GLIDING AUSTRALIA

Issue 76 August - October 2026

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WGC POLAND
THE LONGEST DAY

WAVE FLYING · WAGA SKYVIEW · WHO HAS CONTROL?
ENGINE TEM · WOMEN'S ROC · CLUBS

GLIDING AUSTRALIA MAGAZINE

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COVER: WGC POLAND BY KEITH GATELEY

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FROM THE EDITOR

As we go to press Amber Davison and Max Scutchings are at Aalen-Elchingen in Germany preparing for the Junior World Gliding Championships where they will be flying in Club Class. I look forward to bringing you their stories in the next edition. Best of luck to both of them.

At its heart, gliding is a sport of patience rewarded. Whether you're a weekend club flyer chasing your first Silver distance or a seasoned competitor eyeing a state record, the fundamentals are the same: respect for the machine, respect for the air, and respect for the people who shared their skills with you.

It's worth reflecting on the fact that much of the activity and work that make this sport function smoothly, happen away from the cockpit. Several of the articles in this issue have been contributed by people responsible for that work - volunteers, instructors, committee members and the airworthiness, safety and operations departments.

These dedicated individuals are the structure that lets the rest of us simply turn up and fly throughout the season. Almost uniquely among aviation pursuits, gliding remains a sport sustained by its own community rather than by commercial infrastructure. That's a strength worth protecting, and it only survives if each of us keeps contributing our share.

Don't miss the write-ups coming back from WGC Poland, including the sterling efforts of the Australian team. Competition Director Phil Ritchie writes about the awesome international pilots he encountered at Czestochow. Adam Woolley, who came 4th overall with Keith Gately, shares his views from the cockpit of the Arcus M they flew in the 20M Multi-Seat Class, and I give a day-by-day, point by point account of the 10 tasks.

Also in this issue, Rick Agnew takes us through the technical groundwork of wave flying. He shows us that, as full of risks as this special form of gliding may be, wave flying is also exhilarating and sublime. Be inspired as the Bunyan wave camp approaches in September.

As the new soaring season approaches fly safe, fly often, and enjoy the issue.

SEAN YOUNG *EDITOR*

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SOARING DEVELOPMENT

NOMINATIONS FOR SDP POSITIONS

In accordance with MOSP 4, each year, prior to the Gliding Australia Annual General Meeting, the following positions are made vacant and nominations are sought from the general membership:

- Chair of the Soaring Development Panel
- Deputy Chair of the Soaring Development Panel
- International Teams Manager
- National Coaching Manager
- FAI Coordinator
- IGC Representative
- Chair of the NCC

The current incumbent for each of these positions is willing to stand for another year, however, in accordance with the provisions of MOSP 4, further nominations are now sought.

Any member having an interest in these positions is encouraged to nominate themselves. Please contact me at csdp@glidingaustralia.org with your nomination.

Also, the sections of MOSP 4 relating to the National Competitions Committee (NCC) and in particular the number of and election of committee members is being updated to clarify both the term for each committee member and the election process. The updated MOSP 4 requires Board approval, which should occur prior to the AGM. The existing committee will continue to serve until the new MOSP comes into use.

The SDP has decided to reduce the number on the NCC from 6 to 4 members, to ensure that members are current competition pilots and to have a nomination process (to all members) and that, where an election is required, to have members of the SDP vote. Members of the committee will serve a 4 year term with 2 positions being changed every 2 years.

NATIONAL COMPETITION SITE SELECTION

Unfortunately, site selection for next season's National competitions has not yet been finalised. This has resulted from a combination of late requests for bids and a shortage of bids from Australian clubs.

The Multiclass Nationals will be held at Narromine in January, though we are awaiting some formalities before we can confirm Narromine as the host. Joey Glide will be at Temora; however, the bid recently received for the Club Class event does not include the Two-Seat Nationals. The NCC is still evaluating options for the Two-Seat event, which we hope to hold in February.

Going forward, the NCC will work to settle the Nationals calendar further in advance, and will begin arranging the 2027/28 season shortly.

The NCC will also direct competition organisers to run a pilots' meeting at each competition. Members are reminded that suggestions for rule changes can be made at any time by emailing the Chair of the NCC (ncc@glidingaustralia.org). Competitions are an ideal opportunity to raise issues while matters are fresh in pilots' minds, and we encourage pilots to engage in these meetings to make them as useful as possible.

THE ROAD TO LAKE KEEPIT: YOUR PATHWAY TO THE 2029 JUNIOR WORLDS

In January 2029, the Junior World Gliding Championships come to Lake Keepit. A home-soil Worlds is a rare thing, and for any junior pilot in the country it represents the opportunity of a flying lifetime – the chance to represent Australia in front of family, club mates and a home crowd. The good news is that the pathway to selection is now clearly mapped out, and the work that gets you there starts this season, not in 2028.

The Australian Junior team will be up to six pilots - a maximum of three in Club Class and three in Standard Class. Selection is built around JoeyGlide, so if you are a junior with cross-country ambitions, JoeyGlide is where you will want to be.

THE PATHWAY, SEASON BY SEASON

The journey runs through a sequence of milestones. Between now and the end of 2026, the focus is on building cross-country and competition skills through club and regional coaching and as much state-level competition experience as you can get. The first major gateway is JoeyGlide at Temora in December 2026 — results here begin the formal selection process, so it is the event to aim for.

From those results, a Junior Squad of around ten pilots (roughly five for Club Class and five for Standard Class) will be selected in early 2027 for additional focused coaching. Each squad member will be paired with a coach or mentor in their own region for one-on-one development, and the squad will come together for a Squad Week around the Easter break in 2027.

Team selection is weighted across two JoeyGlide seasons – 40% from 2026/27 and 60% from 2027/28. JoeyGlide 2027/28 will be held at Lake Keepit in January 2028, on the same ground and at the same time of year as the Worlds itself, with international pilots invited. The final team – three pilots plus a backup in each class, eight in all – will be confirmed in early 2028, followed by a Junior Team Week in mid-2028 and high-level national competition flying through the 2028/29 season as final preparation.

WHO IS ELIGIBLE?

To be eligible for the squad, a pilot must be born after 31 December 2002 (IGC has moved the cut-off date to 31 March to accommodate southern-hemisphere events, which effectively means 25 or younger in the competition year). You must also meet the minimum entry criteria for JoeyGlide and, in the ordinary course, have flown JoeyGlide 2026/27 — though your Regional Soaring Development Manager (RSDM) can nominate on an exception basis where circumstances warrant.

Joining the squad is a genuine commitment, and it is made with eyes open: pilots, and parents or guardians for those under 18, complete a short application confirming they understand the program and sign up to a training plan that includes attendance at Squad Week. The Soaring Development Panel oversees and confirms the selection process throughout.

A NOTE FOR PARENTS

For pilots under 18, parents and guardians are part of the journey from the outset — you'll co-sign the squad application and, where funding is allocated, sign for and manage those funds on your junior's behalf. The commitment is real in terms of time and travel, but it sits alongside a structured support framework rather than leaving families to shoulder it alone.

FUNDING SUPPORT

Some Gliding Australia funding is provided for squad development on a matching basis, with pilots funding half the cost of entry fees, glider hire and tows, and accommodation and transport. Available funding may be capped depending on numbers and aims to help eligible juniors get to JoeyGlide 2026/27 where cost is a real barrier, to fund Squad Week and to support development across the 2027/28 and 2028/29 seasons. State and national competition entry and approved high-performance coaching are the kinds of activities eligible for assistance, subject to RSDM approval.

START NOW

The single most important message is this: the pilots who make the 2029 team will be the ones who started building competition mileage early. Talk to your club coaches, get along to your state competitions, and make the most of the coaching on offer at club and state level. Every cross-country flight between now and Temora 2026 is a step towards Lake Keepit. If you have ever wondered whether competition flying is for you, this is the time to find out – there may never be a better one.

Juniors and parents wanting more detail on the squad and selection process should contact their Regional Soaring Development Manager.

CRAIG VINALL

CHAIR SOARING DEVELOPMENT PANEL

csdp@gligingaustralia.org

GA CALENDAR

Use the **Contact GFA** menu at
gliding australia.org
to send event details to the GFA

14TH JUNIOR WORLD GLIDING CHAMPIONSHIPS
CLUB, STD
1 - 15 August
Germany Aalen-Elchingen
wgc2026.org

GCWA WAVE CAMP
2 - 7 Aug 2026
Cunderdin Airport WA
Contact Rob Hanbury 0429 082 520h

CENTRAL COAST GC-GLOUCESTER RIDGE CAMP
8 - 16 August
Contact Michael Vince
mmvince74@gmail.com

INSTRUCTOR COURSE
NARROMINE GLIDING CLUB
Sun 6 Sept – Fri 11 Sept 2026
Contact Narromine GC for more Information

BUNYAN WAVE CAMP
19 - 27 September 2026
Canberra Gliding Club, Bunyan AD, Cooma NSW
Spring soaring and possible high altitude wave soaring in the 'Weather Factory' in NSW high country, weather permitting. Fun flying for all.
Some clubhouse bunk accommodation, O2 refills available. Coordinators: D**rew McKinnie 0447 655 717 gliderdrew@gmail.com and John Young 0417 292 784 johnyoung4450@gmail.com**

QLD STATE CHAMPIONSHIPS
DARLING DOWNS SOARING CLUB
4 - 11 October 2026
Contact president@ddsc.org.au

ROOGLIDE 2026
NARROMINE GLIDING CLUB
14 - 10 November 2026
Contact Rhiaan Bennett krisaan200@gmail.com

CARTER CUP
GLIDING CLUB OF WA
15 - 21 Nov 2026
Cunderdin Airport WA
Contact Rob Hanbury 0429 082 520

NARROMINE CUP
NARROMINE GLIDING CLUB
21 - 28 November 2026
Contact Beryl Hartley arnie.hartley@gmail.com

FAI GLIDING BADGES

TO JULY 2026

MICHAEL SABIN - BOONAH GC - GOLD HEIGHT

AMBER DAVISON - GCV - SILVER DISTANCE, SILVER HEIGHT, SILVER/GOLD DURATION

ORANGE WEEK
WAIKERIE
21 - 28 Nov 2026
Enquiries to Bill Mudge 0429 413 570 or
wgcoffice37@gmail.com

NSW STATE CHAMPIONSHIPS
NARROMINE GLIDING CLUB
28 November - 5 December 2026
Contact Beryl Hartley
arnie.hartley@gmail.com

WOMEN'S RACE WEEK
NARROMINE GLIDING CLUB
6 - 12 December 2026
Contact Melysha Turnbull
melysha.turnbull@gmail.com

WOMEN'S RACE WEEK
NARROMINE GLIDING CLUB
6 - 12 December 2026
Contact Melysha Turnbull
melysha.turnbull@gmail.com

MULTI CLASS CHAMPIONSHIPS
NARROMINE GLIDING CLUB
12 - 23 Jan 2027
Contact Beryl Hartley
arnie.hartley@gmail.com

WAGA STATE COMPS
NARROGIN GC
1 - 10 Feb 2027
Contact David Fry
frywilliams@bigpond.com

HORSHAM WEEK GLIDING COMPETITON
HORSHAM VIC
6 - 13 February 2027
Further information registration and local rules are available on the event website.
horshamweek.org.au

INSTRUCTOR COURSE
BACCHUS MARSH
8 - 12 Mar 2027
For more information contact Noel Vagg
RMOVIC-TAS@glidingaustralia.org

CROSS COUNTRY WEEK & BEVERLEY REGATTA
BEVERLEY WA
8 - 12 Mar 2027
Contact Ross Richardson 0427 112 205

PICK-A-PADDOCK OUTLANDING TRAINING

BY ANNA POROSHENKOVA

The weekend of 13-14 June, three women went to Temora Airfield for the outlanding training course instructed by Scott Lennon and organised by Melysha Turnbull. We were joined by David McIlroy who was interested as well. The aircraft used for training was Scott's Ximango, a Touring Morot Glider (TMG).

The goal was to simulate an actual outlanding situation as closely as possible without actually having to land. Flying at around 1,000-1,500 ft AGL, the task was to look for a suitable paddock and complete a full circuit until shortly before touchdown. The engine power would be reduced to approximately match the performance of a glider once the paddock was selected for the first approaches. Although in general, outlandings are often not really a surprise, circumstances may change rapidly and being able to adjust accordingly is certainly another valuable skill to practise.

As a result, after we got familiar with the exercise and the aircraft, sometimes Scott would cut the power suddenly, adding that bit of time pressure. The topic of thermals shortly before the altitude when you would commit to landing, or even during the circuit, was covered as well. Scott would play with the power to simulate lift, and leave us to decide whether to take the 'thermal' or to land, nonetheless.

CRITICAL BRIEFINGS

Of course, we didn't go into these exercises blindly. On Saturday morning, Scott gave an extensive and detailed briefing on the most important things to look out for, some of them based on unit 34 of the training syllabus. One of the focus points was the WSSSSSS check, but the basics such as timely landing checks and appropriately sized circuits were also notably less trivial under the given conditions.

After the briefing, each of the three of us went for a flight. The Ximango was very steady and easy to control, so it didn't take long to get used to it. As for the weather, it was overcast with a moderate northerly wind and scarcely changed throughout the day. For this exercise, though, it was just fine.

The day concluded with a social dinner with members of the Temora Gliding Club at the Temora Hotel.

SITUATIONAL AWARENESS

For Sunday, Scott prepared another presentation about situational awareness and the devices that can help increase it, such as FLARM, and some of their advantages and drawbacks. At least for me, as someone with little experience with the different kinds of those devices, it was extremely useful.
After that lesson, Scott gave us the awaited detailed debrief of our flights, discussing both the strengths and mistakes he noticed. Needless to say, for all of us, his observations were highly insightful and formed a valuable lesson for future flights and potential outlandings to come. It must have been good preparation for David as well, who at that point hadn't had the chance to fly yet.
He and Scott went directly afterwards following a quick lunch and, on their return, David's feedback matched ours in terms of the learning value and simply the enjoyment of the flight in general. That concluded the weekend and the training.

LEARNING OPPORTUNITY

A thank you is in order first and foremost to Scott both for the time and immense effort that went into the preparation and the flights themselves, especially considering they were done one after the other with barely any break. He managed to make something that must've been a huge mental load look so easy, a combination of noting feedback points with the condition simulation and checking the quality of the paddocks as well.

Though we all had different levels of both general and outlanding experience, Scott managed to make the training an excellent learning opportunity for all of us. I think I can speak for the others when I say that we took away so much from that one hour flight! Naturally, thanks is also due to Melysha for organizing the event and making it happen in the first place, and to NSW Gliding for covering the flights. Thank you also to everyone who showed up and the members of Temora Gliding Club for being a part of it!

AROUND THE CLUBS

Gliding Training School
AAFC CCPL Eden first solo! Textbook solo. Good job, Eden!

Bacchus Marsh
Another big day at Bacchus Marsh with 37 launches and a maximum temp of 14 degrees! We hosted 24 air league cadets, giving them all introductory lessons.
The club was also well represented with 17 members present to make the day work like a Swiss watch.

Darling Downs Soaring Club
Congratulations Anoosheh - first solo!

Alpine Soaring Mount Beauty
24 May featured 18 launches with young Tom Docherty completing 4 more solo flights for his A certificate. Meanwhile, Grant Heaney convinces Tove Heaney to share a flight!

Geelong Gliding Club
Thomas impressed us with his dress standards at Bacchus Marsh Airfield. No one can remember another pilot flying his first solo while wearing a suit and tie!

ADELAIDE UNIVERSITY GLIDING CLUB - 50TH ANNIVERSARY

Adelaide University Gliding Club's 50th Anniversary

On the long weekend in June 2026, current and past members of the Adelaide University Gliding Club (AUGC) got together at the airfield at Stonefield northeast of Adelaide to celebrate the 50th anniversary of the club, which officially began flying in 1976.

It was a flying day and included the presence of an ES52b Longwing Kookaburra, generously provided by SA RMA JR Marshall, recalling the club's original sailplane. The evening included a meal and remembrances.

