

# OUTLANDING

The Taupo Gliding Club's Newsletter



## February – March 2020

*Welcome everyone to this edition of Outlanding. I trust that all of you have enjoyed the summer weather and all the flying activities that have been available. The soaring season has not quite left us yet as there have been some awesome autumn flights happening around the country.*

*It has also been a busy time around the club; visiting pilots coming and going, Multiclass Nationals, and more importantly for individuals, the achievement of success with badge flights and student progression. Well done to all.*

*Thank you to all of you for your assistance over the busy period, your club appreciates the work you have all contributed.*

*After having such a good period we are now faced with COVID19 and the prolonged effects this will have on our club operations. At present the club has shut the hangar doors for the foreseeable future. All we can do is what is advised and keep safe.*

*If anyone has an article or notification to be included into the next newsletter, please have to Trace by 20 May 2020.*

*Fly well and have fun!*

*Cheers, Trace*

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## CFI Report by CFI Bill Kendall



Autumn is not far away and our summer is drawing to an end and with that the club has elected to shut down due to the Covid 19 outbreak you will hear about that further in this News Letter. On a more positive note, firstly congratulations to Trace Austin for winning first place in the Racing Class at the Waipukurau not to mention third place in the Racing Class at the Nationals, an awesome result, also congratulations to Gerald for achieving his

QGP which was his aim before heading home to Sweden. Phil Overall is nearing completion of his QGP so should take this down time to study and complete his exams – GO PHIL. Not far behind is Ivan who has completed his 'B' Cert (or near to) and is moving onto his QGP syllabus well done to all of you, this makes far better reading than the coronavirus outbreak.

At our last Instructors Meeting Tony Budd voiced his concerns as to our students study methods and that some rely on verbal instruction from the Instructors when we expect students to use the study material available to them both in books at the club and through MOODLE on the Wellington Gliding Club website. Some examples are the use of at ASI (air speed indicator) in relation to the colour coded segments around the ASI and the meaning of the yellow triangle. All this info is available in the aircraft flight manual and in Moodle, see example from that site below.

### Yellow Triangle on the Airspeed Indicator

This is defined as "the lowest approach speed (at maximum weight without water ballast) recommended by the manufacturer" (Certification Specification CS-22).

The approach configuration would be:

- Wings level
- Undercarriage down
- Flaps in landing configuration (where applicable)
- Airbrakes extended

The "lowest speed" value should be increased when:

- The glider is turning (e.g. around the circuit)
- There is any wind or turbulence present

This minimum speed may be reduced (with caution) when:

- The glider is significantly less than max all-up weight

Note: this value does not allow for gusts or a wind gradient, or reversal of wind direction on the surface.

Pilots training towards Solo Pilot and Soaring Pilot must use SSNG to calculate the target circuit and approach speed.

Pilots training towards XC Pilot can reduce their speed towards the yellow triangle (plus wind allowance) after becoming stabilised on final approach.

I recommend that all flying members log into the site and setup a training log, there is a lot of very good information there and if you are a visual learner there are some very good videos from the Cambridge University Gliding Club, well worth watching now that us over 70's are at home trying to think of what to do (ha ha).

Stay SAFE everyone let's get through this and look after each other. If you need help sing out.

Bill Kendall CFI

## GNZ Multiclass Nationals 2020



The Multiclass Nationals were held in Taupo this year, and after a bit of a slow start (due to some very windy and non-taskable days) the event turned out to be very successful. There were 30 competitors split between two classes and it was good to see pilots from the south island and from overseas participating.

The first couple of tasks were set as racing tasks and the remainder were AAT's. There were blue days with good climbs and days with well-marked fluffy things that had great climbs. The task setters did a great job

over the two weeks.

On a sad note, there was the passing of fellow GNZ member and pilot, Maurice Weaver, RIP. Some pilots passed up a flying day to attend the funeral in Tauranga and as a sporting tribute pilots placed black tape on their gliders for the duration of the contest.

The competition was closely fought in both classes and the surprise package this year was Tim Bromhead and his new glider GOP. Although he didn't take out the top honours in the open class he surely was up there with five day wins. There were a number of pilots who had bragging rights throughout the contest and there were many stories told over cold refreshments at the end of each day, as well as whilst waiting to launch.



At the end of the day there can only be one winner in each class and the pilots who did win, won deservedly. Congratulations! The results were:

### OPEN CLASS

1<sup>st</sup> Place – Peter Hartmann 8,275pts - GDX

2<sup>nd</sup> Place – Patrick Driessen 8,193pts - GVZ

3<sup>rd</sup> Place – Tim Bromhead 7,154pts - GOP

### RACING CLASS

1<sup>st</sup> Place – Mark Wilson 7,464pts - GGX

2<sup>nd</sup> Place – Steve Foreman 6,575pts - GKP

3<sup>rd</sup> Place – Trace Austin 6,512pts - GNM



As Peter Hartmann was a visiting pilot from overseas he was not eligible to take the National trophy, therefore, this then went to Patrick Driessen as the country's Open class winner.

