

## eChandelle

May 2018

### Membership

#### New members (Flying):

Ftitz Cooks, Sean Keenaghan, Nick Lewis, Martin Shelton

(Youth)

Phillip Tetzloff

### Achievements

Congratulations to:

Sam Higgins - 1st Solo

Mark Wilson<sup>2</sup> - 1st Solo

Victor Lenting - 1st Solo

Ben Wilson - Re solo K13, DG1000 conversion

Kieran Cassidy - Ka6 & DG101 conversions

James Mitchell - Ka6, DG 101 conversions

Daryl Hayes - 1st Paddock landing

Anja Runge - 1st, 2nd & 3rd Paddock Landings

### Upcoming Events

- Launchathon – **Queens Birthday weekend Sat 2 June** The WGC will celebrate the first full year of winching operations with a Launchathon for one day. Rain day = Sun 3 June. There will an impromptu dinner on the night.
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- Gliding New Zealand Annual Conference & AGM 9-10 June 2018 James Cook Grand Chancellor Hotel, Wellington (**see programme at end of eChandelle**)
- Ground-based lectures will start sometime in June. A schedule of topics and date will be published in the next eChandelle.
- We also plan to recommence our Rain or Shine To Solo Flying School on weekend mornings beginning Sunday 30 Sept, hopefully in our new training centre. A full schedule will be released soon.
- We also plan to have flying school on weekend mornings during the winter. This will be much easier than in the past, once the Training Centre is finished possibly by mid June.
- YGNZ Mini Youth Camp. Labour Weekend. Already advertised on YGNZ website.
- Camp for Girl Guides Rangers in the week before Christmas Mon 17 Dec to Fri 21 Dec. 2018.
- Next season we plan to have two task weeks. One to get everyone up to speed for the summer. A second one further into the season for landouts, 50k tasks and longer tasks.

## **New Launch Procedures**

You may have noticed that we have not produced the usual large autumn roster for ground control. The committee decided to implement a new system because there are usually many people sitting round launch point - so it is less necessary to roster a large number of people on. We will roster just one person who will be the Launch Point Controller. This person will recruit other people present on the day for other tasks (wing running, cable car, flight recorder etc). The Duty Instructor and Launch Point Controller will agree at the beginning of the day on the order of flights.

## **New Launch Point Radio Procedure**

The idea is to complete all your checks (ex Discussion of ABCDE - Airframe, Ballast, Controls, Damage, Eventualities) before calling up the winch.

### ***Launch Point Radio Phraseology***

*Glider Pilot (when all checks complete) transmits: "Ready (to launch)"*

**LPC: "Skywinch, Launch Point, <glider>, <cable>, <(head wind)>"**

**\*Glider** (DG-1000, DG-101 single, K-6 single, LS-8 single)

**\*Cable Side** (River Side/Hangar Side or Hangar Side/Orchard Side)

**\*Head wind** (optional - if not changed from previous setting)

Winch: reads back Throttle Guide settings + cable side

eg "Launch Point, Skywinch has Alpha and 5 knots, Remaining Cable."

*A = glass twin, C = fabric twin, heavy single, D = single, E = light single*

*Glider Pilot to wing runner: (after listening to + accepting winch settings)*

**"<colour> Weak Link, Belly Hook On"**

**LPC: all clear + wings level + balanced: "Skywinch, Take Up Slack"**

### ***Skywinch Radio Phraseology***

*LPC: Skywinch, Launch Point, <glider type>, <cable>, <(headwind)>*

*[start engine now - assuming it has been warmed up]*

**Winch: Read back your Throttle Guide settings + cable side**

***eg "Launch Point, Skywinch: Charlie, 10-15 knots, Hangar Side"***

*LPC: Skywinch, Take Up Slack [readback not required, just do it]*

*[Select Drum, Select Drive, Eyes on Signal Lights . . . ]*

## **Training Centre Building**

Construction of the Training Centre building is progressing well. The cladding and roof are now on and the internal wall between the ablution area and kitchen has been installed. In the next few weeks the concrete floor will be polished to for a natural look and windows and doors will be installed. All going well, C&F Industries intend to finish by the end of May.

