

RecWings

The Magazine of the Canterbury Recreational Aircraft Club

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June 2015



Editor's Letter – Don't Forget the Trikes!

The development of Microlight and Ultralight aviation seems like a modern replay of the development of aviation. From the early, low-powered open aircraft with a seat (if you were lucky) and a wing, to the amazing 3rd Generation Microlights and Light Sports Aircraft such as the Tecnam and Zenair 750's.

Hang Gliders were a major step in the development of Heavier-than-air aviation (read: Otto Lilienthal) and are still a popular low-cost form of flying. The first hang-gliders were generally conventional monoplanes with an empennage and tail surfaces, however there were a few bi-planes and canards.

The triangular shape that most of us think about as a hang glider was invented in 1948 by Francis and Gertrude Rogallo as the flexible wing. NASA picked up on the idea and developed it (with Rogallo) into the semi-rigid form that we know today. Their interest was for spacecraft recovery, as the design is inherently stable and has excellent low-speed handling. However they abandoned the idea and continue to use conventional parachutes to this day.

In the early 1960's an American Aeronautical Engineer, Barry Palmer, developed a foot launched glider using the Rogallo wing and weight-shifting for control. This is effectively the first "modern" hang glider. A parallel development in NASA was the Fleep (Flying Jeep) which had a rigid frame attached with an engine at the back. In 1968 Barry Palmer (remember that name?) created a proper weight-shift trike with the engine mounted on the sub-frame. Various other attempts followed (generally mounting the engine on the wing) but the first

commercially successful trike was sold by Frenchman Roland Magallon in 1979. This had all the hallmarks of the modern device, namely a Rogallo wing with a suspended frame carrying the pilot, fuel, and engine.

Look at the wing on our cover photo, that's quite a sophisticated aerofoil compared to the simple hang glider! Reminds me of the B2 Stealth bomber.

So the modern trike owes a lot to wind tunnel testing for the Space race! Think of that next time you're admiring the simplicity of a Trike.

As a 3-Axis pilot I do tend to ignore the trikes, this is an attempt to apologise for this flaw.

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Chariots of Fire FW-190 - update

S/N 990001 was the first of the Flugwerk reproductions FW-190's to fly (although there was an earlier airframe, S/N 990000 built to display standards) and was effectively the prototype of the new builds. As such it had some modifications tested on it, and was eventually used as a parts plane to get others flying.

It was purchased in 2009 by The Chariots of Fire Fighter Collection Limited, a company owned and directed by Blenheim local Murray Miers. This company also owns the ex-Tim Wallis Spitfire XIV, a Sopwith Scout (a.k.a. Pup) replica, and a Fokker D.VIII.

The FW-190 has had its share of teething troubles including a starboard undercarriage that refused to extend (eventually traced to a broken wire) and a cooling fan failure that damaged the prop. Luckily none of the issues have caused any unrepairable damage, just items that have to be worked through. It's definitely a beautiful aircraft, in a fairly brutal sort of way!

There were quite a few CRAC members on the field when it had its ground-loop this year. **Jay McIntyre** of **JEM Aviation** has sent through some updates:

"After taking some time to get the shop back in shape following Classic Fighters Omake, work began last week on repairs to the FW-190 following her unfortunate ground loop on the Friday practice day. Work concentrated on getting access to the damaged areas and further assessment of the damage.

I am happy to say that we have not yet found any further damage from what we could initially see when the aircraft was recovered.

I can also report that the cause of the ground-loop was easily identified and was due to a mechanical failure in the brake pedal mechanism meaning Frank was just a passenger during the last part of the landing roll!"

JEM are doing some exploratory work on the right-hand wingtip and has the undercarriage legs apart for inspection. They're also talking to the company in Arizona that bought all of the jigs and tooling from Flugwerk about spares support. The engine crankshaft runout has been checked and is well within limits.

Here's hoping that this amazing aircraft is flying again soon.





RGA Notes

From **Wayne Wilson**:

Do not open the coolant flap on our Tecnam. It ruins the gasket and causes leaks - not good inflight! Check the level by using the sight gauge on the body of the filler assembly.

Above two photos courtesy JEM Aviation, Facebook page, and reproduced with permission. Top, centre, and below - Brian Greenwood





Club Members' New Aircraft

There have been a number of new aircraft bought by club members; this is the subset that I have images for! First off is **Alastair Millar's** newish Savannah. It is a Rotax 100hp version built in Western Australia in 2011, ZK-CVK. The tail image shows the modification done to the Aussie flag on the tail to kiwi-ise it a little. Alastair assures me that the butterfly on the tail is a local, not a not biosecurity hazard imported with the aircraft.

These 3 photos courtesy Alastair Millar



Right and below, **Glenn Martin's** beautiful Sting S4, ZK-MTN. This is an LSA category aircraft. The airframe is 85% carbon-fibre and 100% sexy. There was a small queue waiting for rides on Sunday, May 31st – these photos were taken during our President's turn. **Mike Sheffield** reported it as "slightly smoother than the Alpi"!





Above, the Sting on finals to 07.

