor. Max Ashton gives us the low-down on which one to choose.

The reviews here can be regarded as biased, since they're from my own point of view and the fact that I use a lot of add-ons. I'm trying to be fair and although I mainly use Prepar3D, I have 40+ hours on the other simulators.

Prices are taken from Steam store.steampowered.com, which I recommend that you use to download the simulators, however, Prepar3D doesn't sell the software anywhere else apart from its own website.

AEROFLY2 RUNDOWN aerofly.com

I will start by saying that if all you want is eye candy to fly around in, then this simulator is just for you! With completely gorgeous, photoreal scenery, beautiful sunsets, high-definition airports, good-looking planes, straight out of the box, I would 100% recommend this flight simulator. The visuals are so realistic that you can land on the Golden Gate Bridge or fly under it!

However, while it has very high quality imagery, all the planes feel the same. Although they look extremely different to each other, in terms of controls, there are no in-depth systems, no ground control, no traffic, and no live weather. The other sad aspect is that there are only few states in America to fly around, and not a lot of extra add-ons to make it as big as Prepar3D or Xplane11. Add-ons will be listed last.

PREPAR3D RUNDOWN prepar3d.com

So, you are probably wondering what in the world Prepar3D is. Well, it's pretty much the father simulator of Flight Simulator X since Lockheed Martin bought all of its rights from Microsoft, and because of that, the classic Flight Simulator X feel still remains in a much improved, updated version.

In Prepar3D, we are up to version 4.5 right now, a 64-bit version, which is important because switching to 64-bit would allow you to utilize more memory – 32-bit is limited to about 3.5 GB ram usage – to improve the simulator's performance and prevent crashing all the time if you're using complicated add-ons.

It's also why I down-voted Flight Simulator X a lot compared to Prepar3D, because essentially, it's a 15 year old flight simulator that is not designed to be operated on newer computers. There are also a few new features such as PBR, dynamic lighting, dynamic reflections, volumetric fog and a whole new list of aircraft to choose from. It even has that good old Flight Simulator X user-interface feel to it. For anyone who has played that classic before, adapting to it would be easy!

XPLANE 11 RUNDOWN x-plane.com

I have put about 30 hours into Xplane11 and I must say, it is a unique simulator. It has an incredible feel to it, right out of the box, unlike Prepar3D where the scenery is mediocre but the systems are amazing, or Aerofly2 where it's just all scenery and looks with no serious intention attached to it.

Xplane11 is that simulator that sits at the halfway point between the other two, and I would say that if you just want to fly from airport to airport and crash sometimes – Xplane11 is amazing for that. The scenery isn't as amazing as Aerofly2 but it does have very well detailed auto-generated scenery, a fair number of custom built airports without any add-ons required, and very good aircraft considering it's all just out of the box.

If I only had one choice, I would choose the default aircraft out of Xplane11 any day over the Prepar3D default aircraft, and not to mention that Xplane11 has crash effects! If you smash into the ground by accident, your plane breaks into several pieces and explodes into flames. It's a lot better than any simulator out there that I've tried!

I also find it really easy to practice landings in this simulator because it has a very good feature that allows you to select approaches that you can choose to automatically load as it positions you within 5 to 10 miles of the airport runway. You can land at any airport in the world with ease. Xplane11 also has windshield droplet effects that make flying through bad weather a lot more immersive.Xplane11 has a tonne of freeware scenery add-ons as well. I would highly recommend Xplane11 to anyone new to flight simulation, or is coming back to it, or doesn't have a simulator yet and doesn't want to spend a tonne of money on add-ons.

As amazing as Xplane11 is in my opinion, one factor it can't give is that classic Flight Simulator X feel, nor any of the other amazing add-ons that it doesn't have! If you have the extra money, Prepar3D can be five times better then Xplane11, but in times like these, it's probably best that you don't spend on anything beyond the simulator itself.

ADD-ONS I LOVE TO USE

Active Sky for Xplane11 and Prepar3D v4, live weather add-on, are sold separately!

Simbreif: Free flight planner simbrief.com/system/dispatch.php

High-quality Prepar3D Aircraft: PMDG, A2A simulations, Fly the Maddog X, Aerosoft, Majestic Software

High-quality Prepar3D Scenery: Flytampa, Orbx, Flightbeam, Fsdreamteam, Twentyninepalms, Photosimlabs

Mediocre-Quality Prepar3D Aircraft: Carenado, Alabeo, Just-flight, Milviz, Aerosoft

Mediocre-Quality Prepar3D Scenery: Imaginesim, Latinvfr, UK2000, Digital Design, Aerosoft, Drzewiecki-designs, FSDG, FSDT

High-Quality Xplane11 Aircraft: Flightfactor, Zibo MOD (free), FLYSIM, Take Command!

High-Quality Xplane11 Scenery: Icarus Simulations, Nimbus, Aw Designs

Mediocre-quality Xplane11 Aircraft/Scenery: Aside from the Vmax 767, the Colimata Concorde and the Jardesigns a330. I haven't used much else for Xplane11 aside from freeware, so I can't extend my opinion further.

Aerofly2 High-Quality Scenery: North-eastern USA, Switzerland, South Florida, Orbx Netherlands are recommended.

BY MAX ASHTON, BEVERLEY SC

CONDOR RACING FUN

BY SARAH THOMPSON

Mike Codling and his feline co-pilot

With the sudden prospect of being unable to fly for a number of months, the discussions started and pretty soon we realised that Condor flight simulation software would help deliver the fix that everyone was missing. After some conversations, it became clear that not everyone knew how to participate, or even get started, so something needed to be done to help everyone stay involved. There was interest from young and old and, with possibly months of club closures, there was a huge need to keep our gliding community connected.

Over in Queensland, the sunshine state, a few of the clubs got together and organised some Condor webinars in which Mike Codling took everyone through the very basics in one week, starting from getting started with equipment right through to your first flight. Key tips included –

- Start your flight airborne – learning winch and aerotow skills can be frustrating.
- Allow thermal helpers, and turn them on and off to build your thermal flying skills.
- Learn to thermal tightly – yes, this is true in real life, too!

This was followed up with a second webinar with some advanced tips and tricks including –

- How to use the Discord app
- Loading landscapes
- Multiplayer procedures
- Using XCSoar from Condor
- Don't plan a long flight – you will be going to bed at 1am!

And then, the racing began.

There were many lessons learned and lots of fun times. Those participating have ranged in skills and experience and all got something different out if it. For some, it has been an opportunity to experiment in a risk-free environment, playing around with final glides. For others, it was the opportunity to learn from more experienced pilots in a no-pressure, fun environment. Some just wanted to try to fly inverted, or fly beyond VNE!

Pete Brunton said, "I've learned a lot flying on Condor this last month. I've been able to watch some more experienced pilots with their final glides and tight turns. I have watched them get the maximum out of the clouds, and most of all, it's been really fun!"

The other great thing about Condor has been the opportunity to fly in other locations and try different skills like ridge soaring.

There has been some enthusiasm to get involved in the online simulator over in the west as well.

Simon Marko's interest in Condor sparked a few years after learning to glide. He notes, "Condor is not like other flight simulators. It has been designed from the start with soaring flight in mind, especially the factors that are unique and special – the sailplanes themselves, the weather model and the sporting features of soaring. In contrast, soaring in a simulator like Flight Simulator X can feel very artificial."

CONDOR COMPETITION

The recent interest in Condor is focusing on the sporting and social aspect. Participants have the ability to run an event such as a regatta, or hold an individual one-off race, online in real-time with a group of pilots over the internet. This makes Condor online racing compelling when the option to fly in real life is closed as it has been due to the recent coronavirus restrictions.

In fact, eSports have suddenly become more popular as the real-world sport equivalents have been shut down. Some examples of this happening to other sports include Formula-1, Indy Cars, Cycling and Soccer. World Gliding is likewise represented with some new Condor Leagues opening up for contests around the world.

When the Beverley Soaring Society Committee met in March, the idea of Condor at Beverley came up as a way of keeping the sport top of mind for their members. After a quick poll showed there was more than enough interest to begin regular races, they went about setting up the server and setting tasks. Now six weeks in, they have up to eight pilots three times a week, most from Beverley but other WA clubs are also welcome. The age group is reasonably spread from forties to sixties, but no junior or lady pilots yet!

Beverley Soaring Society has also introduced a Condor Champions Trophy to be awarded at their annual dinner for the highest placed Condor pilot of each season.

HOT TIPS

Beverley has shared some great lessons learned from hosting Condor from the past 6 weeks.

- Use a service such as a mailing list, Discord Server or even the Condor Forums to let your pilot community know that a race or fun flight is coming up.
- Set a time that's convenient and settle on it – let your pilot community know the days and times for activities so they can carve out the time in their schedules.
- If you set a password – make sure all your pilots know it!
- Give pilots time to download new scenery. We've settled on Slovenia, Lake Keepit and New Zealand for the moment but new ones will surely come along once they have been better socialised.
- Set the desk up for a couple of hours of comfortable flying the same way you would set out your cockpit, all items to hand and settings already tuned before joining a server.
- If the Condor Official Server list is giving you problems, there is the option of Hitzi's server list if your hosting person is using DSHelper.
- Share your tips with the other pilots so thst everyone improves and has fun.
- If you can, stay connected to the server until the last pilot is home. It's very discouraging if you're a new pilot or struggling to keep up and everyone else disconnects!
- Offer encouragement like congratulating other pilots after they've rounded a turnpoint (CG!). It does make participation more appealing. A little bit of friendly banter adds to the fun, too.

"Mike Victor – Check wheels."

"I wondered why I was having trouble keeping up!!"

As clubs start to come back online, many have now realised what a great tool Condor can be for exploring new terrain, for trying out different glider types, and for any time you can't get that gliding fix! During recent times it has also served an important purpose for keeping gliding in our lives and keeping our community connected.

If you would like to watch Mike Condor's webinar you can find it and notes online. Beverley Soaring Society also has some comprehensive notes for sharing. please contact Simon Marko at simon.marko@gmail.com

If you would like to get involved in the racing, races are still happening on Wednesdays at 7pm AEST. Contact Pete Brunton peter04brunton@gmail.com for details.

GA

A RED SUMMER

HOW MURRAY BRIDGE GLIDING CLUB IS COPING

BY EMILIS PRELGAUSKAS

The Murray Bridge Gliding Club Inc (MBGC) first formed in the late 1950s and has, via a series of distinct evolutions, continued through to this day. The circumstances of early 2020 suggest that another, quite distinct evolution is unfolding – whether we are ready or not.

These previous club evolutions have included operating from a variety of sites, from bare farmers' paddocks through to a fully serviced aerodrome, from sole occupancy to shared operation alongside both 'tinnie' and ultralight power schools, and the full cross section of 'fun' and serious cruising power planes and their owners.

ABOVE: The fleet assembled at the Jamboree site.

We have also shifted from club flying supporting a large private owner fleet, to club-only operations of sailplanes towed by winch and later by aerotow, and eventually on to only motorgliders. Activities have encompassed club flying just around the home site, to involvement in contests and away camps through to trips to the Morning Glory 3,000km away.

OUR CLUB

At any particular moment, a gliding club is whatever its members at that time choose it to be. Thus, across six decades, MBGC has at various times morphed and then morphed again. Right now, the club is a motorglider-only club, with just one operational private syndicate motorglider supplementing the three club motorgliders. It operates from the busy private Murray Bridge aerodrome (YMBD) at 484 Reedy Creek Road, Pallamana, north of Murray Bridge.

The fact that gliding was the first form of operation when that aerodrome was in its fledgling state, to be eventually swamped in numbers by power traffic, is a fact now lost to most in the mists of time. Any awareness that 'sail has priority over power' has also been lost, so that now an engine-off motorglider in circuit can generate puzzlement among some in the power flying community.

For some time, the club gave the appearance of being just like the other 40-odd gliding clubs across Australia who have progressively vanished over the last quarter century. It had a stable membership of long term, ageing male pilots flying what they had and were comfortable with. A number of other gliding clubs in the region have had similar profiles at one time or other, and all have bounced back, each using a different trigger mechanism suited to their unique circumstance.

MORPHING

For MBGC, the triggers were a succession of decisions, some made with deliberation, some on the run. Some were made by the membership by consensus, some were driven by a specific proponent or proponents within the club. The private aerodrome location has benefited the club due to the benign support of the site owner, so that the facilities – even if limited in some operational respects – are appealing both for resident fliers and from the point of view of public appearance. Thus Pallamana is an attractive place to be.

