

KiwiFlyer™



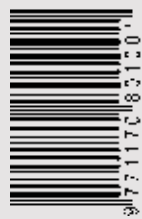
The New Zealand Aviators' Marketplace

Issue 10

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Warbirds Over Wanaka
NZ Open Helicopter Champs
Balloons Over Waikato

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From the Editor

Issue 10 of KiwiFlyer features Warbirds Over Wanaka coverage contributed by KiwiFlyer Correspondent Chris Gee. Chris had a marvellous time at Wanaka and has produced an excellent photo essay for readers. Aligned with the Warbirds Over Wanaka theme is an article by Frank Parker explaining just what it felt like to fire the guns on a P-40 Kittyhawk - a highlight of both the 2008 and 2010 events at Wanaka.

Events form a focus for this issue, with our coverage including Balloons Over Waikato, PilotExpo, the RAANZ fly-in at Stratford, the Around NZ Air Safari organised by Flying NZ and the NZ Open Helicopter Championships held recently at Whitianga. Our aviation scene seems to have exhausted itself to some degree - the Events Guide page has shrunk from a page and a half to less than a quarter of one page. Perhaps we're all too busy planning for future events next summer.

'The Future - Transforming Ideas into Actions' is the theme of this years Aviation Conference Week organised by the Aviation Industry Association. This annual event will be held at Palmerston North during the week of 26-30 July. Several aviation conferences run in series and parallel during the week, which will again include what is now a regular appearance by Bob Feerst presenting his seminar 'Flying in the Wire and Obstructive Environment'. A trade exhibition is also held during the week with the allocation of 60 stands almost fully subscribed already. The next issue of KiwiFlyer will include a Guide to the conference as well as being freely available to all delegates and visitors. Please contact us early if you wish to be included in this Guide.

In our last issue, we invited readers to contribute their ideas to help us improve KiwiFlyer in the future. Many readers contacted us and we are very grateful for the kind comments and thoughtful suggestions you offered. Eight lucky respondents were picked from a draw to receive free Warbirds Over Wanaka tickets. Some of your suggestions have already been put into place and in particular we now have a regular column on Places to Go. For this issue Ruth Presland has written about Te Anau Airport at Manapouri. Readers can expect to find further interesting new content in KiwiFlyer as 2010 progresses. As always, we welcome suggestions and especially contributions at any time. A rich variety of contributions makes the magazine better for everyone.

Best wishes for making the most of autumn flying.

Michael Norton
 Editor, KiwiFlyer Magazine

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In this issue

4. **Balloons Over Waikato**
 Full coverage of the recent Waikato Balloon Fiesta contributed by Balloonist and participating pilot, Pauline Hickey.
8. **Aircraft Painting with Aircraft Paint**
 We speak with Pacific Aero Coatings to learn what is different about aircraft paint.
10. **Palmerston North Power Player**
 A profile on Fieldair Holdings Limited, a company with a long NZ aviation history.
14. **Places to Go: Te Anau Airport**
 Ruth Presland begins a regular page on Places to Go. For this issue we visit Te Anau Airport at Manapouri.
15. **Before and Beyond your Engine Change**
 An engine change provides a wealth of opportunity for cost saving preventative maintenance. We find out what to look for.
16. **Shall we Safari ?**
 Tony Unwin tells his story of participation in the Around NZ Air Safari.
18. **The NZ Open Helicopter Champs**
 A pilots tale of competing in the recently held Heli Champs, contributed by Rachael Butler from Ardmore Helicopters.
22. **A 'Kitty' with Claws**
 An entertaining story from Frank Parker about setting up and firing the guns on the P-40 Kittyhawk at Warbirds Over Wanaka.
24. **Warbirds Over Wanaka 2010**
 Full coverage from Chris Gee over 6 pages.
33. **Making the Most of Combustion**
 A look inside Aeromotive's Cylinder Bay.
38. **Gliding Landouts**
 Landouts are a fact of life in gliding. Jill McCaw explains the process.
40. **An Interview with Otmar Birkner**
 We interview the man behind Autogyro Europe, a company producing a new aircraft every day of the week.
40. **Electric Motors versus Gas Engines**
 An enduring aero modelling debate explained by Janice Angus.
6. **Industry News Briefs**
12. **KiwiFlyer Event Guide**
34. **Accidents and Incidents**
42. **ZK Review**



Front Cover: Chris Gee took this picture of the only Lavochkin LA-9 flying in the world today, during its display at Warbirds Over Wanaka.

Balloons Over Waikato

BALLOONS Over Waikato is the second and most northern of a series of three New Zealand balloon fiestas held during the autumn months. This was the 10th year of the event under the Balloons Over Waikato banner with 27 balloons participating. 18 of these were from New Zealand, 6 were Australian and there were 3 shapes.

The five day fiesta started late on the afternoon of Tuesday 23rd March with registration of pilots and crew, followed by an Event Briefing which included the Hamilton Tower Manager, the Power Network Manager and the Flight Director. With Balloons Over Waikato being rescheduled forward a week or two ahead of the ideal weather (due to the car race), there are only five flying slots now instead of nine. This is due to the afternoons not being flyable at this time of the year and unfortunately restricted the normal plans to give rides to sponsors throughout the event.

Wednesday morning

At 6am we woke to mist and fog that grew deeper by 7am, as it came and went and came again, and was then followed by a low cloud ceiling of 1200 ft which closed the field for the morning. Balloons are VFR only unless a transponder is on board.

Thursday morning

The task for Thursday morning was Hare & Hound. The Hare balloon takes off 5 to 10 minutes before the Hounds which follow by mimicking the flight pattern or devising their own in order to ultimately drop their marker on the large cross laid out by the Hare balloon's crew.

It was an unusual morning weather-wise with some very strong gusts. Most of us had windy landings. Never the less several balloons scored on the target and as many more landed on the same farm making the landowner very happy with seven landing gift packs (a tradition in ballooning).



A total of 27 balloons participated in this years fiesta, with the mass ascension from Innes Common creating the usual superb photo opportunities. Hamilton's Lake Rotoroa is in the foreground.

Thursday afternoon

In the afternoon Balloonists visited various primary schools around Hamilton. My team went to Te Rapa Primary in the north of the city. The purpose of these visits is educational. We talk with the children about our sport, how a hot air balloon works/flys, and we explain about the equipment we carry on board – air com radio, retrieve radio, altimeter/variometer, the fan and of course the burner/s. I took up this part of the talk which was in the

Contributed by Pauline Hickey

school hall and explained what the crew were doing as they assembled the burner frame, I turned on the air com radio so they could hear the Tower talking with airport traffic and let them talk to each other on the retrieve radios. We then held a question & answer session with the children. If we had been outside, we would also have turned on the fan for them to feel the pressure as well as lighting up a burner.

Mathijs (the other pilot with me) showed the children his flight maps from around the world and explained about the PZ (prohibited zones) maps – height restriction and no landing areas, which usually comprise horse training, specialist farms, zoological parks and quarantine areas, before testing their balloon knowledge by asking them questions.

Friday morning

On Friday, we all make "out and about towns visits". We went to Morrinsville (30 minutes east of Hamilton) where we had a very nice light breeze launch from the local domain

with about ten other balloons (including the Jack 'n the Box balloon). After 45 minutes the wind came up. Cambridge and Ngaruawahia were too windy for flying so Balloonists there spent the time talking with locals at the launching sites.

Friday evening

Friday evening's event is the Burner Parade down the main street of Hamilton. This is where Balloonists decorate their baskets, burners and trailers like a float.

Local retailers participate by dressing up their shop windows and getting into the theme of the fiesta. Balloonists light up the streets at dusk with the very bright flame of the whisper burners. Flame rolling skills are demonstrated to send small balls of fire into the air. The local radio station acts as compare for the evening introducing each balloon team and congratulating the float winners on their achievement. This year, the Mushroom shape team won first prize, the Foxtale Fairies second prize and the MizFits were third.

Saturday morning

A fly-in task is held on Saturday morning, with Balloonists competing to grab cash from the top of a 20 foot high pole. The balloons were to launch from a location where the winds would take them close enough to the pole to be able to reach out from the basket and lift the bag from the top of the pole whilst observing the launch distance and location restrictions. Although many balloons boxed around the area close to the pole, no one was close enough on the day to take the money.

Saturday evening

The highlight of the week for many locals is the Night Glow held at Waikato University. Turnout for the event numbers in the tens of thousands.

The Night Glow Briefing is at 3pm and is run by the Night Glow Director (UK) and the Flight Director (NZ). We are told the order of the giant U shape that we will each be positioned in. And so that we know who is on either side of our balloon we are put into the U shape in the hotel lounge to meet our neighbouring pilots.

The Glow Director gives us the run

down on the music he has chosen and the burn patterns he is expecting from us – the plan being that the balloons glow in time to the music. We are also given a burn sheet (with the burn pattern information for our balloon) and a radio for receiving instructions from the Glow Director.

The plan is for all the balloons to cold inflate and stand up in unison and then

The Glow usually lasts 20 minutes and the theme of the tunes is often determined by the theme of the shapes. The whisper burner is used to make the envelope 'glow'. These use raw propane which creates a little less heat and a magnificent glow – pilots wear sun glasses to help prevent night blindness during the glow.

Once the glow is over, teams quickly drop/deflate their envelopes and pack up so that they might see some of the next part of the show – the fireworks display.

Then when all balloons are packed away into their trailers and tanks are on the truck for refueling, the teams go to a evening meal onsite while crowds disperse and the roads become active again.

Sunday morning

The last day included another fly-in task – the 'shortest distance double drop'.

Two V shapes on the ground with the narrow ends closest. ie: > < The pilot must drop a marker in each V shape. Unfortunately the fog arrived and came through in waves, some of them quite thick. Only a few pilots participated in this task as most balloons don't carry a transponder. Also, breakfast was waiting, followed by prize giving and pilot photos.

This final part of the five day event arrives all too soon as we say goodbye to some old and dear friends that we see just once a year, plus the new ones made this year.

BOW 2011

Thoughts are already turning towards Balloons Over Waikato 2011. You can follow progress on www.balloonsoverwaikato.com



Top: The Night Glow attracted tens of thousands of spectators. Lower left: Inflation by twilight. Lower right: Pilots operated their burners to make envelopes glow in time to music. Inset: The burner parade in Hamilton's main street. Local resident Anne Kalnins compared the fire in the evening sky to having mythical dragons on parade. Later, hundreds of ordinary balloons were released into the night sky, disappearing smartly in a strong breeze.

start to glow in unison. This can be rather difficult and requires each pilot to be really onto their timing due to differences in the size of envelopes (the fabric part). To accommodate this the Glow Director gives us a time to be cold inflated by and a time to stand up at, making it the pilots responsibility to be ready at the right time by knowing your own rig and crew capabilities.



Industry News Briefs

KiwiFlyer welcomes items of news from companies for this section of the magazine. Send us up to 150 words and a picture about newsworthy developments in your business for inclusion in the next issue.

Celebrating 60 years of serving the Aviation Industry in New Zealand

This year's Aviation Industry Conference Week which marks the 60th anniversary of the AIA, is to be held at Palmerston North Convention Centre, from 26-30 July.

The theme of the conference this year is 'The Future – Transforming Ideas into Actions'. "Aviation in New Zealand has come a long way since the AIA came into existence 60 years ago," says Irene King, CEO of the AIA, "and we are looking to celebrate what has been achieved in that time and also to look forward to the future of our industry."

This year's conference week will include the Second Annual Aviation Industry Education Symposium: Contemporary Issues in Aviation Education and Research, on 28/29th July. This is being run in conjunction with Massey University School of Aviation and the NZ branch of the Royal Aeronautical Society.

Also running during the week will be the Aircraft Engineering Association of NZ (AEANZ) and the New Zealand Helicopter Association (NZHA) conferences.

The 'Flying in the Wire and Obstructive Environment Course' will again be held during conference week presented by Utilities Aviation Specialists Inc. President Bob Feerst. "Statistics show that this course has had a direct impact on the reduction of wire strikes in New Zealand," says Irene, adding, "We are hoping that this year the CAA will join with us financially in supporting this major safety initiative which is clearly saving lives."

This year, the trade exhibition is bigger than ever before with 60 stands available during the week. At the time of printing 55 have already been booked, so contact AIA soon so as not to miss out.

"We have planned some special events to celebrate this year's conference," says Irene, "I suggest people book early to make sure they not only get the great package and accommodation discounts we have available but also to ensure they don't miss out on any of the interesting surprises we have in store for them."

For more information on the conference and to take advantage of some great offers, go to www.aia.org.nz/events or contact the AIA office on 04 472 2707.

Free iSpiderViewer now available

Spidertracks has launched an iPhone application called iSpiderViewer which is available as a free download from the iTunes app store. iSpiderViewer allows people to track their aircraft on their iPhones, making it even easier to watch over people and assets when on the go.



The application enables users to track multiple aircraft or vehicles showing the most recently updated position of the aircraft or vehicle in real-time as well as the full track, including take offs and landings. If the user has multiple spiders, they are ordered based on the date or time of their last track. Symbols indicate the spider's status and whether the aircraft is moving, is being monitored or if it has generated an emergency alert.

Spidertracks Marketing Manager Rachel Donald says the iPhone app. enables people to track their people and assets from anywhere. "Right from the beginning we made it easy for clients to see where their people or vehicles were by making tracks accessible over the internet from any PC. The iSpiderViewer takes that accessibility mobile. It means Operations Managers don't have to be glued to their PCs to carry out flight following and partners or friends can see exactly where their pilots are on their phones."

New staff at Oceania Aviation

Stuart Simmons has joined the team at Oceania Aviation after 3 years overseas. He will be known to many in the industry as a Bell component and Dunlop/Bell servo specialist. Oceania have also taken on a new trainee, Will Thomas, taking their component shop team number to five.

40 year celebrations at Evektor

Colin Marshall, NZ distributor for the Evektor SportStar advises that Evektor-Aerotechnik are this year celebrating 40 years of aircraft production. Commencing with gliders in 1970, the company is now one of the largest manufacturers of advanced UL and LSA airplanes with a fleet now numbering around the 1000 mark and being operated privately and by flight schools in more than 40 countries.

In 1994 the SportStar became the first aircraft type to be approved by the FAA in the US LSA category. At the upcoming Aero Friedrichshafen, Evektor will present a new luxury cockpit for their EuroStar and SportStar aircraft. The company is also involved as a sub contractor to the Ibis Ae 270 project, Aero Vodochody L-159 program and manufactures production jigs for the B747 auxiliary fuel tank program of Marshall Aerospace.