In all it was a hugely successful competition, great weather, great comradery, great tasks. Feedback received was all positive so well done to all. A huge thank you to all the organisers and volunteers who made the competition a huge success. Without your assistance there would not be a competition. Thank You.

And another huge thank you goes to Trevor Terry for his support in sponsorship. Your contribution is very much appreciated. Thank You.



## Central Districts Championships 2020



The CD Championships returned back to Waipukurau after a two year absence having previously being held at Masterton and Greytown. There was a large field with 30 competitors (same as the Nationals) split between three classes. It was great to see so many gliders on either side of the aero club.

Once again the flying Gods played havoc with the weather by providing beautiful but untaskable days, which reduced the number of contest days to just three - but they were good flying days.

After an enjoyable week of flying and socialising, a couple of BBQ's and the final dinner on the Friday night, prize giving was done on the Saturday morning. Saturday was declared as a no task day, there was some wave around and a couple of pilots took off to see what they could do, so most packed up early and headed home. In the end the results were:

## OPEN CLASS

1<sup>st</sup> Place – Tim Bromhead 2,986pts - GOP

2<sup>nd</sup> Place – McPhee & Bottin 2,019pts - GDY

3<sup>rd</sup> Place – Stewart Barton 1,958pts - GVA

## RACING CLASS

1<sup>st</sup> Place – Trace Austin 2,685pts - GNM

2<sup>nd</sup> Place – Mike Strathern 2,402pts - GHN

3<sup>rd</sup> Place – Steve Foreman 2,289pts - GKP

## NOVICE CLASS

1<sup>st</sup> Place – Grahame Player 1,637pts - GNR

2<sup>nd</sup> Place – Clinton Steele 1,479pts - GGN

3<sup>rd</sup> Place – John Tullet 1,414pts - GET



## GSS

Our ASW28 has just completed an annual inspection. Thank you to those of you that came out and undertook the washing, polishing and waxing. She looks fantastic



## taskPilot



This year's *taskPilot* League is rapidly coming to a close at the end of March and for the second year in a row we do not have a League winner. *taskPilot* is an excellent tool to assist you in becoming a soaring pilot from planning the weather, which task to fly, uploading and downloading tasks and seeing the results. Maybe next year we will have the inaugural winner!

## Achievements

There have been a number of achievements over the last two months and **CONGRATULATIONS** to you all. In no particular order they are:

- Bill Kendall – Silver C
- Andrew William – A Certificate
- Phil Overall – B Certificate and well on the way to QGP
- Gerold Kretschmar – QGP (just waiting on GNZ to endorse) and FRTO



## Basic Theory—Questions (Answers after Humour)

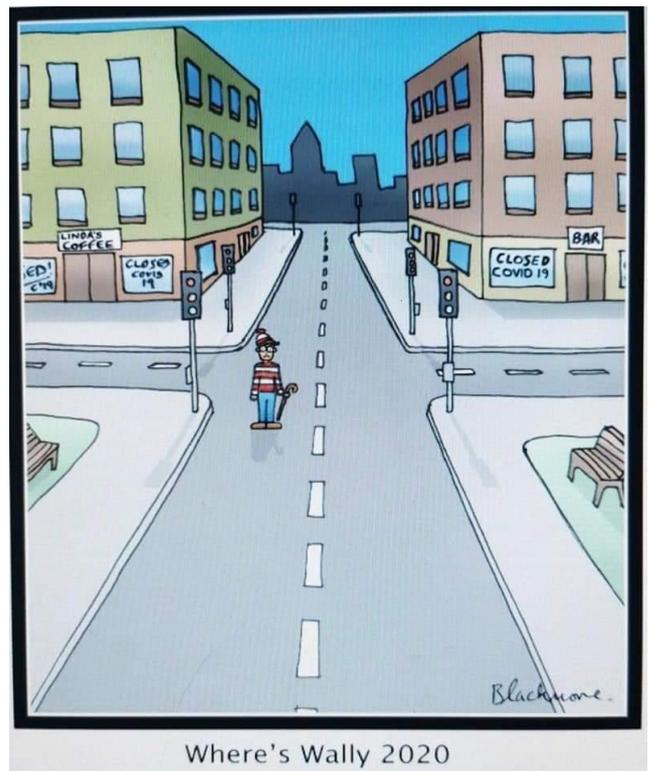
As we all have some extra time on our hands, I thought it would be a good time to refresh the knowledge. See how you go with these questions:

