

# RecWings

The Magazine of the Canterbury Recreational Aircraft Club

- What is Safety?
- RAAZ AGM Trip and Report
- CRAC Christmas Party
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- A-4K Skyhawk in RNZAF Service
- Hispano Buchon Ha-1112 for Wanaka 2016

**December 2015**

## Editor's Letter – What is 'Safety'?

It's a pretty nebulous sort of concept, "safety" – it's something that we all think about and aim for, but what exactly is it? A quick look at some online dictionaries defines it (roughly) as being in a secure state, to have minimised or mitigated risks to the point where they're negligible.

How does a pilot do that? By doing what we're trained to do – minimising risks with such things as checking the weather, pre and post-flight inspections, using the I'M SAFE acronym, and our check lists that are drummed into us to make them second nature.

The trouble is, it is not always the pilot. It can be the passenger (which can boil down to a safety briefing from the pilot, e.g. don't drop your mobile phone into the control runs!), it can be other pilots (keep a damned good lookout), or the person who re-attaches your controls after a major service. In a broader sense, safety is also in the hands of our Instructors, Safety Officers, RAANZ who issue our certificates, and the CAA for providing the regulatory framework and advisories (e.g. NOTAMS) that we use. And how about Airways, providing the Air Traffic Control services that many of us use?

Often when something goes wrong, it is a series of events that end up with an incident or accident. All of these years watching 'Mayday' on TV haven't been wasted (even though they could get the basic facts out in half the time of the program!), the recent one on Concorde was an excellent example. A reinforcing strip riveted and glued onto a DC-10 which was not done to best practices but should have been OK, wasn't. Concorde just happened to be the aircraft which ran over it, and suffered as a result of its particular design.

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I guess my point is that safety is a team effort, with the pilot at the head of the queue, supported by our trusty maintenance engineers, fellow pilots, RAANZ, CAA, and Airways all playing an important role in keeping us out of the poo.

I reckon that our club, and RAANZ, play a huge role in that team – not only with training and attitude, but also with the friendly "are you sure you want to do that" kind of collegiate advice. **That's** the value of a good club. Thanks, team!

**Merry Christmas and safe flying, everyone!**

**Cover, Skyhawk NZ6204 at the Ashburton Aviation Museum. We should have a club fly in to this excellent facility.**

## Raglan AGM Trip and Report

Glenn Martin, photos by Deane Philip

I was asked, to represent the club at the RAANZ AGM, that's what happens if you turn up to a committee meeting! Most of the time, when you plan for a flight the weather doesn't cooperate. However this time it actually helped. The plan was for me to go up in the Sting and Deano to come up in the Viking powered CH750, as a delivery flight to Wanganui. In the event the 750 wasn't quite ready so Deano and I headed off on Friday.

We went up the now familiar route to Cape Campbell, and then took the low circular route around the bay to "the brothers" and across the shortest gap to Ohau point and the Wellington wind farm. Up the Kapati coast through the Para MBZ with helpful traffic advice from the tower. As we came up to the messy airspace around Ohakea we monitored Ohakea tower and heard two Hercules coming in from our left 500 ft above, discussing



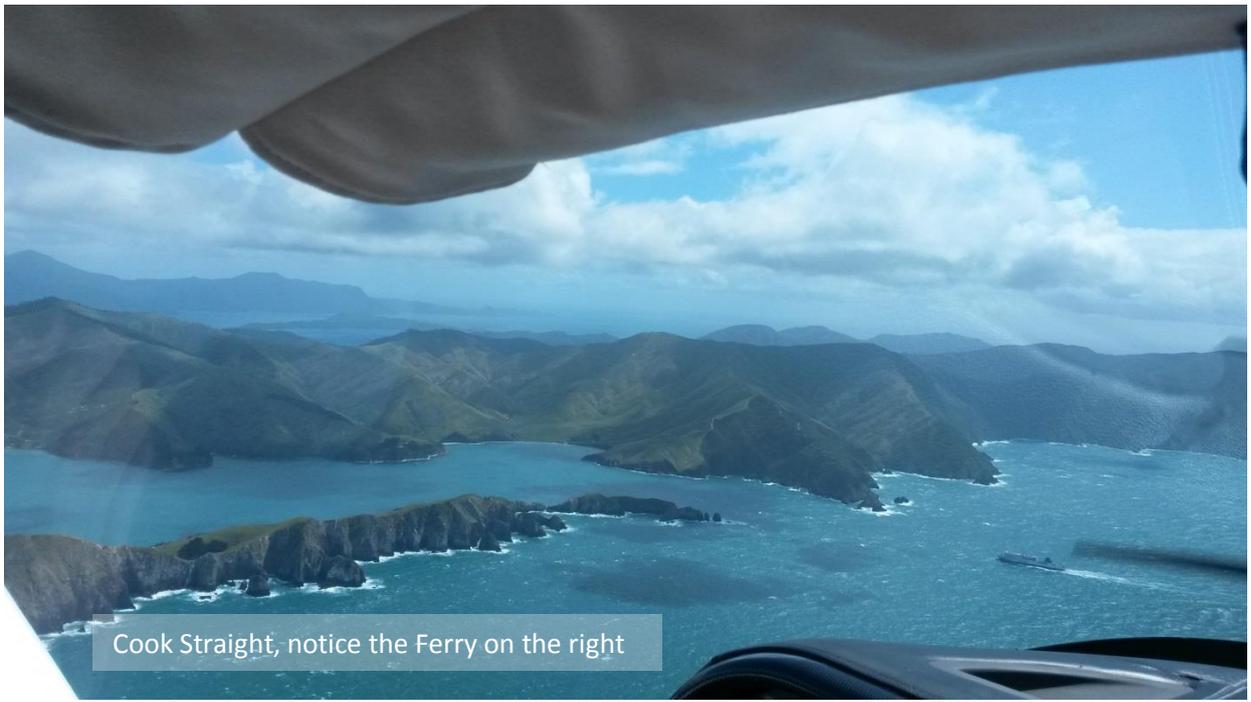
whether they would ask the GA plane to get out of their way. We dropped another 500 ft which they appreciated and we had a great view of them on finals for the base.

