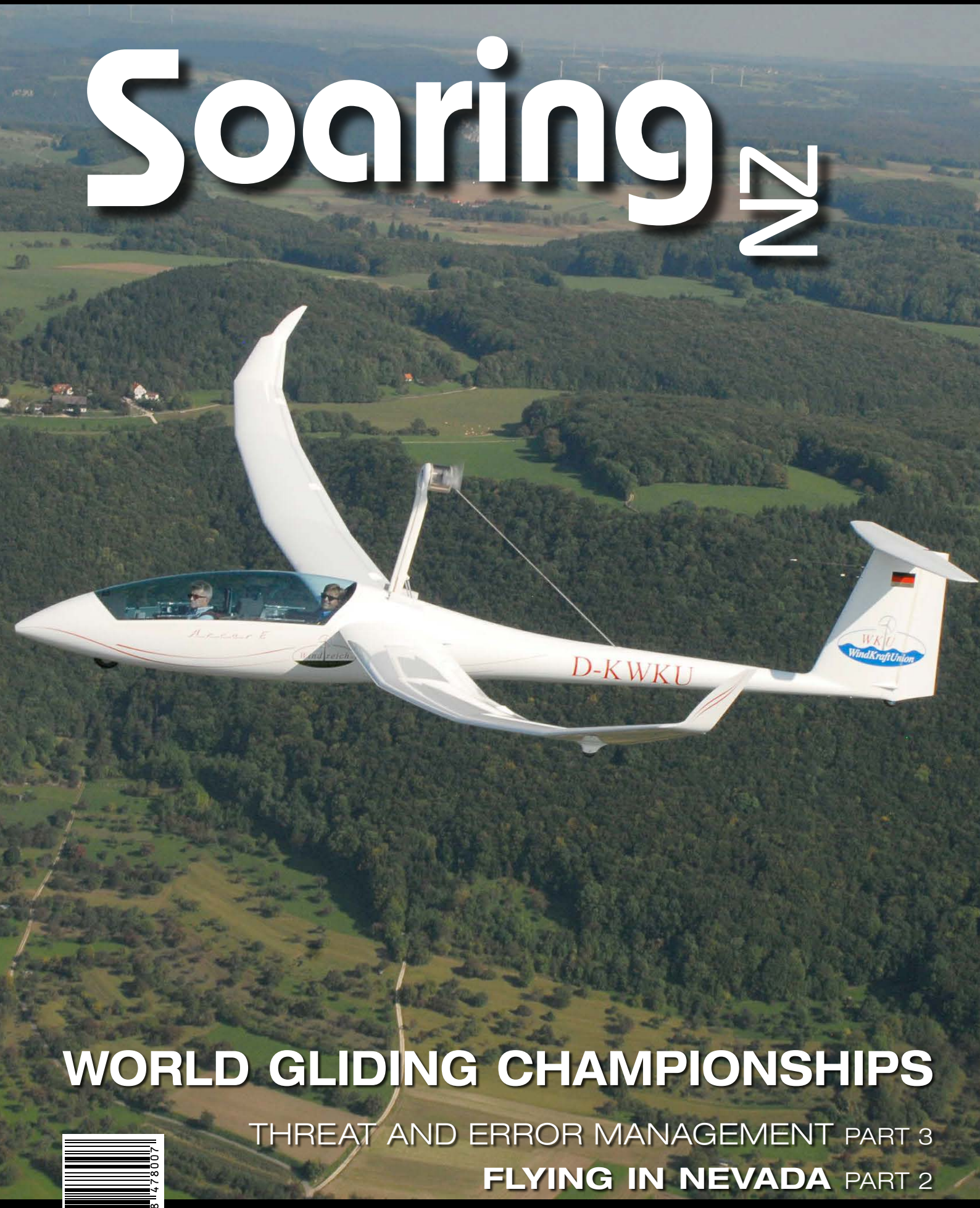
NEW ZEALAND'S PREMIER SOARING MAGAZINE

Soaring NZ



WORLD GLIDING CHAMPIONSHIPS

THREAT AND ERROR MANAGEMENT PART 3

FLYING IN NEVADA PART 2

ARCUS E • CLUB NEWS

issue 18 october/november 2010

BSport Breakfast

6-10am

Kaitaia 95.2FM	Rotorua 1548AM	Wairarapa 91.1FM	Cromwell 107.1FM
Bay of Islands 94.8FM	Gisborne 1485AM	Wellington 711AM	Timaru 1242AM
Whangarei 92.4FM	Taupo 91.1FM	Nelson 990AM	Queenstown 93.6FM
Central Northland ... 92.4FM	Taranaki 97.2FM	Westport 93.3FM	Oamaru 89.6FM
Auckland 1476AM	Hawkes Bay 549AM	Greymouth . 89.1FM/93.9FM	Alexandra 107.1FM
Tauranga 873AM	Wanganui 828AM	Hokitika 89.1FM	Dunedin 1206AM
Waikato 954AM	Manawatu 828AM	Christchurch 1260AM	Invercargill 1224AM
Whakatane 94.5FM	Kapiti Coast 93.5FM	Ashburton 1071AM	

Ian Smith Dean Lonergan Nathan Rarere

Proud supporters of New Zealand Gliding

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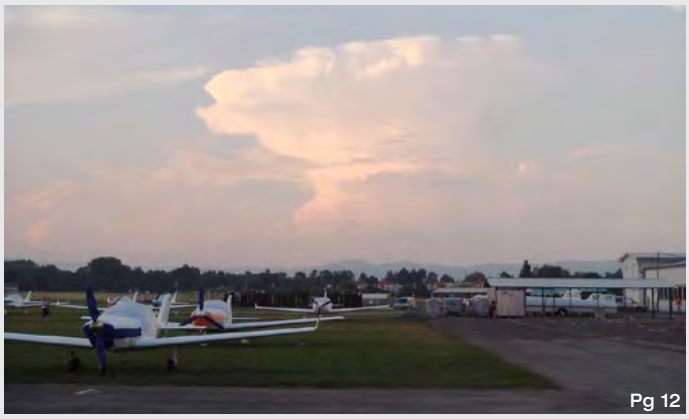

FEATURES

REGULARS

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from the editor
october/november 2010

RANDOM THOUGHTS ON EARTHQUAKES AND THEIR AFTERMATHS

Telegraph Road

This magazine is coming out a week or so later than the equivalent issue a year ago. There is a very good reason for that. On September 4 Canterbury had an earthquake. Life in Canterbury and Christchurch has been pretty odd ever since. This issue's editorial is therefore about the earthquake.

I must reassure you that all Canterbury Gliding Club members are fine. While our home has been badly damaged I only know of one other with a home the owners may have to leave. Our hangar, club house and gliders all survived just fine, in spite of the lovely church across the road at Hororata losing its spire.

With some people completely dispossessed it will be a long time before things are normal for everyone. It is a quiet and non dramatic form of un-normality now, not the sort people write books about.

A lucky Earthquake

It seems inconceivable that a major city can survive a major earthquake with no loss of life!

Timing of course is everything. The quake struck at 4.35 am Saturday morning. The majority of people were home in their beds. People who had been out and about Friday night clubbing had mainly gone home. The city centre streets that all the masonry cascaded onto were mainly empty. No one was in the businesses and shops in the old buildings in the city centre that collapsed. No one was on the roads that opened up into enormous holes.

People were injured by falling chimney bricks coming through ceilings and onto beds. However there had been a short jolt just before the big one and that had woken most people and sent them for cover, or at least out of bed to see what was happening before the big one. There are many stories of beds covered in masonry that people had vacated moments earlier.

All buildings in NZ built in the last 20 years (don't quote me on that timing) have to meet stringent earthquake standards. Most of them did. Older buildings have been strengthened to meet earthquake codes over a similar time period. Christchurch was shaken, most of it didn't collapse. No Loss of Life! Just incredible!

Sand/Liquification

One thing I don't think anybody anticipated with earthquakes was sand. Everywhere around the city, some places worse than others, thousands of litres of water and sand were forced from under the ground. The ground compressed, water can't be compressed, something had to give and it all shot up, with the force, and sand.

The world in the aftermath has become a world of sand. HUGE amounts of sand. The gardens, roads, and street side gutters are full of it. As it dries it turns to dust. My fishpond is full of it (we only found one poor fish left in the pond). The driveway and lawn are covered in it. I can't keep it out of my house. University students were out all around the city shovelling it up. People were frantically trying to get it out of the gutters before it rains again and causes flooding. Where are they going to put all that sand? Where are they going to put all the rubbish, full stop?

Epicentre

The epicentre is actually a line about 30 km long. It is not a single spot on the ground. All along that line the ground has offset, sometimes by as much as 8 m. See the photo John took of Telegraph Road. The centre line of the road lines up with the outside line further down. That is a huge earth movement. Apparently no one had any idea there was a fault line there. This was not the alpine fault quake we've been expecting, this was something completely unforeseen.

Holes in roads

Holes and humps in the roads are probably, beside the sand, the one real visual thing that shows something happened here. I'm

The new sustainably powered Arcus E on its maiden flight over Kircheim, Germany.

Photo Bernd Webber

next issue

The soaring season will have started and we'll cover the South Island regionals. Jill McCaw will investigate the secondary school Gateway programme which adds gliding to its work experience options.

Deadline for Club News, articles and pictures is 11 November and 22 November for advertising.

One of the many cracks showing in our house.

not talking about in the central city, but out here in the suburbs where superficially at least, everything looks normal, the sand is a giveaway. Even unstable houses don't look wrong until you are close enough to see the cracks. But driving down a road and hitting a completely unexpected mound gives you a jolt. That wasn't there last week. Temporarily we completely eliminated the problem the city has been having with boy racers and their souped up cars. They're all super low slung! There's a silver lining no one predicted.

Recovery

We are not a third world country. The earthquake last year in Haiti was of a similar magnitude to this. Nothing else about the situation is anything similar. The night following the quake there was no one who didn't have somewhere to sleep with a roof over their head. No one has gone hungry. Portaloos and water trucks have been provided where needed.

Some of the resettlement etc. will not be to everyone's liking and people will moan, but everyone will receive the basics (and more than the basics compared to Haitian standards) that they need to survive.

Community Spirit

Amazing. Just amazing. People have pulled together, students have created armies out there clearing the streets. People are providing food, places to stay; whatever people need, someone is doing it. So many of the emergency staff had their own trauma and were still out there helping, fixing, doing.

There is nothing to do at our house right now, we just have to sit and wait, but I know if I asked, someone would come. The fact that people from Tonga gave the equivalent of $6 a person each to help people in Christchurch nearly makes me cry. I keep thinking that they shouldn't, that they need that money more than we do. The fact that they did is very humbling.

Aftershocks

We're over them. Truly. It feels like you keep biting on something unexpectedly hard so that your teeth are continuously jarred. Then you forget what it's like, until the next one.

Jill McCaw

Both letters this issue relate to matters of safety. Les Sharp expands on his letter with a list of near misses he himself has encountered over the years. If you have an opinion or clarification on articles featured in the magazine please let us know.

Safety

I am heartened to read David Jensen's view on safety. The concept of wrapping us all in cotton wool is the result of many things, including ACC and the media shyness of the CAA. ACC takes responsibility for personal damage caused by virtually any means, consequently it bombards us with lots of Nanny State advertisements and has the ear of the Media. So does CAA. Advertising is valuable revenue and is not to be discouraged, even if one privately scoffs at the message.

Safety is a weasel word and is used as justification for anything. The French had a Committee of Public Safety, which guillotined 40,000 people in the terror; the Soviets had a similar organization, with a similar name but a larger death toll. I may be declared a "not fit and proper person" for voicing this myself.

CAA has a very secure position where it can't be directed by the Minister, and the board appears to be a fairly weak and disinterested group, probably selected by the Director. CAA funds itself by levies and consequently is immune from outside interference in terms of budgetary pressure.

Long live the nanny state!

Neville Cameron

P.S. The local aircraft engineer notes that the number of hours flown by individual privately owned airplanes has dropped by more than 50% in the last 15 years, the number of G.A. aircraft having fallen also. If no one flies then CAA will have close to a perfect result!

Ed note: The only powers that the Director exercises independently of the Minister (or anyone else) relate to "Aviation Documents" like licences and certificates, rule exemptions and enforcement action. The five-member CAA Board is appointed by the Minister, and the Board appoints the Director. The Minister may direct the Board on certain financial matters. The operation and finances of the CAA are also subject to close scrutiny by the Ministry of Transport and the Auditor General

I resign

You are producing a great magazine and I think the articles on Threat and Error Management are particularly relevant. Anyone who may feel inclined to criticise needs to look at the results it has had within the airlines that have put it into practice. Airline flying was relatively safe beforehand, but the level of safety has moved forward significantly as a result of TEM implementation.

There was an article in the last issue that suggested that competition finishes should be at 1000 ft AGL. Back when we had the Grand Prix series at Omarama I was derisive of CAA's criticism of the low finishes (not that I had any firsthand experience). I also remember Terry Delore's comment that the finishes were beyond what he dared to do. We can all be too bold and then fail to cope with the situation that develops when the odds stack up.

When one looks at the statistics and the argument presented in the article, one has to admit that we need to stop the accidents that will continue to occur if nothing changes. As I see it, finishing the contest above ground level may be a little less spectacular for spectators and the pilots who survive, but the precision required for the finish at altitude would still provide a degree of adrenaline rush, combined with a safety margin that gives the pilot who is running on reserves the chance of surviving the typical errors of judgement that have eliminated a significant number of our colleagues.

It is the same with the occurrences that I have outlined (see below). I can see that repetition of these types of events can be prevented by procedural change. My argument in favour of this is because my second near-miss at Taupo did not involve any evasive action by either of the pilots involved. By chance we missed. 20 ft difference in altitude of either aircraft would have resulted in a totally different memory of the last day of the contest for all involved. I can see how it could have developed and it may be that we may never have been able to see each other in time, but I cannot accept that it needed to have been that way and would like to see prevention of a similar situation in the future.

It is partly due to these latest close calls that I have decided to quit flying both as a tow pilot and as a glider pilot.

Les Sharp

The Incidents

Paraparaumu 1974 to 1981

On many occasions when towing out of Paraparaumu I avoided training aircraft doing standard rejoins on the 'non-traffic side'. I cannot now recall if I ever saw one that actively avoided the tug and glider combination. I don't recall any significant frights because I still felt in control of the situation.

More recently: I have not been able to locate all aircraft in the circuit area at Stratford even though I had heard their radio calls.

One incident that I recall was returning to Stratford from the area west of SH3 in the Twin Astir. Approaching the line of the highway at 4000 ft the passenger in the front seat asked if I had seen the aircraft coming towards us. A Cherokee following the highway at the same altitude was headed for us. I immediately dived the glider and avoided the Cherokee which showed no sign of altering course. I attempted to call it on the radio but got no response. Unfortunately I hadn't had a chance to note its registration. I didn't recall hearing any prior position report from it either.

At Taupo during the 2010 Nationals:

Launching a sniffer flight from the front of the grid I came over the hill to find a utility vehicle on a reciprocal heading. Although the Pawnee was just airborne, I found that I didn't have sufficient aileron control at that airspeed to turn enough to avoid the utility. Fortunately, the driver of the utility changed direction sufficiently to avoid me. In hindsight, what I failed to do was to release the glider which would have allowed me to accelerate and establish full flying control quickly. On the other hand, this action could have left the glider pilot in a predicament, but he would have had 50 metres more distance to cover before encountering the utility. **(The airfield at Taupo has a "hill" in the middle of it and it is not possible to see over this when launching from the eastern end – Ed)**

I had not previously operated on an airfield where I have not had visibility of the take-off run from the start point. The hill at Centennial Park would not be a problem during normal operations where the launch begins at the runway threshold, but that all changes during a contest launch and having a safety person at the top of the mound takes care of the obstructed visibility issue once the grid launch is initiated. In the absence of a lookout, as was the case here, there is potential for a repeat performance.

On Wednesday 24th the first airborne incident that I reported formally occurred when nearing the drop-off area with an open class glider on tow. I saw a glider approaching from the right through the

SoaringNZ welcomes letters from readers. You can send letters by email to soaringnz@mccawmedia.co.nz or post them to: The Editor, SoaringNZ ,430 Halswell Road, Christchurch. SoaringNZ reserves the right to edit, abridge or decline letters. Writer's name and address is required and a phone number is helpful.

drop-off zone at about 80 degrees to my track at a similar height. Because I was already in lift climbing at about 1000 feet/minute I did not wish to turn right because that would have put me under a cloud street where there was a large number of gliders waiting for a start gate opening, and the potential for a significantly higher climb rate. I soon established that I would go over the glider, so I continued on my course, flying over the glider with about 50 ft vertical separation. My concern was that in investigating my incident report, it was established that another glider had gone over the top on basically the same course as the first glider 250 ft above the glider I was towing. In concentrating on the primary threat I had completely missed a potential threat, although the height difference at the time meant that there was no likelihood of a mid-air collision.

One has to also consider here that two gliders on the same course, one above the other with only 300 ft separation could also have become an issue if the top glider had a poorer performance than the one below.

On the last day of the contest on my second tow I was focussing on staying outboard of the two tugs ahead because I was out-climbing them, and also trying to be super vigilant with my lookout. As I looked ahead in the middle of a left to right scan sequence a PW5 went over the top of me barely 20 ft above me on a reciprocal heading over my left wing. The pilot was returning to land barely 5 minutes after being released.

Following the submission of my incident report I started contemplating the possibility of seeing a threat like this developing say 30 seconds beforehand. With the tug/glider combination climbing at 700 feet/minute at about 70 knots, the climb path is an angle of 1 in 10 or roughly 6 degrees. The glider descending at a ratio of say 1 in 30 adds 2 degrees above the horizon and at 50 knots is one nautical mile away (6000 ft). The normal scan is around the horizon and the primary cone of vision (from memory) is about 5 degrees in the vertical sense. In other words about 2.5 degrees above and below the horizon. Outside the primary cone of vision we are mainly reliant on relative movement to alert us to threats. So we have a glider head on profile centred about 8 degrees above the horizon. As most of us know, the head on profile of a glider is fairly difficult to see 6000 ft away and even then can be reduced in visibility due to the lighting conditions that exist. So locating this threat becomes a seriously difficult or impossible proposition.

One can also consider why the glider pilot wasn't aware of my existence and taking evasive action, but again, he has to have been looking 8 degrees below the horizon and spotted the aircraft against the background of the terrain.

I would suggest here that for future gliding contest launches, that separate airspace be set aside before the launch so that any glider returning before the grid launch is complete is physically separated from the launch operation apart from final approach. Alternatively, that radio restrictions are voided and the returning glider makes his intentions clear to all concerned.

On the same day I was set up on finals, and Colin Bell flying Auckland's tug declared that he couldn't see me. I took a quick look around and saw the underside of the Pawnee with about 10 degrees of bank on and just above me converging on my track. It was obvious why he couldn't see me and I initiated an immediate left hand orbit which got me out of the way and gave time to re-establish my approach. In this case an appropriate radio call alerted me to the problem in time to take normal evasive action but was still a lot closer than was comfortable.

More recently I was towing a glider from Stratford towards Fantham's Peak on the South side of Mt Taranaki. There was a broken cloud street on my right. While approaching the area another glider gave a position report over the Stratford Plateau at about the altitude we were towing to. I was carrying out a concentrated scan towards the plateau which was on my right when the pilot of the glider I was towing called and asked if I was aware of the glider to my left. This was the glider which had made the position report and by this time it was flying northwards and we were converging fast at a right angle. I initiated an immediate right turn and as soon as the glider I was towing released I was able to tighten the turn to avoid entering cloud.

This was a case where the glider making the position report had left the area and not made a report that they were doing so. Although it was only a couple of minutes, not making a call that they had vacated the area led me to concentrate harder on the area to my right because I was unable to see them on my initial quick scan of that area and in doing so took my attention away from maintaining an all round lookout. In this way I had set myself up for a potential mid-air encounter.

