

The newsletter of the Sport Aircraft Association (Auckland Chapter) Inc

# Sport Aviator

October 2017



[www.saaauckland.org.nz](http://www.saaauckland.org.nz)

# Committee 2017/18

## EXECUTIVE COMMITTEE

**President:** **David Wilkinson**  
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**Vice President:** **Gary Briggs**  
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**Secretary:** **Keith Weale**  
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**Treasurer:** **Gordon Sanders**  
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## COMMITTEE MEMBERS

**Peter Armstrong** **David Campbell-Morrison**  
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021 946 078

**Scott Neill**  
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## OPERATIONAL POSITIONS

**Safety Officer** **Technical Library**  
Norm Bartlett Rob Keith  
09 528 0108  
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027 430 5303  
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## TECHNICAL MENTORS

Wood & Fabric Mike Tunnicliffe 09 237 8173  
Composites Alistair McLachlan 299 2775  
Metal Skin Kevin Paulsen 296 5125  
Avionics Liviu Filimon 268 1199

### **FRONT PAGE**

Bruce Lynch's Mile's Messenger ZK-AKE recently had its first post recondition engine run. Looking very nice.

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## Next Meeting

**WHEN:** Thursday 26<sup>th</sup> October 2017  
@1930

**WHERE:** Auckland Society of Model  
Engineers Club Rooms  
Peterson Road, Panmure Basin  
Mt Wellington

**SPEAKER:** TBA



Hi All,

Well Gavin has left me to it and gone to NYC for 10 days for a well-deserved break, so hopefully this newsletter gets to all members.

To be fair to Gavin he handed me the Newsletter on a plate and excellent instructions on how to distribute it.

The Chapter Xmas BBQ will be at the SAA cluster of hangars at North Shore Airfield on Saturday 02 December with the Sunday as a rain day. Last year was a fantastic day so bring your better half, kids, grandchildren and dogs (on a leash) etc...

Blacksands is the next event and is always an enjoyable weekend. TOY is unserviceable at the moment so I'm looking forward to see who gets to TNT first out of Don and DCM to fly it to Raglan.

The remaining lucky one will get a lift in the back of the RV8.

This week's speaker is Nev Hay who will speak on the History of the Mosquito. Knowing Nev his talk will be very informative and interesting.

The Warbirds also have an open day coming up at Ardmore on the 12<sup>th</sup> November. These open days are fantastic and a large variety of aircraft will be on display.

See you on Thursday

Cheers

David



Hi Everyone

Things are a bit frantic in our house as I write this.

Delys and I fly off to the United States tomorrow

for 10 days and I was supposed to have this edition of the newsletter completed to hand over to David Wilkinson earlier in the week. Sadly, and as per usual, life and other priorities got in the way and it is down to the last minute as usual.

The newsletter will be a little smaller than usual due to it being so close to the last one but there should still be plenty of interest for everyone.

The Spring/Summer flying season for 2017/2018 is already underway with the Annual Tiger Moth fly-in having been held last weekend at Taumarunui. By all accounts this event was very successful and well attended with nine or ten Tiger Moth's in attendance.

The next events in our region are the Matamata Aero Club BBQ & Fly-in on the 29<sup>th</sup> of October followed by the SAA Waikato Chapter Black Sands fly-in on the 4<sup>th</sup> and 5<sup>th</sup> of November.

Black Sands includes a beach landing this year and will, as always, be well worth attending. Hopefully members will be able to get along to these.

On another matter, David Wilkinson and I got along to see Peter McCarthy at Ardmore airport a week or so ago. Peter is currently setting up an Aircraft Maintenance Engineers course on behalf of Ardmore Flying School.

The course classroom/workshop is attached to the back of the new Warbirds hangar and the course is being set up very much along the lines of an RNZAF Technical Training School.

David and I went to see Peter to not only check out the facility but also to ask about whether there was a possibility of the Auckland Chapter members utilising the facilities. The short answer was yes but the details will need to be fleshed out. David will be able to give more details at the Chapter meeting next week.