The inevitable, problematic consequence of this site's broad appeal is the large numbers of residents attracted to the site – more than 40 hangars and possibly double that number of based powered aircraft. A substantial basing fee needs to be charged for each aircraft to balance the recurrent service needs and capital inputs that the site owner meets.

The follow-on operational consequence is high sortie loads at peak times by the resident training schools, compounded by a narrow taxiway that also doesn't extend to the runway thresholds. Within that context, MBGC made the decision to remain, supported by the presence of another site nearby that offers a cheap home – although without the attractive features – for part of the motorglider fleet.

LOOKING FORWARD

The long term club members, sensitive to their duty to hand on an operating entity to the following generations, looked around for initiatives that would bring a continuous pilot cadre. For a time, nothing seemed to work – advertising, passenger offerings and participation in the 2019 Scout Jamboree. This last involvement grew out of another club member's choice, beyond the others canvassed further below.

A motorglider club is not easy to align to GFA traditions of equipment and people going from ab-initio by training to solo, then training to cross country and contest proficiency, with equipment suited to each stage provided by the club. In this situation, the club does not support private equipment of current standard, and does not offer launches on-site.

So, instead of the normal procedures of updating equipment, MBGC planned to extend the existing fleet with complementary equipment of that earlier era as a cost effective way to harness the internal senior expertise and to increase the club's asset value. It gives redundancy when one airframe goes out service with change-over capacity at servicing time. This approach also affords replacement parts in-house in the case of items that are no longer made. Finally, it means we can realise the dream of making the whole fleet available to support initiatives like the 2019 Jamboree.

The club was energised by the Jamboree date to get everything ready ahead of time, to support the event with both ground support and one-third of the motorglider numbers present. While the pilots had a great time there and the club benefited, but it didn't grow the club toward a wider spectrum of pilots as might have been hoped.

UNEXPECTED OUTCOMES

What the revitalised fleet did achieve instead were other unexpected outcomes. Other gliding clubs with traditional sailplane fleets realised that motorgliders offer a structured way to do outlanding sequences, with inter-club synergies arising through MBGC doing those exercises.

The locally based power schools saw positive potential for some motorglider time for some students and perhaps even instructors, though this is still a work in progress. The main beneficiary is a slight built pilot who can't operate the rudder in Cessnas where the pedals aren't adjustable.

Along with an increase in public interest in flying evident at the three power schools on-site in more recent times, the gliding club too has gained members. This growth was helped both by the available fleet size and the visual presentation of each motorglider, arising from the previous frenetic year of work by members. That preventative maintenance work is also noticeable in the more routine on-going maintenance now, which for the moment at least gives the newer members an unrealistic view of the actual amount of hangar time needed to keep airframes with engines in shape.

UNIQUE TALENTS

MBGC doesn't chase proficiency badges or contests, since the equipment doesn't suit the requirements. The cross country aspects can be quite differently acted out in either touring mode or engine-off in good weather, though quite slowly. As a result, the club won't be visible in these GA achievements listings pages.

On the other hand, there are some things a motorglider-only club can do well, in line with the GA Issue 51 '2019 member survey' listings. Such a club can book individual flights to a set time program, which meets contemporary 'hire&fly' expectations for time poor citizens. Almost irrespective of the weather, known flight time can be provided, and less need for support crew means independent operations are possible so that personal availability extends the days of the week that can be flown.

Those potentials were evident when a number of club members were out at firegrounds for several months during the 2019/2020 bushfire season. Club activity could be maintained locally, though the club couldn't go away to camps and regattas during this holiday season.

ABOVE: The preceding year's work

Therefore, significant rationale exists in the GA Issue 51 '2019 member survey' suggestions for a widening of GFA member servicing arrangements. Because this broadens the offerings non-traditional clubs can extend to the public interested in gliding on their terms, it makes gliding in the broad more accessible and grows the sport.

TRAINING

Now, the emergence of COVID19 brings further complexity to gliding club operations, notably for flight training. In the motorglider situation, it is practicable for solo flying to continue with minimal ground crew interaction. The club supports this with antibacterial cleaning protocols before and after flight of external and in-cockpit contact surfaces. This permits pilot currency to be maintained, ready for future return to ops-normal for the club.

For the motorglider operation where no ground crew are involved, flying training depends on the awareness and collaboration of both persons on-board. Where individuals prefer not to, the currency and training is picked up at a later time. Where flight training is arranged, each pilot and the club are responsible for behaviour favouring healthy outcomes, determining whether dual flying is discouraged or proscribed. *GA*

BELOW: Fully refurbished, ahead of the 2019 Scout Jamboree.

ELECTRIC AVENUE

BY SIMON HACKETT
PHOTOS BY SIMON HACKETT, DAVID CONWAY

I have career and personal interests that intersect strongly in the realm of batteries and electric powertrains. Our family bought the first two Tesla Model S cars to be sold in Australia almost a decade ago, and to this day we drive almost nothing else.

We are fortunate to own a farm in Tasmania called The Vale thevale.com.au where we are in the midst of building a large renewable energy system (solar, wind and batteries). Our intention is not only to power the farm buildings and houses, but also to produce transport fuel for vehicles on the property. On the farm today, that includes a Tesla sedan and a Polaris electric ATV. We fully expect to turn over our diesel tractors for electric ones in the foreseeable future, and to become a 'zero diesel' farm.

The Vale also has another remarkable asset – a 1,300m grass runway nestled in the bottom of a river valley alongside a 4,000ft mountain called Mount Roland. The area is on the edge of the high country in Tasmania with multiple valleys and ridge lines in the vicinity that generate both ridge and wave lift. The only missing piece in the area to date has been glider pilots able to explore it!

SEEKING THE PERFECT TWO-SEAT SELF-LAUNCHER

What I wanted for The Vale was a sailplane that has two seats, because I love taking friends and family with me to experience the joy that I know so well, of soaring with the eagles. What I needed in terms of a launch system was something that can make use of the transport fuel I can manufacture on site – electricity – with minimal maintenance requirements.

While several electric-powered self-launching singles are available now and more are progressively appearing, my research turned up a few examples of self-launching electric-drive sailplanes with two seats. A two-seater platform is substantially more challenging than a single seater to self-launch with an electric drivetrain.

The first real contender I found was the Arcus E. This platform combines the successful Schempp-Hirth Arcus sailplane with the drivetrain created by Lange Aviation for use in their own single seat high performance sailplanes. Alas, it seems that this collaboration has not succeeded sufficiently for both parties to want to continue making it.

ABOVE: Taking off from Parafield SA soon after arriving in Australia.

LEFT: The Taurus at its home on Simon's farm, The Vale, in Tasmania.

STEMME

I have a long history of flying and loving my Stemme S10-VT. I absolutely adore that aircraft--except for the Rotax 914 engine. In that airframe and with the self-launch duty cycle, the Rotax 914 is an absolute maintenance pig.

My idea of a perfect sailplane would be an electric drivetrain in a Stemme S12-G. Unfortunately, to date, Stemme AG are not currently prepared to go down that path, although I have definitely tried to convince them!

Interestingly, a company started by Dr Reiner Stemme reinerstemme.aero in his life after Stemme AG is at work on the 'Elfin' - an aircraft that is precisely what I would like, in essence, an electric Stemme. I very much want to see Reiner succeed with the Elfin. However, like most aircraft startups, the Elfin project is already significantly behind schedule and it is unclear how much the current difficult world economic conditions will affect the aircraft making it out into the world.

BATTERY PACKS

Most of the elements of electric drivetrains are pretty simple. Sufficiently light and powerful motors and inverters are easily obtained, and electronic control systems for them are straightforward. The hard part, of course, is the batteries.

Battery packs that safely store and deliver sufficient energy for the task at an acceptable weight have become available in the last few years. The available energy density continues to improve relentlessly, year upon year, due to the large and growing markets for both stationary energy storage and for the use of batteries in electric cars.

I have found just one manufacturer – Pipistrel – that has succeeded in making a two-seat electric self-launcher, putting it into serial production, and staying the course to keep it in production.

TAURUS ELECTRO G2

In 2019 I took delivery in Australia of the latest version of their electric sailplane, the Taurus Electro G2 pipistrel-aircraft.com/aircraft/electric-flight/taurus-electro. After the aircraft turned up in a shipping container from Slovenia, we did initial check flights at Parafield Airport in South Australia. The airport operators were sufficiently interested in, or perhaps concerned about, this innovation that they arranged for us to have the dedicated use of one of the two main Parafield runways for our initial set of touch-and-go circuits.

That initial flight exercise was successful, so we packed the aircraft back into its trailer and took it to its intended home in Tasmania. I have now been operating the aircraft at The Vale for around a year.

The aircraft is really quite a remarkable achievement. The entire drivetrain system, including the battery modules and the electronic drive control system, are made in-house by Pipistrel, allowing a very tight integration between all of the system elements.

ABOVE: Mount Roland - directly to the south of the airfield.

BELOW: The cockpit is spacious and very comfortable with leather upholstery.

continued over page

ABOVE: Flying above The Vale, you can see the 1,300m grass runway.

BELOW: Ready for takeoff at Parafield Airport with Cath Conway who helped Simon with the inspection and paperwork to get the Taurus registered.

The Taurus is an ultralight LSA category sailplane. While its soaring performance is nowhere near that of the Stemme S10-VT, it is a really delightful aircraft for exploring the soaring conditions in Tasmania. It is light on the controls, responsive and easy to fly. The dual front undercarriage system, huge canopy and the side-by-side seating, like the Stemme, lead to easy handling, fantastic visibility and create an appealing, sociable and extremely comfortable environment for pilots and passengers alike.

The cockpit looks gorgeous with leather trim and instrumentation reminiscent of a sports car. The build quality is excellent, with a notable focus on the efficient and intelligent use of composites to fit everything, including the batteries and up to 190kg of total pilot weight, into a maximum take-off weight of only 550kg.

SUPER SIMPLE

The electric drive system is extremely simple to use with only two switches and one rotary knob under a clear, easy-to-read colour status display screen. The engine sequence is automated, and begins by using the left-hand switch to enable the system.

Once enabled, the right-hand switch is toggled up to raise the propeller boom. Around ten seconds later you are ready to just twist the throttle knob clockwise to fire up the motor. The full 32kW motor power is available immediately with no warm-up time, and it launches the sailplane with a ground roll of less than 200m and at an achieved climb rate of the order of 4 to 5kts.

When you are ready to shut down, the throttle knob is rotated anticlockwise to bring the rpm to zero and the right hand switch is immediately set to the 'down' position – no need to wait for the prop to stop. The control system sequences the process of centring the prop, stowing it and shutting down, with no further intervention from the pilot. If you need power again later, it is available at immediate notice by lifting the right hand switch to the 'Up' position once again. It doesn't get simpler than this.

This is very much a launch system, not a touring system. There is sufficient energy in the battery packs for a launch and climb, if desired, to around 6,000ft AGL. Typically I'll use about a third of that before I have hooked into some ridge lift, found a thermal, or in winter entered the bottom of a gentle wave system that has a habit of setting up directly above the airfield!

TOP RIGHT: Simon's Taurus with his Stemme in the hangar of Airborne Research Australia at Parafield. Simon thinks of the Taurus as a 'mini-me' version of the Stemme. The 15m wingspan of the Taurus is dwarfed by the size of the Stemme.

MIDDLE: The instrument panel in the centre of the side-by-side seats leaves plenty of space and allows good visibility all around.

BOTTOM: The Taurus being charged in the hangar at The Vale.

ULTRA-LOW MAINTENANCE

The core aims I had for selecting this aircraft were the ability to produce my own launch fuel in a sustainable manner using the on-site renewable energy system, and an ultra-low maintenance overhead for the aircraft and its drivetrain.

I have achieved both aims with this aircraft. There is almost nothing to do in maintenance terms on the drivetrain. There are only two moving parts in the whole system – the actuator that raises the motor/prop boom, and the brushless motor that is bolted directly to the prop on top of that boom.

The motor has no maintenance requirements at all and has a nominal TBO of 2,000 hours. The battery pack is internally monitored and self-maintaining, with a built-in heating system to ensure the pack is at the correct operating temperature before power is drawn from the batteries, even when used in the air after an extended soaring flight at altitude.

LONGER SEARCH RADIUS

I would still love to be able to get more energy into the system to allow a longer 'search radius' and chase some more distant wave systems that I can see from my airfield but that I can't quite reach. The one constant with the development of battery systems in the current era, however, is that they are continuing to improve. The Taurus' two battery units are modular, so there is a realistic prospect of upgrading them in the future.

The Taurus Electro G2 has met and, indeed exceeded, my brief to find a two-seat, all electric, ultra-low maintenance self-launching sailplane.

