



CAA 2015 Flight Instructor Seminars

For those that attended these seminars, I trust you learned some useful methods of getting the Met story across to your students. Two things that I took away from the seminar were-

- **'The standard you walk past is the standard you accept'** As an Instructor, part of your job is to instil the right skills, attitude and behaviour in your students. If you see something dodgy and say nothing, you are effectively saying it's OK. And if things turn to custard, someone -perhaps the feds, or worse..the coroner- will ask what you did or didn't do about it.
- **Time for a Met session at your club?** Pull up a few chairs, fire up a computer, log into MetFlight-GA , work through the process of obtaining forecasts and reports, and walk through how to interpret them. Perhaps use GARFOR as a tool to help paint the picture from the words and numbers. No excuse not to be using that service on each day's flying.

Thanks to CAA for providing and subsidising the seminars. And Flight Instructors,- don't forget to [send in your claim](#) for the RAANZ subsidy as well.

RAANZ 2016 National Fly-in

A change of date....

RAANZ 2016 National Fly-in

Hokitika Airfield

Waitangi Weekend

6-7-8 February 2016

More details as they come to hand. [Check the RAANZ website.](#)

From The President

Rodger Ward, RAANZ President

Sorry it has been a while since I have contributed to this publication. It does need regular material and should flow down from the top. No excuses.

I hope winter has treated you all well and the thermals or more likely these days the cabin heater have done their jobs. There certainly have been some great flying days.

Recent evidence would suggest that minimal adverse events have occurred. Just because nothing serious has occurred does not necessarily mean we are safe. It could mean that we have been lucky and in my view succeeding by luck alone is not succeeding. We need to be reporting all those events where we end up saying " ... that was close"

People need to be aware of all the “what ifs” or “near misses”. One of our members at the other end of the country may not be so lucky tomorrow with the same situation. If only he had known.

Recreational aircraft activity is definitely on the increase. A lot of people who previously had looked sideways at our activity are now jumping on the bandwagon. We need to make sure we are friendly neighbours with anyone in the aviation sector. We must also sure that we carry out our activity in a competent and professional manner.

An advantage of our club based organisation is the ability to mentor those who are not as experienced, to give advice when you think it is needed and to take advice when it is offered to you. We are always learning no matter how many hours you have in the logbook and as my mother has said a few times “pobodys nerfect”

Our AGM is looming, date and place to be confirmed, but will be mid to late November and probably in the Waikato. Have a good think about your organisation and be prepared to offer some constructive feedback. I certainly do want to hear what you are thinking about and where you think we need to be going.

Safe flying. Watch out for Old Man Nor Westerly who is gathering his troops for the spring offensive.

Chasing The Perfect Idle RPM- The highs and lows.

This is a very good article published on Rotax owners.com. Rodger Lee who is the principal guru answering questions from Rotax owners on that site.

Is there a *perfect* idle rpm for the 912 series engine? This has been a widely discussed and at times a hotly debated item on many forums. **The simple answer is NO.** Set the idle where you want and/or need it, but do it for the right reason. This answer may surprise you, but it shouldn't and I'll address this later in the article.

A frequent point of discussion seems to be “if the idle isn't set low enough I can't land, or I'll float way down the runway”. The Rotax operator's manual says the idle rpm should be no less than 1400 rpm. While you think about this, remember that the manuals are written with different engines and configurations in mind and that you will need to adjust your final thinking to suit your personal aircraft and engine setup.

What do I mean about different configurations? You may have a 912UL 80 HP @ 9:1 compression or a 912ULS 100HP @ 11:1 compression and either one could be with or without a gearbox overload clutch. The 912UL without the overload clutch and a lower compression ratio can handle lower idle RPMs better than the 912ULS with the higher compression with an overload clutch. Low idle rpm with the 912ULS just causes excessive wear from vibration and pulsation in the gearbox. **Warm ups and long idling times in the 912 and 914 series engines should always be above 2000 rpm.**

So what should we consider when picking an idle rpm? First think of being nice to your gearbox parts and second is setting the idle rpm so you don't have to ride the brakes all the time. We have all been told time and time again not to warm up at low idle rpm due to the excessive gearbox wear which usually happens under 2000 rpm. You also don't want to set too high an idle rpm for starting, as this will make your starts much tougher. The choke and ASM system work best at starts with a lower idle rpm around 1600-1800 rpm. Landing rpm should be your last consideration, and I'll explain shortly.