Deano Spotted a Harvard coming our way quite close and overhead, I suspect he never saw us...just ships passing in the night.

Lunch at Wanganui then off to Ruapehu. On the way we were at 3500 ft and a line of three RNZAF Hercs and two C130j's (Aussie?) passed under us at about 2800 feet. That camouflage really works it is hard to spot them against the ground.

Around Ruapehu and a good look at both ski fields, Crater lake and the Chateau, around the other side of Ngauruhoe. All the way up we had been fortunate to have a 20kt tailwind, in the lee of the mountains this translated to a few bumps. Past lake Taupo and off to Raglan. With the touring around and sightseeing flight time was 4.3 hr.

We were the only plane to fly in for the AGM on the Friday, so an afternoon in the Garden bar seemed like a good idea.



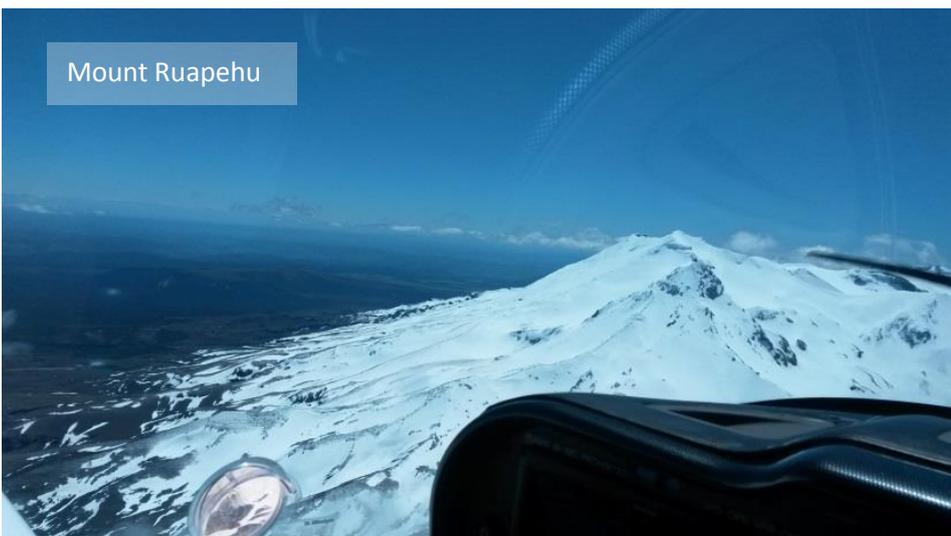
Cook Strait, notice the Ferry on the right

Next morning a few more planes came in, a Bantam and a Gyro but the rest were third generation. Quite a few CH601's including one painted to look like an Airtrainer. A family meeting with another Sting from Stratford and TL Sirius. There was a very nice Technam Astore, the first time I had seen one in the flesh (alloy ?) it looks as good up close as it does in the magazines.



Crater Lake, Mount Ruapehu

Roger Ward and Stuart Parker arrived and Stuart did a fuel run for us, 60 L topped up the plane so just under 15L/hr...love those tail winds!



Mount Ruapehu

The AGM was fairly quick, no major problems, but one good reminder.

We are all very privileged to have the freedom with a \$70 licence to fly practically everywhere around this stunning country. However, we are only one bad decision, or one stupid

behaviour away from having that taken from us ALL. So please be reminded that our behaviour reflects on ALL recreational pilots, please do not "push or ignore the rules" it is not just about YOU it is about all of us.