I am sure that ultimately other two-place electric sailplanes will appear on the market, as battery energy density continues to improve, to offer other choices and other attributes in this emerging market. Bring it on! **GA**

MATESHIP AT JOEYGLIDE

JAMES NUGENT & MICHAEL KELLER
AUSTRALIAN JUNIOR GLIDING CLUB

'There's always something quite special about going to a JoeyGlide – whether it's the electric atmosphere at briefing, the great mateship between everyone or the generally relaxed air of the competition.' Michael Keller. MICHAEL KELLER

RIGHT: Ryan Driscoll heads for Biggenden on the last day

OPPOSITE TOP: Kaitlin Brown

MIDDLE: Ben Spoor ready to launch in his Cirrus.

BOTTOM: Aaron Hannaford and Bailey Seymour prepare the Kingaroy DG1000 for the day's flying.

After several years of less than ideal weather, we thought of doing what most gliding competition organisers want to do – go north. Combined with the fact that JoeyGlide had not been to Queensland for nearly ten years, there was no better time to get in touch with Kingaroy Soaring Club. Shortly after our proposal we got the response, "Fill your boots!" The Juniors were heading to Kingaroy!

In recent years, the method for running JoeyGlide has been the AJGC boxing up the package, then seeking the highly capable help of some generous locals to send it for us. Basically, the juniors turn the handle on the JoeyGlide machine and get all the logistics, aircraft, personnel and catering in place, and then some very proficient helpers run the organisational side of the competition while we go flying. This year we knew we were in exceptionally good hands when Greg Schmidt agreed to direct the competition, with Peter O'Donnell, Al Sim and many other key contributors. The scene was set for a classic 16th Australian Junior Nationals and Coaching Program.

WELCOME TO JOEYGLIDE

The night before the official practice day saw a buzz in the tie-down area as juniors from right around the country rigged their gliders in anticipation of the week's flying. For many who are new to the JoeyGlide circuit, this is an opportunity to meet a group of like-minded junior pilots just like themselves. For those returning, it is when mateships come to the fore after months of absence. This rigging session was made all the more exciting by the looming SkySight forecast, which was showing several days of booming weather for the start of the competition and coaching program.

Official practice day arrived, and the pilots, coaching participants, family and friends assembled in the Kingaroy Soaring Clubhouse for the customary 'Welcome to JoeyGlide' and general morning briefing. Each day followed the same routine. Greg Schmidt delivered the day's task accompanied by a weather briefing delivered remotely by Jenny Thompson. As has been the case at JoeyGlide from the beginning, the obligatory fines were also collected for any amusing misdemeanours from the previous day with the proceeds going towards the RFDS.

Shortly afterwards, Peter O'Donnell would collect his team of coaching participants and coaches for a short briefing, followed by a trip over to the hangars to prepare the coaching two-seaters for the day's operations.

TOP LEVEL COACHES

The coaching participants were spoilt once again this year with three Duo Discus and one DG1000 made available to the AJGC for use in the Coaching Program. A special word of thanks goes out to the Griffin family from Darling Downs Soaring Club who generously made their Duo Discus T available to the AJGC at no cost. Such generosity is passed directly on to the coaching participants, resulting in a stunningly small flying bill at the end of the program.

The standard of coaching and instruction was as high as it has ever been, with the likes of Steve O'Donnell, Greg Kolb, Mark Dalton, Nathan Johnson and Arnold Geerlings delivering introductory cross-country coaching to the twelve participants. Mentors Lisa Turner and Joe O'Donnell were also on hand to provide guidance all week, helping with everything from thermal centring technique to digging out camelback tubes from behind seat backs.

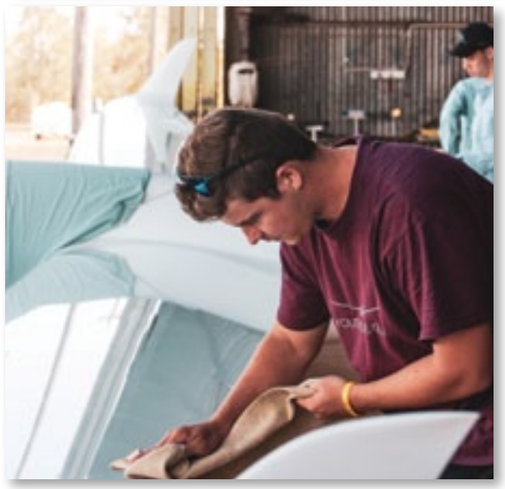
The stunning Queensland weather ensued, with a minor hiccup on Day 1 when a gentle storm washed half the fleet out of the air and into paddocks. From Day 2 onwards, the temperatures, cloudbases and climb rates steadily climbed, and the fleet of competition and coaching gliders enjoyed some quality racing.

Southeast Queensland was in the grips of a crippling drought, which meant that the small amounts of moisture in the air were insufficient to form storms in the record-breaking temperatures. Instead, we got 14,000ft inversions over Kingaroy, in the blue! The best news of all came weeks later, when photos of a lush green Kingaroy valley appeared in the JoeyGlide WhatsApp – unrecognisable from the scorched terrain we had enjoyed a week of racing over.

RAAF PILOT

On the final night, the clubroom filled with tired, flown-out juniors and their supporters for the presentation dinner. A past JoeyGlide competitor – 1SQN RAAF pilot Ryan Griffin – generously travelled to Kingaroy to be our keynote speaker. Ryan described how his love of flying manifested while flying gliders with his mates, especially at JoeyGlide, which led to his career. The next morning, some very weathered AJGC committee members collapsed into their cars alongside a procession of other juniors and their supporters for, in some cases, the very long road trip home.

We were lucky to have two of our own team create media material at the event. Aidan Curtis and Tom



continued over page

RIGHT: James Nugent launches on the final day

McQueen made daily recap videos and a highlights video, which are quality viewing. They can be found on YouTube or on the Australian Junior Soaring Facebook page. Enjoy, and thanks boys!

The Australian Junior Gliding Club would like to thank our long-standing sponsors for their continued support of our flagship event. In no particular order, this includes Aviation Insurance Australia, the Civil Aviation Safety Authority (CASA), Gliding Queensland, SkySight, OzRunways, GoSoaring and Naviter. Your support makes a difference in helping the next generation of junior glider pilots realise their potential.

The Australian Junior Gliding Club would also like to thank Todd Edwards and the Kingaroy Soaring Club for their generosity, genuineness and sometimes patience in helping run JoeyGlide 2019. Our Competition Director, Schmidty, his team of Safety Officers, our Coaching Coordinator Peter O'Donnell and weather expert Jenny Thompson were invaluable in helping us run a successful event. To Nev Donald, Rob Butler and helpers – thank you for launching us and cooking for us – your help is much appreciated.

Find results for JoeyGlide at this link.
soaringspot.com or bit.ly/36jYmkE

OTHER JUNIOR NEWS

2020 JUNIOR INSTRUCTOR'S COURSE

Following the success of the 2019 AJGC Junior Instructor's Course, the GFA has allocated funds to subsidise the second Junior Instructor training course in 2020. The course will be held at Camden, NSW thanks to the support of the Southern Cross Gliding Club. Dates will be determined based on the availability of successful applicants and level 3 instructors but will be some time in the second half of 2020. See Australian Junior Soaring on Facebook for information and applications.

2020 JUNIOR AIRWORTHINESS COURSE

The AJGC is looking to organise an airworthiness training course in the second half of 2020. The training will consist of Replacement of Components, Form 2 and refinishing training, delivered by the GFA Airworthiness team. See Australian Junior Soaring on Facebook for information and expressions of interest.

2020 AJGC LOCAL SERIES

The Local Series, as the name suggests, is a series of junior gliding events taking place at clubs in each state or territory in 2020. Organised by the AJGC State Representatives – who are also members of the regional committees – these events range from fun-flying days, to cross-country coaching weekends, to mountain flying courses and everything in between. Each region will see at least two Local Series events 2020. Watch Australian Junior Soaring on Facebook for more.

JOEYGLIDE 2020/2021

Are you keen to get involved, or know someone who might be? JoeyGlide 2020 will be held at Leeton, NSW from 7 – 16 January 2021. Further information is available on the JoeyGlide website, where you will also find the entries for both the competition and coaching program.

We are ultra-welcoming and supportive of newcomers and are always more than happy to answer your questions. Feel free to reach out to us on the website, email or Facebook. We look forward to seeing you at Leeton!

AUSTRALIAN JUNIOR GLIDING CLUB

Website: joeyglide.juniorsoaring.org
Email: admin@juniorsoaring.org
Facebook: Australian Junior Soaring

CROSS-COUNTRY PLANNING

BY MATTHEW CAMERON

ABOVE: Track line on map from Tocumwal to Mt Arthur. First aiming point is Berrigan township. From there, the bottom end of Lake Urana should be visible on a normal day. There is a straight road from Urana to Boree Creek. There is also a wheat silo on track on the Sturt Highway southeast of Narrandera. These are all good head out of the cockpit navigational checkpoints.

All cross-country flying is an act of faith. It is claimed with some justification that such flying is the apex of the gliding art. Certainly it encompasses many flying and planning skills in the one package.

Without a doubt the need to thermal efficiently is the backbone of the whole flight, irrespective of the location. Selection of the day is also important as the meterological conditions will dictate the distance possible, and good terrain is necessary for safety.

It was one of those slow days, in the low 30s, some fluffy white cumulus scattered around and, for some odd reason, not much gliding. Eventually one of the low-time pilots approached the CFI and suggested that he attempt a cross-country flight of some 100km. The CFI agreed and suggested I occupy the back seat of the glider as the only other instructor available.

DOOMED FROM THE START

As we readied ourselves for take-off, I thought that the pilot was pushing it a bit – as far as I knew, there had been no planning as such. Airborne, we dropped the tug at the first thermal, which in my opinion was not all that strong, and our hero was back on the ground seven minutes later. A cross-country flight that was doomed from the start.

The is an old adage that says 'Proper Preparation Prevents Poor Performance', the 5 Ps. The writer would suggest that a large percentage of failed cross-country flights are a result of less than proper planning.

If you are going to fly cross-country, certain aspects of planning should be considered on every flight, even flights of short duration. Personal hydration is a familiar one. Continual hydration is very important on hot days. Do you carry enough carry enough extra water to allow for possible out landing? I have had two occurrences in relation to hydration, neither nice, and thankfully I was on the ground on both occasions.

On hot days when flying a cross-country, drink plenty of liquid with breakfast, and when driving to the airport and when getting ready for flight, force yourself to drink more. Get into the habit of constantly sipping in flight. Flying high, where the outside air temperature is lower, also helps.

COMMON PITFALLS, SIMPLE REMEDIES

One of the most basic planning requirements is a knowledge of glider performance. When properly flown in still air conditions, just how far will your glider travel from, say, 10,000ft? It may well be the difference of getting to a suitable landing area or out-landing in an unsuitable one. What is the answer to the same question if you are either 10kts below or above that best speed?

The other item that has become obvious to me is the general lack of navigational knowledge within the gliding community. I am aware that gliding imposes different requirements on pilots and sometimes you have to divert off your planned track to obtain lift to remain aloft.

But techniques that light aircraft pilots use often be put to a glider pilot's advantage. To claim that such techniques are not applicable to gliders is simply rubbish. You would probably add that the speed of a glider varies greatly, having to slow down to access lift. While this is true, you can use average speeds to obtain some useful data – mental arithmetic is a great asset in the air.

It is important that you identify before take-off those items that are either on track or just slightly to one side that will allow you to navigate without constantly putting your head in the cockpit. Long straight roads, distant hills, lakes, swamps, rivers etc are all useful and useable. It may be advisable to change your destination to take advantage of such items.

continued over page

ABOVE: Successful return from a dual cross-country.

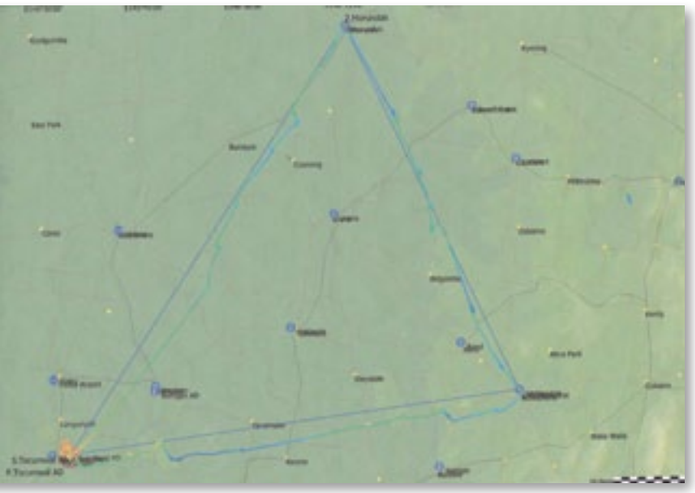
MAP AND WIND READING

One experienced CFI claimed that most cross-country flying only involved map reading. If he is correct, how good are your map reading skills? I hasten to add that I totally disagree with his statement. Furthermore, most cross-county pilots fail to recognise that being blown downwind of your preferred track costs you a lot of time to beat upwind due to the reduced groundspeed. It is preferable not to go there in the first place.