Last up for this edition is **Wayne Lindebaum's** flash Europa Classic, ZK-SBZ, *right, and below*.

This cool wee aircraft was in an all-white scheme when Wayne purchased it, but he's since prettied it up with some metalflake blue stripes.



The Europa is a British-designed two seat SLA, designed to have the wings removed quickly by two people to facilitate storage. It has won many accolades and was the subject of the TV series "A Plane is born" (required viewing for any AvNutter like your editor).



This gorgeous Zenair Zodiac CH601 belongs to our Treasurer, Scott James. It's pictured at the Poolburn Fly-in during May. *(Photo: Scott James)*

Recent Arrivals

Graeme Main

As well as **Alastair Millar's** Savannah, recently arrived from Australia, and **Glenn Martin's** Sting, there are two other aircraft both of which previously belonged to club members which have returned to Rangiora Airfield.

The first one is Alpi 200, LPM, previously owned by **Ross Marfell**, which **Victor Dragomiretskky and Margo Migirdichyan** have purchased. The aircraft came from Kerikeri, and was flown down by Victor and Margo, with **Volmar Wollenweber** accompanying them on the flight. There were a couple of incidents on the journey – just south of Whangarei Victor and Margo experienced smoke in the cockpit (caused by a wiring problem). This necessitated an emergency landing at Whangarei, where a tyre blew also just after landing. The smoke problem was diagnosed, and after fixing the tyre they elected to continue with constant attention having to be paid to the voltmeter and the offending connection having to be disabled at regular intervals to avoid overloading the circuit. At least I think that's what the problem was – too technical for me). Anyway they all arrived safely after a great flight in perfect weather.

Another recent arrival is my old Sapphire which I sold some 15 years ago, and have regretted it ever since. The opportunity arose to repurchase the old girl; which had been partially restored, and my son and I (with the assistance of Bob Johnson's excellent aircraft trailer – thanks Bob) made a lightning trip to Fielding, stayed overnight, and drove back next day with the Sapphire in tow. The Sapphire has an interesting history – it was constructed in 1983 by Scott Winton in Australia, who later produced a Mark 2 version with a longer fully-glassed wing, and there are some 40-50 of these still flying in Australia. Mine, however, is the earlier version with a shorter part-fabric wing, and with a Rotax 503 will cruise at approx. 80 kts. It's ideal for the commute from Rolleston to Rangiora. Work is progressing well and the bird should be ready to fly in a couple of months.

Graeme Main



Poolburn Fly-in photo album

Photos by **Scott James**



Cleaning Club Aircraft

Right, Mike Small took some time out to thoroughly clean RGA last weekend, one of the many unpaid and unrecognised jobs that the instructors, committee, and patron do for the club.

The only two people I have seen cleaning the club aircraft have been Instructors, Tony and Mike, although I'm sure others have from time to time.

We're keen to involve members in the easy task, we all own a little of these aircraft and it's a good way to learn a little more about them.

Please ask your instructor if you're interested.



Celebrity Gossip

I'm not normally one to pay attention to the cult of celebrity, however these are two items of important news.

Harrison Ford, who suffered head injuries, a broken pelvis and ankle in the crash of his Ryan PT-22 in March, has taken to the air again at the controls of his Bell 407 helicopter in early June.

Richard Bach who likewise suffered a head injury and broken shoulder in the crash of his beloved *Puffin* amphibian in August 2012, has also recovered enough to pilot his newly rebuilt Puffin in March this year.

He is the author of *Jonathan Livingston Seagull*, and the superb *Biplane* book (amongst others). His aviation story became quite a spiritual journey*.

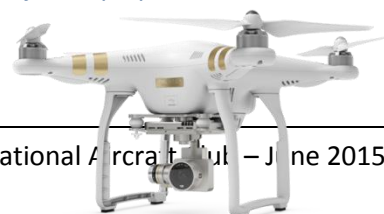
Congratulations on the return to aviation for these two, I hope the road to recovery is complete with no further complications.

**Ironically my own aviation history became quite spiritual, I could only fly on Sundays, and my instructors would regularly pray on final approach. It's nice to have a positive influence on people's lives.*

DJI Phantom 3 Update

More details have emerged about the new DJI Phantom 3. Last month I mentioned that it looked like the same airframe as the Phantom 2 with a brand new camera. This is far from the case, it has more powerful motors, an upgraded battery (not compatible), longer flight time, and is almost totally new under the hood. A lot of the technology comes from the amazing DJI Inspire drone, including the Visual and Ultrasonic sensors for stabilisation in "GPS denied" areas. It still has the GPS positioning but also uses the Russian GLONASS system as well (similar to GPS). The Phantom 3 comes in two flavours, the Professional and the Advanced, the only difference is the camera.

I really like my Phantom 2/H3-3D Gimbal/GoPro/FPV kit, but the Phantom 3 is a major step up. I want one!



Going North

Volkmar Wollenweber and Glenn Martin

After having explored the north of the South Island it's time to go north. (and by the way having lived here for more than 11 years and never have been to Cape Reinga it's time to go there).

Looking for someone who would join I rang Glenn and he was immediately in....and there was also another motivation for him.....his Sting has arrived and why spend money on an Air New Zealand ticket ? he booked "Alpi Travel".

