



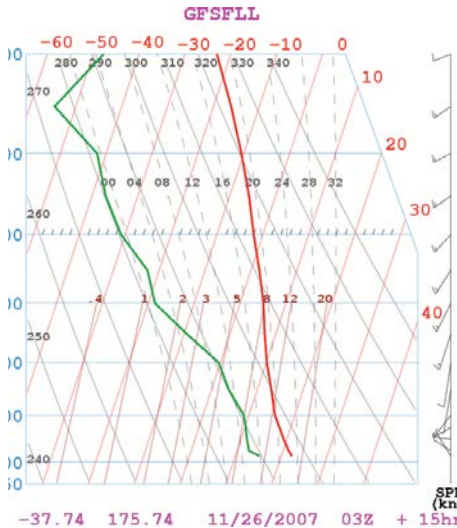
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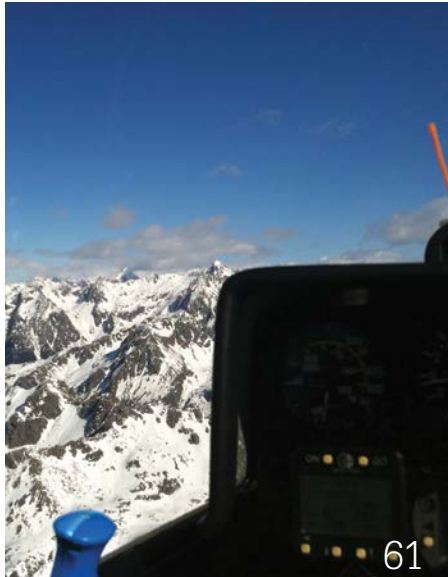
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from the editor

november 2014–january 2015

Merry Christmas everyone and welcome to an issue full of in-depth reading. This is, for want of a better description, a 'science issue'. It is certainly heavy on technical subjects. While this may not be to everyone's tastes, I like it and I'm pretty sure there are enough other people out there who do too. We've been extremely fortunate that two big international projects that are relevant and of interest to glider pilots have allowed us access to their work. The Deepwave project is investigating the way atmospheric waves propagate and the effect they have on global climate. It's fascinating stuff. Canterbury Gliding Club member, Professor Rick Millane approached the project directors when they based themselves in Christchurch earlier this year and he was welcomed on board. He tells us what Deepwave is all about and what he learnt on page 34

New Zealand glider pilots have been following the Perlan Project since Perlan based their early high altitude attempts in Omarama in 2002. The Perlan Project takes the idea of wave flying and is pushing it to the limit. We background this exciting project and look at where they're going with it on page 22.

One scientific area that glider pilots are very good at understanding is that of weather forecasting. We avidly watch 'the map' on the TV news, looking particularly for the weekend forecast. Once we get further into gliding, we start looking online at more and more detailed forecasting tools such as RASP and soundings. Way back in 2008, in issues three and four of *SoaringNZ*, we ran a series of articles, 'How to Read Tephigrams, by an Idiot.' David Hirst was the idiot and he did a marvellous job of laying out the step by step information you need to look at to make weather predictions from these complicated diagrams. These are the most asked for articles we have ever run and so, by popular request, we have reprinted them. For those who read the original, it will be a great refresher. For those new to the sport, this is what you need to know when you're sitting at morning briefing and wondering what the heck this chart is that everyone else seems to be getting information from.

The year seems to have rolled around really fast. As I write this, my son Alex is busy with the last minute business of packing and paperwork for JoeyGlide. He leaves on Friday. By the time you're reading this it will be over. There are four young people competing at the Australian Junior Nationals/JoeyGlide/Junior Pre Worlds – whatever you call it, it's a rather important



Letting off steam at the recent South Island Regionals

contest this year. They are Alex, Nicholas Oakley, Philip Dunlop and Campbell McIver. For Alex and Nicholas Oakley, this is their third year flying in Australia, always aiming for the big one, the Junior Worlds next year. Philip competed at JoeyGlide last year for the first time while this will be Campbell's first contest across the ditch. They're all very capable contest pilots but this year the competition will be particularly challenging with all of the other Junior teams from around the world attending. This year it isn't just the Aussies they are aiming to beat. We will of course have a full report in the next issue.

