



The AGM is almost upon us

Ask not what your club can do for you; ask what you can do for your club! A formal notification for the AGM has e-mailed, please keep the evening of Wednesday April 15th free.

The committee are a pretty hard working bunch and there have been some big projects on in the past few years. The club has moved from a single hangar/small club house to two hangars and a large clubhouse which is the envy of many. The relationship with the Air New Zealand Flying Club seems to work well, giving a good mix of GA and Microlight pilots using our facilities. If you're asked to contribute in some way, please think about contributing. Many hands make light work...

The topic of aircraft replacement was discussed at the last committee meeting (refer to the committee report) and the general desire seems to be equipping the club with two Tecnams in the longer term. However our lovely RANS, JOR, is still doing a good job of supplying lower cost flying and will continue to do so in the near future. This is just the view of the committee members present and naturally the decision will be made by the Club when the time approaches, probably not this coming financial year. It is, however, a reflection of the optimistic mood that the club is growing and developing in the right direction. The decision to buy the first Tecnam generated plenty of healthy debate; the same is expected for any further developments.

February Highlights

- 30 Hours training flown in Tecnam RGA
- 15 Hours training in JOR
- Flight Safety seminar held by CAA, attended by at least a dozen CRAC members (see report)
- Hangar Rash reported on RGA
- Web site professional help offered – and accepted



Safety First

Whilst we can relax about the state and health of the club, we can't relax about safety. Microlights are still represented poorly in the statistics and, as the largest club, we must lead the charge to make it a safer sport.

It boils down to assessing the risk and acting accordingly. Do a decent pre-flight, post flight, assess the weather and fly to your skill level and the performance of your aircraft. Don't be afraid to ask for refresher course, we have some excellent instructors who are only too pleased to update our skills. Don't forget our in-house Safety Officer as well.

The club also has a supply of the CAA Good Aviation Practice (GAP) booklets which offer excellent advice. Likewise the free CAA safety briefings like the recent "WX Matters" held at the Canterbury Aero Club in Christchurch. To use a horrible word, be pro-active about safety. If in doubt, ask or talk about it with your peers and our instructors.

Annual Subscription

Just a wee reminder that your CRAC Annual Subs will be due on April 1st!

Committee Meeting Report

The usual committee meeting was held in early March, some of the points are:

- Open day to open Hangar 1, Clubhouse, and celebrate the Tecnam deferred until late March or (more likely) April, depending on the completion of the Hangar.
- Costs to come are approximately \$18,000 plus hoist hire, and the concrete pads
- Bank Balance approximately \$45,000
- RAANZ fly-in at Waipukurau (bad weather expected on the Friday before, sadly!), Easter Fly-in at Woodbury
- JOR is approaching the 300 hour mark on its "new" Rotax 582 and an appropriate maintenance schedule is being worked on. A general discussion was held about aircraft replacement, the general desire was to purchase another Tecnam in the long term. However this is a decision that would be made at the appropriate time and discussed and ratified by the club.
- RGA has had some bad Hangar Rash (see article), possibly as a result of...
- ... the southern Hangar doors (Hangar 2 of course) seem to be sticking on the eastern side and will be inspected and repairs scheduled if necessary
- Hangar 1 construction will recommence on March 16th. As a result of the excellent construction deal Deane had negotiated, and the errors by the manufacturer, we have to fit around the builders other jobs.
- Some discussion regarding the concrete pads and paths from the clubhouse took place, with the committee planning to meet at the airfield and work out the desired plan, subject to costs and budgets
- James Sleeman, who designed, built, and implemented the original club web site, has offered to help with the rest of the development of crac.co.nz (bringing the membership listing and booking system onto one platform). Not only did James do a huge amount of work on the original web site and associated systems but he was also Secretary and Treasurer for quite a period. We owe James a huge thanks for the work he has done in the past, let alone continuing to help us.
- The club is actively pursuing a weather station in the hope of integrating this into our web site. Buzz is doing all of the hard work on this one.

Damage to RGA

Our favourite aircraft (first equal, anyway), the club Tecnam ZK-RGA, has suffered some Hangar rash at the hands of club members when being moved in and out of the hangar. This is a terrible situation for our almost brand-new pride and joy, and should never happen.