Current developments include a new single engine four seat airplane (the VUT100 Cobra) and a new generation twin engine turboprop airplane for transportation of 9 to 14 passengers (the EV-55 Outback). The EV-55 Outback performed its first engine test last December with an official rollout scheduled at the time of printing. For more info contact Colin Marshall on 03 312 5402.

Dynaero Twin under development

Samuel Adrian-Balley, NZ distributor for Dynaero says that Dynaero's new twin prototype, the Twin-R has been officially released. Powered by two Rotax 912ULS engines, the four seat aircraft is based on the airframe of the MCR-4S model. Landing gear will be fixed rather than retractable. The aircraft will have an empty weight of 990lbs and a MTOW of 1870lbs.

Major boost for NMIT School of Aviation

A \$1.2 million facility housing the Nelson Marlborough Institute of Technology's School of Aviation's administration team, three engineering workshops and two classrooms was officially opened by the Minister of Defence Dr Wayne Mapp in February.

NMIT School of Aviation head of

school Steve Holtum, said the new facility at Air Force Base Woodbourne has centralised the Aviation School and given it a modern independent identity.

The new NMIT building will also cater for both RNZAF and NMIT aviation engineering students. RNZAF engineering tradesmen will undertake NMIT's pre-trade



NMIT Aviation Head of School Steve Holtum speaking at the facility opening with NMIT CEO Tony Gray, Minister of Defence Dr Wayne Mapp and Director of RNZAF Training Group Captain Stephen Davies Howard

training fundamentals programme which prepares aircraft maintenance technicians for their advanced trade training.

NMIT also won a tender to jointly deliver a Diploma in Aeronautical Engineering – a technical management training programme to RNZAF Engineering Officers. The NMIT Aviation School demonstrated it could train potential aviation engineering tradesmen to the same standard, if not higher, as had been previously provided in Australia.

The two contracts have led to a doubling in aviation engineering student numbers to 160 a year and the number of fulltime tutors has increased by five to 20.

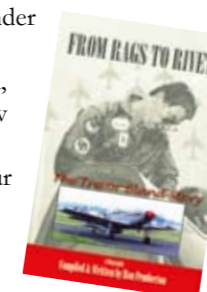
New TracPlus SHOUT launched

TracPlus Global has announced that it is shipping its latest handheld Iridium global tracking and messaging device, the SHOUT. "The SHOUT is the smallest and lightest portable Iridium tracking device available," said Mike Hanning, VP Sales and Marketing. The SHOUT incorporates two way global text messaging and an internal battery as standard.

In a further development for TracPlus, Airways Corporation have announced that owners of NZ registered aircraft can receive subsidised subscriptions for new satellite tracking devices. The offer will enable owners of ZK-registered aircraft to purchase a TracPlus portable SHOUT for US\$1295+gst. Airways will support the purchase by way of contributing US\$19.95 towards each month's subscription costs. The Airways subsidy can also be applied to any other new TracPlus terminal.

"Rags to Rivets" - Biography of Warbirds Founder Launched

Trevor Bland, founder of the New Zealand Warbirds organisation, is the subject of a new biography compiled and written over a four year period by fellow Warbirds member, Ron Pemberton. The book provides an in-depth analysis of Trevor's passion for flying, from his childhood days in Wellington - rushing out every time an aircraft flew overhead - through to his absolute dedication in establishing and



developing the Warbirds movement in NZ.

The story portrays Trevor's desire to succeed in his quest to join the RAF's Blue Diamond aerobatic team and to excel as a flight commander and combat tactician with the RNZAF A4 Skyhawk squadron.

'Rags to Rivets' retails at \$29.95 and can be obtained from the author at harvard1078@yahoo.co.nz, NZ Warbirds during office hours or online at www.flyingbooks.co.nz/books/trevorbland.php

New Jabiru Service Centre



Central Aero Engineering at Hamilton Airport have become the sole NZ Technical and Support Centre for Jabiru aircraft and engines. The appointment was made after Central Aero Director Paul Waterhouse visited the Australian Jabiru factory to certify the two Jabirus that Euro Flight at Tauranga recently imported. While there, Paul met with the full Jabiru team and completed an engines and airframes familiarisation course. It was also an opportunity for Paul to demonstrate Central Aero's skill base and history, particularly in regards to light sport aviation and engine maintenance.

Central Aero now offer NZ wide advice, support and assistance for any Jabiru product. If parts aren't already in stock they can generally be obtained within 2-3 days.

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Aircraft Painting with Aircraft Paint

A COMMON approach to painting an aircraft is to engage the services of a local spray painter. Whilst consideration will hopefully be given to appropriate engineering supervision during the job, the same can't always be said for the type of paint to be used. This is usually left up to the preference and experience of the painter, the result being that automotive paint is often the product of choice.

While, at least on metal and composite aircraft, there is nothing necessarily wrong with an automotive paint finish, there are several advantages to be had by specifying the use of aircraft paint instead. If there is an increased cost, it is easily outweighed by the long term benefits achieved. Or if the problem is one of reluctance on the part of the painter due to inexperience with the type of job or product, then advice and training are readily available.

Benefits of Aircraft Paint

Pacific Aero Coatings at Tauranga are the Asia Pacific Distributors for the FAA Certified Superflite range of aircraft covering and refinishing systems. Managed by aviation enthusiast, pilot, and qualified painter Kim Thompson, the company offers the full range of Superflite products. Pacific Aero Coatings specialises in aircraft painting and restoration, in close partnership with local engineering, fabric and when required, additional spray painting support services.

Kim cites many good reasons to specify the use of aircraft paint on your next refinishing project. Primarily these relate to surface flexibility, weight saving, and ease of repair.

Automotive paint finishes are brittle right from the start. They are usually applied in several layers of colour followed with additional clearcoats over the top. This works well on rigid car panels that aren't exposed to regular climate and pressure changes and where an extra 10kg won't matter. The same can't be said for aircraft where especially for light aircraft, the extra

weight really does matter and especially for larger aircraft, the climate changes the paint is exposed to are much more extreme. As well, vibration frequencies of aircraft skins often lead to early fatigue of the paint and surface cracking around rivets and skin joints.

Aircraft should be painted with a flexible paint that is finely ground with

deteriorating in any other way. The nature of the above application process (no clearcoats to change appearance over time or make colour matching difficult) is that a Superflite paint finish is also easy to repair if hangar rash or other maintenance issues occur.

Other benefits of Superflite paint systems include excellent resistance to chemicals, fuel spillage and bird droppings, as well as its state of the art UV protection in topcoats to prevent colour fading, and its long lasting durability.

Superflite Products

Superflite has been developing and manufacturing aircraft paint systems since 1949. The company began with a focus on fabric covered aircraft, producing traditional nitrate and butyrate products over Irish Linen and Grade A cotton. This butyrate dope system (known as System I) continues to be manufactured and developed today.

Superflite's background in manufacturing flexible paints for fabric refinishing, combined with new technology led the company to develop an all-urethane system which was certified in 1983 and is now known as System VI. Superflite's System VI has become extremely popular, particularly with kit builders, because of its 'easy application and gorgeous high-gloss finish'. All Superflite products are FAA-approved with STC's being available for most aircraft models.

Pacific Aero Coatings

Pacific Aero Coatings stock everything required for aircraft refinishing of fabric, composite or metal aircraft. Advice and the wisdom of experience are readily available, with Kim being part of the SAA mentor programme and running refinishing courses on an as required basis. Product is supplied to both trade and retail customers.

More recently, Kim is now offering customers the opportunity of full service



Jim Talbot's RV-7 was recently finished in Superflite paint from Pacific Aero Coatings and deservedly won the Grand Champion award at SportAvex this year.



L to R: Willie Johnstone, Jim Talbot (holding trophy) and Kim Thompson.

high build qualities in order that much less paint is required to achieve good coverage and depth. Kim notes that even though the Superflite products require just two topcoats, they can still be buffed and polished "to your hearts content" with a superb finish easily achieved. A paint that maintains flexibility is essential in order that the paint withstand climate and panel flexing stresses without cracking or

restorative work for those who want to bring an aircraft in and later "walk away with a top end job". If required this can also include the organisation (on behalf) of upholstery and perspex refurbishing work.

Proof of the exceptional standard of work on offer comes in the form of Jim Talbot's RV-7, recently crowned Grand Champion at SportAvex in February. Jim constructed the aircraft from a quick build kit in his spare time over four and a half years. When time came for painting, Jim contacted world renowned car painter Willie Johnstone in Tauranga. New to the Superflite System VI painting system, Willie worked closely with Kim throughout the



The camera doesn't do justice to the attention to detail in this paint finish. The stripe was painted onto the same prepared surface as the white and blue colours, to the same depth of paint finish. As a result, the surface is smooth with no ridgeline where the colours meet.

project to achieve an outstanding result for Jim. It's fair to say that Jim's own workmanship in constructing the aircraft was also of an exceptional standard and that the SportAvex award was very well deserved.

More Information

Kim is passionate about helping people achieve quality results in all aspects of aircraft refinishing. He is happy to show customers how to correctly apply the product so they can do it themselves if they want to. Alternately, customers are welcome to participate in the restoration work undertaken by Pacific Aero Coatings on their own aircraft. Quality is assured by Kim's approach of not cutting corners and his determination to only do the job "the right way". For information about Superflite products or any of Pacific Aero Coatings services, contact Kim by email: info@pacificero.coatings.com or phone 07 574 2922. www.pacificero.coatings.com



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Palmerston North Power Player

Fieldair Holdings Limited

Although most of the aviation industry knows the name of Fieldair, unless they are a regular customer, there are many who may not be aware of the full extent of the company's capabilities. KiwiFlyer recently spoke with General Manager of Fieldair Holdings, Charles Giliam to write this profile on a business with 50 years of New Zealand Aviation history behind it.

THIS SPECIALISED aviation group has grown quietly and confidently over the years and now handles a wide scope of activities. These include full MRO (Maintenance, Repair and Overhaul) aviation engineering, air freight and aviation design abilities. The company operates from bases in Palmerston North and Auckland as well as a line station in Christchurch.

Humble Beginnings

The original business was founded in 1951 by Lawson Field as one of the nation's first specialist aerial topdressing companies. Through sheer determination, dedication and pioneering spirit their fleet grew to an impressive 45 aircraft comprising both fixed and rotary wing. In November 1999 Fieldair Holdings Limited was acquired by the Freightways Group. Freightways is a leading provider of express package services and information management with a presence in Australia and New Zealand.

Riding on the wings of 50 years experience in the industry, Fieldair Holdings Limited encompasses three major companies. These are Fieldair Engineering Limited, Air Freight NZ Limited and NTech Limited.

Fieldair Engineering Limited

Easily their most visible commercial activity, Fieldair's engineering division employs more than 85 full time workers plying their trade on maintaining, overhauling, repairing and manufacturing aircraft parts and associated instruments. Most of these activities take place at their headquarters at Palmerston North International Airport. Their scope has increased tremendously over the years, and now includes:

- Convair CV 580/5800
- Airbus A320
- Boeing 737-300
- Cessna Caravan, 182
- Britten-Norman BN-2
- Diamond DA 40 & 42
- Piper Cherokee & Seneca
- and many more types of light aircraft.

Key customers include domestic cargo carrier Air Freight NZ, niche carriers Air Chatham's, Massey University's School of Aviation, air2there.com and the New Zealand Defence Force. In a year, Fieldair typically completes 5,800 jobs spanning all of its divisions.

Such was the demand for Fieldair's engineering services that this division has experienced a 54% increase in staff numbers in the last 8 years. One of their hangars was expanded recently to increase capacity.

Fieldair Engineering is certified for NZCAA Part 19F (Supply), Part 145 (Maintenance), Part 148 (Manufacturing); CASA CAR 30 (Heavy Aircraft) and AS/NZS ISO 9001:2008.

Fieldair's **Engine Repair Section** is able to overhaul a wide range of modern Continental and Lycoming engines and has



Fieldair Holdings Limited comprises divisions for Engineering Services, Air Freight, and Engineering Design and Technical Support.



A Fieldair staff photograph in front of Brendan Deere's Spitfire which some of the team recently worked on.



recently been accepted as an approved service centre (ASC) for Lycoming, one of only two in New Zealand. They also have the unique distinction of being one of the few firms able to overhaul radial engines in the world and also the only such firm in New Zealand.

The **Manufacturing Division** is able to build new airframe components and also repair damaged flight control components. They enjoy access to latest technologies and can cater to the needs of almost any customer.

The **Supply Division** is able to procure aeronautical spares and components in addition to supporting the company's own activities. They are also able to supply 'hard to source' parts to a fixed price.

The in-house **Instrument Services Department** is able to overhaul, repair and calibrate as well as offer full avionic and ELT installation and inspection for a wide range of general aviation, military, commercial fixed-wing and rotary aircraft. They have the honour of being the service centre for Artex and the Astronautics Corporation as well as also holding a very recent accreditation from Garmin Aerospace.

The **General Engineering Division** specialises in freight handling systems for road transport and short-term manufacturing contracts in steel and aluminium alloys.

Air Freight NZ Limited

Commencing operations in 1989, Air Freight NZ forms an air bridge between the North and South Islands. It has a fleet of four Convair 580 freighters and one Convair 5800 based in Auckland and Christchurch. The fleet maintains a weekday schedule undertaking night cargo flights between Auckland, Christchurch and Palmerston North.

On a daily basis the fleet shifts approximately 60 tonnes of freight, mail and most types of general cargo. The Convair's speed and capacity mean they are ideally suited to the operation and continue to be the aircraft of choice.

NTech Limited

NTech was formed in December 1992 and was acquired by Fieldair in 2005. Being an NZCAA Part 146 (design) organisation, this company's objective is to provide comprehensive engineering design services and technical support services to the aviation industry. Their customer base is both local and international, with design work extending from World War I fighters to modern composite commercial aircraft.



Summarising Success

General Manager Charles Giliam is proud to note that Fieldair's customers have always been satisfied with its performance. He quotes Craig Emeny (CEO of Air Chatham's) saying how happy they are with Fieldair's well rounded maintenance service, their quick response time, attention to detail, and their customer care and dedication.



Fieldair Engineering's scope covers a broad range of aircraft, from Air Freight NZ's Convairs through to Airbus A320, Boeing 737-300, Diamond DA40 and 42, Britten-Norman BN-2, plus a wide variety of light aircraft.

It is on these strengths that Fieldair strives to be the best it can possibly be across all divisions. Charles says that the company is more than happy to grow quietly and confidently whilst still

being able to deliver the best service possible for now and in the future. For more information, see contact details below.