A huge high pressure system coming from the Tasman would be there for more than 3 days, so its time to go.



Glenn did the flight planning by "AvPlan" informed himself and me about crossing Cook Strait, crossings from a Vector article, asked me about life jackets. (lol)

Ok. Saturday morning ready to go. I took off from Graeme's strip in Rolleston early in the morning (nice sunrise and blue skies) to fly over to Rangiora to pick up Glenn and refilling again.



8 am and off we are in the direction to our first refilling "Foxpine". On the way we discussed how to cross the Cook Strait. Going up to Perano Heads or crossing strait from Cape Campell. Blue sky, light tailwind and we are slowly climbing to 4500ft.

Contacting Wellington and getting clearance we decided to go straight which is nothing more than about 15 minutes over water..... halfway over we saw clouds and decided to go below to about 1200ft. After a short time with low clouds we got to Ohau Point. Here we had a few bumps, wind turbines were working....

Slowly climbing again we flew about 2 miles out to sea along the coast. Paraparauma asked us to head to the coast because we were crossing the departure route of an Air New Zealand flight heading north so we did.

After a little over 2 hours and a look at Glenn's new holiday home which took a bit of finding. We landed in "Fox pine" for refilling.....the Fuel station was removed 3 weeks ago !

Ok a bit of a chat to Jennifer Lester the owner, and some local advice on heading north around Ohakea and the mountains then on to Wanganui...ok a bit of a bumpy landing, comments of Glenn I heard for the rest of our 3 days travel, ...in the future I will maybe have some flights with him and he is sitting in the left seat, we will see if I need a cushion !



Mount Egmont

Refilling, having a coffee, having a..... and off we are again.....clouds broken at 4000ft, we are heading to Whitianga via lake Taupo.



Climbing up to 9000ft and enjoying in blue sky Mt Ruapehu and Mt Ngauruhoe. Coromandel was waiting and we were heading to Whangamata. I showed Glenn my favourite fishing spots....he was not impressed...crossing Tairua and Pauanui finally we arrived after another 2 hours in Whitianga.

A good friend is owner of the "Lost Spring Hot Pools" he came to pick us up. Because he was a former pilot too, I did a short ¾ hour tour over some bays and Island with him and he showed me beautiful secret beaches, so I know where to go next time with the boat.

After refilling again I was very impressed 15 litre /hour consumption I think brilliant.

After a nice and relaxing afternoon in the pools (Glenn didn't want to have a pic of both of us in the pools, he thinks people can interpret this in a wrong way!) we headed out to a Greek restaurant... great food... great Ouzo.

Alan offered a bed in his house which is not totally correct.....Glenn slept in the former stables...in the morning he had a shower.

Sunday morning Glenn's eyes were full of expectations.....North Shore is waiting...his Baby is ready to be assembled.....Whitianga – North Shore only was a short 40 minutes flight over water.....and he saw his baby without wings 9.30am when we arrived.

A friend from Auckland arrived and we started to put the wings on....without success because we couldn't get the only bolt in. I started to become nervous and we decided to head up north to Whangarei. Later we heard that Glenn is now a perfect wing assembler after trying it about 3 times finally they got it. After 30 minutes I arrived in Whangarei and was welcomed by Neil who flew my plane last Christmas. After a tea, a and refilling we headed up north. About 10 minutes after take-off, my friend asked about some food because he had





The Chariots of Fire Fighter Collection's Flugwerk
FW-190 A8/N at Classic Fighters Omaka 2015

©2015 Brian Greenwood

only a very small breakfast....I smiled and showed him on the map the next two hours.



Great weather, blue skies, no wind and after a bit more than an hour we circled Cape Colville and the light house of Cape Reinga.

Flying back low over 90 mile beach with a few landing attempts we headed to Keri Keri.



My friend started to become a bit grumpy so we called another friend and ordered some Burgers and McChicken to the airport. Also a good possibility to refill. The burger was delivered, I changed the passengers and flew a few circles over the Bay of Island, returning to Keri Keri and picking up my friend again.

....and.....the refilling was not working...

I did some calculation and there was more than enough fuel to go back to North Shore (also there was the possibility to refill in Whangarei)

My friend is a mechanic and he was sitting in front of the fuel gauge. After a time he asked me, if the plane also flies if the motor stops...yes it does..than he asks about how many litre the fuel tank is....obvious he was becoming very nervous....I told him that he is sitting on 15 litre reserve, but I had the feeling I couldn't convince him.

About 5 pm we arrived back in North Shore and I had a very relaxed passenger back....refilling showed I had used 52 litre...exactly my calculation.

I was invited by the importer of the "Sting" and we had a nice dinner at his home.

Monday morning Glenn had a short look in the direction of the Hangar where his baby now was assembled and of we are to New Plymouth. We flew about 4000ft down the coast line between 2 and 10 miles out to the sea in

a straight line. After refilling the plane and us...again the p.... we decided that the plane does not know that it is flying above water and we are heading straight to Rangiora.



