14-15 Oct

AGC Weekly News

The weekly newsletter of the Auckland Gliding Club at Drury, Auckland

From the CFI

Unfortunately, it has been experimentally verified (two stuck vehicles) that the field will not be suitable for use this weekend, so the flour bomb drop is indefinitely postponed.

Please remember the field is still closed to all but maintenance traffic, no matter how well intentioned your motivations.

There has been clarification on “competition finishes” from on high, the result being they are an approved manoeuvre.

However, pilots must have completed the syllabus in the MOAP and have CFI sign off. So, there shall be no low finishes below 500 feet until such time as evidence or training has been demonstrated and logbooks signed or viewed.

The article I’ve submitted on how to use the thermal assistant is not an article on airmanship, that is to say issues of thermal etiquette need to be evaluated constantly while thermalling with others.

The next ATC visit is planned for the 28 October, winching and aero tow and then the final visit is on the 4 and 5 November. Extra help on these days will be welcome.

Other dates to remember:

Central Plateau comp 6-12 Nov

Matamata Regionals18-23 Nov

Xmas Camp at Matamata 26 Dec-2 Jan

Hopefully Seamus and possibly Hugo will help with the Xmas Camp. It’s open to all student pilots, so plan your Xmas break now.

DX travels to the South Island on the 9 Nov and returns on the 12 Dec.

I will be away over Labour Weekend but as always, I’ll be contactable via email or phone.

Anton Lawrence
CFI Auckland Gliding Club
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Amphibious glider?

Hanna Reitsch with the Seeadler in about 1936

Flights that don't go well

Adam Woolley

Photo by Petr Kolmann

We all have those flights that don't quite go to plan, no one is immune. Sebastian Kawa once outlanded before the start at a World Gliding Championships, does it make him a poor racing pilot? Absolutely not, he is still one of the greats of all time in our sport. It can happen to anyone, that we just have a bad day, after all, gliding is a game of skill & chance.

I'm currently writing to you all from a State Gliding competition in Queensland, Australia. The start of my competition hasn't gone well, but it's not deterring me from making the most of it. In fact, I'm actually using this competition as practice for the upcoming World Gliding Championships later this year, so mistakes or (GP time penalties) are expected to be made as I push closer to my competitive risk limit.

The second day was no different, after a great start & first thermal, I saw that I was ahead of the pack. I decided to track direct, over some unlandable terrain (my first paddocks were at the end of the glide if I didn't find anything), thinking that it'd be a good thermal producer. Sadly, it wasn't, those that took the longer route had thermals over the red (yup, red!) fields & as a pack, continued on task. Meanwhile, I decided that it was only a game after all & started my engine over the last field & the risk of damage wasn't worth it.

My day is over after 42km, right? Well, if you have that mindset, you would be wrong. Rather than beat myself up, I made something of the day. I first powered out of the immediate task area, climbed up & cooled down, evaluated the weather, and my options & set some goals to make something of the day. So, what were they?

1. We all feel uncomfortable flying over unlandable terrain, I'm no different. So I challenged myself to fly towards the clouds in the North, over 100km of difficult terrain, while flying below 4000'agl. What was I trying to achieve? To train to think clearly under pressure, to become more comfortable in this scenario, but to always have a landing option (whether it's in front,

behind, or 90° to the right of you) which you may have to divert to while destroying your speed. I had to make one 90° deviation to a distant field, to stay within my personal safety limits.

2. Dump all my water and learn to fly my Ventus 3TS-15 empty. What speeds does it like to cruise & climb at, is the CG right, how much bank in the climbs is optimum?

3. Try a different thermal entry technique. I realised that I may be pulling on thermalling flap (L in my glider) too soon. So I tried to feel my way into the climb, set +2 by feel, then & only when I knew I was in the climb, I'd reselect L. Sometimes this would be after a few turns

4. Once established in the thermal, trim perfectly (usually I thermal with forward trim, so I can pull on the gusts & lever myself on the thermal if I can with back pressure). What I found was that I was able to completely relax the foot pressure, I found I was flying at slightly less bank though, however, the glider flew hands off being totally relaxed with minimal input.