There is one rule, and some tips to achieve it. Rule one, **don't damage the aircraft!** We're



not insured for small bumps and bruises (well, it's not economic to claim for them) so every piece of damage chips away at our ability to provide cheap and safe flying, and to expand that to as many people as practical.

There's no two ways around it, moving aircraft in a hangar can be difficult. **Always open the hangar doors fully.** There are a couple of reasons for this.



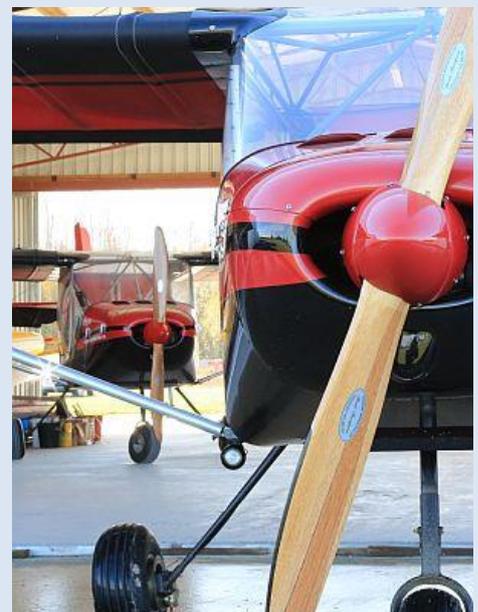
It gives you more room to manoeuvre even if you think you can squeeze out on a smaller opening. Secondly, the person moving an aircraft after you will probably assume the doors are fully open. I've been caught out on this one with my own aircraft (luckily realised in time).

Never be afraid to ask for help, even if it is just someone to check the wingtip or tail plane clearance. Personally I sometimes walk to the wingtips or even walk around the whole aircraft and assess how far back and in which direction I have to push before I check again. Damaging my own aircraft would be terrible, but damaging someone else's would be hard to forgive.

Remember, if you're moving these aircraft around it's for your safety that we want to avoid damage, let alone the cost to the club.

The images show damage to RGA's Starboard aileron, port wing tip, and starboard wing tip. Please let this be an end to it!

(Thanks to Wayne Wilson for taking the photos)





Quadcopters

A recent budget miscalculation resulted in the purchase of a Quadcopter over Christmas. None of this real-man stuff of building one (like Roy has done) but the purchase of a fully operational camera platform in the shape of a DJI Phantom 2 Quadcopter with a 3D Gimbal to complete the package. I left the FPV module out to save \$500, just as well I did.

So what is FPV? The acronym stands for First Person View, and is a small transmitter attached to the Phantom to send the video signal live to a

screen on the controller. In other words you will see what the camera sees as you fly the aircraft. It's next on my purchase list!

The Phantom 2 is designed to be a perfect camera platform, with a flying time of around 20 minutes and a range of just over 1 km. This aircraft has built in GPS, a barometric altimeter, and an industry standard NAZA-M flight control system.

Using the GoPro3 Black I can do video and still photography in one session. The GoPro wireless control has to be turned OFF pre-flight as it can interfere with the Phantom's flight controls. In practice this causes little difficulty, the GoPro recording can be turned on (without wireless) before flight and left running. A little more editing perhaps, this problem can be avoided if you purchase the Phantom Vision which has a built in camera and FPV. I chose the model without a camera so that I can use existing cameras (GoPros) and upgrade them when desirable.

I've done some Quadcopter training on a WLtoys brand (the sort you would buy in a mall) which is reasonably well respected and a very good training aircraft. However it is quite difficult to fly, and really annoys the cat. I live in Kaiapoi (read: in the Control Zone down to surface level) so technically even flying this outside (without permission) is illegal. However I do have to say the risk of the WLtoys drone getting higher than about 100m seems small – counter that with helicopters operating from a nearby park giving rides on holiday weekends, there is still a risk.

Flying the Phantom 2 is a revelation – provided you have the patience to allow it to get GPS lock **before** take-off – an absolute must in my opinion. This allows it to hover in place, despite any reasonable wind. It handles beautifully and seems quite robust and reliable. It generally can hover within a 1 cubic meter box, the books says 2 cubic meters which would be in windy conditions. The video off the camera is stunning, the 3D gimbal makes it silky smooth and broadcast quality.