The mystery aircraft for the September issue was provided by Barry Gillingwater and is was quickly identified as an Ilyushin IL-2 Sturmovik by quite a few members including Keith Morris who was first to identify it so congratulations Keith. Keith also tells me this particular aircraft is from the Fighter Heritage Collection in Seattle.

Wikipedia tells me the "*The Ilyushin Il-2 Sturmovik was a ground-attack aircraft produced by the Soviet Union in large numbers during the Second World War. With 36,183 units of the Il-2 produced during the war, and in combination with its successor, the Ilyushin Il-10, a total of 42,330 were built, making it the single most produced military aircraft design in aviation history.*"



Enjoy the newsletter.

Cheers  
Gavin

## PROJECT UPDATE

## Ian Chapman – RV-6 (ZK-VNZ)

**By Ian Chapman**

David Wilkinson and I caught up with Ian Chapman at Ardmore last week and he is rapidly progressing with the fitting of the wings to his RV project.

In the photo below, Ian has the wings installed and his was in the process of rigging them prior to drilling the rear spar holes.

After a fairly long project build, things are now rapidly approaching the point where ZK-VNZ will be ready for her CAA inspection and first flight.



## MEMBER UPDATE

## Rob Fry – Red Bull Air Race Win

**By David Wilkinson**

Rob Fry who is a member of our chapter, is the team manager for Japan and his team won the recent Red Bull Air Race World Championship held at the Indy Car Track in the US. We look forward to Rob being a guest speaker when he is available. Attached is a photo of the team on the famous Brick finish line.



## PROJECT UPDATE

## Clive Whittfield- Vans RV-6

**By Clive Whittfield**

A couple of photos taken this morning. Fuselage painting pretty much done apart from final touch-ups, buffing etc. Been making use of the booth at work to do this which has been a huge help.



Now it's time to take it home and bring the wings in for some colour. After that it's 'just' a reassembly job.



Will probably have to look to the collective wisdom of the chapter for some guidance through the paperwork and testing process shortly. General aim is to have it flying 'on Thursday' sometime in summer or autumn..... 😊

## PROJECT UPDATE

## Bruce Lynch – Miles Magister

By Chris Opperman & Gordon Lindsay

Congratulations to member Bruce Lynch for the first engine start on his Miles Messenger today at North Shore. Well done.

<https://youtu.be/mLta4vk8ngA>



This beautiful Miles Messenger had its first engine run today at North shore airfield after the engine overhaul. It purred beautifully.

Gordon Lindsay

## A BIT OF HUMOUR

## It would be funny if it wasn't true

**By a well-known 'Flight magazine'.**

Undaunted by technical realities, the design team at Pilatus Britten - Norman has announced plans for the BN2-XL, promising more noise, reduced payload, a lower cruise speed, and increased pilot workload.

We spoke to Mr. Fred Gribble, former British Rail boilermaker, and now Chief Project Engineer. Fred was responsible for developing many original and creative design flaws in the service of his former employer, and will be incorporating these in the new BN2-XL technology under a licensing agreement. Fred reassured BN-2 pilots, however, that all fundamental design flaws of the original model had been retained. Further good news is that the XL version is available as a retrofit.

Among the new measures is that of locking the ailerons in the central position, following airborne and simulator tests which showed that whilst pilots of average strength were able to achieve up to 30 degrees of control wheel deflection, this produced no appreciable variation in the net flight of the aircraft. Thus, the removal of costly and unnecessary linkages has been possible, and the rudder has been nominated as the primary directional control. In keeping with this new philosophy, but to retain commonality for crews' transitioning to the XL, additional resistance to foot pressure has been built in to the rudder pedals to prevent over-controlling in gusty conditions (defined as those in which wind velocity exceeds 3 knots).