So what is the *perfect* rpm? There isn't one, but there **is an idle rpm range** for each to consider. A reasonably good place to be would be between 1600-1800 rpm at operational oil temp and some like the twin 912 Tecnam can be higher due to its overall higher aircraft weight and tendency not to roll as easy as a lighter aircraft. The things that may come into play here are which engine you have and how heavy a plane do you own. Those factors affect how much rpm it takes to make it roll for taxi. Heavy planes would need more and light aircraft less. This part is about saving the brakes or slowing for turns. (Just a quick note; Carbs should be synced at idle along with the higher RPMs.)

Here's the biggy!

The next question is **how much does the idle rpm affect my landing?**

Not as much as many want to believe and here it's more about piloting skills.

No one usually sets their idle up excessively high and a 100 rpm difference at normal idle RPMs (1600-1800) shouldn't make any big difference in a landing especially if we're talking the difference between 1650 and 1750. Most set their idle RPMs around 1600-1900 rpm for the ULS. High idle RPMs makes you ride the brakes more on the ground. Being able to achieve a lower idle rpm usually reduces taxi brake use over the higher idle settings.

I will have people swear that an 1800 idle rpm over a 1650 idle rpm makes them float way down a runway or they almost can't land. We have to go back to Flying 101 in the student flight manuals. What controls the aircraft speed? Is it the throttle or the stick? Way too many tell me it's the throttle. For the sake of this singular discussion let's just talk about engine speed from idle rpm and maybe up to as high as 2500 rpm.

The stick controls your speed not the throttle. If you have more rpm (or speed) on landing then pulling the stick back a tad farther will land you at the same speed as if the idle rpm were lower. Try it yourself. Pulling the stick back will increase angle of attack which will increase drag which reduces speed regardless of throttle setting and the plane will settle. This can be done in any phase of flight and is done during landings. We use this during slow flight practice as we pull back on the stick to reduce speed. It's the flare in landing. The plane at idle rpm will lose altitude and settle when the angle of attack and drag are increased. This is normal for jet landings and they leave throttle in to touch. I have many friends that leave a small amount of throttle in their 912's to touch for better tail and directional control with the prop wash. I'm one of them. It's not outlandish it's just a different way and there are and always have been different configurations to land. If you wanted to, you could land at full stall at idle or 2500 rpm. The difference would be just a higher nose up at 2500 rpm because you had to increase the drag and angle of attack which helps reduce some lift to get the speed down to stall.

Try a landing at idle rpm then try one at let's say 2500 rpm. The main difference should be that the stick is farther back with 2500 rpm to help slow the plane, but the touch speed should be the same. **If you fail** to pull the stick back farther will you glide down the runway and maintain a bit more speed? Of course you will, but that's piloting skills. On approaches and round out the idle speed will never get to 1600 if it was set there. Depending on the plane, pilot and approach speed the rpm will always be higher and what affects that more than any single item is **your angle of attack, which either increases the speed and the loading on the prop - or decreases it**. The more landing speed the more the prop turns due to some wind milling added to the idle rpm. So even at idle with a 1650 rpm the engine speed may still be around 2100 **and decreasing** after you round

out or flare to land. You can actually turn the engine off if gliding at a safe altitude and unless you slow down the prop can still turn with the engine off.

Last year this very scenario was presented to a large fly-in group of pilots. Many knew the correct answer, but I was stunned at the number that thought idle rpm controlled their speed. We have had all change their mind after some demos that showed landings with an idle rpm set at 1600 and rpm left right to touch down at 2700 rpm. The only difference was the 2700 rpm group had to have the stick back a bit farther to land at the same speed as the ones set at 1650 rpm. 7 years ago some friends in the UK said they couldn't land on a 300m grass strip unless the idle was set at 1500 rpm with an aircraft with a 14:1 glide ratio. I challenged them that it can be done at 2700 rpm and on an asphalt runway. We measured off 1000' and I made 8 landings with 2700 rpm in half that distance. The key points are leave no runway behind you at touch and use the stick to control speed and to land at almost stall. It was quite easy.

In Summary;

What is the perfect idle rpm for a 912 series engine? Well that's up to you, but most will be in the 1600-1800 rpm range, depending on which 912 engine and aircraft they have. Does having an idle rpm set at 1650 rpm versus 1750 rpm make a difference in landing? Not if you realize it's the stick that controls the aircraft speed (and prop loading) and not a 100 rpm difference in idle rpm. Lower idle rpm does help for taxi on the ground and if you decide to have a low idle rpm for landing just keep in mind you do have the throttle and shouldn't just let it idle at low RPMs when just sitting on the ground.