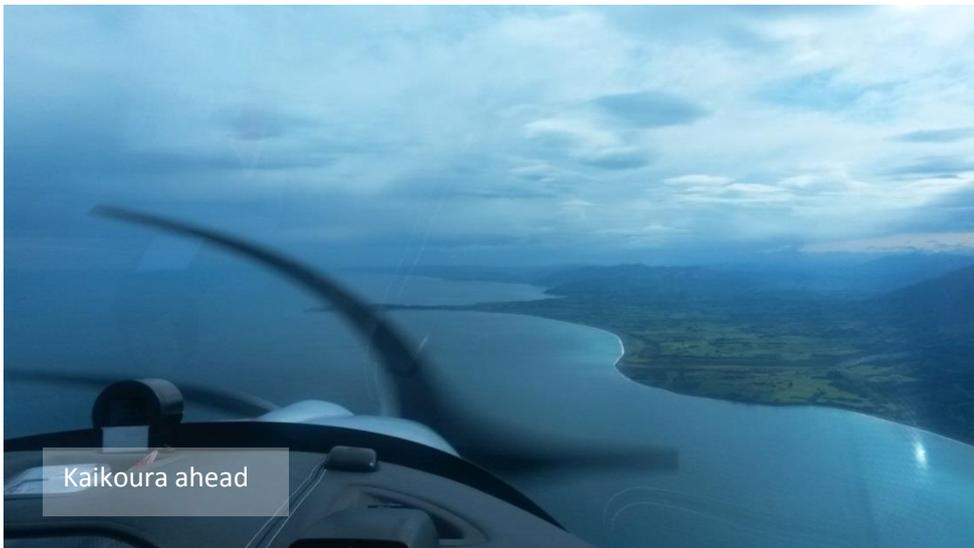
RAANZ AGM line up at Raglan

There was a quick, for Deano and I, lunch then back to the plane. The Wx for Sunday looked pretty suspect so we headed back to RT. Max angle climb out of Raglan, to keep well away from the paragliders soaring the Beach bluffs. This time we flew straight over New Plymouth with the kind permission of NP control, and around Mt Egmont. Still a tailwind, but this gave us turbulence for about 25nm in the downwind of the Mountain. Comfort stop in Wanganui again



Mount Egmont

at the Aeroclub, the café was closed so carried on south. Due to the westerly we stayed upwind of Kapiti this time, but still in the MBZ. As usual good traffic advisories from the tower. There was scattered cloud over the Strait so we



Kaikoura ahead

stayed under the 2500 ft limit for the control area, but again had a listening watch to them. About then Matt started txtg Dean giving advice as he was watching us on flightradar24!. Down the east coast and as predicted by Dean we got some bumps off a couple of valleys. Just north of Kaikoura we could see that the whitecaps suddenly stopped and the sea was calm. In about one mile we went from

15kt tailwind to a headwind , from NW to Ne, like stepping through a door. No stopping at Kaikoura, by this time Deano was getting worried that I was going to put on some “old man music” so I think he wanted to get the flight over as quick as possible. No one in the Circuit at RT, it was 5:30 pm so everyone gone home for a nap? Return trip was pretty much the same 4.4 hr and about 60 L fuel. Another great trip, love ATC they give you great advice, and are very friendly, it is comforting to have them looking out for us as we buzz around. Second thought...get out of Canterbury! There is a whole country out there!

## The A-4K Skyhawk in RNZAF Service

Brian Greenwood

The Douglas A-4 Skyhawk was developed in the mid 1950's for the U.S. Navy as a replacement for the piston engine d Douglas AD Skyraider. Key design goals were to keep the aircraft as simple and light as possible, but to enable a large weapons load.

### A-4 Skyhawk Statistics

Length:	12m
Wingspan:	8.38m
Height:	4.57m
Max Speed:	1083km/h
Range:	3,220 km
MAUW:	11,136 kg
Powerplant:	1 Pratt & Whitney J52-P8A turbojet, 41 kn (9,300lbf)



In the late 1960's the RNZAF needed an aircraft to replace their Canberra Bombers and Vampire Fighters. They considered the F-111, F-4 Phantom, F-5 Freedom Fighter, and Mirage III, with the Air Force



preferring the F-4. The F-111 was considered too complex and expensive, the F-5 couldn't carry enough ordinance, and the subsonic A4 was not much newer than the Canberras.

It was Finance Minister Rob Muldoon who told the Air Force that they were not going to get their preferred F-4 Phantoms, and that the A-4 was the aircraft most likely to get cabinet permission. The RNZAF wanted a

minimum of 18 aircraft so the cabinet approved 14, comprising 10 single seaters and 4 two seat trainers.

The A-4F evolved into the A-4K after the RNZAF specified the radio fit, braking chute, and a steerable nose wheel. The Royal Australian Navy had purchased 10 T/A-4G Skyhawks in 1967 (and a further 10 T/A-4F's refurbished to T/A-4G standard in 1971); this was believed to have played a part in the New Zealand decision.

When the A-4's arrived, the 75 Squadron pilots were initially disappointed in the weapons aiming equipment in both the air-to-air and air-to-ground modes, joking that it was a TLAR system (That Looks About Right!).



This was a significant issue as the Vampires that had been used previously had an excellent reflector sight. However the aerodynamic performance was an improvement on the Canberra and the Vampire, and the Squadron worked hard to get the new aircraft into service.

The aircraft were delivered in the standard U.S. Air Force South-East Asia scheme. They could carry external tanks, bombs, rockets, or the AIM 9 Sidewinder (I believe we used the



'G' model initially). The hump on the A4-K was fully wired for ECM/ESM equipment but was always completely empty in RNZAF service (except for occasional luggage or duty free!), and was removed at the first mid life upgrade. The radar (AN/APG-53A) was the same version as the old A4-C model, and was old technology even by the time it was delivered. It only had a basic air to ground mode and no air to air ability.

However, the A4 was a wonderful aircraft to fly – what it lacked in equipment, it made up for with personality!

75 Squadron flew the aircraft on many overseas deployments including Australia, Singapore, and the Philippines, usually accompanied by an Orion for navigation and preceded by a Hercules full of ground crew and spares.