I achieved all these goals, & when I landed back home, I felt good about myself & that I had achieved something for the day. So if you find your day not going to plan, reset some goals, and achieve something else for your day!

Safe circles, Adam

Adam Woolley was born into the gliding world, being the 3rd generation in his family. Going solo at 15, his thirst for efficiency in soaring flight & quest for a world championship title to his name has never wavered. One big passion is sharing his experiences & joy with other glider pilots all around the world. Adam is an airline pilot in Japan on the B767 & spends his off time chasing summer around the globe. He has now won 7 national Championships & represented Australia at 5 WGC's & 1 EGC.

How to use the Thermal Assistant

Anton Lawrence

The committee has agreed to fit LxNav S100 varios to all club gliders including AK, this will give excellent consistency across the fleet and make it much easier on students transitioning from the two place gliders to singles.

The S100 is fitted with a thermal assistant, which if understood properly is a great aid to thermalling. This article will describe how to use it to best advantage.

I can probably hear voices now going "I don't need that rubbish", however I was shown how to use it properly by Sebastian Kawa, who we generally assume is an OK pilot, if being a multiple world champion is anything to go by.

The LxNav Manual has this to say about the thermal assistant:

The Thermal Assistant mode displays a graphical representation of your location within the thermal. If you are thermaling to the left there will be an aircraft symbol on the right of the ring of bubbles and the bubbles will appear to rotate clockwise (towards the symbol of the glider). If you are in a right hand thermal there will be an aircraft symbol on the left and the ring of bubbles will appear to rotate anticlockwise (towards the symbol of the glider). Large red bubbles indicate the strongest lift within the thermal and small blue dots indicate the weakest lift or sink within the thermal. Yellow bubbles indicate lift equal to your MacCready setting, average thermal or average climb rate depending on your preferred setting (refer to Section 5.7.4.1). The point of strongest lift is indicated by a white large bubble.

You can use the thermal assistant to visually determine which part of the thermal has the strongest lift and adjust your turn accordingly to manoeuvre the glider in the direction of the strongest lift and away from the weakest lift or sink.

The Thermaling assistant can be set to automatically change to the Thermal assistant mode or it can be manually selected. See Section 5.7.4.2 for settings.

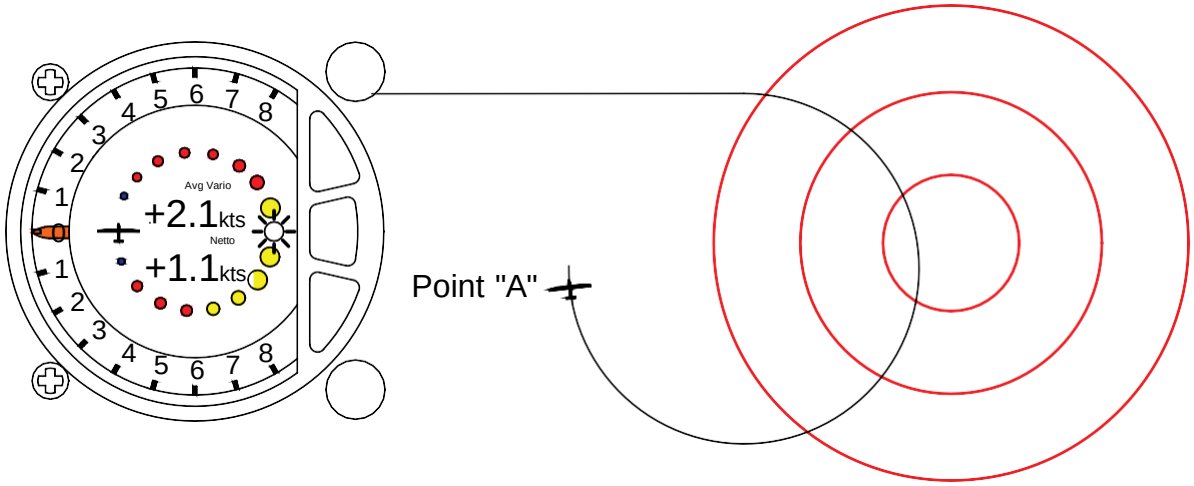
The two NavBoxes within the Thermal assistant Mode can be configured using the quick access menu.