Through hard copy material on tables and a scrolling on-screen display of photographs, with some speeches in among the individual pilot's stories, the entire period was covered. Sponsor Simon Hackett spoke of his enthusiasm for gliding, which he clearly expresses through his practical support.

Adelaide University Gliding Club

Photos from the recent AUGC 50th anniversary, where five aircraft flew in. C182 SRE (John and Julianne Stobie), PA20 ZKI (Cath Conway and Bee) Aldinga, MAU (Paul Van der Loo) Parafield, RV6 SOL (Mark Newton) Bankstown and JS3 PT (Peter Temple) Gawler who also claimed the Come and Get it Trophy. The dinner was attended by Emilis our founder and Simon the Club Patron. Andrew Horton represented the first club flying camp. James Dutschke gave us a signed Roulettes poster commemorating our 50th as he soloed with BVGC at Stonefield. Fun flying for the weekend with the club K13 and the Longwing Kookaburra RN standing in for LZ,which was the first club trainer.

As the original founder, I recounted the path that brought the club into being – from the earlier advocacy of Martin Simons and the support from Tony Kiek, to its beginnings at Balaklava Gliding Club and the practice ever since as the AUGC. Individuals, groups and committees have sequentially handed on responsibilities and tasks from one to another across that time span, thereby allowing the club to grow and adapt to changes in society, academia, industry and community, staying relevant throughout.

Special distinctions were noted that set AUGC apart, including projects to adapt sailplanes for inclusion and diversity, even way back in the 1980s when this work was not mandated. For example, Matthew Nicholls, who had lost his arms in a farm accident and was able to learn and solo in sailplanes using his feet, was able to attend the 50th event.

A special day in 1988 was remembered when AUGC flew their Bocian in and out of Adelaide's city centre airport. The state Governor had come out to spend the day with attendees at their gliding hub. Many attendees at the 50th Anniversary had also been there, and enjoyed sharing their memories of that day.

Emilis Prelgauskas

WHO HAS CONTROL?

BY CHRISTOPHER THORPE

WHY HANDOVER AND TAKEOVER DISCIPLINE MATTERS IN SAILPLANE INSTRUCTION

Flight instruction depends on shared access to the controls. That is both its strength and one of its greatest hazards. In a two-seat sailplane, the instructor must allow the student to manipulate the aircraft, make mistakes, recognise errors and develop judgement. At the same time, the instructor remains responsible for maintaining a safe margin and intervening before a developing situation becomes unrecoverable.

That balance only works if there is never any doubt about who has control of the aircraft.

Australian aviation case law has recently highlighted, in clear and practical terms, that handover and takeover are not minor cockpit courtesies. They are safety-critical procedures. They are also legally significant because, after an accident, a court may examine not merely whether an instructor was experienced or well-intentioned, but whether the instructor used a clear, recognised and disciplined control-transfer process at the moment it mattered.

A recent and particularly relevant case is Ripper v Gobel Aviation Pty Ltd (in liq) [2024] VCC 1907, decided by Judge Robertson in the County Court of Victoria on 19 December 2024. That decision was considered on appeal in Gobel Aviation Pty Ltd (in liq) v Ripper [2025] VSCA 344, decided by the Victorian Court of Appeal on 23 December 2025.

Leave to appeal was granted, but the appeal was dismissed.

For sailplane instructors, the lesson is direct: control ambiguity is a hazard. Silent intervention is a hazard. Riding the controls is a hazard. Unannounced corrective inputs, particularly during launch, approach, landing or any other high-workload phase, can create precisely the uncertainty the instructor is trying to avoid.

THE SAFETY PROBLEM: TWO PILOTS, ONE AIRCRAFT

A sailplane cannot be safely flown by two people making independent, uncoordinated inputs. Dual controls are provided so instruction can occur, not so that responsibility can become shared, blurred or improvised.

The student may believe they are flying. The instructor may believe they are only assisting. Both may be applying pressure to the controls. Neither may fully understand what the other is doing. In a benign phase of flight, this may merely be untidy. Near the ground, on launch, during aerotow, in a circuit or during recovery from an incipient loss of control, it can become dangerous within seconds.

The most dangerous form of control ambiguity is often subtle. It is not usually a dramatic struggle for control. It may be an instructor 'helping' with rudder on aerotow, easing the stick during a flare, correcting a wing drop, or preventing a developing overbank without saying anything. The student feels an aircraft response, does not know it was caused by the instructor, and may add their own input in the same or opposite direction. The result may be over-control, control conflict, surprise, startle or delayed recovery.

This is why the standard must be simple and non-negotiable: **One pilot flies the aircraft at a time.**

THE LEGAL LESSON FROM RIPPER V GOBEL AVIATION

The litigation in Ripper v Gobel Aviation Pty Ltd (in liq) [2024] VCC 1907 arose from a training accident in which control of the aircraft became central to the dispute.

Although the aircraft was not a sailplane, the instructional principle is directly relevant to gliding: where two pilots have access to the controls, there must be no ambiguity about who is flying the aircraft.

The case is important for instructors because the court did not treat handover and takeover as informal training habits. It treated them as recognised safety procedures relevant to duty of care, breach, causation and damages.

The critical issue was not simply that an instructor made a control input. Instructors must sometimes intervene. The issue was that the instructor made a control input without clearly communicating that he was taking over. The student continued to believe he was flying the aircraft. The court accepted that the resulting control ambiguity and uncoordinated inputs contributed to the accident sequence.

The Victorian Court of Appeal in Gobel Aviation Pty Ltd (in liq) v Ripper [2025] VSCA 344 upheld the trial judge's analysis. The appeal decision recorded that it was essentially common ground that only one person should fly or otherwise control the aircraft at any one time, particularly by using the rudder pedals and control stick. It also recorded that there was a handover and takeover process between student and instructor, and that observance of that process was vital to ensure there was never any doubt about who had control of the aircraft.

That is a powerful lesson for all instructional flying, including gliding. The instructor's responsibility is not only to be capable of taking control, but to ensure that the student knows control has been taken.

The case also illustrates how closely a court may examine the exact sequence of events: what was briefed, who was pilot in command, who was physically manipulating the controls, what words were used, whether the student knew the instructor had intervened, and whether the accident would probably have been avoided if the recognised handover/takeover procedure had been followed.

For a sailplane instructor, the litigation message is blunt: after an accident, "I was only helping" may not be a satisfactory explanation if the student did not know you had taken control.

THE RELEVANCE OF CAMPBELL V HAY

Campbell v Hay [2013] NSWDC 11, decided by the District Court of New South Wales on 19 February 2013, provides an important contrast. In that case, the plaintif was a student in a light aircraft when the engine stopped and the instructor was forced to take over the controls and conduct a forced landing. The claim was dismissed because the court found

continued over page

that the injury resulted from the materialisation of an obvious risk of a dangerous recreational activity under s 5L of the Civil Liability Act 2002 (NSW).

For gliding, that finding needs to be understood carefully. It does not mean instructors are immune from liability because flying is risky. It does not mean clubs can rely on the inherent risk of aviation as a substitute for disciplined instructional practice. Nor does it mean that a student or passenger accepts the risk of avoidable instructional failure merely by participating in aviation.

The more useful lesson is that courts may distinguish between inherent aviation risk and avoidable operational failure. Engine failure, forced landing risk and the general risk that something may go wrong in flight may, depending on the facts and the applicable legislation, be treated as obvious risks of recreational aviation. But a failure by an instructor to use a proper control-transfer procedure is different. That is not an unavoidable feature of flight. It is a preventable procedural failure.

For instructors, the practical conclusion is clear: do not assume that the inherent risks of gliding will excuse poor cockpit discipline. A court may accept that aviation carries obvious risks while still finding, on different facts, that a particular accident was caused by an instructor's failure to manage those risks properly.

WHY THIS MATTERS EVEN MORE IN SAILPLANES

Sailplanes are unforgiving of delay. There is no surplus thrust to repair a poor energy state. Launches develop quickly. Circuits compress workload. Low-level errors leave little time for analysis or negotiation. On aerotow, a small directional or vertical displacement can escalate rapidly. On winch launch, pitch and attitude errors can become critical almost immediately. During landing, late instructor intervention may occur close to the ground, at low energy, and with limited recovery options.

These characteristics make handover/takeover discipline more important, not less. Instructors must be particularly alert to control ambiguity during:

- aerotow launch, especially wing drop, yaw, vertical displacement, slack rope or over-controlling;
- winch or auto launch, especially pitch attitude, wing level and early launch failure scenarios;
- approach and landing, especially late flare, ballooning, undershoot, overshoot or directional control problems;
- stall, spin and unusual attitude training;
- circuit correction, especially when a student is low, fast, slow, overshooting or task saturated;
- type conversion flights where control feel, sight picture and response may be unfamiliar;
- flights with experienced pilots where authority may be socially harder to assert.

In all of these situations, the instructor's authority must be immediate, clear and unmistakable.

THE STANDARD WORDS MUST BE STANDARD

Every instructor should use a consistent verbal protocol. The exact words may vary between organisations, but the principle should not.

A simple model is:

Instructor: "My aircraft" or "I have control".

Student: "Your aircraft" or "You have control".

When returning control:

Instructor: "Your aircraft" or "You have control".

Student: "My aircraft" or "I have control".

The exchange should be verbal, positive and confirmed. It should not be replaced by a nod, a gesture, a vague "okay" or an assumption. The purpose is not etiquette. The purpose is to remove ambiguity.

In time-critical situations, the instructor may have to take control immediately while making the call. Safety comes first. But even then, the words should be spoken clearly and as early as possible:

"My aircraft" or "I have control".

The student should be trained from the first flight that this command requires immediate release of the controls unless specifically directed otherwise. The instructor should then confirm physically and visually that the student has released pressure.

DO NOT RIDE THE CONTROLS

One of the most common instructional traps is 'shadow flying' the student. The instructor keeps a light touch on the stick or rudder, adds small corrections, and believes this is harmless because the inputs are subtle.

IT IS NOT HARMLESS

Riding the controls corrupts the training exercise and weakens the student's learning. The student may not feel the true aircraft response. They may believe they are performing better than they are. The instructor may mask errors until the student is later exposed to them solo. Worse, the student may sense resistance or movement in the controls and respond with additional input, creating conflict.

THERE ARE ONLY THREE ACCEPTABLE STATES:

1. The student has control and the instructor is monitoring;
2. The instructor has control and the student has relinquished control;
3. The instructor is deliberately demonstrating, with control state clearly briefed and understood.

Anything else risks ambiguity.

Intervention must be early, clear and decisive.

Good instruction is not measured by how late an instructor can save a situation. It is measured by how well the instructor prevents the situation from reaching that point.

A late takeover often occurs after the student is already overloaded, startled or fixated. At that stage, the student may not process verbal commands quickly. They may freeze, resist or continue applying control pressure unintentionally. The instructor then faces both an aircraft problem and a human factors problem.

Early intervention avoids this. It preserves margin, reduces startle and allows the instructor to teach from a controlled situation rather than rescue from a deteriorating one.

Early, positive intervention is also consistent with the Gliding Australia Training Principles and Techniques Manual, which treats timely instructor intervention as a core safety skill rather than a last-moment rescue technique.

THE INSTRUCTOR SHOULD INTERVENE BEFORE:

- the student's workload exceeds their capacity;
- the aircraft approaches a low-energy or high-risk state;
- directional control becomes uncertain on launch or landing;
- the glider is close to exceeding safe attitude, speed, bank or yaw limits;
- the student's actions suggest confusion, fixation or delayed response;
- the instructor feels tempted to 'just help a little' without saying anything.

That last point is important. The urge to make a small silent correction is often the warning sign that a formal takeover is required.

BRIEF IT BEFORE FLIGHT

Handover/takeover should be briefed before every instructional flight, not assumed because the student has heard it before.

The briefing should include:

- who is pilot in command;
- who will handle each phase of flight;
- the exact words used for taking and giving control;
- the requirement for the student to release controls immediately when instructed;
- whether the instructor may demonstrate particular exercises;
- what will happen during launch, approach, landing and emergencies;
- how the instructor will intervene if safety margins reduce.

For early students, this briefing should be explicit and repeated. For advanced students, it should still be included, because advanced students may be more likely to resist, assist or second-guess during a surprise event. For mutual flying or checks with experienced pilots, it is equally important because assumptions about authority can be stronger and more dangerous.

DEBRIEF AND DOCUMENT CONTROL-TRANSFER ISSUES

If a flight involves a late takeover, student resistance, unclear response, simultaneous inputs, or any uncertainty about who had control, it should be debriefed properly. The debrief should not be punitive. It should answer four questions:

1. What was happening to the aircraft?
2. What did each pilot believe about who had control?
3. Why was it necessary for the instructor to intervene?
4. What will be done differently next time?

Where the event was significant, it should be recorded in the student's training notes or club safety system. That record protects future instructors, supports the student's development, and demonstrates that the issue was recognised and managed.

In litigation, records matter. Courts may examine not only what people later say they normally do, but what the evidence shows was briefed, practised, recorded and reinforced.

PRACTICAL INSTRUCTOR RULES

The following rules should be treated as core instructional discipline:

1. Never allow doubt about who has control.
2. Do not touch or move the controls while the student has control unless you are taking over, guarding against an immediate hazard, or the action has been clearly briefed as part of a demonstration.
3. If you need to correct by control input, take control first.
4. Use standard words every time.
5. Require a positive response where time permits.
6. Train students to release immediately and completely.
7. Intervene early enough that the takeover can be calm rather than desperate.
8. Do not use silent inputs to preserve student confidence. Safety is more important than protecting the student from knowing they made an error.
9. After any ambiguous control event, debrief it directly.

A CULTURE ISSUE, NOT JUST A COCKPIT TECHNIQUE

Handover/takeover discipline reflects the broader culture of an instructional organisation. If instructors routinely ride controls, make silent corrections, or rely on informal habits, students learn that ambiguity is normal. If senior instructors tolerate this, it becomes embedded.

Conversely, when instructors consistently use disciplined control-transfer language, students learn that authority, clarity and procedural discipline are normal features of safe flying.

This matters beyond the training flight. Today's student becomes tomorrow's pilot, passenger-carrying pilot, coach or instructor. The habits modelled in the back seat propagate through the club.

CONCLUSION

Proper handover and takeover is not a formality. It is one of the simplest and most important safeguards in dual flying.

The safety principle is straightforward: only one person can fly the aircraft at a time, and both occupants must know who that person is.

The litigation principle is equally clear. After an accident, courts may look closely at whether the instructor used a clear and recognised control-transfer procedure. Aviation carries inherent risks, but that does not excuse avoidable ambiguity, silent intervention, or uncoordinated control inputs.

FOR SAILPLANE INSTRUCTORS, THE PROFESSIONAL STANDARD SHOULD BE UNCOMPROMISING:

Brief it.
Say it.
Confirm it.
Do it early.
Never leave control in doubt.

INSTRUCTING REFERENCE

- Gliding Australia OPS 003 Training Principles and Techniques Manual.

Case references

- Ripper v Gobel Aviation Pty Ltd (in liq) [2024] VCC 1907, County Court of Victoria, Judge Robertson, 19 December 2024.
- Gobel Aviation Pty Ltd (in liq) v Ripper [2025] VSCA 344, Supreme Court of Victoria Court of Appeal, Niall CJ, Beach JA and O'Meara AJA, 23 December 2025.
- Campbell v Hay [2013] NSWDC 11, District Court of New South Wales, Marks ADCJ, 19 February 2013.

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About the Author:

Christopher Thorpe is the former Executive Manager Operations for Gliding Australia and has extensive experience in aviation safety, training and gliding operations management.

This article is provided as an educational resource for the gliding community.

WOMEN'S ROC CAMDEN

BY LOUISE SINCLAIR

I participated in the women's course on Replacement of Components that was held in May. Organised by NSW Gliding, the course was hosted by Southern Cross Gliding Club in Camden, NSW.

Six weekly online sessions ran from 2 April to 7 May 2026, giving participants the opportunity to build a strong foundation before arriving in Camden for hands-on teaching. Across those sessions, a wealth of knowledge was shared by Nick King, Roger Perrett and Len Diekman, whose presentations guided the group through the many responsibilities involved in flying and servicing gliders.