I urge you all to support these young people. This is a very expensive exercise and they're just starting out in the working



Charlie Tagg flying an LS8 at the South Island Regionals.
Photo Geoff Soper.

next issue

Next issue: Nationals, North Island Regionals, JoeyGlide, Interviews with Perlan Pilots

magazine deadlines

Deadline for Club News, articles and pictures is 31 January and 10 February for advertising.



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world with no real funds behind them. Sadly, unlike some countries, glider pilots here are always going to have to work for a living and do their gliding training at their own expense. Any sponsorship and donations for next year's campaign will be gratefully received. Contact team manager David Tillman if you can help. david@mfree.co.nz

Our branch of the McCaw family will be joining with the extended family for Christmas Day. It's always a happy occasion, especially these days as we have a new generation crawling around and reminding us what family and Christmas is all about. My wee grandniece is just adorable. Boxing Day or thereabouts we'll head south to Omarama. Where else would we go? There will be flying of course, but also swimming in the river, boating on the lake, walks, barbeques, games of poker and everything else that goes with Christmas time with the extended family that the gliding community has become. I hope your Christmas is a happy time.

Stay well and safe.
Jill McCaw

50TH SOUTH ISLAND Gliding Championships, Omarama

BY CONTEST DIRECTOR, GEOFF SOPER



As I drove to Omarama all forecasts were for a wet and wild week of weather with gale force winds from the southwest, snow to low levels and a predicted washout of rain. I had faith in Omarama and was hoping the high squeezing over from the Queensland coast would see to the low pressure systems and give me at least three days taskable weather to make a contest into a championship. We all know the micro climate of the Mackenzie doesn't always match weather predictions.

We had a new sub-class of the Open Class this year, the 20m Two Seater Class. The 20m class was scored with the Open class, just like the 18m class, but was limited to two seater gliders with two pilots and with a glider handicap of 1.07 or less. We had four Duo Discus gliders competing for the 20m Class this year. Task setters were once again Jerry O'Neill, Grae Harrison, and Theo Newfield with Gavin Wills as Safety Officer and Lemmy Tanner on the weather.

PRACTICE DAY

While soarable, was not taskable.

DAY ONE

Sunday 16 November turned on magnificent clear blue Omarama skies with a very strong hat-removing sou'wester. It turned out to be fairly blue and not as strong as it looked in the morning.

First launch saw all 34 gliders emptied from Omarama in just over an hour. The grid team led by Abbey Delore, with oversight from Hugh Turner, were truly awesome and Yvonne

Loader was 'on the bench' faithfully recording tow times.

Four landouts tested the system – Glyn Jackson in VV, a Ventus 2a and Mike Strathern (and frog) in his ASW 20a TJ inspected the Ahuriri valley, whilst Theo Newfield in his ASG29 CW, aero-towed off the Maitland. Meanwhile Roly van der Wal in LS 6c VV decided to test the contest director's phone by landing out near Lake Hawea. He knew he would have to wait for a ground retrieve as the Lucerne crop didn't lend itself to an aerotow. Then it got interesting, as a check of the registration form showed he had no crew. Roly apparently figured you don't need crew if you don't intend to land out. We suspected that once the competitors started coming home there would be no shortage of volunteers as Roly was our principal sponsor. Roly's business, 'Immigrant's Vineyard', generously donated an excellent Pinot Gris first vintage, "Plovers Nest" as daily prizes. Frank Saxton and Jono Wardman happily volunteered to go retrieve him which is what Regionals are all about.