So that's great, but how do you actually interpret the information presented to core a thermal accurately.
First off you need to have a good thermalling technique, this isn't a thermalling article per se, suffice to say you need to enter the thermal and bank tight at 45 degrees, slow to around 50-55 kts and keep the bank constant all the way around, until the white bubble is at 45 degrees to the top, opposite the glider icon, as shown in the following diagram. Do not flatten out in the sink, this will move your circle such that the thermal assistant won't be able to help you. To be clear no weaving and wobbling, hold a smooth 45 degrees bank. When the white bubble is at 45 degrees, point "B" on the diagram, open up the bank by about 10 to 15 degrees, no more. The glider will move across into the edge of the core, the white bubble will come around to the glider icon and the Vario will start to sing at around point "C", bank tight again to 45 degrees, repeat the process until centred.

Every thermal is different, and every entry will be different, you may be closer to the core or further away, you may have gone in the side top or bottom, or you may have got it right first time, the white bubble will always point to the strongest area of lift and the centring process remains the same.

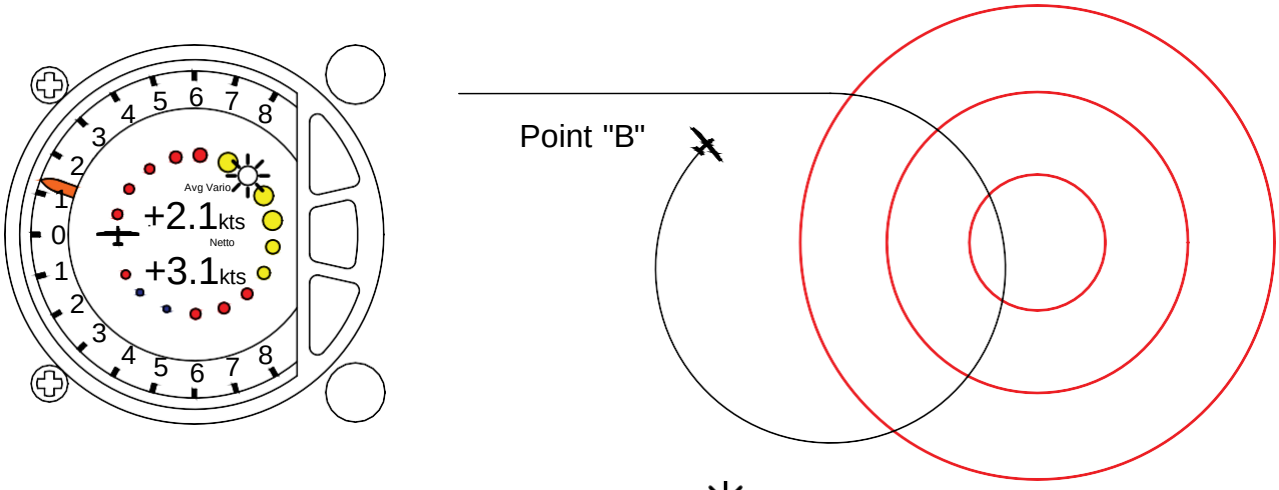
The basic technique described here can be found in all textbooks from Reichmann to G Dale, all be it without the assistant to guide you, G Dale describes it as the advanced technique, for me it's the only technique 99% of the time. If you need to flatten out below 20 degrees in your search for the core you probably need to go and find a better thermal.

In my diagrams don't take much notice of the middle numbers, I've just copied the LxNav pictures.
The club gliders show current climb rate and average climb rate, but they can be configured however you like as per the manual above.