The course covered an impressive range of topics, from airworthiness terminology and documentation to legislation, rules and operating guidelines. Participants explored sailplane materials, structures, loads and flutter, as well as fatigue, corrosion, stress, strain and undercarriage systems. Rigging, tow releases, instruments, harnesses, canopies, electrical systems, hardware, lubrication and inspection procedures were all part of the learning experience.

Combining online theory sessions with onsite practical training, the course brought together participants keen to expand their technical knowledge and work towards their Replacement of Components Certificate, also giving women in gliding the chance to build practical skills, confidence and connections.

After six weeks of reading, listening and absorbing new information, Akemi Ichikawa, Julie Lentle, Kerrie Claffey and I arrived at the club for five days of onsite training.

The facilities at Southern Cross Gliding Club provided an ideal setting for learning. Roger Perrett, Nick King and Arnie Hartley welcomed the group with generous support, practical guidance and the kind of experience that only comes from years in the sport.

The practical component gave everyone the chance to turn theory into action and to experience first-hand the care, precision and teamwork required in glider maintenance.

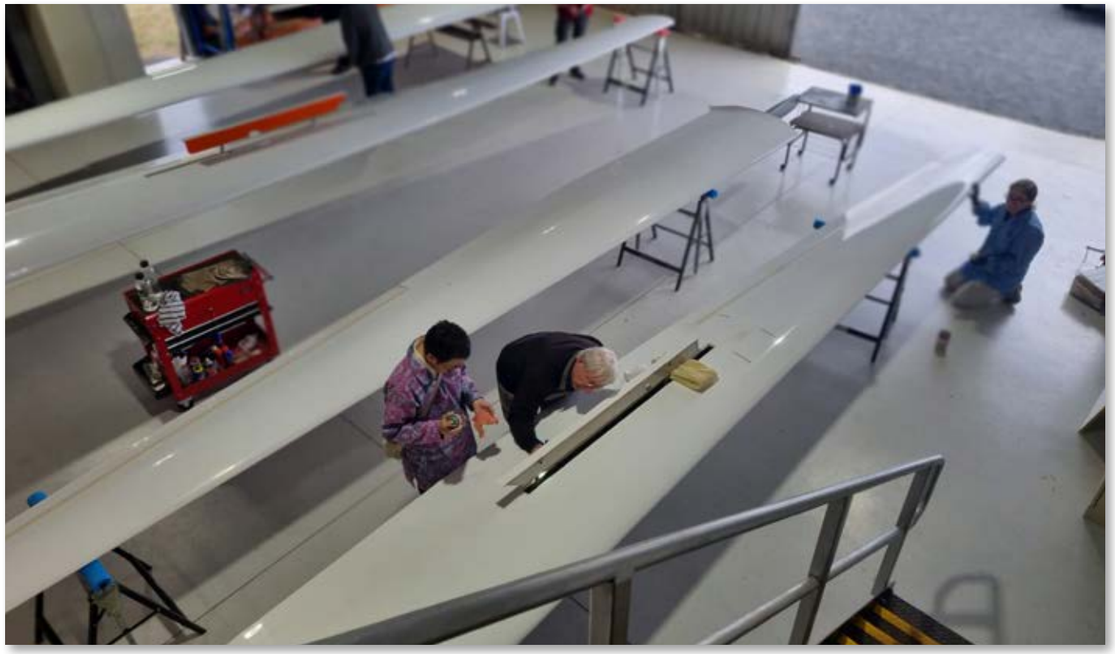
The hands-on lessons quickly became a favourite part of the course. We learned how to use tools effectively, from removing split pins and nuts, to tackling the ever-challenging Tost release. Getting that spring back into place became one of the week's small but satisfying victories!

Throughout the week, the workshop and hangars were busy with activity. The group completed tasks including wing tests, checked aileron and rudder deflections, de-rigged gliders and worked through a long list of practical maintenance tasks.

Wings were cleaned and retaped, air brakes inspected, seat pans, wheels, rudders and Tost releases removed and refitted, canopies removed and cleaned, participants even had the chance to try cable swaging and instrument testing. It was impressive to watch each of us step up, give every task a go and bring her own skills and determination to the team environment.

By Friday afternoon, everyone headed home with more than just some notes and completed tasks. The women left with greater confidence to work on their own gliders, a deeper understanding of maintenance practices, and a renewed appreciation for the friendships and support that grow through shared learning. It was a pleasure to share the experience with Akemi, Julie and Kerrie.

Special thanks go to Nick King, Roger Perrett and Arnie Hartley for the time, patience and commitment they gave in travelling to teach and support the group. Their guidance, encouragement, humour and hospitality helped make the week both productive and enjoyable.



Thanks, are also due to Southern Cross Gliding Club for hosting the course, and to Women in Gliding and Gliding Australia for continuing to provide these valuable opportunities for women in gliding.

We would also like to thank and acknowledge the support of those people working behind the scenes, including Jenny Thompson, Beryl Hartley, Melysha Turnbull, just to name a few.

This course is an opportunity well worth taking. It offers not only practical skills and technical knowledge, but also the confidence to be more involved in maintaining and understanding the aircraft we fly.

For any women interested in airworthiness please contact Melysha Turnbull via email at women@nswgliding.org for further information.

COME AND GET IT TROPHY

BY LEONARD FREITAG

A week before the Melbourne Gliding Club Christmas Camp 2025, I was thinking about goals that I could set and achieve. That led me to stumble upon the Come and Get It Trophy (CAGIT).

The concept of the Trophy is pretty straightforward. The Trophy sits at one gliding club, until another pilot from another club launches from their home club and makes a successful goal flight by landing at the club holding the trophy, thereby claiming it. The trophy then moves to the club the pilot took off from and the cycle repeats.

For many years, NSW had its own CAGIT that its clubs would compete for, although a Victorian club would occasionally cross the Murray and 'steal' it. This led the Victorian Soaring Association (VSA) to create a Victorian CAGIT in 2016. Initially, the Trophy travelled all around Victoria until James Nugent took it to Sunraysia Gliding Club in Mildura in December 2020, where it sat for just over 5 years – until now!

WINCH-ONLY CLUB

However, before last year's Christmas Camp, I had mostly dismissed the idea of attempting to claim it due to the logistical complexities involved. When I contacted James Nugent, he confirmed that Sunraysia is a winch-only club and does not operate any tugs, which meant I would not be able to launch out of Mildura for the return flight, as I didn't hold a winch endorsement. The only other viable option was for someone to drive the empty trailer there, de-rig it and drive 4.5 hours back to Raywood.

Fast forward a week – a few days into the camp, I overheard some discussion in the Bendigo Clubhouse about the CAGIT, and mentioned the possibility of going to get it myself. As the days passed, the forecast began to show a weather window that suggested the flight could

succeed. Not wanting to give up the opportunity, and with encouragement from other club members along with my amazing mum, Anita, offering to drive the 9-hour round trip with the trailer, the plan was set into motion.

AN UNEXPECTED RACE

On the morning of 29 December, it was time. I completed the DI on VCS, our club's Discus CS, programmed the 321km journey into the S100 and XCSoar, and attended the daily 10am briefing in the Clubhouse. Adding to the pressure, soon after briefing I received a text from James Nugent informing me that Mark Bland, a pilot flying out of Mt Beauty in his ASK21, was attempting the very same goal today. Now it had become a race!

Getting to Mildura first would claim the Trophy. Although I had a roughly 200km head start, Mark was the more experienced pilot and could launch earlier due to thermals forming earlier in the mountains than over the flatlands. Everyone at the club helped me get to the front of the launch grid to maximise my chances of arriving first.

At 1230, I launched behind our Pawnee, and after a superb tow by PK, I circled up to 5,000ft and wasted no time setting off towards Mildura. I made solid progress through the clear blue skies, passing the Archaeopteryx operating out of Boort and the salt lakes near Sea Lake, and periodically checking the OGN to compare my progress with Mark's.

KEEPING AFLOAT

However, approaching the Hattah-Kulkyne National Park roughly 75km from my goal, I found myself in trouble. A combination of poor decisions and rejecting climbs in the interest of speed left me barely staying afloat at less than 1,500ft. Keeping calm and composed, I made one final attempt by gliding over a dark patch next to a cultivated paddock, giving myself landing options in the event it didn't work.

Thankfully, I managed to find some lift I could hold onto and, with a bit of helpful guidance from the Sunraysia locals who happened to be in the area returning from their own task, I slowly climbed back up to 8,000ft. From there I pushed the stick forward enjoying a fast, relaxing final glide into the 'A' shaped runways of the Sunraysia Gliding Club.

GOT IT!

After a smooth touchdown on the gravel runway of 04, I was greeted by locals Dave and Rob, who helped me push VCS under a tree and congratulated me on the journey. After a 30 minute wait, Anita arrived with the trailer and the four of us derigged VCS before officially presenting us with the Trophy. After a quick tour around the clubhouse where Anita and I would spend the night before driving back to Raywood, Dave and Rob farewelled us and headed home.

Anita and I made a quick trip into town for fuel and pizzas before retreating back to the clubhouse for the evening. We were up again at 5am the following morning and soon began the drive back to Raywood, arriving just in time for the 10am briefing and a loud round of applause.

weglide.org/flight/985247

THE BASICS OF WAVE FLYING

BY RICK AGNEW

The Canberra Gliding Club Bunyan Wave Camp is scheduled for 19-27 September. Also, several Australia pilots will be heading to Omarama in New Zealand for their annual wave expedition. This is a good time to take a look at what is involved in flying in wave. Rick Agnew has been wave flying for many years in Australia, North and South America as well as New Zealand. Here, he takes us though the basics of wave flying.

There are essentially two different techniques for using wave lift, depending on whether you are flying the under-laminar (turbulent rotor) layer, or flying in the laminar layer itself.

Several forms of under-laminar lift exist, but they are all nearly stationary relative to the ground.

To use this lift, fly upwind of the smallest, lightest fragments of cloud, even tiny, short-lived wisps. I refer to these as scud – small rotor or roll clouds. These barely visible tufts often mark the leading edge of the laminar airflow.

Recognising these scud clouds and reacting promptly is vital. Your entire wave flight may depend on spotting and moving to these structures quickly.

Maintain enough airspeed to avoid being blown backwards, keeping to a true airspeed of at least equal to or greater than wind speed, which allows you to hover over essentially the same point on the ground. Using distinct ground features as reference points will help you hold position.

By moving slightly forward, back or sideways, you can locate a stronger lift. Frequent reference to ground features helps you stay centred in the best area. GPS can help, but in a very rough rotor, it may be hard to focus on small displays. As you climb towards cloud base, move gradually upwind, where the best lift usually is.

BUILDING A MENTAL PICTURE OF LIFT STRUCTURE

Quickly build a mental picture of the lift structure, using:

Your variometer (delayed but quantitative information)

Your physical sensations (immediate qualitative cues)

Predicted lift/sink overlays from tools like Skysight on your nav computer

In a narrow, rough rotor, I recommend steep turns, much as you would use in thermals. Flatten the turn as you pass through a strong lift on the upwind side, and quickly steepen and speed up through strong sink. It can feel like “two steps up, one step down” – but you will gain height.

This is demanding flying - you must concentrate hard, constantly adapt to changing lift and sink, and actively fly the glider. In a rotor, rapid shifts from high positive to negative g are common, so secure all loose items. A camera flying through your canopy will definitely ruin your day.

Avoid arriving low in the rotor. Climbing from a low level is often extremely difficult, and below a certain height, it may be impossible to climb out at all.

USING LIFT IN THE LAMINAR LAYER THE WAVE PROPER

Once you reach the laminar layer, the air becomes silky smooth. Your primary aim now is to stay in the area of the best climb rate. As in rotor, ground references are crucial to staying roughly stationary over the best lift.

If the wind speed is less than your glider’s minimum sink speed, you must fly along the wave line, crabbing to compensate for crosswind. The best lift is usually under or just upwind of the leading edge of lenticulars. If the lift is localised, use broad figure-eight patterns as you would on a ridge, always turning into the wind.

If the wind equals or exceeds your minimum-sink speed, you must effectively ‘park’ in front of the wind, and remain stationary relative to the ground. Pick two close ground features and check your position frequently.

Remember, wind speed usually increases with altitude. You may need to speed up to avoid being drifted back into the sink. Only constant position checks will keep you out of downwind trouble.

Lift is not uniform along the wave. You may need to explore slightly upwind, downwind or laterally to find the best climb.

If you lose the lift, you’re either too far upwind or too far downwind of the core. For safety, always search upwind first. If you push downwind and find only sink, you may lose too much height to get back to where the lift was.

TWO EXAMPLES

1. You’re flying at 40kts with zero vario. You speed up to 60kts into the wind. The vario climbs slowly to a maximum, then decreases. You’ve just flown through the best lift. Turn back, reduce to 40kts as soon as the vario starts to fall, and be prepared for a long, slow grind back into the wind – changes come slowly if wind speed increases with height.

2. At 40kts with zero vario, you increase to 60kts, and the vario shows steadily stronger sink. You’re now upwind of the lifting zone. Turn downwind and watch the vario closely. Downwind, your speed over the wave pattern is high, so changes are rapid. As soon as readings go positive, turn 90° across the wind. Drift will carry you into the core. When the vario starts to drop, turn into wind, set 40kts, pick new ground references, and re-centre.

Once you’ve reached a comfortable height, move a little sideways along the system to refine the best climb area.

AS A GENERAL RULE, THE STRONGEST LIFT IS

Upwind of clouds with large vertical development

Downwind of the highest parts of the terrain

You’ll sometimes see parts of a cloud surging upwards more rapidly. These usually mark the best localised lift.

CROSS-COUNTRY IN WAVE

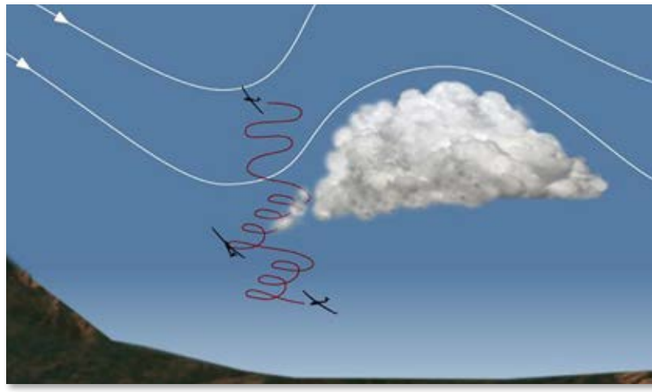
For experienced wave pilots, cross-country flights of over 500km are common in Europe, the Americas, New Zealand, and increasingly in Australia. These flights usually use several wave systems triggered by different obstacles (see WeGlide logs).

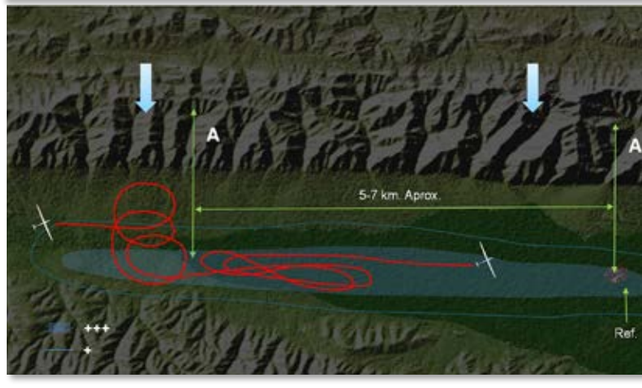
I’ll focus on flying along a single system and on moving from one system to another.

Once you’re above a ‘safety height’ – high enough that a drop out of laminar flow won’t force an immediate outlanding – you can move laterally along the wave line, crabbing against the crosswind. With cloud markers, ‘surfing’ the wave front is straightforward.

In blue conditions, you must visualise a line on the ground parallel to the triggering obstacle. If you lose lift, search upwind.

From Bunyan, I’ve flown many 300km flights and one over 900km in a wave. Flights over about 1,100 km have already been achieved in the Bredbo wave system. By jumping between multiple systems, even greater distances are possible, especially as airspace rules evolve and transponder use allows ATC to approve entry into currently restricted areas.