IGC PRESIDENT'S LETTER

This is an abridged version of IGC President Bob Henderson's letter to delegates.

Statistics on the latest World Championships.

106 competitors representing 27 National Aero Clubs participated in the Standard, Club and World Classes in July in Prievidza, Slovakia. 12 competition days were achieved for each class.

142 competitors representing 32 NACs participated in the Open, 18M and 15M classes held in August in Szeged, Hungary. The weather was inclement and only seven competition days were achieved for the 18M and 15M classes and eight days for the Open Class.

The World Champions are:

Open Class	Michael Sommer (GER)
18M Class	Zbigniew Nieradka (POL)
15M Class	Stefano Ghiorzo (ITA)
Standard Class	Sebastian Kawa (POL)
Club Class	Arndt Hovestadt (GER)
World Class	Laurent Couture (FRA)

Some figures on activity levels over the past year:

Ranking List – now 5644 pilots listed, up 15% from the end of 2009 (4,888)

WGC – 248 competitors

OLC – 1069 clubs participating, up from 1065 in 2009

Safety

The Bureau is concerned that, in the past year, we have had two fatal accidents, a mid-air and a glider collide with a truck while landing. The fatal accidents occurred at the SGP Final in Santiago and at the WGC in Prievidza. The mid-air occurred at Prievidza – both pilots landed safely, and the glider vs truck at Szeged – the pilot was uninjured but the truck driver suffered serious facial injuries. We will be discussing these accidents at the Bureau meeting. However, also of concern is the fact that the safety message being delivered at our Championships seems to be missing the mark for some pilots. This we need to address – maybe by reviewing pilot qualifications, maybe by reviewing penalties, maybe by some other initiatives. One thing we have learnt is that we need to ensure that Team Captains understand their responsibilities.

Bureau Meeting

Apart from reviewing the WGC events and the concerns about safety, the Bureau will also be looking at a number of matters including:

The revised championship structure for the 13.5M and the 20M classes

Finalising the Continental Records

Updating the Championships Bid form

Reviewing progress on the world circuit developed from the SGP

We are getting close to creating a product based on and building on the SGP combined with a marketing strategy and a sponsorship concept associating the clean and pure nature of our sport with a strong environmental message. The SGP will continue as an IGC Championship; this will be a stand-alone gliding product with sporting control retained within IGC expertise.

Best regards

Bob Henderson

SEVERAL NOTEWORTHY CRASHES

FINALS AT THE WORLDS IN HUNGARY

Lars Zender from Australia was on finals when he collided with a truck on a road crossing the threshold. Lars was okay, the truck driver seriously injured.

More photos on picasa WGC2010GliderCrashSzegedHungary

MID-AIR UVALDE TEXAS

Chris O'Callaghan Vice-President of AOPA (Aircraft Owners and Pilots Association) was killed in a mid-air accident at the American 15m nationals in August. He had completed the task and was coming home when his Ventus 2bx collided with another competitor. The other pilot was able to land safely. O'Callaghan's accident was the third mid-air accident in the US this season. Gavin Wills, who had been flying in Uvalde only three weeks earlier, is adamant that the use of Flarms would have prevented all of these events.

CENTRAL DISTRICTS GLIDING CONTEST

Gliding Hawke's Bay and Waipukurau is pleased to be hosting the 2011 Central Districts Gliding Contest at Waipukurau from 19th thru 27th February.

Saturday 19th is a practice day and Sunday 27th is a reserve day.

Waipukurau has an excellent reputation for settled weather in February with thermals and convergence predominating. It is an ideal early level competition with plentiful safe landout options.

The CHB Aero Club provides camping/caravan accommodation at the airfield with good clubhouse facilities at fifteen dollars per person/night.

The entry fee has been set at $170 reduced to $150 for early entries before 1st January 2011. Entry fees can be directed to our Westpac Bank account 030658 0081302 000 or by cheque to Gliding Hawke's Bay & Waipukurau, 204A Knight Street, Hastings 4122.

We look forward to seeing you there.

David Davidson, Contest Director

UK AIRSHOW

A rare aerobatic glider slammed into the runway in front of thousands of fans at Shoreham Airshow in the UK. Incredibly the pilot was initially able to walk away from the crash scene before collapsing onto the runway tarmac. He was taken to hospital but given the all-clear later. The Swift S1 glider, one of only 35 ever built, was badly damaged in the crash.

Video on YouTube: Shoreham Airshow 2010 Glider Crash

TAURANGA AEROBATIC CONTEST POSTPONED

We have been informed that this contest has regrettably been postponed. The organisers are quick to point out that it is due to clashes with other events and not through lack of interest. They hope to try again in the autumn.

DARREN DAY CAUGHT SHORT AT PARAPARAMAU

Wellington pilot Darren Day got the news media very excited when he crashed in a suburban street managing to damage only the glider. He apparently aimed for the poles of the pedestrian crossing in an attempt to reduce his speed. He is quoted in the Dominion Post as saying,

"*Gliding is all about quick decision-making. I just had to land somewhere where no-one would be hurt and I could walk away.*"

VINTAGE KIWI

The full size version of Vintage Kiwi is available to download from the GNZ website.

EARTHQUAKES

Want to know how many earthquakes Canterbury and the rest of the country has felt today.
You may be surprised.
See geonet.org.nz/earthquake.

ANTARES H3

Lange and DLR develop second generation fuel-cell powered aircraft

The Antares H3 is a higher performance successor to the Antares DLR-H2, the world's first piloted aircraft capable of performing a complete flight powered by fuel cells only. The fuel cells use hydrogen as fuel. The hydrogen is transformed into electrical energy in a direct and non-combustive electrochemical reaction with oxygen taken from the surrounding air. The only reaction product emitted is water. The aircraft flies CO2 neutrally, if the hydrogen is created using regenerative energy. The aircraft will have a wingspan of 23 m, a maximum takeoff weight of 1.25 metric tons and it will carry payloads of up to 200 kg. The aircraft will use four external pods to house fuel cells and fuel. It is expected to have a range of 6000 kilometres.

EXTREME WEATHER DOESN'T HAPPEN JUST IN THE SOUTH

Donna Bergersen, pilot and tow pilot for the Hauraki Gliding Club took this photo of a 'wind-willy' or baby water spout off the coast from Coromandel. She tell us that they can grow into the 'real thing'.

OHLMAN SETS SOLAR POWERED AIRCRAFT RECORDS

Not content with setting gliding records, well known German glider pilot Klaus Ohlman has been setting records in the ICARE 2 Solar-Powered Aeroplane. These two records are obviously from the same flight.

Distance using up to 3 turnpoints, 367.8 km

Date : 05.09.2010

And

Free distance using up to 3 turnpoints, 375.7 km

Date :05.09.2010

SMALL PILOTS

With all the work in recent years to make gliders fit bigger people, DG Flugzeugbau GmbH have remembered there are smaller pilots out there too. They are offering a kit for the following gliders: DG-500/22 ELAN, DG-500/20 ELAN, DG-500 ELAN Trainer, DG-500, ELAN Orion, DG-500 M, DG-500MB that includes adjustable seat back, an airbrake pushrod with additional handle in the front cockpit, and clip on/off rudder plates for the rear cockpit. Now we need other manufacturers to follow suit.

DG also offer advice for how particularly tall pilots can fit into their aircraft. See their website. www.dg-flugzeugbau.de/index-e.html

Contributions to Logbook are welcome from all of our readers within New Zealand and internationally. Email your news snippets to: soaringnz@mccawmedia.co.nz. Please put "logbook" in the subject line.

2010 WORLD GLIDING CHAMPIONSHIPS

The World Championships have now become so large that they are actually two competitions split into classes with and without flaps. The World/Club/Standard Class competition was held in Prievidza, Slovakia, in July. The following week the 15m/18m and Open classes began their contest in Szeged in Hungary. New Zealand was represented at both contests by Dane Dickinson who was joined by John Coutts for the second competition. Dane reports on the non flapped contest in Slovakia and John reports on the flapped ship contest in Hungary.

31ST FAI WORLD GLIDING CHAMPIONSHIPS
WORLD / CLUB / STANDARD CLASSES –

There seems to be a persistent trend that world champs must be dramatic and tumultuous competitions. NZ representative, Dane Dickinson, reports that the championships in Prievidza this year were no exception.

Situated in central Slovakia near the Fatra and Tatra mountain ranges, the green airfield of Prievidza was a picturesque location for the world champs. Lying in the middle of the Nitra Valley, the airfield is mostly overlooked by richly forested hills about 3-4000 ft high. The airfield also commands an impressive view of the stunning Bojnice Castle that is perched on the hillside a couple of kilometres away. From the gentle slopes around Prievidza, the competition task area extended in all directions to give varied flying conditions: flat farmlands to the south, rocky mountains east, rolling hills of the Czech Republic to the west, and a high plateau stretching into Poland in the north.

Although still showing many signs of the former communist state, the character in this part of Slovakia is wonderful. The people are courteous, helpful and hardworking – getting a problem fixed is easy (once the language barrier is overcome). Eating out is cheap, as is accommodation, the summer climate is comfortable, the women are beautiful, and the flying is good. What more could you want?

To go with the lovely setting in Prievidza, the organization of the championships was utterly impeccable. Not only did the day-to-day operation run like clockwork, but standards of presentation were also upheld with an impressive opening ceremony, a manicured briefing hangar and excellent website – the grid team even wore white gloves when handling the gliders! The chief sponsor of the event was AeroSpool (also possibly the best outfit in the world to work on gliders), which arranged for around 15 of their WT 9 Dynamic microlights to aerotow the fleet. While the long ground rolls of laden standard class ships were interesting, the Dynamics proved to be great tugs, with good climb rates in the air and fast turnaround times – they were exceptionally quiet too. In fact, the only flaw in the organizational side of things was the failure of the live tracking system – which certainly was not the fault of the Slovakians.

The competition in the sky was a different story. The weather never really developed into booming summer conditions. Thermals were generally weak with the interplay between ground and cloud proving rather tricky. Although sometimes the sunny mountain faces would act as advertised, more often the mountains were merely annoying barriers to progress and climbs would be found in peculiar places. The difficulties could mostly be put down to high temperatures and humidity levels that meant most good-looking clouds were in fact dead, vacuous shells. But although the sky was difficult, and in some cases completely chancy, an intense 12 days of flying took place.

Right from day one the drama began to unfold with a serious mid-air collision in the standard class. Luckily both pilots were uninjured and were able to land safely. Several other air-to-air incidents occurred early in the competition and this led to an edgy mood amongst both pilots and officials. Tragically, on the fourth flying day, Russian standard class pilot Alexander Martynov was killed after his LAK-19 was observed to enter an unrecoverable spin. There were also several outlanding incidents, and Chief Steward, Rolland Stuck, concluded that this was “the worst safety record at a world

The grid at Prievidza is ready 14 tow planes and 105 gliders

Photo Rick Millane

PRIEVIDZA, SLOVAKIA

Dane launches with Prievidza castle in background.

Photo Rick Millane

Flogging of the task setter for a day with many landouts.

Opening ceremony, Dane flanked by Warren and Teri.

One hot pilot.

A: Launching into an ominous sky Day 2 winner. B: WGC Prievidza.

championship". Some observers were inclined to pin blame upon a new wave of aggressive flying, but my view is that we have had a good run in recent years and this time Lady Luck was against us. In any case, the pre-start gaggles were certainly a big psychological test in the weak conditions, with the varied wing-loading across the classes exacerbating the problem too. Other factors that compounded the flying intensity were several days of poor visibility, a number of tasks through narrow airspace corridors, frequent occurrences of showers / thunderstorms, and some unusually low cloud bases over rough terrain. The tasks were challenging, and unfortunately AATs were set several times when they shouldn't have been, but there was really only one day where the task setter got it wrong and caused 97 landouts in thunderstorms. In true Slovak spirit though, he received a public lashing for the mistake!

For me the championships went from boom to bust. With some careful task planning and a touch of luck to win the second day, I found myself leading the scoreboard after some difficult AAT tasks – a great result from which I could approach the imminent racing tasks with some confidence. Unfortunately, various circumstances and a bit of bad luck on the fourth race got the better of me. Hot, stressed, utterly exhausted, and over an hour behind the fleet, I made the painful decision to abandon task and return to Prievidza – something I had never dreamed of doing at world championship level. Falling off the top, I tried to put the day behind me and resurrect the campaign. But with my momentum gone, the persistently tricky weather, and an inability to gaggle fly, I was never able to recover a consistent rhythm and finished the competition well down the list.

Most competitors that I talked to also admitted to having trouble in the conditions, and said they were rather confused about the skies. The one notable exception was Sebastian Kawa. A controlled and calculating pilot, Kawa not only has a rapid flying style, but also has a seemingly uncanny ability to understand and predict the intricacies of every task he flies. Together with such foresight, he has the capacity to rise to the occasion and put together extraordinary flights when necessary (I recommend viewing the trace of his final glide on the third competition day). The best glider pilot in the world in my view, Kawa was able to singlehandedly hold off the masterful German duo of Mario Kiessling and Michael Buchthal to take out the standard class and earn yet another world championship title.

Despite the weather and airborne dramas, the Prievidza championships were thoroughly enjoyable and I am delighted to have had the opportunity to compete there. I could not have done it with out the help of many people – thanks are especially due to my father, Warren, for being an excellent team captain, and to Wilson Ellery for his expert crewing. Also to Bill and Jan Walker, and my mum, Teri, for all their fantastic support. Finally, a special thank you to the Pryde and Roake Trusts for their generous financial assistance.

Photo Rick Millane

31ST FAI WORLD GLIDING CHAMPIONSHIPS
15M/18M/OPEN CLASSES – SZEGED, HUNGARY

By John Coutts

Although he lives and flies (when family and business permits) in Johannesburg South Africa, John Coutts is still very much a Kiwi. Together with Dane Dickinson in the 15m class, he represented NZ at the 2010 flapped World Championships.

Szeged is a town about the same size as Hamilton, located near the southern border of Hungary, neighbouring Serbia and Romania. Hungary is a relatively small country and, airspace permitting, it is quite possible to fly from one end to the other. Arrangements had been put in place with both Serbia and Romania to use their airspace as well, enabling the task setters to send us in any direction towards the better weather. I had the opportunity to fly in the European Championships in 2002 at a neighbouring site and although my performance was pretty average, I recalled the weather to be reasonably good and I had told the South African team pilots to expect relatively good gliding conditions. I was wrong!

I was a little disappointed when I arrived at the airfield and there was really nothing to advertise that gliding's showcase event was about to take place in one week's time. The only evidence of any airfield preparation was a canteen area that proved to leak like a sieve every time it rained. In all they had 143 entrants in the Open, 18m and 15m classes, each paying almost 1000 euros. The organisation was thin on the ground and this wasn't helped by the fact that the original contest director had resigned and his replacement had been seriously injured in a gliding accident only two weeks before the start of the contest. As one pilot said, they actually did well considering the limited number of volunteers. I kept thinking back to Omarama in 1995 and thought how great a job New Zealand did!

I flew a JS 1 revelation sailplane which was generously loaned by the Jonker Brothers, Attie and Uys (pronounced 'Ace'). This aircraft is a dream of theirs that they have spent eight years creating and it is really something special. In total there were six JS 1s in the contest and four ended up in the top ten – really a remarkable achievement. I live just over one hour away from their factory in the University Town of Potchefstroom and we have flown many training flights together in JS 1s and become good friends in the process.

Iain Baker is a pom, but also the sales rep for Jonker sailplanes and he helped me out the first few days of practice, while I waited for Dane and his crew Wilson who had just finished competing in the unflapped World Championships at Prievidza in Slovakia. Nigel McPhee, my crew and NZ team captain made up the remainder of the Kiwi contingent.

During the practice period, it was a warm 35°C most days and felt like 80% humidity. It was very hazy and everything looked very green and lush, there was a lot of standing water in the fields. It turned out that earlier in the summer they had had very bad floods, plus we had the Danube River and a few other large rivers close by for good measure, so the ground just had no chance to dry out. The days of the practice period were very hot and humid, yet the air felt very stable and the thermals were small and weak. They started late and finished early, or a thunderstorm would develop to kill all lift. From the air, you could still see the extent of the flooded areas yet a small section perhaps 30 km wide by 60 km long to the east seemed drier, perhaps with sandy soil. This provided better conditions. Near the rivers, and the Danube in particular, conditions were very weak and really no go areas if you could avoid them. As is always the way in gliding the weather is always totally different from one day to the next. I was just beginning to think that this was going to be the typical weather cycle for the contest, when a cold front stalled over the site during the opening ceremony and we had four days of no flying.

Finally, after what seemed like an eternity with countless hours soaking in the local heated pools, 100 laps around the town square, and a failed trip to Serbia where they wanted 100 euros for one day's third party car insurance, we were finally flying. The theme of this World Championship looked pretty set -- weak thermals, low cloud bases and monster gaggles. I started late on the first day because

Photo Rick Millane

John Coutts

Photo Rick Millane

NZ four - Wilson Ellery, John Coutts, Dane Dickinson and Nigel McPhee.

the start gaggle was just getting crazy. Later on track all three classes converged until all 143 gliders were fighting over a set of 2 knot thermals to 3500 ft. I made a mistake when I dumped some of my water but forgot to check I had closed the dump valves properly. I slowly lost all my water and poor flying lost me some precious time on the final glide. Many gliders were just squeaking in and I was surprised to see someone 200 ft below me going for the line when I was only just going to make it. He hopped field after field finally coming to rest 100 m before the airfield boundary. Lars Zender from Australia just passed over the boundary fence but his wingtip caught a passing truck shattering the windscreen and severely injuring the driver. He walked away unscathed and that was really a testament to Gerhard Waibel's crash resistant cockpit design incorporated into the later ASW gliders.

Day two wasn't much better when I flew like a complete idiot on the first two legs. The latter part of the flight I started to get it together as the weather conditions showed signs of deteriorating. I figured a stubble fire would give my last climb to final glide. But with about 15 others I landed near it. I was so convinced it was going to work that I literally thermalled down from 2000 ft to land at the base of the fire. I could have used the height to glide at least another 20 km. Uys Jonker the South African called me to ask about the fire, as it was the only choice left in a dead sky. I replied that it was no use, my field was good, and I would see him shortly. I couldn't believe it when over half an hour after I landed he slowly climbed away in one knot to finish the task.

On day three I tried something different but it backfired on me, leaving me down in 30th place overall. I guess after that I just concentrated on enjoying the flying and surprisingly started pegging back a couple of points on the leaders.

On the fourth day the task setter, who seeamed to be on his own mission, sent the 15m class on a task entirely into Serbia. Reasonable cumulus soon gave way to blue conditions that just got weaker and weaker. Eventually every one of 143 gliders landed out (or started their engine) and the 15m class all landed in Serbia. The 15m class all landed reasonably close to Szeged and most were on an airfield, so the retrieve should have taken about two hours even if done by road. An aerotow retrieve was not permitted and our previous experience during the practice period had taught us that this was going to be an exercise, and that it was. Most arrived back at four o'clock in the morning, having spent many hours waiting at the border control, first on the way in and then coming back out again.

On day five, I finally discovered that the drier fields had been harvested first and the wet ones were still in crop. It was a blue day yet I was able to predict the good areas ahead and push low into them and see in advance the softer areas where I needed to fly more cautiously. My performance was good enough for first place for the day.

Day six provided probably the only racing day of the whole contest and the final day, day seven provided probably some of the weakest conditions I have flown in.

Before it felt like it had even really ever begun, it was all over and I was sitting in 15th. In retrospect the weather was the worst of any international competition that I have flown. Only seven days with a maximum altitude of 5,500 ft and the strongest thermal of 5.6 knots over the whole three weeks. Most days the average thermal was down around the 2 knot mark. Dane also had an average contest, finishing in 29th in the 15m Class, although a day win to add to the one he notched up in Previdza, proved that he could be one to watch in Uvalde.