An outstanding feature of Islander technology has always been the adaptation of the O-540 engine which, when mounted in any other aircraft in the free world (except the Trislander) is known for its low vibration levels. The Islander adaptations cause it to shake and batter the airframe, gradually crystallise the main spar, desynchronise the accompanying engine, and simulate the sound of fifty skeletons fornicating in an aluminium dustbin. PBN will not disclose the technology they applied in preserving this effect in the XL, but Mr. Gribble assures us it will be perpetrated in later models and sees it as a strong selling point. "After all, the Concorde makes a lot

of noise" he said, "and look how fast that goes."

However, design documents clandestinely recovered from the PBN shredder have solved a question that has puzzled aerodynamicists and pilots for many years, disclosing that it is actually noise which causes the BN2 to fly. The vibration set up by the engines, and amplified by the airframe, in turn causes the air molecules above the wing to oscillate at atomic frequency, reducing their density and creating lift. This can be demonstrated by sudden closure of the throttles, which causes the aircraft to fall from the sky. As a result, lift is proportional to noise, rather than speed, explaining amongst other things the aircraft's remarkable takeoff performance.

In the driver's cab (as Gribble describes it) ergonomic measures will ensure that long-term PBN pilots' deafness does not cause in-flight dozing. Orthopaedic surgeons have designed a cockpit layout and seat to maximise backache, en-route insomnia, chronic irritability, and terminal (post-flight) lethargy. Redesigned "bullworker" elastic aileron cables, now disconnected from the control surfaces, increase pilot workload and fitness. Special noise retention cabin lining is an innovation on the XL, and it is hoped in later models to develop cabin noise to a level which will enable pilots to relate ear-pain directly to engine power, eliminating the need for engine instruments altogether.

We were offered an opportunity to fly the XL at Britten-Norman's development facility, adjacent to the British Rail tearooms at Little Chortling. (The flight was originally to have been conducted at the Pilatus plant, but aircraft of BN design are now prohibited from operating in Swiss airspace during avalanche season). For our mission profile, the XL was loaded with coal for a standard 100 N.M. trip with British Rail reserves, carrying one pilot and nine passengers to maximise discomfort. Passenger loading is unchanged, the normal under-wing protrusions inflicting serious lacerations on 71% of boarding passengers, and there was the usual confusion in selecting a door appropriate to the allocated seat. The facility for the clothing of embarking passengers to remove oil slicks from engine cowls during loading has been thoughtfully retained.

Start-up is standard, and taxiing, as in the BN2 is accomplished by brute force. Takeoff calculations called for a 250-decibel power setting, and the rotation force for the (neutral) C of G was calculated at 180 ft/lbs. of backpressure.

Initial warning of an engine failure during takeoff is provided by a reduction in vibration of the flight instrument panel. Complete seizure of one engine is indicated by the momentary illusion that the engines have suddenly and inexplicably become synchronised. Otherwise, identification of the failed engine is achieved by comparing the vibration levels of the windows on either side of the cabin. (Relative passenger pallor has been found to be an unreliable guide on many BN2 routes because of ethnic consideration).

Shortly after takeoff the XL's chief test pilot, Capt. Mike "Muscles" Mulligan demonstrated the extent to which modern aeronautical design has left the BN2 untouched; he simulated pilot incapacitation by slumping forward onto the control column, simultaneously applying full right rudder and bleeding from the ears. The XL, like its predecessor, demonstrated total control rigidity and continued undisturbed. Power was then reduced to 249 decibels for cruise, and we carried out some comparisons of actual flight performance with graph predictions. At 5000 ft and ISA, we achieved a vibration amplitude of 500 CPS and 240 decibels, for a fuel flow of 210 lb/hr, making the BN2-XL the most efficient converter of fuel to noise after the Titan rocket.

Exploring the Constant noise/Variable noise concepts, we found that in a VNE dive, vibration reached its design maximum at 1000 CPS, at which point the limiting factor is the emulsification of human tissue. The catatonic condition of long-term BN2 pilots is attributed to this syndrome, which commences in the cerebral cortex and spreads outwards. We asked Capt. Mulligan what he considered the outstanding features of the XL. He cupped his hand behind his ear and shouted "Whazzat?"