MOVING UPWIND AND DOWNWIND

Jumping between systems

Changing from one wave system to another inevitably means crossing a strong sink between lift lines. Set your MacCready to match the conditions (often to something near the ‘wind equivalent’) and fly fast through sink. Take care not to exceed VNE – and remember that true VNE increases with altitude, while indicated VNE does not. Your indicated air speed may significantly under-represent your true airspeed at high altitude.

Height loss will depend on wavelength, sink rate, and your chosen path. As an example, with 40kt wind and 8km wavelength, upwind jump will be:

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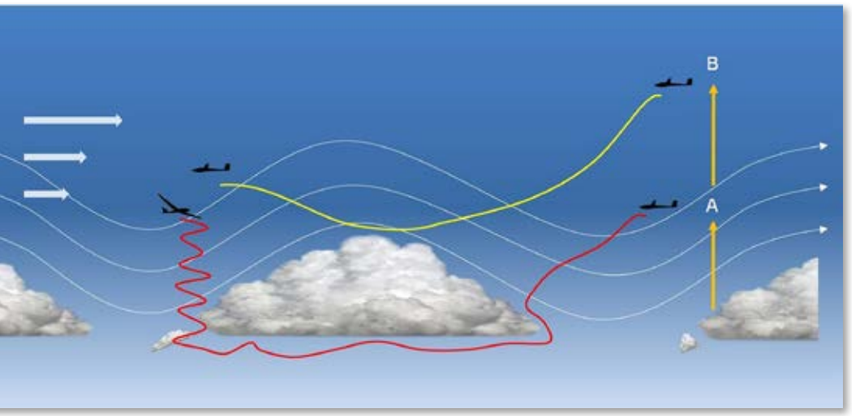

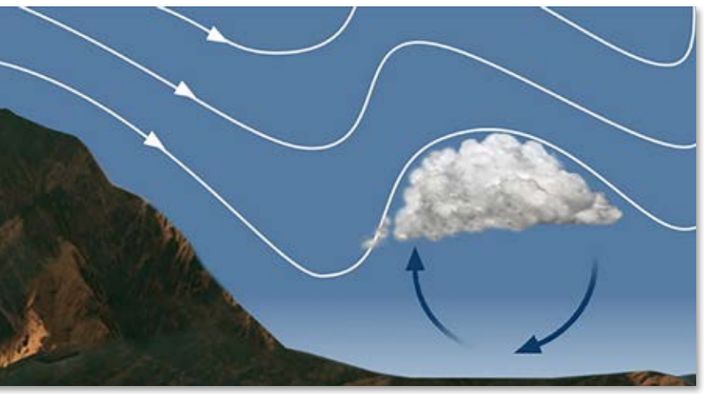

7,000ft loss in a 25:1 glider
3,000–4,000ft loss in a 35:1 glider

Downwind jump (with tailwind, crossing sink faster) will be:

1,700ft loss (25:1)
1,000ft loss (35:1)

To minimise height loss, you can try the following:

Change systems where the new wave is starting or ending – often lift and sink are weaker at the edges.

Travel along your current wave to find the weakest lift segment first, then cross upwind from there, as the adjacent sink is often also the weakest.

Choose a path where clouds are thinner, patchier or less organised, indicating weaker wave and usually weaker sink.

When going upwind to another system, keep a large height margin above any intermediate cloud. In a strong sink, the effective glide angle can be far worse than expected, and it can feel like you're descending more than you're moving forward.

If it becomes clear that you will arrive below the cloud tops of your target wave, turn back to your original system, climb again and only then retry.

Avoid arriving at the new system below the rotor cloud base. You'll most likely encounter severe sink and turbulence and be forced to thermal rotor again to re-establish laminar contact, which may be difficult or impossible from that height.

THE TRANSITIONS BETWEEN DIFFERENT WAVE SYSTEMS: TWO OPTIONS

When we start the transition to another wave ledge we have to be very generous with the height. If we start too low (A), we will be in or below the target cloud. This will force us to fly through the sub-condulatory region and look for the windward edge of the rotor. Once reached, we will climb with the rotor thermals up to the laminar zone. If we leave with sufficient altitude, we will lose a lot of height on the downwind side of the rotor, or in the descending zone of the wave current lines, but we will recover them quickly when we fly over the ascending region of the wave again.

SAFETY AND OUTLANDINGS

Outlandings from the wave are common enough that, at Bunyan, we treat every wave flight as a full cross-country. Safety heights (minimum altitudes below which you must avoid descending) should reflect:

Terrain and land-out options
Structure and reliability of the wave system
Wind speed and direction near the ground

These safety margins should be higher than in normal thermal soaring.

Only plan to use a downwind paddock as a last resort. We've heard that many 'flat-earth' pilots attempt wave circuits as if they were at home doing 600ft circuits in calm air – with predictable, pale-faced results. Allow for an extra sink and remember that your circuit may well be flown in an area of rotor or strong wind gradient.

LANDING IN STRONG WINDS IN WAVE: CHECK WIND DIRECTION

The presence of rotors can cause the wind on the ground to constantly change direction and even blow in the opposite direction to the wind at altitude. This flow behaviour must be carefully taken into account on wave days. Checking the wind direction just above the runway is a fundamental precaution. Radio messages from your crew on the landing strip should give real-time indications of ground conditions prior to your landing – that is, wind speed and direction.

SAFETY IN THE WAVE

While wave flying is one of the most rewarding forms of gliding, it demands respect, preparation and disciplined technique. The exhilarating and hypnotic sensations of wave flying should never distract you from essential safety rules.

ON TOW

Takeoff and towing often occur in turbulent air masses beneath the laminar flow, typically in rotor conditions, which can be quite rough. Before takeoff, check your harness and secure any loose objects in the cockpit, including cameras and other equipment. An experienced tug pilot can sometimes avoid the worst rotor areas, making the ride smoother. Familiarise yourself with emergency procedures and potential landing areas before you launch.

In severe conditions, you may need to use full control deflections, and the glider may take longer than you think to respond to these inputs. Therefore, it is especially important to react quickly to any out-of-station movements. This will help prevent the straining tug from pulling down and/or a large slack in the tow rope.

The use of dive brakes in rotor situations while on tow should be avoided, as it degrades the tug's rate of climb (potentially towing you out of the pummelling) but also alleviates stress on the tow rope. With repeated snapping, any strains on the tow rope must increase the chances of rope failure. When faced with a rope starting to loop or go slack, I side slip, then straighten up quickly.

There will be no doubt when you have entered the laminar flow wave itself! The roller-coaster ride abruptly finishes. You have time to sort yourself out before bunging off tow and subsequently notching your barograph.

IN FLIGHT

Throughout your flight, you should have a contingency plan, in other words, a place to land if you lose the wave, the rope breaks, the cloud (Foehn gap) starts to close in, and so on. Maintaining a safe height and being mindful of our landing strips is probably the best insurance.

A headwind of 30 to 40 knots affects the average glider's glide ratio quite markedly. The glide ratio can be as low as 10:1 and quite often closer to 5:1. Flying low downwind to a landing zone is dangerous.

If you have to fly back to a landing area after missing the lift, do not fly diagonally across the wave system. Obviously, spending more time in the sink reduces your chances of making it back. It is better to try to fly upwind of any roll clouds as long as possible, and then cross over.

OUTLANDING

Outlanding in normal conditions should present no problems. However, to the uninitiated, outlanding in wave conditions may include strong turbulence near the ground, wind shear giving you a tailwind on final when you expected a strong headwind, as well as poor visibility. Beware of these possibilities!

LAST LIGHT

You may still be basking in the sun at some incredible height, but remember that it may take some time to descend – even with full dive brakes and in areas of strong sink. The light on the ground fades especially fast in the wintertime!

Think about thermal shock factors on your aircraft. If you descend too quickly from high altitudes where typical air temperatures can be below 30 degrees, you may damage the aircraft's mechanical loads and its paintwork or finish.

Plan early for your descent, as it will take more time than you think. For example, 500ft/min from 20,000ft will take 40 minutes. Add to that sorting yourself out, the potential rotor and a circuit, and it will inherently take over one hour to be back on the ground. Furthermore, you may be flying into a setting sun and/or coping with fogging canopies – therefore, think about visibility as well! Respect the last light by making provision for the return flight.

CLOUDS

You are often near the clouds when you fly. If you are next to the leading edge, be careful not to be pushed downwind, as you may disappear into the cloud. If you see clouds forming in front of you, this is where the lift is! If this happens, try to fly quickly upwind of these clouds to re-contact the area of lift.

Always watch out for changes in air mass humidity. With some winds, the humidity of the air can increase within minutes. The Foehn gap can shrink and even disappear altogether at an alarming rate. If this starts to occur, make sure you have an access area clear enough to safely descend to ground level in clear air. If you are stuck above the clouds after the Foehn gap has closed, radio your situation to your base, notifying your intentions. Normally, you may still find some gaps downwind that will allow you a safe descent. However, this too might not be an option. Quick reaction and recalling where the gap was may get you down in the thinnest area of cloud.

Alternatively, if the situation gets worse, go straight down, crossing the cloud where the Foehn gap was. Before being engulfed by the clouds, set the trim to 60 knots, deploy full airbrakes, and let the controls go loose.

The glider will stabilise itself in its descent.

As you are a trained pilot, well-versed in unusual attitudes, you may need that skill to recover, once below cloud base. Obviously, this emergency procedure can only be attempted if you are certain that the clouds do not touch the ground. Otherwise, I would probably recommend that your last resort is to use your parachute.

Really, this scenario should never be encountered, and therefore, this is the reason why you must be very careful when flying above the clouds. ***GA***

POLAND – AN UNEXPECTED GEM FOR GLIDER PILOTS

BY PHIL RITCHIE
AUSTRALIAN TEAM CAPTAIN

PHOTOS: VARIOUS CONTRIBUTORS, INCLUDING WGC POLAND

LEFT and BELOW: Lumpy Paterson flew a JS3 in 18m Class.

At the 40th Multiclass World Championships, Poland pulled out more than a few pleasant surprises.

The competiton was held in May 2026 in Czestochowa, about 2 hours drive south of Warsaw. If you are like me, Poland may not top your list of desirable destinations when considering a gliding holiday or competition, but as it turns out, it is as good as it gets. The WGC pilots flew more competition kilometres than at any previous world gliding championships and flew the longest competition flight at a World Comp. Even better, all this happened in May – not even at the peak of the season!

However, unlike any Australian gliding competition, record beating flights are hoped for but rarely experienced. The absolute ceiling, due to airspace, was FL 95, and it was common for heights not to exceed 6,500ft. Cumulus were seen most days, but large blue areas were a common feature. Airspace was a significant restriction and a trap for the unwary. Freezing levels were often near cloud base, making cockpit comfort a problem.

AN UNLIKELY GLIDING MECCA

Does this sound like a gliding Mecca? No, but you'd be wrong to think so. Ten competition days were flown. Thermal wave occurred prior to start on multiple days. Outlanding options were not on a level with Australia's abundance but were by no means scarce. Real outlandings were rare and technical outandings – given that this was the top end of gliding and Means of Propulsion were a common feature of most of the gliders – not too significant.

So, who wants to go gliding in Poland now? But wait – there's more. Poland is largely flat land flying so we Australians wouldn't be too stressed. It is an amazingly friendly country as well and, given that it's in Europe, pretty economical. The language is impossible but most speak some English and your phone translator will do the rest. Their local gliders are heavily biased towards local manufacturers. Some of us even managed visit to the SZD factory on a non-flying day.

In any case, Australia fielded five pilots and four gliders at this event. David Jansen flew his brand new – and I mean brand new – previously unflown JS5 in Open Class. Adam Woolley and Keith Gateley flew a borrowed Arcus M in the Two-seater 20m Class. Norm Bloch and Lumpy Paterson flew JS3 Jets in 18m Class, also in borrowed gliders.

DETERMINATION, PATIENCE AND SKILL

Adam and Keith gave us our best results, finishing a very respectable 4th place overall. Their top performances were a win on Day 4 and a 2nd place on Day 8. But for those watching on the ground, the heart stopping day came on Day 2. Adam's determination, patience and skill managed to keep

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them off the ground for over 20 minutes, all the while going further and further past the rained in turnpoint.

Those of us in the team tent watched as over half the two-seater fleet started their engines, expecting Adam to do the same any moment. However he eventually got a good climb and headed back to the turnpoint and then had a solid run home. Almost the entire fleet were Arcuses, either M or T models. The only exceptions were a single HpH 304 Twin Shark and a single ASG 32 Mi.

David managed a day win as well. Flying his beautiful JS5 for the first time only a couple of days before the start of the competition meant facing a steep learning curve, meanwhile sorting out the teething issues associated with a new glider. Frustration was a big factor for David but he was very fortunate that the Jonker Sailplanes team was on hand throughout the competition to sort out problems as they arose. They even provided him with ground crew, as his wife was unfortunately unable to attend.

AUSTRALIAN-EUROPEAN CONTRAST

The Open Class fleet was a thing to behold. Eight EB29s, both single and dual seaters, five JS5s plus a JS1 and an incongruous JS3. The last day was a nail biter at the top in Open Class. The two Germans, Felipe Levin and Michael Sommer had been leading the competition for some time and Sebastian Kawa trailing in 3rd with quite a large margin to make up.

On the last day, however, Sebastian pulled out a blinder and it looked as though he might have taken the overall lead. But it was not to be, although he did manage to split the two Germans. By the way, did you know that Kawa means coffee in Polish? Well, now you do. So, his name in English is Sebastian Coffee.

Norm and Lumpy finished mid-field in their class. Both learned a lot about flying in Europe and how team flying is both an art and a science. They had practiced team flying at the Squad week held at Tocumwal during the last week of February plus a week of flying together in January. Their efforts to start together and fly together brought modest results and, when within range of the airfield, we could hear them talking and making decisions together. Their main weakness was lack of experience in making the best of the conditions that were often quite different to Australia's.

On Day 3, they trusted their own judgement and headed off on their own. This did not pay off and cost points. They learned from their mistake and from then on they kept up with the others very respectably. The 18m Class was by far the largest, fielding 42 gliders. The Jonker's JS3 was the most popular with 18, followed by 11 AS33s, 6 Ventus 3s, 4 ASG 29s, plus a couple of JS1s and a solitary DG600. Quite a few of the newer gliders were electric. The top finishers were the usual suspects, the French and the Germans. Both countries fielded very experienced pilots, who are accomplished team pilots.

UNEXPECTED RICHES

I volunteered to be part of the team for the chance to look at the top end gliders, to meet world class pilots and to help out – as well as hang out with fellow glider pilots and have a laugh. But, in fact, I came away so much richer than I could have ever hoped for. Gliding at this end really is a team sport.

The crew were as much a part of the success and fun as the pilots. A shout out is owed to Jorgen Thomsen, Richard Dowling and his wife Barbara, Caroline Jervis and Dylan, the lad from Jonker Sailplanes. Individuals are often destined to be also-rans. The Australian pilots communicated with each other well, even if they were not in the same class, passing information about weather conditions, slow points and how well the conditions were holding up as Cu thinned out. Future pilots selected to go to world championships will have to attend Squad Week to encourage and foster the team approach. I heartily endorse this policy.

LEFT: Norm Bloch landing his JS3.

ABOVE: The view over Czestochowa-Rudniki

BELOW: The Australian team at the final medals ceremony.

continued over page

DAY WIN FOR WOOLLEY & GATELEY

We're all smiles today, day winner! Thanks, Mathijs, for the glider, thanks to the crew for allowing us to focus on the flight, thanks to our team captain and team mates for super support. Thanks, Keith, for superb in-flight support.

We decided on a moderate (then late) start, despite keeping an eye on all the major players in each class starting early. A line of CU appeared though in front of the line of easy lift. When all the others had pealed off and four big players were still in the area, it was time to press the PEV again. It turned out we were last to start by 5 minutes.

This really suited me, because I could disconnect from others around me and do what I do. When I can do this, and truly believe in my abilities, then I sail. We flew our line, took our best thermals and, low and behold, we caught the French, Polish and Brits fairly quickly.