In the 15m Class Stefano Ghiorzo won, with Leigh Wells second in an ASG 29 and Thomas Gostner third. Stefano and Thomas were in the Diana 2 and although it seems the sailplane has many shortcomings from a practicality and ground handling point of view – in the air it really is the best 15m glider.

In the Open Class Michael Sommer again won to make it his third open class world title. He was flying the new EB 29 single seat glider with a wing span of 29m. Probably the best glider in the world. Steve Jones from England was second in a Nimbus 4 and Pierre de Broqueville from Belgium third in an EB28 two seat.

In the 18m class, the two Poles Karol Staryszak and Zbigniew Nieradka were flying very well and the South African Jonker Brothers (the JS 1 creators) were also flying well. On the final day, Karol, who was in the lead, landed out. His team mate Zbigniew just managed to climb away from low level to win overall with an ASG 29. Uys Jonker ended second, flying the JS 1. I never really had a good opportunity to accurately compare the JS 1 with other gliders, especially as the weak weather meant that often everyone was flying at very different wing loadings. I did however feel confident in the glider's running ability and wasn't ever passed by anyone. The Ventus 2cxa's were able to dump down to a much lower wing loading and seemed to have a climbing advantage over the JS 1 and ASG 29 in the very weak thermals at the end of the day. I think in a proper racing environment like Uvalde Texas, the 2012 world championship site, the JS 1 will be a good choice.

Overall, I was disappointed in my performance but then I have not done much flying in the last 7 years. I would like another World title, but with family and business, it is difficult to allocate the time and money required, bearing in mind that just flying around the circuit is not good enough practice. You need to fly lots of international and national contests which are time consuming and very expensive. If anything, I did re-acquaint myself with the difficult competition environment in Europe and I began to feel more confident in the final week of competition.

Finally, I would like to thank Nigel McPhee who was an excellent crew, the Jonker Brothers, and Iain Baker for organising the JS1 and GNZ for covering the entry fee.

South Island Regional Gliding Championships 2010

Compulsory Briefing 2030hrs Omarama 12 November 2010
Practice day Saturday 13 November 2010 **Competition** 14-20 November

Entry fee $244 – $220 if registered by 5 November 2010

Register via online The Regionals website is: http://glidingcomps.42.net.nz/sireg2010 or by emailing competition Director Geoff Soper at reg2010@42.net.nz or kevin.bethwaite@gmail.com

Tasks will be set with a view to challenge you and give satisfaction but not break you.

NEWS FLASH

FREE ENTRY to CLUB CLASS with following conditions.

For FIRST TIME CLUB CLASS pilots never having flown in a contest, plus any Club Two-seater entering CLUB CLASS with a handicap (performance) equal to or less than 87 e.g. Twin Astir fixed or retractable u/c, Puchacz.

The emphasis on the South Island Regionals as a whole is to be challenged, share, learn, and have fun in one of the world's greatest soaring areas

THE ARCUS E

Hot off the press comes the news that the first serial-built two seat glider with an electric engine has flown.
On 18 September the Arcus E took to the air above Kirchheim in Germany, powered by clean CO2-free energy.

A special moment, The Arcus E and the classic gull wing glider the

The Arcus E project is the result of collaboration between Schempp-Hirth, Lange Aviation and Windreich AG. These three innovative companies have used all of their know how to create the most progressive propulsion system in current sailplane history and prove that “visions can be realised”.

Gliding enthusiasts are familiar with the gliding manufacturers Schempp-Hirth and Lange Aviation. Lange produce the Antares glider and have a long history of working on innovative propulsion methods. The CEO of Lange Aviation from Zweibruecken is development graduate engineer Axel Lange. Lange is regarded as the expert in the area of electric propulsion systems in sailplanes. The other company involved in the Arcus E is Windreich AG, a company that works mainly in onshore/offshore wind energy systems. Willi Balz, the CEO of Windreich AG and co-initiator of this progressive project was more than delighted with the maiden flight. This environmentally conscious electric aircraft fits into his company’s philosophy of sustainable non-polluting energy.

Willi Balz was determined that this aircraft would be recharged completely CO_2 free. A wind turbine on the roof of the hangar charges the wing batteries either directly via a converter, or it charges large truck batteries which can charge the Arcus even when there is no wind. Therefore, the Arcus flies completely emission free.

Schempp-Hirth’s Arcus is already a very successful two seater aircraft. It has done well in many recent competitions and the demand is high. Offering an electric self launcher option with low noise levels should make this variant very popular indeed.

On Saturday evening the 18th September, the Arcus E took off and climbed almost silently into the evening sky from the Hahnweide airfield in Kirchheim/Teck. The pilots were Tilo Holighaus and Willi Balz. The elegant aircraft with its characteristic swept back wings made a subsequent low pass accompanied only by a light hum. Onlookers were spellbound. With fascination the spectators and press followed every manoeuvre of this shapely aircraft. The Arcus E’s aerodynamic layout was pre-planned to encompass the easy to operate electric engine system. As it drew graceful lines in the red evening sky it rewarded its creators and all who worked on her for the many extras they had given to create her. Both pilots were presented with champagne and flowers after the landing. It was a milestone that just had to celebrated.

There is a video available. On YouTube type in “First Flight Arcus-E at Hahnweide - Low pass” to hear how quiet this engine is.

Photo Bernd Webber

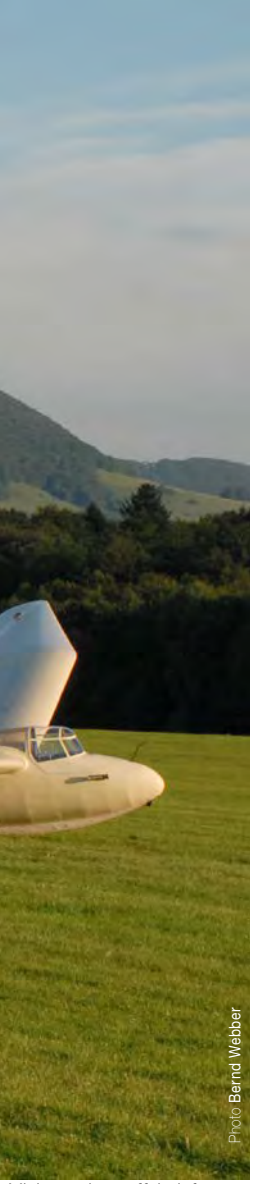


Photo Bernd Webber

Minimoa show off their form.


Photo Bernd Webber

A: The Arcus E above Kirchheim City. L: Two spectators, Reiner Rose OLC and Tilo Holighaus /SHK. M: The new steerable tailwheel. R: Flowers for the pilots and designers, Tilo Holighaus and Willi Balz.

Photo Bernd Webber

At the last GNZ AGM the soaring pilots voted to support a new concept in regards to the Club glider racing class in New Zealand.

5 – 13 February 2011, Matamata

GNZ **CLUB CLASS** NATIONALS

The Club Class has been failing to attract enough entries to create a meaningful competition, consequently the SRC have been considering implementing changes in the way we handle this particular glider class. Competitions at Matamata have had marginal entries, but the recent Multi Class Nationals at Taupo and Omarama in 09/10, had insufficient eligible Club Class entries to constitute a championship.

In contrast to our NZ experiences the Club concept is enjoying positive support in its various forms overseas. In Australia it started as a handicapped event that enabled just about all glider types to be eligible. It has proved so popular that it has been necessary to 'thin' the group into two fields. They attract at least as many entrants as the Multi Class Nat's. In the US they have a similar idea called Sports class, which is enjoying plenty of support as well.

The success has been for several reasons. The pilots enjoy the 'laid back' attitude and friendly atmosphere, particularly in Aussie. Also the handicap system and Assigned Area Tasks (AAT) type tasking seems to suit certain older gliders that find it difficult to be competitive in other classes. Another reason is that the events are held at a time that can allow those keen on the normal FAI classes to still be active there as well.

Our island topography causes too many variables to task effectively using large AATs, the preferred tasks of the US and Aussie contests. AATs (and handicaps of course) are really the only tasking tool being used to sort out the large performance spread of these contests. We tried this at the Drury Comps in Jan 2010 and this experience has changed my initial opinion.

We put the idea to the competition pilots at the various meetings and then came up with a format for the 2010/11 season. The basic changes approved and voted in at the AGM are –

That the Club Class Championships be restructured as follows:

1. The Club Class National Championships be disassociated from the Multi-class National Championships and be held each year in that Island not hosting Multi-class National Championships. The duration of the Championships is suggested to not exceed 9 days.
2. Entry to the Club Class is unrestricted, but the Club Class Champion will be the highest place entrant flying a glider that conforms to FAI-IGC Club Class requirements (in being listed on the IGC Club Class Handicap List). Those gliders not conforming to FAI-IGC requirements will be scored but are ineligible for Club Class prizes or trophies.
3. Handicapping will be based on the GNZ Handicap Register.
4. Gliders in the Club Class will not be permitted to carry any ballast that may be jettisoned in flight, nor any fixed ballast in excess of that necessary to maintain the centre of gravity within Flight Manual limits.
5. Motor gliders participating in the Club Class will incur a 0.02 point handicap increase.
6. The Club Class will be exempted from the part of Rule 4.2.1 that requires no more than 2/3 of tasks be of a single type.

The Club Class will be exempted from Rule 4.15.5 and the associated penalty.

The Concept

The proposal is that we run a new National Championship event at a different time and in an alternative island to the Multi-Class Nationals, incorporating the new 'Club Class' into an existing 'non sanctioned' event. This has the added advantage of maintaining a larger size field.

We believe we can run a 'one class' event with the National Club Class contenders requiring an eligible aircraft to contest the National Club Class trophy. Other trophies can be distributed at the discretion of the organisers, as they would have previously anyway.

In order to score such a one-class field we decided to use the existing BGA handicap register which covers all the gliders in NZ. However the FAI Club Class definition list of Club Class gliders was chosen to determine glider eligibility for our NZ purposes.

Pilot meetings and surveys suggest we also support and encourage mentoring during the races.

While we still wish to encourage every pilot and glider type to enter we intend all the tasking to be focussed on the following philosophy. *That we task for the very best NZ pilot abilities in Club Class gliders.*

Many of the pilots at the meetings commented on the class being aimed at entry-level pilots rather than glider type. Even those new to the racing scene said they would prefer to race against their peers and in a larger group. Hopefully this will mean that winning the Club Class trophy will have the mana of winning other National Trophies.

The Sailplane Racing Committee intends to promote the revised Club Class Championships by –

- Targeting owners of eligible aircraft with a mail out letter enlisting support by either entering or allowing their gliders to be otherwise utilised by others in the event.
- Directly targeting and lobbying more experienced competition pilots to encourage their participation in this event.
- Targeting clubs and CFI's to get club pilot and instructor support to commit club gliders, encourage teams and newer pilots. *Any more ideas? Contact us.*

Prizes At this stage we have only the existing prizes pertaining to this class. We want ideas for more prizes – not so many that we devalue the main ones but we welcome any ideas or sponsorships. It is obvious that this class will be suitable for youth so we intend to ensure this aspect is promoted. It is also obvious that NZ can be represented at the next Worlds in this class so maybe the prizes can reflect help in this way.

The Competition – Matamata Feb 5th – Sunday 13th Feb 2011

This is the responsibility of the organising host – This year it is the Matamata Soaring Centre. I know the MSC will do their best to ensure a successful inaugural event.

We hope that the new format can fulfil a wide range of pilot objectives and still result in a truly meaningful National Champion. The spin off with this is that we hope we attract more people into the competition aspect of flying sailplanes.

Please feel free to contact myself at sailplaneservices@xtra.co.nz and Brett Hunter hunter.b@ihug.co.nz with ideas or comments.

Ross Gaddes, GNZ Sailplane Racing Committee

FLYING IN NEVADA PART TWO

By John McCaw

In the last issue John McCaw told us about soaring from Ely in Nevada. In part two of his story he shares stories and more wonderful pictures from Nevada's other famous gliding site: Minden.

The huge Heavenly Valley Ski resort.

Minden is west of Ely in the middle of the Carson Valley. The airfield itself is actually half way between the town of Minden and Carson City. Like Ely it was a Pony Express stop. Minden was the stop before the crossing of the Sierra Nevadas. These days it is farming country ... farming and gambling. All of Nevada is gambling country.

The Pine Nut Mountains are just west of Minden. They are great thermal generators. Wikipedia says that Minden is one of the best soaring sites in the world and lots of people do come to try it out. Lots of Kiwis come to visit. The airfield (4,700 feet) has a bar and restaurant and two commercial gliding operations: SoaringNV and Minden Soaring. Private jets come and go. Many bring gamblers to the local casinos from all over America.

Early in my trip I was staying with Jim and Jennifer Herd who live near Minden. I went down to the airfield to visit SoaringNV, run by Laurie Harden. I'd been in touch with Laurie before I left home and she was very helpful. SoaringNV runs advanced soaring courses with four top instructors. Chip Garner (US National winner) was a guest instructor for them this year. Gavin Wills flies here most years and is a guest instructor. Also trying to work for them but having trouble with his visa was Phil Plane from Omarama. He wasn't able to officially instruct but he offered to take me for a passenger flight in the Duo Discus.

Close to the airfield is scenic Lake Tahoe. It sits at 6,000 feet ASL in the Sierra Nevadas and is the perfect spot to fly over with tourists. SoaringNV take their joy rides here. It is a great experience. The whole area is very scenic. Phil and I wanted more than a simple joy ride so we climbed over the huge Heavenly Valley ski resort and soared down the Sierra Nevadas. Thermals in this area, like at Minden, are 13,000 feet plus and on the day we flew, 6-8 knots average. We flew down the White Mountains towards Mono Lake. It was a wonderful introduction to soaring in America.

I came back to Minden a couple of weeks later after my time at Reno and Ely. Chris Richards and Terry Delore flew the Nimbus 4 across from Ely. Dave Tillman from the Canterbury Gliding Club and Kerry Jackson from South Canterbury were there. Kerry was just passing through but had one good flight each with Chris and one with Terry. Kerry and Chris tried to do a 1000k but had to start the engine for the last bit. They still had a great flight.

Laurie and her crew were very welcoming. They have a nice fleet: a Duo Discus, Duo Discus X, ASK 21, and an LS4. They also have something Kiwis don't usually see, a Schweizer 2-32. These American built gliders are aluminium, but much sleeker than a Blanik. The really interesting thing about them is that they are the only production three seater gliders. They have two seats in the back. They are very useful for passenger flights. SoaringNV can help you with the

Minden Airport

The Schweizer 2-32

details needed for flying in the US. It pays to check with them before you leave NZ as the paperwork involved to let you fly solo in the US takes at least 6 months to sort out. No one will let you fly a glider solo without the right paperwork, it's an insurance issue. Talk to whatever operator you plan to fly with well in advance.

As well as flying, the other Kiwi guys and I did some really nice tramps around the area. There is a lot to do at Minden if you are into the outdoors. With the lake not far away it could be a good place for families to visit while Dad goes soaring.

I'd like to thank Laurie and her team for making me welcome, Jim and Jennifer Herd for having us to stay and helping me get around the countryside, Chris Richards again, for letting me fly with him and Phil Plane for introducing me to flying in America.

L: Phil Plane in one of the backseats of the Schweizer 2-32. M: Laurie and the SoaringNV team. R: Lake Tahoe.

GLIDING – THREAT AND ERROR MANAGEMENT

– OR HOW TO REDUCE MISTAKES AND FLY SAFELY

Arthur Gatland

Arthur Gatland started flying in 1963 at age 13 and has accumulated 17,000 flying hours including 2,500 hours in RAF fighters such as Harriers, Hunters, Hawks. He is currently a Boeing 777 Captain and instructor, and for ten years was Manager of Training and Flight Standards for Air New Zealand. He is an A Cat glider instructor, with a Gold C and 3 Diamonds, and was a previous CFI of the Auckland Gliding Club.

In the last two SoaringNZ articles, I introduced Threat and Error Management (TEM) as a simple yet powerful technique for assessing threats affecting any and every glider flight, and discussed how to use TEM in local and cross-country glider flights. Recognising threats allows pilots to predict situations where they might make errors or forget something, which increases the possibility of accidents.

As I said in the last issue, our accident rate in NZ is poor and yet none of our spate of accidents has been the result of structural or mechanical defects – all have resulted from pilots intentionally putting themselves in a situation that for various reasons has resulted in a crash. Ridges, rocks and trees do not suddenly leap out and hit gliders – yet we manage to collide with them on a regular basis.

This series of articles applies to every glider pilot in New Zealand, regardless of experience.

In this article I will continue the theme of TEM as it applies to competition flying, which of course includes all the threats for cross-country flying, but add a few important extra threats and pressures. Remember that to assess what constitutes a threat, we use the concept of a pristine flight, and look for anything that introduces a variation to this theoretical flight. Let's look at a pristine flight in the competition context.

Pristine Flight (Competition):

Recall from the last issue of SoaringNZ that a pristine flight relating to cross-country flying would be a 'straightforward' cross-country soaring flight where everything goes exactly to plan. In brief, it involves a well-prepared glider, a current and healthy pilot, and ideal soaring conditions over friendly terrain, with no time pressure. Additionally you will have chosen the task and this is likely to be based on the best conditions (predicted or observed), and you have ability to select your launch time, length of task, and the choice of shortening it if the weather deteriorates.

Of course, in competition flying there are many differences from a weekend cross-country flight, and these constitute additional threats for the competition pilot, and you need to have a strategy or plan to manage these threats. Let's review some of these:

Ridges, rocks and trees do not suddenly leap out and hit gliders – yet we manage to collide with them on a regular basis.