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fieldair.co.nz

PilotExpo: The Director's Wrap

PilotExpo in March was well supported by exhibitors, the public, and thankfully this year, the weather. We asked Event Director Stuart Clumpas for his summary and plans for 2011.

NZ PILOTEXPO 3 opened at Ardmore Airport on March 12th and proved to

be another solid step forward for the event. With a notable lift in presentations by the Exhibitors from Event 2 last year, the show looks as good as any other on the planet. Of course New Zealand is not the USA or Europe, so we have to accept that we're not going to have the same kind of participation from the major manufacturers in terms of booths. Many aviation company's products though were very well represented by their NZ resellers.

That said, we are seeing the USA companies beginning to sit up and take note; Emil Pope, Regional Director for Honeywell made the trip down from Singapore and Avidyne Director of Sales and Marketing, Bill Schillhammer was scheduled to attend until a family bereavement forced him to return home.

The weather proved to be mixed but a number of pilots flew in mainly from the North Island. Many of the attendees came either by road or commercial transport, perhaps a reflection on the fact that with a changeable forecast people are not so keen to take to the skies. With almost half of the population within three hours drive of the airfield though, perhaps this isn't a surprise.

Event participants reported decent business throughout the two days and it seemed that many of the people who came had a purpose in mind and were looking to buy things for their aircraft. There were no official sales of new aircraft as far as we are aware, but there were a number of people who expressed serious interest. Over ten different manufacturers were represented,

including, Cessna, Cirrus, Piper and Tecnam, so there were a reasonable amount of aircraft to see.

This year the show took on a "Learn to Fly" aspect specifically aimed at enticing new entrants into recreational flying, as

opposed to trying to attract new recruits for the Airlines. By all accounts this was successful with many enquiries and potential new starts being reported by the six training organisations that attended.

So with Show 3 concluded, what's in store for the future? This is an appropriate time for us as Organisers to sit back, look at where we've come to and where we are going. There is no doubt that the show will not remain static as to move forward and be successful it does need to

continue to grow. So our focus is to attract new exhibitors and consequently more of you pilots out there to come and see what's going on. International respect and stature is starting to come our way and participation from companies themselves will obviously help. But we are a small market, albeit a market with one of the highest per capita use of aircraft. If we are to grow it will need the participation and commitment from all the vendors in the marketplace. The show now clearly has a committed core of both visitors and exhibitors who "get it" as it were. The challenge ahead is to try to get as many distributors and sellers in the NZ aviation marketplace as possible to commit to the show, and thus make it a "must be there" event for us all.

We have ideas to help that on its way, but are always pleased to receive feedback from others. Do feel free to email us on stuart@pilotexpo.co.nz if you have any ideas that you think may help us achieve our goals.



Scenes from PilotExpo 2010 at Ardmore in March.

Event Guide

April 31st - May 1st 2010

NZ Autogyro Association Fly-in

At Raglan. A variety of autogyros are expected for an Autumn fly-in at Raglan. Several two seat machines should be available for rides and introductory flights with instructors. Contact Lloyd Heslop 027 442 4500 or Tony Unwin 0800 359 249.

June 4th-7th 2010

NZ Women in Aviation

At Tauranga. A long weekend of flying and friendship to celebrate our 50 years. All former members please contact Judy Costello. Ph 09 292 4712, email raynjudy@actrix.co.nz

July 10th-12th 2010

AOPA Winter Fly-in

At Omarama. Details to follow on www.aopa.co.nz

July 26th-30th 2010

AIA Conference Week

At Palmerston North. Details on www.aia.org.nz/

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The 2010 RAANZ Fly-in at Stratford Contributed by Nick Furmage

The 2010 RAANZ National Fly-in was held at Stratford in March. Local pilot (of Jodel D-11 EDR), Nick Furmage contributed this report.

MARCH 19th through 21st saw planes of all types descend on Stratford for the 2010 RAANZ National Fly-in, this year hosted by the Stratford Aero Club Sport Flyers. The weather was perfect here in Taranaki, though elsewhere it was not. We had 32 aircraft attend from all points of the compass. The Tower (SAA Mobile Tower) was manned over the whole weekend by Ian Tonks and Nathan Rayner. They recorded 252 movements over the three days with no issues or incidents. All pilots were very appreciative of the information provided by these dedicated chaps.

The most epic journey was easily claimed by the two fellows who flew from Christchurch in their X-air Trike over a 10 hour odyssey. They overnights in Paraparaumu then set off from there at 10am on Friday morning. According to our Tower log, they landed at 1810 that evening. Reports had been coming in that the wind to the south was pretty fierce. On the trike that offered the opportunity of talking to people on the beach on the way up (they were walking faster...). It wasn't that warm further south either. We took these aviators under our wing so to speak as they were unable to make the trip back due to weather. They eventually returned home by commercial means and will be back to collect their trusty steed at some point.

The crowd during the fly-in was in the region of a thousand, give or take and the public were quite impressed with the variety of aircraft on display. The visit by Kevin Janes' black Yak was a highlight for many with of course a fine display by Kevin. Yours truly did the commentary over the three days as there is nothing worse than going to something like this when no-one engages the public. We also made life easy for visitors as Club members were decked out in Stratford Aero Club Sport Flyers shirts. This made us much more approachable to the general public and with the additional Air Training Corps (ATC) help at hand, any enquiries or questions were quickly resolved.

We had two Squadrons of ATC assisting, these being No.48 District of Stratford and No.8 City of New Plymouth, as well as assistance from the Army Cadet Corp. No.48 Squadron Unit Commander Julie Woods had the task of keeping them all busy. They basically helped wherever needed and assisted with competitions. This made the day a lot easier for everyone attending. With the help of visiting and local pilots we were able to get all the

cadets up for some air experience and are grateful to the pilots and cadets for giving their time and making the fly-in such a success. Thanks also to the ATC parents for an outstanding lunch on Saturday which was very well received by all present.

On a personal note my brother and his wife were over from Australia and both were impressed with the aircraft on display. He was quite taken with the Foxcom Terrier 200 ZK-MEG, so much

so that he's now thinking of getting his licence and purchasing a Terrier. The interesting part is that the aircraft is made in McKay Queensland which just happens to be where said bro lives. Can't get much more convenient than that. No doubt a visit to the factory will be made in due course to check it all out.

The Saturday dinner was slightly delayed due to a 'Hoon car incident'. The Stratford No.1 Sonarei Fighter wing was sent up to investigate and after locating said Hoon they opened up on him with a couple of salvos which looked very spectacular. On the second pass the said Hoon was despatched with a loud bang back to where he came from, his car looking somewhat worse for it. The Sonarei's returned victorious (you had to be there - it was a hoot). We then enjoyed a

fine meal of spit roasted lamb, venison sausages and salads, washed down with dessert and some fine ales.

Fog did delay things on all three days but made for a relaxed fly-in as it burned off pretty quickly and gave everyone time to have breakfast and check their machines out ready to start the flying day. We aimed for a friendly and relaxing fly-in and I think we achieved it. Most visitors also had the opportunity to venture out around the district and see the sites.

Prize giving went down well with Piper Sport ZK-SXY taking the Supreme Champion award and Sonarei ZK-SNW taking out the Reserve Champion place. The Ryan Memorial Trophy was awarded to the chaps from Christchurch and their X-Air Trike VTZ for an outstanding effort getting to Stratford. The landing competition was won by Glyn in Zenair 701 JLZ and from memory Feilding won the bombing and nav competition. I must apologise here as we lost the list at the dinner so this is all based on recollection.

These events don't just happen by themselves. It takes a lot of time, effort, generosity and goodwill to make a fly-in successful. As with most fly-ins, once the planes have headed for home, one can sit down and have a cold one and reflect on the event (we had a few cold ones) - and we concluded that everyone had a darn fine time. We couldn't have asked for more. Many thanks to all the people that helped out before, during and after the event.



Scenes from the 2010 RAANZ fly-in at Stratford. The X-Air Trike was flown all the way from Christchurch. Supreme Champion was Anton Meier's Piper Sport SXY.



Places to Go: Te Anau Airport at Manapouri

Contributed by Ruth Presland

HAVE YOU EVER thought about visiting Te Anau Airport at Manapouri? Here is some information to help plan a trip to one of the most spectacular regions in the south west of the South Island.

Firstly, pick your weather. You will find the best conditions will be when a large anticyclone is over southern New Zealand. At Manapouri the prevailing winds are from the west and north west, which can be fairly smooth flying. On good flying days, from about 4 pm, a southerly/sea breeze kicks in within the valley.

Getting there

As with any new destination, it pays to check your map in advance to help plan a smooth arrival. Have a close look for the aircraft reporting points. Familiarising yourself with these at your kitchen table will ensure an enjoyable and relaxed arrival to any airspace that you are not familiar with.

Shallow Bay is used by east bound traffic coming down Lake Manapouri. Balloon Loop is a prominent loop in the river 2NM east of Shallow Bay on your right, as you turn on to finals on 14. Kepler swamp is a large swamp situated off the threshold of 08 extending north to Te Anau. Hidden lakes refer to the small lakes 3 NM northwest of the township at the entrance to the first arm.

Traffic in and around Te Anau can be frequent and varied. Wings and Water operate a Cessna 206 float plane which is based at the Te Anau township water front. Helicopters also fly from there so keep a good look out and listen out on your radio. At the airport itself, traffic includes helicopter training, scenic flight operations and parachute jumping. With this in mind please keep to the circuit - the jumpers land on the lake side of the terminal. The parachute jump plane sometimes does tight low level turns onto 34 (on the lake side) so again keep a vigilant look out and make your intentions clear on the radio. Be careful not to let the awe inspiring scenery distract you from making your position reports in a timely and accurate fashion.

Also be aware there are other private strips in the vicinity, one of which can be busy with microlight training. This airstrip is 3.5 miles south of runway 14.



Clockwise from top: The award winning terminal building; Possibly the most scenic fuel installation in NZ; Hidden Lakes viewed from the local float plane.

A warm welcome awaits

There is a brand new aero club building currently being constructed and well on its way to being finished which will ensure a warm welcome to visiting pilots. A landing charge of \$15 is payable (and monitored by cameras) so please visit the award winning terminal and make your payment to save in administration fees.

You will find fuel at Te Anau Airport, Manapouri in the form of Avgas and Jet A1, which requires a Kaurilands card. BP avgas is also available at old Te Anau strip by arrangement, if you happen to get caught out. Don't forget to check the expiry date on your fuel card before you leave to save stress on your flying holiday! Also, pack your strong and sensible tie downs as permanent pickets are limited and the ground is hard and stoney.

Transport can be arranged by the airport staff at Manapouri, phone (03) 249 6720.

Places to stay

So you have made it - why not stay a day or three. Accommodation is available at both Manapouri and Te Anau townships and varies from holiday parks and motels

to hotel style. Te Anau is 20 km from the airport and Manapouri Township is 4 km from the airport. At Manapouri, for camping or cabins try Lakeview Motor camp. They have a range of accommodation for budget conscious flyers. Lake View Hotel has rooms or try the local B&B called Connemara which is owned by a pilot. They have cottages and a car available for visiting the surrounding area. Call Murray Hagen on (03) 249 9399 or (021) 220 7889.

Things to do

The places to visit are vast and varied for all interests. Try out the Milford Sound Glow worm caves, Manapouri or Doubtful Sound day trips, overnight trips, or Manapouri power station (which is highly recommended). If you have always wanted to fly in a float plane, Alan will cheerfully take you out. This is a real blast and you may well entice a few pilot yarns from him as well - Wings and Water, ph (03) 249 7405.

Before you leave take your own scenic flight over Lake Manapouri. Look for the monument on an island, south on the lake 4NM from the township. You could also fly over the Fiords, though some mountain flying training is then advisable. If you would like a local pilot to act as your guide, Ruth (me) or Wayne from www.mountainflyingnewzealand.com are only too happy to help out. Just let us know prior to your arrival.

For local advice, always ask. We'd much rather spend 10 minutes on the phone, than days looking for you! For local Te Anau - Manapouri advice call Russell Baker on 0274 343 008.

Have a great trip while you discover what this fantastic region has on offer. You will meet some wonderful locals, enjoy a warm welcome and experience what is the South Island's best kept secret: Te Anau Airport, Manapouri.

Useful contacts

Airport Manager email: qaosh@ihug.co.nz
 Airport Secretary: Lee (03) 249 6720,
 email: admin@airfiordland.com
 Aero Club President: Murray 021 220 7889

Before and Beyond your Engine Change

When the time comes to change an engine, there are many more considerations to make beyond the options of new versus exchange versus overhaul. A primary consideration is the choice of maintenance provider for carrying out the exchange and whether their philosophy and approach to the job is the best fit for your long-term (or short-term) ownership plans for the aircraft. KiwiFlyer recently spoke with Peter McCarty at Hawker Pacific Ardmore regarding the issues to consider and opportunities that are available to aircraft owners at engine change time.

THE FIRST option to consider for many operators is the lowest cost approach of a basic engine out, engine in, fly-away again deal. Hawker Pacific currently offer just such a deal for Lycoming and TCM engines (new, exchange or overhaul) purchased through them. Installations costs can be as low as \$2290+gst fly-away.

Making the most of the process

Of course, other necessary maintenance may be uncovered during the exchange process. As well as this though, Peter points out that an engine exchange is an ideal opportunity to undertake optional surrounding area work that can be done very economically while the engine is removed from the aircraft. This is a time to make the most of preventative maintenance opportunities and of caring for components that you wouldn't normally address until more serious (and costly) problems arise.

For example, evaluate the condition of the engine mounts/frame and mounting bolts, bearing in mind that these bolts are subject to the full thrust and torque of the engine. At the same time, closely inspect and address any corrosion on the firewall.

Evaluate the condition of oil, fuel and air lines. Older aircraft may have copper pressure lines that harden with time. A few extra dollars spent now while everything is accessible may pay a handsome dividend in avoiding a more difficult exercise later. Be aware too, that some mandated replacements may be required (Cessna 172 mixture and throttle cables for example). Consider also the condition of magneto and alternator wiring and shielding as well as whether this is a good chance to replace instrument senders, especially if they are known to give trouble over time. It may

also be worth taking a close look at the aircraft fuel system and flushing the tanks as a preventative maintenance measure.

Consideration should be given to overhauling baffle systems. It is a missed opportunity to fit a new engine and still have the same old cooling and heating problems. This is a time to address baffle integrity, corrosion (and erosion), and sealing, since it goes without saying that a well baffled engine will run cooler and

On the subject of performance, consider also the state of the propeller. The best performance return on your new engine will only be achieved if the propeller is in good condition.