Once handed over the fit out begins for the ablution block showers, toilets and hand basins. Anthony Tribe (Ministry of Plumbing) is providing all the labour, plumbing, showers, toilets and hand basins for free. We are deeply indebted to Anthony and his team for this tremendous generosity.

Ivan Johnson (Ace Kitchens and Laminates) will outfit the kitchen. Britt Grieve has some great ideas for LED lighting and we have some samples try out.

Members who have recently joined may not be aware that we have raised \$175,000 in donations from club members and community trusts towards this \$225,000 build. Tom Davies has kindly agreed to underwrite the shortfall at 2% interest over 10 years.

Despite this, we need additional donations to complete the kitchen, the deck and audiovisual gear for presentations. Again we must ask members to help with funding towards a new fridge, oven, dishwasher, kitchen cupboards, sinks, tables and chairs. We are looking to install a new kitchen and appliances so, no second hand stuff from home that you want to get rid of. Ideally, we are looking to raise \$12,000 to complete the kitchen including appliances. This means 12 members at \$1,000 each would be a huge help.

Please contact Grae Harrison 0274 429337.



### **Another DG 100 for you?**

Several members have committed to secure from Germany another second-hand DG100 for a private syndicate. In a few weeks, Georg (summer crew) is due to inspect a DG100 in Germany and take it for a flight. Subject to committee approval, the club would retain a quarter share under the same arrangement as NB.

Although this second DG 100 is fully committed, the container from Europe will have room for another glider, if enough members were interested. This would be a private syndicate and would not have club involvement. However, shipping costs of about NZD 10,000 (total cost) would be halved.

Cost of second hand DG100's range from 13,500 – 17,500 euro depending on hours and condition of the trailer. Quarter share costs between NZD 5800 – 7500 per person plus shipping and some instrument changes to imperial units. Again, Georg would be happy to inspect any second hand glider from Germany. If you are interested in such a syndicate, please contact Grae Harrison 0274 429337 [grae@letsgotravel.co.nz](mailto:grae@letsgotravel.co.nz)

### **DUO DISCUS Perhaps?**

In addition some members are thinking about importing a new Duo Discus with turbo engine for a private syndicate of maximum 4 people. The Duo Discus is renowned as the best two-seater cross-country trainer ever produced. It's 20m wingspan produces great performance (45 to 1 glide ratio) and handling is a delight. The turbo allows you to start the engine after winching and motor over to the Tauarua's to connect with the big thermals and spend a day heading north up through the Ruahine ranges. If there are no thermals for the last 80km to reach Papawai simply start the engine and motor home and avoid outlandings.

Performance doesn't come cheap but shared ownership of a high-performance twin does. We are looking for two syndicate members, who want to learn a lot more towards cross country and competition flying both at Papawai and occasionally at Omarama.

To give you an idea of the level of commitment, these gliders cost NZD 240,000 plus trailer and instruments. It is intended to highly spec this glider with the latest LX9000 navigation colour screens, engine controls front and back and Oxygen for high altitude wave flying. A private hanger space will be available for this glider. Please contact Grae for expressions of interest.

### **Gliding New Zealand Annual Conference & AGM 9-10 June 2018**

The annual conference & AGM for Gliding New Zealand will be held 9-10 June 2018 at the James Cook Grand Chancellor Hotel in Wellington. This is open to all members in the gliding community. WCG members who are interested in meeting other pilots from around NZ and finding out how gliding works in NZ are encouraged to attend. Both Martyn Cook and Brian Sharpe will give talks on Saturday from 1:15 to 2:45 (see programme at the end of this news letter).

## Safe Speed Near the Ground



### ZK-GIC Glasflugel Standard Libelle 201B

Date and Time:	8-Nov-08 at 17:30
Location:	Five Rivers
POB:	1
Injuries (Serious):	1
Damage:	Substantial
Nature of flight:	Private Other
Age:	70 yrs
Flying Hours (Total):	155
Flying Hours (on Type):	0
Last 90 Days:	11

The glider encountered a downdraft during the base turn of the approach to land. It became low on the approach. With a highway and power lines between the glider and the strip, the pilot elected to land approximately half a mile short of the strip. The glider struck a deer fence, cart-wheeled, and came to rest inverted. The damage to the glider was substantial. The pilot was hospitalised with a broken shoulder and ankle. The wind was an easterly at the time, and mechanical turbulence off the hills to the east of the airstrip may have contributed to the downdraft.