Threats	Considerations	Strategies
Unfamiliar airfield	A percentage of pilots competing in any competition will not be familiar with the airfield or local area, particularly when entering the Nationals which will be out of region for many pilots.	Arrive at the site early, check on local rules and procedures, fly a few familiarisation flights. Get used to finding the airfield from several directions. If you can't arrive early, try to arrange a short local flight early on day 1 of the contest (in a glider, or hire a light aircraft).
Time pressure (ground)	Pre-flight: this is present every day in a contest; you simply can't afford to be late getting ready for launch. This can lead to rushed pre-flight, distraction from simple tasks, and forgetting critical items such as drink, snacks etc.	Always allow far more time than you think you will need to allow for likely delays. It is far better to get the glider to the launch point very early, allowing time for a relaxed drink / snack before earliest launch time. Use preparation checklists to ensure you have covered everything. Delegate this to your 'crew chief' if you have one!
Time pressure (in flight)	In-flight: Time is everything. The pressure to keep pushing on is ever-present, and every time you do one too many turns in a thermal, or choose a cloud which doesn't work as well as you hoped, the frustration and impatience increases. Time pressure can be compounded after what is perceived as a poor result the previous day. "I only came 3rd yesterday, I have to push on even harder today (i.e. take more risks)!!"	Preparation: on your weekend cross-country flights you should give yourself realistic tasks and timed challenges for practice. You quickly learn that effective speed-flying is surprisingly relaxed, based on good decisions made by thinking ahead all the time. If the thermals are weak, relax by realising it's the same for all competitors. Try to have a Plan B – "If this thermal isn't at least 5 knots, I'll go straight to that cloud over there."
Launch delay	By the nature of competitions, you can't launch exactly when you might like. Pilots can allow themselves to get frustrated by apparent delays in launching and by their place at the back of the grid.	In fact this should make very little difference to the task success. You must accept that (a) you have no control so accept your start time and (b) it's unlikely to penalise you and it could actually be an advantage. Relax and don't stress about it.
Navigation	Navigating over possibly unfamiliar terrain or routes that are not of your choosing add considerable pressure.	On your weekend cross-country flights, set yourself tasks over unknown country for training. At the competition, try to arrive early so you can fly a few local familiarisation flights. Consider hiring a light aircraft for a local scenic familiarisation flight (share the cost with other pilots).
Risk of landout	This increases in competition because you will try to complete the tasks regardless of the weather, whereas in weekend flying you would probably turn around and go home. When you start a contest, you should tell yourself that you will land out 2 or 3 times during the contest – and that you will make damn sure it doesn't result in a damaged glider or worse.	Landouts should not present significant safety risk if you obey basic safety rules. Be practiced at short landings, ensure you are always within range of good landing areas, and continually monitor wind direction and local weather effects. Never take a risk where a safe landing is jeopardised.
Pressure to get home	Landing out on a cross-country flight is always inconvenient, but in competition it means loss of points, possibly cancelling any chance of winning the contest, and could mean a long retrieve resulting in a late night and fatigue for tomorrow's task, or even missing the start time. There is an overwhelming temptation to push the boundaries to prevent landing out.	In your mind, carefully separate 'tactical risk' from safety risk. It might be smart to ignore a weak thermal and push on to a better looking thermal – albeit getting a bit lower – as long as there are good paddocks around. However NEVER defer the decision to land out hoping another thermal will appear by magic – because it won't. If you damage the glider, you can forget any chance of winning the contest! A safe landing is always highest priority for the competition points as well as your life!
Few landing areas	Many competition flights in NZ involve flights over areas with few landing areas. It is very tempting to just say "I won't have to land out" and push on regardless. This is called DENIAL and has been the undoing of many pilots in all forms of aviation. See also "impatience" below.	Always always always have a landing area in mind at all times. Make sure you have sufficient height to reach your designated paddock, and know your minimum height required to reach it. Do not leave the area until you have enough height to reach the next landing area. To win a competition you first have to finish the contest. If you take risks that will eventually result in damage, you will miss out on several days flying which really wrecks your points total (apart from the minor detail of risking your life, incurring repair costs and increased insurance premiums).
Impatience	Competitive pilots are always aware of the need to keep pushing on. This can lead to bad decisions based on impatience. You know you need 5,000 feet to move on, and be able to reach the next safe landing area. But at 3,500 ft the lift drops from 5 knots to 3 knots – you say "I can't waste time, I've got to go now – I'm sure it'll be OK..."	Listen to the little voice in your head that is telling you the required truth – that you are pushing your luck. Safety is paramount at all times – no exceptions. Gliding is a sport and should never be a life-or-death situation, however the evidence proves that some pilots have allowed it to become exactly that.
Frustration	Impatience always leads to increasing frustration, as things never go as well as you would like.	You must be self-aware and recognise when you are becoming frustrated. Then make yourself be careful, be methodical, and double-check all your decisions.
Weather changes	Unexpected weather changes have caught many pilots unprepared. "I didn't expect the wind to change direction"; "Unexpectedly the lift dropped from average 8 knots to about 2 knots"; "I didn't expect that sea breeze"; "Suddenly it started raining and I was forced to land in a rough area."	The term "unexpected weather change" is a contradiction. Nothing is more certain than the fact that the weather is constantly changing. This is a threat that you must expect to occur, and be ready. How many competition pilots have won the day because they were alert to the "unexpected" changes in the weather? Why do other pilots moan that "he was really lucky!"?
Inexperience	We all have to start somewhere! Pilots who have never flown in competitions can easily be a bit overwhelmed by the event, and excitement or adrenalin affect their thinking.	You must ensure that your first competition flight is the same as your last cross-country flight. Fly within your abilities and don't worry what anyone else is doing. (In fact, this is what the top pilots are doing anyway!) Set realistic goals for each day.

Soaring NZ

Terry Delore and Chris Richards finish a task at Minden.

Photo John McCaw

Threats	Considerations	Strategies
Fatigue	As soon as you wake up and start your daily activity, you are starting to accumulate tiredness! This fatigue is more rapid when you undergo challenges, continual decision making, stress/adrenalin, heat or cold, dehydration and hunger.	If you ever say that you don't suffer from fatigue, you are severely mistaken. Adrenalin enables many sportsmen to operate to a high level of physical activity for a period of time, but their decision-making often suffers. Glider pilots will always experience fatigue and their decisions at the end of a competition flight are often flawed. You must make safe conservative decisions and be aware of the risks of poor decisions.
Cloud flying	Instrument flying in gliders is a challenge, and requires training and practice. Threats include disorientation, navigation problems, rain or icing on the wings, procedural / radio requirements, inability to see where to go next etc. I won a day at the Nationals once with lucky cloud climbs, but more often it's been a mistake – examples include icing on my wings which turned the Discus into a K6, or compass / navigation issues which meant I lost any likely gain etc.	Cloud flying, like any specialist skill, requires training and practice and we don't often get the opportunity. More often than not there is no advantage anyway. I have heard pilots say they can maintain orientation in clouds without instruments – which is utter rubbish – gliders do have some natural stability but humans' eustachian canals are very easily disoriented. If you're not an expert in instrument flying don't try it in a contest!
Water ballast	Gliders handle differently when carrying water ballast, including during take off, aerotow, thermalling etc. Additionally it is another threat that needs to be handled before landing in a paddock or back at the airfield. There are weight and balance limits to observe, and with high altitude flying a risk of icing.	Don't underestimate the threat. Brief your wing runner, brief the towpilot, ensure you have clearance on both sides in case of ground loop. Know your best thermalling speed. Allow extra space from other gliders when thermalling because of reduced manoeuvrability. Have a contingency plan in case the water won't jettison correctly (or does so asymmetrically). Basically, practice flying with ballast routinely before you enter a contest. Also you must observe your glider's weight and balance limitations – do you know these?
Overconfidence	It takes a strong person to make an accurate assessment of their abilities and shortcomings, and over-rating your abilities can be fatal. Typically, all pilots go through periods of overconfidence in their flying careers – typically at 100 hours total time, then 100 hours on a new aircraft type or 100 hours after getting a Commercial Licence, or 100 hours of cross-country flying etc. Competitions tempt pilots to push their personal limits, and after one successful contest day you can easily convince yourself that you are a god and can handle anything. Well ... you're not and you can't.	"Pride comes before a fall", Proverbs 16.18, which shows how long humans have been aware of the dangers of overconfidence. Ask any pilot who has flown 10,000 hours and they will openly admit you never stop learning about flying, and you will always make errors of judgement. Anytime you read accident reports and find yourself saying "what an idiot", or "I would never do that", or "I could have coped with that" – then YOU are overconfident. Always look for your mistakes – because they are there! The important thing is to recognise the big ones!
Poor preparation	Poor preparation can stem from overconfidence. ("I don't need careful preparation because my experience or natural ability will see me through".) Or it can stem from laziness, or lack of organisation or lack of time.	In all cases, don't underestimate the dangers of lack of preparation, which can lead to errors in rigging, forgetting essential equipment, not being mentally prepared, added time pressure, and finally that little nagging voice that says, "I think I've forgotten to do something" which is a huge distraction (but it's probably correct!).
Final glides	Final glides are a huge threat due to their nature – intentionally flying lower than normal, often based on a calculated glide distance which may or not be correct, through unknown lift / sink, coupled with fatigue at the end of a long flight and hours of adrenalin. There is a common threat of crossing the finish line and having no plan on how to actually land! This is partly caused by the phenomenon of 'anti-climax' – after stress or pressure is removed, particularly after a success, the earlier continual adrenalin causes an anti-climax, and people feel very flat and suddenly tired. This shows up as pilots finish a task but actually relax and forget to think about landing safely. I have personally seen several accidents after misjudged final glides, including trying to pull up into the circuit with insufficient speed.	Firstly, practise final glides regularly (this doesn't mean a beat-up – it means practising the judgement involved with appropriate radio calls and local rules etc.) Secondly, make sure you always have a safe speed, and plan how you will land. If your plan is to pull up into a circuit, you must always have a Plan B – usually landing straight in if you don't have over 100 knots at the finish line. Frank Gatland – who was still doing safe final glides at age 85 – was a firm advocate of always landing straight in – it is safe, just as fast, and removes the extra threats and challenges of a low circuit when you are tired. If you commit to a final glide and it is looking doubtful, don't wait until 500 feet to decide you're not going to make it. Start looking for lift at say 1500 feet, and commit to a paddock landing in good time.
Other gliders	Competitions involve large numbers of gliders often in close proximity. Mid-airs are often fatal.	Lookout, lookout, lookout. Particularly pre-start and at turnpoints – but just as important at all times.
High altitude	In Part 2, I talked briefly about some of the threats in wave flying. These include: Use of oxygen Cold temperature Higher wind speeds Icing Terrain Aircraft limitations – IAS/TAS relationship Turbulence In competition the threats are the same but the temptation is greater to push on when you are cold, low on oxygen, or otherwise uncertain about some aspect of the flight.	Without overstating the issues, any of these can kill if you don't understand the issues and procedures. However with correct training, preparation, and self-monitoring and self-discipline, there should be no issues with any of these. Never be complacent with wave flying. Remember the 'catch 22' that hypoxia can lead to euphoria, over-confidence and loss of self-criticism – so if you find yourself thinking everything is fantastic, check your oxygen! All glider pilots should undergo RNZAF hypoxia training – it is an invaluable experience!

I could go on and on – but hopefully you have picked up the themes involved here. It's all about recognising threats on any flight and managing them so that they do not lead to errors or significant risks. In other words, AWARENESS of the Threats and the right ATTITUDE for safe competition flying. As I said in Part 2 of this series, cross-country flying by its very nature has a significant number of threats, including continual possibility of landout, weather changes, unpredictable lift, different terrain with changes in height above sea level, often areas of partly unlandable country, or flat but very small paddocks, use of unfamiliar hills to find ridge lift, navigation challenges, and so on. It is actually the presence of these threats that form part of the challenge, the fun and satisfaction of cross-country flying. Competition raises this to a higher level, as you test your skills against some very skilled and experienced pilots. However you must not underestimate the risks that these challenges present. Because of often longer duration flights, dehydration and hunger are always present to some extent, and have an insidious effect on your decision-making. In the Nationals at Omarama years ago, I pushed a bit too far past the last good paddock but didn't find lift and had to turn back to the paddock, and only just made it, ground-looping and giving myself a scare. I should have made the decision to land much earlier. I actually won the day but almost damaged the glider – why? – if I had landed in the paddock first time I would still have won and not risked injury or damage, apart from the embarrassment!

Managing Threats:

All these threats increase your likelihood of making an error. In this context we are not talking about errors in speed-flying, like not picking the strongest thermal, or incorrect speed-to-fly technique. We are discussing errors that result in reduced safety margins, or ultimately could contribute to an incident or accident. Most pilots can very easily recognise all threats if they think about it, but a superior pilot will implement a strategy to prevent an error resulting from any of these threats.

Inexperience and Instructor Responsibility:

Once again, instructors and experienced competition pilots must help us lift our game. They should be aware that inexperienced competition pilots (and even experienced ones!) may not recognise all threats existing on any particular day. You can help these pilots by simple discussions about the task, the weather, the terrain etc. A short helpful chat to ensure he is fully prepared, and has a plan, and is mentally prepared to land out if necessary, may save his life. It will actually help you to think about the Threats and focus your own mind on safety.

As I said previously, the main ways that new pilots can gain experience and knowledge is by instructors or experienced pilots passing on these thoughts, OR letting them learn by making mistakes! Which method is better??!!

Consequences of Errors:

When competition flying, the most common and most serious safety-related errors – that of late paddock selection and speed maintenance when ridge flying – have consistently proven to have serious implications including major damage, injury or death. Yet collectively we persist in committing these errors. To be blunt – why are we that dumb? I don't know ... but I suspect it's gross over-confidence, or ignorance, or denial – "it'll never happen to me."

All I can say is that if this applies to you, then YOU need to wake up and realise how illogical your attitude is. Just ask your wife/husband what they think about your attitude to survival...

Summary For All Glider Flying:

Every glider flight, whether local, cross-country or competition, involves some threats, and all pilots must ensure they recognise these and have a strategy to manage the threats and prevent errors, and/or have a process to catch errors or slips that may have occurred. Remember we ALL make some mistakes on every flight – the important thing is to ensure they are not critical ones, or that they are captured before they lead to an undesirable position.

What Are Threats?

- Any variation to our straightforward pristine flight is a threat
- Every threat increases the likelihood of an error being committed
- Every threat requires a positive strategy to manage it and prevent errors

Useful Strategies:

A reminder that the following are just a few examples of TEM strategies that should become automatic to be a skilled and safe pilot.

TEM Strategies:

- Use SOPs / Procedures diligently
- Don't succumb to time pressure
- Always fly the glider first
- When fatigued be more careful and conscientious
- After interruptions, say "Where was I?"
- It is important to carry out a Situation Awareness review after a period of high workload
- Don't 'see what you expect to see' – look for errors
- Listen to 'that little voice' that questions what you are doing
- Take advice from other pilots, especially experienced glider pilots
- Check your ATTITUDE – safety above all else – it is after all a sport and should never become a life-or-death situation.

To Every Glider Pilot:

Acknowledging your vulnerability to mistakes is actually a sign of strength. In flying, you never stop learning. Every flight, whether you have 50 hours, 500 hours, or 15,000 hours, presents you with the same threats that must be recognised and managed. On every single flight you need to ask:

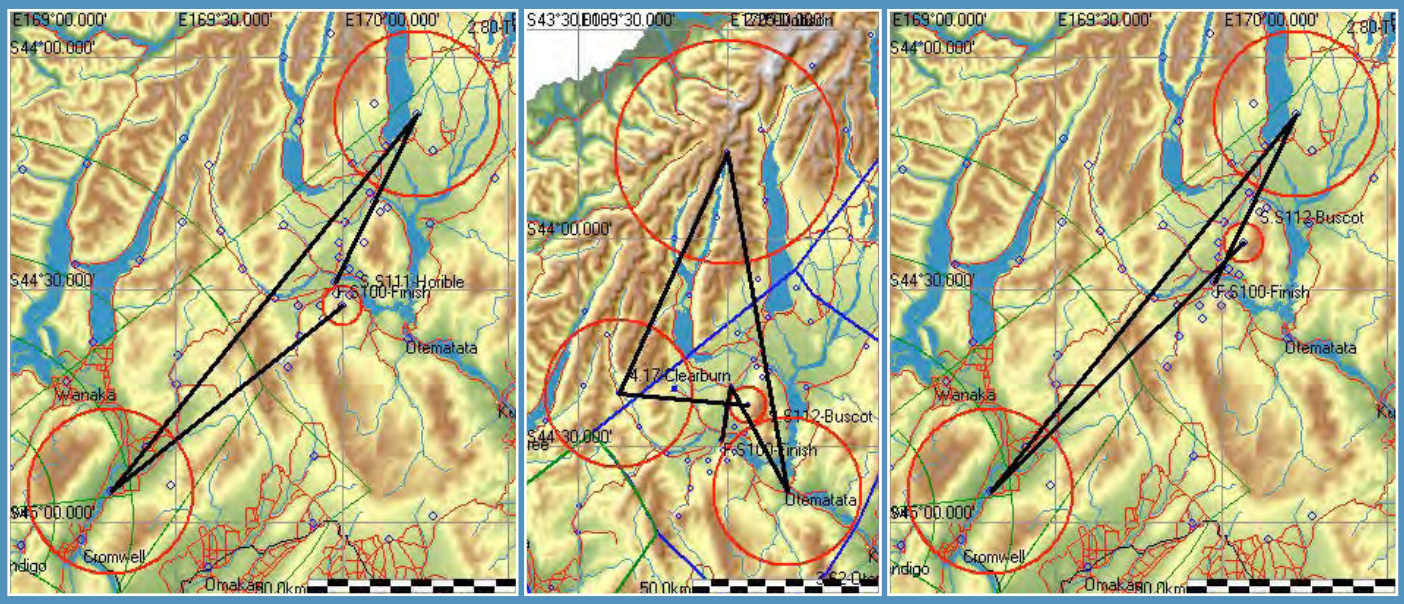
> What are my threats today?

> How will I manage and mitigate these?

Have fun out there – but be safe!

THE TROUBLE WITH **AATS**

By Dane Dickinson



In this article Dane Dickinson provides a perspective on Assigned Area Tasks (AATs) and the problematic issues they bring to competition gliding.

Several years ago Ben Flewett told me that AATs were like lotteries – you've got your ticket, and you might get lucky, but probably not. I must confess that I didn't understand the analogy he was making at the time. Over the past few seasons however I have started to see what Ben was getting at. In this article I will offer an overview of my experiences with AATs and argue that they invariably increase the degree of luck present in gliding competitions – an undesirable consequence that reduces the significance of competition results.

Traditional (racing) tasks

The most common task in gliding is a fixed course where pilots fly through a number of pre-designated turnpoints. To complete the task competitors must pass every turnpoint; the winner will be the pilot that does so the fastest. Basically a race.

Although perhaps not ideal to everyone, this format of flying has evolved and been developed over the past 50 years in such a way that it is accepted by most glider pilots as a good method to determine who is the 'best' at gliding. In general, this system of tasking and the scoring that goes with it tests the following criteria: technical preparation, piloting and soaring skill, weather knowledge and sky-reading, flying efficiency (i.e. speed), and a raft of psychological traits that we might simply label the 'champion's psyche', or, in George Moffat's words, 'one's will to win'.

It is important to note two things that are not (or, at least, should not be) tested: specialized local knowledge, and luck. Testing pilots with local weather phenomena that cannot be properly understood without hundreds of hours of practice would be rather irrelevant and unfair on visitors. And if we were to purposely incorporate luck into the game, then we may as well save some money and roll dice instead. But where do AATs sit in all of this?

Assigned Area Tasks

AATs are a relatively new invention, and the first point to note is that they fundamentally conflict with the concept of racing. Rather than an inflexible course of firm turnpoints, competitors are designated large areas to fly into (usually circles), and a time frame to do so. To win, a pilot must fly into each area, but must try to do so in such a way that he is faster than the other competitors. But there is no real racing involved because the nature of the tasks mean that you cannot assess your progress against others along the way. The analogy I like to draw is that AATs are akin to telling rally-car drivers to go out into the countryside for a few hours and try to come back with the highest average speed – a lot of fun maybe, but not a lot of point if you are trying to determine the best and fastest driver. The rebuttal of this argument is that gliding competitions are not only about 'racing'. This is a fair point; however, what advantages do AATs confer to gliding competitions?

One of the commonly advanced positives of AATs is that they provide a cop-out option for task setters in questionable weather, which allows for more competition days and reduced landouts. As we will see, this is a bad argument for many reasons. Other purported advantages of AATs are: that they reduce gaggle flying and increase pilot decision-making, that they work well with handicapped competitions, and that they are easy to complete for novice pilots. Of these, the AAT's capacity to reduce gaggle / start zone tactics is rather credible – by forcing pilots to make more decisions in the sky, more reward is put on creative talent and less on leeching skill. But what of the negatives?

An obvious detraction of AATs is that they require more work, both in tasking and in flying. But they also are troublesome in that they further complicate our sport (many pilots struggle to understand them, not to mention observers). Aside from this though,

there is nothing inherently problematic about them. However we have not yet examined how AATs are commonly employed. Consider the following typical AAT scenarios:

1. Uniform conditions. I mean uniform terrain, uniform sky, and a uniform glider fleet. This was the spawning ground for the AAT during the late-90s. It was during uniform flying conditions that the AAT's architect, former World Champion Brian Spreckley, explicitly intended for AATs to be used.

Of the 50-odd AATs I have flown, only about 5 or 6 have been in uniform conditions. Several tasks in Australia come to mind where they worked rather well. The fleet became relatively dispersed throughout the sky and the winning pilots were those that flew precisely and kept the pedal down all day. Curiously though, most task setters tend to avoid AATs in uniform conditions and set racing tasks instead.