Once the new engine is in, take appropriate post installation care by using specified running in oils, power settings and flight practices. If this and the above issues are adequately attended to, an engine change can facilitate extended component

life and reduced ongoing maintenance costs well beyond that achieved by the engine change alone.

Maintenance for the long term

Peter says that he is quite able to meet the needs of a customer who wants a quick engine swap and to fly away the next day. In fact, Peter recalls performing one such exchange on a beach with a hiab crane borrowed from the local power company. However, with a desire to see long term customer satisfaction from proper maintenance care and reduced ongoing costs, the quick swap

option is a little "against the grain".

The team at Hawker Pacific have a wealth of maintenance experience and can fit an engine to "anything we have sold it for". The advantage of their experience is that operators can expect good advice on preventative maintenance options, even if their preference remains for a "bare bones installation" at minimum cost. Peter says they are happy to accommodate the requirements of different owners and operators - private owners may well want to reduce cost in the short term, whereas commercial operators often need to reduce downtime and minimise long term costs.

For more information

As Lycoming and TCM resellers, Hawker Pacific are directly backed by the manufacturer and can fully administer factory warranties, spares requirements, and support programmes. Contact Hawker Pacific at Ardmore on 0800 429 722 and speak to Peter about the maintenance aspects of your engine change requirements, or to Tony for factory new, exchange and overhaul Lycoming and TCM engine pricing.
 Email: peter.mccarty@hawkerpacific.com or tony.marsters@hawkerpacific.com



There's much more to consider during an engine change than just the engine. Opportunities abound for preventative maintenance and future cost saving.

last longer. It is also good to pay particular attention to exhaust gas flows to ensure gases can't invade the cabin, and to revisit any repairs that might have previously been made to exhaust systems on the aircraft.

Review the state of engine cowls for wear, fretting and chafing, as well as all fasteners. It may well be worth taking advantage of any STCs available to rectify identified problems in this area since some such fittings can be quite inaccessible once the engine is back in. Also check the life remaining on ancillary components such as vacuum pumps, air conditioning units, alternator, etc. Replace belts and fit spares if desired.

Given the aircraft is having major maintenance, to help minimise future downtime it may be worth updating the ARA or avionics inspections if nearly due.

Especially for higher performance engines, give some thought to recalibrating some of the performance indicating gauges such as manifold pressure, fuel flow, oil pressure, cylinder temperature, etc. You don't want to base your engine health monitoring or new engine setup process on faulty readings and it is not uncommon for some older engine tachometers to under-read by 10 to 15%.

Shall we Safari ?

Contributed by Tony Unwin

On Tuesday 23rd March, the Around New Zealand Air Safari 2010 began at Ardmore. Over 10 days, participants weaved their way around New Zealand, to finish at Queenstown just in time for Warbirds Over Wanaka. Run by Flying NZ, in part to help attract new members to Aero Clubs around the country, this very well organised event received a great amount of local support everywhere it went. It also attracted a fair share of international interest, with pilots from Australia, England and Germany participating. Defined routes accommodated both GA and Vintage / Microlight aircraft of all types. One of the more unique (and unexpected) entries was Tony Unwin from Tauranga, who led a squadron of five autogyros on the event. Tony contributed this report on some much enjoyed aviating.

I HEARD ABOUT the plan to hold a 'Flying Safari' some six months before it happened although the organisers at FlyingNZ had been working on it for over two years. This is a big budget event for general aviation, with around 65 entries and 160 pilots and crew. Considering entry fees, accommodation, food, fuel, maps and merchandise, most participants (of two people and an aircraft) would have invested about \$6000 in these 10 days of adventure. More if you start in Perth!

I was probably naive when I asked around for interested friends to join me but eventually we ended up with five aircraft and seven team members (three from Germany) departing Tauranga for Ardmore on 22nd March for registration and inspection by the scrutineers. For weeks leading up to this point I had been emailing and faxing documents to and fro with the daunting figure of 'Mother Goose' who lives and breathes the event organisation. Being microlights and in particular open cockpit gyroplanes, it was going to be difficult to comply with all of the rules - the practicalities of map folding and even carrying a Vol 4 of the AIP needed to be considered in a tolerant light!

Checking In at Ardmore

With some trepidation we arrived at the check-in to be sat down in front of 'Mother Goose' to explain ourselves and show that our licences, medicals, insurance, permit to fly, maintenance documents etc. all matched the checklist we had been given. Then on to the 'Scrutineers' who needed to see the large Safari numbers correctly attached to each machine, not to mention the correct lifejackets and locator beacons, suitable

GPS and up to date navigation documents. Somehow we passed muster and could attend briefing for the event. 160 entrants gathered and the tensions were released by a bit of gospel style hand clapping and body swaying while various topgun exploits were performed on a large screen. 'Mother Goose' has a human side!

cut off the section up Ninety Mile beach and around Cape Reinga. With rain showers spoiling the view of the Bay of Islands we skirt down the coast before heading straight across to the top of the Coromandel Peninsular and a night stop at Whitianga. The local Aero Club laid on a meal in great style at the Airfield and we all relaxed with a beer and buffet in a warm atmosphere of camaraderie which became a feature of the days ahead.

Day Two dawned damp. To be honest it was pre-dawn and raining! We were in a back-packers hostel right on the beach and a good 20 minute jog into town. However some aviator's mum was running it and what a star she was, loading pilots in shifts into a small saloon and dropping them outside the local bakery. There was no hurry but briefing was scheduled for 7.30 as usual, so with muffin and take-away coffee we loaded onto the duty buses and headed to the airfield.

Our home patch in the Bay of Plenty was not where we expected weather issues, so when we heard the decision to scrap the programme for the day we kept a low profile and did our own thing. Five gyros hugged the coast and slipped into Pauanui for coffee and then over the pass to Thames and the Waikato with a plan on making Raglan. One look over the misty plain of Thames and we quickly executed a diversion back to Tauranga via the Waihi Gap to avoid a soaking from the incoming showers. The Aero Club again provided a meal and indeed a cooked breakfast next day in time for the 7.30 briefing. On to Taupo for lunch and (after some grief with weather) on to Gisborne for dinner and a night-stop. The gyros were again ahead of the pack and slipped through the gorge



Clockwise from top: 65 aircraft ready to go at Ardmore; The weather on Day One proved this Safari was not for the faint hearted; The crew of 16 can be an asset when checking over a Catalina; Lining up for food and fuel at a stop over; The gyro squadron; Trojan admirers and a Gisborne sunset.

Days One to Four

Day one started with what was to become a regular event, the 7.30 briefing. Not a brilliant day for flying and when we were asked to give our ETA at lunch to the nearest second we knew we were in the wrong league. 25 knots from the northwest was OK and we launched first keeping low along the coast below Whenuapai airspace before sliding into Parakai for a fuel top-up. This was a rare chance to uplift Mogas for our Rotax engines and we took all we could carry. Without delay we headed north for Kaitaia in formation, battling turbulence and headwinds over some huge forests. No drama and we arrive in time to join the 60 other aircraft for lunch, refuel and briefing.

After a welcome break we look at the schedule for the afternoon and decide to

from Opotiki into a lovely East Coast evening which produced a glorious sunset.

Day four started well with the main pack on task, but we enjoyed a fantastic scenic tour of the coast in glorious weather. Lunch was at Hastings with the usual Aero Club hospitality and then more competitive events for the afternoon. We tucked down to Dannevirke and on to rejoin the group at Masterton just as the Catalina was touching down. This team was different, sixteen on board the aircraft all intent on ensuring a high level of social activity was enjoyed throughout!

A rest day and some wind

A rest day was scheduled in Masterton but we were honoured to be invited to the 80th Anniversary of the Wellington Aero Club. Up and away with a warning of a windy Wellington arrival. Yeah right! The northwest flow at 35 knots turned the journey into an epic with white caps on the waves and white knuckles on the stick, the ground speed varied from something over 70kts to 22kts as we turned towards finals. The gyros handled it brilliantly as did Air Traffic Control. We were delighted to appear on TV and radio and threw in an impromptu demo flight for good measure.

To the South Island

Next day it was more of the same as we crossed Cook Strait for Otago and a tour of their great heritage display. The lunch stop at Motueka had to be scrapped due to low cloud in the sounds and the Aero Club there had some 160 meals available for the crowds who were awaiting us! The very few who did make it there however, had a marvellous time!

On to the South; we tracked via Kaikora to Rangiora for lunch and then Ashburton and Rangitata Island to Timaru. The Safari proper were navigating to the second and identifying features and photographic landmarks with great skill. Many teams had surprised themselves with their own

abilities to complete the 'navigation to the second' challenges and were now putting great effort into what was becoming an intense competition - the aces of the Airforce were being hard pushed by mere civilians!

Timaru offered another much needed rest day and then on via the hinterland towards Invercargill. We were overtaken through the McKenzie pass but by staying low kept safe from the high speed metal above. Once, the shape of a Trojan flashed by but radio reporting worked well and separation was not an issue. I had in mind to offer a gyro flight to Gavin Wills who is CFI at the Omarama gliding field which worked out well. This ride had been promised two years earlier when we were displaying at Wanaka.

Racing with the weather

The arrival at Invercargill was a race against rain and the Safari won. The next day however, went to the weather and we had to abandon the aircraft and continue to Mandeville and Queenstown by bus. What a treat there is at Mandeville. The collection of de Havilland aircraft displayed in pristine condition and the restoration workshops are

unbelievable. Can this really be happening on a lonely rock in the middle of the South Pacific?

Celebrations at Queenstown

With low cloud brushing the roof of the bus we pass a Tecnam pilot wishing he had come by road with us - shortly afterwards he completed a precautionary landing! To collect the aircraft we bussed back to Invercargill and enjoyed an interesting flight up the Clutha River to Alexandra, on over the Roaring Meg pass, down the valley past the famous bungy bridge and then slipped in behind a departing Boeing to yet another warm welcome at Queenstown.

Dinner and prize giving happened in style, with a great celebration as the team from our local Tauranga Aero Club proved victorious!!



The Club President briefs crews on the Wellington Aero Club's 80th anniversary celebrations.



A Gyrate Eagle gyro on climbout from Wellington Airport despite 35kts from the northwest.



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The NZ Open Heli Champs

Contributed by Rachael Butler

On 10th April, the 6th annual NZ Open Helicopter Championship was held at Whitianga Airfield in conjunction with the Whitianga Festival of Speed. The event is run by Roy Crane of North Shore Helicopter Training along with an organising committee that this year included Tony Johnson (a past manager for the British team at the World Helicopter Championships and also an organiser for the British Helicopter Championship events). Tony now resides in NZ and was a key to the event's success this year, through writing new rules and scoring templates and managing the event on the day. Rachael Butler, an Instructor with Ardmore Helicopters participated in the event and contributed this report from a competitor's viewpoint.

PERHAPS THE first thing to make clear to readers and potential new participants is that the Heli Champs is not a competition for New Zealand's top pilots (although we would all like to think we were). People who are pre-PPLs right through to pilots with several thousand hours enter and although you get some very competitive teams, mostly it's just a fun day out for all.

This year 12 teams from around the North Island entered with aircraft that included a couple of H300s, H500, R22s, a handful of R44s, a couple of Jet Rangers and two home built Safaris. The day started with an 8am formation flight around Whitianga led by, of all things, a plane (Beaver) and the Auckland Rescue helicopter. From the view we had at the back of the 'formation' it was lucky points weren't being awarded for this flight. The formation flight was followed by a pilot briefing where all pilots and their navigators/co-pilots huddled around the Master Clock setting their watches to the second. It was important that all watches were exactly right because there were harsh penalties for every second you were either early or late for each event.

Navigation Under Pressure

At 9.05 the first team was due at the Navigation exercise Preparation Line but unfortunately for them (and fortunately for us - recall I said that some teams were competitive) they were late. On this exercise we were handed an envelope precisely five minutes before our allocated takeoff time. The envelope contained a section of a 1:250,000 chart and a list of tasks to complete within a certain time. Timing was everything. For example if you were more than three minutes late back to the finish line you lost all your points for the exercise. The tasks included finding several grid references and answering questions

at each grid reference. For example, what type of business is located at grid reference xxx or what is the colour of the house at grid reference xxx. Although this may



Opening bottles with an opener attached to the skid proved near to impossible for anyone who hadn't already been practising at home.



Precision Flying required that one chain (attached to the skids) remained off the ground and the other stayed on the ground, while traversing a marked course.

sound easy, trust me when I say that when you have only five minutes to read the instructions, have a minor 'domestic' with your pilot/co-pilot regarding how to plot a grid reference and then have to find them all whilst at the same time 'discussing' the accuracy of the flying versus the course plotting, the exercise isn't as easy as it first appears. By the way, GPS units were not allowed.

One of the points to find on the NavEx was Matarangi airfield where we picked up three bags of rice and a bowling skittle

attached to a rope. Once back at Whitianga we had to drop the rice bombs into barrels while maintaining forward flight and at a height no lower than 15metres (this is where the larger helicopters were at a disadvantage because the larger downwash blew the rice bombs away - well, that was my excuse for missing the barrels and I'm sticking to it!). The reason for the bowling skittle? - The final part of the Navex involved lowering the skittle into a so called 'Dog House' - a 30cm square hole. Once again heavy penalties were incurred if you missed the dog house or let the skittle touch the sides of the box.

The Bottle Opener

While teams compared notes about the Nav exercise and whether the business at a given grid reference was a sewage treatment plant or dairy farm, the next event (which was optional) involved opening bottles of beer with a bottle opener attached to the skid. This event takes some real precision flying and a steady hand, which is not that easy when you have the TV cameras filming you. While this was going on we enjoyed a lunch of ham and chicken sandwiches, as well as soup and drinks that were kindly put on by Bill Beard of Avsure.

Precision Flying

The next event was Precision Flying. This involved two chains being attached to the skids - one 2m long and the other 3m long. The objective was to fly around a course (comprised of a square with a 1 metre corridor) keeping the long chain within the corridor and in contact with the ground, but ensuring the short chain remained off the ground. While doing this we also had to make a couple of 360 degree turns, one clockwise and the other anti clockwise (get the directions wrong and you lost points). This was a timed event and once again harsh penalties were incurred if you were either too fast

or too slow. As with the other events there appeared to be two schools of thought on how to approach it. One was "who cares if it looks pretty, lets just get to the finish line on time so we don't get time penalties" so these guys flew the course strictly to time, and if the long chain got anywhere near the ground then that was just a bonus. The other school of thought was "let's go for accuracy".

