

# AGC Weekly News

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

## From the CFI



The Winter Lecture Series begins soon. These are the people taking the classes:

**Law**, Gerard

**Nav**, Roy with zoom and practical lessons.

**Airmanship**, Russell

**Human Factors**, Jonathan

**Tech**, Gerard

**Met**, Anton

**Radio theory and practical**, Russell.

*The first lecture will be on Saturday morning 01/06/2024. A calendar showing lecture dates will be issued soon.*

### Flight intentions and Authorisation procedure

Student and those flying club gliders are still required to fill in the flight authorisation forms. These forms can be found in the caravan. Instructors are to make sure this happens.

XCP pilots flying XC do not need to fill out an intentions form but should put their intentions on the booking site. Stating XC is enough.

“Ops normal” radio calls will not be required in future as long as trackers of some sort are being used. In the event of a tracker failure, Ops normal calls will be required.

### Trackers

Following on from above, trackers of some sort will be mandatory for any XC flight. These can be any one of the follow:

B-Traced or similar, MT-600, Spot, In Reach or ADS-B.

Flarm on its own is not acceptable as its range is limited.

### Mercer as a dual land out option

Mercer can be used as the dual out landing option for the XCP syllabus. However, the student must provide all relevant briefing material for the flight, including knowledge of the MBZ and frequency. The student must also be able to provide a copy of the Aerodrome Chart from the AIP and be able to explain what all the notations mean.

There is more workload in landing short on the grass than landing in one of the larger paddocks adjacent to State Highway 2.

You will also get to do a short XC aerotow on retrieve.

### Taxiing

We will start to teach students who are close to XCP how to safely taxi a glider.

This includes reasons to clear the runway but also includes being able to avoid obstacles in a land out and possibly initiate an intentional ground loop in the event of brake failure or overrun. Ground looping will be taught in theory only.

*Anton Lawrence  
CFI Auckland Gliding Club  
021 280 188*

---

## **JS2 EASA Certification Test Flights**

*Submitted by Gerard Robertson*

---



<https://youtu.be/mueriJPYoLs?si=fki0jBwdfarnl8cl>

---

## **The Lechtal Parcours**

*Submitted by Gerard Robertson*

---



[https://www.youtube.com/watch?v=AYrbkhAwO\\_o](https://www.youtube.com/watch?v=AYrbkhAwO_o)

---

## **Reminder!**

---

Just a reminder about the Working Bee on 4 May, beginning at 10am - your participation will help to spread the workload evenly among the other members.

---

# Variometer 101

By Adam Woolley  
Courtesy Wings & Wheels

---

With its simple yet ingenious design, the variometer plays a crucial role in keeping gliders soaring gracefully through the air for hours on end.



Photo by Sean Franke

If you've ever watched a glider gracefully manoeuvre through the sky, or you've just started your life's soaring adventure you might wonder how they or we manage to stay aloft for so long without an engine. One of the key tools that we use to help us as glider pilots achieve this beautiful feat, is called a variometer. In this article, I want to describe in simple terms how this clever device works.

## Sensitive Rate of Climb Instrument

First off, what exactly is a variometer? Simply put, it's a special instrument that measures the rate of climb or descent of the glider. Think of it as a helpful assistant for the pilot, indicating whether they are going up, down, or maintaining altitude. Uniquely, the Americans have designed a very clever digital variometer called the ClearNav!

## Pressure Sensor

Now, let's delve into the inner workings of a variometer. At its core, a variometer contains a sensitive pressure sensor. This sensor is designed to detect even the slightest changes in air pressure. As the glider ascends or descends, the surrounding air pressure changes, and the variometer picks up on these fluctuations.

But how does it translate these pressure changes into useful information for the pilot? Well, the variometer is connected to a display unit in the cockpit. This display typically features a dial or digital readout, that shows the rate of climb or descent in feet per minute (fpm) and typically shows on the instrument as a number 1-10.

When the glider is climbing, the variometer needle or digital display will indicate a positive rate of climb. Conversely, when the glider is descending, the display will show a negative rate of descent. If the glider is maintaining a steady altitude, the display will remain close to zero. A slow rate of climb is 100fpm (indicated as 1), and a strong one is 1000fpm (indicated as 10) – a true elevator in the sky, and super exhilarating when you catch one!

Now, you might be wondering how the variometer distinguishes between rising and sinking air currents, which are crucial for us glider pilots seeking to maximise our time in the sky. This is where some clever engineering comes into play.

### **Audio Variometer**

In addition to measuring the overall rate of climb or descent, variometers are often equipped with a feature called an "audio vario", which is imperative to both our senses and our safety in the sky. This feature emits a distinctive sound that changes in pitch or frequency depending on the glider's vertical speed, which allows us to realise whether we are in lift or sink, just by tuning our ears into this distinctive sound.

For example, when the glider is climbing in rising

air, the tone will become higher in pitch (a happy tone), alerting the pilot to the presence of lift. Conversely, when the glider encounters sinking air, the tone will become lower in pitch (a depressing tone), signaling the need to adjust course to find better lift or just less sinking air. By listening to these auditory cues while also monitoring the visual display, glider pilots can effectively navigate through thermals and other atmospheric phenomena to maintain or gain altitude.

Overall, the variometer is a vital tool for glider pilots, helping us to gauge their rate of climb or descent and fly through the ever-changing & invisible air currents of the sky. With its simple yet ingenious design, the variometer plays a crucial role in keeping gliders soaring gracefully through the air for hours on end.

*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.*

---

## **Member's Ads**

---

**H36 Dimona** ZK-GPH for sale or syndication. Julian Elder is interested in either creating a syndicate or selling his Dimona GPH. It recently has had significant restorative work carried out. For any technical stuff contact Ian Williams (021980194 [ian@agcon.co.nz](mailto:ian@agcon.co.nz)) or sales information contact Julian (0276924114 [julian@elder.net.nz](mailto:julian@elder.net.nz))

---

This edition of the newsletter was compiled by Peter Wooley – [wooleypeter@gmail.com](mailto:wooleypeter@gmail.com) – 021 170 2009

---