On March 30<sup>th</sup>, 1976, the squadron was called on to help enforce our 12 mile coastal limit after a Taiwanese fishing boat was found fishing illegally. NZ6206, now preserved at MOTAT, was loaded with live ammunition and Zuni Rockets. It stopped the fishing boat in its tracks with a single pass, firing warning shots across its bow. Flight Lieutenant (later Squadron Leader) Jim Jennings was the pilot. AVM John Hosie (quoted in the fabulous “Skyhawks” book by Don Sims and Nick Lee-Frampton) heard about the incident from a U.S. Coastguard perspective:

‘I remember being up at Hawaii on a seminar some three or four years later, hearing a US Coastguard Captain say, “If you go fishing in New Zealand waters and don’t have the right licences, they don’t bugger around, they’ll just blow you out of the water, no questions asked”. We never had any trouble with foreign



fishing boats for years afterwards; not a problem. It doesn’t hurt to be able to do something a little nasty and the maintenance of a small Skyhawk fleet was very, very modest”.

John Hosie later became the RNZAF Air Vice Marshal from 1992 through to 1996.

The Skyhawks were also called in to sink a burnt out and abandoned Korean trawler, the Don Wong 513 after it had been declared a maritime hazard. I believe both Rockets and

free-fall bombs were used on this occasion.

By the early 1980’s it was decided to upgrade the Skyhawks instead of replacing them. Approval was given in 1983 after a defence review, and a contract was awarded to Lear Siegler (later Smiths Industries) in 1986

as project “Kahu”. This covered the upgrading of the cockpit to include a decent HUD (Head Up Display), HOTAS (Hands on Throttle and Stick), a partial glass cockpit (two “large” CRT displays), and integrating a version of the F-16’s AGG-66 radar. Other changes included a ring laser gyro inertial navigation system, and integrating flare and chaff dispensers. Structural changes included rewiring and re-skinning the wings.



In June 1984 it was announced that the New Zealand Government would purchase the

remaining 10 RAN A-4G and TA-4G Skyhawks which had been taken out of service following the decommissioning of HMAS Melbourne for AUD 28.2M. This represented an absolute bargain, as most of the aircraft had lower airframe hours than the RNZAF A-4K's, and came with a huge amount of spares. It took 6 C-130 flights to bring back the critical spares, and the bulky items were sent by sea. It was later estimated that we received \$30M worth of spares, enough to keep the fleet going for another 20 years! The RAN were obviously sad to see the aircraft go, and the RNZAF personnel were presented with a

plaque made out of 2 launching stop ends and engraved with the words "Look after them for us".

Contemporaneously with the purchase of the ex-RAN aircraft, the RNZAF started to repaint their aircraft in a new three-tone green/green/grey "Euro 1" scheme, which was much better camouflage over land. However when the A-4G's were picked up, they were dressed in Kiwi roundels but left in

RAN colours. This gave rise to the most attractive scheme (to my eye!), the RAN Grey/Blue-Grey in Kiwi roundels (*above right*).



The new aircraft were modified to A-4K standard over a period of time, contemporary photos often show a mix of markings between the (then) two RNZAF schemes and the two RAN schemes (Grey with white

undersides and Grey/Blue Grey wrap-around).

Meanwhile the A-4's were being rolled through the Kahu upgrade at SAFE Air at Woodburn. New weapons included with the Kahu upgrade were the very successful AIM-9L Sidewinder air to air missile, the GBU-16 Paveway II LGB (Laser Guided Bomb), and the AGM-65 Maverick Air-to-Ground missile. Laser Target designation for the Paveway II's was to be provided by ground based lasers. The Maverick AGM-65 was chosen over the AGM-84 Harpoon for costs reasons, and it was mistakenly thought the AGM-84 wouldn't fit on



an A-4. The U.S. Navy later successfully trialled Harpoons on the inboard wing pylons of a Skyhawk.

The 'Kahu' modified Skyhawks are easily identifiable by the swept-back radio aerial behind the cockpit (earlier A-4K's had a more upright aerial)

and the twin ILS aerials on the tail. Both features are visible in this photo of two TA-4K Skyhawks, *left*.

Some of the aircraft were allocated to a re-constituted Number 2 Squadron, so the RNZAF now had three squadrons of fighters and trainers – 2 and 75 Squadrons flying A-4's, and 14 Squadron flying Aermacchi MB 339's.



In 1990 the Defence Minister announced a deal in which RNZAF Skyhawks would be based at the RAN air base at Nowra in Australia to provide around 400 hours of training to the ADF, mainly for the Royal Australian Navy. This was done on a cost-sharing basis, which provided cheap training for the ADF and an income stream for the RNZAF – a definite win-win situation.

The Australians welcomed the A-4's back with open arms, and the deal was considered a success. It was re-negotiated and extended in 1996.

By 1999 the Skyhawks were slowly getting more difficult to service. The “new” electronics had been going for at least 15 years, and they made our Skyhawks a bit of an orphan. The original contractors had all disappeared into large corporations, which meant that the RNZAF had to maintain much of the support



information themselves.

A decision was made to lease 28 F-16A/B's from the USAF. This was a real sweetheart deal from the U.S. Government, the F-16's were very late model F-16A/B's built for Pakistan, but embargoed before delivery due to Pakistan's nuclear policy. The only minor issues were that they had the earlier F-16 radar (older than the A-4K Kahu's!)

and that they used a different inflight refuelling system to the RNZAF's drogue and probe system.