Here's a tip for any of you thinking about competing next year - you lose more points in time penalties than anything else, so the teams that flew accurately by keeping the long chain in contact with the ground within the 1m corridor and did their 360 turns in the right direction didn't get many points because they all took too long. Next year I'm not going to care quite so much about what the long and short chains are doing and whether my turns are clockwise, anticlockwise or in fact done at all; I'm switching to the "who cares if it looks pretty, lets just get to the finish line on time" group.

The Slalom

The third compulsory event was the Slalom. Once again we were glad we weren't the first team to go as it gave us a chance to get some tips from the first teams through the course. This event involved lifting a bucket of water (attached to the co-pilot) and manoeuvring it through, around and into a series of obstacles. The goal was to pass the bucket through all the obstacles without knocking any of them over and placing it onto a bullseye painted on a table. The tricky part about this event is that the pilot can't see where the bucket is in relation to the obstacles and is solely reliant on the co-pilot telling him/her where to position the helicopter. The team with the least time penalties, the most obstacles still

standing and the most water left in the bucket won.

The fourth and final event was the Fender. This involved a boat fender attached to a rope (once again attached to the co-pilot whose arms were getting a bit tired by this stage). The rope had three marks on it and the goal was to place the fender into one barrel, the co-pilot then extended rope to the next mark while instructing the pilot on how much to climb before re-positioning to place the fender into the next barrel etc. This event was also a good communication test as, just like the Slalom, the fender was not visible from the pilot's side.

The winners

While the points were being tallied we all enjoyed refreshments and started scheming on how we could win next year. Congratulations to the overall event winner who was Alan Coubray and Glen Mulcahy flying a Safari. Second place went to Mike Southward and Rachel Erikson flying a R22 and third were John Carter and Russell Pemberton in a R44. Mike Southward also took out the bottle opening competition with a NZ record of 8 bottles in 5 minutes. (Mike kindly supplied a lot of the equipment for the event and quite possibly acquired some useful practice in using it first!). Our Ardmore Helicopters teams claimed fifth, sixth and seventh places.

The Heli Champs is a great event and I

thoroughly recommend it. It is a chance to meet pilots from around the country and do things that you wouldn't normally get to do. A big thank you to Roy Crane, Tony Johnson, Hamish Macleod and Simon Tompkins for organising and running the event. Ardmore Helicopters will definitely be back next year.



Passing through an obstacle on the slalom event. The bucket of water is 'steered' by the co-pilot.



Buckets also had to be passed through this gate. Points are deducted for lost time and spilled water.



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Royal Aeronautical Society recognises Massey University personnel

THE ROYAL Aeronautical Society recognised two Massey University School of Aviation personnel during March.

Michael J. Neville / Boeing Airplane Company Award

This is "awarded to a young person in employment in aviation within New Zealand who demonstrates excellence in work ethics, values, application and results; and has the firm and appropriate intention for further study or learning."

This year the award went to School of Aviation staff member **Michael MacNeil**. Michael is a 'B' category Flight Instructor.

He graduated with a Bachelor of Aviation (BAV) in 2007, having achieved an 'A' grade point average and having previously been awarded the Palmerston North Airport Professionalism Award.

Michael was also the project officer for the Spidertracks flight tracking and following system, assisting in drafting the SOPs and then introducing Spidertracks to the School.

He assists as a member of the BAV Selection Panel and has recently been

authorised to conduct flight examining for some of the in-house university flight tests that student pilots are required to undergo.



Royal Aeronautical Society Vice President Gerard Robertson presents School of Aviation staff member Michael MacNeil with his award.

Sir Geoffrey Roberts Award

This is "awarded to any young person who is a New Zealand citizen and who has the firm intention of following a career in civil aviation in New Zealand."

This year the award went to School of Aviation student **Christopher Head**. Chris entered the School of Aviation

in 2007 having previously graduated from Canterbury University in 2003 with a Bachelor of Music with Honours BMus(Hons), followed by a Diploma in Teaching at Christchurch Teachers College. In 2009, having gained his CPL and multi-engine instrument rating he was presented with his pilot's "wings".

Chris was also awarded the Airways Corporation Academic Award for achieving the highest grade point average on his course as well as the Feildair Engineering Limited Aviation Systems Award presented to the student who achieved excellence in the field of aviation systems and demonstrated the highest level of enquiry about aircraft systems and their operation.

In 2010, Chris is completing the Massey University Flight Instructors Course which will then complete his BAV degree. Chris adds to his overall understanding of the aviation industry by assisting in the School's Flight Centre, acting as an Operations Assistant, an aircraft refueller, an aircraft cleaner and assisting the Maintenance Controller in completing aircraft records and ordering parts.

Massey University School of Aviation "Massey 54" Cohort

37 BUDDING PILOTS recently joined the Massey University School of Aviation on January 22nd. A highlight for these students will be training on the new Diamond DA 40 and DA 42 aircraft.

The School of Aviation's academic programme has been adapted to reflect these new aircraft. Features of the revamped degree include a focus on scenario based training and at the end of the flight training phase, a multi-crew coordination training module.

Several of the new cohort had already achieved success at the end of their High School careers by gaining the recognition of scholarship awards.

These students included: Hamish Watchman from Palmerston North, awarded a Massey University High Achiever Scholarship (Academic); Zacharay Topping from Levin awarded a Massey University High Achiever Scholarship (Sport); Ryan Hellier from Auckland awarded the Campus Living Villages NZ national scholarship; and Jeremy Wilson from Christchurch who was one of only 4 students selected for the 2009 RNZAF Scholarship for ATC cadets.



Hamish Watchman (High Achiever Scholarship)



Zacharay Topping (High Achiever Scholarship)



Ryan Hellier (Campus Living Villages NZ National Scholarship)



Jeremy Wilson (RNZAF Scholarship for ATC Cadets)



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A 'Kitty' with Claws

Contributed by Frank Parker

ONE OF THE highlights at Warbirds Over Wanaka this year was a repeat of a P-40 Kittyhawk live firing (albeit with blank ammunition) its 50 calibre machine guns. This was the culmination of considerable effort and foresight, some of it from many years ago.

It is worth remembering that the World War II era fighters we admire today are in fact weapons systems. The whole reason for these wonderful aircraft was to shoot guns or drop bombs; the aircraft, although an integral and important part of the overall result, was toothless without its armament.

How did this come about at Wanaka. Firstly the aircraft: This particular Kittyhawk (a model P-40 N-1) was constructed in 1943 by Curtiss Aircraft Company and delivered to the RAAF where it was allocated to No.75 Squadron. Following a landing accident in 1944 it was removed from service and languished at the abandoned Tadjji Airfield until it was recovered by an expedition led by Charles Darby in the mid 1970's. Fast forward another 20 years and the aircraft was then rebuilt by Pioneer Aero Restorations for Charles and Garth Hogan. At this stage the wings were rebuilt to accommodate the weapons systems with a mind to future fitment.

For Warbirds Over Wanaka 2008 Garth went through the process to fit and fire the weapons. Obviously an approach to the local Police Arms Office where you then suggest you wish to fire some machine guns from your aeroplane is not received lightly. It is however, permissible as a Historical

technician 'Gunner' (what other nickname would be appropriate) Ashford who served his time as an armourer with the RNZAF on No.75 Squadron Skyhawks.

Then the day for a test arrived. This was also a challenge as the guns had to be 'choked' to provide the correct back-

pressure to operate the mechanism and several attempts were required to fine tune.

And so the big question: What's it like to fire a machine gun from a WW II fighter. If only the answer was as simple as the question. It is obviously a great privilege to pull the trigger for the first time in 66 years

on this particular aircraft. It quickly reminds you what

this aeroplane is all about. It is a weapon. It was made to destroy things. In the cockpit first up is the checklist; area safe, armament master 'ON', gun solenoid 'ON', fly the aircraft into position, squeeze the trigger. Then straight from the war comics, rat-a-tat-tat. With a cyclic fire rate of 700+ rounds per minute (times six guns) you only use short 1-2 second bursts as in fact a full load of ammunition is less than 30 seconds firing. Because the gun mechanism absorbs most of the recoil as it reloads there is not a lot of 'rattle and shake' when the guns fire, though from the noise of the gun mechanism and report of the rounds firing it is obvious there is a lot of action

Re-enactment. Indeed this is the provision used by 'Warhorse' and other re-enactment groups at various venues.

In the case of the P-40 there was a further consideration as the spent cartridge shells are ejected from the aircraft. This required acceptance from CAA under the requirements of 'dropping articles from aircraft' and was only possible after a risk analysis of where the cartridges would fall, consideration of ricochet (or is that bounce) patterns and appropriate safety factoring for the crowd line.

Once this was cleared there was the task of fitting and checking the armament. This was completed by professional armaments



With flashes of fire spurting half a metre from the gun muzzles and spent cartridge shells pouring from the wings at a rate of 4200 rounds per minute, Frank Parker makes a low pass at Warbirds Over Wanaka with his finger on the trigger. Firing the guns on the Kittyhawk was a highlight for many at Wanaka. Gavin Conroy picture.



One of six Browning M-2 50 calibre machine guns.



At 700 rounds per minute, per gun, what looks like a lot of ammunition doesn't actually last very long.



Three guns in place and ready for business. Note the spaces in the hinged panel for spent cartridge shells etc. to fall through.

going on. Look out on the wing leading edge and you are in no doubt as the guns 'spurt' flashes half a metre from the muzzle as they fire..... YA HOO (and that has nothing to do with web searches !!)

The guns are Browning M-2 50 calibre machine guns and the bullets are half inch or approx 13 mm (for younger readers) in diameter. This weapon can trace its roots to the Browning Model 1917 machine gun of WW I. The basic design is still manufactured today. For further information Google 'Browning Machine Gun' and waste an afternoon !

The P-40 N-1 (ZK-CAG) is fitted with six 50 calibre guns. For its time this was awesome 'stopping power' and although the P-40 never made it as a fighter in WWII it was well acknowledged as a ground attack aircraft in the African, Pacific, Italian and Russian Campaigns.

And so at Wanaka this year I was the guy who got to 'squeeze' that trigger - sometimes you get lucky. However it is important to acknowledge all those who made this possible; Charles Darby who recovered the wreck and the armaments from the wastes of PNG, Garth Hogan who rebuilt the aircraft with the foresight to provide for a functioning armament fit, the engineers, the armourers, and of course the aircraft's current owners. Cheers, FP.



Finding oneself lined up in these sights was not a good place to have been.

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Warbirds Over Wanaka 2010 Contributed by Chris Gee

SINCE ITS humble inception as a country fair by legendary aviation and business entrepreneur Sir Tim Wallis in 1988, The Warbirds Over Wanaka airshow has grown into the nation's major aviation event. This year more than 65000 visitors flocked to Wanaka Airport from all over the world to witness what must be one of the world's most unique boutique airshows.

Held at Easter every two years, the airshow is (since 2006) run by the Warbirds Over Wanaka Community Trust which was established to help ensure the legacy and vision of Sir Tim. The airshow brings millions of dollars worth of business into the Wanaka region and has become famous the world over as a "must-see" event.

Despite everything the region and the airshow (including trade

fair, wine and food festival, classic cars and more) have to offer, it will always be the fantastic array of rare Warbirds and classic aircraft that remain the centre of attention. From graceful pre-war bi-planes to thundering modern fast jets, Warbirds Over Wanaka will always have something to excite the nerves and bring back memories of times long gone.

The finale on Sunday was nothing short of spectacular, culminating in a massive airfield attack, with The Warhorses moving in to defend the airfield as multitudes of aircraft made their attack runs supported by pyrotechnics. The Harvard's, Spitfire, Corsair, Kittyhawks, Zero, LA-9, Yak-3M and Mustangs all flew together in what certainly looked, sounded and smelled like the real thing.



A6M3 Zero: One of the star attractions this year was the Mitsubishi A6M3 Zero from the Monica Museum of Flying in Southern California, arriving via an ocean journey from Long Beach to Tauranga, then a multi stop ferry flight to Wanaka. One of only three examples still flying today, this was the second visit to New Zealand by a Zero, the other example is still located at the Auckland Museum. Powered by a Pratt and Whitney R1830 Engine the Zero was flown by Col. Stephen W. Barber and Col. Jason Somes to spectacular effect, with many low passes and engagements with the Allied Warbirds. The Zero flew in a number of re-enactment scenarios, including the Pacific Campaign of WWII where she was chased down by two Kittyhawks and the Corsair.



LA-9: (left) This Lavochkin LA-9 is the only example flying in the world today and was a key part of what made this airshow unique. Beautifully restored by Pioneer Aero Restorations in 2003, this LA-9 was luckily able to fly once again after a new propeller was fitted at Wanaka. The LA-9 first entered production in 1946 and was flown by the Soviet Union, China, Romania and North Korea. There are only four other airframes in existence, located in museums around Asia. The LA-9 was shown off in some fantastic displays by John Lamont. Unfortunately this was the last display of the LA-9 in NZ before heading to its new home at Virginia Beach, USA. The aircraft is already back at Pioneer Aero Restorations for disassembly and shipping.

MkIX Spitfire: (right) The Supermarine MkIX Spitfire is perhaps the most famous of the Warbirds and was flown this year by Sean Perrett and John Lanham. This Spitfire is owned by the family of renowned Kiwi fighter pilot Alan Deere and is the first restored in New Zealand. It formed the lead to the 'Finale' of the show where thanks were given to all the veterans. A real highlight was the Commemoration of "The Forgotten Campaign" of Burma, where the Spitfire and Zero flew together.



FG-1D Corsair: One of the most potent carrier-capable aircraft of WWII, this ex-RNZAF Goodyear FG-1D Corsair flown by Keith Skilling, has both a unique look and sound. Its distinctive "bent" wings were designed to keep the landing gear short and robust for carrier landings and give clearance for the enormous 13' 4" diameter propeller that gave it a speed of over 400 MPH. Despite its 2000hp Pratt and Whitney radial engine, the Corsair has a reasonably quiet, deep sound and as it flew overhead some well-timed breaks in the commentary reminded us as to how this aircraft got the nickname "Whispering Death" from the Japanese.



P-40 Kittyhawk: (above) There were two Curtis P-40 Kittyhawks flying together this year, with one of them performing a 'live-firing' of its six .50cal machine guns against the Zero during the re-enactment of the Pacific Campaign. Flown by Frank Parker, the P-40 fired its guns while passing in front of the crowd at over 240mph. Warbirds Over Wanaka is the only Airshow in the world where live ammunition (they were blanks) is fired from a classic flying machine and this added an exciting touch to what was already an exhilarating flying display. (See the 'Kitty with Claws' article on page 22).