2. Wide performance range. It is common for a task setter, when faced with great disparity in pilot abilities and/or glider performance, to throw a big circle in a good part of the sky that will cater for everyone in the competition. Otherwise there would be a strong likelihood of under-setting, or many landouts, or possibly both.

I experienced several AATs of this type at the British Overseas Nationals in Spain (an open, handicapped event). Similar in feel to AATs of uniform conditions, these weren't so much a problem because of the actual task, but simply suffered from the severe range of handicaps involved. (In my view, unhandicapped competitions remain the best and fairest form of the sport.)

3. Planned route AATs. These normally occur at mountain sites where the circles encompass obvious energy lines, which everyone chooses to follow in a premeditated fashion. The same phenomena can also occur in flatland due to predominate winds and thermal streeting. Peculiarly, these tasks are very much like traditional racing tasks in terms of retaining the character and feel of racing – everyone is essentially flying the same course, so gaggles and race tactics can be critical. Normally quite fun to fly, the planned AAT provides virtually no benefit over regular racing tasks. In fact, they are counter-productive to the intent of AATs and do not reduced gaggles or promote individualism.

4. The marginal (weak) forecast. Unfortunately, when faced with a poor soaring day, a task setter will often set an area task with the hope that pilots will somehow be able to find a way to the circles. Despite conditions not allowing any significant degree of 'thermal prediction', an AAT will increase the possible routes available to pilots, thus increasing the chance that some pilots will find enough lift to complete the task.

But now we need to ask if this is a desirable situation? If the weather is hopelessly weak and unpredictable, pilots will often be flying blindly, just hoping to stumble into lift. And because the AAT disperses everyone into different parts of the sky, those fortunate enough to complete the task will have done so only with a reasonable degree of luck on their side. Ironically, in these conditions a racing task (although it risks outlanding the fleet) has a greater chance of getting everyone around the task because gaggling will help cross-country speed as well as sharing the 'lucky climbs' amongst everyone. The only bonus to AATs in such conditions is that if things suddenly improve, the task is very unlikely to become underset.

One further proviso that must be mentioned about tasking in marginal conditions relates to the old adage "competitions are won and lost on the weak days". While often the best pilots will indeed come out on top in weak conditions, there have been numerous occasions where competitions have had rather peculiar winners / place getters. I can't help but speculate that much of this 'noise' on results sheets is due to genuinely fluky weather, and that there is a good argument to require a minimum winning speed (say 70 kph) in order for a task to count – but this is another issue.

5. The lottery. This is an all-too-frequent scenario. AAT lotteries are real, and they generally result from either poor visibility or very unstable weather. In both cases, pilots cannot be expected to forecast how conditions will pan out (just like tickets in a lottery – no one could rightly be expected to predict the numbers). An AAT ensures that this uncertainty is transformed into luck because the flexibility in flight paths forces pilots to all take different punts on the conditions.

On numerous occasions I have reached the first circle of an AAT and been faced with an impossible choice: do I keep going, or turn here? The problem is always that I do not have enough information to make a calculated decision. With poor visibility or uncertainty in CB development, you cannot answer the requisite questions like: Is the last sector blue? Does that street continue deep into the area? Will there be a storm in the last circle? In which direction will that shower develop? What is behind that thunderstorm?

One might quip that in the face of uncertainty a pragmatic approach would be to fly deep in the first area. The sword is double edged however; while turning early might result in coming home horrifically undertime, often conditions will evolve in a way that going deep in a circle means you won't come home at all. If you cannot get to grips with the weather because you cannot see more than 10 km or because the sky is filled with storms, there is simply no way to remove luck from the AAT equation.

Conversely, a racing task in such a sky is a different beast. Because all pilots must fly on a similar path, ultimately everyone will face the same conditions – but the best pilot will be able to use the encountered weather most effectively. Unfortunately, there is a widespread attitude amongst competition pilots that AATs should be reserved for uncertain weather, when in reality this is just bad task setting. A far better option would be to set no task at all.

Final thoughts

We are reasonably fortunate in NZ that our topography and climate helps to insulate us from AAT lotteries. However, with the exception of catering for a wide performance range, most AATs offer no real advantage over racing tasks and therefore should rarely be set.

Having said that, there is one type of AAT that is so outstanding that I would be disappointed if the tasks vanished altogether. I'm talking about the AAT that Gavin Wills has developed for wave conditions. By using small circles (normally a radius of 5 km) and a comparatively large task distance, a happy equilibrium develops where we have all the benefits of a racing task, but with 'fuzzy' turnpoints of an AAT. The task focuses pilots on a speed race in a wave system and allows them to fully optimize the strong lift, while avoiding the unnecessary headache that comes with chasing 0.5 km turnpoints in fierce headwinds and down areas of wave.

Lastly, I should make it quite clear that incorporating some luck into gliding competitions is not entirely bad. Luck serves to keep things interesting and overturn stagnating result sheets once in a while. I think AATs take it too far though, and I am quite convinced that the tasks are detracting from our sport (at the top level at least). In a future article I will present a statistical analysis of competition results to (hopefully) support my conjecture that AATs are laden with luck.

GNZ AWARDS & CERTIFICATES
AUGUST – SEPTEMBER 2010

GNZ Awards Officer
Edouard Devenoges
gnzawards@xtra.co.nz
40 Eversham Road, Mt Maunganui 3116.

QGP No	Pilot's Name	Club	Date	Glider
3092	Abbey Delore	Canterbury	23. 7. 10	
SILVER DISTANCE				
	Andrew Benton	Nelson GC	31.1.10	Astir
SILVER DURATION				
	William H. Dewar	Gliding Manawatu	6. 2. 10	DG 202
SILVER HEIGHT				
	Andrew Benton	Nelson GC	31.1.10	Astir
GOLD DURATION				
	William H. Dewar	Gliding Manawatu	6. 2. 10	DG 202
GOLD DISTANCE				
	Mats Henrikson	Canterbury GC	31.7.10	LS4
	Timothy Bromhead	Piako GC	30.12.09	Discus B
GOLD BADGE				
313	Mats Henrikson	Canterbury GC	14.8.10	
DIAMOND HEIGHT				
	Colin Steele	Nelson Lakes	4.9.10	ASW 15
DIAMOND GOAL				
325	Mats Henrikson	Canterbury GC	31.7.10	LS4
326	Timothy Bromhead	Piako GC	31.12.09	Discus B

AIR NZ CROSS COUNTRY CHAMPIONSHIPS

		Glider	Distance	Points
Northern Division	Clinton G. Steele	ASW 15	135.59km	150.41
Southern Division	Mats Henrikson	LS4	335.49km	347.35

OFFICIAL OBSERVERS

09/040	Steven Barham	Taranaki GC	13.8.10
09/041	Peter Cook	Taranaki GC	13.8.10
09/042	Tim Hardwick-Smith	Taranaki GC	13.8.10
09/043	William Hopkirk	Taranaki GC	13.8.10
09/044	Peter Miller	Taranaki GC	13.8.10
09/045	Leslie Sharp	Taranaki GC	13.8.10
09/046	Peter Williams	Taranaki GC	13.8.10
09/047	Kevin Koch	Norfolk ASC	18.8.10
09/048	Clinton Steele	Norfolk ASC	18.8.10
09/049	Grant Wisnewski	Norfolk ASC	18.8.10
09/050	Kevin Wisnewski	Norfolk ASC	18.8.10
09/051	Ronald Sanders	Gliding Manawatu	21.8.10
09/052	Ian Shepard	Gliding Manawatu	21.8.10
09/057	Andrew Benton	Nelson Lakes GC	4.9.10
09/058	Jonathon Burnett	Nelson Lakes GC	4.9.10
09/059	Kerry Egger	Nelson Lakes GC	4.9.10
09/060	Kenneth Montgomery	Nelson Lakes GC	4.9.10
09/061	April Rumsey	Nelson Lakes GC	4.9.10
09/062	Frank Saxton	Nelson Lakes GC	4.9.10
09/063	Gerard Stephens	Nelson Lakes GC	4.9.10

This report was received from George before the accident in Paraparaumu in September - Ed

A QUESTION OF SAFETY

GEORGE ROGERS NATIONAL OPERATIONS OFFICER, ACTING

ACCIDENTS 2010

This report was received from George before the accident in Paraparaumu in September - Ed

Accidents

Three accidents have been reported since the last issue. Fortunately no injuries were reported but both gliders were substantially damaged. One resulted when a glider got low and was unable to cross a saddle to get to the airfield. An outlanding in bush was consequently required.

The second resulted when an approach with landing flaps saw a high rate of descent becoming below glide to the aiming point, with the glider impacting a road sign but clearing the fence into the airfield.

The third resulted from a glider caught in heavy sink immediately off tow and unable to return to the airfield. A landing in a city street resulted, the glider was destroyed but fortunately the Pilot uninjured. GNZ is investigating contributory factors.

Biennial Flight Reviews (BFR's)

A BFR is a requirement to maintain a Glider Pilot Certificate or Licence. The responsibility to ensure a BFR is completed by the stipulated date rests with the Certificate or Licence holder.

If a BFR is not completed at the required time the Privileges of the Certificate or Licence lapse. The Pilot is not entitled to continue to exercise the privileges of the Licence or Certificate.

The GNZ Advisory Circular on Biennial Flight Reviews has recently been reissued and is available on the GNZ Website; it gives full details of requirements.

Flapped Gliders – Conversion Guidelines

A number of glider accidents feature 'landing short' with full or landing flaps deployed. The under-shoot often involves hitting obstacles or fences on approach and subsequent ground loop with significant damage to the glider and risk to the pilot.

The Operations Committee have reviewed regimes for conversions into flapped gliders and provide the following guidance.

As the GNZ Instructor Manual notes, the effect of positive flap is initially to increase lift with only a moderate increase in drag. As the angle of flap is increased the increase in lift becomes progressively less while the drag increases rapidly.

The high drag profile can be a real problem if the glider gets into a high rate of descent with limited penetration. Preventing this is obviously better than needing to cure the problem.

Conversion planning should include;

A good understanding of the glider Flight Manual relating to the flaps. Briefing by an instructor or pilot experienced on the type can be valuable.

Recognising that there are no generic hard and fast rules on flap use. The characteristics of the glider, conditions – wind – at landing time are factors to be taken into account.

At Pre Landing checks – SUFB – the profile of the approach and the use of flaps should be planned. Wind strength and any potential for gradient in the circuit will be factors in the planning.

It may be wise to initially adopt a 'progressive' approach to use of flaps – start early landings with initial flap settings working up to full flap landings (in appropriate conditions).

Significant flap settings should only be selected when it is clear the 'aiming point' will be achieved. This may be on final.

Recognising that 'Errors' may happen. If a high rate descent with limited penetration onsets and an under-shoot is impending, it may be appropriate to ease off flap to reduce drag and improve penetration. Real care should be taken in doing this as the stall speed may increase. Adjustment to the attitude to compensate may be required. It would be appropriate to practice this initially at altitude to gain a good understanding and feel for the behaviour of the glider.

Obviously angles to the Aiming Point must be monitored at all stages in the circuit. Early detection of height or penetration loss greater than planned enhances the opportunity to correct without somewhat emergency responses.

Flight Following

It is sensible for clubs and those pilots cleared for independent operations to periodically review systems for glider flight following.

The objective is to ensure systems allow effective detection of 'missing' gliders within a reasonable time and trigger processes for locating the glider.

The advent of such as SPOT trackers provides another good way of achieving the objective, particularly for those on independent operations.

Threat and Error Management

This issue includes the third part of the series of articles by Arthur Gatland on Threat and Error Management. On behalf of all pilots we extend our thanks to Arthur for the professional, relevant and well presented articles. Pilots are encouraged to study and keep these messages in mind.

"There I was, nothing but the maker's name on the altimeter...." Rex explains to Steve Wallace (who was the instructor with me in Twin Astir GMW (behind) whilst Ray Burns and Francois Retief (who would have had to deal with any fire) listen in. Dave Foxcroft takes a photograph.

THAT'LL BE A CABLE BREAK SIGNED OFF THEN...

Jonathon Pote, having done some gliding in the UK, has been getting back into it again at Auckland Aviation Sports Club. On Saturday 19th June he was on his third flight for the day when the unexpected happened.

Saturday was always going to be a challenge with the wind gusting 15 – 20 knots at 45 degrees to 08, and turbulence flowing off the tree line, but all went fairly well for my first two launches with Steve Wallace in Mike Whisky. There was also a lot of turbulence up to a thousand feet; above that it was beautifully smooth. The third launch, for more stalling, was to be the last of the day. Rex had just refuelled the tow plane, Cessna 172 DML.

We had a bumpy climb up over the water, turning left and downwind, then there was a slight waggle of the tug's wings at about 500 feet. "Was that a 'wave-off'?" I wondered aloud. Seconds later the tug was turning left fast and going down. The sight of the cable and rings whipping back at us dispelled all doubts. Easing up and right, I watched the line whip past.

Steve took over control whilst I craned my neck to follow events. Well below and in our eight o'clock, DML reappeared trailing an impressive amount of grey smoke from beneath. We heard nothing on the radio, but it was a great relief to see Rex downwind low over Whenuapai with plenty of clear landing area in front and I felt his problems were over. Steve very kindly gave me back control and I landed close to DML and the caravan. It was all over in less than a minute for Rex, less than two for us.

For a minute or two there had been a significant risk of a tragic outcome. As such events are very rare, it is essential to learn every possible lesson thoroughly in case it ever happens again. So what did I learn?

Note unexpected events. Although Rex's waggle was very similar to the turbulence effect, I was suspicious and thus when the cable came off it was no great surprise. I was ready for it.

Radios may not be essential, but they are very useful at times. We assumed Rex had transmitted and we had not heard. In fact he was too busy to transmit much, and wanted the master switch off asap. Should we have transmitted a 'Mayday' on his behalf? I think we should have. There were two of us, with a perfect overview of the situation and very little workload. We could have warned Base Ops on 134.5 and then the world on 121.5 to ensure a fire truck and ambulance were on the way had Rex not been as skilful. If he had come down off the airfield, we could have given an accurate location to assist the response. Consider this event happening away from Whenuapai, say over Muriwai on a West coast day. It would have made even more sense to get a 'Mayday' out, then land alongside to render help if needed. It could be a long time before other help arrived.

The cable. It seemed to be rocket propelled, and the rings would have certainly shattered the canopy, not to mention my face, given half a chance. It came nowhere near, but in a low tow position without an 'up and right', it could be lethal. Once it goes past you never see it again, until (as we did...) you find it still attached after landing. So think whether you want to be rid of it. Pull the release if you want to but consider bystanders below. However, if it fails to release you will not know, so approach high over obstacles.

A: what little oil remained to leak out after DML came to rest. B: The split crankcase. You could see right through the engine.

Why such a small wing waggle that we were unsure, and why no radio call heard? If the tug pilot wants you gone, things have suddenly gone very wrong. It is probably too dangerous to do much of a waggle, so be receptive of an equivocal signal. If you do release by accident in a place favourable to you for landing, then it is good training for the real event. Keep a plot going in the brain as to whether an immediate release would put you in a really tricky position, or merely an unexpected one. I'm not sure if any call was made at all, but distress calls are inversely proportional to the problem; the worse the situation, the less time you have to tell the world about it. Rex got it right: aviate, navigate, communicate.

Once I saw Rex over the grass, I assumed his problems were over. Far from it. Whilst the smoke was quite light in colour and seemed to come from the exhaust, in fact the cockpit was full of toxic acrid fumes and a major in-flight fire very probable. And he had just refuelled... It's not over until the aircraft has stopped and the pilot is well clear. Thinking far more clearly than most could, Rex elected to come to a halt as close to the caravan (and thus help) as possible. When the slipstream stops could well be the time petrol and ignition source come together with lethal effect.

An afterthought. One instructor (and I forget who) suggested I try to keep the tug in an imaginary gun sight while on tow. I was doing just that, and with more success than usual, when it happened. Should we now stencil a Cessna 172 silhouette below the front canopy?

DEMISE OF AVGAS

SoaringNZ's United States correspondent Jim Herd looks at an issue that will have major effects here in New Zealand.

In the USA, 100LL (low lead) aviation fuel is being 'run out of town' as a direct result of environmental groups demanding that it will be so. Aviation is the only transport medium remaining that has any lead at all in its fuel, and this lead is reckoned to be the cause of about 50% of the remaining airborne lead pollution occurring on an ongoing basis in the skies above the USA. But consumption of avgas is less than half of one percent of the consumption of mogas. You can make up your own mind as to how significant this 'pollution' really is, but after 'encouragement' from a law suit and the current policies of the executive branch of government (we are talking about America!) the Environmental Protection Agency has greatly increased pressure on the FAA and all of aviation to 'get the lead out'. And the expected timeline to plan and complete some kind of transition is a few short years, not a few decades.

The transition to unleaded fuel for automobiles actually went rather smoothly with a long transition period in each country around the world. It was orderly and evolutionary. Why? Because the volume of mogas is so huge that it easily supports multiple pumps and multiple 'pipelines' throughout the production and delivery processes to be operating in parallel as drivers transitioned. Automobiles generally have a relatively short lifespan when compared with aircraft, so the fuel transition occurred over roughly one lifetime of most cars – hence it was more or less natural evolution as new car designs anticipated the loss of lead well before it was mandated. Modern autos have engine technology that is innately capable of handling unleaded fuel with minimum fuss due to a variety of technologies such as electronic ignition and sophisticated fuel injection. There are also knock detection systems that guard against the ugly prospect of detonation.

So here we have the core of the issue! Lead is the only known substance that will allow high performance piston aircraft engines to operate properly and at full power without the risk of detonation. Detonation is the phenomenon whereby the fuel/air mixture in the combustion chamber will literally spontaneously explode due to heat and pressure! This is in contrast with the normal process which is a controlled burn as the spark ignites the fuel and a flame front progresses across the combustion chamber at an extremely precise time. Of course, this all occurs very fast during each cycle inside each cylinder, but detonation can and will destroy an engine in a few minutes or even a few seconds under extreme conditions! Detonation must be avoided at all costs, so lead has been our friend for many decades.

It is true that many tow planes are not highly tuned and are not normally at high risk for detonation, so they could run happily on lower octane fuel with no lead. This mostly means lower compression ratios – typically 7.5 to 1 or lower, instead of 8.5 to 1 in the big bore Continentals and Lycomings. In the USA, 70% of the fleet would run happily on 94UL – that is basically 100LL with the lead removed so it becomes 94 octane. But this is small comfort because aviation can only support one fuel grade, so it must satisfy the entire fleet. Note also that the 30% of planes that need higher octane represent about 70% of the actual fuel used. That segment is typically the primary work-horses of piston-powered aviation and they just fly more and use more fuel than more sedentary engines. So any thought of ditching all the aircraft that cannot operate on 94UL is really not practical.

So we have a conundrum, and no progressive and evolutionary transition away from lead seems on the horizon, as happened with cars. If a forced transition happened in the immediate future, say a year or two, it would have to be a revolution, not an evolution!

It would be very sudden and it would leave 30% of the fleet with only very poor options. They could de-rate their power by pilot operating procedures – pull back the throttle or propeller speed. They could change pistons to lower compression ratios and produce less power. They could install water/methanol injection, which reduces detonation risk, but this has other problems. They could install a whole variety of electronic engine control devices, similar to cars, or various other innovative solutions. The problem with all of this is that it is hugely costly with many unknowns that could damage safety, engine longevity, costs, etc. And as yet there are virtually no testing and FAA approvals to serve the fleet – this is incredibly expensive and takes years to complete. So this is a very undesirable path and extensive work, technical and political, is underway to find better solutions.