Monday 17th was a no contest day, but hey; a bad day in Omarama beats a good day at work. Lex had a few issues with some of the Cambridge and Volkslogger units. There seems to be an issue that has only recently been found that means the



Photo John McCaw



Photo Geoff Soper



Photo Geoff Soper



Photo Geoff Soper

Cambridge logger does not show any flight logs on the unit and the Volkslogger shows the logs but they are dated 1995.

DAY TWO

Tuesday 18 November. A wave day that had all the ground team quite jealous. All the classes except Club had the same AAT task.

It was hard to keep the grins off the pilot's faces as they smoked around at high speeds, but the OPEN/20m/18m day went to Nigel Davy and Alex Boyes in NS at 161.6kph having completed 323.2km. The usual suspects had great runs but no podium finish and the excited buzz in the briefing room/bar was just what we needed to hear from the back office. While the day started blue the predicted southerly front arrived late in the day bringing some rain and then it poured. As twilight set in snow was settling down low on the surrounding mountains.

DAY THREE

Wednesday 19 November. Cold air swelled up from the Antarctic region and the fridge door was well and truly open. The morning dawned to a thick blanket of snow low down on

the ranges, all very picturesque winter postcard scene. Spring in Omarama can surprise.

An AAT was set for all the classes with big circles around all the turnpoints as there was a very high probability of thunderstorms today. The air was very cold. Combine the cold air with nice warm / hot sun on an unstable day and you get lots of clouds.

Contest Director Geoff Soper 'directed' that a pilots' photo was first task of the morning following briefing as the snow on the Bens was too good an opportunity to not have as a backdrop.

Surprisingly the only actual landouts were Nigel Davy at Pukaki airfield and Hamish McCaw at Maryburn strip.

DAY FOUR

Thursday 20 November. Moist westerly and a sky full of nice looking wave clouds. Wave task was set for all three classes - very much an Omarama special task with 5km radius fuzzy turnpoints, and scored as an AAT but with an impossible minimum time of 1 hour. The larger turnpoints meant that there is less congestion at the turnpoints when gliders were high and fast in the wave. The tasks were set to the east as well to

SOUTH ISLAND REGIONALS



Photo John McCaw

Keith Essex with Lemmy Tanner and Jan Walker



Photo Geoff Soper

Kevin Bathwaite



Photo Geoff Soper



Photo Geoff Soper



Photo Geoff Soper



Photo Geoff Soper

force pilots to jump forwards and back between wave clouds, so everyone was not zooming back and forth along the same cloud. Launch initiated at 1300 and completed in under an hour thanks to the assistance of strong ridge-lift shortening tow times and of course the Youth Glide team and helpers. Some of the Youth Glide wing runners weren't as youthful as their vests suggested. A sprightly Dave Speight rejoiced in showing off his prowess in this regard. Rumour has it he pulled up lame later.

And what a day they all had with very high speeds all

round. The only hard luck story was Roly in VH who landed out down near Alexandra. The winds were too high in the lee of the Dunstons to effect an aerotow retrieve. He may have been soil testing for future vineyard sites. Derek Kraak, in DK, really enjoyed the high speed with an average handicapped speed of 189.5 km/h over the 429.3 km he flew. This turned out to be the fastest handicapped speed of the contest and Big Red had a grin that stayed with him for the week.



Photo Geoff Soper



Photo John McCaw



Photo John McCaw



Photo John McCaw

DAY FIVE

Friday 21 November. Lex blogged, "...for a contest that looked like it was going to struggle to get three days of flyable weather at the beginning, I think we have managed to do quite well."

All classes had a similar task, including Club – an AAT that used the, hopefully, clearer sky to the east and north. It was definitely a wave day.

It was not to be, as a promising glorious day deteriorated rapidly with the clouds packing in around the first turn point.

With the benefit of 20/20 hindsight we should have gridded at 0830 and launched by 0900. The base radio packed a sad as the weather rapidly turned to the proverbial custard with many pilots opting to landing back and calling it quits. The Contest Director went and made himself scarce.

All pilots were to be congratulated for their decision making on this difficult day.

There were a number of pilots wishing for a day six and an equal number (those in the lead) casting incantations for a no task day.