This is where I fell down. The gaggle started to disperse, looking nervous, so that's what I did. Rather than keep in my groove and do my own thing. The French got away from me again.

Again, once I could disconnect myself from those around me, I could groove again. We started picking up the others ahead just as the day started to die. Fortunately, I trusted myself again and flew my own line, getting within striking distance at the last TP.

I matured up at that moment, decided just to latch onto the back of the Belgians and the Dutch, cruise control home, we were confident that we'd done enough.

ADAM WOOLLEY

VIEW FROM AFAR

Armchair pilots across the world tuned in to see the WGC unfold while task information, live tracking and results were published online. Following is the view from the GA editor's chair in Sydney.

OPEN CLASS

The Open Class championship came down to a seven-point margin at the top. Felipe Levin from Germany flying an EB 29R won his second world title on 8,945 points, just clear of Poland's Sebastian Kawa on 8,938. Germany's Michael Sommer came 3rd on 8,871. By any measure, it was one of the closest Open Class finishes in championships history.

Levin won the opening task at 120.79 kph over 382km, with Sommer just 96 seconds behind. Task 2 on 20 May was a faster, fixed-route 537km race, and Kawa – flying in front of his home crowd – covered the course at 134.28 kph for maximum points, vaulting him up the standings. The top five on that day were separated by under 14 minutes over 537km, which is a good measure of how closely matched the leading pilots are when conditions are clean and thermals are working.

Tasks 3 and 4 continued to show Levin and Sommer at or near the front. Task 5 was one of the longer, harder days of the contest – a demanding AAT that produced a wide spread of results.

The contest stayed close through the middle phase. Task 6 on 24 May France's Sylvain Gerbaud took the day win at 122.53 kph, while Levin had a quieter day in 10th, though his earlier points kept him at the top of the standings. Through Tasks 5 and 7 the pattern of the championship became clear. Levin and Sommer were consistent across all conditions, while Kawa had the pace to take day wins on the better days but could not quite close the gap in the overall standings.

Task 7 on 26 May was a shorter, more difficult day of marginal weather. Christian Hynek took an opportunistic

LEFT: Adam Woolley and Keith Gateley took 4th place overall in 20 Metre Multi-Seat class.

BELOW: The Australian team talk tactics at Aussie basecamp.

continued over page

win at 100.61 kph, while Levin finished fourth at 97.53 kph – neither gaining nor losing meaningful ground. Task 9 on the penultimate day was among the best of the championship, an 848km fixed route that Levin won at 143.20 kph, with Kawa 2nd and Sommer and Aboulin arriving within eight seconds of each other for 3rd and 4th. Going into the final task, Levin led Sommer by 76 points and Kawa by 146.

WIN FOR JANSEN

David Jansen won Race 8, beating former world champions Sebastian Kawa and Russel Cheetham. He flew 420km at 118 kph showing what he could do in his new JS5.

The final task, a 3 hour AAT with a maximum of 610km, did not settle the Open Class title until the results were processed. Kawa flew 432 km at 135.19 kph for maximum points, with Sommer and Levin close together at 123 kph in 2nd and 3rd. But Levin's earlier consistency meant that Kawa's strong finish fell seven points short of overhauling him overall. Sylvain Gerbaud finished 4th in the championship on 8,453 points, with Laurent Aboulin 5th on 8,362. Britain's Russell Cheetham placed eighth overall on 7,510 points.

18 METRE CLASS

Victor Mallick from France flying a JS3 won the 18 Metre Class on 8,440 points, holding the championship lead through most of the competition and managing his margins consistently in the final stages. His compatriot Christophe Abadie, the 2022 World Champion, finished second on 8,165. Stefan Langer (Germany, AS 33 Me) was 3rd on 8,051, a result built on consistent day-to-day scoring rather than big individual wins.

At 42 entrants, the 18 Metre Class was the largest of the three classes and generally produced the tightest daily results.

Task 6 was notable in the 18 Metre Class for bringing the standings to an exact dead heat. Mallick and Langer were level on 4,978 points apiece at the halfway mark. By Task 7 the US pilot Sean Fidler took the daily win at 105.49 kph on what was a more difficult day, with the overall top four – Mallick, Langer, Abadie and Kiessling – separated by under 120 points. Task 9 was won by Poland's Karol Staryszaky at an astonishing 142.68 kph over 75km, while Mallick held third on the day at 137.92 kph, enough to protect his overall lead.

On the final day, Abadie won the task at 121.28 kph with Mallick just behind at 120.28 kph, the two pilots arriving 455 and 453km into the task window within seconds of each other. Mallick's 985 points on the day held off any late challenge, with the field covering a wide range of speeds – 36 gliders finished the task, the last at 82.50 kph after 4 hours 49 minutes. Mario Kiessling finished 4th in the championship on 7,789 points, and Thies Bruins 5th on 7,614.

20 METRE MULTI-SEAT CLASS

Germany's Karsten Leucker and Jan Omsels flying an Arcus T won the Two-Seater title on 8,338 points, finishing 8th on the final day but with enough banked from the preceding nine tasks to hold off the Polish crew of Łukasz Grabowski and Judyta Czyz, who finished 2nd on 8,300. The Hungarian pairing of Kassai and Mészáros were 3rd on 8,204, with Australia's Woolley and Gateley 4th on 8,144 and Britain's Steve Jones and Gary Coppin 5th on 7,953.

Leucker and Omsels won Task 1 by just 12 seconds over Jones and Coppin, who actually covered slightly more distance. Task 2 reversed that order, with Jones and Coppin winning on a harder day at 99.26 kph over five hours and eight minutes – only seven of the 16 crews made it around the 510km course that day. The German pair finished 5th on that task at 93.74 kph, which kept them in contention but not ahead.

AUSTRALIAN DAY WIN

Adam Woolley and Keith Gateley won Race 4 flying 32.72km at 111.69 kph. They took 2nd place in Race 8 and were always near the top of the table and in contention. At the end of the championships they were clipped at the post and missed a podium position by just 16 points for a well deserved 4th place overall.

By Task 6, Leucker and Omsels had reasserted their position at the top of the standings on 4,914 points, with Adam and Keith in 3rd on 4,744 at that point. Task 7, the marginal-weather day, saw Belgium's Delfosse and De Broqueville take the win at 96.9 kph, with Leucker and Omsels on 3rd. Their lead of 5,652 points after seven tasks over Grabowski and Czyz on 5,474 was enough of a cushion and made consistent scoring in the final three tasks sufficient to hold it.

Task 9 produced the fastest racing the class saw throughout the championship, with Janowitsch and Lutz winning at 132.43 kph over 616 km. Going into the final day Leucker and Omsels led by 111 points, enough to make finishing 8th on Task 10 at 100.99 kph sufficient to seal the title, despite the Finnish pair of Kettunen and Sorri taking the day win at 110.19 kph.

CHAMPIONSHIPS SUMMARY

The 40th FAI World Gliding Championships produced three well-contested titles across ten scoring tasks. The Open Class margin of 7 points between Levin and Kawa after ten days, and nearly 5,000 scored kilometres, will stand as one of the narrower championship finishes in that class. The 18 Metre Class was similarly close through the middle stages before Mallick pulled clear in the final phase.

The Two-Seater title went to the crew that managed the best combination of consistency and reliable scoring, with the German pairing rarely giving ground and never having a genuinely bad day. The Australian team performed very well, especially considering the logistical difficulties of arranging gliders halfway around the world.

GA

LEFT: Polish farmland offered different outlanding conditions to those in Australia.
ABOVE: David Jansen landing his new JS5.

WORLD GLIDING CHAMPIONSHIPS 18M OPEN, 20M MULTI-SEAT CZESTOCHOWA-RUDNIKI POLAND

16 - 30 MAY 2026

OPEN CLASS

1	Felipe Levin	Germany EB 29R	8,945
2	Sebastian Kawa	Poland JS5	8,938
3	Michael Sommer	Germany EB 29R	8,871
14	David Jansen	Australia JS5	4,824

18M CLASS

1	Victor Mallick	France JS3 18m	8,440
2	Christophe Abadie	France JS3 TJ 18m	8,165
3	Stefan Langer	Germany AS 33 Me 18m	8,051
20	Mark Lumpy Paterson	Australia JS3 TJ 18m	7,133
23	Norm Bloch	Australia JS3 TJ 18m	6,928

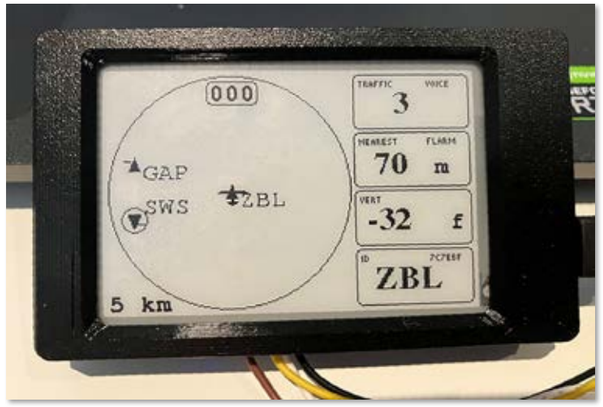
20M MULTI-SEAT CLASS

1	Leucker & Omsels	Germany Arcus T	8,338
2	Grabowski & Czyz	Poland Arcus M	8,300
3	Kassai & Mészáros	Hungary Arcus T	8,204
4	Woolley & Gateley	Australia Arcus M	8,144

Full results at soaringspot.com https://tinyurl.com/wgcpol

WAGA SKYVIEW DISPLAY

BY KEVIN WILSON



ABOVE: Radar View showing three aircraft in proximity. The host aircraft is a tug with ZBL on tow. SWS is another tug that has just released glider GAP

This is the story of how the low-cost DIY build 'WAGA SkyView Display' for FLARM & ADSB came to exist and the capabilities and features it provides. It's in use in over 30 gliders in Western Australia and is also the first FLARM display to include unique features designed for tugs. This is not a commercial product and this is not an advert or product review. You can build you own for around $60! Since it's based upon SoftRF open source software, an introduction to SoftRF and its FLARM compatible devices is provided. (*See page 31.*)

The WAGA SkyView display originated as a component of the Western Australia Gliding Association 'WAGA Flarm project' which Rob Hanbury, a WAGA member, conceived and initiated in mid-2024. The goal of the project was to reduce the risk of mid-air collisions in WA by equipping 100% of gliders and tugs with FLARM. While about 70% of gliders and tugs already had FLARM, he deduced that the high cost of commercial FLARM products was the most significant factor to overcome.

INITIAL RESEARCH

Rob's initial research suggested a trigger cost of circa $1,000 per installation, under which most remaining owners could be motivated to buy a FLARM system. This price point is not available from commercial manufacturers for a FLARM with display, even if a bulk order for members were coordinated. He therefore explored two options. The first was a batch of specially designed and built WAGA FLARMs with a genuine FLARM chipset, and second was a solution based on SoftRF software and hardware.

There was little use of SoftRF in Australia when Rob was considering the options, leading to a perceived risk regarding ongoing compatibility with other FLARMs. In any case, he found he was able to directly source genuine FLARM components and a promise of FLARM support, enabling the production of a special low-cost WAGA FLARM with ADS-B In, and so he chose that option. To keep the cost per installation under $1,000, he decided to offer the $60 SoftRF SkyView display with each WAGA FLARM transceiver.

How the WAGA FLARM transceiver development progressed is Rob's story to tell, perhaps in a later GAus article, but the outcome is over 35 WAGA FLARMs successfully in service in WA. Because my project role was to enhance the SkyView display, I'm telling that part of the story here.

In January 2025, I was assisting Rob with the WAGA FLARM project in a small way. I had already experimented with a standard SoftRF SkyView display and dismissed it as inadequate, so I offered to take on the task of a 'few small improvements' he and I had in mind. Little did I suspect how much time and effort would be involved!

I should point out that I am not an experienced software programmer. I obtained my Electronic Engineering degree in 1981, which was practically the BC era – Before Computers! Back then we had main frames or machine coded processors and dot matrix printers. 'Personal Computers' (PCs) didn't appear in quantity until around 1987 when I was working in the computing industry as a hardware service manager. I recall going to a launch presentation of the first version of the Microsoft Windows graphical user interface and coming away thinking that it would never become popular. I wish I had bought some shares!

BRANER FORK

I am a glider and tug pilot who is experienced with Excel and Access VBA programming and, having recently retired, I was looking to learn C++ language computer coding as a hobby. Improving the SoftRF Skyview display code was just the right first C++ project I was looking for because it had purpose and connection with my flying interests.

Rob had got as far as installing the Arduino IDE (the C++ programming tool), downloading the SoftRF source file library from the public internet repository and tinkering with a few bits. He helped me to set up my PC and get going. We started with the Braner fork (version) of the SkyView display.

I dived in and started looking around the code library and reading about C++ on the internet. I worked out how the display's core programme loops, the purpose of most of the files and then which files I needed to focus on for my changes. I was, and still am, in awe of Linar who created the software, Braner who improved it and the many others whose code libraries are called on for assistance when the program runs.

I quickly realised that to be able to test the display frequently during my coding changes, I would have to find a tool to efficiently send data to it exactly the way a FLARM sends (NMEA sentences) to a standard FLARM display. I started by using the little-known six basic simulations that are built into every PowerFlarm, but I yearned to be able to write my own simulations for specific testing purposes.

I tried using PC Terminal software (Putty and RealTerm) to send the data but that was impractical. So I turned to what I knew best, Microsoft Access, to create a simulation database that enables me to create and modify simulation files as data tables on a PC and then send them via a data port and data cable (using RS232 protocol) to the SkyView display. It's a rough and ready tool but does the vital job.

The SkyView display uses the LilyGo TTGO T5S ESP32 development board, which has impressive specifications for the price, including:

- ESP32 Processor with 4MB Flash
- WIFI, Bluetooth and hardwire connectivity. Can act as bridge retransmitting data eg hardwired to FLARM, BlueTooth out to another device.
- 2.7□ E-Paper module with 264*176 Pixels mono-chrome screen. Refresh rate is adequate but is a performance constraint.
- ThevSoftRF case has space for internal battery. Using BT, no hardwire connections required.

When connected by hardwire to a FLARM transceiver, it needs a simple power and data converter.

NOT ROCKET SCIENCE

The space in this article is insufficient to explain how the LilyGo board is set up or how to use the Arduino IDE for programming. But it's not rocket science, and can be learned given determination and time. I made many programming mistakes during my learning experience – I found the trick is to make small programming steps, use the simulator to test after every step and have a route to step backwards if any step does not work.

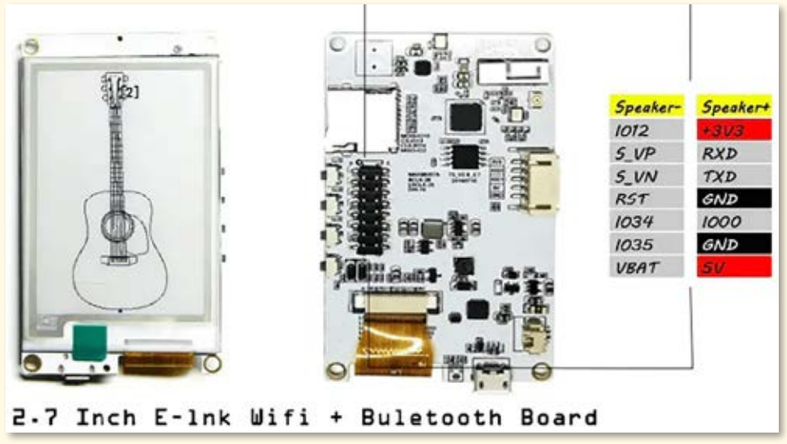
I started by adding the option to change the display mode from portrait to landscape. That taught me how the radar screen and text boxes are made to display. More challenging was adding the display mode option to the code a mobile phone uses to make setting changes on the SkyView.

I continued making numerous coding amendments/additions to the Braner fork we started with. These are some of significant ones:

The Linar and Braner forks display collision warnings by making the aircraft icons on the radar get bigger but this fails to provide quickly comprehended indications for 'directed lookout' - ie, where to look and the predicted time to collision. FLARM displays have long used flashing coloured LEDs in a rose/ring to indicate relative direction and time of collision traffic so the pilot knows where look.