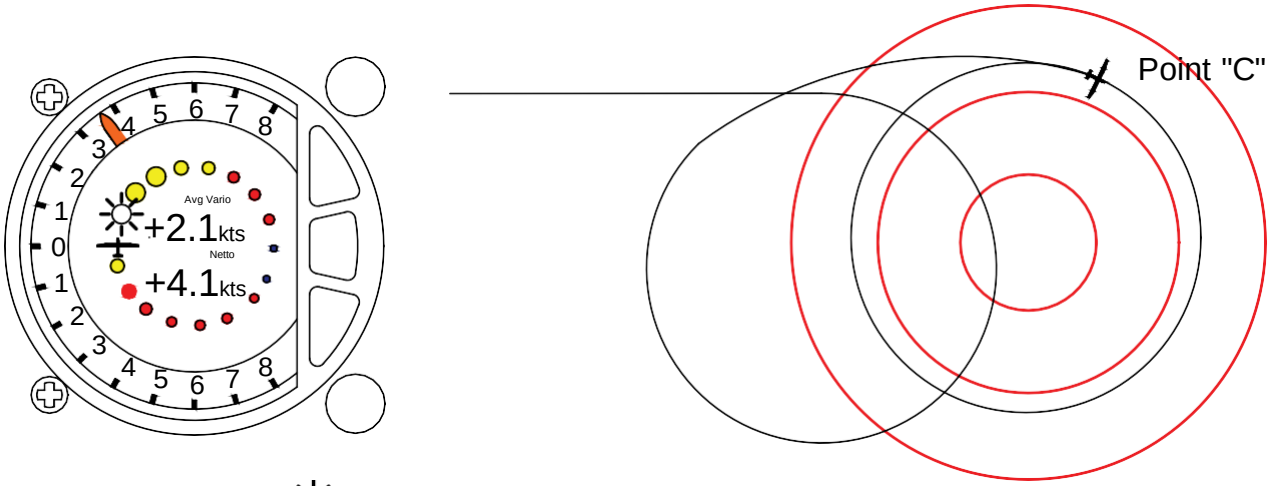


On entering the thermal turn tight at 45 degrees bank angle and keep the bank on all the way around, do not flatten out in the sink.

At point “A” the thermal core will be 180 degrees opposite as indicated by the white bubble.



At point “B” open up to 30 degrees bank. The white bubble will be 45 degrees from the top or 135 degrees from the glider icon, whatever is easiest for you to visualise.



At point “C” The white bubble will be coming around to meet the glider icon, tighten back up to 45 degrees bank, you probably won’t centre the first attempt and some thermals require constant centring especially in wind shear situations. If the lift comes on sooner than Point “C” then turn into it.

The diagrams show a right-hand thermal entry, for a left-hand entry the display and centring will be a mirror image.
A practical example below.

A recent 800' AGL low save at Taupo

The first two turns (at the left of the image) centre the thermal, then it's kept tight. The trace is GPS speed over the ground so the distance between the centre of each turn is exaggerated, as far as the air mass is concerned (8kts from the west) the first two turns would have overlapped.

SeeYou simulation from the IGC file of the first turn. Note airspeed and bank angle.

I've used SeeYou to look at a number of traces of a number of pilots taken from OLC and all have similar entries into the first couple of turns when looking straight down. However 3D mode with instruments on gives a better picture of who is centring quickly and accurately, not all do. Of course, as previously stated every day and every thermal is different, but a trend is apparent. Accuracy is the key to establishing a good quick climb and faster XC speeds. The Thermal Assistant is one of the tools that can help. Most importantly, keep your eyes looking out the canopy, you only need a quick glance at the gauges to see what they're showing.

Some more videos from Gerard

https://www.youtube.com/watch?v=Nilqc_lPwS4

https://www.youtube.com/watch?v=WIuJnbMcfco

Member's Ads

LS3-A for sale (ZK-GLL). Has been refinished and is in excellent condition. Recent upgrades include LXNav S100 plus remote stick, Trig ADSB, new front panel, Flarm mouse, new galvanized tilting open trailer that I am in the process of making a full cover for. Glider fits in the trailer the same as a cobra trailer with the fuselage and wing trolley's being visually similar to what the expensive trailers use. After several landouts the trailer proves to be successful and easy to use. Comes with tail dolly, wing walker tow-out bar, oxygen bottle and EDS system (I have never used this so cannot vouch for its functioning) Annuals recently completed. A great performing 15m flapped glider. $45,000
Contact Keith Macy keith.macy@outlook.com

PW5 KF. Current Annual until Dec 2022. Ready to fly. Approx 800 hours flying. Radio, altimeter, airspeed indicator, electric and mechanicals varios. Includes open trailer. Priced to sell at $8,000. Ideal for single ownership or cheap syndicate. Reason for sale is that glider is surplus to requirements.
Phone Murray on 0275 875 438

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