Fiordland Aero Club Inc.

Recently, on short notice, a day flying was organised by Lyall Hopcroft of Gore Aero Club. **Murray Hagen** has shared his experience:

A Great Day

What can happen at short notice...

"Be at Mossburn airstrip at 12.30, can you take a passenger, he will be a Manapouri at 12."As there's no time to collect ZK-MIH from the farm hanger, I take the Club's new plane ZK-LPK. (After all, its a PR flight to Alexandra.)

LPK was second to arrive at Mossburn and Airspread South were operating at the time. They joked could we put out a load or two of superphosphate but we thought an extra tonne on board might have put us over the limit, so we declined!

After my pick-up passenger and I spent 25 mins chatting about the onward trip, we dispatched Lindsay Baird in his S6, giving him a 10 minute start on us. LPA caught up with Lyall Hopcroft in his Eaglet just past Mid Dome and flew beside him to Garston. We could hear Michael Blomfield on the radio, flying his Dynamic and about 5 minutes behind us. We caught up to Lindsay beginning to climb the hill toward Bannockburn.

We all carried on down the Nevis valley, flew over Nevis bung-jump, around Roaring Meg Power Station and down the gorge to Cromwell. Crossing over Lake Dunstan, flying at 125kts/5200Revs/25.5MAP. As we radioed and approached our destination of Alexandra, one of our Fiordland Aero Club members joined us in his R22, returning from Christchurch.

Nigel Forrester welcomed us on arrival at Alexandra and we were all treated to tea and coffee and a guided tour of his hangar/home. Nigel is in the process of building 2 more hangars but with separate accommodation units attached. A fantastic set up. E: nigelbrentforrester@gmail.com

Fiordland Aero Club hope to make a similar hangar/home idea a reality. (We just have to get Southland District Council to re-think the spraying of untreated sewerage on the adjoining land.)

After drooling over Nigel's Karatoo and Murphy Renegade, it was time again to fly on to Park's airstrip at Tapanui. After another natter we struck out for Otautau overflying Mandeville and saying farewell to Lyall.

Flying into the setting sun is not the best for visibility but we stayed in front and it wasn't long before Lindsay's landing strip came into view. My passenger was dropped off and we all commented on what a fantastic ultra-smooth air day it had been. The sun was just dropping behind the mountains, so time to head back to Manapouri before dark. 21 minutes later I was parked up at the club hangar and off to the pub for take-away before driving home.

It sure was a great way to spend an afternoon and the 2 hours of flying that went with it. The Aero Club at Alexandra can expect to see more of both Fiordland and Gore Aero Clubs' this coming summer.

Just a bit of fun!!!

About Fiordland Aero Club Inc.

The Fiordland Aero Club was relocated to Te Anau Airport, Manapouri in July 2012. We currently have 60 members, 6 volunteer instructors and at present, 5 would-be pilots undergoing training.

We lease ZK-SYD from Mr and Mrs K Harvey. Mr Syd Harvey (Dec'd) was a long time supporter of our club. We purchased ZK-LPA in 2013 with enormous assistance from Meridian Energy. (LPA has already chalked up 470 hours of instruction.)

Due to Contracts we hold with Southland District Council to maintain the airport and farm the surrounding land, we have been able to generate a small income. This income is due to massive support from our members who cut and bale hay as our prime fund-raising process.

We were prompted after 3 years in our new hangar and training with 2 aircraft and 800 hours of instruction to take out a Bank Loan, thereby allowing us to purchase our latest edition to the training fleet. The Alpi Pioneer 300 - ZK-LPK.



Handing over the keys to ZK-LPK. From left: Ian Remnant (Instructor), Murray Hagen (President and Instructor) and Mr Logan McLean (Alpi Aviation).

Because of (a) our Instructors donating their time and (b) the income we achieve from selling hay, it is possible for a student, who is prepared to put in the effort – to fly solo for a cost of between \$2500 and \$3000. Those then qualified to fly solo can hire the Club's aircraft for just \$130 per hour.

is

ZK-LPK arrived on a Saturday in June along with 15 other visiting aircraft. 11 of them, being a few of the 48 Alpi aircraft in New Zealand.



Our hangar at Te Anau Airport – Manapouri, with a few of the aircraft that flew in for the arrival of ZK-LPK.