SOUTH ISLAND REGIONALS



Roly van der Wal



Karen Morgan and Terry Jones



Photo Geoff Soper



Grid team



Brian Savage

NO CONTEST DAY

Saturday 22 November. Oh well, asking for six contest days might have been pushing it. Our hard working scorer was happy and Dave Tillman our treasurer kept busy, printing invoices and settling the accounts. It gave Lex breathing space to fix the scoring glitches and others to prepare themselves for the final night dinner that evening. Others watched the inaugural rigging (in the rain) of the Arcus, Uniform Charlie owned by 'Alaska Keith'.

The final night's dinner at the Countrytime was a great night – lots of laughs and reminiscing, fundraising that collected around \$4500 for our team competing in Joey Glide. The team received donations / pledges and auction items (in no particular order) from: Simon Gault, Roland van der Wal, Craig Keenan, Paul Barrett, John Robinson, Terry Delore, Mike Gray, Lemmy, Nigel Davey, Graham Parker, Keith (Alaska), Clare

Skelton, Chris Garton, Karen Morgan, David & Mairi Speight, Mark Tingey, Alex Boyes, Warren Dickinson, Derek Kraak, Grae Harrison, Bill Walker, Max Stevens and Tony Collins.

Back to the Regionals and special thanks to Derek Kraak for organising the three meal special deal at the Countrytime during the week and the final dinner.

WE ASKED THE PILOTS: WHAT WAS THE HIGHLIGHT OF YOUR CONTEST?

Karen Morgan said:

- the meteorology
- racing around fast on the wave days
- sneaking into Naseby around the virga
- picking our way into the Lindis around the snow showers
- the wind which meant that as we thermalled, we blew



Photo Geoff Soper



Photo Geoff Soper

Hugh Turner



Photo Geoff Soper

Max Stevens



Photo John McCaw



Photo Geoff Soper

- backwards as fast as we climbed
- > the agonisingly slow climb into wave
- > is that rotor again?
- > the people, so many old friends, and some new ones
- > the photography recording the amazing sights – the wave shots around Mt Cook were exceptional this year
- > the light across the Mackenzie Basin, with the late afternoon sunshine picking up the snow falling on the Grampians as we retrieved a team from Pukaki
- > Roly's wine was pretty good too.

The dramas were there too: Max hoping for rain when he was leading by one point, and looking over his shoulder at Charlie. They both overlooked Graham. Go the ASH. Thanks to all the workers for a well-run and safe competition.

Roly van der Wal

I loved landing out

Adrian Cable

I can't give you a single highlight, I have to briefly give you several;

- > The joyous atmosphere and bubbling enthusiasm that is the South Island Regionals.
- > The extremely astute organisation, especially task setting in challenging conditions.
- > The pride in competing against exceptional pilots able to deal with said challenging conditions.
- > The pleasure of meeting old friends and making new.
- > The referred awe of sharing a cockpit with a friend competing in the South Island's magnificent mountains for the first time and flying through the start gate straight on to final glide for 400 km at 180+ Kph.

SOUTH ISLAND REGIONALS



Photo Geoff Soper



Photo Geoff Soper



Photo Geoff Soper

YGNZ members:

For the fiftieth South Island Regionals, Youth Glide NZ members came from all over to run the grid launch operation (with assistance from Daisy Strange, Speightsy and others). We had an absolute blast working with the tow pilots to have the most efficient grid launches. We launched all 34 gliders just under or over an hour every day, with the occasional rope knot or re-launch. The YGNZ members' most enjoyable experience was driving the cars back up towards the terminal. Flash Kia, BMWs, Range Rover, Toyotas and more, was as though Christmas came early (bonus score if they had fresh baking or good lollies) and would see the grid team sprint towards their favourite car candy. Nick Oakley was the only YGNZ member competing and due to the fantastic environment the 50th South Island Regionals continues to bring, we cannot wait to have some YGNZ teams and pilots racing next year.