We circled Mt Egmont and climbed up to 9000ft requested radar watch to add to the Spidertracks. After a very short time we could see the South Island and after 50 minutes we were 9000 feet above Nelson (not a problem to get clearance). We could see the first sights of the North Westerlies and when we were above the mountains we had a quite interesting experience....Nose down and climbing fast to 10000ft....nice wave.

After 3 hours and 5 minutes, some Yoga and stretching in the seats we arrived safely in Rangiora.

Glenn jumped out and I did a small hop back to Rolleston.

Summary: Great trip, 17 hours and 20 minutes in the air, 1380nm and 270 litres of fuel burned, and **great team work** which made flying very easy. We roughly changed every 30 minutes as “in charge” and the second person took over Nav and Radio. Transponder is essential and the spider track showed our track. We always felt very safe, the plane is very equipped and we discussed always the different options we had. We made a plan but were also open to change it...which we did.

Ready for The next long distance flight....the south of the South Island is waiting and if there is someone happy to join....yes please...New Zealand is a beautiful country.

Lessons for Glenn

As a low hour Pilot this was a steep learning curve, but boy did I learn a lot. Volkmar's 5000 hr + in Balloons gives him a great experience with weather, and flying in Europe very confident with Controlled airspace and ATC. I now feel confident to turn on a transponder and ask the nice people at ATC if this lowly Microlight pilot could please visit the big boy airspace!

Avplan was great for planning and having maps and a printout of the avplan map gives triple redundancy. In the cockpit it easily enables modification as you go along.

Great article from Kapiti aeroclub on crossing the strait in different weather patterns.

http://www.caa.govt.nz/Publications/Vector/Vector_Articles/Crossing_Cook_Strait.pdf

With a transponder it was much easier to have sufficient height to always be within easy glide of land.

I regret ribbing Volkmar on his one hard landing...I know he will get his revenge eventually!

Two people in the cockpit when going into new areas really made the process so much easier you can crosscheck and discuss each decision.

The extra height for long legs when the scenery is boring makes the flying very smooth, and it seems easier to find an exit plan when you have a 20 km glide!

What an amazing time we live in, these aircraft can drop into the Oxford strip for a BBQ, and transport you from CHCH to the hot pools in Whitianga in a 4 hour “drive”.

Volkmar and Glenn

Committee Report

As always, this report is the result of your Editor's dodgy notes, not the actual minutes.

Apologies from Buzz Harvey. Matters arising: Basil Buwalda had attended the first meeting of the ATC group and reported an excellent attendance and a warm reception to our letter and offers of support. Secretary Graeme Main reported that there was a good supply of wings badges in the instructors room and these will be handed out to those who have soloed in the past couple of years (contact the Secretary for details). Graeme also reported that the insurance on RGA has been renewed with an appropriate increase to the third party liability, but with a slightly reduced premium. He also mentioned that the 2015 Tax return had been lodged and a copy of the 2015 accounts sent to the Companies Office.

Treasurer Scott James reported a Bank Balance of \$65,265 with the only unusual invoices being for the engine overhaul on JOR.

Club Captain Paul Godfrey spoke of the Poolburn fly-in being a good success with around 20 aircraft attending. The Otago Aero Club people are keen to make this an annual event. There was some discussion on future fly ins (which will be announced as and when they are organised). The Canterbury Aero Club is keen to hold an open day at NZRT (possibly September?) and it was agreed that we should support his. There was also some discussion about club liability, with Scott James offering advice and help after researching the CAC's procedures.

The work on JOR is almost complete (Editor: finished, as I type this, and JOR is back online). Duncan Fraser reported that Nathan Clarke was organising the Annual NZRT Safety Meeting at the Canterbury Aero Club rooms on Thursday the 11th at 7:00pm, although this may have to be changed due to a possible clash with ATC bookings. There was some discussion about the “default” no wind runway for Rangiora (refer to separate article on this month's Mag). Volkmar reported on a Near Miss with a CT/4 which will be handled by Duncan through the Airfield Safety Committee.

Chief Flying Instructor, Tony den Haan, reported that RGA had done 54 hours in May and has accumulated a total of over 600 hours. He noted the state of the runways and taxi way, and recommended that a set of larger 8” tyres and wheels be purchased for RGA, this was voted on and approved.

Victor reported that the weather station is now fully operational, at a total cost of \$200 for the installation, apart from utilising the spare TV screen which will be mounted in the lounge. Basil Buwalda also mentioned that they are investigating a new online booking system which will incorporate online flight sheets. It was generally agreed that we should utilise new technology where possible, provided it is user-friendly for the

non-techno types amongst us.

Margo also reported that in relation to the ongoing email problems suffered by Buzz Harvey, an investigation had shown that Vodafone email addresses could not be relied on. They will continue their efforts to find a solution which may involve any emails to Vodafone addresses being first sent to a gmail address.

Under General Business there was discussion about airfield inspections on unknown strips, and technical evenings at the club (with topics such as Controlled Airspace, Navigation, Weather etc). Basil undertook to look into this.