ZK-LPK is an Alpi 300 with fixed gears. USA spec's. Constant speed prop. Built to LSA specifications. New IS injected engine. Imported by Alpi Aviation for Fiordland Aero Club, LPK is the first of its type in New Zealand and is to be used specifically as a trainer aircraft.

Facilities at Fiordland Aero Club:

We have a large member area with a kitchen, stove, fridge and microwave. Toilets are also in the complex. No shower.

For pilots flying in and staying the night, we have a car available to drive to Te Anau or Manapouri. Return the vehicle full. If sleeping bags are brought along its ok to bunk down for the night in the members area. There is a caravan on site.



The B&B – The Anglers Arms (Cottage) in

Manapouri is associated with the club and is available to rent for overnight or holiday stays.

President: Murray Hagen 021 220 7889 Secretary/Treasurer: Lynne Stewart 0210 718 675

I: fiordland_aero_club@yahoo.co.nz

Instructors: Murray Hagen, George Taylor, Ian Remnant, Rod Hall-Jones, Justin Remnant, Adam Butcher.

Our annual Social Membership is \$50. Annual Landing Fee for members using Te Anau Airport has been negotiated at \$60. Hire or Lessons: Flying inquiries are best directed to Murray Hagen.

Flight Gift Vouchers: \$80 for a ½ hour instructional flight. Take the aircraft's controls under your Instructor's guidance and feel what its like to fly a plane.

Position reporting near West Auckland/Parakai

From Parakai/West Auckland newsletter

There are some obvious geographical features near the airport, and while they are not official reporting points, they do let other locals know exactly where you are.

BUT... only the locals will understand. Visitors, students and those transitting won't have a clue where you are if you call 'Chook Sheds' or 'Gibbs Farm'... and a call is not much use unless the other pilot understands what it means.

So, **when referring to a place that is not a 'reporting point' on the maps, always include the distance and direction from the airport**, that way the locals will know precisely where you are and the visitors will also have a reasonable idea.

Eg.

- '5 miles South at Glasshouses'
- '5 miles West over Sandhills'
- '2 miles North at River Mouth'
- '2 miles NW at Chook Sheds'
- '7 Miles North at Gibbs Farm'
- '1/2 a mile East at Concrete Works'

Even for 'official' reporting points, it is a good idea to add the distance and direction, as that avoids the need for a transitting aircraft to try to find the reporting point on the map. You want them heads up and looking for you, not head down examining the map as you close on them at what could be 450 km/h.

RAANZ Exec Management Review meeting

The RAANZ exec recently met for a 2-day session in Christchurch. While most RAANZ business is done via electronic means on th forum, nothing beats a face-to-face meeting. Some notes from the meeting follow....

QA

- Tony Lea confirmed as QA auditor
- Management Review- this meeting
- Audit Calendar- all actions complete after this meeting
- Internal Competence Review- all confirmed OK
- Conformity to Safety Policy- confirmed OK
- Field Audits- 2014 results tabled, only discrepancies due to late/not submitting CMV or FPV forms
- Head Office Audit- Tony Lea (QA) report tabled
- QA Action File- tabled, no systemic issues
- All CAA audit findings now closed off.
- 2016 CAA audit is full re-entry audit.

Initial permit issue

- via selected IAs
- Proposal to be prepared & tabled at MOU

Technical- owner responsibilities

- Reminder in RecPilot re owner responsibilities

Instructor sign-off checklist

- For ATOs to use in confirming Instructor capabilities
- Based on training syllabus in logbook

ATO seminar

- RAANZ to cover airfares and accommodation
- currently 20 of 30 confirmed
- limited to RAANZ ATOs
- last chance email out Stuart

Instructional Techniques course

- some progress, but needs to be finalised

BFR validity period

- Need to specify in P&P that instructors may impose conditions or shorter period
- Note in RecPilot

HASELL checklist

- Error in exam question
- Into Training Manual

SMS

- Approved plan within 9 months, 3 years to implement
- Need to confirm extent of RAANZ SMS (office..ATO/Instructors..IAs...clubs?) MOU item
- Safety Coordinator Deane appointed.

Preflight checklist

- CHIFTA still appropriate for basic ULs, but recommend pilots adopt TMPFIHCE as standard for all types

RAANZ finances/fees

- Current fees just cover expenses
- Some additional over-expenditure with face-to-face meetings and ATO seminar, but OK for the time being

FlyDrive database

- Airfield/facilities/resources database on website, owner edited

Website

- Could do with a smarter front page, linking through to existing lower level pages.

RecPilot

- Possibly merge with CRAC monthly magazine?