You should have enough knowledge to be able to use the forecast winds to calculate the wind drift at an average gliding speed for any leg of a proposed cross-country route, plus whether the same wind is giving you a head or tailwind component. Be aware that slowing down for a good thermal will cause you to drift downwind. You do not want to spend the last long leg home working continuously into a strong headwind in conditions of probable weakening lift. The chances of out landing are much higher.

In addition to the wind and its velocity you should also be able to calculate the average true airspeed of the glider. None of this is rocket science and any student power pilot should be able to assist you. It's all very basic stuff. However, from observation, few pilots can carry out the procedure, and many are simply not interested.

BELOW: Cross-country over a favoured triangular course. Tocumwal-Walbundrie-Morundah-Tocumwal. Good gliding terrain and safe.



WHERE ARE WE GOING?

The very first planning decision is simply where are you planning to fly to. Is it to be an out and return, a triangle or other multiple legs? You may be forced to fly multiple legs to remain within the best terrain conditions to achieve the maximum lift. Your planning must be flexible enough to change destinations on the day. The alternative is to have several plans to different destinations and select the most favourable depending on the weather conditions.

It goes without saying that the status of the terrain over which you are going to fly is critical if you are to succeed. It might have the best cut crop paddocks in the state but if they are wet or still hold moisture from some weeks before, they will be less than useful to you. In addition, since a long flight is going to take you out of your comfort zone, you must be prepared.

Allow electronics to assist in the planning. Google Earth allows you to draw a track line on the surface of the earth and inspect the terrain beneath at low altitudes. In addition you can pick out major stand-out navigational features en-route that allow you to keep your head outside the cockpit where it belongs instead of searching for features on a map. Such large features are visible at some distance depending on your altitude. It is vital that you choose the type of terrain over which you are going to fly with care and thought.

WEATHER WATCHING

Irrespective of where you choose to fly, whether you succeed on any particular day depends entirely on the weather conditions you are presented with but, if you have planned properly that will be evident at least 48 hours before you flight. For a long cross-country flight, I suggest that you should start accessing the weather, looking for trends at least seven days before take-off. The last 48 hours are critical.

Particularly watch out for encroaching cirrus later in the day of the flight. It will kill lift and perhaps leave you far from home without any friendly lift! If the day is considered marginal, perhaps the decision should be to await better conditions on another day. Depending on exactly what time you are prepared to take-off, you must be aware that initial climbs are likely to be weak and gain strength as the day progresses. It may pay to take a higher than normal tow before you cross the start line, allowing you to settle down before seeking the first thermal.

TRUSTING INSTRUMENTS

In this electronic age, some consider carrying paper maps in the cockpit to be a relic of the stone age. Perhaps, but I have a different point of view. Such a map, marked with the appropriate track you propose to fly, is invaluable, particularly if the electronics fail. I have had such an experience myself.

When you get into trouble, what will save your bacon is a good grasp of the basics, whether they be navigation or flying skills. If faced with a possible outlanding, my only advice is to make the decision early. I have had three, all on prepared flight strips. I could have pressed on, but since the result was inevitable, it was better to land on a prepared aerodrome early rather than an unknown paddock later on!

Just how well do you know the instruments you fly and navigate with? Of all the instruments in the cockpit, it is obvious that the magnetic compass is the least understood. It is also the one most likely to get you home when the electronics fail. It's not much good in a steep turn, as it suffers from acceleration errors even at glider speeds.

BUT, if you understand just why it has these limitations, you are halfway to understanding it. A small piece of historical knowledge might get you out of trouble. Are you aware that within Australia, most long fences run either directly north/south or east/west? When they constructed these fences, they used a compass to keep the direction straight.

Much the same applies to the airspeed indicator. The TRUE airspeed is somewhat higher than that indicated on the face of the instrument. It's a function of altitude and temperature, and one reason to fly as high as you can.

FLYING BY INSTINCT

Particularly in the summer months, I prefer to stay as close to the chosen track as possible, both for speed and because of the previous preparation. When you are flying over literally hundreds of square miles of open county with little variation, it is difficult to pick exactly where thermals will be. If you proceed in a straight line, eventually you must strike a thermal. The trick is to find one before running out of altitude! Under summer conditions this is a tip that works and keeps your speed up.

Your flying must become instinctive. Without even thinking about it, the strong bump under the starboard wing already has you rolling into a turn with the speed smoothly reducing to the required best thermalling speed.

In similar fashion, when you finally decide to exit the thermal, you ignore the compass, knowing that the lone hill in front of you is the direction you need to go while accelerating smoothly to your best L/D speed. After a while you do not have to think about it at all.

EDUCATE YOURSELF

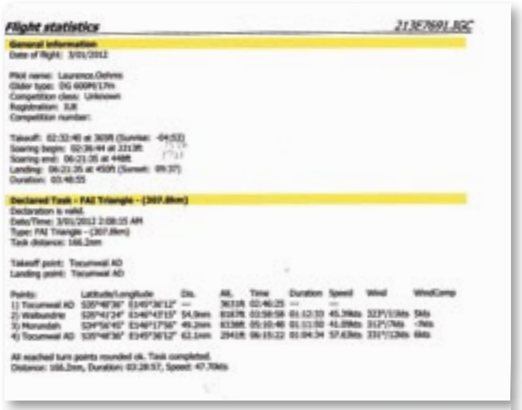
Aside from the actual flying of a cross-country I educated myself in the winter months by accessing the really good information on the internet from around the world and relating to every conceivable gliding subject.

From a training and logical point of view, it is normal to start with short cross-country flights and gradually increase the distance as you gain experience. It is a very useful training exercise to analyse each flight in some detail. Most electronic tracking devices incorporate a method of recording the flight. Ask yourself the question, if this technique is wrong why was it allowed happen? What did I do that was right? How could I have flown better to increase my average speed on this flight?

All cross-country flights are a race against time. Flying as close as possible to your planned track is a good starting point to get your speed up, as is flying as high as possible to get a better true airspeed. If the thermals are well defined and reasonably strong, be prepared to go a bit lower before accessing the next thermal. It's very much a matter of balance between the two. Accuracy in the thermal with smooth control inputs will also increase your climb rate. The more thorough the planning, the better the chance of success. However, you must be flexible depending on the weather conditions on the day.

GA

BELOW: Analysis of the recent flight provides much information and data.


Flight statistics 21307691.IGC

General information
Date of flight: 3/01/2012

Pilot name: Laurence.Oehms
Glider type: DG 600M/17m
Competition class: Unknown
Registration: ILR
Competition number:

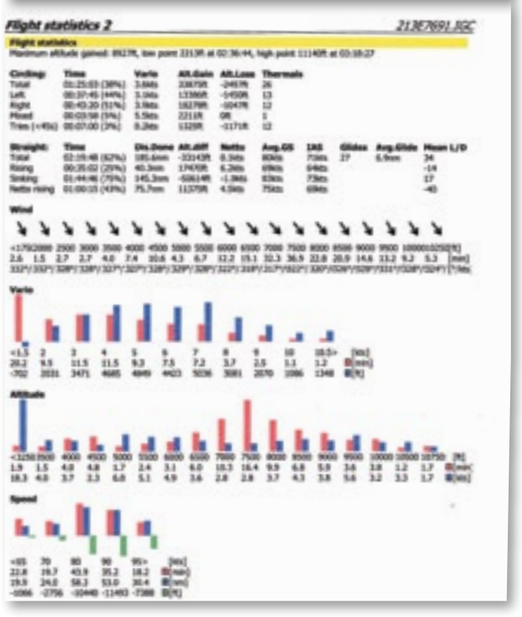
Takeoff: 02:33:40 at 369ft (Sunrise: -04:53)
Soaring begin: 02:36:44 at 1113ft
Soaring end: 06:21:35 at 4468ft
Landing: 06:21:35 at 4509ft (Sunset: 09:37)
Duration: 03:48:55

Declared Task - FAI Triangle - (307.8km)
Declaration is valid.
Date/Time: 3/01/2012 2:08:15 AM
Type: FAI Triangle - (307.8km)
Task distance: 166.2nm

Takeoff point: Tocumwal AD
Landing point: Tocumwal AD

Points	Latitude/Longitude	Dis.	Alt.	Time	Duration	Speed	Wind	Wind Comp
1) Tocumwal AD	S35°48'36" E145°36'12"	---	361ft	02:46:25	---	---	---	---
2) Walbundrie	S35°41'24" E146°43'15"	54.9nm	818ft	03:58:58	01:12:33	45.3kts	323°/13kts	5kts
3) Morundah	S34°56'45" E146°17'58"	49.2nm	833ft	05:10:46	01:11:50	41.0kts	312°/7kts	-7kts
4) Tocumwal AD	S35°48'36" E145°36'12"	62.1nm	2941ft	06:15:22	01:04:34	57.6kts	331°/12kts	6kts

All reached turn points rounded ok. Task completed.
Distance: 166.2nm, Duration: 03:28:57, Speed: 47.7kts


Flight statistics 2 21307691.IGC

Flight statistics
Maximum altitude gained: 8927ft, low point 1113ft at 02:36:44, high point 1114ft at 03:18:27

Climbing:	Time	Vario	Alt.Gain	Alt.Loss	Thermals
Total	01:25:03 (38%)	3.6kts	3387ft	-2497ft	26
Left	00:37:45 (44%)	3.1kts	1336ft	-1450ft	13
Right	00:43:20 (51%)	3.9kts	1827ft	-1047ft	12
Mixed	00:03:58 (5%)	5.5kts	223ft	0ft	1
Tries (<45s)	00:07:00 (3%)	0.2kts	1125ft	-1171ft	12

Straight:	Time	Dis.Done	Alt.diff	Netto	Avg.GS	IAS	Glides	Avg.Glide	Mean L/D
Total	02:19:48 (62%)	185.6nm	-3314ft	0.3kts	80kts	75kts	27	6.9nm	26
Rising	00:35:02 (25%)	40.3nm	1747ft	6.2kts	69kts	64kts			-14
Sinking	01:44:46 (75%)	145.3nm	-5061ft	-1.0kts	83kts	73kts			17
Netto rising	01:00:15 (43%)	75.7nm	1137ft	4.5kts	75kts	69kts			-40

Wind

Varios

Altitude

Speed

continued over page

A VINTAGE GLIDER AT THE 2020 KEEPIT REGATTA

BY PAUL DICKSON

I have flown the Keepit Regatta several times in the past and it is a very friendly and relaxed comp, so I thought it would be the perfect opportunity to push the Dart to faster speeds.

As the only timber aircraft at the competition, it was a daunting entry list with lots of high-performance plastic, including several JS, Duo Discus and ASG32 gliders, not to mention the other older fibreglass gliders. These last might not be quite as new, but are still of much higher performance than the Dart.

It appears that no one has flown a Dart in an Australian comp before, as the first issue for me was the fact that no Australian handicap exists. After some discussion with the organiser and scorer Casey Lewis, we settled on the US handicap. Casey was feeling sympathetic to the poor delusional fool with a wooden glider and gave me a little extra due to the low wing loading.

The Keepit airfield is now looking lush and green after the heavy rains that the region received in early February, and it was nice not to have the dust that was present at the Women's Worlds in January. Lake Keepit is beginning to look like a lake again, however, the downside of this was that there were a lot of very wet looking paddocks that still had standing water in them. Paddock selection for any outlanding would have to be very carefully considered!

PATIENCE

After a poor soaring season in the Hunter Valley due to bushfire smoke, I arrived at the regatta a few days early to get in the groove of cross country flying and had a couple of good flights along the Kaputar ranges, the best of which was 256km at 66km/h. It was just as well that I had a few days to fly as the practice day and first two days were overcast non-events. Day 1 was cancelled and on Day 2 Milan Sejka from Kingaroy was the only pilot to make it around the 2hr 15min AAT. Most pilots gave up and either started their engines, outlanded or turned around and came home. I was no different and, rather than risk an outlanding in a sodden paddock, I did not attempt the task.