1. What is the name given to the cross-sectional shape of the wing?
2. What three factors affect the lift produced by the wing?
3. In what direction does lift act?
4. Define wing loading?
5. State the two types of drag?
6. What provides stability in the pitching plane?
7. What is dihedral and what is its purpose?
8. What is the speed control in a glider?
9. What are the turning controls?
10. What is adverse yaw and what causes it?
11. Define “co-ordination”?
12. What is the secondary effect of rudder?
13. What is the purpose of spoilers or airbrakes?
14. What happens to the stalling speed when flaps are lowered?
15. What action should never be omitted before turning?
16. What are the symptoms of a stall in straight flight?
17. What action must a pilot take if a glider stalls?
18. Is it possible to stall in a turn without a nose-high attitude?
19. What action must a pilot take if a glider stalls in a turn?
20. What is the recovery action from a fully developed spin?
21. Define “safe speed near ground”?
22. Calculate the speed to fly the circuit in a glider that stalls at 33 knots in straight flight with a 15kt wind?
23. How would you know if you had not applied enough rudder with aileron at the entry to a turn?

24. What is meant by the term “autorotation”?
25. If you are turning and the glider starts to noticeably increase its bank angle without any input from you, what is the problem and what would be your action?
26. What is another name for directional stability?
27. Define aspect ratio?
28. What kind of drag is affected by a change in aspect ratio?
29. Which force provides a glider with forward speed?
30. What happens to the stalling speed when the airbrakes are opened?

## Humour

**Does anyone  
know how long  
toilet paper will  
last if you freeze  
it?**



## Answers

1. *Aerofoil*
2.
  - a. *Actual Shape – which encourages a speeding up of the airflow over the cambered top surface of the wing.*
  - b. *Actual Speed of the wing through the air, the faster the speed the more lift.*
  - c. *Angle of Attack (AoA). The angle at which the wing meets the air.*
3. *Lift acts at approximately right angles to the airflow.*
4. *Wing loading is the flying weight (total weight of glider, pilot and all accessories) of the glider divided by the wing area. NOTE: the lower the wing loading, the lower the sink rate.*
5.
  - a. *Profile Drag – The shape of a glider offers resistance to its passage through the air. Its actual profile governs the amount of resistance or drag it produces at any given speed through the air.*
  - b. *Induced Drag – This kind of drag is inseparable from the process of producing lift from the wing and it is proportional to the AoA of the wing.*
6. *Tailplane*
7. *The sweeping upward angle of a wing from the fuselage. Its purpose is to bring the wings level again when the glider is side slipping towards the lower wing.*
8. *Elevator*
9. *Ailerons*
10. *Adverse yaw is caused through aileron drag. As ailerons are being used to apply or take off bank, one wing is given more lift than the other to start the banking movement. Extra lift means extra drag (induced) and the lifting wing gets dragged back and the glider yaws in the opposite direction.*
11. *The use of aileron and rudder together to change direction or to stop a change in direction.*
12. *To roll in the direction of yaw.*
13. *To steepen the approach path for landing.*
14. *Stalling speed is reduced by the effect of increased camber. (creating more lift and drag)*
15. *Lookout.*
16.
  - a. *Nose position higher than normal*
  - b. *A continuous backward movement on the stick.*
  - c. *It becomes quieter in the cockpit*
  - d. *A falling airspeed indication on the ASI.*
  - e. *Flying controls are less effective.*
  - f. *There maybe some mild buffeting.*

17. *A smooth and progressive forward movement on the stick, thereby reducing the angle of attack and un-stalling the wing.*
18. *Yes*
19. *A smooth and progressive forward movement on the stick and sufficient rudder should be applied to prevent the glider from yawing any further to the dropping wing.*
20.
  - a. *Full opposite rudder is applied*
  - b. *Ensuring ailerons are central, move the stick forward until the spin stops.*
  - c. *When the spin stops, centralise the rudder and recover from the resultant dive.*
21. *When under 1000ft AGL the speed must be increased to at least 10kts above the stalling speed.*
22. *No slower than 51 knots*
23. *The nose of the glider would "hesitate" before moving in the direction of the turn.*
24. *The continuous rotation in a spin caused by the high AoA and induced drag on the inside wing.*
25. *The glider is stalling. And therefore a smooth and progressive forward movement on the stick and sufficient rudder should be applied to prevent the glider from yawing any further to the dropping wing.*
26. *Weathercock stability.*
27. *Defined as wingspan divided by average wing chord.*
28. *Induced drag. (Wings of long span and narrow chord have a high aspect ratio)*
29. *Gravity*
30. *Most cause an increase in the stalling speed between 2-5 knots.*