Our CAA has done a lot of work to start integrating drones and UAV's into our airspace safely. However most users I have talked to seem to think that the only rule is "below 400'". As can be seen from my Kaiapoi comments, this is far from the truth.

The basic rules **as at the time of writing, and by my own personal interpretation** are as follows:

- Always below 400'
- Always within visual range (i.e. not solely by FPV, nor by binoculars etc.)
- Not within 4km of an airfield or designated landing area (Part 61 pilots are exempt with certain stipulations)
- Not within controlled airspace without verbal permission from the appropriate control authority (e.g. Christchurch Tower)
- Not at night (except within 100m of a structure)
- Always a 3km visibility minima
- Manned aircraft ALWAYS have right of way
- Never within a low flying area or special use airspace

There are exceptions available to these rules if permission is granted. The CAA is always subject to criticism but I reckon they're doing well trying to accommodate these potentially dangerous devices into our airspace safely. They've set up a good web site (www.airshare.co.nz) as a hub of information and to apply for permission for exemptions.

To test the new web site I lodged a flight request in the Kaiapoi Red Zone and called the tower for final permission an hour before the scheduled flight. As with all my (limited) dealings with the CAA, they were courteous, professional, and helpful. Permission was granted without difficulty and the flight proceeded, unfortunately *someone* forgot to format the SD card so only about half the flight was recorded!

As to the Phantom itself, it is a remarkably stable and easy aircraft to fly. If you let the controls go it will come to a stop and hover in place. If the battery gets too low, or it loses contact with the controller, it will climb to a pre-set height (default is 20 metres) and return to the start point. The start point is re-definable during flight, which I found useful during one flight when the tide came in! I thought I was a reasonable pilot until I let Iceman, our own instructor/test pilot, fly it – don't tell him, but he's very good.

The Phantom 2 can be plugged into your PC via USB to allow many different parameters to be configured. These include maximum distance from the controller (about 1.3 km from memory!), maximum height (120m/400 feet is the default and legal limit in New Zealand) plus fine tuning of the controls.

The Camera Gimbal can be controlled in flight in the pitch axis (the camera can be rotated directly down) from the controller.

The United States FAA has recently released a discussion paper on Drones recommending similar rules to the ones already instituted by our own CAA. One major difference is that they seem to be advocating a licence system for drone operators.

A summary of the FAA proposal is here:

http://www.faa.gov/regulations_policies/rulemaking/media/021515_s_UAS_Summary.pdf

More importantly, here's some Kiwi links:

www.airshare.co.nz

<http://www.caa.govt.nz/rpas/index.html>

DJI New Zealand Distributors

<http://www.rc-tech.co.nz> (Check out the awesome **Inspire** drone)