We returned to Britten-Norman convinced that the XL model retains the marque's most memorable features, whilst showing some significant and worthwhile regressions.

PBN are not, however, resting on their laurels. Plans are already advanced for the Trislander XL and noise tunnel testing has commenced. The basis of preliminary design and performance specifications is that lift increases as the square of the noise, and as the principle of acoustic lift is further developed, a later five-engined vertical take-off model is also a possibility."

All in all, a wonderful aeroplane.



The mystery aircraft this month is provided by Barry Gillingwater. Let me know your guesses in time for the meeting to earn a chocky fish.



# 10 In the News & On the Web

## ON THE WEB

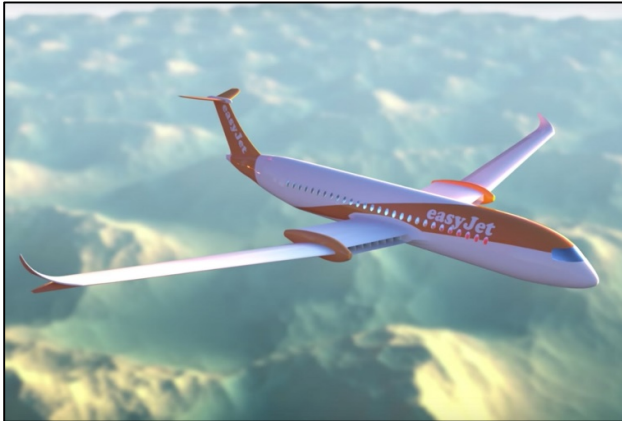
### Easyjet Electric Jets

**From Gavin Magill**

Easyjet report they will be flying short haul electric regional jets within 10 years.

<https://www.stuff.co.nz/travel/news/97376509/easyjet-aims-to-fly-electric-planes-on-shorthaul-routes-within-a-decade>

<https://www.dezeen.com/2017/09/28/easyjet-will-fly-electric-planes-in-next-ten-years-news/>



## ON THE WEB

### PAC 750 XL Drone

**From Nev Hay**

Engineers convert PAC 750XL into large delivery drone.

Our days are numbered Gavin!!!

[http://www.chinadaily.com.cn/china/2017-09/22/content\\_32325167.htm](http://www.chinadaily.com.cn/china/2017-09/22/content_32325167.htm)



## ON THE WEB

### Reno 2017 Unlimited Gold Class Race

**From Gavin Magill**

Finally, a really good video of the gold final at Reno 2017.

<https://youtu.be/YvRmZZZEzF8>



## ON THE WEB

### Bell V280 Tiltrotor Testing

**From Gavin Magill**

New Bel V280 tiltrotor concept aircraft ready for flight testing.

<https://www.wired.com/story/bell-v280-valor-tiltrotor-test/>



## Chapter Events

2017

<b>Oct 26</b>	<b>Chapter Monthly Meeting</b> Last Thursday of the month 7.30p.m. at the Auckland Society of Model Engineers clubrooms, Petersen Dr, Panmure Basin
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## Aviation Calendar 2017

2017

<b>Every Sat</b>	<b>Dargaville Aero Club</b> The place is buzzing every Sat, wet or fine, windy or calm, and the catered lunch at 12.30 is good value, just don't be late! Club website is <a href="http://dargavilleac.weebly.com/">http://dargavilleac.weebly.com/</a> . If going as a group, please ring in advance so the cook expects you. Ph. Murray 027-478 4308 or club house on 09-439 8024.
<b>3<sup>rd</sup> Sun Month</b>	<b>Turangi Aero Club Fly-In</b> This regular event is closed for the winter, hopefully to return when (if?) the weather picks up later in the year.
<b>Oct 29</b>	<b>Matamata Aero Club Fly-In</b> See advertisement later in newsletter for details.
<b>Nov 04-05</b>	<b>Black Sands Fly-in.</b> Raglan. Annual fly-in, air rally/fly-around, food, much socialising. Organised by SAANZ Waikato-Thames Valley Chapter. Contact Bruce Cooke Ph: 021-112 2364 E: <a href="mailto:bmcooke@waikato.ac.nz">bmcooke@waikato.ac.nz</a> For more info, brochure and to download the information pack go to <a href="http://www.saa.org.nz/public_pages/events.php">http://www.saa.org.nz/public_pages/events.php</a>
<b>Nov 12</b>	<b>NZ Warbirds Armistice Day Commemoration Open Day.</b> Ardmore Airfield, 10:00 to 16:00. Flying slots at 1:00, 12:45 and 14:30. Normally a very good show but equally poorly publicised. Adults \$20, kids under 14 free.
<b>Nov 23-26</b>	<b>South Island Akro-Fest.</b> Omaka. Aerobatic competition and fly-in. Contact Andrew Love for more information and to register. Ph: 021 818 816 E: <a href="mailto:Torque_Roll@hotmail.com">Torque_Roll@hotmail.com</a>