National Fly-in

- 2016 Hokitika Easter weekend (now Waitangi weekend)
- 2017 Stratford
- Agreed to keep AGM separate from National Fly-in- creates a second opportunity for fly-in and face to face.

AGM 2015

- Raglan? late November

CAA MOU agenda

- Monday 28 September immediately following ATO seminar.
- On-condition maintenance
- Vintage/low use registration
- Registration holiday
- Instructor standards/competencies
- Flight permit initial issue via selected IAs
- SMS scope (RAANZ office, ATO/Instructors, IAs, Clubs?)
- Exchange of information- incidents/accidents/follow-up
- Aerobatic rating
- Part 103 to Part 61 cross-credit time
- Summary of pilot stats and hours flown

Membership changes

David Klein	Southern Recreational Aircraft Club	Advanced National	Upgrade
Michael Blomfield	Fiordland Aero Club	Advanced National	Upgrade
Martin Healey	Canterbury Recreational Aircraft Club	Intermediate	Upgrade
James Lyver		ATO	Appointment
Mike Dimmock	Canterbury Recreational Aircraft Club	Advanced National	Upgrade
Stephen Butler	Auckland Recreational Microlight Aircraft Club	Novice	exam
David Horner	Northland Microlight Club	Novice	exam
Ross Brodie	Geraldine Flying Group	Novice	FRT0
Cory Smitheram	Canterbury Recreational Aircraft Club	Novice	Joined
Ivor Link	Canterbury Recreational Aircraft Club	Novice	Joined
Gregory Molineux	Canterbury Recreational Aircraft Club	Novice	Joined
Jean-Paul Lassale	Gyrate Flying Club	Novice	Joined
Michael Holdsworth	Feilding Flying Club	Novice	Joined
Jeffrey Coulson	Golden Bay Flying Club	Novice	Joined

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Mercury Bay Student Aviation Trust

RV12 Project Log

Date	Hours	No. of students	Job reference
19th of August 2015	12:30 – 17:00	5	Prepping the wing spar and wing skins for undercoating.



Goal of the Day

Today the team has continued their preparation of the wing parts. This process requires all components to have the sharp edges removed, all holes de-burred, degreased and wiped clean so that each part can be undercoated.

Seeing last week's progress

When the team turned up to the workshop today they were greeted with the sight of all of last week's components having been painted. The paint work was undertaken during the week by the mentors. Undercoating is a time consuming process that required close to 8 hours of work between three people.

Heading into today's work

Once again the students couldn't contain their excitement when it was announced that work would continue on wing preparation. It was very much a team effort with Bernadine, Matthew, Jordan, Rian and Cody all chipping in to ensure that all parts are completed so that next week the construction of the wings can commence.

A very necessary step

Although today's progress has been much the same as last week's, the students are well aware that this process is very necessary in order to achieve a quality finish. Even though this process is quite time consuming, the students did their best to keep their levels of motivation high with a few jokes and laughs to help break the repetitive nature of today's task.



Thanks everyone for keeping up with our progress, more next week!

Mercury Bay Student Aviation Trust Team

Mercury Bay Area School
 Whakatipu - Mercury Bay - The Coromandel Peninsula - New Zealand
 Te Kōwhiri o Te Whānau o Aotearoa



For Sale



372 Two Chain Road | Swannanoa

Aviation Opportunity

This outstanding property is being offered for sale for the first time in thirty years. With the potential for a 520 metre runway, with a 07/25 vector surrounded by farmland rather than lifestyle blocks, this is an opportunity not to be missed. The 290sqm, architecturally designed, sawn Oamaru Stone home is classically elegant and features two living areas with oregon cathedral ceilings, four bedrooms, two bathrooms, a large upstairs games room and a triple internal access garage. There is excellent indoor outdoor flow to the paved barbeque area and the expansive gardens are well established and include a tennis court and numerous specimen trees. Shelter has already been established at the proposed hangar site. Other options include a kilometre long trotting track, subdivision, or renewing a lease with the neighbouring dairy farmer. Swannanoa Primary School nearby is Decile 10, for which there is a bus from South Eyre Road. All this within thirty minutes of Christchurch Airport.

Deadline sale closing 4pm, Thursday 15 October 2015 to Farmlands Real Estate, 269 Flaxton Road, Rangiora.



Maurice Newell
027 240 1718

Land Area* 10 HA
RV* \$920,000
WebID RA1647
Price Deadline Sale

Emily Newell
027 472 0409



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