Margo is investigating a system to publish some of the All Club E-mails to the web site. Scott James suggested that the club could look into a vehicle to load to visitors. A budget of \$1000 was approved but no decisions were made on storage or management of the vehicle. Additionally it was felt that the accommodation was too cheap and it was increased to \$20 per person per night.

Deane Philip reported on the Hangar construction, Deane explained that the holdups now were mainly weather related. The lifts have to be ordered a week ahead of time, and if the weather is unsuitable to safely use them then the builder has to reschedule around his other jobs. However this is still cheaper than the alternative of hiring and constructing scaffolding around the building. Currently the doors are being worked on.

Deane also suggested that the club magazine could incorporate some advertising to help defray some of the minor expenses that have been incurred. Your editor agreed (see separate section) and sought permission to use the name RecWings for the magazine, which was agreed.

Other items discussed were: Volkmar Wollenweber is well on the way to becoming an instructor, and Graeme Main reported on the cost of a Yaw Stability kit for the RANS, ZK-JOR. This was put on hold while we see what the utilisation of JOR will be in the coming months. Scott James will look at the costs on RGA after a suggestion from Tony den Haan that we should be increasing the cost to at least keep up with inflation. Graeme Main had spotted a Savannah kit in Australia to AUD21,000, but it was agreed to wait until the Hangar is complete.

Fly in News

Paul Godfrey, Club Captain

Rangiora Fly in

First there is to be a midwinter social fly-in.

This will be on the 20/21st of June. The format at this stage is for those out-of-townners who turn up on Friday, we will be doing takeaways as requested.

Saturday

Breakfast at clubrooms about 8ish.
Local flying, location depending on weather and aircraft type. Options are a trip around the peninsula, or for those who want something a less ambitious, we have some local strips available to us at around ½ hour flying time.

Lunch at Forest Field about 1-ish

After lunch, for those who want to we can organise some more local strips.

Tea to be advised. We are trying to organise a meal out that will suit most people.

Sunday

Breakfast at clubrooms about 8-ish.

Numbers would be appreciated, to help with catering needs.

For out of towners accommodation can be arranged at our clubrooms for \$20 per night per person, or a local motel if preferred.

Meals will be on a cover cost basis.

Brass Monkey Fly-in

Secondly I have heard great news. The Brass Monkey is on but at a different location to other years and a different date.

At this stage it is at Tapawera on the 28th to 30th August. More details to follow.

The following article was written by Nathan Clarke, the Safety Office for Rangiora Airfield, and originally published in the AOPA(NZ) Magazine. It is reproduced with Nathan's kind permission.

Rangiora Airfield Procedures

Visiting Rangiora?

Rangiora being close to Christchurch and having Z and BP bowsers makes it ideal for training and a logical stopover for fuel. This in turn makes it a very busy aerodrome at times, especially around the middle of a weekend day.

We have fixed wing and helicopter training, ag. operators, Aero Club competitions, itinerants, plus the 75 plus aircraft based on the field coming and going regularly. One of the most difficult areas to manage is the experience gradient of the pilots. There is almost always a student pilot in the circuit doing solo consolidation or coming back from an area solo or solo cross country.

The student pilot with low experience is the person we need to be aware of and help out by following the correct

procedures for joining, circuit and departure. Remember some of these trainees are not local and in some cases not from New Zealand.

We have all been students at one time, so we all know how it feels to have a high workload at that experience level. Let's help each other out by exhibiting mutual respect, communicating openly and following the simple joining and departure procedures laid out for us.

Safety procedures

The following are some of the procedures from the Rangiora Aerodrome Plate that are regularly not being complied with. Of note:

2. Low speed microlight aircraft should circuit at 500ft

Expect to see microlight aircraft at 500ft flying a close downwind leg. This keeps everyone nicely sequenced so no-one has to orbit or extend downwind. If you fly a low energy microlight please think of others who may need to extend downwind or orbit because of your speed.

3. Turn left after landing

Please adhere to this. With multiple aircraft in the circuit, expect someone to land close behind you on your right.

6. Standard overhead rejoin recommended *From AIP Volume 1 Aerodrome Procedures:*

5 STANDARD OVERHEAD CIRCUIT JOINING PROCEDURE

5.1 Joining procedure

5.1.1 The standard overhead joining procedure, which is depicted in Figure AD 1.5-1, should be followed at



unattended aerodromes (where no air traffic control or flight information service is provided) and at other aerodromes when a pilot is unfamiliar with the aerodrome or is uncertain of circuit traffic. The standard overhead joining procedure is a means of compliance with CAR 91.223(a)(2), which requires a pilot to conform with or avoid the aerodrome traffic circuit formed by other aircraft. This procedure is used to determine the runway in use and the position of traffic in order to sequence safely. It does not presume a right of way over existing circuit activity.

Fixed Wing A/C — please take this advice at NZRT. Very often we have very experienced pilots joining for fuel and the comment I regularly hear is how busy the circuit is and how difficult it is to sequence safely when joining on a leg of the circuit. I regularly see avoiding action on final approach. This is unnecessary and can easily be mitigated if the circuit sequence is planned out correctly from the overhead.