## Aviation Calendar 2018

2018

<b>Jan 20</b>	<b>Classics of the Sky – Tauranga City Airshow.</b> Tauranga Airport. An awesome afternoon and evening of family fun. Includes RNZAF Black Falcons and much more. Full info at: <a href="https://www.classicflyersnz.com/Airshow.html">https://www.classicflyersnz.com/Airshow.html</a>
<b>Jan 27</b>	<b>Thames Wings &amp; Wheels.</b> Thames Airfield. 10am – 4pm. Static displays showcasing a variety of vehicles and aircraft: \$5 per person or \$10 per family.
<b>Mar 02-04</b>	<b>Tiger Moth Club AGM Fly-in.</b> Whitianga. Annual summer fly-in, competitions, annual dinner, AGM. Contact secretary Graeme Wood Ph: 027 293 2318 E: <a href="mailto:woods@clear.net.nz">woods@clear.net.nz</a>
<b>Mar 09-11</b>	<b>SAANZ SportAvex, Waipukurau.</b> Annual summer fly-in (North Island's turn), a full program is planned, including competitions, AGM, annual dinner, Wings awards presentation. Details being progressively posted at <a href="http://www.saa.org.nz/public_pages/events.php">www.saa.org.nz/public_pages/events.php</a>
<b>Mar 30 Apr 01</b>	<b>Warbirds Over Wanaka International Airshow.</b> Wanaka Airport. 30 <sup>th</sup> anniversary, 16 <sup>th</sup> airshow since 1988. RNZAF Black Falcons, aircraft from past shows returning for anniversary. Take an aircraft ride on Rides Day, Monday 2 <sup>nd</sup> April. Info and tickets at <a href="http://www.warbirdsoverwanaka.com">www.warbirdsoverwanaka.com</a> Sport Aircraft owners are invited to display their aircraft. Info at <a href="http://www.saa.org.nz/public_pages/events.php">http://www.saa.org.nz/public_pages/events.php</a>

If members are aware of other events that could be of interest to others, please pass the details to Gordon Sanders - [gordon@sanders.gen.nz](mailto:gordon@sanders.gen.nz).

# Black Sands 2017



The Waikato Chapter  
of the Sport Aircraft Association of NZ  
invites all recreational aviators to attend the annual  
“Black Sands Fly – In”

**Raglan Airfield**  
**November 4th and 5th**

An Informal, fun get – together for flyers of all types

Barbeque lunches both days

Flying Activities

Beach Flying workshop Saturday Afternoon

Plenty of fun for families and non – aviators

Accommodation on Site

Plenty of great dinner options

Some of New Zealand’s best flying scenery

What more could you want?...

More Information will be posted at [www.saa.org.nz](http://www.saa.org.nz) from late September.

Contact Bruce Cooke,  
[bmcooke@waikato.ac.nz](mailto:bmcooke@waikato.ac.nz),  
Ph 021 1122364.

Book your accommodation now at  
[www.raglanholidaypark.co.nz](http://www.raglanholidaypark.co.nz)  
(please support our hosts)



Please read the information before flying in – important safety notices are included.