Both were comparatively minor issues and the RNZAF sent a team to Davis-Monthan to assess the aircraft, which were found to be in excellent condition, as promised. A deal was officially signed in July 1999.

On November 27, New Zealand voted in a new Government, a coalition between the Labour Party, Alliance, and the Green Party. This coalition represented 51.6% of the total votes. One of their first decisions was to put a hold on the F-16 deal, pending an independent inquiry by Defence Consultant, Derek Quigley.





Draken International's A-4K ex NZ6218 and an ex-Israeli A-4N.  
Copyright [Draken International](#).

The Quigley report was tasked to “Assess the consequences of cancellation, deferment, amendment or confirmation of the project: fiscal cost, diplomatic and legal consideration”.

In the meantime, the Government kept it’s members “informed” about the F-16. I once sat next to Tim Barnett, MP for Christchurch Central, during this time on a flight to Auckland. When questioned about the possible cancelling of the F-16’s he said that “they were a pure air superiority fighter, and of no value to New Zealand”! No knowledge (or interest) that they had a superb strike record, exactly suited to the RNZAF’s role.

Not surprisingly, the Quigley report recommended keeping the Air Combat Force and attempting to reduce the number of F-16’s leased (22) but to continue with the deal. This made sense, as the RNZAF currently had 18 Skyhawks – however some of the F-16’s were to be used as attrition airframes and spares. In the end, the Government of the day cancelled the F-16 deal, completely ignoring the best advice they could get.

Worse was to come – on May 8<sup>th</sup>, 2001, the Government announced that the Air Combat Wing was to be disbanded and the aircrew made redundant with effect from December 1<sup>st</sup>, 2001. This was despite polls saying that 75% of New Zealanders opposed the cut, and large protests. Included amongst the protesters were a number of former Chiefs of Defence. Both the Ministry of Defence and the RNZAF opposed the cuts. In a move that would put Machiavelli to shame, Helen Clark’s Government had cancelled the incredibly cheap F-16’s and then scrapped the Skyhawk’s for being too old and “clapped out”.

In the end, the A-4’s and Aermacchis were taken out of service and stored at Woodburn in Blenheim. The pilots and support personnel were made redundant, some entering service with our allies. Many attempts were made to sell the aircraft but somehow the paperwork never got approved by the U.S. Administration (they have to approve all sales of U.S. made equipment). The politicians deny that this huge change in our defence capabilities affected our defence relationship with Australia and America, but somehow things just never seemed to happen. The Australians were left in the lurch to the tune of 400 hours per year training for their navy, and the U.S. had a signed deal ripped to shreds and thrown in their faces.

In mid 2012 it was announced that approval had just been gained to sell most of the Skyhawks and Aermacchis to Draken International, based in Lakeland, Florida. They are currently used for airborne adversary training, threat simulation, aerial refuelling training, and research. Draken are, apparently, very pleased with their purchase and have put them to good use, including support for the F-35 Lightning II program. Not bad for an aircraft that Helen Clark described as ‘clapped out’.



## A-4 Photo Credits

- P6, top: The RNZAF Museum's ex RAAF Canberra on delivery escorted by an RNZAF A-4K ([RNZAF Museum](#))
- P6 bottom: A-4K Skyhawk NZ6201 from No. 75 Squadron on the flight line at Clark Air Base, Philippines, during the air combat training exercise "Cope Thunder '83-1" on 1 November 1982. ([TSgt. Craft, USAF - U.S. DefenseImagery photo VIRIN: DF-ST-84-01000](#))
- P7 top: [RNZAF Official](#)
- P7 lower: Pilots and ground crew members of No. 75 Squadron, RNZAF, pose in front of A-4K Skyhawk NZ6206 with members of the U.S. Air Force. 75 Squadron was participating in the air combat training exercise "Cope Thunder '83-1" at Clark Air Base, Luzon Philippines. ([TSgt Craft, USAF - U.S. DefenseImagery photo VIRIN: DF-ST-84-01002](#))
- P 8 top: A TA-4K Skyhawk trainer aircraft of No. 75 Squadron, RNZAF, evades simulated anti-aircraft missiles at the Crow Valley Electronic Warfare Tactical Range (Philippines) during Exercise COPE THUNDER '84-7. SSGT ([D. Perez, USAF - U.S. DefenseImagery photo VIRIN: DF-ST-86-05131P8](#))
- P8 lower: [RNZAF Museum](#) via the [A4Skyhawk.org](#) website
- P9 top: [RNZAF Museum](#)
- P9 Lower: [RNZAF Museum](#)
- Centrefold: Draken International's A-4K ex NZ6218 and an ex-Israeli A-4N. [Copyright Draken International](#).
- P12, both: [RNZAF Official](#). The lower photo is of Skyhawks out of Nowra, note the weapons load on the aircraft in the foreground!
- P13 top: [adf-serials.net](#)
- P13, bottom: [RNZAF](#)
- P14: [Draken International](#)

## Does the RNZAF need an Air Combat Force?

Yeah, Nah, Maybe! The truth is that nobody can see into the future and foretell with 100% accuracy what our needs will be. It's all about balancing finances against risks, much like insurance. In fact, that's a perfect analogy; and New Zealand has cancelled its Home Insurance because it hasn't made a claim for a few years.