Yak-3M: (above) Owned and flown by Arthur Dovey, the Yakovlev Yak-3M was the smallest and lightest combat fighter of WWII. This example was modified from a Yak-11 Trainer to Yak-3M Fighter in Russia before being finished by Pioneer Aero Restorations in Auckland. During WWII the Yak-3 proved more than a match for the Luftwaffe FW-190 and ME-109, and an order was sent to avoid engaging them at low altitudes.



P-51D Mustang: Flown by Graham Bethell and Robert Borrius-Broek, the two North American P51D Mustangs opened each days flying and proved to be a great crowd pleaser. P51D's flew duo and solo displays along with formation displays with the Vampire and L-39. Often cited with turning the tide of the war with their ability to escort the Allied bombers all the way to Berlin, the Mustangs range, versatility and Packard-Merlin engines made them into one of the most legendary Warbirds flying today. One example is painted in the colours of the Canterbury Territorial Air Force.



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Jurgis Kairys: 2010 marked the welcome return of “The Mad Lithuanian” Jurgis Kairys to Warbirds Over Wanaka. The multi-award winning World Freestyle Aerobatic Champion loves performing here at Wanaka and really pulled all of his tricks out of the bag this time. Along with some breathtaking aerobatics and supported by pyrotechnics he flew threw a smoke ring, barrel-rolled around a C-47, raced against cars and wrote his signature “J” in the air with smoke while spinning seemingly out of control in the sky.



KiwiFlyer’s Wanaka Correspondent Chris Gee, interviewed both Jurgis and Peggy during their visit to Wanaka. Look out for his reports in our June/July issue.

Peggy Krainz: Wingwalker Peggy Krainz and Pilot Friedrich “Friedel” Walentin brought their Boeing Stearman all the way from Stuttgart in Germany to perform at Wanaka. Their display proved to be a major highlight of the airshow, with Peggy’s death-defying transition out of the cockpit and onto the top of the wing, then out onto the wing itself, accompanied with Peggy’s choreographed dance moves and Friedel’s graceful aerobatics.

Sir Tim Wallis and Brian Hore beside Dave Hughes’ replica of ‘Miss Torque’, the newest Titan T-51 Mustang from Campbell Aviation. Readers may remember the original P-51 ‘Miss Torque’ owned by Sir Tim and Brian Hore which spent many years in the Wanaka area. The aircraft provided a walk down memory lane for Brian and Sir Tim with Brian commenting that the cockpit “felt just like the original”.



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F/A-18 Hornets: For many it was the four Boeing F/A-18 Hornets from 3 SQN RAAF that stole the show, performing tight four-ship formation flypasts and mock ‘pop-up’ airfield attacks, launching flares, and of course being VERY VERY LOUD. Based out of Christchurch for the duration of the airshow the F/A-18’s gave an exhilarating display of raw power and precision flying. On Saturday of the Airshow All Blacks Captain Richard McCaw was flown past a very jealous crowd in the rear seat of an F/A-18, where he addressed the crowd over the PA before returning to Christchurch.



Harvards: The venerable North American AT-6 Harvard has become a staple of the Warbirds aviation scene in New Zealand, with thousands of Kiwi pilots having been trained on them, both by the RNZAF and as trainers to move onto more advanced Warbirds. Of the 202 Harvard’s operated by the RNZAF there are still 16 airworthy examples in New Zealand. Many of these aircraft are owned by Syndicates and they are a common sight at aviation events throughout the country performing aerobatic and formation displays.

LC-130 Hercules: The United States Air Force saluted the key role New Zealand plays in its Antarctic operations by sending one of its Lockheed LC-130 Hercules equipped with retractable ski and with the apt name “City of Christchurch”. LC-130’s and Boeing C-17’s operate out of Christchurch International Airport to McMurdo in Antarctica as part of Operation Deep Freeze, a joint mission that has supported the National Science Foundation and U.S. Antarctic Program since 1955. The aircraft was on open static display for the duration of the show and welcomed a steady stream of visitors.





SH-2G Seasprite: The Kaman SH-2G(NZ) Seasprite is a highly versatile platform and performs a number of roles for the RNZN including ASuW/ASW/SAR and Utility roles. It is operated by No.6 Squadron RNZAF, which comprises both Air Force and Navy personnel. The SH-2G can be operated from the ANZAC Frigates TE KAHA and TE MANA, as well as the new Canterbury Multi-Role Vessel and the Offshore Patrol Vessels. This wonderful helicopter showed off many of its abilities during its display, including the 'Rescue' of a survivor off a moving speed boat that was being towed along the runway. Operated by a crew of three the Seasprite can be armed with Torpedoes, Depth Charges, a MAG-58 Machine Gun and the AGM-65 Maverick missile.



UH-1H: The venerable Bell UH-1H Iroquois has been the backbone of the RNZAF helicopter capability since 1966. Operated by No.3 Squadron in the Tactical Airlift, Special Operations and Medivac roles it is also on constant standby as a Search and Rescue platform. The sound of this helicopter and its two bladed rotor is unique and immediately identifiable. The Iroquois was displayed expertly with steep 'wing-overs', run-on landings and the winching of a crew member into a moving NZLAV from the Army's Queen Alexandra's Mounted Rifles. They also helped the organisers of the airshow solve the problem of a car which was "parked across an emergency exit" by dropping it from 1000ft into a paddock, much to the delight of the crowd. The UH-1H fleet is due to be replaced by NH-90 Helicopters in late 2013.



P-3K: New Zealand's maritime area of interest represents approximately 1/12 of the world's ocean surface, so it is fitting that No.5 Squadron is equipped with what is widely considered the best Maritime Patrol aircraft in the world. With a range of over 6000 km and loiter time of 8 hours the Lockheed P-3K Orion has been operated by the RNZAF since 1966. Originally P-3B's they were upgraded to P-3K's in the 1980s. Currently the aircraft are being converted to P-3K2 standard by L-3 Communications in the USA. This upgrade will include replacement of the Data, Sensor, NAV, COM and ground systems.



C-130H: Since 1965 The RNZAF has relied on the Lockheed C-130H Hercules for its Strategic & Tactical Airlift capability. L-3/Spar Aerospace in Canada has been contracted for the upgrade of the aircraft including its airframe, avionics, new 'glass' flight decks, NAV/COM suites and night vision systems. The Hercules performed a number of manoeuvres during its handling display such as the 'Khe-Sanh' or 6-into-3 approach and STOL display, as well as a classic 'wheelbarrow' pass pictured above.



Kiwi Blue parachute team: The Kiwi Blue Parachute Display Team put on a spectacular display each day after jumping from the C-130. Immediately after departing the aircraft they formed into a freefall star formation, before deploying their parachutes and forming a 'Stack' formation, with ankle mounted smoke canisters adding to the effect. This Author had the opportunity to watch them jump from within the C-130 on rehearsal day. Their professionalism was obvious as they kitted up and double checked each others equipment, before inching forward in a huddle and, once given the signal, tumbling out of the aircraft...

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PBY-5A Catalina: (above) Since arriving in 1994 with The Catalina Group of New Zealand this Consolidated PBY-5A Catalina has become a common sight at aviation events throughout New Zealand. However at the Warbirds Over Wanaka airshow this year the aircraft got to 'show its teeth' with participation in the Pacific Campaign re-enactment, where she ran a simulated attack against a static submarine and was 'bounced' by the Zero until the two Kittyhawks and Corsair saved the day. The aircraft's wide parasol wing and large waist blisters allowed for excellent visibility, versatility and long endurance. This ensured the Catalina was used extensively in all theatres of WWII and remained in civilian use for long afterwards.



Yak-52s: (above and below) Due to its high performance, G loading (+7/-5), accessibility and ease of operation, the Yakovlev Yak-52 has become the 'Warbird' of choice for many New Zealand pilots, even though the type was never a military aircraft. There were many examples present at the airshow and their aerobatics, mass takeoffs and formation flyovers were a great sight (and sound) to behold.



DC3: (right) After a proud history and with over 16000 examples built worldwide there are only two Douglas DC-3's still flying in New Zealand. Both of these aircraft made a grand contribution to the action at Warbirds over Wanaka 2010, especially during the 'European Theatre' re-enactment when they flew in formation as part of the 'Airborne Assault'. The 'Fly Dakota' DC-3 has display pilots and crew who are parachute jump rated and a removable passenger door which allowed the Kiwi Blue team to jump from the aircraft during the display. New Zealand is one of the few places in the world where pleasure flights in classic aircraft are still available, following some extremely questionable security rules being applied to passenger capable aircraft such as DC-3's. The requirements for over wing emergency slides (the trailing edges of the wings are only a few feet off the ground), cockpit voice recorders (the noise is so great that any conversation is inaudible) and armoured cockpit entry doors (the surrounding structure would not support it and the extra weight to do so would remove the ability to actually carry passengers) have grounded many classic passenger aircraft around the world. Luckily common sense still reigns in New Zealand.



Vampire: (above) Brett Emeny's De Havilland DH115 Vampire from New Plymouth made a welcome return to the airshow. Its distinctive 'howl' and flat take off were memorable as well as its formation flights with the L-39 and P-51D. The Vampire was designed with a unique configuration to make the best use of the technology available at the time and was the first jet aircraft operational with the RNZAF in 1951 staying in service until 1972.



L-39: (above) Two examples of the Aero L-39 Albatross flew at the airshow this year, one from New Plymouth and one based at Jet Flights in Wanaka. The L-39 flew solo displays as well as formations with the Vampire and P-51D. A highly successful aircraft made in what was Czechoslovakia, the L-39 became the standard Warsaw Pact jet trainer and is still in widespread use throughout the world today.




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Warhorses: Not all the action in is the sky over at Wanaka airport. The 'Warhorses Over Wanaka' contingent, many of them members of the Historical Re-enactment Society, has become a major part of the airshow. With two 'camps' set up at the airfield, one Allied and one Axis, the warhorses have authentic WWII clothing, armour and weapons. They carry out fire fights throughout the event, including a major fight involving live firing of 105mm howitzers and armoured vehicles. At the end of the day both sides of the warhorses came together to defend the Airfield as part of the spectacular finale. This year the warhorses had an array of vehicles involved in their display, most from the WW2 and Vietnam war eras and included Gun tractors, Chevrolet quad 'mini-trucks', army motorcycles, a 35 Tonne Abbot self-propelled howitzer, a Unimog, a six-wheel GMC truck and various jeeps and Landrovers.



Crowd Shots: (left) Oban (9yrs) & Tana Hansen (6yrs) show their appreciation to the Pilots after the Sunday Finale; (right) Some very pleased Gold Pass holders!



Entertainment: The Boogie Woogie Bugle Girls, from Hamilton, offered entertainment throughout the public days of the airshow. With authentic renditions of the Andrew Sisters and classic songs from the WWII era, they added much to the atmosphere and with the warbirds screaming overhead helped solidify the sensation that, despite the cellphones and digital cameras, we were indeed in the 1940's.



Jack Stafford: One of the very distinguished VIPs present was John 'Jack' Stafford. In 1945 he was awarded the Distinguished Flying Cross after a very successful tour flying the Hawker Tempest with 486 Squadron in Europe during WWII. He is credited with shooting down eight V-1 flying bombs, an Me-262, two Me-109, a FW-190 and a Dornier Do-217, as well as seeing significant action supporting the allied airborne invasion of Arnhem and other raids. He spoke eloquently to the audience of how he remembered the Me-262 encounter and his sorrow that it had to happen on Christmas Day.

Making the Most of Combustion

If poor engine performance or rough running isn't caused by a fuel system or electrical problem, then it is probably related to one or more of the engine cylinders and top end. The team in Aeromotive's Cylinder Bay are experts in the investigation and remedy of such problems.

Valve spring problems and breakages are the other common problem encountered, these frequently being determined as the cause of rough running.

AEROMOTIVE at Hamilton Airport have a fully equipped Cylinder Bay capable of repair, overhaul and the building up from new kits of all Lycoming and Continental engine cylinders. This bay is run by Gary Williams and complements the Aeromotive Engine Shop, performing both in-house and outside contract work for other maintenance organisations. Current workload is approximately 200 cylinder overhauls per annum, with 50% of these being for in-house engine jobs and 50% from outside. Engineering Manager Brett Puddle notes the advantage this in-house capability provides in regard to obtaining an immediate analysis for customers whose aircraft have been brought to the hangar specifically for engine problems or for other routine maintenance.

On occasions, the team have also undertaken assembly-only work on behalf of other providers, a notable recent job being for Brisbane Aero Engines who supplied parts to Aeromotive for assembly and fitting to an aircraft during its stay in New Zealand.

Common Problems

The most common problem the Cylinder Bay deals with is exhaust valves which typically wear and cause trouble in advance of other cylinder components. These are a frequent cause of poor performance due to high leak down rates (the time for which the cylinder will hold a given pressure), though a high leak down rate can also lead to the discovery of split cylinders and cracks. At times, this can be an elusive process – a recent case of green staining around an intake port which gave all the indications of being a gasket problem turned out to be a pin hole through the casting.



Brett Puddle setting up for port re-facing.



Gary Williams re-facing a rocker in the Aeromotive Cylinder Bay.

Once it has been necessary to remove a cylinder, typical investigation work will include removing valves and springs, measuring the bore, measuring valve stems for necking (which indicates stretching), measuring the valve guide for size and out-of-round, then taking whatever actions are deemed necessary. Reassembly will include re-facing and lapping valves where needed. It is rare to find problems with pistons or rings but when there is, then new rings are fitted and the bore is honed.

Time for Overhaul

The time for full cylinder overhaul will either be at the normal due time or when problematic running and troubleshooting has led to the discovery of cylinder cracks or excessive wear. The cost of building a new cylinder from factory kit components is currently quite competitive with a traditional overhaul and many customers are taking the 'new' option.

The overhaul process usually involves retaining the pistons but replacing rings and honing the bore, matching opposite pistons for weight, replacing exhaust valves and guides, refacing the exhaust port, replacing rocker bushes and refacing rocker faces, as well as fitting new manifold studs.

With a wide range of parts in stock, turnaround time for cylinder overhauls is normally a matter of days only and while this depends to some degree on workload, urgent jobs can more often than not be accommodated to the customer's requirements.