The next couple of days were affected by high level cloud and on Day 3 and 4, I found that the thermals were uneven and surging, making it difficult to centre and get consistent climbs. Flying when the top of climbs are only 4,000 to 4,500ft AGL does not leave much room to glide in a Dart, and I found that I had to take every climb to keep airborne. The limited gliding distance and slower speeds also didn't allow me to make the larger diversions that I would normally take to stay over higher ground, which is likely to be drier and provide better climbs.

At times I had to remind myself to be patient and just take the weaker climbs to stay high.

I ran out of luck on Day 4 and outlanded (along with lots of others) but I did have the satisfaction of being low and finding a group of thermalling pelicans above a paddock containing two Duo's and a LS3 and getting a good climb away from them, just before a third Duo started its engine above the same paddock.

BEST FLIGHT

I don't think of myself as a vindictive person, but thermalling above a paddock full of plastic gliders is SO satisfying!

My smugness didn't last long though - I was soon in my own paddock only a glide away. It was a good paddock and I planned my approach so that I finished my ground roll right up against the farmhouse where there was firmer ground, so it was an easy retrieve. Once we got back to the club for dinner, we heard the horror stories of having to winch Matthew Atkinson's glider trailer through a creek to get to and from the paddock. Normally, glider retrieve stories are amplified with the addition of beer in the club house, but they had the photos and mud-spattered clothing to prove their adventure.

As the week progressed, the weather improved and on Day 5, I had my best comp flight in the Dart, managing 6th place for the day. On this day we had a 2hr 30min AAT which took us towards the Pilliga and I finally had a day with good climbs to cloud base at 6,000ft AGL. Some good cloud streets were forming, and I flew fast in this section. The faster gliders had the luxury of being able to extend further into the turn circles where the climbs were good, but I soon had to turn for home for an uneventful crossing of the wetter ground and final glide home. Even an extra couple thousand feet above ground gives you more options to look for the best climbs and push on when they are not good enough.

HARD WORK

Perhaps as karma for my smugness above a paddock full of plastic gliders, the next day was difficult after a different air mass had moved into the region. The day was blue with 12-15kt winds and the previous fickle climbs to only 4,000ft AGL.

We waited on the grid for some time and eventually our task time was reduced to 2hrs. I found that this reduction in time only allowed me to just touch the circles and then

☛ *continued over page*

LEFT TOP: David Pickles waiting to launch beside the Dart (photo: Ivo Ivelin).

LEFT BOTTOM and ABOVE: The Dart on the flight line.

move on, so I didn't have the benefit of diversions and in the blue I flew straight lines, which was a mistake. At one point, I was low over Flood Hill ag strip. A wedged tailed eagle that saved me this time, and showed me where the climb was.

It was a struggle most of the way home with the wind moving me further away in the weak climbs. I eventually found a good climb over the Kelvin Ranges to get final glide. At this point, it was depressing to see Brad Edwards join me at the top of the thermal in his brand new ASG 32 and then disappear homeward at heaven knows what speed at a very flat angle. Meanwhile I eked everything out of the last climb and flew home at best glide. Brad was making his finals radio call when I had barely left the thermal.

TEMPTATIONS

I am ashamed to admit that on the last day of the regatta, I quietly left the Dart tied down and hopped in the Hunter Valley Gliding Club's Duo Discus with Andy Aveling from the UK in the back seat. It was a good day with a 3hr AAT over the Kaputar Ranges, but what a difference it makes when you have a few more points on the glide ratio! You can pick only the best thermals and explore more sky before taking a needed climb. Andy and I managed some good climbs and fast runs under well aligned cloud streets, which was good enough for us to get 2nd place for the day. But flights in plastic gliders don't count, do they?

The organisation and catering provided by the LKSC members was superb. Tustra had his huge pan in operation and cooked for us in the clubhouse. The delightful smells of his paella bubbling away was enough to draw everyone in without waiting to be told that dinner was ready. Tanya and Hannah Burgess also fed us at a French themed evening when they cooked us the most delicious beef bourguignon and sautéed green beans followed by tarte Tatin and profiteroles.

It's surprising that with the extra wing loading I wasn't flying fast enough to keep up with the plastic. Jan and Bob Dirks also hosted us at their Carroll Gap farmhouse for several evenings, including the presentation evening when we all sat on the verandah and enjoyed Jan's extravagant feast. The camaraderie among the competitors was great.

During the regatta, I did learn that compared to my other glider, an LS3, the Dart requires a more cautious flying style, especially on the low days where the handicap does not make up for the ability of the modern gliders to stretch out and explore more sky for the better air and the best climbs. That being said, it is great fun and a challenge to go up against the plastic in a competition. I am happy with overall 9th place but most importantly, I learned that you can have as just as much fun in a timber glider.

Overall, it was a very enjoyable week of flying in the Dart. I will be back to next year's Keepit Regatta as I'm driven to one day beat the guns in their JSs.

LEFT TOP: Dart outlanding near Boggabri. (photo: Paul Dickson)

LEFT BOTTOM: The Dart in flight (photo: Ivo Ivelin)

TOP: Two Duos and an LS3 in a paddock near Boggabri. (photo: Garry Stevenson)

RIGHT: Tustra's Big Pan Paella (photo: Justin Smith)

RIGHT BOTTOM: Bogged! Matthew Atkinson retrieving WUS (photo: Kerry Kline)

A MODEL CLONE OF THE ZEPHYRUS
AND HOW WE FOUND THE MISSING PLANS

BY PETER CHAMPNESS

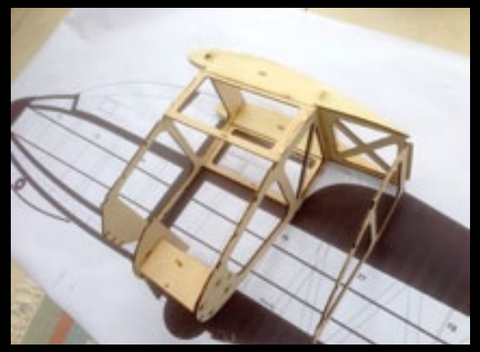
In October 2014, Vincent Crockett of Scale Soaring UK contacted the Beaufort Gliding Club, saying that he would like to construct a model sailplane of the Zephyrus. This sounded like an interesting project so we supplied a good 3-view diagram and some initial photographs of the Zephyrus.

Later as the model progressed Vincent asked for measurements at specific points and photos of specific details. Robert Hocking and Doug Lyon were able to supply a lot of photos of the Zephyrus under construction from 1951 to 1966.

Chris Thorpe contributed many interesting details such as the original Certificate of Airworthiness (C of A) certificate and an article about the wing load test which was conducted by the Depertment of Supply, Australian Defence Scientific Service at the Aeronautical Research Laboratories. At the time that the Zephyrus was completed, Doug Lyon was the Deputy Chief Airworthiness Officer at the GFA. Consequently he signed the C of A on his own design!

The proof load test came in handy a few years ago, when the Department of Aviation decided that the Zephyrus should not be used as a training glider because she had been constructed as an amateur construction project with a GFA construction number of (GFA Home Built No. 70). This was promptly answered with a copy of the test and the C of A, and the decision was reversed.

Vincent wanted to represent the Zephyrus as she was originally completed. Several changes from the current configuration are shown in photos of the model. The ailerons originally extended to the wing tips. They have subsequently been shortened and wing tip skids added to prevent the aileron tips rubbing on the ground. The rudder was found to be over-balanced. The fin was increased in height and the rudder forward of the hinge reduced in size. The forward cockpit has a revised profile.



The model is a fine tribute to the Zephyrus and Vincent has done a great job. His build log can be viewed here:

scalesoaring.co.uk/phpBB3/viewtopic.php?f=12&t=334

THE PLANS ARE FOUND!

Vincent sent updates on his progress occasionally along with requests for further measurements and photos of specific details. Toward the end of the model construction, the conversation at the Beaufort table turned to the model and the original plans that had been missing for years. It was thought that they had been taken home by a former member of the club and subsequently lost.

At this point Chris Trewern suddenly announced that he thought he might know where they were. So we all trouped out to the Beaufort hanger and a cardboard tube was found lying inconspicuously on top of a set of tall storage lockers, almost out of sight. The tube contained the plans, slightly damaged by silverfish.

Rob Hocking took the plans and had them copied. A number of sets of the copied plans were produced and spiral bound at Officeworks in both A3 and A4 sizes. The original set of plans has been placed in the Australian Gliding Museum archives.

TOP: Vincent Crockett poses with his 1:3.5 scale model of the Zephyrus.

BELOW: The model represents the Zephyrus as originally completed.

HOW TO GET BACK INTO THE SKY SAFELY
FOR LOCKED-DOWN RUSTY GLIDER PILOTS

PROFESSOR SIDNEY DEKKER
National Safety Advisor

Fly often, fly a lot. There is probably no better safety advice than that, except when you're grounded by a pandemic. Then the advice is pretty useless. So how do we get back into the sky safely as a gliding community?

Currency matters. In fact, it matters a lot. A number of years ago, the German Luftfahrt Bundesamt or LBA (basically Germany's CASA) initiated a study into the relationship between glider pilot proficiency and accident probability. You can see the link for yourself in the figure. The graph shows all the gliding accidents in Germany during a period of 15 years, set against pilot currency. The message is clear: the more you've flown in the last 90 days, the less likely it is that you will have an accident.

Pilot currency in the published data from the study was defined as number of launches (not hours) in the last 3 months. The LBA pointed out, however, that the same relationship applies to flying hours set against percentages of accidents. You have to assume that all German glider pilots over those 15 years were law-abiding, so there were no (solo) pilots to the left of the figure – that is, those with zero launches in the last three months.

RISK EXPOSURE

It probably sounds intuitive that the more you have flown, the less likely it is that you will have an accident. But think about it. If you fly more, you actually are exposed to the risks of flying more. If you only fly very little, you have much less exposure to those risks. So technically, you should have a lower probability of having an accident. But the point is not the amount of risk exposure. The point is risk awareness, risk management, risk mitigation. The point, in short, is risk competency – having the ready-to-deploy skills and abilities to recognize risk, absorb it, adapt to it, handle it. Risk competency comes chiefly from pilot currency.

So how can we translate this into a safe return to the skies? In Northern Europe and North America, pilot proficiency represents a recurring problem. A 'winterstop' there, after all, may last as long as half a year. To handle this, the LBA designed a 'Sicher Segelfliegen Trainingsbarometer', an idea from Ole Didriksen and worked out through a collaboration between the Deutsche AeroClub and the LBA. The BGA (British Gliding Association) then took and somewhat adapted and translated the German barometer from the 1990s, giving it some pretty colours. The barometer is as current as ever - pun intended. Have a look at it, spend some time on it to do the numbers that apply to you. You can find out where you'll be once your club has created the opportunity for you to fly again.

Being an instructor, by the way, is no protection against the reality of this barometer! It's not that you bump up into the green merely because you're an instructor. Currency is blind to your ratings – it doesn't care, which is why there is no provision for them in the barometer. Some clubs make sure their instructor corps has the first opportunity to achieve currency again. It is a sensible move that can ensure that you don't end up completely grounded and wingclipped as a club.

A CURRENCY CONTRACT

What else can you do? Some pilots enter into a weather/conditions minimum contract with themselves – a kind of safety floor below which they won't fly – and some even tell their CFI's, duty instructor or training panels about that contract. Like most contracts, this one can be renegotiated when things are looking up, and you feel a bit warmer in the saddle again.

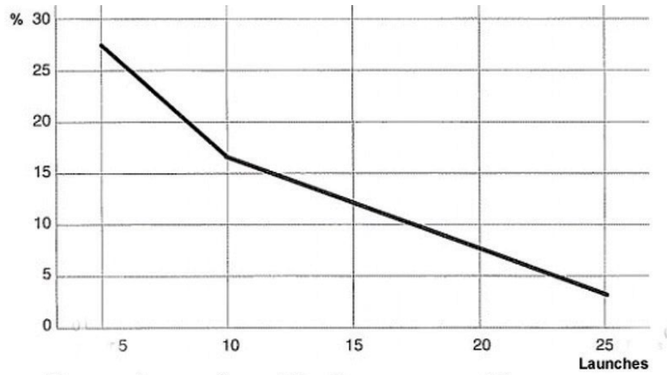
The idea of such a contract is not bad. As some of you will have found when flying around in bushfire/duststorm-polluted skies recently, there can be quite a gap between being legal and being comfortable or, for that matter, being safe. Visibility of 5km, for instance, is really not a lot when you're cruising along at 80 knots. At that speed it'll take you about 120 seconds to fly into the area you cannot now see. The difference is particularly large when you are used to flying with some 30, 50 or 100km visibility.