There are promising new fuel alternatives that have shown good results in a test environment. 'Swift Fuel' can be concocted from a biomass base or more conventional petroleum products. It is claimed that 400 square miles growing biomass would produce enough fuel for all of piston General Aviation in the USA. GAMI – General Aviation Modifications, Incorporated – is a highly successful company that modifies aircraft engines for better performance. (Full disclosure – last year GAMI installed a turbo-normalizer in my Bonanza. I now cruise at 200 knots instead of 160 knots!) GAMI has developed a new unleaded fuel composition based on readily-available hydrocarbon fossil fuel components and they call it G100UL. Each of these innovative companies may have cracked the code and hopefully they both have done so, so we can avoid an expensive monopoly from the aviators' standpoint. But huge questions remain and years of evolution, testing, and certification have just begun. Such challenges as mass production, compatibility with current fuel refineries, mass distribution, and consumer pricing – all add to the tremendous challenges to comply with critical specifications for avgas. Critical success factors for each potential solution boil down to these five: engine power, energy density, cost, mass production schedule, and environmental issues.

Yet another potential solution is Ultra Low Lead Avgas (ULL100Avgas). This is a blend of current avgas with ETBE (Ethyl Tertiary Butyl Ether), which is already a very common and readily-available fuel component in Europe and seems to be relatively low risk. But it hasn't been extensively tested yet and concerns do exist.

So why is all this so difficult? Avgas, like everything else associated with aviation, has many burdensome variables that can be viewed as a third dimension when compared with 'two-dimensional' mogas. For example, avgas is required to remain stable for at least 12 months because many planes just don't get much work so the fuel sits for months on end and must still perform safely. Mogas is generally only certified to be stable for 3 months. Avgas must function well at sea level and also at 30,000 feet – this is very difficult due to fuel components that tend to 'flash off' at extreme altitudes. Of course, temperature stability must also accommodate huge extremes – often in just a half hour as aircraft climb from a hot summer runway to perhaps far below freezing at cruise altitude. Water absorption is also critical – avgas must not absorb water, and that is called hydrophobic. And avgas is strictly limited to a very narrow specification which is far more burdensome than producing mogas. The special challenges only multiply from there, but very low volume is perhaps the Achilles Heel.

In the USA, there has been work going on (relatively unnoticed) for a decade or more, but now we are seeing serious attention being paid. The EPA and FAA are conducting public hearings to collect input from all stakeholders and they are causing reverberations all around the industry as they press towards abolishing 100LL. In response, a variety of aviation advocacy groups have become active and vocal in defense of the aviation community. Coalitions have been built and game plans are just starting to evolve. The unwritten reality is that if aviation doesn't wake up and get very active and very vocal on all this, the result is likely to be very undesirable. The U.S. government and the environmental activists haven't yet demonstrated much sympathy for our plight, so a huge educational campaign is necessary, along with a very serious and comprehensive program to solve the problem amicably. Massive cost is one fear, and another is a sudden and revolutionary dislocation on the day that the 100LL pumps run dry. Unintended consequences are just starting to be uncovered and they are scary, but I am hopeful that a reasonable consensus will emerge in due course because many smart people are fired up and I suspect the environmental activists really don't want to cause widespread major distress and potentially a death knell to segments of aviation.

Bottom line – avgas has very little in common with mogas, power plane engines have very little in common with auto engines, and the overall aviation industry has very little in common with the auto industry. Result – a huge mountain to climb to get lead out of avgas, but it will happen sooner rather than later! And again, it won't matter if you get towed up with a brute-force engine bolted to a Pawnee or a mild-mannered Piper Cub, because with aviation fuel, one size fits all. The over-riding challenge is to construct a new world of fuels and engines where a significant new cost burden, or performance degradation, is not the outcome.

It is likely that this scenario will pervade the civilized world because aviation and fuel oils are such global industries, as are the environmental concerns. I humbly suggest that the Kiwi soaring community must pay close attention and work to find a viable long term fuel solution that won't cause another huge burden on the soaring pilot community.

NEXT ISSUE
John Goddard reports on the Avgas issue from the New Zealand perspective.

AN **ENLIGHTENING** EXPERIENCE FOR WHANGAREI GLIDING CLUB

Paul Rockell shares an electrifying and cautionary tale.

Over this last winter while wasting time on the internet viewing YouTube gliding videos, I came across an account of an instructor and trial-flighter bailing out of a K21 at Dunstable after a lightning strike blew apart the control rods. I then went looking for stories of glider winches having bad experiences with thunder storms. Considering the amount of winch operating manuals which mention the danger of inducing a strike down thru the wire, I found nothing recorded except for the fact that in WW2 over 25 barrage balloons were set on fire by lightning bolts. I figured that it was the memory of these events and common sense which accounts for winch manuals mentioning the electrical risk associated with wire winching.

As you might suspect, my interest was not entirely academic, and whilst this event I am about to relate is a small part of the wonderful heritage of oral history within the Whangarei Gliding Club, nothing of it has ever been recorded in print. I think that there is a vast repository of yarns that the wider gliding fraternity would be interested in reading about of similar incidents involving that powerful and sometimes terrifying mix of soaring and thunderstorms where thrilling verges on disastrous.

A few years back when polypropylene was yet to be discovered by our club, we persevered with wire of a multi-stranded variety. This had crimped joiners but was a huge improvement over that birds nest kinking other stuff that could ruin a whole day's flying. Back in those days we had a little fright which hastened our use of non conductive materials.

I remember that summer morning's weather was unremarkable but at midday a weak westerly frontal change passed through. An increasingly unstable air mass was evident with cumulus becoming overdeveloped and heavy rain showers dotted around the landscape. Inevitably we shut down flying for twenty minutes while one passed over us to be followed by strong sunlight and those amazing smells you have after rain on hot ground. There was minimal wind but when Noel returned to the winch I estimated that the shower cloud was at least six kilometres away with the sun shining on the tops about sixteen thousand feet high.

There had been no indication of lightning at all. We loaded Jackie in the front of the K13 and I strapped up in the back. She was one of our farm staff being given a treat with her first glider flight. The launch was normal, the K13 fuselage acting as a sound box as the wire sang and twanged and Jackie screamed, "Oh my god," and this and that, as they do.

When passing sixteen hundred feet above the ground I saw a lightning bolt leave two thirds up the side of the cloud and proceed directly to us, seemingly in slow motion. The flash and stupendous thunder clap were instantaneous, to be immediately followed by several involuntary expletive deletives issuing from our mouths. The next few stunning seconds were accounted for with the realisation that we were still alive, the aircraft tentatively appeared still in one piece, it was flying and incredibly still on the winch wire.

Radio calls determined that all participants were okay so we landed back to have a communal shake with much nervous laughter and considered that we had got off rather lightly. The lightning bolt had entered the winch wire immediately under the glider, passing down and discharging over the tyres of the winch into the ground. Some said they saw the winch head lights glow after years of non use.

No one felt any static charge either in the glider or on the winch or launch point. I think the electrical discharge, luckily for us, was probably of a lesser voltage because on other close strikes I have felt the electrical charge build up in my body. It was a one off – the lightning took the opportunity to use our wire, and left to its own devices the cloud would not have discharged. However it still makes a good story and remains a good lesson to show a little respect to clouds and how far laterally the charge can travel, even if we now use poly-ropes.

TAURANGA GLIDING CLUB

Sandy Griffin, Tauranga's Club President reports on club retention.

Photo David Jensen

We have struggled with member retention, just like all the other clubs in NZ. Recently I decided to use some of my experience in management, employment relations and HR and try a few ideas of my own. We do not have a problem recruiting new members. The problem is keeping them from falling through the cracks.

So these are some things we have tried – and they seem to be working.

1 When someone says they want to resign – I discuss their reasons with them. Two members recently did this and were persuaded to stay on as associate members and see if their circumstances changed over the next year or two. They both agreed, as they wanted to remain a part of the club – one is even continuing to do his rostered duty pilot duties.

2 A novice pilot, not yet QGP, said he thought he should resign as he did not seem to be making progress. In talking with him I pointed out that some of us take longer than others to progress. I then got an instructor and the CFI to spend more time with him. We encouraged him to come on Wednesday afternoons, when there were not so many people around and to do more 1500 feet circuit training. He did this with an instructor and had five flights in one afternoon. This built his confidence, so much so that he entered the spot landing contest we held. He is now coming regularly, having two to three flights each time and is really enthused again.

3 We are inviting new members to take on roles within the club as soon as they have been here long enough to know the ropes. For example one new member (six months) is now our new web-master and another is going to do our printing in his printing company.

The next step is to get a novice member to step up to club captain or committee member.

4 It's all about involving them in the CLUB. We are clubs as well as glider training facilities. CLUB implies a connected group through an activity – it also implies a social group (camaraderie/friend-ships etc.). There is an invisible expectation of becoming a part of something that exists in new members' minds.

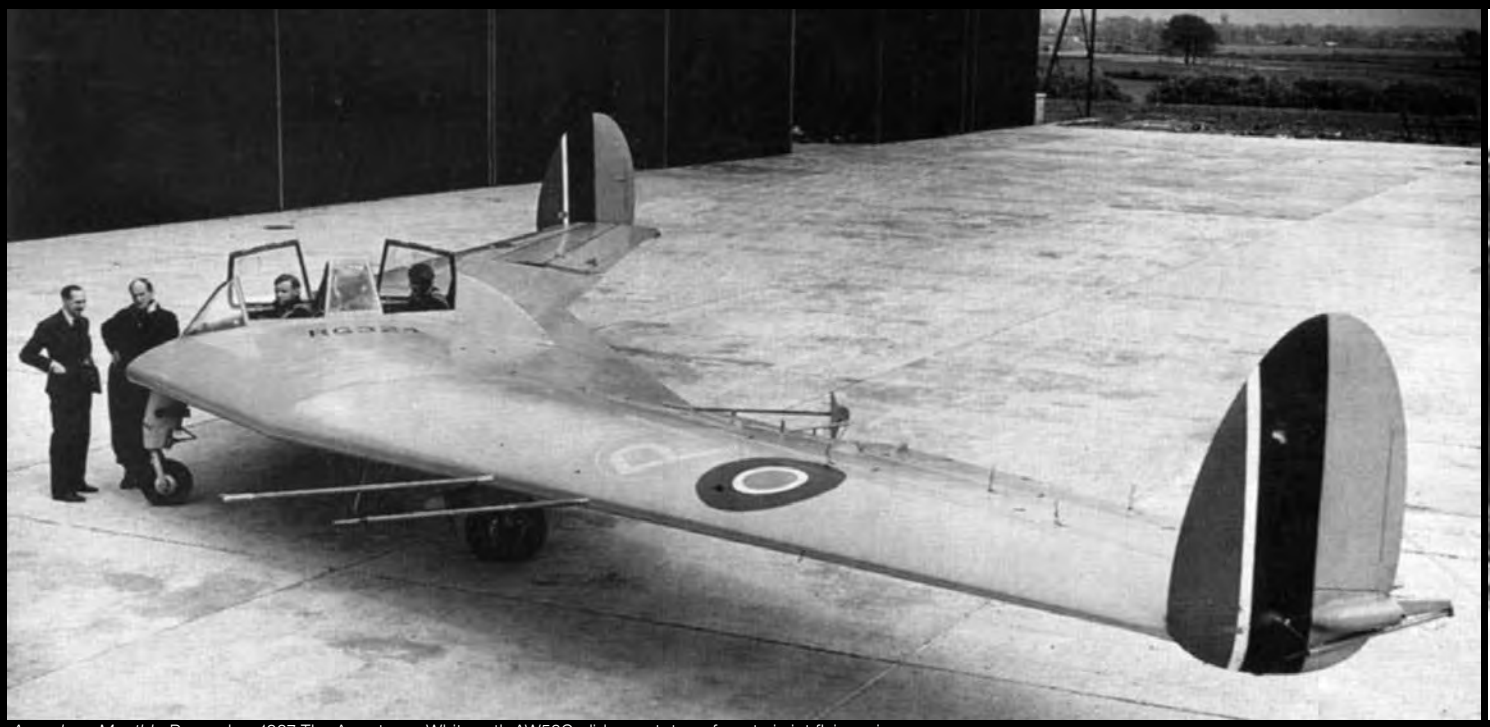
5 Mentoring is not just about the flying aspect but also the confi-dence building and friendships needed to make someone feel they belong, especially in the aviation world – flying is the most unnatural thing we can engage in (we are not naturally birds). Therefore a little nurture goes a long way in the retention list. We use the GNZ motto: *To promote, foster and encourage the sport of gliding in all its forms.* Perhaps we have to apply this to the person while learning also?

These methods seem to be working in Tauranga. Only time will tell. We go to our clubs to fly, but remember we all started out somewhere and someone gave their time to teach and mentor us along the way too. It is good to do the same for someone new.

There is no one solution and we all need to do our best to enthuse, encourage and teach our new members to be good safe glider pilots and club mates at the same time.

A FLYING WING BY ANY OTHER STILL LOOK ODD

By Ian Dunkley



Aeroplane Monthly, December 1997 The Armstrong Whitworth AW52G glider prototype for a twin jet flying wing.

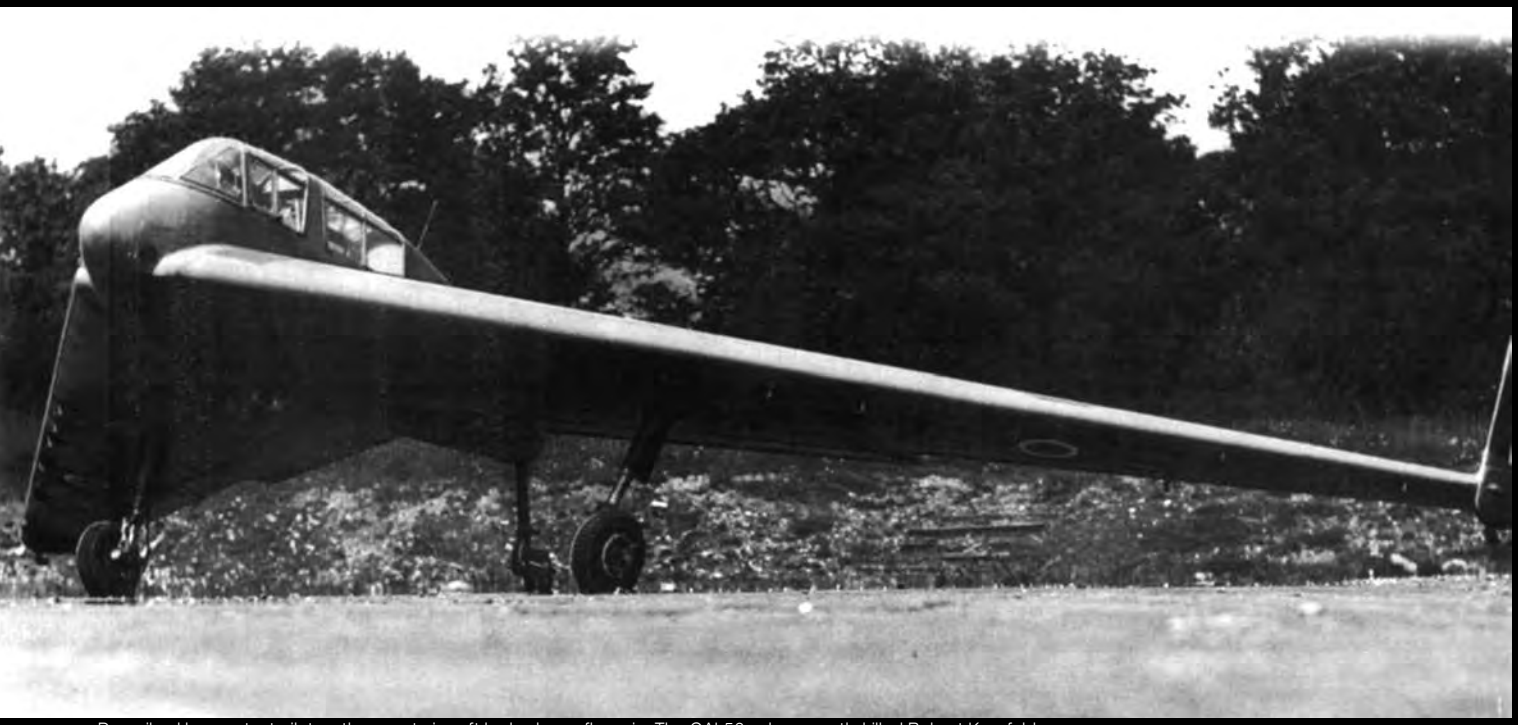
The SB 13 Arcus, an experiment by the Akademische Fliegergruppe Braunschweig that had interesting results. Photo Jochen Ewald

It seems that perfection is attained
not when there is no more to be added
but when there is nothing more to be deleted.
At the end of its evolution, the machine effaces itself.

ANTOINE DE SAINT-EXUPÉRY

Perhaps the most successful flying wings of any type, this pristine German built Fauvel AV36 was displayed at the 2005 Aero exhibition in Germany.

NAME WOULD



Described by one test pilot as the worst aircraft he had ever flown in. The GAL56 subsequently killed Robert Kronfeld.

David Hume, an 18th century Scottish philosopher, had a novel way of drawing attention to his somewhat controversial writings. Using fictitious names he wrote to publications either objecting, supporting, or complimenting the author. As proof of his skills at self publicity; can you think of any other 18th century Scottish philosopher with his own website? I am therefore indebted to Harry Leschen, a fellow flying wing enthusiast, for his letter in SoaringNZ August 2010 and giving me the opportunity of having flying wings mentioned in three successive issues of SNZ without the need for bribery or subterfuge.

Back in 1962 Jim Marske and I shared a platform at a fortunately small symposium on flying wings in California, an encounter that left me in no doubt about his superior knowledge. As Harry refers to Jim's book, I am somewhat hesitant in arguing with the definitions that Harry uses, but in honour of David Hume, I will.

"Flying Wings" describes any flying object that does not use a second flying surface to stabilise the contraption. As such anything from a flying saucer, even one with a hole in the middle, to Concorde and the US Space Shuttle, is a "flying wing", including planks, swept wing forward, swept wing backward, parabolas, deltas, and any other odd shape – be it mono wing, biplane or triplane – that someone has dreamt up, and believe me they have.

I was going to use a frisbee or boomerang rather than a flying saucer as one extreme, but was put off by the fact that rotation may get me both into hot water and out of my depth. I must however admit that my use of pure "flying wing" in my original article was not correct as this description refers to flying wings that do not require vertical surfaces to provide directional stability.

Having got that lot of my chest I had originally intended to rely on the German Horten brothers to illustrate examples of the many flying wing types but decided this would be more suited to an article in Vintage Kiwi News than a general gliding publication. However it is relevant to mention that from their start in 1933 the Hortens continued developing flying wings right through the war, even when they could hear the approaching Russian and American war effort. They carried on with their work in Argentina from 1948 into the '60s after failing to find employment in the USA or UK, despite offering their services to both.

Before leaving the Hortens; I must say that I find it most remarkable that during the war years they appeared to have made a significant contribution to the Allied war effort by absorbing considerable German resources without actually producing anything that helped the German effort. Development projects included gliders to be used in the invasion of Britain, jet fighters, even supersonic 70 ton transport aircraft and long range bombers. In spite of Herman Göring's somewhat sceptical view of flying wings, development was allowed to continue unabated. Their success is illustrated by their claim that by the end of the war, virtually all new German aircraft developments were flying wings.

I am illustrating this article with a whole range of flying wing examples, some of aircraft preserved in Museums, others of some that have not survived. At the end of this article you will find references that you may like to follow up for some very detailed information on this type of aircraft that fascinates some and scares others.

I will end, as I began, with two personal footnotes. Flying the

L: Al Backsrom's "Plank" with an elevon in the cockpit, in the USA Nat Soaring Museum's store. R Top: Perhaps the most successful flying wings of any type, this pristine German built Fauvel AV36 was displayed at the 2005 Aero exhibition in Germany. R Bottom: A new Horten IV, the most elegant of pure wings, currently under construction in Germany.