Thanks for having us a part of the memorable 50th South Island regionals.

Kevin Bethwaite:

- ▶ The way CGC members showed their collective abilities to run the event made me very happy. The tasks were, for me, very well set and even though I had two technical land-outs they were nothing to do with the tasks but all to do with the pilot.

- ▶ I recognised that AATs were probably ideal for club or other pilots with lesser performing gliders or pilots who are still starting longer tasking. The fact we did four of these made me happy.
- ▶ The social side made me very happy. The meals at the CountryTime were a great way to keep the team together (especially when the weather was pretty cold and not conducive to BBQs at the camp kitchen). The meals were also very good value. Finals night was the best we have done and great fun.

Roger Sparks:

Minuses:

- ▶ Strong blustery weather with some really mean turbulence.
- ▶ The lack of mandatory FLARM creates a risk we don't need.
- ▶ We could do with a social programme including an "ask the experts" session....good for a no fly day.

Pluses:

- ▶ Slick organisation. Ran like a well-oiled machine.
 - ▶ Great grid and launching.
 - ▶ The AATs worked well with this crazy weather.
 - ▶ High level of competence from met, tasks and scoring.
- Thanks all



TROPHY LIST FINAL PLACINGS

CLUB CLASS GLIDING NZ TROPHY

1	KD Brian Savage	3233
2	CC Kevin Bethwaite	2985
3	VV Glyn Jackson	1251

STANDARD MESSERVY TROPHY

1	XG George Wills	4325
2	LB Nick Oakley	4059
3	XP Tim Bromhead	3666

15M ANTONY RYAN TROPHY

1	XG George Wills	4325
2	LB Nick Oakley	4059
3	OO Peter Chadwick	4020

20M CONTEST DIRECTORS BIRO (NOOO EXPENSE SPARED IN THIS COMP!)

1	XT Mark Tingey/Adrian Cable	4113
2	UO Chris Streat, Trev Mollard,Ronan Harvey, Dion Manktelow	3760
3	QQ Gavin Wills / Simon Gault	3607

18M GLIDE OMARAMA TROPHY

1	YD Max Stevens	4163
2	ZB Warren Dickinson	3760
3	CH Grae Harrison	4129

OPEN STH ISLAND TROPHY

1	ZZ Graham Parker / Keith Essex	4231
2	YD Max Stevens	4163
3	ZB Warren Dickinson	4148

MATHS AND SCORING

Lex blogged, "The eagle-eyed of you will have noticed that the points may appear to have been in a strange order. Open / 20m / 18m class, days 3 and 5, and the 15m / Standard class day 5 have some pilots getting more points than others, even though their average speed was slower than those below them. The basic answer is that this is correct and is how the GNZ scoring system works - both speed and distance points can be reduced if you either go too slow or not far enough.

*** Maths Warning! *** If you want to know more, sit down with a good cuppa and carry on reading, otherwise it would be best just to accept that the scoring system is working as it was designed.

A pilot's score for the day consists of two parts: points awarded for the distance the pilot has flown, and points awarded for the average speed the pilot flew the task in.

The maximum distance (Pdm) and speed (Pvm) points vary each day depending on a number of factors. Lex displays each day's Pdm and Pvm on the scoring website for each class.

The GNZ scoring system for AAT tasks has a couple of wee adjustments it can make to individual pilots scores. One is reasonably well known: if your handicapped speed is less than 2/3 of the fastest handicapped speed for that class, for that day, then you get zero speed points. You often see this on strong wave days when a bunch of pilots are all given the same score - they are all the ones who got around but were too slow to get any speed points. The little know adjustment is that for an AAT task (it does not apply to Racing tasks), your distance points can also be reduced if the distance you went was less than 2/3 of the maximum distance anyone in the class went that day. It is possible for either of the above adjustments to apply to a pilot's score or even both if they were both slow and did not go far enough.