Most modern FLARM 'radar' displays switch to an imitation of this presentation. Due to the limitations of the monochrome screen, I came up with a 'Lookout indicator' using three triangles to show direction and alarm level. (*See illustration*.) I and other pilots have seen this work in action and it has proven fit for purpose.

I changed the content of the four text boxes to make them more relevant. The Radar_View mode uses the text boxes to show the distance and relative bearing to the nearest (or alarming) traffic and the Competition ID. As a tug pilot, I unintentionally found this is very useful as I can easily see the rego of the glider on tow (the closest traffic) which greatly helps with radio communications. Also, when under tow, the distance will show as approx imately 75m, the rope length. When the glider releases and its distance increases, I can see the direction it is heading and monitor its position, so confirming safe



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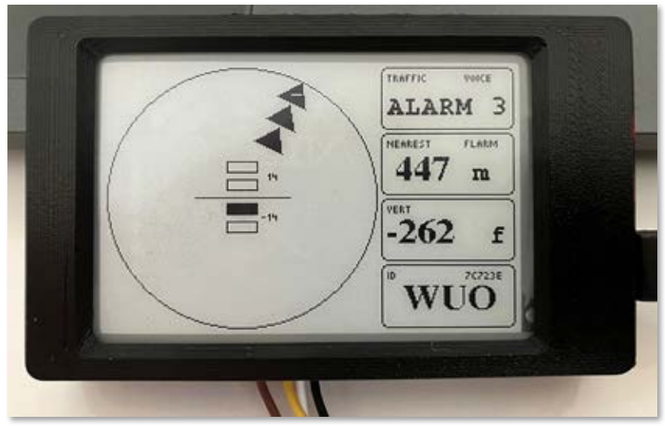
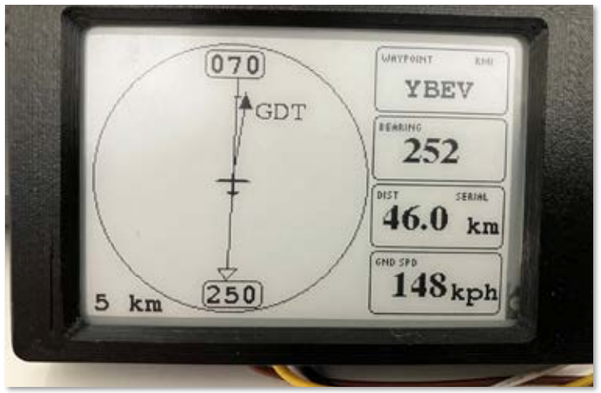


ABOVE: Alarm Panel showing a FLARM Level 3 alarm (0-9 seconds until collision). Lookout indicator (black triangles) shows relative direction. Centre bars show vertical angle. Threat has Comp ID 'WUO'. Look out!



ABOVE: Nav View designed to assist tug pilots navigate for paddock retrieves.

continuing separation.

Coincidentally when I was working on the SkyView, I was considering what handheld GPS device to purchase for my club's tugs for aero retrieve navigation, as the old ones were on their last legs. I wondered, since the FLARM GPS is feeding location data to the SkyView, could it be used?

To find out, I added a Nav_View screen and code so that the text boxes would show the bearing and distance from a selected waypoint (eg the home airfield), which is the data format used by a downed glider pilot to report his position. I had the opportunity to fly the tug on a retrieve using this and it worked exactly as intended. But I still wished it had a needle (like an RMI) that always points to the waypoint. So, in version WAGA03, it's there!

BELOW: WAGA SkyView installed in a Maul tug with voice alerts to pilot headset via the comms panel.

The WAGA SkyView has a built-in buzzer suitable for glider use. Alternatively, it can give synthetic voice alerts to a speaker - for example, 'Warning: Traffic 2 o'clock, 12 hundred feet, above'. (Note: The display creates the voice, not the FLARM transceiver.) We've also learned to connect the SkyView via a tug's radio or audio panel to the pilot headset. Some pilots liked the voice prompts, other didn't, so now it also has the option to send tone alerts to the headset.

A short video on YouTube entitled 'Flarm Display - SkyView WAGA Ver 03' [https://youtu.be/_5mlzl7RmtM] shows the Waga SkyView Display in action using simulation data.

Several other developers, mostly paraglider pilots, are currently working on their own forks (versions) of the SoftRF SkyView. Thus, other development boards and screen options are starting to appear, but they will not have the unique WAGA SkyView features unless someone ports them across.

CONCLUSION

The WAGA SkyView Display is the $60 FLARM & ADSB 'radar' display included in the WAGA Flarm system bundle that helped achieve the target price of under $1,000. More than 30 are in use in WA.

It can be used with any genuine FLARM such as MouseFlarm, PowerFlarm, WAGA Flarm or a SoftRF device. For just $60, it has a lot of functionality and may be a useful accompaniment or alternative to a standard FLARM LED display for owners on a limited budget. It does not attempt to compete with the expensive commercial FLARM radar displays.

It is the first and currently only FLARM display to have features designed for tugs. Tug pilots have commented they find it improves safety because of their increased situational awareness, visibility of release separation and their ability to see the callsign of the glider on tow and voice collision warnings to the pilot headset. It's also an effective basic navigation tool for paddock retrieves and returning to base.

The WAGA SkyView Display is a DIY build. The development board with integrated screen arrives fully assembled from the supplier. The builder has to download the software from an internet repository, load it onto the board by following a short set of 'flashing' instructions and then configure simple settings using a smart phone.

The source code, binaries, user manual, flashing instructions and the traffic simulator are in my GitHub repository at https://github.com/Bumpff/SoftRF_Skyview-WAGA if anyone wishes to explore.

I do not sell, manufacture or warrant these devices in any way. I'm happy to provide remote assistance and advice.

SOFTRF

SoftRF is an 'open source', non-commercial software solution that operates in the Instrument Scientific and Medical (ISM) radio frequency band and can 2-way communicate with Electronic Conspicuity (EC) devices using many of the common EC protocols. Its protocol options include Legacy (a close imitation of FLARM frequency hopping and encrypted communication protocol), FANET, ADS-B In and OGNTP.

Theoretically, SoftRF transceivers can see and be seen by FLARM transceivers, provided that SoftRF has kept up with any changes made by FLARM to its radio protocol. This is the same issue that the Online Glider Network (OGN), the ground receiver and data system that drives the likes of PureTrack, has since it too is not supported by the FLARM company. In practical use there have been mostly reports of good compatibility but also some issues, which seem to be getting fewer as bugs are resolved.

Note: FLARM cautions that "SoftRF is not based upon FLARM software. Correct functionality or interoperability cannot be guaranteed. Disrupting the FLARM network can negatively impact flight safety. Responsibility rests with the user." (Source FLARM website 02 March 2025).

AN OPEN SOURCE APPROACH

Open source software is publicly accessible source code that anyone can inspect, modify and enhance, thus promoting collaboration and transparency in software development. XCSoar is an example of open source software. It is generally licensed for reuse on the basis that no commercial gain is permitted. Releasing a project to the open-source world of software development can bring together worldwide volunteer programming talent. In the case of aviation EC systems, the programmers are often active pilots, who use their flying and programming skills to continue building ever-improving IT solutions for pilots.

SoftRF devices are not marketed by commercial companies or sold as ready-to-use products. Individuals or groups need to acquire the appropriate hardware (multi-purpose 'development' boards usually made in China) and load the free software. Such devices can be assembled by an average person following written instructions, but a basic understanding of electronics and computing is useful.

Like FLARM, a SoftRF system comprises of a transceiver and display, or a combined transceiver/display unit. GPS and FLARM data is passed from transceiver to display by cable, internet hotspot or Bluetooth using either the standard NMEA or GDL90 data communication sentence structures.

The SoftRF transceiver hardware comes with a default 6-digit hex ID, just as FLARM transceivers have. It is also possible to program them with the an aircraft's unique ICAO 6-digit hex ID. This means they are uniquely identifiable and can be registered on the OGN, similar to FLARM devices. An ADSB-In module can be added to a SoftRF transceiver.

The assessment of potential collisions is undertaken by the FLARM transceiver or SoftRF transceiver, not in the FLARM display or SoftRF SkyView display. SoftRF transceivers assess potential collisions either by distance or 'vector' and issue collision alarms in an identical format to FLARM. 'Vector' is likely an approximation of the FLARM collision prediction algorithm but may not be as good.

The SoftRF project includes the SkyView display, which is capable of displaying data from a genuine FLARM or SoftRF transceiver as a 'radar' screen and collision alarms. A SoftRF

SkyView display can work with a genuine FLARM transceiver, and a commercial FLARM display will work with a SoftRF transceiver.

The originator of the SoftRF project was Linar Lyusupov in 2015. He described the project as "a DIY, multi-functional, compatible, sub-1 GHz ISM band radio-based proximity awareness system for general aviation". He created the software (with credit to numerous contributors of code libraries), selected commercially available low-cost hardware and designed enclosures.

FIGURE X: LINAR ORIGINAL SOFTRF SKYVIEW

In 2022, Moshe Braner started a 'fork' (independent version) of the SoftRF code based on Linar Version 1.2. He has advanced the code considerably in many ways including the option to set Aircraft ID (eg ICAO hex code) rather than device default code, improved 'vector' collision assessment, ADS-B module, support for multiple hardware options and lots more.

Linar has not incorporate these changes in his version but has made a small number of amendments of his own. Thus SoftRF has evolved into two distinct forks with the Braner fork probably the most capable version that is being developed more actively.

Linar and Braner opensource code is publicly accessible on https://github.com, the online software developers' repository. Anyone can download the source code, at no cost, for their personal use and amend it if they wish, subject to some license terms. Figure X: Linar original SoftRF Skyview

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LOOKING BACK - BUILDING FORWARD

In my seagoing career I often worked in inherently hazardous conditions, with others imbued with a strong team ethos. We looked after each other's backs. There was a fundamental excitement in the work we did, constantly changing environments and demands. We did cool stuff, mostly safely.

Sometimes it was scary, painful, brutally demanding. Some days were hellish, terrifying, exhausting, dealing with emergencies and high stress situations. The teamwork and trust in each other's skills and initiative got us through. Later, on reflection, we gained some wisdom from those hard days, cemented professional respect and friendships, and ultimately used those experiences to build safer systems and practices. The process hasn't been risk-free or hazard-free, but risk-aware and better managed, with professional insights constructively shared.

On reflection, my gliding experiences, beginning in Woomera GC in 1971 up to Canberra GC in 2026, have given me helpful insights in my Navy career and post-retirement activities, and vice versa. Gliding has been so exciting and inspiring, enjoyed mostly safely. As GAus Safety Manager I have worked with so many amazing people, harvested their wisdom and expertise, built teamwork, assisted others facing their most arduous and traumatic days.

SAFETY – PEOPLE AND PRACTISE

We dealt with emergencies and their aftermath, worked collaboratively to build safer systems and practices. The integrated teams, across departments, across regions and clubs, through many motivated and talented individuals, have helped us deal with many safety issues and a few crises, too. In aggregate, it has been an immensely rewarding experience, notwithstanding a few rough days.

In gliding I do think we are now more risk-aware, better managed, with gliding safety insights constructively shared. When I look back to our recent Safer Skies Stronger Clubs event in Brisbane in April 2026, we were supported by eminent speakers and enormously talented individuals, and by CASA and industry participants. We gained valued insights into our risk issues and safety priorities, as well as tackling challenges in sustainability and growth, membership and communications, culture and sporting excellence.

In the Australian Safeskies 2026 Conference in May 2026 with government and industry, plus other sporting aviation groups and safety professionals, we shared insights into safety performance data and analysis, and built strategic relationships. While we know improvements are needed, GAus is seen as a very credible ASAO with forward-looking ideas and priorities.

CONTRIBUTING TO THE SAFETY SPACE

I know well that when we are on the flight line, at the launch point, or soaring in the air, we are pursuing personal rewards and shared enjoyment. We're not concerned with bureaucracy and official stuff. Yet we all benefit from the efforts of good people seeking to preserve our freedom to fly in shared airspace, safely, in high performance gliders, with more autonomy and fewer encumbrances. Great teams are working in the background to enable that to happen.

So, looking ahead, what's happening? What is being built in the safety space?

CASA is publishing a Gliding and Glider Towing Sector Safety Risk Profile (SSRP) and accompanying Risk Bow Tie diagrams on their website. We had a workshop on these during our Safer Skies Stronger Clubs event. We will use these constructively to back safety submissions, cases for change.

Much GAus team effort is going into safety submissions, engagement with authorities and development projects on changes to airspace, and infrastructure developments affecting gliding aerodromes, competition and cross-country safety. We are pushing hard to move or limit low level obstructions, deconflict with other air traffic, change waypoints and airspace design, update ERSA entries, issue NOTAMs, improve chart markings and gliding information shared with other aviators.

We are active members of the CASA Runway Safety Working group for Non-Controlled Aerodromes, dealing with multiple environmental, wildlife, aerodrome maintenance, radio and operational risk drivers, particularly in shared aerodromes. We have ensured the focus is not just on Certified Non-Controlled Aerodromes, subject to CASR Part 139, but also Non-Certified Aerodromes as used by many gliding clubs.

KEY DOCUMENTATION

GAus is also represented with ASAOs on the CASR Part 103 Manual of Standards (MOS) Technical Working Group, which affects sporting aviation aircraft including gliders flying VFR under CASR Part 91. This in turn affects minimum equipment levels and airspace access, plus our systems of operation and maintenance. We are working to defend our existing systems, reduce any new burdens, and ensure reasonable safety and risk measures are implemented.

You will soon see a new Safety Priorities statement, informed by recent reviews of our safety priorities and key initiatives. That will support an update of MOSP5 SMS and GAus Emergency Response Plans. We have learned from recent hard-won experiences with serious accidents.

This brings us to recent and ongoing work on canopy safety, pre-launch checks and essential actions, training system improvements, low level training, straight in approach and circuit training, glider conversion training and briefings, better radio and airspace procedural training, powered sailplane safety, electric propulsion, crashworthiness – many interesting issues requiring great teamwork and safety focussed collaboration.

Pawnee maintenance, inspection and airworthiness issues, cost and risk drivers continue to get priority attention. That in turn has accelerated some clubs using combined aerotow and winch operations, and other clubs adopting new LSA towplanes. We have been working with RAAus to add new LSA towplanes to the list of approved types, within safe operating limits.

WORKING TOWARD THE FUTURE

Great work has been done to conduct webinars and develop guidance references for people involved with investigating gliding occurrences and accidents. Webinar recordings are available on the Gliding Australia YouTube channel.

Improving safety reviews and audit checklists, and reporting system feedback has required much teamwork, initiative and upgrades to our IT systems and processes.

DREW MCKINNIE
SAFETY MANAGER
safety@glidingaustralia.org

This review now brings me to succession. I have been GAus Safety Manager for five years now. While some extension is possible, the GAus CEO and Board will be glad to hear from interested people who would like to become constructively involved in this rewarding SM role, build on our progress, bring new experiences and expertise to build safer systems and practices. Info is available in the GAus Position Descriptions Manual ADMIN 0019, as well as MOSP5 SMS. You may soon see an Expressions of Interest document. There's fun to be had, and I'm happy to facilitate a long handover, and grease the rails of corporate knowledge transfer.