Runway 07/25 have opposing circuits; this can be a problem in light winds. **In light variable winds we use 07 as the duty runway.** (Editor's emphasis)

If the weather prevents the overhead join, it is no problem to join on a leg, just keep your eyes open and make the appropriate radio calls. There is generally less traffic in low cloud base and/or poor visibility conditions, but don't assume this.

8. Two private airfields in close proximity 1.8NM southwest

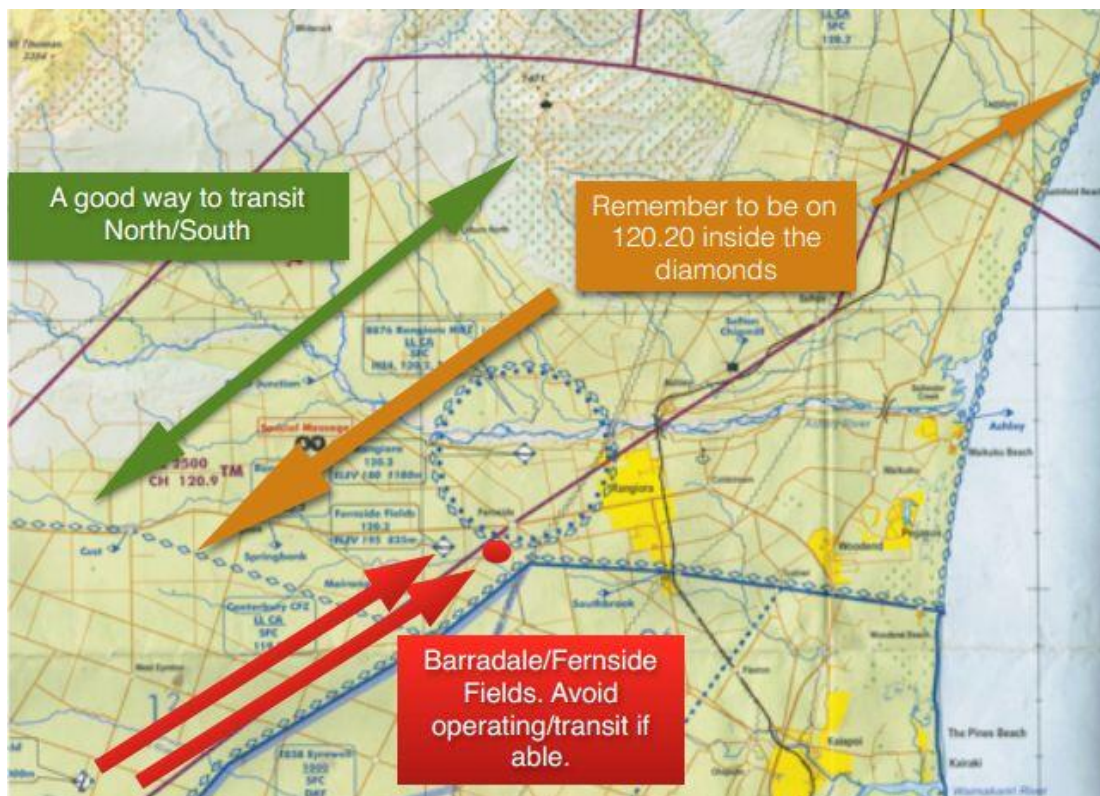
9. Helicopters may join and depart at low level but must come to a stationary hover to check for traffic prior to crossing the active vector.

Local helicopters will generally join low level below 500ft direct from the North for the pumps or South directly for the centre triangle. If a helicopter joins for an overhead join it can be assumed they are training or on a flight test. Please be aware they are slower and are vulnerable because of being blind behind; make sure you sight them before descending for the circuit and give them some space.

10. Make radio call on final approach

This procedure has been put in place because of safety concerns. In the past pilots have 'cut off' aircraft on final in their haste to land, or taxied out for take-off without looking. Please abide by this procedure for your own safety and the safety of others. Again, please use the overhead join to build a picture and sequence appropriately.





Basic airmanship for any aerodrome

Radio calls

Joining calls — Make sure you get on frequency early when joining. For Rangiora you need to be on 120.20 when crossing the CFZ boundary. Radio calls must be clear, concise and of minimal content. Please talk slowly and clearly and say only what you need to. Phrases like “letting down non traffic side” are unnecessary because if you are carrying out an overhead join other pilots will know what you are doing once the joining call is made. Use direction and distance from the Aerodrome or published VRP. Do not use local points that you may know but itinerants do not. The last thing you want is a pilot unfamiliar with the environment looking at his/her map while joining to find some obscure point which may not even be on the map. Please do not ask if there is any other traffic when inbound, other pilots will let you know where they are.

Departure calls — If departing please make your departure call as part of your line up and rolling call. This gives people a heads up that you won’t be staying in the circuit. It is a good idea to climb well above joining altitude when departing to provide vertical separation from joining aircraft.

Circuit calls — Early/mid/late downwind calls are useful if it is busy, and the number you are in the circuit is a must. Legally when the preceding aircraft crosses the threshold they are considered to be landed and the rotation/extending downwind, please advise other traffic.