It would certainly have been cheaper to keep the capability, even in a reduced form, than ever have to build it up from scratch again. It was estimated that it would take 20 years (or a major war) to get back to where we were. Having an Air Combat Force gives you many more options to respond to a situation. A good example is that our Allies are currently using their air assets in the war against ISIS, whereas New Zealand can only send in the SAS or trainers. That's the only option we've got (how we should respond is not part of this article, what options we have is all I'm talking about).

As for rebuilding an Air Combat Force to its previous level, it is unlikely that any politician would propose or support this. We have so many things competing for a small budget, we need to get our hospital waiting lists down and we need to fund meds like Keytruda (finer minds than mine are looking at that one!).

It was rumoured for a while that the current government was keen to re-arm the Air Force, however if that had been true then it would have been easiest, cheapest, and cleanest just to re-introduce the Aermacchi's. They were excellent aircraft with low air frame hours, and had the flexibility to do the low end training roles

that are required – training the Army and Navy about air defence, and pilot training. There is some story about Rolls-Royce not supporting that version of the Viper jet engine anymore; however it doesn't seem to be an issue for the current operators of this type of engine.

If the Air Force had been re-equipped in all of its other (and, let's be honest, more important) roles then one could say the savings had been well spent, however the main workhorses are still the P-3K Orion, and the C-130H Hercules. Apart from upgrades to old air frames, the only new equipment has been to the helicopter fleet – until the recent introduction of the Texan II turboprop trainers. Oh, and these are a very nice aircraft to build an ACF on!

However one can dream – the F-16's would still have been a viable force today, the USAF is intending to keep theirs until well past 2025 after delays in the F-35 project. If offered cheaply enough they would still be suitable – and we don't need many to fulfil the training roles.

There also allegedly a number of Saab Gripens for sale somewhere, going cheap.

But our best option would be trainers like the Bae Hawk. This would keep compatibility with the RAAF and would fill our needs without having enough of a bite to scare off too many politicians. However they're probably dearer than the Gripens.

One lives in hope!

## Committee Meeting Notes December 2015

- Letter of thanks sent to Tegal for supporting open day
- Bank Bal \$33K not including cost of soak pits on Hangar 1
- Last 2 BBQ's attendance poor, next one will be in March
- RGA Hours 36.3, JOR 8.4 – not bad for the weather!
- 44 booked for Christmas party at Caesar's
- Voltage regulator in JOR replaced
- New spats for RGA almost complete
- Hangar 1 Soak pits completed, Mike Small had also moved the shingle to allow completion of the area between the hangars and cleared soil in front of Frank Barker's hangar to allow access for club aircraft during taxiway maintenance.
- Hangar doors problem raised with builder, who will either fix it or we will use the \$5000 retained from the building costs to remediate the issues. Deane willing to do the work with help from club members.
- Mogas supply at NZRT: Buzz advised that there now appears to be some costs involved for the club. Costs to be defined. Committee agreed that some costs would be acceptable.
- Margo circulated club survey results. EFTPOS not practical on the field due to costs and security issues. SAC membership is done on an individual basis not a club basis, and all are welcome in CRAC. Margo has updated the website membership database and the MailChimp one from the accounts. Graeme Main advises that we now have over 200 members.
- **Graeme Main presented a feasibility study for the purchase of a new Tecnam. After discussions, Deane Philip moved that the club proceed with the purchase subject to Club approval at a SGM. Seconded Graeme Main. SGM notice will be given around February 1<sup>st</sup>, with a possible meeting date around Feb 17<sup>th</sup>.**
- ATC flying day postponed until 2016
- John McCaul suggested that the original CRAC sign and concrete footings could be used as a barrier for the proposed Mogas tank which would defray some costs.
- Deane Philip arranged for a \$150 Pilot Shop voucher for the club Xmas raffle.
- Glenn Martin and Deane Philip had attended the RANZ AGM, noted that our club (being the largest) had over 50% of the votes.
- Deane investigating getting some publicity via radio stations
- Tony den Haan to follow up trim button in RGA
- Basil Buwalda looking at club comps e.g. landing

## Hispano Ha-1112 Buchon for Warbirds Over Wanaka 2016

The Messerschmitt Bf109 was the main fighter aircraft of the German Air Force during WWII. A deadly and feared fighter, some consider it was the best aircraft of its generation and the most produced fighter aircraft in history. Designed by Willy Messerschmitt and Robert Lusser in 1935 and blooded in the Spanish Civil War, where it showed it had the potential to out manoeuvre and out fight any aircraft at that time.....until it met its match during the Battle of Britain, up against the RAF's Spitfire and Hurricane – the rest as they say is history.

The Buchon is essentially a Rolls-Royce Merlin engined Messerschmitt Bf109. The Luftwaffe left around 40 for the Spanish Air Force to use upon its return to Germany in 1939. In 1943 the Spanish government agreed with Messerschmitt to produce 200 Bf109G's. Improving relations between the Spanish government and the West from 1952 onward, saw a more powerful engine sourced from Britain, the two-speed Rolls Royce Merlin 500-45. The inclusion of the Merlin engine required modifications to be made to the Bf109's airframe, which gives its nose a distinctive appearance. The combination of ex-German airframe and British power plant was successful, and the first prototype flew its maiden flight in 1954. This particular aircraft was given the construction number 223 when built by Hispano Aviacion in Seville in 1959.