The same goes for crosswind handling of your, the club's or your syndicate's glider. The maximum demonstrated crosswind component in the book was demonstrated by someone who was pretty current and who hadn't just been playing Condor for the last few months. You may not be able to replicate that demonstration – for the first time after a long hiatus – as neatly in the same way.

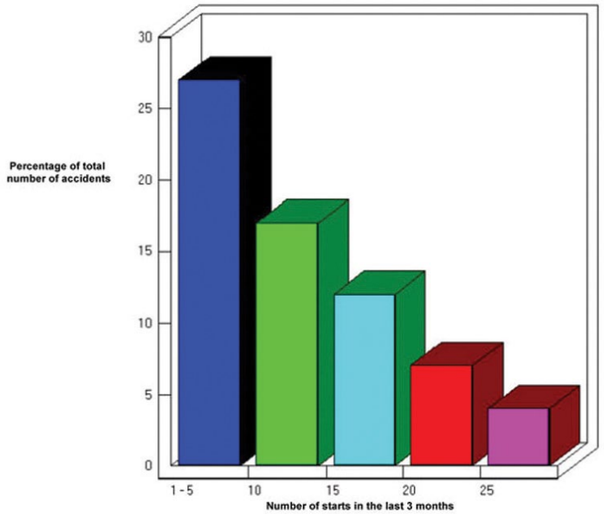
Long wings and slow roll rates don't tend to make this process any easier. I remember how much I thought an Airbus A340 and even a 737NG have in common with long-winged gliders. Both aircraft have relatively long, slender wings and are indeed 'good' gliders themselves . It's hard to slow down and go down in them at the same time, as ATC often wants you to do. Once, when crabbing down along the glide path in a strong crosswind at Berlin's Tegel airport, after just having completed my type rating on the 737NG, I thought the plane would be docile enough for me to kick it straight, like any other, and drop the wing into the crosswind, so that I'd touch down on the one main gear into the wind first.

However, by kicking the plane straight, the wing that I wanted to go down, went up instead. The airspeed

☛ continued over page

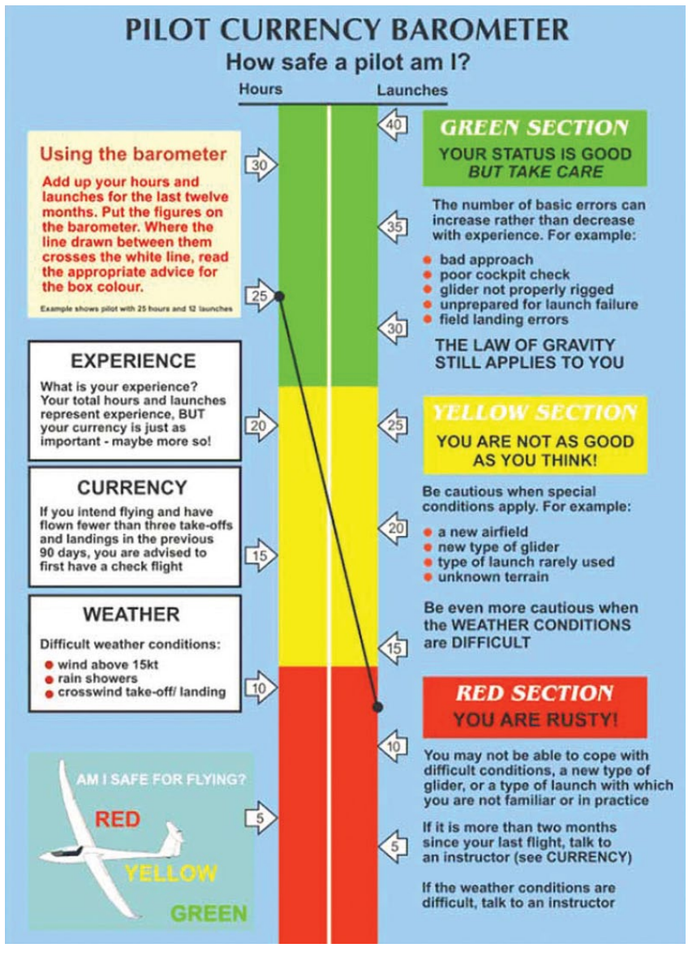


Percentage of accidents compared to launches in the last 90 days



Percentage of total gliding accidents against pilot currency
x-axis (horizontal): number of launches in last 3 months
y-axis (vertical): percentage of total number of gliding accidents over 15 years
(Source: Luftfahrtbundesamt Flugsicherheitsmitteilungen 1/92)

It can clearly be concluded from the graph that most of the accidents caused by pilots with little recent flying experience



increase on one wing, and decrease on the other – induced by my decrabbing rudder input – was enough to send the wing up, despite my turning the yoke into the wind. Big-wing birds, like the 21m JS-1 that one really nice owner let me fly recently, can do the same thing when decrabbing in a stiff crosswind. Incidentally, I flew with plenty of airline pilots who had stopped bothering to kick the plane straight. Instead, they plonked it down in a crab to let the undercarriage sort out the de-crab for them. Though both legal and technically possible, since the undercarriage can withstand quite a crab on touchdown, it always felt heart-wrenchingly ugly. You don't really want to do that in a glider.

WHAT ABOUT CORONA?

States and territories have their own policies, guidelines and rules in place for which activities are allowed, and how many people can participate. Meanwhile, those policies, guidelines and rules are changing often. So first of all, by checking your local government website, for instance, you can see what is possible where you live and fly right now. But within that, your club can take a bunch of practical measures to ensure the safety and health of your pilots. A proposal might comprise of the following suggestions, which you can run by your local authorities if you think that would be a wise idea:

- There will be no student training until it is deemed safe to resume doing so.
- The decision to participate on any particular day will be entirely at the discretion of each member and no member's choice to fly or otherwise will influence the decision to do so by any other member.
- Any member who is unwell or experiences any of the symptoms of Covid-19 must not travel to the gliding field until they have either returned to full health or tested negative to a Covid-19 virus test and self isolated from the airfield for at least 14 days.
- Members who choose to fly will travel to the gliding airfield in a manner consistent with local government guidelines at the time.
- Nobody should enter the clubhouse, and all participants should arrange to bring their own lunch and drinking water to the field for the day.
- Members are also encouraged to bring their own chair and other items of comfort so that they do not need to use any gliding club facilities.
- Hands are to be washed rigorously before and after use of the facilities. Individuals can bring their own soap or hand sanitiser to the field on the day.
- The tow pilot will use an alcohol wipe to clean all contact surfaces (e.g. joystick, harness buckles, door and window frame) and will provide his or her own headset on the day.
- Everybody will remain at a distance of more than 1.5m at all times. This is not difficult as we rarely need to be less than several metres apart. The only exception to this is at the point of hook-on, but members are well separated by a closed glider canopy for this very brief moment, usually lasting no more than a minute.
- All members will wash their hands immediately upon arrival at the field and at least hourly thereafter unless actively involved in flying at the time.
- Many members have their own gliders or are part of a syndicate with no more than one other pilot. Syndicate members should take appropriate precautions, as suggested above for the tow pilot, to ensure that the glider they are about to fly is free from contamination. Members who hire a club glider should also use alcohol wipes to decontaminate all surfaces before preparing and flying the glider each day.
- If a pilot feels that he or she may need to outland, that pilot should land preferentially at an airstrip that will allow an aero-tow retrieve. This action should under no circumstances compromise the safety of the pilot or glider.
- In the unlikely event of a paddock outlanding, no more than two members will assist with the process of derigging the aircraft for return to the airfield.
- The process of de-rigging a glider can easily be carried out while maintaining a safe social distance of at least 1.5m.
- Under no circumstances should club members become a visible 'gathering' under the understanding of the regulations and rules in place in the state or territory at the time.

These are some ideas about guidelines for local rules you can put in place to create an environment where pilots can begin to return to the skies safely. Fly often, fly a lot!

With thanks to Dan Papacek for his contributions and ideas.

GA

WINNING THE MENTAL BATTLE

BY BERNARD ECKEY **PART 1**

If we want to enjoy our sport to the fullest and if we want to achieve our goals and ambitions, we are well advised to have a closer look at sports psychology. Few other sports demand a more intense and uninterrupted mental effort – especially in difficult or stressful situations.

Regardless of whether we conduct gliding for fun and enjoyment, or whether we strive for records or competition success, the right frame of mind determines success or failure more than anything else. This makes sports psychology just as important as stick and rudder skills. Over the next few issues we will therefore look a little more closely into mastering our thought processes, emotions and feelings.

UNDIVIDED FOCUS IS CRUCIAL

When we try to work out why some of us are more successful than others, we soon see that successful people are more focussed on what they are doing. Focus is not only the core of excellence in gliding but it is also the driver behind consistency and top performance in everyday life. We are all capable of pursuing our dreams as long as we apply an undivided focus. Making the choice is up to us!

You can either focus and take control of your destiny, or you can adopt a half-hearted approach and watch things from the sidelines. Yes, it is as simple as that and there are no exceptions to this rule. There is little point in putting a day aside for gliding and then be present physically but not mentally.

Agreed, there are plenty of distractions on an airfield and getting sidetracked is often hard to avoid. The simple solution is to quickly re-focus after such distractions and redirect our mind towards our goal. Only this will move us closer to your ultimate target – often sooner than later. When we fully focus on what we are doing we have our thoughts working for us. It will help us to turn average performance into good performance, and good performance into great performance.

A PLAN OF ACTION

Just ask yourself a few vital questions:

- Am I striving to become the best I can be?
- Am I as deeply engaged in my favourite pastime as I could be?
- Am I acting on everything I have learned so far?
- Am I fully focused today and prepared to learn?
- Do I have a positive attitude towards reaching my goal?
- What can I do to go home feeling satisfaction and achievement?
- Am I still pursuing my goal for the season?

I have never met a top performer who wasn't passionate about his or her activity and fully focussed when engaged in it. This holds true for every athlete, every businessperson, every politician, or every other professional. No doubt, whatever our top performers can do, we can do as well!

To achieve something, it is imperative to formulate and follow a plan of action with focus and commitment. Not just once or twice but every time we set foot on an airfield and every time we step into a glider. Real focus is a choice! We, too, can either adopt it and flourish, or ignore it and remain average. Only if we retain our focus and our passion can we expect to make rapid progress, and our goals and ambitions will then no longer remain an elusive dream. The reward is a well-earned sense of pride and achievement and another feather in our cap.

THE POWER OF POSITIVE THINKING

Let's turn our attention to positive thinking now. Avoiding success is simple – all we need to do is to allow ourselves to slip into a negative frame of mind. When we find ourselves in a problematic situation and decide that it is all too hard, or that the challenge ahead is far too great, we are on the fast track to failure. Fear of failure impedes the realisation of our potential. If deep down we fear defeat, we have already lost before we have even started. The misery is self-inflicted – we have succumbed to the power of negative thinking.

As in any other endeavour, a negative frame of mind must be turned into a positive one and this holds especially true if you want to have success in our sport, because a negative or defeatist attitude and poor performance go hand in hand.

☛ continued over page

But let's not dwell on negative thinking for too long – we don't want to waste time. Anyway, all of this doesn't apply to you – you are the fortunate type of person with a positive mental attitude. If this is the case, let me congratulate you, you are made for success and you can just skip over this topic. However, if on occasion you slip into a negative frame of mind, feel free to read on.

NEGATIVE INTO POSITIVE

A negative frame of mind can be turned into a positive one with a plan, and with a good dose of willpower and determination. Provided you do it properly, and provided you are realistic, you will not only improve your soaring performance but also change your life for the better. The right mindset has benefits far beyond your chosen sport and will have a positive effect on many other aspects of everyday life. Surely, that's enough incentive to give it a go, but the question is, where do we start?

Well, the first step is to be realistic when it comes to motivating yourself and to realise that the process of reversing your mental attitude is not only rather slow but also requires a deep desire for change. We must be realistic and cannot expect drastic attitude changes to happen quickly.

The second step is to set ourselves a goal, but one that is achievable and that provides adequate motivation. Be realistic and set yourself an achievable but slightly challenging goal. You can't break a world record on your very next attempt or become the next world champion overnight – it's just not reasonable and is bound to end in disappointment.

SETBACKS

An early solo pilot, for example, can aim for a two hour soaring flight but for a more advanced pilot, a reasonable challenge might be a 500km triangle flight. Whatever we do, we must believe in our abilities and we must be determined to become an achiever. Although it's easier said than done, success is not achieved by settling into familiar patterns of behaviour but by programming body and mind towards successful outcomes. To do this, any negative mindset must be turned around.