Circuit rules

We regularly have pilots joining or departing on opposing circuit directions to those published. Please follow the published circuit directions; if you don’t, you are breaking the rules. Remember, variance from the rules can result in sequence changes even if not on the ground.

Standard circuit shape — Please conform to the standard circuit spacing and 45 degree ‘tip in point’ so others know where to look. Don’t forget to say ‘low level’ if you are less than the prescribed circuit altitude. If doing anything other than normal circuit, such as a glide approach/auto prosecution, and ignorance won’t wash!

4.1 Departure

4.1.1 The Pilot of a VFR or IFR aircraft departing the aerodrome traffic circuit must make all turns in the direction of the traffic circuit unless:

- (a) otherwise instructed by ATC in controlled airspace; or
- (b) a turn in the opposite direction has been prescribed as part of an IFR departure procedure; or
- (c) the aircraft is laterally clear of the circuit or is a minimum of 1500ft above the aerodrome level.

2.1 Joining procedures

2.1.1 The pilot of an aircraft intending to land at an unattended aerodrome, or one where the aerodrome flight information service is being provided, may join the circuit via a standard overhead circuit joining procedure as outlined in Figure AD 1.5-1, or direct into downwind, base leg, or long final provided that:

- (a) joining intentions are advised to traffic or AFIS if the aircraft is RTF equipped; and
- (b) the runway-in-use and aerodrome traffic are properly ascertained (be aware that some airfields have alternate circuit patterns for approved aviation activity); and
- (c) when making a straight-in approach, or joining downwind or base leg, the aircraft is sequenced without causing conflict in such a way as to give priority to aircraft already established in the circuit or established in the standard overhead circuit joining pattern; and
- (d) when entering or flying within the circuit, all turns are made in the direction appropriate to the runway-in-use.**

Eyes First-Radio Second

Your eyes are your primary source of separation, the radio is to confirm what you are seeing and build a picture of the traffic.

Always turn the aircraft on the ground to check the circuit and final approach for aircraft, remember to look for the Helicopter doing a 180 degree autorotation, they will be high and close with a high rate of descent.

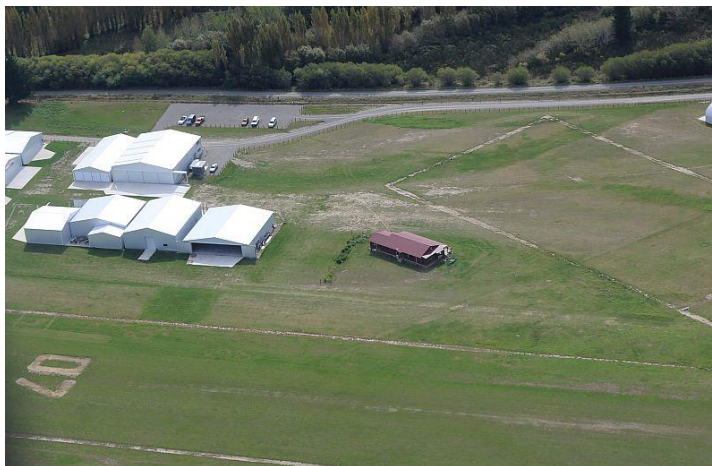
Do roll out of climbing and descending turns regularly to check the area is clear of traffic. A climbing or descending turn through 180 degrees in a light fixed wing is dangerous because an area is constantly obscured by the wing.

Always expect traffic to be joining even though you may not have had calls, I teach my trainees, “look for the

traffic joining onto each leg of the circuit, only once you have eliminated the chance of conflict can you turn onto that leg”, always expect the unexpected! Radio problems, often caused by fingers are quite common!! We are all human and can easily miss a call or have finger trouble!

Do look behind the wing for converging traffic before turning.

Do start looking for traffic as soon as you are safely airborne after take off.



Vale Murray Taylor

Sad news from our Secretary, who informs us that fellow club member and aviator **Murray Taylor** was killed in the quarry accident at Waikari on Monday (8/6/15).

Murray was an early Alpi owner and had one of the first 100hp versions that we know of. After his, everybody wanted one!

Our deepest condolences to Murray's wife, Jill, and family and friends, our thoughts are with you.

Computer Security

An analysis of a corporate Virus strike – Anon the mouse

What has computer security got to do with aviation? With the increasing advances of Information Technology into aviation, you might just find out! From tablets running GPS systems, to electronic flight logs and booking systems, computers are an everyday part of our flying. How did you receive that weather report, did they print it out for you, or did you go online?

This is the last and most serious virus strike I was involved with. I hope it has some lessons for you, it certainly did for us.

I work in a secure corporate environment (not aviation related, sadly). We have a decent firewall, security that only gives users access to what they require to do the job, good anti-virus systems, our web browsing goes through a proxy server which also virus-checks the browsing (using a different program to the workstations), and our e-mail is vetted by both an external system and an internal one. We do back-ups nightly using a very expensive "best-practise" system. What could possibly go wrong?