Hortens was not without risk, although this is of course true of any development aircraft. A flame-out caused the death of the father of a vintage friend of mine when flying the H IX V-1 twin jet fighter. This accident was still being discussed in the 1970's by American conspiracy nutters, some of whom blamed "little green men" etc. anxious to protect their superiority in odd shapes and fancy construction. Such is the world of flying wing enthusiasts.

In "Flying Half an Aircraft" I mentioned that the second of two pilots I allowed to land the Av22 damaged it, making repairs necessary. This incident prevented me from letting the most experienced glider flying wing pilot in the world, Heinz Scheidhauer fly me in my Fauvel Av22 at a vintage rally in Germany. Perhaps best known for bailing out of a Horten H111 at over 25,000 feet in a thunderstorm after hail broke his canopy and punctured the wing, Heinz was still flying Hortens in the 1960s during which he made the first glider crossing of the Andes, a flight requiring a 1000 km aerotow to the start point. I would have settled for a quick circuit with him, thunderstorms not being my idea of fun.

References both highly recommended

Nurflügel, by Reimer Horten and Peter Selinger. Published by H. Weishaupt Verlag, Graz IBSN 3-900310-09-2. Photographs from this book are published with the permission of Peter Selinger. In German but with English captions and excellent translations by Jan Scott.

Tailess Aircraft in Theory & Practice, by Karl Nickel & Michael Wohlfahrt, translated by Capt. Eric Brown. Published by Edward Arnold, IBSN 0 340 61402-1

Prof. Karl Nickel worked with the Hortens in both Germany and Argentina, and Eric Brown was a noted test pilot with flying wing experience, some you would not like to repeat.

Or finally a web site to get you started http://www.nurflugel.com/

Foot note

A Horten IV is under construction in Germany and on completion it will be flown to answer the many questions of the design's true performance. This major construction has received widespread support including a donation on behalf of Vintage Kiwi.

NEW ZEALAND GLIDER PILOTS RANKING

Maurice Weaver, Sailplane Racing Committee

The Sailplane Racing Committee has endeavoured over the past few years to come up with a ranking system for its competition pilots which reflects the level of competition and the skill of the individual pilots competing.

Brett Hunter particularly has been working on resurrecting the ranking system to achieve that objective. After a few false starts and a fair amount of feedback, the members of the Sailplane Racing committee decided to get serious and collectively consider various methods of ranking, including the FAI and British systems. It was agreed to adopt the British system and to modify it for the New Zealand competition environment.

Brett Hunter has been assisted by Maurice Weaver in undertaking this task and with input particularly from Dane Dickinson and other committee members we now have got to the point where we believe we have a robust method of ranking contest pilots on their individual performances.

Effectively, your ranking is based on your best single contest performance and is not based on accumulated results. In other words if you enter a lot of competitions it doesn't improve your ranking it only improves your chances of getting a higher ranking. In total there are nine factors which determine your ranking points and therefore your position amongst your fellow competitors.

Firstly the Competition itself is rated. This rating will be able to be issued on the first day of any future competition so competitors will know what points are being competed for.

Competition rating points factors

1 **Competition type**	**Points**
Worlds	1,400
Foreign Nationals	1,100
Nationals	1,000
Regional	900
Provincials	750

2 **Class**	**Weighting Factor**
Open	100%
18 metre	100%
15 metre	100%
Standard	100%
Club	60%
Sports/PW5	50%

The new Club Class Nationals will have a weighting factor of 100%.

3 **Number of Competitors** Effectively, more competitors in a particular class in the contest will increase the Competition rating for that class. This is calculated by comparing the number of entries with the standard number of entries over a period of a number of years. As an example, for every additional competitor above the average the competition ranking score is increased by 0.5 of a point.

4 **Quality of the field** The method adopted for assessing the quality of the field is based on the previous year's ranking score of each pilot. Each pilot with a score greater than the Competition ranking score (less 100 points) is deemed to be a pundit for that class and competition and the number of pundits increases the current competitions ranking points. For example Chris Richards in the 18 metre Nationals at Taupo this year had a previous year's score of 1,001 which exceeded the Competition base rating of 1,000-100 = 900 points, therefore making him a Pundit for this event. Another example, Ian Finlayson sometimes competes in the Sports Class. Even though he is not a pundit this year in the 15 metre or Standard Class based on his previous year's score, he would be a pundit in the Sports class if he dropped down to that Class, therefore raising the competition ranking score for that class. Every Pundit adds 10 points to the competition ranking points.

5 **Number of days competing** For each event to have a champion there are required to be at least three days of competition. If the event is less than three days the Competition ranking score will be discounted by 10%.

6 **Number of competitors** For each class to have a champion there are required to be at least four competitors in that class. If the class has less than four competitors then the Competition ranking score will be discounted by 10%.

These six factors make up the Competition ranking score. The winner of each class will obtain this score. Each other competitor will receive a percentage of the competition ranking score depending on place in the event and the actual individual's event score.

7 **Position** The individual pilot's place in the event.

8 **Score** The individual's score in the event compared with the winner's score.

To use Chris Richards as an example again, in the Open/18 metre class in Taupo this year, he placed third of twelve and his score was 4,222 points with the winner obtaining 4,655 points. The event had a competition rating of 1,031, therefore his score was

Score = comp. rating - (place slope (Position -1)/(no. of comp.-1)) –points slope*MIN((winners points – points scored)/(0.6*winners points),1)
Score = 1,031 – ((475*1,031/1,000)*(3-1)/(12-1)) – ((475*(1031/1,000))*MIN((4,655 – 4,222)/(0.6*4,655),1))
Score = 1,031 – 89.04 – 75.92
Score = 866

9 **Previous year's scores** Because the Nationals is held in the North Island one year and the South Island the next it has been decided that your last year's result will be counted towards your best score, with no discount. The year prior to that will be reduced by 20% and the year prior to that a 70% reduction.

This system at first glance may appear to be complex, but it is relatively simple and robust, in that it considers individual performance very well over the whole range of competitive pilots. This ranking system will be a dynamic document which shall change to reflect the changing competitive environment of New Zealand gliding.

The full spreadsheet will be posted on the GNZ website.

Season 2009-2010 New Zealand Pilot

Position	Name	Rating Score 09/10
1	Ben Flewett	1069
2	Dane Dickinson	1045
3	Nigel Mcphee	1031
4	Lindsay Stevens	1018
5	Mike Oakley	1003
6	Chris Richards	1001
7	Tony Van Dyk	989
8	Patrick Driessen	986
9	Theo Newfield	921
10	Ross Gaddes	918

CLUB DIRECTORY

Link for club info www.gliding.co.nz/Clubs/Clubs.htm

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pbthorpe@xtra.co.nz Ph 09 413-8384
Base RNZAF Base Auckland (Whenuapai) 021 146 4288
Flying Weekends, Public Holidays

Auckland Gliding Club
Club Website www.glidingauckland.co.nz
Club Ph (09) 294 8881, 0276 942 942
Club Contact Ed Gray info@glidingauckland.co.nz
Base Appleby Rd, Drury
Flying Weekends, Wednesdays, Public Holidays

Canterbury Gliding Club
Club Website www.glidingcanterbury.co.nz
Club Contact Kevin Bethwaite kevin.bethwaite@airways.co.nz
Ph (03) 384 3196
Base Hororata Road, Hororata
Flying Weekends, Public Holidays

Central Otago Flying Club (Inc)
Club Website www.cofc.co.nz
Club Contact Phil Sumser phil.sumser@xtra.co.nz
Base Alexandra Airport
Flying Sundays, and by arrangement

Glide Omarama.com
Website www.GlideOmarama.com
Contact Gavin Wills gtmwills@xtra.co.nz
Base Omarama Airfield
Flying October through April 7 days per week

Gliding Hutt Valley (Upper Valley Gliding Club)
Club Contact Wayne Fisk wayne_fisk@xtra.co.nz
Ph (04) 567-3069
Base Kaitoke Airfield, (04) 526-7336
Flying Weekends, Public Hols., Mid week by arrangement

Gliding Manawatu
Club Website www.glidingmanawatu.org.nz
Club Contact Ron Sanders Resanders@xtra.co.nz
Base Feilding Aerodrome
Flying Weekends, Public holidays

Gliding South
Club Contact Bob Martin bob.martin@clear.net.nz
Phone 0274 828 611
Base Rouse Airstrip, Five Rivers, Southland
Flying Weekends and Public Holidays

Gliding Wairarapa
Club Website http://www.glidingwairarapa.co.nz/
Club Contact Diana Braithwaite Ph (06) 308-9101
Base Papawai Airfield, 5 km east of Greytown
Ph (06) 308-8452 or (025) 445 701
Flying Weekends, or by arrangement

Hauraki Aero Club
Club Website www.flyhac.co.nz
Club Contact Ron Bergersen d.rbergersen@xtra.co.nz
Ph (027) 277 4238
Base Thames Airfield
Flying Weekends and Public Holidays

Hawkes Bay and Waipukurau Gliding Club
Club Website www.skyhigh-photography.com/Main/Aviation_and_Spaceflight/HB_Gliding_Club.php
Club Contact David Davidson Dhcd@clear.net.nz
Ph (06) 876-9355
Base Bridge Pa Airfield, Hastings 0272887522
Flying Sundays. Other days by arrangement

Kaikohe Gliding Club
Club Contact Peter Fiske, (09) 407-8454
Email Keith Falla keith@falla.co.nz
Base Kaikohe Airfield, Mangakahia Road, Kaikohe
Flying Sundays, Thursdays and Public Holidays

Marlborough Gliding Club
Club Website http://glide_marl.tripod.com
Club Contact bmog@paradise.net.nz
Base Omaka Airfield, Blenheim
Flying Sundays and other days by arrangement

Nelson Lakes Gliding Club
Club Website www.glidingnelson.co.nz
Club Contact Frank Saxton franksaxton@gmail.com
Ph (03) 546-6098
Base Lake Station Airfield, St.Arnaud Ph (03) 521-1870
Flying Weekends and Public Holidays

Norfolk Aviation Sports Club
Club Website http://www.geocities.com/norfolkgliding/
Club Contact Kevin Wisnewski wizzbang@xtra.co.nz
Ph (06) 756-8289
Base Norfolk Rd
Flying Weekends and by appointment

Omarama Gliding Club
Club Website http://www.omarama.com
Club Contact Yvonne Loader loaders@clear.net.nz
Ph (03) 358-3251
Base Omarama
Flying 7 days a week by arrangement

Otago/Youth Glide Omarama
Club Website www.youthglideomarama.org.nz
Club Contact Tom Shields tom.shields@century21.co.nz
Ph (03) 473 1721
Base Omarama and Dunedin
Flying By arrangement

Piako Gliding Club
Club Website www.glidingmatamata.co.nz
Club Contact Steve Care s.care@xtra.co.nz
Ph (07) 843-7654 (027) 349-1180
Base Matamata Airfield, Ph (07) 888-5972
Flying Weekends, Wednesdays and Public Holidays

Rotorua Gliding Club
Club Website http://www.geocities.com/rotoruagc/RotoruaGlidingClub.html
Club Contact Mike Foley
roseandmikefoley@clear.net.nz
Ph (07) 347-2927
Base Rotorua Airport
Flying Sundays

South Canterbury Gliding Club
Club Website www.glidingsouthcanterbury.co.nz
Club Contact John Eggers johneggers@xtra.co.nz
33 Barnes St Timaru
Base Levels Timaru & Omarama Wardell Field
Flying Weekends, Public Holidays & by arrangement

Southern Soaring
Club Website www.soaring.co.nz
Club Contact Chris Rudge chris.rudge@soaring.co.nz
Ph (03) 438 9600 M 027 248 8800
Base The Soaring Centre, Omarama Airfield
Ph (03) 438-9600
Flying September-April: 7 days a week (except Xmas Day)

Taranaki Gliding Club
Club Website www.glidingtaranaki.com
Club Contact Peter Williams peter.williams@xtra.co.nz
Ph (06) 278 4292
Base Stratford
Flying Weekends and Public Holidays

Taupo Gliding Club
Club Website www.taupoglidingclub.co.nz
Club Contact Tom Anderson Tomolo@xtra.co.nz
PO Box 296, Taupo 2730 Ph (07) 378-5506
M 0274 939 272
Base Centennial Park, Taupo
Flying 7 days a week

Tauranga Gliding Club
Club Website www.glidingtauranga.co.nz
Club Contact Roy Edwards royedw@wave.co.nz
Ph (07) 578-0324
Base Tauranga Airport
Flying Weekends and Public Holidays, Wednesday afternoons and other times on request

Wellington Gliding Club
Club Website http://www.soar.co.nz
President Warwick Walbran wwarwiknz@yahoo.co.nz
Base Paraparaumu Airport
Bookings Ph 04 297 1341 (clubhouse)
Ph 027 618 9845 (operations)
Flying Weekends and Public Holidays 7 days a week December through to March

Whangarei District Gliding Club
Club Website www.igrin.co.nz/~peter/gliding.htm
Club Contact Paul Rockell rockelkaym@xtra.co.nz
Base Rockelkaym Ridge, Gibbs Road, Puhi Puhi
Flying Weekends and Public Holidays

GLIDING NEW ZEALAND CLUB NEWS

Deadline for club news for the next issue 10 September 2010.

AVIATION SPORTS CLUB

Ah the wonderful Auckland winter weather. I'd like to say crisp, clear and cold winter days but I would be lying. Rain, rain and more rain and precious little flying. We managed just three days in August. To be fair one of these provided excellent flying conditions, as long as you were the towpilot – not so good if you were at the other end of the string. On the bright side, the rain gave us a chance to do all the glider annuals including MW's 8000hr inspection and to do a pile of husbandry jobs on the fleet. We did manage to host ATC cadets at the beginning of the month and got them all through between the rain squalls.

David Foxcroft got brave one windy day and attempted the Raglan run in the PW5. Yes, the wind does need to be 25 kts plus. It wasn't, so he turned back at Port Waikato, got back to Muriwai but ended up landing out on the way back. A week or two later Steve Wallace and Kris Pillai tried again in our twin, MW but the wind proved to have too much southerly component and they ended up on Muriwai beach. There must be weird stuff that happens there on the beach as their arrival and retrieval attracted virtually no interest from beachgoers. Unlike the last time Steve W landed on the beach, the sand was firm and the retrieve was nice and easy. Ever the consummate instructor, Steve spent an hour or so going thru the QGP ground syllabus with Kris while waiting for the retrieve crew.

A recent trial flighter, a chap called John, kinda looked familiar to us. Instructor Lionel Page got to take John Hannah (Four weddings and a Funeral) for a most enjoyable flight. A real nice chap and he seemed to enjoy himself.

Roll on summer.

GL

CANTERBURY

The winter months have seen many non-flying days but there have also been some really good ones. The 31st July was one of them and it provided a nice little nor'wester to speed people on their way. Mats Henrikson declared a gold distance and George Deans a 500 diamond. George launched himself early and we on the ground heard little from him all day. When he arrived back not long before dark it was to find he had flown over

Aviation Sports Club: Special visitor to Whenuapei – Actor John Hannah and his partner on right.

Aviation Sports Club: MW on Muriwai beach. Steve Wallace and Kris Pillai wait for retrieval.

Canterbury: Springfield

500k but because conditions did not allow him to reach his southern turnpoint he had to abandon the diamond. A very determined effort never the less.

Meanwhile Mats in the club LS4 was quietly giving position reports from time to time and as the day wore on some of us were worried that he may run out of daylight but happily he arrived back and we celebrated his gold distance and diamond goal.

Also enjoying the day was Terry Delore in his ASH 25 accompanied by long distance pilot Jenny Wilkinson. They flew to Nelson Lakes and back, about 500k.

Alex McCaw flew the Single Astir to Culverden and return and Abbey Delore in her beloved Libelle "Shrek" had a nice little flight also.

Back on the ground the new sown grass is starting spring growth at our Springfield site and thankfully we suffered no damage during the 7.1 earthquake, although many members experienced varying degrees of damage, some of it quite catastrophic.

Many members who had known Steve (Chook) Morrissey were shocked and saddened to learn of his death during a hiking outing in Hong Kong and our sincere sympathies go to his family and many close friends who have lost a wonderful friendly man.

Stew

GLIDE OMARAMA

In April 2010 Gavin Wills bought Southern Soaring and merged it with Glide Omarama. While there has been some restructuring, the two brands will continue with Southern Soaring doing trial flights and Glide Omarama operating the Gavin Wills Mountain Soaring School. Most of the Southern Soaring staff and equipment have been retained.

Tom Shields is now the Southern Soaring manager and this winter he has completed extensions within the Omarama Terminal building and created a Trial Flight Visitors Centre with a Pilot and Gift Shop. Lemmy Tanner remains as our CFI, Darren Smith will be Chief Tow Pilot and we are delighted that Rod Dew has agreed to stay on and head up the ground crew team.

Meanwhile all our pilots have enjoyed northern hemisphere soaring. Phil Plane has been flying for SoaringNV in Minden, Nevada with Devin Bargainner and Laurie Harden.

Lemmy towed John Good's Duo X 5,000 km across the US to join Gavin and son George at Parowan, Utah for the US Sports Class Nationals

Glide Omarama: Above: Approaching Tasman Saddle. Right: Glide Omarama staff, guests and gliders. Bottom: Glide Omarama's brand new Duo Discus XL outlanded by Gavin.

in June (George and Gavin came 8th). He then continued with Gavin, John and Karl and Iris Striedieck and other East Coast characters on a Gliding Safari through Utah, Wyoming, Montana and Idaho before joining Trevor Florence and Ash Hurndell at Invermere, BC.

Mike Till, Gavin Wrigley, Bo Nilsson, and G Dale have all been instructing for their usual British clubs in Britain.

G has been flying for the British Team this year with considerable success. He achieved first place in the FCC Gliding 2010 Club Class, first place in the Pribina Cup Club Class, and 6th place in the World Championships. He and Annie will take a break from Omarama this summer to renovate their English home for the Olympics. We expect the experience of an English winter will bring them scurrying back to NZ in 2011!

Gavin is very excited about supporting the Junior Development Camp to be held at Omarama in December. We expect that out of this camp will come NZ's future racing pilots.

See you all at Omarama this summer!

Mandy

GLIDING HAWKES BAY & WAIPUKURAU

Pictures of the first launch of their new self launching Twin Astir.

MARLBOROUGH

CJ

It's been a busy few months for our club. In May our Blanik was involved in a landing accident which resulted in the aircraft being written off. Fortunately there were no injuries apart from pride. We have since replaced it with another Blanik, GKN out of Norfolk Aviation Sports Club. Like the rest of the Blanik owners we now have an aircraft that we can't fly due to ludicrous ADs requiring information few people record. Hopefully sanity will prevail soon and we can start flying again! Our tow plane now has a new engine installed which should see us right for a few years. On the flying front it has been rather quiet due to rain most weekends. Jamie Halstead and Carl Jackson managed a wave flight down to Flock Hill and Lewis Pass. We also have a new member – Noel Cohen who has powered plane experience and lots of enthusiasm – roll on summer!

NELSON LAKES GLIDING CLUB

The weather has continued its generally uncooperative behaviour with insufficient wind to ridge soar, or generate wave, and not enough ground heating to cause workable thermals. Still we turn up and try. At the AGM we decided to sell our yellow winch. Before being seduced by a 300HP German double drummer, the yellow winch was our club's only method of launching. It has served us well for many years and has been the very cornerstone of our operation. It was designed and built in 1989 by Arthur Jordan and is a real testament to his professional engineering skill. It has launched many South Island pilots into extended flights and is still just as capable and reliable as ever. We used it last weekend and did about 20 launches flinging our heavy Grob twins between 1400 ft and 1700 ft AGL without missing a beat. And all for a cost of less than $10 a launch. This machine will give many more years of reliable and effective service and is a great way for a club to reduce costs. It certainly makes ab initio training a lot cheaper. For more details check out our club web site or contact me. I am confident we are on the brink of a fantastic soaring season!