Sure, we all suffer setbacks and get discouraged from time to time but that is absolutely normal and never a reason for giving up. How we deal with setbacks is what matters most. Provided they are properly analysed, they serve as excellent learning opportunities. Negative experiences add to our level of experience far more than positive ones. They are another good reason for getting our mind into a positive mode and redirect it towards success. Every time a negative thought enters our mind, we respond with a positive one.

To sum it up, successful pilots tend to be optimistic and engage in positive thinking. They concentrate on achievements and continually focus on positive outcomes. This approach not only removes doubts in their own abilities but deep down it also provides great inspiration. By adopting positive thinking, they not only motivate themselves but, simultaneously, others around them. A totally new atmosphere is created, one that breeds success, one of accomplishments and one that fellow pilots will want to embrace.

PROBLEM SOLVING

Positive thinking must be combined with problem solving skills and the knowledge that the solution to most of large problems is to break them down into smaller ones. Put simply, overcome one small obstacle at a time by thinking of what you have learned in the past and what you have picked up in quality gliding literature. If you hit an obstacle, it is just a matter of remembering the relevant hints or suggestions and promptly implementing the solutions. Whatever you do, do not give up on positive thinking!

By falling in love with an inspiring sport like gliding, most pilots will develop an almost insatiable appetite for increasing their knowledge. The more we know about gliding, the more we want to learn about it and the inevitable result is an upward spiral of understanding.

When we are facing in the right direction, all we have to do is keep walking. Talk to yourself while flying and reaffirm to yourself that you will manage your challenge and pass the test with flying colours. Practising positive self-talk isn't a lot of hot air – it is essential for gaining the frame of mind necessary for success.

When flying locally, believe in your ability to find thermals and successfully work the lift. When flying cross-country, have the willpower and determination to make it around the task even in the most demanding of conditions. Doubts about a successful outcome only serve to diminish your capabilities. The real basis for success is faith in success. If we keep that in mind every time we step into a glider success is as good as guaranteed.

In the next issue, we will have a closer look at 'thinking ahead' and at 'decision making'. Until then, please put the above into practice and remain current.

GA

EXPLAINING INSURANCE

BY DAVE SHORTER

Reading the details of an insurance policy is just about as exciting as delving into a dictionary – a pretty ordinary story line, not recommended bedtime reading. But like a dictionary, it's occasionally necessary. The details of an insurance policy can be a bit confronting – insurance policies have a pretty lousy reputation for clarity, and most of us rely on qualified brokers to interpret a policy for us. But an understanding of the following will hopefully make things a bit easier for you.

MANAGING RISK

Insurance policies are all about risk, and the management of risk. I'd like a penny for every time I've heard someone express concern about "losing the house" over a claim for an accident. The reality is that the possibility of this ever happening is extremely low, and never likely to happen to you or me. How many people have you ever heard of being sued for everything they own? The reality is that lawyers will likely go after the very rich, corporations, government bodies or individuals/organisations with comprehensive insurance to protect against their liabilities. Nevertheless, there is always the remote possibility that a claim is brought against us, and therefore we must arrange appropriate aviation insurance for these potential liability claims

So, what are the most likely risks associated with gliding?

Firstly, and most likely is the risk of total loss or significant damage to your glider in an accident. The risk is you lose the value of your glider. The risk is limited to the value of your glider.

Then there is the possibility that you or your glider cause damage to the property of a third party - you drive a vehicle or tow your glider into someone else's glider or motor vehicle, or land in a farmer's crop, damage his fencing, or countless other possible damage scenarios. The risk is that you are responsible to pay for the damage you cause. It's hard to imagine this cost running into millions of dollars, but if you're responsible for the destruction of another glider, it could be some hundreds of thousands.

The principle risk, however, is that you are responsible for causing bodily injury to a passenger or third party. One can imagine some pretty horrifying situations leading to personal incapacitation or death. Damages awarded to a passenger or third party could be very substantial. A glider pilot or club responsible for an accident of this nature could be liable for damages awarded to the injured party.

Clubs also have a duty of care for people and goods within their place of operations – the risk for the club is that visitors may sustain injuries, property may sustain damage, for which the club may be liable.

Gliding Clubs also have property and possessions which are at risk of fire, storm damage, burglary – hangars, solar systems, offices and contents.

LIABILITY

This is the word that causes most misunderstanding and gives rise to many queries from pilots and club treasurers. The purpose of liability insurance is to cover loss or damage to a third party or third party bodily injury for which you are deemed liable. It is the damages to a third party, for which you are held responsible. You cannot sue yourself for injuries you cause yourself.

An Instructor may be held responsible for a passenger/student, a maintenance inspector may be held responsible for an accident caused by faulty workmanship, a pilot may be held responsible for a collision causing damage to another glider (but not for damage to his/her own glider), a club may be held responsible for safety of visitors to their airfield, or for a third party's property at the airfield. In each of these instances, the responsible person/organisation is liable to remedy the damage. This is what Liability Insurance covers.

How much liability insurance do we need? You probably won't find anyone prepared to give you a definitive answer to this question, and I certainly can't. The answer all depends on your assessment of the risk. Local Government councils who own airports are particularly risk averse and, in most instances, insist that clubs are insured for not less than $10m and often $20m. If you were responsible for the permanent incapacity of a highly qualified professional person, it's not hard to imagine a damages award in the millions. At the other extreme, if you only ever fly at remote locations over uninhabited country, the risk would be much less.

ELEMENTS OF AN INSURANCE POLICY

Most insurance policies are written as two distinct sections. One is a Policy, which normally includes

- Description of the types of risk included in the cover,
- Optional inclusions
- Definitions – important to read and understand the meaning of these special words quoted in the policy
- Exclusions – those risks specifically excluded. These might be general exclusions like nuclear war, asbestos injury, terrorism etc – but some are specific to certain operations.

The other is a Schedule, which defines

- 'The Insured' – insured persons, additional Insured.
- Scope of cover – details of coverage such as geographical limits, policy options included.
- Period of cover
- Limit of Indemnity, Extent of Cover – the value of insured cover.
- Policy Excess or 'deductible' – amount payable by the insured for any claim.

Policy documents also include a lot of other general blurb – protection of privacy, guidelines for making claims, claims notifications, duty of disclosure notices, complaints and dispute resolution, and references to insurance codes of practice. Important, but not critical info for understanding the guts, is understanding who is covered, and for what.

When reading a policy you need to concentrate on –

- Who is insured – 'the Insured' (in the Schedule and Definitions)
- The scope – including limiting circumstances
- What risks are covered (Schedule, Scope and Policy)
- Definitions – qualifies some important terms, for example, 'The Insured', 'Aircraft'
- The dollar limit of coverage (in the Schedule)
- The Excess (in the Schedule)
- Exclusions

THE GFA INSURANCE POLICIES

The GFA carries insurance to protect the officers and employees of the GFA organisation. Insurance cover for individual members and clubs is the responsibility of each

☛ continued over page

member/organisation. However, as a service to the membership, the GFA purchases some insurance which extends coverage to the State Regional Associations and the general membership of GFA and these policies provide a very real saving to individual members, clubs and glider owners.

Copies of the GFA policies are available for all members to peruse on the GFA website. See Docs and Forms/Administration/GFA Insurance. For some of the policies the Schedule and Policy are separate documents, and both need to be consulted.

Note – as with many bureaucratic organisations, insurance companies are normally slow to release updated documents. If the current year's folder on the GFA website doesn't include the policy you're looking for, the terms and conditions normally don't change from year to year. Check the prior year's folder.

GFA BROAD BASED LIABILITY (BBL) POLICY

This policy provides liability cover for up to $1m. The Schedule states:

"Insured

The Gliding Federation of Australia Inc. and/or Affiliated Associations and/or Clubs and/or their individual financial Members for their respective rights and interests.

Deductible

AUD 1,000 each and every loss in respect of Property Damage Claims"

Risk covered is defined in the Policy Section 1: Coverage

"1. The Insurers agree to pay on behalf of the Insured all sums which the Insured shall become legally obligated to pay as compensatory damages because of bodily injury at any time resulting therefrom, sustained to any person, including passengers … or because of property damage, caused by an accident and arising out of all gliding activities including but not limited to:

(i) The ownership, maintenance or use of Aircraft;

(ii) Gliding displays and/or events competitive or otherwise);

(iii) Airport operator and/or hangar keeper activities; and

(iv) Gliding club activities"

These two extracts are the guts of the BBL, but there are many more words and qualifiers that are worth reading for added clarity.

Note that the definition of Aircraft is limited to gliders and coverage does not include tugs or tug pilots while piloting tugs, for which tug insurance is required.

This policy provides the primary liability insurance cover underpinning most other gliding insurance policies. The $1m cover becomes the first policy accessed in any gliding liability claim, including private and club gliders, and Club hangar keeper liability policies. Thus, other policies are written with a $1m excess – which considerably reduces the premiums payable for a range of other insurance policies.

Recent enquiries revealed that the cost of insuring club/private gliders without this $1m excess would result in premiums on each glider policy of an additional $4-500pa. In addition, clubs benefit by reduced premiums on their club liability policies.

GFA CONTINGENT LIABILITY POLICY

This is a catch-all policy which provides liability cover for up to $10m for GFA and Volunteer Club officers working in authorised roles. The actual wording:

"Insured:

The Gliding Federation of Australia Inc.

Additional Insured:

Affiliated Clubs of the Gliding Federation of Australia, authorised officers and/or individual instructors, Airworthiness Inspectors, Tug Pilots, Airworthiness Inspectors including Ground Crew/Staff, Sporting Coaches and any Owner/Operator of the aircraft used directly in relation to Certification and/or Flying Instruction or activities of Instructors/Inspectors, for their respective rights and interests.

World Glide Pty Ltd for their respective rights and interests."

Section 1 Coverage specifies that the policy covers liability for bodily injury and property damage

"… caused by an Occurrence resulting in an Accident involving Sailplanes and/or Gliders and/or Motor Gliders and/or Glider Tugs and arising out of any and all activities and/or responsibilities of the Insured regarding Airworthiness Certification and/or Flying Instruction and/or other activities of the Insured's Instructors, Sporting Coaches, Inspectors and/or Glider Tug Pilots whilst on duty including whilst flying in any aircraft mentioned above.

Cover afforded to Inspectors is extended only for work on and/or certification of aircraft (excluding their own) whilst working as employees of the Insured, or on a voluntary, or purely cost recovery basis only.

GFA inspectors who are not employees of the Insured (including Approved Maintenance Organisations) who are engaged in airworthiness activities for hire and/or reward are not covered.

The excess deductible for property damage claims is $1,000.

HANGAR KEEPER LIABILITY (HKL) POLICIES

HKL policies are used by the GFA and Clubs to cover the organisations and their officers for the risk of liability claims arising from their normal course of business – operating the club, ground operations, running competitions, conducting passenger flights, winch launching gliders ad so on.

The premises liability cover provides for damage or injury in Section 1 of the policy:

"(a) In or about the premises specified in the Schedule, as a direct result of the services granted by the insured.

(b) Elsewhere in the course of any work or of the performance of any duties carried out by the Insured or his employees in connection with the business or operations specified in the Schedule caused by the fault or negligence of the Insured or any of his employees engaged in the Insured's business or by any defect in the Insured's premises, ways, works, machinery or plant used in the Insured's business."

Section 2 of the policy, hangar keepers liability, provides cover for claims for damage of property (not owned by the insured) in the care of the insured.

Section 3, Products Liability, is for claims from aircraft maintenance, sales or repairs.

GFA ADMINISTRATION HKL POLICY

The Insured are the GFA, Affiliated State Gliding Associations and GFA Subsidiary Companies.

This policy for $10m (section 1 of the HKL policy only) is for liability for Property Damage or Bodily Injury "… arising out of Gliding Administration (including in respect of gliding competitions) in accordance with the objects stated in the Memorandum and Articles of the Association".

CLUB GROUP HKL POLICIES

The GFA has arranged a consolidated group policy that individual clubs can join. The base policy provides insurance of:

- $10m Premises Liability, Section (1) risk – accident insurance for property damage and bodily injury,
- $500,000 Hangar Keepers Liability, Section (2) risk – property in care of the insured
- $1m Products Liability, Section (3) – covers voluntary maintenance work

Individual clubs can vary the premises liability where required by aerodrome owners – a number of clubs have $20m, and in one case $30m.

The Insured are the GFA and subsidiary companies. Additional Insured are Affiliated State Associations and a list of Clubs participating in the policy.