This aircraft was one of 27 purchased from the Spanish Air Force by Spitfire Productions for use in the 1968 film "Battle of Britain". By now registered as G-AWHK, this Buchon was then shipped to Texas where it flew briefly before being placed on static display in 1971 with the Confederate Air Force in Detroit. Acquired by the Old Flying Machine Company, it arrived at Duxford in 1996, re-registered as G-BWUE. The aircraft was marked up as Hauptmann Werner Schroer's Bf109G-2/trop "Red 1" which he flew whilst serving on the Greek island of Rhodes in 1943.

In 2006, G-BWUE moved back to Duxford to be maintained by the Aircraft Restoration Company. Appearing regularly at airshows in the UK, it also appeared in "Hindenburg", and "Valkyrie" starring Tom Cruise. Now owned by Historic Flying Ltd., G-BWUE has been painted as Messerschmitt "Yellow 10" as it appeared in the classic war film, "Battle of Britain".

**([www.warbirdsoverwanaka.com](http://www.warbirdsoverwanaka.com))**



### Where's the Grease Gun?

Gert van Kruiningen

Could the person who "borrowed" my grease gun, (required for running my Bleriot engine) return it please ! It was in a big black plastic container sitting underneath my engine catching oil drips.

## Christmas Turkeys – Aircraft that were failures

**Brian Greenwood**

Let's define a failure as an aircraft which was dangerous, or failed to fill its design purpose.

### The Flying Flea

The Pou-du-Ciel (literally "Louse of the Sky") was a brilliant concept, designed to have only pitch control by varying the incident of the front wing (it was a tandem wing design, like a highly staggered biplane) and a very large rudder which also induced roll.

However when later builders put larger engines in their aircraft, there were a series of unexplained fatal shallow dives. To quote Wikipedia:

When on approach to land, the pilot would push the stick forward to gain speed for the flare and landing. As speed built up, the rear wing, operating at a greater angle of attack would gain lift and pitch the aircraft's nose further downward. The pilot's normal reaction would be to pull back on the stick. This action would increase the angle of attack on the front wing by lowering the trailing edge of the wing. Because the trailing edge of the front wing was close to the leading edge of the rear wing, the front wing's downwash would accelerate the air over the rear wing and cause it to gain lift more quickly than the front wing, resulting in an ever increasing nose pitch-down and flight directly into the ground."

Mignet had not encountered this problem during his testing of his prototype, because he could not afford a

large horsepower engine. When builders started putting larger engines on them and expanding the flight envelope, the wing interference problem surfaced.

The Royal Aircraft Establishment in the United Kingdom and the French Air Ministry conducted full-scale wind tunnel tests, and discovered the problem. Their investigations resulted in changes to the airfoil used and the spacing of the wings to prevent aerodynamic interference. Later Mignet Flea designs incorporated these changes.



By 1939, there were many improved Flying Fleas in the air, but the aircraft never completely overcame its dangerous reputation.

The Flying Flea is making a bit of a comeback because the design has been sorted and it should now be considered a success. Let's face it, lots of aircraft have teething problems, but then I wouldn't have a Christmas Turkey article if I took too much notice of the facts!



### Republic XF-84H

The Republic XF-84H was an attempt to utilise the efficiency of a turboprop engine combined with a supersonic propeller. It was based on the existing F-84F jet fighter.

Although it was originally based on a proposal for the USN for an aircraft which could

operate off carriers without a catapult, it was picked up as a pure research concept by the U.S. Air Force.

The first flight showed the excellent acceleration that this configuration offered, but showed up a few other

issues. The engine took 30 minutes to warm up prior to flying (seriously!), and was notoriously unreliable. The vibration from the 12' propeller and prop shaft was horrendous, and the propeller pitch gearing had many failures. It snaked badly at 450 knots and was never flown over that speed.

The worst issue was the incredible amount of noise the thing generated. On a ground run up, the aircraft could be heard over 40 km away! The shock wave from the propeller was enough to knock a man over, and there is a story of a crew chief inside a nearby C-47 who was severely incapacitated during a 30 minute ground run by the XF-84H. It caused nausea and headaches for its ground crews, and has been attributed as the cause of a seizure for one Republic Engineer.

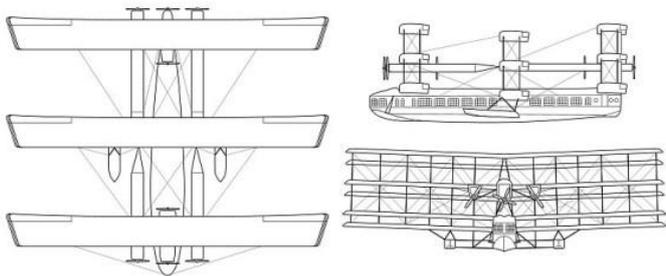
The vibration and noise problems seemed insurmountable and the research program eventually terminated. However, nothing is wasted: the "Thunderscheech" was the first aircraft fitted with a Ram Air Turbine (RAT) which is now common on a lot of Jet aircraft. Given how many times it was deployed, they had plenty of opportunities to develop this new safety feature. *Photos public domain, credited to the USAF via Wikicommons.*



### Caproni Ca.60 Transaereo

In the days when two wings were good, three wings were even better; somebody must have thought that nine wings was optimum! The aircraft was a large flying boat powered by 8x400hp Liberty engines, 3 at the front, 3 pushing at the back, and 1 each behind the leading set of wings and in front of the trailing set of wings. It was intended to be a 100 seat passenger aircraft.