GAUS APPROVED MAINTENANCE ORGANISATIONS

Adelaide SC Workshop	**PO Box 94 Gawler SA**	**08 85221877**	**maintenance@adelaidesoaring.org.au**
Aeroswift Composites	**20 Cathie Street Ballarat Vic**	**0428 399 001**	**comcom2@bigpond.net.au**
Australian Aircraft Kits	**Airport Drive Taree NSW**	**02 6553 8100**	**aircraftkits@bigpond.com**
Border Aviation Pty Ltd	**PO Box 273 TocumwalNSW**	**0428 743 450**	**admin@borderaviation.com.au**
Camden Sailplanes	**PO Box 163 Camden NSW**	**0418 681 145**	**camdensailplanes@bigpond.com**
Aviation Composites	**Link Bibra Lake WA**	**0410 464 553**	**apmm@aviationcomposites.com.au**
Jonker Sailplanes	**Potchefstroom S Africa**	**+ 27 82 879 8977**	**support@js1.co.za**
Keepit Glider Tech	**Lake Keepit NSW**	**0417 843 444**	**keepitglidertech@outlook.com**
Lockwood Sailplanes	**Kangaroo Flat VIC**	**0407 315 511**	**dg400gke@gmail.com**
Maddog Composites	**16 Jacobs Street Dinmore Qld**	**07 3143 3131**	**claire@maddogcomposites.com.au**
North East Aviation	**Wangaratta Airport Laceby VIC**	**0408 440 173**	**neaviation@optusnet.com.au**
Riverland Sailplanes	**PO Box 1128 Waikerie SA**	**0488 717 833**	**grant@riverlandsailplanes.com.au**
RNA Maintenance	**Condell Park NSW**	**0414 867 644**	**roger.alli@hotmail.com**
Scarborough Sailplanes	**ScarboroughQLD**	**0421 061 811**	**justinjsinclair@hotmail.com**
SL Composites	**Hangar 4 Temora Airport NSW**	**0438 773 717**	**slcomposites1@gmail.com**
Sunraysia Sailplanes	**PO Box 980, Irymple VIC**	**0400 144 729**	**sunraysiasailplanes@gmail.com**
Ultimate Aero P/L	**P.O.Box 431 Boonah Qld**	**0421 595 533**	**nigel@ultimateaero.com.au**
Vintage Glider Repairs	**Munruben QLD**	**0412 773 668**	**lahina2@hotmail.com**

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

POWERED SAILPLANE AIRSTARTS

THREAT AND ERROR MANAGEMENT

BY PAT BARFIELD

Picture this: You are in a powered sailplane, and you have pushed far from home ahead of an approaching front. Shadows intrude over your homeward route. You get lower, and you feel okay about your engine behind your seat. “Let’s keep going.” Hope turns to apprehension as the sky turns soft then flat. You push on over the forested areas, and yes, you can just reach open ground. “Oh well, time to start the engine and cruise home under power,” you say. You raise the mast, attempt an engine start, then airstart procedure, but no joy, it won’t fire up. Meanwhile you are sinking faster, as you rapidly descend towards a tight little paddock…

Powered sailplanes are becoming more common in Australia because they are a great way to fly independently without needing an aerotow and they open up many new places to fly around this vast country. With their increasing use, it’s important to understand the risks and hazards associated with the unique aspects of powered sailplanes.

This article will concentrate on the topic of restarting the engines in flight, which doesn’t always go to plan. There were 42 reported SOAR incidents between 2011 and 2025 relating to inflight restarting of powered sailplane engines, and many of us will have heard anecdotally of more unreported incidents. The statistics in this article relate to the reported incidents to share the benefit of these lessons without having to learn them first-hand.

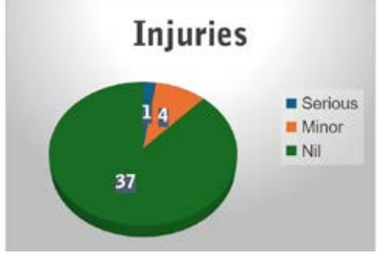
THREATS

The greatest threat is the engine failing to start when needed due to a variety of reported factors including mechanical failures, electrical system, fuel system or contamination, propeller damage and carby icing.

Another reported cause of an engine failing to start resulted from the pilot not following the checklist actions, exacerbated by the stress of low-height decision. The impact of a late outlanding decision will be discussed in more detail in the human factors section.

After a successful restart, the threat of adverse weather conditions such as downdrafts from orographic or convective conditions may impact climb performance, which resulted in one impromptu outlanding.

You may think that modern jet and electric powered sailplanes are totally reliable, yet jet and electric engine failures were reported. You would expect greater engine reliability with a 4-stroke engine compared to a 2-stroke, however the data showed a similar rate of failure between 2-stroke and 4-stroke powered sailplanes.



HUMAN FACTORS

NORMALISATION OF DEVIATION

The term ‘normalisation of deviation’ was first used after the Space Shuttle Challenger explosion. Even though there was a known threat with the rocket booster O-rings in cold temperatures, NASA became desensitised to the risk by gradually reducing the safety margins until eventually a catastrophic event occurred. Many pilots who have successfully climbed away from a low-level airborne restart may lead to a creeping culture of personal normalisation of deviance, to delay the outlanding decision incrementally later until an incident or accident occurs.

LATE OUTLANDING DECISION

As height reduces and an outlanding becomes more imminent, more attention is required on paddock selection and landing tasks and, consequently, attention to restarting and other checks reduces. For many pylon mounted engines, because the stall speed increases when the engine is deployed, greater flying accuracy is required if the engine fails to start.

Pilots who made late outlanding decisions were significantly more susceptible to a lapse of checks, mostly landing with the wheel up or failing to start. A lapse of checks was evident in 6 out of 18 late outlanding decisions (rate of 33%) as opposed to 3 out of 23 timely outlanding decisions (rate of 13%).

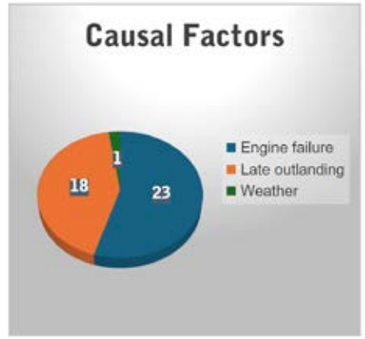
Most pilots think of their available resources in terms of two factors, altitude and airspeed, yet there are two more to consider: time and ideas. The lower you are, and the faster you are sinking, the less time you have to perform any restart attempts and to manage all the other tasks needed to execute a safe landing. Time compression and hurried activity markedly increase the probability of lapses in checks and errors in execution. Furthermore, if you run out of ideas, more errors are probable such as goal fixation on a worsening option.

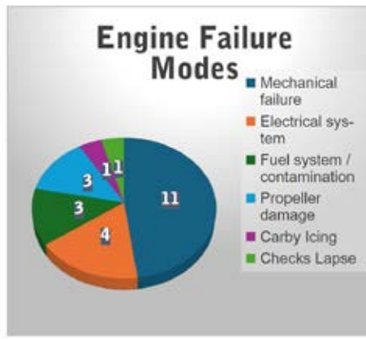
THREAT AND ERROR MANAGEMENT

Some threats can’t be totally mitigated because engine unreliability is inherent in powered sailplane engines due to design standards, single ignition systems, unreliable fuel quantity indications and engine systems overheating.

Options to manage the remaining threats include:

- Regular powerplant maintenance and running.
- Change fuel regularly, particularly in a sustainer engine that may have limited engine use.
- With a non-powered glider, typical risk appetite dictates that pilots should always fly within gliding distance of landable terrain. Given the reliability of inflight engine starting, this maxim should be followed for powered sailplanes as well.
- Don’t extend the engine unless within gliding range of landable terrain with the engine deployed.
- Assume the engine won’t start.
- Start the engine no later than on downwind for your selected paddock with the aircraft configured for landing (with the undercarriage down) in case the engine fails to start. Ensure that your downwind leg is sufficiently comfortable to reach your landing area if the engine is deployed but not running.
- Know how long it takes to start the engine via the primary and alternative start methods. Know the warm-up time to achieve climb power. Restart earlier after extended flight at high altitude and low air temperature.
- Be familiar with climb performance in areas of strong downdrafts.
- Beware of time compression, leaving limited time to perform essential actions.





RESTARTING ENGINES IN FLIGHT

The GAus Powered Sailplane Manual recommends initiating a restart above 2,000ft AGL. The following extracts from powered sailplane flight manuals contain some useful guidance that can also be considered for other powered sailplane types. Note that the minimum heights quoted by the aircraft manufacturers are for current factory pilots in the best-case scenarios and you should add your own margins depending on your personal flying performance and risk appetite.

DG 1001M FLIGHT MANUAL

Restarting the engine should only be done over landable terrain and not below 400 m (1320 ft) above ground. But it is better to restart the engine at 200m (660ft) over a landable field rather than at 400m (1,320ft) over a forest or unlandable scrub.

Should a flight be conducted over a wide expanse of unlandable terrain, the engine should then be restarted at 1,000m (3,300ft) above ground level so that if the engine does not start, all the emergency starting procedures can be followed without hurrying, including retraction of the engine if necessary.

DG500M FLIGHT MANUAL

With the engine extended but not running, the rate of sink at 90 km/h (49 kts) increases to 1.5m/sec. (300 ft/min.). This is a glide angle of 17!

Therefore, restarting the engine should only be done over landable terrain and not below 500m (1,650ft) above ground. But it is better to restart the engine at 200m (660ft) over a landable field rather than at 500m (1650ft) over a forest or unlandable scrub. Should a flight be conducted over a wide expanse of unlandable terrain, the engine should then be restarted at 1,000m (3,300ft) above ground level so that if the engine does not start, all the emergency starting procedures can be followed in peace including retraction of the engine if necessary.

ASK21MI FLIGHT MANUAL

One should always be prepared for the possibility that the power-plant will fail to deliver the hoped-for propulsion. This may not necessarily be due to a technical shortcoming, but might be caused by nervous tension of the pilot, leading to mistakes in carrying out starting procedures. The engine and its reliability should be assessed in light of a sailplane pilot's experience, that a thermal is not necessarily found when it is most urgently needed.

The engines of powered sailplanes are not subject to such stringent production and test regulations as normal aviation engines, and therefore cannot be expected to be quite so reliable.

A minimum safe height for extending the propeller and starting the engine must be met. The criterion is that it must be possible to retract the propeller again and carry out a normal sailplane outlanding if the engine cannot be started. A general valid value for this minimum safe height is about 300m (980ft); however, this also depends strongly on pilot ability and geographic factors.

Stemme flight manual

It is not wise to assume that the drive system will never fail. When flying in glider configuration, it is recommended to plan the flight as if there were no engine. In motorised flight, always be prepared for an engine failure, with a possibility of a safe landing within your gliding range. In both cases, if the engine either refuses to start or simply quits, you may still land as a normal glider.

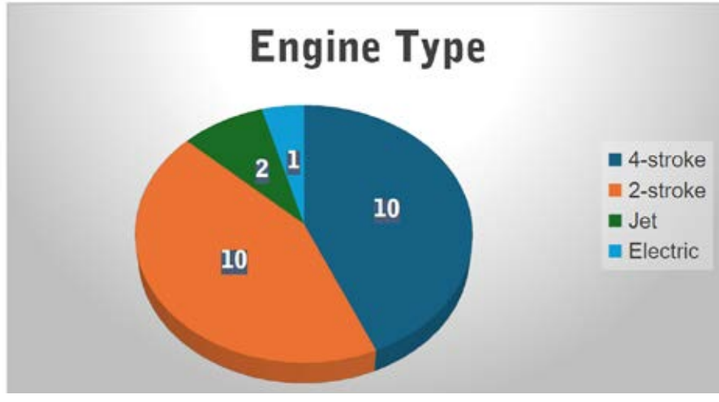
Risks and Decisions

While there are steps we can take to reduce the risk of mechanical failure, however, there will always be a residual risk. Assuming the engine will not start is the safest way to manage this risk. Assuming an outlanding is imminent is also prudent.

The other significant risk that pilots can manage is the decision point when to switch from a soaring pilot to a powered pilot to a landing pilot. The later you leave these decisions, the higher the risk.

No one sets out to have an accident. Yet many pilots find themselves in worsening situations, at increasing risk of accident, due to plan continuation bias, cascades of deferred and small decisions, reducing margins, increasing time pressure with reducing energy and options.

If the engine starts and you can climb away, that’s a bonus!



THE AIRWORTHINESS PANEL
AND WHAT IT DOES FOR YOU

Who are the RMAs?
Standing: Scott Johnson (QLD Incoming), Zac Simpkins (QLD), Dennis Stacey (Executive Manager Airworthiness), Lindsay Mitchell (QLD Retiring), David Villiers (Chair of the Airworthiness Panel), John Wharington (Vic/Tas), JR Marshall (SA/NT)

Gliding Australia has three departments that administer various aspects of gliding in Australia. The Operations Panel looks after operational standards, the Sports Development Panel handles competitions and associated matters, and the Airworthiness Panel takes care of the airworthiness of our gliders, powered and unpowered.

These panels are all made up of volunteer members with experience in their various fields. The Airworthiness Panel includes Annual Inspectors nominated by their Regional Associations - these are the Regional Managers Airworthiness (RMA), of which there are one or two in each region. The panel sets policy and procedures for airworthiness management, and works to oversee and maintain the standards of airworthiness for all Australian gliders.

The panel is chaired by a member of the GAus Executive – the Chair of the Airworthiness Panel (CAP). The CAP is recruited separately and appointed by the GAus Board and is required to have appropriate professional experience in airworthiness as well as gliding airworthiness experience.

The work of the panel is critical for the safety of our aircraft, and the jobs can take up a significant amount of time and reduce the time that RMAs have to fly themselves. Many are instructors, some are tug pilots, all are Annual Inspectors, and all are volunteers. Along with their RMA duties, instructors and tug pilots are usually on their own club's roster.

SO, WHAT DO YOUR RMAS DO?

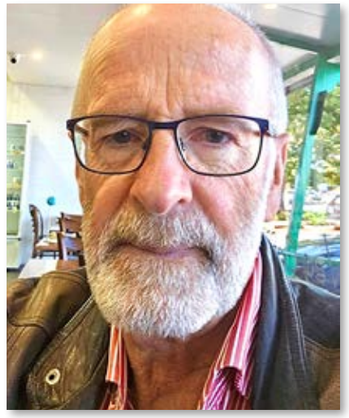
For a start, the RMAs are your regional airworthiness experts and advisors. They are all experienced Annual Inspectors, and some have additional qualifications as well. As part of the Airworthiness Panel, they have access to additional advice from other members of the panel as well as the Executive Manager Airworthiness, Dennis Stacey. Your local RMA should always be your first point of contact for any queries about airworthiness, glider maintenance, qualifications or revalidation. As such, they are a valuable resource for Maintenance Authority holders. Both MOSP3 and BSE specify that the RMA is to be consulted in certain circumstances.

The RMAs are also the major contributor to Gliding Australia's airworthiness assurance system in that they organise and carry out Airworthiness Audits of our clubs, Approved Maintenance Organisations (AMOs) and Maintenance Authority (MA) holders. These audits are intended to both help clubs, AMOs and MA holders maintain the airworthiness of gliders and motor-gliders and to improve their airworthiness management systems. The audits also serve to give the GAus Executive and Board (and through them, CASA) confidence that glider airworthiness continues to meet the expected high standard. This involves a lot of preparation, travel and report writing and on-going follow-up of audit findings.

Defect investigation is another task that falls to the RMAs. Usually, whenever a defect report (SDR) is raised, one or more of the RMAs are assigned the job of defect investigation. This can take considerable time spent either on the phone or at the club/AMO that reported the defect. Some of these investigations involve contacting the Type Certificate holder or manufacturer, or seeking advice from someone more familiar with the issue under investigation. The outcome of these investigations can range from 'no further action' to the raising or amendment of an Airworthiness Notice (AN), an Airworthiness Alert (AWA) or, in extreme cases, an Airworthiness Directive (AD). An example of this is GAus AD 684 Issue 3. This resulted from an investigation carried out by RMAs and the EMA into fuel valve failures in Australia. EASA has now issued an AD mirroring the GAus action for Grob G109 aircraft.

A particularly significant workload is the organisation and running of Airworthiness courses. This is another job falling to the RMAs. A huge amount of work goes into the organisation and running of an airworthiness course, including finding a venue, organising catering and accommodation, finding mentors and presenters for the various modules, obtaining the necessary funding, training materials, training aids and consumables, advertising the course, registering participants and checking that they have the necessary prerequisites, overseeing the evaluation of candidates, and recommending to the EMA the issue of maintenance authorities. That does not include the week or more spent actually teaching the course and mentoring attendees.