My Youtube channel

<https://www.youtube.com/user/skipypnz10>



Rangitata Island Fly-in, 22/3/2014

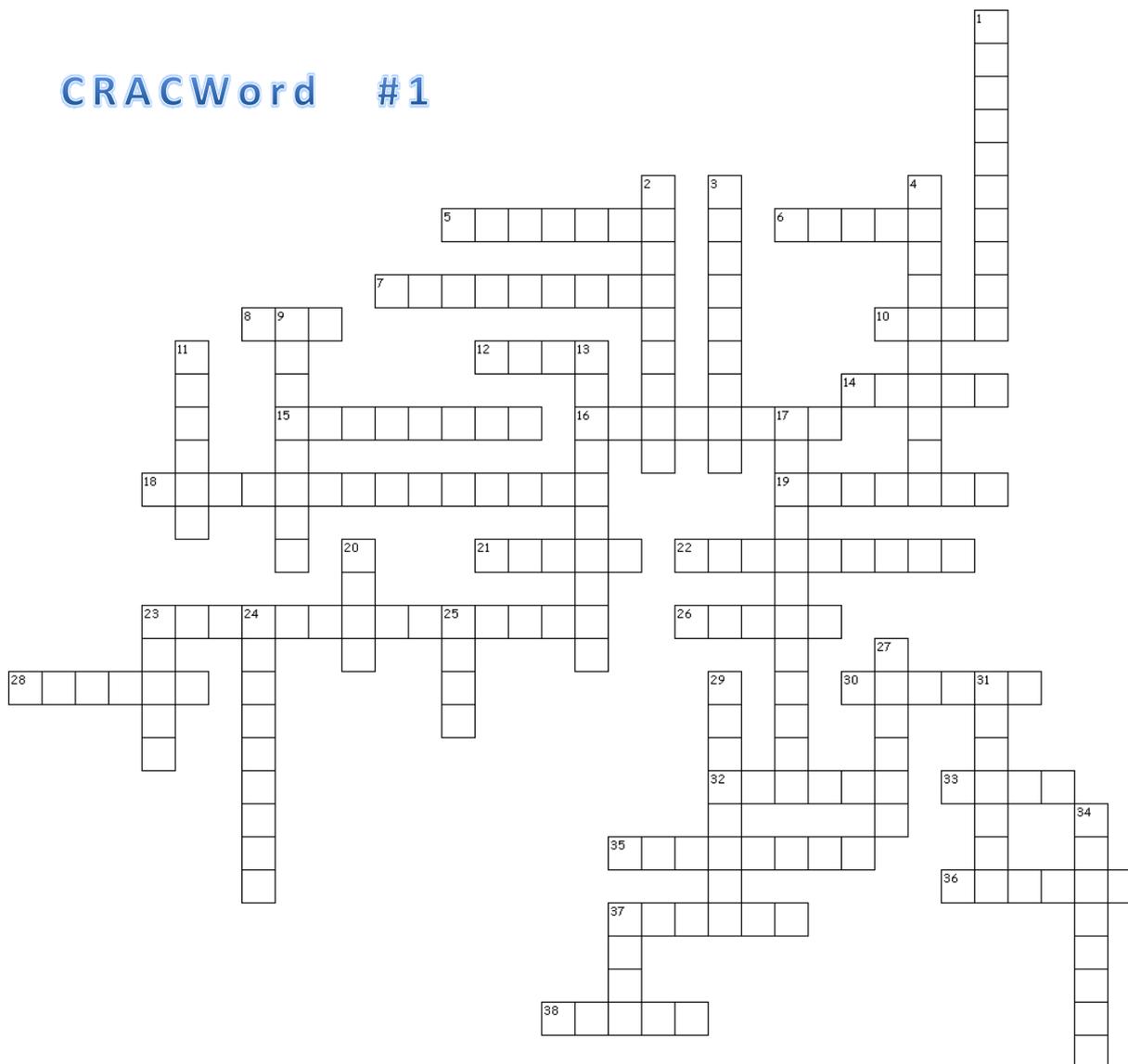


Time for a pin-up! BAe Hawk Mk 127's of the RAAF – A27-29 and A27-11 perform at Warbirds Over Wanaka 2014. They'd look good in RNZAF markings too...



Representing the lighter side of Aviation is the Australian Aircraft Kits Hornet registered to John (Jack) Montgomery and (I believe) based at West Melton. Quite a spirited display!

CRACWord #1



Across

5. Roll with it
6. Our newest registration
7. Sturdy Battle of Britain winner
8. Ruddered
10. Mongol's house
12. Modern Wooden Wonder
14. Common engines
15. Early Training
16. Must remember to cancel
18. Announced when entering Controlled Airspace (3,11)
19. Ignition or X-Man?
21. feature of a prop, or rotate around an axis
22. A.K.A. Conventional
23. Possible effect of landing into a sunset (7,7)
26. Most of us are right in it!
28. Useful airfield item
30. Not for your coat, that's a different spelling
32. Pre-flight mnemonic
33. Close
35. _____ Rudder to cure a wing drop
36. Sexy Italian
37. Yap to the Radar
38. Financial situation, post aircraft purchase

Down

1. Saviour of private aviation
2. RAF slang for landing gear
3. Feature of a CH-701 (5,4)
4. Critical to good engine life (4,2,4)
9. Camel Adversary
11. Canadian with Flare
13. Vital Baggage
17. Shape to be avoided
20. Rangiora
23. Wing component or tries to take off
24. Yelled frequently to start with (5,4)
25. Could have been a Schlitter
27. First switch
29. Unusual Auster
31. _____ Yaw
34. Arts from Nelson, now Wellington
37. Too dangerous to risk an instructor with

Restrictions on Jabiru Power Aircraft imposed by the Australian Civil Aviation Safety Authority (CASA), the equivalent of New Zealand's CAA, include:

- Restrict flights to day time under the visual flight rules
- Require aircraft to be flown so they can at all times glide clear of a populous area
- Require passengers and trainee pilots flying solo to sign a statement saying they are aware of and accept the risk of an engine failure
- Require trainee pilots to have recently and successfully completed engine failure exercises before solo flights.