In New Zealand you will be taught to use:

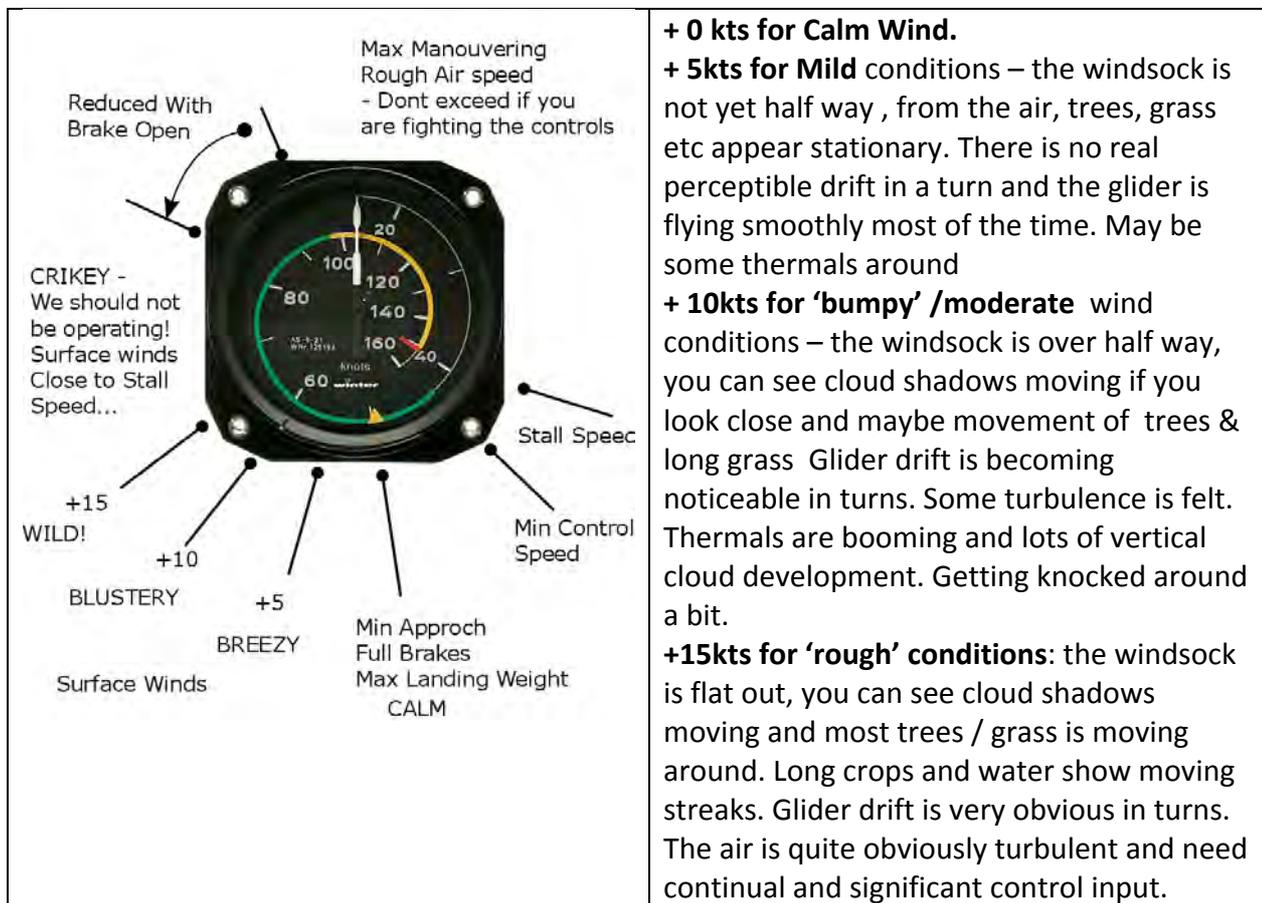
“Stall Speed + 10 kts + half the wind speed”

Other countries may use 1.3 or 1.4 even 1.5 (GFA) times the stall speed plus half the wind speed – or the gust speed. For example the DG 1000 stalls at roughly 40kts with two people.