However, perhaps the most important part of their job is to contribute to the development of airworthiness policy including MOSP3, BSE and other airworthiness documents and manuals. The Airworthiness Panel works as a group, and their combined wisdom far exceeds that of any individual member. The range of expertise, both in gliding and their employment, adds significantly to the policy development process. The recently published Version 25.1 of BSE is the work of the panel and several other contributors. The current major policy development project that the RMAs are working on is the development of formal syllabuses for each of our maintenance authorities. Already completed (but not yet published) are the airframe Replacement of Components and Annual Inspector syllabuses. Engine and motor-glider syllabuses are under development. To many, this may seem to be just more red tape and more rules to get in their way, but these syllabuses are an important factor in obtaining and retaining our Part 149 Approved Sports Aviation Organisation (ASAO) status with CASA. It will also ensure consistency between courses run in the various regions and enable the development and sharing of common training packages across GAus. The panel is also working on an update to the Airworthiness Schedule of Experience to improve its usage and value as evidence to support granting or upgrading airworthiness qualifications.



David Villiers
Chair Airworthiness cap@

Many other aspects of the RMAs' work calls upon their experience and knowledge to help around their own clubs and others in the region. However, there are some aspects of the job that they cannot handle by themselves.

So, how can you help? RMAs are always looking for experienced MA holders, particularly Annual Inspectors, to assist in their work. That may be helping with an audit of another club or AMO, investigating a defect on a system which the RMA lacks familiarity, helping to run an airworthiness course, or mentoring someone who is working towards a new airworthiness authorisation. All MA holders have something to contribute, and your local RMA will appreciate any help they can get. Getting involved in the work of your RMA is a good way to build experience.

Finally, GAus office holders, including RMAs, should not serve more than five years. The main reason for this is to facilitate turnover of the positions and the sharing of experience in airworthiness to a wider group of people. There is little benefit in an RMA serving until they retire from the sport, taking all that experience with them when they go. Hence, every RMA is looking for their relief! Do you have what it takes?

LEONGATHA BASE, UNDERCARRIAGE IS LOCKED IN 'UP' POSITION

BY RODERICK CARMICHAEL

As an alternative to my intended announcement of my circuit entry, this came in at a distant second.

My Grob Single Astir - among the more than 1,200 variants produced – has probably seen every permutation of niggles and problems in the model's nearly 50 years, but jammed 'UP' gear was not one that I'd heard of.

A little bubble of lift gave me the opportunity for a couple of orbits and extra time for some further wrenching/gentle toggling of the undercarriage handle, the futility of which became obvious days later when pictures of the seized over-centre mechanism were shared.

No, it was time to rejoin the pattern. Every take-off and landing is watched and judged by at least a portion of club members present on the field but my earlier radio announcement and further conversation about my little dilemma with the CFI guaranteed me a full house of onlookers, critics and iPhone recordings. Have a look at one of them here.

tinyurl.com/underup1

In my favour were some very still conditions and fairly green, lush grass on the right side of the tarmac. The blare of the screeching alarm (warning that the air brakes were deployed but not the wheel!) from the speaker right behind my head was recognised quickly enough not to bother my concentration on making a smooth touchdown. It was a cracker, not dramatic at all and slowing to a stop in close to normal distance.

I was soon joined by my club cohorts and after inspecting for damage, of which there was none - "looks cleaner" was one comment – and some happy snaps, the serious business of extracting WVJ from the field began. Luckily we had sufficient helpers to raise the 250KG of Astir onto the trailer cradle, allowing the satisfying confirmation that the gear was utterly jammed in the 'UP' position.

The following dismemberment and packing of WVJ into her trailer was a great learning/team experience, as most of us had limited rigging/derigging experience. Thankfully, the trailer – with tyres inflated - was ready to leave from behind the hangar.

Our little club has a well established level of communications for each phase of the day's flying, starting with a pre-Ops. Briefing always includes group discussion about any irregular incidents like the one on this day. The knowledge of instructors and senior and experienced members shines through at these times, and we're all the better for it!

PROGRESS BEHIND THE SCENES

Better information, earlier action and improved feedback to members

DAVE BOULTER
EXECUTIVE MANAGER OPERATIONS
emo@glidingaustralia.org

OCCURRENCE INVESTIGATION AND JUST CULTURE WORKSHOPS

The two-part Occurrence Investigation and Just Culture Workshops have now been completed.

The first workshop covered the immediate response to an occurrence, SOAR reporting and escalation, preserving evidence, gathering facts and some of the common pitfalls in investigations.

A lot has been happening within Operations over the past few months. Some of this work is now becoming visible to members. Other work has been done quietly in the background. All of it is aimed at improving how we manage safety information, communicate with members and represent gliding interests.

The second workshop focused on structured, evidence-based investigations. It included Human Factors, systems thinking and the importance of analysing causes rather than simply identifying symptoms. It also looked at how good reporting and investigation can build a positive safety culture.

A key theme across both workshops was Just Culture. This means encouraging open reporting and learning while still recognising individual responsibilities. The purpose of an investigation is not to find somebody to blame. It is to understand what happened, why it happened and what we can do to reduce the chance of it happening again.

The workshops were practical and based on real operational situations. They were designed to help clubs make better decisions, conduct stronger investigations and turn individual occurrences into shared learning.

This training was fundamental to our work in tackling the SOAR backlog. It has also helped us develop a clearer and more consistent process for reviewing SOAR reports across Gliding Australia.

The workshop recordings are now available on the Gliding Australia YouTube channel. I encourage CFIs, instructors, Regional Managers Operations and anyone involved in reviewing occurrences to watch them.

A new Operations Advice Notice covering the revised SOAR process will be released shortly. It will explain the responsibilities of the SOAR originator, club CFI, RMO and the national office. It will also explain how departmental, specialist and safety input will be brought together before a report is finalised. There is still work to do, but we now have a much better foundation.

WEBSITE IMPROVEMENTS

A considerable amount of work has also been completed on the Gliding Australia website.

The new website infrastructure has been approved and the previous interfaces to Salesforce have been removed. This was important. Gliding Australia was facing a nightmare of ongoing software licensing fees if the previous arrangements had been continued.

Getting this work completed required a real team effort. Sharon Brunton, our IT Manager, led much of the work. Ian Munroe, our Salesforce consultant, provided the specialist support. Yours truly also contributed where I could.

We now have new website pages for published SOAR reports and Service Difficulty Reports.

This is more than a website change. It is an important part of improving the feedback loop to members. People take the time to submit SOAR reports and SDRs. We need to show how those reports have been considered and what we have learned from them.

The new pages will make safety and technical information easier to find. Over time, they should help members identify recurring issues before they become accidents.

CASA CONSULTATIONS NEED YOUR INPUT

We also have a considerable amount of regulatory work ahead of us. CASA currently has several proposals and consultations that may affect gliding. These range from proposed annual charges for VH-registered aircraft to allowing some drone operations above 400ft.

These proposals can have consequences that are not always obvious to people outside our part of aviation. A proposal that appears reasonable for powered aircraft or commercial operators may create a very different risk for a glider operating cross-country, soaring over an open-cut mine or searching for a safe outlanding area.

Gliding Australia will continue to prepare formal responses where required. However, feedback from individual members and clubs is also important.

Please read the consultations and make a submission. You do not need to write a legal document. Explain, in plain language, how the proposal may affect your flying, your club or the continued operation of your aircraft. If we do not explain the effect on gliding, we cannot assume that somebody else will.

PROTECTING AIRFIELDS AND GLIDING OPERATIONS

We are also facing a growing number of battles involving airfields and nearby development.

Some airfields are under pressure from urban encroachment, changing ownership, planning decisions and increasing operating restrictions. At the same time, energy developments are creating new issues for gliding operations.

Wind farms close to airfields can affect circuits, training areas, launch operations and cross-country routes. Solar farms can remove paddocks that may previously have provided emergency landing options. Transmission lines, towers and other infrastructure can create further hazards.

These developments are often supported by aviation risk assessments. Unfortunately, those assessments do not always properly consider sports aviation. They may focus on airlines, commercial operations and the larger airports – the big end of town – while giving little attention to gliders, recreational aircraft and unpowered flight.

To improve our response, Gliding Australia has brought Operations and our Airspace, Aerodromes and Avionics Officers closer together. The first of these coordination meetings was held this month.

The aim is to identify proposals earlier, share information and provide better input into planning processes. We want aviation risk assessments to properly describe the risks to sports aviation, not simply conclude that there is little effect because airline operations are not involved. Early involvement is critical. By the time construction begins, it is usually too late to achieve meaningful change.

Members and clubs can help by telling us about planning proposals near their airfields. Do not assume that Gliding Australia already knows. Local knowledge is often the first warning we receive.

There is plenty of work ahead. However, the improvements to SOAR, the website and our coordination of airspace and airfield matters show what can be achieved through good teamwork.

CLASSIFIED ADVERTISING

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

SINGLE SEATERS

VH GQD Glasflugel H303 Mosquito S/N 65 1977

Well equipped high performance 15m class 42:1. Competition and wave ready. Upgraded panel with electronic ASI/ALT/VSI, Open Vario Navigation display, FLARM, Mode C TXPDR, 2 varios, SkyEcho II ADSB, USB ports, dual batteries. Mountain High Oxygen system, winglets, wing-tip wheels, tow out gear, wing and elevator covers, cockpit cover, parachute, refurbished cockpit, good trailer. Located Tasmania. $30,000 **Call Bob 0414326804** or email 1946flyer@gmail.com

VH-FQO Glasflugel Mosquito B S/N 171, $26,000ono, includes excellent trailer and LXS80Club, located at Cunderdin Airfield, MR current to Oct 2026, contact me for full details, have all history and documents since first flight in Jan 1980 contact me for further information and photos Stuart Usher, spitfirestuart@gmail.com **Phone 0499900044**

VH-GQF Mosquito

The Glider is setup for competition and is a proven performer.

Recent 4000hrly survey completed and will come with fresh form2. Striefender seals on all surfaces.

V7 vario set up for electronic compensation and XCvario set up on the TE system. XCnav remote joystick for XCsoar,PDA mount for XCsoar,Canopy Flasher, Flarm, Canopy Cover, Cockpit extractor vent, External plumbing, Fuselage flap fences. Easy to rig, two pins (main and tail) Automatic control hookup, Large cockpit weight range. Trailer is well setup for comps and or outlandings his is a great Club Class competition glider or your first cross country glider due to its ease of handling and very effective dive brakes. $30,000 **Neil Bennett 0435 210 321** njkbennett@gmail.com

VH-GOP Standard Cirrus

$15,000 or ono. A fun glider for same owner for last 20+ years. 2231 hours, 975 landings and will be sold with a recently completed FRM 2. Currently in the club hangar at Warwick Gliding Club Qld. Basic Instruments: Winter ASI, Altimeter, Borgelt B-21 audio and mechanical vario, MicroAir 760 radio and Oz FLARM. Tow-out gear, wing walker and tail dolly Trailer registered in Qld until 5th June 2026 and in ok condition, reliable and user friendly

Contact Les: 0407 986 142 lesmilne@bigpond.com or **Phil: 0419 264 713** phillip.southgate1@bigpond.com

MOTORGLIDERS

VH-YBE ASH25

self launching Motor Glider. It's your choice, use a tug or launch yourself 25m and 26.5m options very good condition 3330 hours, 1300 landings Motor Rotax 505A 147 hours Accessories and parts inc. Full set of Jaxida covers, solar panels on engine doors, spare engine with muffler and much more Anschau Trailer. OPEN TO DISCUSSION ON TERMS FOR THIS GREAT GLIDER **Dieter**, preferred contact by email admin@sdr13.com or phone **0428 860 160**

VH-XUT Stemme S10VT

$225 000 or best reasonable offer, available for inspection in Bathurst, NSW.
Owned by the current owner with too many hobbies for 15 years.
Total hours flown 317. Total engine hours 203, had 143 when purchased, Total propeller hours 57.
Rotax 914. Trip to Morning Glory in 2022. Very well maintained and hangered. Sold with fresh Form 2
Original PU finish in very good condition. Well equipped with Trig Radio and Transponder, LX 8000, Power Flarm Core, all up to date.
Easy updates with wifi in LX8000. Mountain High Oxygen for 2 people, never used. Strong Parachute ideal for the Stemme. New tyres. Heaps of spares. Full documentation since new. No accident history or damage apart from a prop strike which was inconsequential. Full inspection by Stemme. Hence low propeller hours. Further pictures and details available by email request. Happy to have a chat about it. Can be delivered if required. Feel free to arrange an inspection**.**
Michael Begg michaelbegg1@gmail.com

VH-GBY ASH25E

1988 model with nil accident history and approx 1300 hours T/T in very good condition. Engine has 29 hours and is in good working condition. LX9000 dual, all Winter mechanical instruments recently replaced. Mountain high oxygen system Aluminium Cobra twin axle trailer in good condition. based in Narrogin Western Australia for sale at AUD 120,000 **Arnold Geerlings** arnold@geerlings.co.za **0450221661**

VH-YQA Distar Sundancer LSA 2019

with Rotax 912UL 100hp. Engine and Airframe 125 hrs, always professionally maintained and hangared at Boonah QLD. In excellent conditon, instruments include Dynon Skyview,transponder, LX Nax vario and flarm, with Galaxy ballistic parachute. 3 sets of wing tip extensions 13 to 15 metres Form 2 currently being completed. For further details contact Brian Gilby 0427320912 Airframe 4873 hours Engine 611 hours Prop 418 hours Tacho 251 hours

Recovered in Ceconite 102 in 2012 New Main Tyre and

continued over page

tube 2025 50 Year Survey completed 2022 Annual Inspection due Aug 2026
Lifed Components
Fuel / Oil lines Feb 2029
Harnesses March 2032
ALT/ASI calibrated to Aug 2027
Magneto service @ 330 hours Tacho
Contact **Kevin** – kevin@whitco.net.au **0412 538 469**

TUGS

PA-25-150 Wings and Airframe

Eddy current tested 06/26 and fabric ok. Wings $25k plus airframe no engine. All else cowls etc. there. For further details text **0477053351**

ZK-PPA PAWNEE D

Expressions of Interest Invited

The Marlborough Gliding Club (New Zealand) is seeking Expressions of Interest from gliding clubs and operators throughout Australia and New Zealand for the purchase of its Pawnee D, ZK-PPA.

The aircraft has recently passed NDT (eddy current) testing and is now available for sale.

Key Points

Piper Pawnee D tow aircraft (ZK-PPA)
Located in New Zealand
Recently passed NDT / eddy current testing
Available for inspection by arrangement
Expressions of Interest sought from gliding clubs and operators in Australia and New Zealand

Interested parties are invited to register their interest and request further information, aircraft records, maintenance history, engine and airframe times, and pricing details. To express interest or obtain further information, please contact:

Marlborough Gliding Club
glidemarlborough@outlook.com

VH-TGN 2024 Bearhawk

Experimental / Homebuilt Recently refurbished by Edwards Aviation
Located at Lake Keepit Soaring Club

When Pawnees were grounded because of the wing spar problem Keepit purchased a Bearhawk towplane to ensure continued operations. We now have our Pawnee FOO back in operation and the Bearhawk is surplus to requirements.

It is a good aircraft that has been significantly improved by Edwards Aviation since we purchased it. Photos are attached. Specifications are as follows:

Airframe Total Time: 255 hours - Engine Lycoming O-540, 255 hours total time, 5 hours since bulk strip - Propeller Hartzell Trailblazer, 5 hours since overhaul - Avionics Dual MGL Avionics screens LX Nav FLARM ADS-B: Not fitted - Additional Equipment Fully set up for glider towing. Performance Stall speed below 40 knots, Cruise 130+ knots Climb performance approximately 200 ft/min better than a Pawnee on tow. Price: $200,000 + GST Contact **Chris Bowman** president@keepitsoaring.com

Tocumwal Soaring Centre
The place to fly!

Fleet Includes

Boomerang	*JS3 RES*
Ventus 3M	*2 x Duo Discus*
Ventus 2cxT	*4 x LS4*
Discus B	*LS7*
Ventus B	*Multiple Training Gliders*

TOCUMWAL SOARING CENTRE

Glider Hire or **BYO - 3 x Towplanes - Onsite Accommodation - tocumwalsoaring.com**