WX Matters

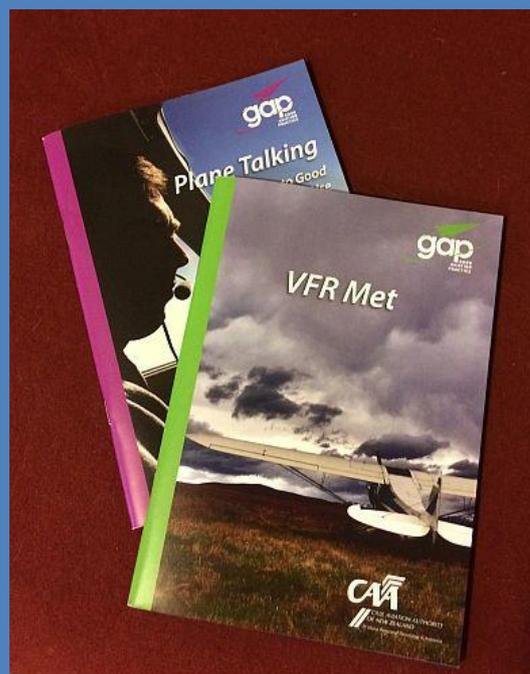
As mentioned in the Highlights section there was a good CRAC representation at the CAA Safety Seminar held at the Canterbury Aero Club on March 9th.

Quite wisely the CAA staff running the event postponed all discussion on charges for weather information to the end of the event. Instead they concentration on a general education program plus the introduction of some new tools, including some soon to be released phone apps. I found the GARFOR proposal particularly interesting, a Graphic Area Forecast. This is a simple and effective method of turning an ARFOR (which, lets face it, is just a bunch of text on a page) into a graphic representation of weather on route.

During the discussion on costs (specifically the Metflight subscription) all they could say was that they are “working on something you’d like” and that the “wheels are in motion”. Watch this space!

These Safety seminars are well worth the money (Free, with sausage rolls and an open bar in this case) and are highly recommended by your editor.

Note that the GAP range of booklets have been expended recently with the new VFR Met being particularly impressive





Canterbury Recreational Aircraft Club (Inc)
P.O. Box 440
Rangiora 7440

Patron

Wayne Wilson
patron@crac.co.nz

President

Mike Sheffield
president@crac.co.nz

Secretary

Graeme Main
secretary@crac.co.nz

Chief Flying Instructor

Tony den Haan
cfi@crac.co.nz

Safety Officer

Duncan Fraser
safety@crac.co.nz

Club Captain

Paul Godfrey
captain@crac.co.nz

Treasurer

Brian Greenwood
treasurer@crac.co.nz

Clubrooms Manager

John McCaul
tuckshop@crac.co.nz

Hangar Manager

Buzz Harvey
hangars@crac.co.nz

Upcoming Events

March? - Possible CRAC Fly-in to Omaka and aviation museum

April 3rd - ? Probably Woodbury fly-in

March/April? - Official Clubhouse and Hangar opening, Tecnam presentation. Open Day or event to be decided

April 3rd – 6th -Easter 2015 – **Classic Fighters Omaka**

June 2015 - **Brass Monkey to Lake Station** (not Karamea as previously posted)

Club Captain **Paul Godfrey** will organise some local flying events that will be run with short notice (weather dependent) so keep your eye on your club e-mails

Thanks to everybody who have contributed to this newsletter:

Wayne Wilson, Photos of RGA damage

Next Newsletter

Nothing yet! Contributions invited.

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

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New Members February 2014

Welcome aboard to:

William Martin
Dean Gibson

As always, please make the new members welcome. If I've missed anyone please let me know . We're also missing a couple of recent new members' e-mail addresses, contact me at editor@crac.co.nz

Congratulations

Victor Dragomiretskyy
Advanced National pass

Web Site:
www.crac.co.nz

Facebook
www.facebook.com/flyCRAC

Photos
crac.co.nz/photo-galleries