For more information

To find out more about Aeromotive's Engine Shop and Component Bay capabilities, contact Engineering Manager Brett Puddle on (07) 843 3199 or email: brett.puddle@aeromotive.co.nz



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How the Insurance Market Works

Contributed by Bill Beard

THE AIRCRAFT Insurance Industry is relatively small. While there are many insurance brokers prepared to sell you aircraft insurance (mainly as a sideline to their regular business), there are only four or five recognised Aviation Underwriters writing risks in New Zealand. Aviation insurance is a highly specialised field because of the complex nature and range of the risks involved. As well, with the small statistical base upon which rates are calculated, insurance offers are largely "judgement rated" in accordance with particular company's overall underwriting standards and philosophies. An individual underwriter can sometimes have a broader range of rating latitude on a given class of risk and can be influenced by his or her personal evaluation of the risk.

A broker who is knowledgeable both in aviation and insurance can more often than not, negotiate improved terms with an underwriter by clarifying information or offering additional details. For example, if a pilot has marginal experience on a particular aircraft then analysing experience the pilot may have on similar category aircraft or providing additional details on training and check-out procedures can be very helpful in obtaining better terms.

Often aviation insurers choose to deal with only one broker on a given risk and quote on an exclusive basis. In the case of renewals, the broker presenting or handling the account with a specific insurer remains the exclusive agent to that company. Other brokers will be precluded from obtaining terms from the holding underwriter. Some underwriters reserve this right to stop confusion. For example, in obtaining quotations on a Beech Bonanza or Cessna 210, these being fairly complex single engine aircraft, imagine one broker being aware of the significance of an instrument rating held by the owner/pilot and the other agent not familiar. The instrument rating would be considered a very important factor by underwriters for this type of aircraft and the broker emphasising this stands to get a better quote.

On the other hand, a broker who provides underwriters with full details of

Recent Accident and Incident Reports provided courtesy of Avsure

Type: Centrair GYR
Location: West of Taupo **POB:** 1
Operation: Private Other **Injuries:** Nil
Date: 22 February 2010
Report: Glider out-landed on an airstrip during competition. During aero tow retrieve glider ground looped into a fence.

Type: PZL-Swidnik GSB
Location: Centennial Park **POB:** 1
Operation: Private Other **Injuries:** Nil
Date: 26 February 2010
Report: Out landing in a paddock. Hit a rough piece of ground, causing minor damage to the aircraft.

Type: Schweizer 269C-1 HQO
Location: Ardmore **POB:** 2
Operation: Test flight **Injuries:** Nil
Date: 3 March 2010
Report: During a test flight the engine RPM was unable to be adjusted. After a period of time spent attempting to rectify the problem, RPM began to fluctuate dramatically and the decision was made to land immediately. The landing was being aborted due to high speed when engine RPM dropped suddenly, the helicopter descended rapidly, striking the ground with the rear skid and rolling forward.

Type: Cessna 172N ELH
Location: New Plymouth **POB:** 4
Operation: Not stated **Injuries:** Nil
Date: 1 April 2010
Report: On landing the aircraft flared too early, power was applied and the nose lowered to correct, and the aircraft landed nose wheel first.

Type: Robinson R22 HTD
Location: Reefton **POB:** 2
Operation: Private Other **Injuries:** Nil
Date: 11 March 2010
Report: While operating in the Paparoa Ranges, the helicopter was caught in a downdraft and had insufficient height to avoid impacting the ground.

Type: Bell 206B HBJ
Location: Wairoa **POB:** 1
Operation: Agricultural **Injuries:** Nil
Date: 11 February 2010
Report: At the end fo a spray run the pilot's attention was focused on documents in the cockpit, the helicopter descended, striking its right skid on the rising terrain.

Type: Robinson R22 Beta HVC
Location: Wanaka **POB:** 2
Operation: Private Other **Injuries:** Nil
Date: 16 March 2010
Report: On lifting off, a strop became hooked on the rear of the left skid. The collective was lowered to reposition however this caused the strop to tighten further against the load. The aircraft rolled backwards and cartwheeled down the hill.

Type: Air Tractor PCC
Location: Mt Bruce **POB:** 1
Operation: Agricultural **Injuries:** Nil
Date: 9 April 2010
Report: Aircraft failed to achieve expected performance on takeoff, colliding with rising terrain beyond the strip.

Note: Accidents and Incidents are selected from the CAA website and are provided for information only. Accuracy is not guaranteed. Please refer to CAA website for full briefs.



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Gliding Landouts

Contributed by Jill McCaw

IN A GLIDER every landing is a forced landing. Gliders don't get to go around again and even motor gliders who sometimes fly long distances using sustainer motors don't land with engines running. Glider pilots therefore learn to make every landing precise and controlled.

A glider circuit is not like the wide square circuit used by powered planes. Our circuits are closer in to the airfield or landing site and we control our descent rate with spoilers or airbrakes on the wings. We aim to land at stall speed + half windspeed + 10kts and rather than follow our instruments we are taught to judge our descent by keeping a constant angle to our aiming point. In training we are taught that this is 45°, that being an easy angle to visualise, but in practise 45° is too steep for anything other than a high wind situation. About 30° is more realistic. The judgement of height and distance from the airfield becomes instinctive with training. This awareness, along with an instinctive judgement of airspeed are crucial for accurate landings. Generally, training gliders on a still day land at around 35 to 40 kts.

Another fact of life for gliders is landouts. Gliders can fly long distances cross country with distances over 1000km possible in a day. But gliders of course don't have an assured source of lift so landing away from the home airfield is always possible. Landing out on farm strips and farm paddocks is normal. If there is not enough lift, for instance at the end of a day when convection is shutting down, then a landout is inevitable.

Landouts contain an element of risk. Until your wheel is actually on the ground you can't be exactly sure what you are going to find. What looks like a nice firm strip may be pockmarked with rabbit holes, hide rocks in the grass, have a single electric fence wire across it or what looks like grass may actually be a crop that is several feet high. Choosing good landing areas is a learned skill. Obstacles, on the ground and on approach, slope, wind speed and direction are crucial things to note. While ensuring the safest possible landing site is the pilot's first priority, in the back of the pilot's mind are considerations such as whether the size of the paddock/strip allows the possibility of an aero-tow retrieve. Or if an aero-tow will not be possible then how close is a road for access with the trailer? There are many jokes too about farmer's daughters providing hospitality and beer for a stranded pilot awaiting his crew. Some of the stories are actually true. There is a frequently used strip near Lake Ohau in the Mackenzie Basin where the local family's teenage daughters and friends are excitedly waiting for the landed out pilot to be Richie McCaw. This hasn't happened yet.

Land out etiquette says that the pilot must contact the land owner as soon as possible to let them know they are on his property and check that they are happy with retrieve arrangements. Once retrieved, a follow up thank you and gift such as a bottle of wine should be sent. We want landowners to be as happy to have us, as we are grateful to have the use of their landing area.

Retrieving gliders can sometimes be an adventure. Gliders, like model aeroplanes, pull apart easily to fit neatly in their trailers with wings tucked in next to the fuselage. It is always fun and a good learning experience to go along on retrieve trips and see where other people have landed and how they coped with the site. Plus the pilot is supposed to shout his crew dinner at the very least.

For more information on gliding or to subscribe to SoaringNZ, visit the Gliding New Zealand website, www.gliding.co.nz



Gliders can land in some very scenic places. Piako Gliding Club's two seater on the surf beach at Raglan – the author was one of the pilots. Retrieving this glider was an epic 5 hour adventure.



A safe landout may still cause other problems. This glider landed in a ploughed paddock, filling the wheel well with dirt. David Hirst photos.



Landout retrievals often require the support of several friends. The pilot is expected to shout his crew dinner at the very least.



An interview with Otmar Birkner (owner of Autogyro Europe)

Otmar Birkner is the owner of Autogyro Europe, manufacturers of the very popular MT-O3 and Calidus range of gyros. The company is represented in New Zealand by Tony Unwin of Gyrate in Tauranga and Otmar was one of the visitors to NZ who travelled with Tony on the recent Air Safari (see article in this issue). KiwiFlyer took the opportunity to speak with Otmar about his company while he was here.

details of the factory and aircraft, we talked about growth. The company has doubled turnover every year and at seven aircraft per week is now a, if not the, major player in the industry. Otmar's approach to sales has been to partner with like minded people. He has appointed a network of distributors that covers 36 countries, all of whom are aviators with aviation backgrounds, often

German ultralight autogyro regulations in September of 2003. In 2005 they split the company with Thomas focusing on a training school, Michael leaving and Otmar taking over sales and production. By this time their aircraft had become the first choice for gyros in Germany with more than 60 sold.

There is no secret that they started with an existing design, the Spanish ELA gyro. Originally, Thomas and Michael had wanted to certify this aircraft for sale in Germany. They undertook a variety of design changes in order to do so but the Spanish factory refused to incorporate these into production. Otmar explains they realised that for the cost and effort of purchasing and then modifying each aircraft, they could just as easily build their own, thus also ensuring they had full control over the design and quality of the finished product.



Otmar Birkner piloting one of his Calidus gyros on the recent Around NZ Air Safari.

THERE ARE now more than 600 MT-O3 gyros flying in 36 countries around the world. Production from the factory in Germany is currently seven aircraft per week, five of these being MT-O3 and two being the new Calidus model. Turnover last year was 12m Euro which is an outstanding achievement given that the company began less than 10 years ago and also given that there are other more well established autogyro manufacturers in the international market. There are now nine Autogyro Europe gyros on the NZ register.

As well as talking about current and future products, we were particularly interested in how this growth had been achieved and in Otmar's approach to running his business.

A most obvious trait is that Otmar loves to fly. In 2006 he completed a 12500km trip around Australia in one of his MT-O3 gyros. He has also flown an 8000km tour of South Africa and an 8000km tour of Northern Europe. And now he has flown around New Zealand as well. He says that life is a pleasant mixture of fun and business, but you get the feeling that life is business and that business is fun. I couldn't help but ask whether there had ever been any scares on these long distance odysseys which have often traversed a good amount of tiger country (many gyro pilots can claim credit for at least one engine stoppage – and safe landing). Otmar said no, never a problem, touch wood.

Partners for Growth

Still staying away from the technical

in the training sector. His stated aim is to achieve common benefits amongst all those involved with the organisation.

All of the distribution arrangements are based on handshakes and friendship, rather than lengthy business contracts and Otmar endeavours to visit every distributor at least once every three years. At a rate therefore of one per month, this involves a lot of travel, something Otmar considers well worthwhile in order to "learn of anything that can be done to improve the product or to better meet the needs of distributors and customers".

In the Beginning

Otmar started out with an interest in trikes and microlights. He was manufacturing microlights on a small scale (10 per annum) when approached in the early 2000's by Thomas Kiggen to undertake larger scale gyro production based on a project Thomas had been working on with partner Michael Ullrich since 1999. Their aircraft became the first machine to gain approval under new

We were curious as to the company's selection of polished stainless steel for the aircraft frame. Otmar explained this choice as being a trade off between the added weight incurred (achieving the necessary strength adds 10kg over alternate materials) versus eliminating the concerns of potential hidden corrosion they had with microlight owners who might not adhere to required maintenance and inspection programmes.

Autogyro Europe's production is now entirely in-house except for the engines which are Rotax. They have a 4500m2 facility at Hildesheim in Germany and have approximately 50 employees. Factory leadtime is currently 3 months from placement of order.

New Models and the Future

Since 2008 the company has been developing a fully enclosed tandem model called Calidus. This is now in production at the rate of 2 per week, limited only by the requirement to construct more moulds to produce the composite fuselage. Otmar says that Calidus was designed to avoid

adverse yaw characteristics often associated with fully enclosed pusher gyros and that extensive flight testing had proved this capability. Otmar used a Calidus during his Air Safari flight around New Zealand, this machine currently being available for demonstration flights at Gyrate in Tauranga.

Otmar says that especially with the reputation of gyros changing for the better, the company is only at the beginning of its market opportunity. New customers cover the spectrum of aviation backgrounds, with many keen to add a multitude of accessory options to their aircraft. Improved rules are being developed or adopted in many countries and with German and UK certification behind them, Autogyro Europe are in a strong position to accommodate different international standards as required. They are not selling in America yet (partly due to America's penchant for litigation) but are investigating avenues with which to pursue this market.

They are also investigating the potential for fully certified autogyros and although this has been often talked about by other manufacturers, one gets the feeling that Otmar and Autogyro Europe are more likely than most to take the matter on seriously and accomplish it.

A final indication of Otmar's enthusiasm for the industry comes when he explains how he recently bought the airport their production facility is based at. After hearing that it was likely to be closed down due to losses of some 300k Euro per annum, in spite of 60,000 movements a year, he stepped in and bought it recently for One Euro. In his words "It's another hobby I have now".

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Electric Motors versus Gas Engines

The Great AeroModelling Debate

Contributed by Janice Angus

NOW THAT daylight saving has ended it is time to reflect on the fact that our summer flying season is rapidly drawing to a close. The days are getting colder and the wind chillier, with the opportunity for outdoor flying activities about to become severely curtailed. Thoughts turn toward planning the new plane building projects and repair schedule for the winter to while away the hours indoors. Perhaps this is a good opportunity to consider electric power – cross over to the “dark side” and embrace the growing phenomenon that is the electric powered model aircraft.

Electric motors for model aircraft have been around for some time but more in the fringe interest group arena. Some of these were specially adapted from electric drill motors or similar small battery operated appliances. At best, the performance and endurance of many of these early examples was marginal.

In the last few years electric aircraft have been growing more and more popular due to the fact that they have become more affordable, smaller, lighter, with increased power and speed capabilities, and are more readily available. Today many popular models can be purchased off the shelf with minimum construction required. These rugged plug and play aircraft kits are ideal for the learner as they are virtually indestructible, with many being built of EPP (a robust, heavy duty type of polystyrene like material), and easy to fly.

The development of the lithium polymer battery has been a major advance for electric model flying. These battery packs are lightweight, relatively quick charging and give extended flight duration. As they become more main stream, they are now cheaper to purchase which means you can afford to buy multiple packs to ensure longer flights.

Recent advances in electronic technology has seen the availability of more powerful brushless in-runner and out-runner motors, Electronic Speed Controllers (ESCs) and a wider spectrum of battery packs.

There are distinct fundamental differences between flying electric and gas powered aircraft. Many spirited debates have occurred between “glow fuel devotees” and the “electron junkies” on the merits of one form of power over the other.



David Chan and Ian Lewis. “Trojan’s Rule”



DC-3 airborne. Yes it is electric.



Ian Lewis hand launching his Mustang.



Don't let the size fool you. Small but powerful.