50kts (Vs+10) – Say Gliding New Zealand

60Kts (Vs x 1.5) – Say Gliding Federation of Australia (and FAA/SSA)

This is also very close to the best glide speed (55kts -60kts in 18m), the manufacturers minimum full brake approach speed (54kts Yellow Triangle) and min sink speed with a bit of ‘g’ so there is little point in flying any slower than 55kts in either circuits or when well banked in tight thermals. I use 55kts for minimum approach speed / speed near the ground. Since judging the wind speed is often a guess at the best of times I tend to think like this:



What is actually meant by “safe” & what is “near the ground” ?

NOT near the ground is ‘ample height to recover from any expected loss of control’

“Safe Speed” – means *not losing control in the first place*

If you think you don’t have enough height to recover from an unexpected loss of control then you are ‘near the ground’ and need a ‘safe speed’.

Pilots tend to be a little bit reluctant to speed up when the ground gets closer. A dangerous instinct – best ignore it and get the speed on as early as you can. It gets harder to do later so if you are very close to the ground – i.e. launch failure – get lots of speed quickly and keep hold of it.

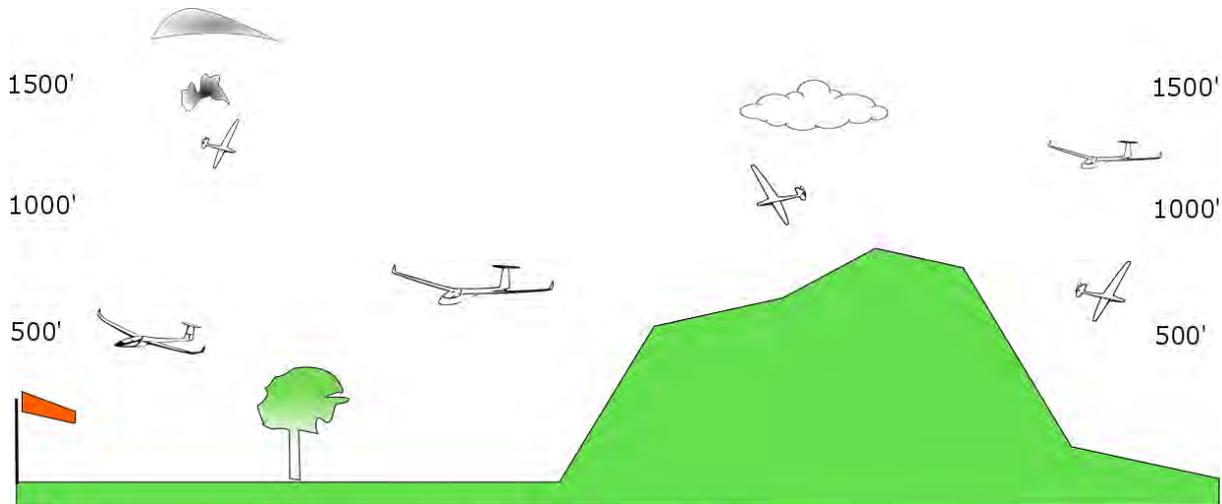
Another dangerous perception is that – if you fly faster it *feels* more turbulent. Don’t worry, the glider will handle the bumps, the straps *will* keep you in and you have much more control.

What Causes Loss of Control ?	
Internal factors – things you can do something about	External factors – things you can’t change
<p>The <b>Speed</b> You Fly At</p> <p>The <b>Height</b> You Start Circuit At</p> <p><b>Pilot skill.</b> Not being current, having limited experience on type or in the conditions or at the site are all common factors in accidents.</p> <p><b>Pilot distraction</b> – failing to monitor speed in the first place! (the Stall / wing drop). Failing to monitor attitude / bank angle (the Spiral Dive). Loss of control through Distraction can be particularly nasty as it comes as a total surprise to the pilot – panic and inappropriate response is very likely.</p> <p><b>Loose articles</b> in the cockpit ! – do a double check before flying on rough days &amp; make sure any junk in the rear cockpit is well</p>	<p><b>Turbulence</b> - This is generally random but can act in any direction and may cause sudden and unexpected rolling, stalling etc.</p> <p><b>Wind Shear</b> – you may find you have to alter heading to maintain your desired track in close proximity to the ground</p> <p><b>Wind Gradient</b> – loss of air speed when descending / climbing through a gradient. It may also cause a rolling effect <i>towards the ground when turning</i> into wind if you are in a well-banked turn – and is worse with long-winged gliders</p> <p><b>Rotor</b> - Not quite the same thing as turbulence as its tends to be large scale and organised. It can be powerful enough to roll</p>

secured. Often putting things like phones, batteries and cameras in the side pocket isn't enough.