Ken Montgomery

Nelson Lakes Gliding Club: Winch for sale

PIAKO GLIDING CLUB

There was much to celebrate on Saturday the 3rd September. Not only was it a fine Saturday (the first in 8 weeks) there were thermals and the ridge working for some extended flying. Best of all, our tow plane was back from its time in hospital after its undercarriage broke. We've been fortunate to have had Auckland Club's support with the use of their tow plane.

Our first ab inito course of the winter has commenced with five students. August had 60% more rainfall than normal and the weather has been so poor that an earlier course would not have got off the ground. Our flying hours are well down on other winters. When the weather has been suitable club members have arranged tow pilots for Thursdays or Fridays in desperation to get some flying in. There is a fair amount of pent up enthusiasm needing some release. It could be a busy flying season.

Our committee is making good use of the winter, holding extra meetings to review our Five Year Plan. While good progress has been made with our aims and aspirations at this stage, three years on, it is important to keep it before us. One of the things we review is the longevity of our tow plane. It is a bit like our grandfather's axe, but we all agree that there is nothing better to be towed by. This has been backed up by our recent experience with borrowed tugs. It is a pity though that engine reconditions are so expensive and the red tape is so thick and prolific when looking at alternative power units.

Coming up is a live-in instructors course weekend. They will be able to check out the new bunkroom mattresses the MSC have installed. We have our season opening briefing on Saturday 25th September and members of neighbouring clubs that fly from Matamata are welcome and invited to attend. Bring on the fine weather!

BM

Top: Taranaki's refinished Pawnee
Bottom: Sunset on broken wave over Hastings

A 'shattered' wave cloud appeared over Hastings last November. Our correspondent who took the photos from his front porch says it appeared to be broken up by wind shear from an approaching southerly, not at all like the usual smooth wave pattern set up by the ranges 40 kilometres to the west. (I apologise for losing the name of the photographer – if it was you, get in touch and I'll make sure your name is published next time – Ed.)

TARANAKI

We are happy to report that the work on our trusty Pawnee has been finished to a high standard and it is now back in use. It would be more in use if the weather was a bit more on the drier side than it currently is. Many thanks to all those who helped with the project. They were well led by Tim Hardwick-Smith and Paul Muller.

Along with the rest of Blanik owners around the world, we are a bit dismayed at not being able to use our trusty Blanik JB which we've owned since 1976. Not to worry though, our Twin Astir will have to work harder and John Tullett has kindly made his K7 available. Glyn Jackson, currently over in Holland, has been making our lives a misery by sending back photos of himself flying ASK 21s and a Duo Discus.

Some membership changes include Andrew Skene who has moved to Hawkes Bay, Kieran McLaughlan who has gone back to study in the States. And Les Sharp has advised that he is retiring from flying, effective now though retaining his membership for the current year. Les has been towing for many years and would have to be the most experienced tow-pilot in Taranaki. Thanks Les for all your good work for our club in your various roles as Chief Tow-Pilot, committee member, instructor, Newsletter editor, Club President and as part of the phenomenal fund raising group of the 70s and 80s. And he's a good glider pilot too! Well done.

Papa Mike

TAUPO GLIDING CLUB

We have had a wet, windy and cool winter which unfortunately reflects in a comparatively low number of flights\launches over the June to August period. However with the spinoff of the National Gliding competition in the period 1st of January to the 30th of June preceeding this dull winter weather we had: 1216 total launches, 809 club launches, 77 trial flights, and 19 youth flights.

The Annual Dinner was held on Saturday the 24th July and the AGM Sunday 25th in the club rooms. Jacqui Newton has retired as Secretary/Treasurer and was presented with the Tail End Charlie Trophy for all her work over the past years.

Over the winter we had 3 new college students doing the glider experience college student program, none are solo at this stage. We have just had a new solo pilot, Brent Griffin the son of member and instructor Gordon Griffin. He had flown fixed wing aerobatics before so took no time to solo. He now intends to get his tail dragging rating and join the tow pilot team. Well done!

Of interest, Trev Terry is making solid progress in establishing a radio repeater for Centennial Park frequency 134.45MHz on the Fire lookout after the Quarry. He hopes to also install a club web cam looking back across our airfield and towards Mt Titiraupenga. He estimates we will need to raise between $2-3000 for this project.

We will be having a weekend flying camp over Labour Weekend for all and sundry.

We need volunteers to assist with the forthcoming 6th Central Plateau Gliding competition from Oct 30 to the 7th of Nov. Please mark it on your calendars now and let Trev Terry or Tom Anderson know of your availability.

Sadly I report the passing of Des Bird, a life member of our Club who died peacefully at his home in Rotorua on Thursday 2nd September in his 80th year. Des' funeral was a great send off. Unfortunately due to the weather it was not possible to arrange a fly past.

Des came first to us around 1968/9 when the Ruapehu Gliding Club were regular visitors. He was recognized as one of the most experienced winch pilots around and taught a lot of Taupo members on the winch. Des joined TGC in 1983 and during his time with the club was a B cat instructor and CFI for a period. Des was a much loved member who never had a bad word for anyone and played a large part in the history of our club.

We are all the better for having someone in the Club with the wit and humour of Des, with that cheeky cackle and the mischievous glint in his eye. I enjoyed the many light hearted conversations we had and he always managed to see the humorous side of things. Our lives were enriched considerably with having Des be part of it. Des, I reckon you've just caught the BIG thermal.

TGC scribe. PB

VINTAGE KIWI

The Easter weekend saw the VK team attending the Easter Rally at Inglewood. Norfolk Aviation Sports Club were once again our hosts. The weather was very flyable although not brilliant, but our hosts certainly made up with their now legendary evening Hangar Dinners

The main highlight was the initial test flight

Vintage Kiwi: ZKGBB Schneider ES 52 Kookaburra Photos Greg Douglas

of ZK-GBB Schneider ES 52 Kookaburra. It really does look fabulous. Once all the dreaded paperwork is completed and finalised it will be owned and operated by the Norfolk Road Aviation Sports Club on a permanent loan basis from Vintage Kiwi. The second highlight was Greg Douglas doing a very successful landout in his 17 metre Dart on the last day. Yep, members do in fact get out and about in their aircraft at such events.

Our next fly-in rally will be Raglan – by the sea in November 12, 13, 14. Every one is very welcome to attend even if you are not a VK member, just sneak away from work, bring your glider and enjoy. If you do not have a glider just come anyway. You will not be disappointed. It's a great weekend. Come join the adventure.

Ian Dunkley has now decided to step down from the 'chair' which he has held from the VK conception and has handed over the reins to Roger Brown who was voted into the position at the AGM held at Easter at Inglewood. Ian of course was VK's founder and without initiating such an organization here in NZ we would not be seeing the increasing interest in keeping some of these wonderful designs flying and active. The Vintage and Classic Glider Club of NZ has bestowed onto Ian a Life Membership and a title of Life President.

News flash [Late September]. Our Schneider Kookaburra has just had the final CAA sign off and official blessing, so it can now officially go flying and once again be part of the NZ glider fleet. Well done one and all.

VK Scribe

SoaringNZ and the GNZ Website Classifieds are now linked. Members are allowed one free non-commercial classified advert per issue. Ads may be submitted to the GNZ website or directly to SoaringNZ. They will be displayed in both places until notified that they are no longer required. Adverts that are obviously old and no longer in effect will be removed. Please notify us when your item has sold.

GLIDERS

Duo Discus T GTT Aug 2004 • As new condition, 650 hours. Finished in Autocryl from new. Cambridge 302, Becker AR4021 com, Microair T2000 transponder. Dual oxy. Comet Deluxe trailer. Available as complete sale or one half share. Based and hangared at Centennial Park, Taupo. Enquiries please to Trev Terry 0274908566 or trev@trevterrymarine.co.nz

DG 400, with 15m/17m tips • fully equipped and ready to fly. Including A8A oxygen regulator with quick connect, Cambridge M Nav with Averager and Winter Mechanical varios. Terra transponder, Dittel FSG60M radio, boom microphone and headset, tow out gear, wing, canopy and tailplane covers. Trailer has Cobra fittings and can charge batteries with glider in trailer. Contact Mark 0274 508505, mda.308@xtra.co.nz

ASH25M GYJ • Immediate delivery, 3 sets winglets, wing covers, tow out gear, rigging gear, motor- total 35 hrs. Fully instrumented, Ilec computer. Cobra Trailer, Oxygen and parachutes. $275,000. D Speight. Phone 03 409 8380 or email david.mairi@xtra.co.nz

Libelle 201B • much pre-loved GID for sale, all annual paper work complete July 2009, ready to fly. Complete with robust trailer, tow out gear, O2, good radio, transponder mode a/c, Borgelt audio and winter varios. $17k. Based in Blenheim, give me a call on 03 577 9002 or 0274 786 332. Ross Menzies

ZK-GIU Libelle 201 b #579 • Good condition approx 1600 launches and 2300 hours. Basic panel, transponder, B40 vario, O2, Chute. $18K Contact Paul 021 331 838

TesT-10-M • self launching motor glider for sale GVV, better than new condition. Polyurethane finish. 40:1 15mtr, 30 KW engine. Winglets, tinted canopy, digital avionics, radio, transponder mode C; Live your soaring independence dream. Email:gerald@resco.co.nz NZ$98,000

ASW 15 • #15069. Recent re-finish inside and out carried out at Sailplane Services. 1600 hours TT. This glider comes with 2 options. First option sports a new Cambridge 302 with 303 nav screen, new Microair transponder and Microair radio! Option 1 $22500. Second option comes with Cambridge M nav and no transponder but still with Microair radio $16000. Trailer tows nicely. Phone Geoff Gaddes 027 497 2723 email g_gaddes@xtra.co.nz

LS-6b ZK-GVS • Comes with LNAV, Cambridge GPS, 1x O2 system, Winter Vario, Becker radio, etc, Komet trailer with modified axle on parabolic leaf spring (higher ground clearance and softer ride) and tow out equipment, based at Drury - NZ$80,000. Due to business opportunity, Vincent: vnv@worldskip.com phone 021 0357 182

Sagitta ZK-GDO • The only one flying on the Southern Hemisphere! Repainted 2007. Panel with standard instruments, plus Borgelt vario. Comes with refurbished trailer (new axle, floor, rigging rails etc). Details at www.sagitta.smits.co.nz Make me an offer!

LS6c • fully equipped, Cobra trailer $130,000. Phone Ivan Evans 03 539 6232 email:ivan@ts.co.nz

LS 8, ZK-GXS • Complete with trailer. Fully equipped. Refinished in urethane paint. NZ$150,000. Contact Graham White email: g-p-white@xtra.co.nz, phone 64 06 877 6073

2 Gliders for sale • RONLERCHE K4, SKYLARK 2. Both hangared at Norfolk aviation sports club. Phone John Schicker 06 758 2953 day or night

ASH-25E, ZK GZZ • 1100 hrs total time NDH. Refinished in polyurethane .2 sets Maughmer wing tip extensions & winglets to near 27m. Ilec SN10B front & rear. Cambridge 302A Mode C transponder. Flarm front & rear. EDS oxygen system. Leather seat cushions. Parachutes. Motor reconditioned to operational standard. Jaxida covers. Cobra trailer. Many spares. $215,000. Omarama hangar also available. Phone Theo Newfield 027 4326 015

Discus-2cT 2007 • 18m. Every option. PU paint finish. Avionics include LX8000 computer with FLARM & remote stick, Becker radio & transponder, Tru-trak turn & slip. Cobra trailer with SL package. Jaxida hangar covers. Brand new condition. Contact Brett Hunter hunter.b@ihug.co.nz

ASW 20C • GTC TT~1900 hrs. One of the last of these great machines to come off the production line in 1985. Tinted canopy, excellent and reliable avionics, good oxygen system, plenty of batteries. Additional storage pockets for storing all the gear for those long flights. Ordinary trailer but it works well and is sound. Plenty of ground support gear. $59,500. Finance available. Contact John Ahearn 021 2234 911

Ventus Ct SW for sale • In good condition with Cobra Trailer. Won the Nationals in 2006. Hard to beat for price versus competitiveness with the get home convenience of the turbo. $120,000. Contact Julian Elder email julian@elder.net.nz.

Nimbus 2b • GKI Priced for a quick sale $38,000 ono. Phone either John 027 499 4375 or Ben 027 555 5485 for all info

LS3-A ZK-GLL • Refinished by Sailplane Services, Cambridge L Nav and GPS Nav, EDS Oxygen, Mode C Transponder, Flarm, Complete with trailer, $46,000. Phone Paul 021 162 2396

DG800B Motorglider ZK-GZT • 18m with winglets. Only 273 hours TTIS, 23 engine hours. Full panel, Borgelt B500 & B2000, Microair Radio and Transponder, full set Jaxdia covers. All AD's and services up to date. Contact Mike Strathern for more info and photos, 027 370 8747 strathern280@gmail.com

Glider Nimbus II GKV • 20m sailplane, large oxygen system, Cambridge computer, transponder, two man rigging, trailer braked, Tow out gear. Priced for a quick sale $30,000 ono. The best LD for dollar on the market. Finance and terms available. Phone Michael on 03 318 0860 or 027 436 8308

GLIDERS WANTED

I'm looking for a KA7 • Email ramiro_dantonio@yahoo.com.ar

Single Seat winch launch-able sailplane wanted • Priced from 20-60k would prefer glider with trailer however will consider without. If you happen to have a self-launcher would pay up to 120k. Contact Douglas 021 118 5797 or doug@waipapaeyecare.co.nz

HANGARS

15 metre hangar space Omarama • South Canterbury Gliding Club is offering a 15 metre hangar space at $1,800 per metre plus GST. Phone Paul Marshall 021 331 838

Omarama Hanger for rent • 15m western side. $12 per day, $300 per month contact annlaylee@aol.com for longer term rates.

A 20m hangar space in Omarama • is looking for a long term tenant. Negotiable price, contact Nigel 0800 438 453

Omarama Hangar • 20m space in Sailplane Hangars Ltd eastern most hangar on the west side (Unit S), comprised of 20,000 shares in Sailplane Hangars Ltd and Licence to Occupy. $40,000 plus gst. Contact Garry Wakefield email garry@walaw.co.nz or phone 03 348 9246

Omarama Hangar space for sale • Top slot in new private lock-up hangar. Secure, convenient, water, power, painted floor. Great neighbors. Regret not available to syndicates nor commercial operators. Contact David Laing laing.braeview@xtra.co.nz or phone 027 434 0074

Omarama Hangar 15 metres • In newer designed western hangar. Close to campground. Best grass frontage on airfield. East side for morning sun. Great neighbours. Replacement cost per metre is over $2,400. Selling for $2,200 per wingspan metre. Phone Chris Rudge 027 473 3228

Omarama Hangar Space 15 metre • We are selling our 15m space for $25,000 which is less than $1,700 per metre. Phone Paul on 021 162 2396

FOR SALE • 15 meter hangar space east hangar at Omarama $2,000/m negotiable. Phone 03 348 7009 or email vindaloulou@gmail.com

Drury airfield hangar position for sale • Concrete floor, water, power. Plan ahead for next season.... Why rig each day when you can have a hangar spot for half the cost of a new trailer? Phone Roger Sparks 027 495 6560

Drury 18m Hangar Space For Sale • Quarter Share in the first hanger. Contact therms@xtra.co.nz or Bernie 021 244 4405

OTHER:

PLB MT410G (GPS) 2 Years old. batt expires 2015. $550 ono. Contact Andrew Crane dallascrane@xtra.co.nz

LX 160 • Flight computer and speed-to-fly vario $995.00 ono. Contact loaders@clear.net.nz

Volkslogger • IGC/FAI approved GNSS Flight recoder $995.00 ono. Contact loaders@clear.net.nz

Replogle barograph complete with charts, $250. Phone Don Spencer 09 537 5964

Borgelt B50 Vario • I Need a Digital Data Module for it. Would buy a damaged/broken complete B50 as I can't buy the module new. Contact peter.mckenzie@contactenergy.co.nz

Compaq IPAQ Pocket PC • loaded with "See You" with stand charger, downloading cable and mount for attaching to glider canopy. $375. Enquiries to loaders@clear.net.nz

Aviation oxygen cylinder • steel with valve measures approx 560mm x 100mm including valve. Offers – contact ggreen@vodafone.net.nz

Yaesu Vertex VXA-150 • Airband transceiver for sale. Hardly used unit. Complete with hand held speaker/microphone, headset adaptor, plug-in ear piece and user manual. Still in original packaging. $350. Phone 03 443 6135

ILEC SN-10B • Flight Computer plus Vario Meter. 3 years old - in "as new" condition. $3,200. Contact Mike Tucker or mike.tucker@xtra.co.nz.

Christmas gift for glider pilots • The perfect gift for any Omarama fanatic – a painting of Omarama scenery/buildings. See www.wildconcepts.co.nz

Terra 250 Transponder & Alticoder US • $500 for both. Altimeter – 3 needles to 35,000'. Offers contact Roger 021 689 592 rog.peters@xtra.co.nz

Solid well built metal plate construction glider trailer • Was used for LS3 and then LS8, so should fit similar gliders. Current rego and WOF. $2k ono. Contact Hadleigh – hadleigh@gliderpilot.co.nz

WINCH FOR SALE • Nelson Lakes Gliding Club is selling its well proven yellow winch. Launches Grob twins 1400ft to 1700ft AGL for less than $10. Brilliant design. Simple to maintain and operate. Ford Cleveland 5.7 litre V8 with automatic transmission. Only $NZ15,000 plus gst for this wonderfully successful machine. Further details at www.glidingnelson.co.nz or contact Ken Montgomery ah 03 547 2317, mobile 027 631 4040 or email kenandshirlzintransit@yahoo.co.nz

WORK WANTED

Canadian commercial pilot/glider instructor looking for any reason to go back to New Zealand. 400TT, 275 single engine, 125 glider, 75 hour towing. Looking to head down around late October 2010 and stay through until March-April. Would really appreciate any opportunities! Thanks! Kyle Tiessen kyletiessen933@msn.com

WANTED I'm a young sailplane pilot from overseas(GER) and looking for a (backpacker) job or board & lodging on airfields in NZ. Please contact me: Leodrummer@web.de Thanks!

BGA Full Rated Instructor seeking to avoid British winter! Email Alan Jolly – alanjolly@tiscali.co.uk

Looking for a gliding opportunity! I'm a 21-year old glider pilot from Germany who is going to travel New Zealand during the end of February to the middle of March. Therefore I'd like to take the chance and go gliding for a few days. Is there a club which would be so kind in helping me getting a few (solo)-launches? I'm an active xc- and competition-pilot with around 250hrs on LS 4, LS 6, LS 8, DuoDiscusX, DG-1000, ASK21, ASk23, ASK-13 and Ka-8 regards, Robert – zulu_golf@web.de

For Sale

Ventus 2c 18m ZK-GYD

2002 Model. Serial Number #76.
Total Airframe approximately 465hrs.
This aircraft is in immaculate condition.
Equipped with normal instrumentation as pictured.

Including:
– Ilec SN10 Vario/Flight Computer with remote.
– Flarm with Swiss Bat external display
– Transponder (to be fitted)
– Dittel FSG 71M Com Disc Brake
– Tinted Canopy
– Carbon/Kevlar cockpit
– Oxygen with MH regulator
– Cobra trailer with carpeted floor and full SL special options
– Tow out gear.

$156,000 plus GST

Contact Ross Gaddes, Sailplane Services.
Wk: (+64) 09 294 7324
Mob: (+64) 0274 789 123
E: sailplaneservices@xtra.co.nz

Sailplane Services (2005) Ltd