HIGHEST PLACED CLUB OWNED GLIDER

Omarama Cup, CC, Kevin Bethwaite, 2nd place Club Class

HIGHEST HANDICAP SPEED

Roy & Ivan Evans Cup, DK, Derek Kraak 189.5kph Day 4

MOST MERITORIOUS 2 SEATER FLIGHT

Roy Evans Cup, UO, Chris Streat Day 5 winner

MOST MERITORIOUS FLIGHT: SOUTH ISLAND PILOT

Fred Dunn Memorial, OO, Peter Chadwick Day 1 speed 20kph higher than others in class

BEST INDIVIDUAL PERFORMANCE SOUTH ISLAND

Mt Cook Air Services, XG, George Wills 1st in 15m/Std

MOST POINTS WITHOUT A PLACING

Sailplane Specialists Ltd, ZA, Charlie Tagg 4042pts (trophy missing anyone reading this please search your clubhouse/place you call home)

PULSE OXIMETER DONATED BY FRANK SAXTON

Roland Van der Wal



Is it true what they say about red heads? Derek Kraak and contest director Geoff Soper

SI REGIONALS FROM THE RADIO ROOM

BY NEIL ALLISON

The Contest Director sometimes calls it the 'Naughty Room', but for the most part during the South Island Regionals, the scorer's office in the Terminal is the front row seat at the game. It is a great place to meet the pilots, monitor their progress and get a great serving of fun.

I began helping at the Regionals in 2007 when I was treasurer of the Canterbury Gliding Club. Over the years, I've helped with the money, gridding, running ropes for the launch and a few land-out retrieves. In those early years I was often asked to stay out of the office when things were getting exciting. For the last two years I've been fortunate to have a front seat at the finish line and help with radio comms.

The scorer's office is a busy place well before the 10am daily briefing as Lex prepares for daily winners' flight presentations, produces the task and grid sheets and I enabled the SPOT tracking for the day. Once the launch starts the radio room becomes busier as we record the launch time for each glider and provide 10 and 5 minute start warnings, and the start opening for each of the three classes on two frequencies. After recording pilots' start times we move into a tracking phase, recording ops-normal calls and monitoring SPOT positions using <http://tracking.gliding.co.nz/>. We attend to any landout information that is relayed to us and liaise with the retrieve crews or tow pilots. Often we have pilot's crews visiting us to discuss where their glider is, how long since the last SPOT update, get an estimate of when they'll be home and have a bit of a yarn. When the pilots return for the finish we get busy with advising wind direction and speed when they change to the local frequency. This is when having someone on each frequency is useful: thanks Hugh! Later the pilots bring in their loggers and tall stories of high adventure, followed by questions about the provisional scoring and penalties.

As a professional geek, I'm interested in using the various

tracking technologies to follow the competitors around the tasks. In addition to SPOT, our main position monitoring tool, this year we were tracking FLARMS on the Open Glider Network (OGN) webpage <http://live.glidernet.org/> and the Onglide Flarm Range Tool <http://flarmrange.onglide.com> using a receiving station set up on the GlideOmarama balcony by Melissa (7C). This provided an excellent, near real-time, view of the action in direct line-of-sight from Omarama. A few pilots had registered with FlarmNET and so their competition ID was displayed on their trace. A really cool feature of this system is the automated launch reporting it offers. I've added building an OGN FLARM tracking station to my list of projects as I can see potential for having a receiver at our club airfield. However, a network of receiving stations is needed to realise the full potential of this system. Last year we had some pilots use Live Tracking from SkyLines <https://www.skylines.aero/tracking/>, predominantly using XCSoar on mobile phones to send position info over the mobile networks. Each of these systems has their strengths and disadvantages and together they provide complementary tracking information.

I've found that being in the radio room at the Regionals is an excellent holiday. It's given me an opportunity to be with a group of great people, some who've travelled from far away to compete. I've got a close up view of the flying and competition without too much exertion and played with some fairly new tracking technology. I'm looking forward to flying in future Regionals and know that whoever fills the gap in the radio room will also have a great time occupying the best seat in the house.



Photo: John McCaw

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