First flight happened on March 2 (or perhaps February 12<sup>th</sup>, there's some doubt). It delivered the promised stability and there was high hopes for its future. However, it crashed on its second flight on March 4<sup>th</sup>. The aircraft pitched up, the tail started falling and the aircraft lost control. The tail hit the water and the nose slammed down, breaking it in two. It seems likely that the ballast sandbags had come loose and fallen to the

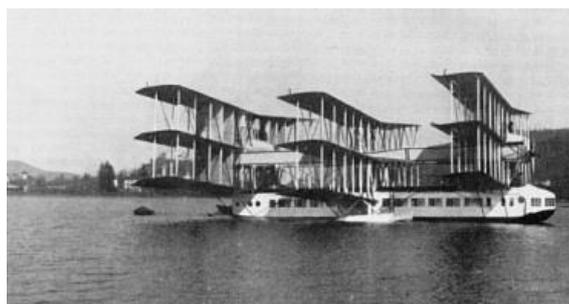


tail on the first pitch up, and the CofG had moved too far aft. Hardly a design fault, and again unfair to call it a turkey!

Giovanni Caproni continued his career as a successful aircraft designer, with many successful aeroplanes to his credit – including the amazing Campini N.1

### Zenair CH-701

Huge apologies to CH-701 owners and the Zenith aircraft company; this Aircraft was **not** a failure; it fulfilled all of its design criteria and is an aircraft I'd be happy and proud to own. I just snuck it in to see if you were reading this. Merry Christmas!



## URGENT Reminder

Don't forget to check your BFR expiry, RAAZ Membership, and Medical Declaration. Do it now!  
Remember you're not flying legally if any of these have expired.

### CRAC Christmas Party

Thanks to **John McCaul's** good organisational skills a very successful Christmas Party was held at Caesar's Bar and Restaurant in Belfast on Sunday. The food was top notch and the price was very reasonable, especially with the \$10 per head club subsidy. It all helps, this time of year. ☺

The raffle of the \$150 Pilot Shop voucher was won by **Stephen Field**, who had some kind words of advice for the less successful amongst us – "Tough luck", as I recall! It should be noted how generous Stephen and his wife is to the club, especially around the yearly fly-ins he hosts – we have to view the humour in context! A well-deserved win.

President **Mike Sheffield** made a brief and stirring speech, but I couldn't quite hear it completely. He announced that we now have over 200 members and are the largest club of our type in the country. Other than that it was a message to fly safely, and have a good Christmas. As I recall!

Other memories of the night are **Glenn and Vanessa Martin** competing with the children's quiz, and trying to dissuade my fellow club members from buying raffle tickets to increase my chances. Unsuccessfully. A good time was had by all; I'm amazed that we don't get more than a 22% turn out at these!







The last time a Messerschmitt bf 109 visited Warbirds Over Wanaka was in 1996. Here's Mark Hannah taxiing the G10 'Black 2' of the Messerschmitt foundation.  
Photographed on good old fashioned film!

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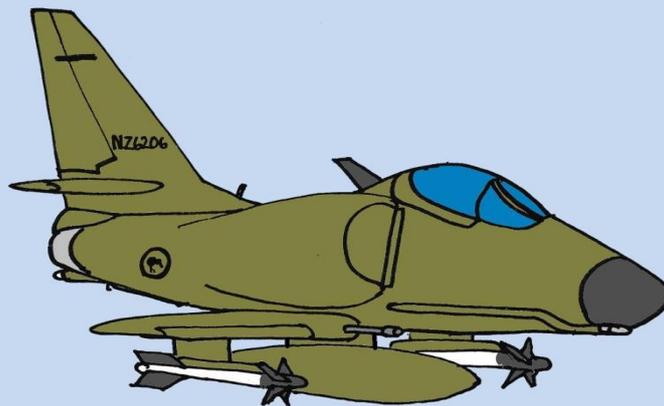
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[editor@crac.co.nz](mailto:editor@crac.co.nz) and we'll add you to  
the non-club mailing list.

## Upcoming Events

Nothing for the moment – we're all going  
on holiday! Keep your eye out for club e-  
mails though, events will be arranged at  
short notice.

*Disclaimer: This Magazine is prepared by  
dedicated enthusiasts; the opinions  
expressed herein are not to be taken as  
official club policy unless approved by the  
committee.*

### Contributions and Attributions

Glenn Martin, RAANZ AGM report & trip  
Deane Phillip, photos of same  
Mark Greenwood, Me109 G10 photo

RNZAF Museum and A4Skyhawk.org for  
the A-4 photos

Draken International for the recent A4  
images

[www.warbirdsoverwanaka.com](http://www.warbirdsoverwanaka.com) for the  
Buchon article

### Next Newsletter

Contributions requested, publishing  
deadline 8<sup>th</sup> February 2016 (No issue in  
January).

Brian Greenwood  
Editor ([editor@crac.co.nz](mailto:editor@crac.co.nz))

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## New Members

Welcome aboard to:

**Florin Predan**  
**Stuart Pain**  
**James Sullivan**  
**Ray Parsons**  
**Tosh Prodanov**  
**Scott Moody**

Please make our new friends  
welcome.

Congratulations to:

**Chris Anderson – IA Approval**

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