At 10:05 am our help desk received two calls – a database on a shared drive wasn't responding for a user, and a manager was having trouble with his mouse. The database problem wasn't unusual; it was a nasty, complex little beast. The help desk bod extracted the mouse from the hapless manager's nose, then went hunting for the database issue. In the meantime, other files and databases were going offline. People were calling me! A quick check in the folders showed the problem - there was a text file saying that the files were being encrypted, and to go to a web site to pay the ransom. But which PC was infected and was working its way through our system? The sooner we could isolate the source, the better! A quick right click on the ransom note file, security tab, advanced, owner, showed user XYZ. Go to her PC, and unplug it from the network. Disconnect the company from the internet and block all outgoing e-mails until we can be sure we have everything covered and are not spreading the bad luck to our business partners.

We had been hit with a computer virus which encrypts (i.e. locks and denies access to) anything it can, and then claims a ransom to supply the decryption key. That much was obvious, but which one? And how to clean the mess up? We followed the rest of our corporate generic virus plan, it was a matter of nutting out what damage had been done. The mess was quite large, despite our perceived good security. Almost everything that wasn't open by multiple users was affected –Word documents, PDF's, Spreadsheets, databases right across our corporate drives. Unfortunately the user was a reasonably senior one who had access to a lot of areas.

We diagnosed the virus as a form of ransomware known as CryptoWall. We've since learned of a lot of infections in Canterbury – it's common! We had successfully isolated the damage, and started a methodical recovery from the previous evening's back-up. All-in-all it took us around 48 hours of solid work to recover 99% of the affected data, but the mission critical systems were back online before the end of day one.

So how did we get this nasty bug? Simple, the user had browsed a news site during her break. She clicked a link to a legitimate recipe site, whose advertising company was dishing up the virus (we assume they had been hacked). It got into our place via a Flash player vulnerability. Here are some thoughts for home PC users:

- Uninstall flash player and see if you need it. Most sites don't; the only use I have found is Facebook **games** (which I don't recommend anyway). Even YouTube has converted to HTML 5 so doesn't require Flash. If you REALLY need it (you don't!) make sure you update it every time it asks.
- Do frequent backups of any data that you can't afford to lose. Photos, documents, your family tree software, last will and testimony, etc. Buy yourself TWO USB drives and alternate. Keep one offsite in a secure location (your Mum's place, glove box, bottom drawer at work, Uncle Bob's...). Stick a label on it with your name, phone number, and a copy write symbol if appropriate. Dropbox is not a backup system in this respect. It would have been encrypted as well.
- Don't leave the backup USB drive attached to your computer, it will be encrypted too
- Keep a secure record (not on your PC) of important user names and passwords – your ISP log in, for your router/modem, your e-mail passwords, etc. This makes re-installation easier.
- Don't feel too smug if you're a Mac or a Linux user, they're out for you too (just less prevalent)
- Just because they found a hole in Flash this time (ours was out of date, shame on us), doesn't mean that they're not looking for vulnerabilities in Java, HTML, Internet Explorer, Firefox, Chrome, Safari, Windows, iOS... keep your software updated.
- If you do get a dose, don't pay the ransom. Take it as a lesson on life, and move on. The easiest way to recover is to wipe your system and re-install everything, recovering your data from one of those backups.
- Antivirus Software can generally only guard against threats it already knows about – i.e. not NEW ones!

Classifieds



For Sale

Advertising columns by the inch!
Small adverts **free** to all CRAC and Air NZ Flying Club members.

Distribution to all CRAC members and to all associated RANZ clubs.

Commercial adverts \$10 per 1/3 page or thereabouts, per issue (monthly except January). All funds go towards the modest

costs of the newsletter and then into the kitchen fund. We reserve the right to review advertising costs as the distribution increases.

Got spare items to sell? Want to upgrade your aircraft? Do you have an unusual requirement to fulfil? (Please bear in mind that the magazine has a 'family' rating!) Throw an e-mail to editor@crac.co.nz and it will be

included in the next edition.

I aim to publish within a week of the Monthly Committee meeting, which makes the publishing date the second Wednesday of the month. Approximately. Barring hard drive failures, family emergencies, lotto wins, and stunningly nice flying days.



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Upcoming Events

June 20/21 – Rangiora hosted Fly-in.
See article in this issue

August 28-30th (tentative) 2015 - Brass
Monkey to Tapawera. See article in this
issue.

As always, Club Captain **Paul Godfrey**
may co-ordinate some local flying events
that will be run with short notice
(weather dependent) so keep your eye
on your club e-mails and the
noticeboard.

A huge THANK YOU to everybody who
have contributed to this newsletter:

Volkmar Wollenweber, Glenn Martin,
Nathan Clarke, Graeme Main, Paul
Godfrey, John McCaul, Anon the mouse

Next Newsletter

Member contributions invited.

Brian Greenwood
Editor (editor@crac.co.nz)

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New Members May 2015

Welcome aboard to:

Hamish Crowe
Michael Johnson
Craig Shepard
William Gard
Michael Odering
Tim Gould
Mac Earnshaw

**Please make our new friends
welcome.**

Congratulations

Doug Anderson, ATO
Appointment
Deane Philips, Advanced
National

Unreliable E-mails

Remember to check your spam
or junk folders at least once a
week.

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