This is a club responsibility, and clubs separately purchase a subscription to this group policy.

'The Insured' includes all Officials.

An important DEFINITION common to the above liability policies (BBL, HKL and Contingent policies) is the clause which means that insurance carried by Clubs and Associations extends coverage to staff and volunteer officers of the organisation. The actual clause reads:

"Insured means the Insured named in the Schedule and includes any directors, employees, partners or agents of the Insured whilst acting in the scope of their duties."

GFA ASSOCIATION'S LIABILITY POLICY

Commonly known as Directors Liability, this policy is designed for Not-For-Profit Associations and provides liability cover for the Association and its directors, employees and officers for damages arising from a wide range of Wrongful Acts, Employment Practice Breach, Trustee Breach, Dishonest Acts and includes cover for other costs including for Taxation Audits and Legal Defence.

The Insured is the GFA, and includes the Affiliated State Associations and Clubs.

Limit of indemnity is $5m. Deductible excess dependent on type of claim ranges from $1,000 to $5,000.

GLIDER INSURANCE POLICIES – CLUBS AND PRIVATE OWNERS

If your glider is damaged by another pilot/aircraft you may claim damages from that person/party – their liability cover may pay for your damage. However, most glider damage is

self inflicted, for which you may purchase glider hull insurance.

If you happen to be the one causing damage or injury to a third party, you'll be liable for their compensation. Up to $1m of this liability can be claimed from the GFA BBL policy – beyond that, you'll need your own liability insurance, which can be purchased as part of your glider insurance policy. Typical values are $3, 5 or 10m – whatever makes you feel comfortable. It depends a lot on the risk situations your glider is exposed to. Flying over built-up areas with concentrated populations increases your risk.

The deductible excess payable by you for a property damage claim on the BBL policy is $1,000. This insurance is the separate responsibility of the glider owner/operator.

TUG INSURANCE – CLUBS

Tugs are not included in the aircraft covered by the BBL policy, so do not benefit from the first $1m liability available to glider policies. To ensure that owners/operators and tug pilots are suitably insured, clubs and tug pilots should purchase sufficient liability cover for tugs to protect those interests.

This is a Club responsibility.

FIRE AND GENERAL INSURANCE – CLUBS

The assets of the Club – hangars, offices, contents and equipment – are at risk of loss from fire, flood, burglary. HKL policies don't cover this risk.

Clubs need to organise their own cover for this.

NEED MORE INFO?

This has been a brief summary outlining the insurance policies we use to manage the risks we face. I am not qualified to provide insurance advice.

I'd recommend you first consult the policy documents, which are accessible on the GFA website – see Docs and Forms/Administration/GFA Insurance/(current year folder.)

Then for more definitive advice or interpretation of the policies you need to consult someone qualified – normally your insurance broker.

THE GFA'S INSURANCE BROKERS ARE:

For GFA aviation insurance (BBL, HKL, Contingency policies), and glider insurance –

- Aviation Insurance Brokers Australia, David Tait, (07)3274 4732 davidt@aviationinsurance.com.au

For the GFA Associations Liability policy (Directors Liability)

- Gallagher, Ravi Singh 02 8838 5781 ravi.singh@ajg.com.au

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.

This is a selection of occurrences. 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.

From 1/1/2020 to 29/2/2020

Damage	VSA	WAGA	NSWGA	GQ	SAGA	Total
Nil	5	3	2	3	1	14
Minor	3	3	3	2		11
Substan	1	1		2		4
Write-off			1			1
Total	**9**	**7**	**6**	**7**	**1**	**30**

Injury	VSA	WAGA	NSWGA	GQ	SAGA	Total
Nil	9	7	5	6	1	28
Minor			1	1		2
Total	**9**	**7**	**6**	**7**	**1**	**30**

Phases	VSA	WAGA	NSWGA	GQ	SAGA	Total
Launch	1	2	1	1	1	6
Landing	3	4	4	3		14
Ground Ops	3	1		1		5
Thermalling	1					1
In flight	1		1	2		4
Total	**9**	**7**	**6**	**7**	**1**	**30**

Type of	VSA	WAGA	NSWGA	GQ	SAGA	Total
Compet	2	4	2	1		9
Cross-Countr		1	2			3
Local	3	1		4		8
Training	1		1	1	1	4
Ground	3	1		1		5
AEF			1			1
Total	**9**	**7**	**6**	**7**	**1**	**30**

Level 1	NAGA	VSA	SAGA	SWG	GQ	Total
Airspace		2		1	2	5
Consequential		1				1
Environn	1					1
Operatic	6	6		4	5	21
Technical			1	1		2
Total	**7**	**9**	**1**	**6**	**7**	**30**

15-JAN-2020 GQ
TERRAIN COLLISIONS
VENTUS-2CT

Under investigation The pilot launched by winch and about 9 minutes later the aircraft was observed low in circuit for a crosswind landing on RWY 03. The pilot undershot the approach and touched down heavily before the aerodrome boundary. The glider struck the wire and post boundary fence and was substantially damaged. The pilot suffered a scalp injury from one wire that passed over his head and was transported to hospital with minor injuries.

16-JAN-2020 NSWGA
WHEELS UP LANDING
DG-300 CLUB ELAN

The experienced and current pilot launched by aerotow into a sky with well-developed cloud. After 30 minutes flying, the pilot observed rain in several directions some 20 kms away with lightning in background. With the rain advancing towards the aerodrome, the pilot chose to terminate flight and return quickly for a landing. The pilot hastened the descent by using air brakes, and upon reaching the circuit area encountered heavy rain and sink. The pilot forgot to configure the aircraft for landing and landed with the undercarriage raised. The aircraft touched down on the grass runway and suffered only minimal damage. In a later discussion with his CFI, the pilot stated that he became focussed on returning to the aerodrome, and then underestimated the effect or water on the wings. Concerned with the degraded glide performance and under pressure to complete a landing in the rain, the pilot omitted to conduct the pre-landing check list

4-FEB-2020 VSA
WHEELS UP LANDING
PIK20B

On the late stage of the final glide, just before landing, the experienced pilot got confused about the landing gear position, up or down, resulting from this, the landing gear was rotated from down to up and the landing was wheel up. The pilot was flying the first day of a competition and was conducting a straight-in approach after finishing the task. The pilot configured the glider for landing but did not undertake a pre-landing check. As the pilot crossed the aerodrome boundary fence he realised he had not done completed the pre-landing checks, which "triggered a state of confusion with regard to the undercarriage position". The pilot stated, "I could not remember if I had lowered the undercarriage or not. The logic dictated that because I did not do FUST check, the undercarriage must be up. At the same time I had to pay close attention to landing itself, I was aware that I could not dedicate much more time to the undercarriage issue without compromising the landing safety. I had to make a decision and very quickly so that I could concentrate on the landing and decided to rotate the undercarriage handle. It did not have enough time and brain power to go beyond that - I landed with the wheel up." The following contributing factors were identified:

The pilot not flown a competition for a year, and this was his first straight-in approach since then.

The pre-landing check was omitted, most likely because a normal circuit had not been flown and the pilot was focused on conducting a straight-in approach in a complex and dynamic environment. There were gliders on the runway, on final in front, and also approaching the aerodrome from behind.

The pilot did not properly check the undercarriage position to the placards, probably because he was overloaded.

5-FEB-2020 WAGA
TAXIING COLLISION
DISCUS CS - SZD-50-3 "PUCHACZ"

A Discus was being towed to the workshop area to have the ballast tank filled. A DG-505 was parked in the immediate area and a Puchacz was tied down nearby. While attempting to negotiate the space between the DG-505 and the Puchacz, the vehicle driver momentarily lost sight of the Discus wing tips, resulting in the Discus port wingtip colliding with the port wingtip of the DG-505. Both aircraft were substantially damaged. See photographs below. Contributing factors included inattention/ distraction of vehicle driver, proximity of the parked gliders and lack of crew to assist.

.

29-FEB-2020 NSWGA
COLLISION WITH TERRAIN
MARIANNE 201B

Under investigation. At about 1530 the Club two-seater being flown by the command pilot on a training flight undershot the aiming point and the starboard wing hit an electric fence bordering the runway. The glider struck the ground hard and was severely damaged, but the flight crew were relatively unscathed. Emergency services, including the ambulance, attended. It was reported that the command pilot flew a low circuit and overshot the runway centreline during the turn onto final. The aircraft also undershot the threshold of RWY 05R by a significant margin and struck the electric stock

fence at a point about 20m from the southern airfield boundary. The command pilot advised that he exercised some poor judgment by getting too low in the circuit but that the electric fence was difficult to see. He also mentioned that the runways, which are dirt, did not stand out well from the rest of the airfield, which contributed to him not realising he was so far displaced from the runway centreline.

29-FEB-2020 VSA
LOW CIRCUIT
SZD-50-3 "PUCHACZ"

While conducting a private passenger flight, the low experience pilot conducted an extremely low circuit culminating in a final turn below 50ft AGL. The wind on the day was around 9kts from the south, and operations were being conducted from RWY 19 ... The pilot made a shallow turn onto final approach at a height of about 30ft AGL, a height derived from the GPS flight log and corroborated by several witnesses. The aircraft landed normally. After the flight the pilot believed he had entered the circuit from the crosswind leg at 1,000ft AGL, and that he delayed turning onto base earlier so as not to cut across the path of a powered aircraft ahead in the circuit. The pilot stated, "When I turned base, I was surprised to find myself at a lower height than usual." The pilot further stated, "With a safe landing being my primary objective and after establishing that I had sufficient height to arrive at the airfield, I knew my biggest hurdle was going to be the turn into final. This was because of my training ...., experience in ridge flying, and awareness of a report that I had recently read on high accident rates caused by stalls/spins near terrain. As such, I was extremely cautious to maintain speed and execute the turn safely." The pilot was counselled by the Duty Instructor and CFI, and the options of conducting a right-hand circuit to RWY 19, or a landing on RWY 27 were discussed. The reason why the pilot did not recognise earlier that he was low was not identified. It is noted, however, that the altimeter, which was set to read QNH, would have been reading 500ft higher than the aircraft's height above ground. The pilot will undergo some further training, including flying with the altimeter covered. Potential causal factors include inexperience, high workload, extending the flight for the benefit of the passenger, misreading the altimeter, and a desire to conform to expected circuit practice when a modified circuit was more appropriate (goal fixation).

GA

CLASSIFIED ADVERTISING

glidingaustralia.org

For members' convenience, Classified Ads can be purchased from the Gliding Australia website at 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-WPP VENTUS 2A

in new condition, also the FRP top cobra. LX9000, V8 & C302 vario, ozflarm & ATR radio. Tow out gear & KerryCovers, nothing else. All reasonable offers considered, instruments negotiable

Contact Adam on WhatsApp +61438784688 or go_soaring@hotmail.com

VH-GAD SCHEMPP-HIRTH VENTUS A

serial no 9, manufactured 1980. 1,397hrs, 481 launches. ASI, ALT, Compass, Cambridge 301/302 Vario Nav. Sage vario and averager. Becker radio. New MH O2 bottle + regulator, dispenser 6years old. Mini OZ FLARM, Oudie 2. Blue tinted canopy, Tail wheel, approved winglets. Wing and tailplane covers. Gelcoat refinished at various stages during lifetime. Enclosed Aluminium/ steel frame dual axle trailer. Tow out gear. Pilot weight 68-96kg. Form 2 till May 2020. At Bacchus Marsh Vic. Contact **Richard 0457366799** or email rc.callinan@bigpond.com

MOTOR GLIDERS

VH-GBB JS3 15/18M JET

current Aus Ntnls winner, 12th Last WGC, Competition ready, LX 9070 Nav with IGC logger and MOP, V8, S100 with IGC logger and MOP, Becker 8.33 KHZ Radio, ASI, ALT, Compass, Longer Cobra trailer with FRP top. Buying a Helicopter. Make Offer but do your homework first. **John Buchanan 0419643711** jbukes2@gmail.com

VH-VRG DIMONA H36

Approx. 2200 hrs total time. Engine and prop 22 hrs since new. Can negotiate to sell with fresh annual. Wonderful touring aircraft in excellent condition. **Contact 0428 722 066 f**or details
Price $60000 ono

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. Currently located at Bindoon WA. Price $50,000 neg. Contact murray.dixon2@bigpond.com

VHF RADIOS - DITTEL, BECKER, ATR

All Bench Checked and servicable, Value prices. **Call Arnie 0418 270 182** or email arnie.hartley@gmail.com

ORDER A PRINT EDITION OF GLIDIGN AUSTRALIA #52

bit.ly/2U5cPw3

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