The main advantages to electric motors are that they are clean to run - no oily, sticky residue smeared all over your aircraft. They are quieter, so less likely to disturb nearby residents - particularly important when flying in urban park areas. You do not have the potential for “dead stick”,

the motor will not cut out unexpectedly as can be a factor with gas engines. Electrics are easy to start. There are no hassles with glow plugs, starters, priming your motor or need to flick the prop. For scale and more authentic models you are more likely to be able to fit the engine inside the cowl, so no need to have the exhaust or carburettor protruding and spoiling the appearance of the model.

More and more dedicated electric model aircraft kits are becoming available but if you feel inclined, it is relatively easy to convert a gas powered kit to run on an electric motor. There is no doubt that electric powered model aircraft are here to stay and will become more prevalent and continue to grow in popularity.

On the down side, buying the initial power train (motor, speed controller and battery packs) can be quite expensive. A good quality charger is essential but as it is a one off purchase you can expect to get many years use from it. Many electric flyers justify the expense of the batteries as a case of “purchasing all your fuel at once” compared with gas powered aircraft where the cost of fuel is an ongoing expense.

That said, there are many who are passionate about flying with gas powered engines and would never consider an electric powered model as anything but a fad and a toy. They enjoy the challenge and mechanics of getting that gas engine finely tuned and performing at its optimum.

Many gas engines actually sound quite authentic and are a joy to experience in the small scale or larger type models. Some electric motors, when flying at speed, sound like demented mosquitoes and can be equally irritating to bystanders. Gas powered aircraft will continue to be the preferred option for many flyers and I expect model aero clubs will see examples of both types of aircraft being flown as a normal occurrence.

The world is turning towards more environmentally friendly products and this trend is reflected in all aspects of daily life. The perception of having a “clean, environmentally friendly pastime” with electric powered models may even bring more people into the sport and that is a good thing. It's great to have choice and different options – this is what keeps aero modeling such an interesting and vibrant pastime.

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Contributed by Penny Belworthy

This month, we profile new aircraft from three very different corners of the aviation spectrum. The King Air is one of two Beech's added, the other being a 95 Baron. The gyro is in fact one of five added to the register, surely a record for a two month period. If you would like to see your new aircraft on this page contact editor@kiwiflyer.co.nz

**ZK-SNM
Beechcraft King Air C90A**



THIS Beechcraft King Air C90 is now on line at Flight Training Manawatu. In operation for 15 years and with a fleet of Cessna 152s, 172s and a Partenavia P68B, the company became involved in international training for the Indian market some four years ago. Turbine training is considered a significant advantage to obtaining airline placements in this market



and hence the company's decision to acquire the King Air C90. Chief of Flying Operations, Michael Bryant says that they looked at various aircraft, settling on this example due to its low hours, almost new engines and great overall condition. The C90A fitted their requirements well due to the King Air's popularity in India and the ease with which it can be upgraded to a glass cockpit at a later date via existing STCs. At this stage the C90's intended uses are focused on training under Part 91 where the aircraft will provide students with valuable experience in fast, high altitude flying.

**ZK-REW
Roy's Toys Magpie Gyro**



ROY Waddingham's gyro started life as someone else's two seat project. When he took it over he converted it to a single seat so it has become something of his own design. Power is by an injected and turbocharged Subaru EA81 and rotors are 27" diameter, offering 90mph in level flight without using full throttle (yet). Prior to becoming a gyro convert, Roy accumulated 250 hours in microlights, half of that in a Bantam B22.

**ZK-RYZ
Kavanagh Balloon**



RYZ "Sunrise" is a new envelope for Waikato Balloonist Pauline Hickey. Purchased to replace her existing envelope "Rainbow", this is an Australian made Kavanagh C77 (77000 cu ft) and was custom made in the colour scheme of a sunrise. Features include a Smart Vent, turning vents, a detachable crown rope and a pouch for the crown rope on the bag flap. Kavanagh also numbered the parachute gores as well as the envelope gore to enable easy match when tabbing up. Even the envelope bag colour was customised (red).

The purchase order was confirmed on 22 January 2010. Six weeks later Sunrise was ready for CASA's export inspection, weather dependant. Arriving on Wednesday 10th March, the envelope received its CAA inspection on the 14th. First flight was on the 20th with many further flights since (this being the ballooning season).

ARRIVALS - February/March 2010

BRD	Indy Aircraft T-Bird II	Mr T B Spence	Murapara	Microlight Class 2
DGC	P & M Aviation Quik GT450	Mr T R Leighton	Molueka	Microlight Class 2
EEN	Foxcon Aviation Terrier 200	I C Belfield and G Belfield	Whangamata	Microlight Class 2
GPH	Hoffmann H 36 "Dimona"	N R Swan	Waitakere	Power Glider
GYB	Schempp-Hirth Nimbus-3D	Tasman Trust	Manukau	Glider
HIW	Robinson R44 II	Helicare Maintenance Limited	Nelson	Helicopter
HNC	Schweizer 269C-1	The Reliance Group Limited	Auckland	Helicopter
HPR	Robinson R44	Barn Bay Fishing Co Limited	Haast	Helicopter
HQO	Schweizer 269C-1	The Reliance Group Limited	Auckland	Helicopter
IJS	Aerospatiale AS 350B2	Rotor File N.Z. Limited	Clevedon	Helicopter
ILR	Bell 206L-3	Oceania Helicopters Pukekohe Limited	Pukekohe	Helicopter
IRG	Robinson R22 Beta	Helicopter Associates Limited	Tauranga	Helicopter
JLT	Vans RV 7A	Mr J L Talbot	Tauranga	Amateur Built Aeroplane
KAR	Pacific Aerospace 750XL	Pacific Aerospace Limited	Hamilton	Aeroplane
KAW	Pacific Aerospace 750XL	Pacific Aerospace Limited	Hamilton	Aeroplane
IGF	Britten-Norman BN.2A Mk.III-2	Great Barrier Airlines Flight Operations	Manukau	Aeroplane
MUS	Cessna 510	Acernus Aero Limited	Wellington	Aeroplane
MWR	Magni Gyro M-24	Mr M W Ross	Wellington	Gyroplane
OTM	AutoGyro Europe Calidus Fern	Gyrate NZ Limited	Mount Maunganui	Microlight Class 2
PCA	Titan T51 Mustang U/L	Anderson Family Trust	Mosgiel	Microlight Class 2
REW	Roy's Toys Magpie	Mr R Waddingham	Lincoln	Gyroplane
RUA	Bruce Naish Gyro -1 Place	Mr M Pfahler	Hokitika	Microlight Class 1
RYZ	Kavanagh C-77	Ms P Hickey	Hamilton	Balloon
SCT	Best Off Skyranger Swift	Mr M J Morris	Wanaka	Microlight Class 2
SEB	Beech 95-B55	Rainbow Lea Aviation Limited	Tirau	Aeroplane
SNM	Beech C90A	Air Manawatu Ltd	Feilding	Aeroplane
ZAH	Yakovlev Yak-52	Rustic Road Ltd	New Plymouth	Aeroplane
ZEE	AutoGyro Europe MT03 eagle	Gyrate NZ Limited	Mount Maunganui	Microlight Class 2

TRANSFERS - February/March 2010

BEN	De Havilland DH 82A Tiger Moth	Clevedon Aviation Ltd	Papakura	Aeroplane
BJX	Cessna 180	John Sturgess & Associates Limited	Manukau	Aeroplane
BKN	Piper PA-18A-150	B B Avoition	Feilding	Aeroplane
BRB	De Havilland DH 82A Tiger Moth	Mr G J Levitt	Australia	Aeroplane
BTM	Piper PA-18	Cronin Developments Limited	Christchurch	Aeroplane
CMA	Cessna 177B	Grand International Concerts Limited	Auckland	Aeroplane
CLX	Piper PA-28-140	Drake Aviation Ltd	Rangiora	Aeroplane
DEM	Cessna 310Q	Photo Survey Limited	North Shore City	Aeroplane
DGO	Piper PA-28-180	Hawera Piper Limited	Hawera	Aeroplane
DKK	Cessna 172M	Sunair Aviation Ltd	Mount Maunganui	Aeroplane
DPN	Cessna 172M	Dual Wings Flying	Paeroa	Aeroplane
ECY	Piper PA-28-140	Mr E C Harris	Ohaupo	Aeroplane
EFA	Cessna 172M	Mr C H Mellsoy	Hamilton	Aeroplane
EHP	Cessna A150M	Mr H R Smith	Marton	Aeroplane
EJL	Cessna A188B	Mr J S Rutherford	Waiau	Aeroplane
EJV	Cessna A152	Helipro Aviation Training Limited	Paraparaumu	Aeroplane
EKM	Cessna 152	Mainland Air Services (2010) Limited	Mosgiel	Aeroplane
ELU	Cessna 172N	Mr A J Milne	North Shore City	Aeroplane
ETD	Cessna 152	Mainland Air Services (2010) Limited	Mosgiel	Aeroplane
ETK	Cessna 172N	Wellington Aero Club (Inc)	Wellington	Aeroplane
EUF	NZ Aerospace FU24-954	J S & L F Kerr / Skydive NZ Ltd	Christchurch	Aeroplane
EWG	Cessna A152	Nelson Aviation College Ltd	Molueka	Aeroplane
EYT	Vans RV-8	Mr B W A Beverland	Kaitiaki	Amateur Built Aeroplane
FCQ	Cessna 152	Helipro Aviation Training Limited	Paraparaumu	Aeroplane
FEL	Piper PA-28-180	FEL Aviation Partnership	North Shore City	Aeroplane
FGC	Cessna 152	Mainland Air Services (2010) Limited	Mosgiel	Aeroplane
FNA	Piper PA-28-181	Mr D J Smith	Manukau	Aeroplane
FOF	Cessna 152	Nelson Aviation College Ltd	Molueka	Aeroplane
FPG	Cessna 152	Helipro Aviation Training Limited	Paraparaumu	Aeroplane
FRS	Piper PA-38-112	Wanganui Aero Club (Inc)	Wanganui	Aeroplane
FWK	Cessna A152	Mr B A Cardno	Wanaka	Aeroplane
GVQ	Schempp-Hirth Janus CM	Mr R G Garlick	Wellington	Power Glider
HBN	Eurocopter EC 130 B4	Heli Air Hawkes Bay Limited	Hastings	Helicopter
HCR	Robinson R44	New Zealand Helicopters Limited	Christchurch	Helicopter
HFG	Robinson R44 II	Frontier Helicopters Limited	Whakatane	Helicopter
HIN	Robinson R22 Beta	Dingleburn Station Ltd	Wanaka	Helicopter
HJW	Robinson R22 Beta	Helicopter Operations Ltd	Tirau	Helicopter
HKU	Aerospatiale AS 350BA	Alpine Helicopters Ltd	Wanaka	Helicopter
HLM	Robinson R44 II	Kaikoura Helicopters Ltd	Kaikoura	Helicopter
HME	Hughes 269C	Rick Lucas Helicopters Ltd	Palmerston North	Helicopter
HMU	Robinson R22 Beta	Wanaka Helicopters Ltd	Wanaka	Helicopter
HMV	Robinson R22 Beta	Cronadun Aviation Limited	Reefton	Helicopter
HOB	Alpine Aviation Ltd T500	Alpine Aviation Ltd	Ashburton	Microlight Class 2
HOY	Robinson R44 II	Mr S W Day	Wanaka	Helicopter
HQZ	Robinson R22 Beta	Skysales Aviation (NZ) Ltd	Christchurch	Helicopter
HRJ	Robinson R22 Beta	Rimutaka Heli-Service Limited	Upper Hutt	Helicopter
HTF	Robinson R44 II	Amuri Helicopters Ltd	Hanmer Springs	Helicopter
HTH	Hughes 369HS	Gisborne Helicopters Limited	Gisborne	Helicopter
HVQ	Robinson R44	Stewart Island Helicopters 2008 Ltd	Bluff	Helicopter
HVH	McDonnell Douglas 500N	Tuahenua Helicopters Limited	Tauranga	Helicopter
HXH	Robinson R22 Beta	Helicare Services Ltd	Nelson	Helicopter
IAN	Robinson R44	Heliraro Ltd	Franz Josef Glacier	Helicopter
IAZ	Aerospatiale AS 350BA	Atlantick Pty Ltd	Australia	Helicopter
IBD	Robinson R44	Heliops Ltd	Kerikeri	Helicopter
IBZ	Aerospatiale AS 355 F1	Corsair Holdings Limited	Auckland	Helicopter
ICH	Robinson R44 II	Reid Heslop Helicopters Limited	Wakefield	Helicopter
IEG	Robinson R44 II	PLB Construction Group Limited	Huntly	Helicopter
IGP	Robinson R22 Beta	Wanaka Helicopters Ltd	Wanaka	Helicopter
IOO	Robinson R44	Heliflite Pacific Limited	Papakura	Helicopter
IOQ	Robinson R44	Mr B J Kingan	Te Awamutu	Helicopter
IQQ	Hughes 369D	D.P. Nyhon Holdings Limited	Wanaka	Helicopter
ITZ	Robinson R44 II	Helicontrax Ltd	Christchurch	Helicopter
JAM	Corby CJ 1 Starlet U/L	Mr R E Baker	Palmerston North	Microlight Class 1
JAS	Piper PA-34-220T	Mainland Air Services (2010) Limited	Mosgiel	Aeroplane
JAZ	Cessna 172N	Auckland Aero Club (Inc) Ardmore	Papakura	Aeroplane
JEP	Micro Aviation B10 Bantam	P & D Bovill Partnership	Tuakau	Microlight Class 1
JIG	Socata TB 10	Mainland Air Services (2010) Limited	Mosgiel	Aeroplane
JJG	Hughes Australian Lt Wing GR-582	Dean Waller & Roy Waddingham	Christchurch	Microlight Class 2
JMR	Cessna 172S	Air Hawkes Bay Limited	Hastings	Aeroplane
JZT	Reims/Cessna FA152	Nelson Aviation College Ltd	Molueka	Aeroplane
KLW	Piper PA-34-220T	Aviation Facilities Pty Ltd	Papakura	Aeroplane
KLW	Piper PA-34-220T	Ca'Bella Pacific Limited	Parnell	Aeroplane

continued on page 46



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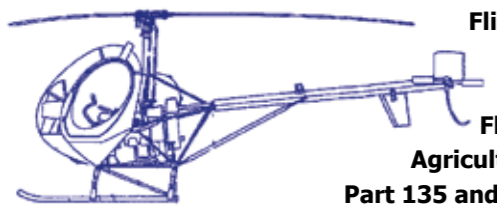


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