a glider – basically don't fly *anywhere* near a hill if you think rotor may be likely to form. And if you do find yourself near the hill – go FAST.

**Wake turbulence** – not often an issue on a gliding site !



Note that all of these factors change not only the speed needed to maintain control but also the height required to regain control – so if they are expected to be severe, then your 'near the ground' height GOES UP. We might use 500-600ft AGL on a flat land site in mild conditions where a wing drop or incipient spin might be the worst loss of control. In the Lee of mountains on a windy day, where entering a full spin or being rolled over by the rotor is a real possibility - 2000' might be more realistic. The same applies in very strong convective conditions –especially with a lot of vertical cloud development and a risk of heavy showers. Take another look at the gliders in the figure.

**Another thing to think about.** The DG1000 you trained in is built for aerobatics, can have wing tip extensions to 20m. This means a big fin, big rudder and powerful ailerons. It is also quite 'dense' and has a modern, thin wing– i.e. holds speed well and is unlikely to be over-powered in moderate turbulence. The Libelle or K6 for that matter on the other hand is exactly the opposite kind of glider. So it is more likely to be (often is) over-powered by turbulence - and or loose speed quickly in gusts - so add another 5 kts onto your safe speed calculation for the old 'uns! The length of the landing run isn't likely to be an issue on the windy days.

So in deciding what safe speed near the ground means **today** – at *this stage in your flight*– you must **assess** not only the **wind speed**, but the probability of **turbulence** –( your surroundings) its severity(wind speed) and **the characteristics of the glider you are flying**.

Then - If you identify that loss of control might be a problem - pick, and stick with, your minimum speed.

Many pilots flying in the lee of large mountain ranges, or crossing over the same, will have experienced conditions where they are struggling to have enough control to keep the glider flying straight – but are forced to fly a little bit slower to keep within the maximum rough air speed. It is not pleasant. These conditions can exist anywhere in the Wairarapa, form quickly, and if the upper winds are high, be very, very careful.

So if you are flying on the westerly vector and there is a bit of wind about – don't just think surface winds, but also the ones at 2000'. In wave conditions sometimes those upper winds decide to pay a real quick visit to the surface. Wave conditions – especially if the 5000' winds are 30knots or more imply that 'near the ground' is probably closer to 2000' than 800' and circuits need to be flown **high and fast**. You may also find the surface winds are completely at odds with the upper winds and the ridge simply doesn't work.



## Having Trouble with the Radios in the DG's

1. If there is an instrument installed in a glider, which can be adjusted by a pilot then sooner or later it will get adjusted.
2. The adjustment will not be obvious on simple checks, but will appear by surprise at an extremely inconvenient time.
3. The original pilot will either be unaware of the adjustment or unable to correct it, and so leaves it in the worst possible state.
4. The next pilot, unable to identify the fault, will blame the instrument, the manufacturer, the installer, the engineer and the Club.
5. After analysing and correcting the fault the engineer will attempt to lock the device to prevent it happening again.
6. Labels, placards, warning notices and check list revisions will be used to inform all users and prevent a recurrence.
7. Despite the above, it will happen again - and once again no-one will own up to it.
8. The key or code to the lock will be lost or changed, which will prevent the engineer from correcting the second fault.
9. No pilot will own up to adjusting or changing anything.
10. Demands will be made to replace the instrument with a more expensive instrument, with a few additional features.
11. The additional features will be used to justify the hefty price tag.
12. Further modifications will be needed to the aircraft to install the new instrument, including a bigger battery.
13. Pilots will welcome the new instrument as better than the previous one, with more adjustable features than before.
14. Refer back to Item 1.