



"THE FLYER"

YARRA VALLEY AEROMODELLERS NEWSLETTER

October 2019

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A squadron of Assassins. Great to see half of the pilots are juniors. El Pres is taking orders if you're interested in getting one of these indestructable fun machines!

*No flying the last Sunday of the month –
Sunday 27th October*

The next general meeting is Monday 28th October 2019

8:00pm – Red Earth Centre Mooroolbark

Newsletter will be online at:-

www.yarravalleyaeromodellers.com.au

Auction night

It will be that time of year again come November clubnight. That's right it's time for our annual auction! Rummage through your stuff and bring it along. I seem to remember Neil Griffiths just about cleared up everything last year 😊

Apology

I will be AWOL this coming clubnight and have handed my duties over to Fernando Monge 😊. Me and the Missus will be on our first ever cruise as of 17th wandering the South Pacific on the "Mutiny on the Bounty" tour stopping at various islands along the way before coming home on Nov. 2nd. My only other encounter with the seven seas was a ferry to Jersey from England way back in the last millenium. It didn't go too well then for me but I'm staying positive in that this boat is somewhat bigger than that ferry.

Website issues.

Last clubnight our fearless leader was hoping the website would be up and running within the week. Unfortunately, we're still in a holding pattern for that.

Dates to note!

Sun 20 th Oct.	VFSAA Scale Comp. P&DARCS
Sat 23rd Nov.	YVA Haydn/Frank Scale day 2019
Mon 25th Nov.	YVA Club Auction
Sun 15th Dec.	YVA Xmas party

If you're interested in events outside of the club, the VMAA calendar will inform you of what's on where at this address <https://www.vmaa.com.au/Calendar/calendar-of-events.pdf>

House Keeping

Ensure every person attending the club field signs in and out of the register book. Remember the last person to leave the field has to check that the clubroom is locked and secure. Lock the front gate on departure.

Clean up after yourself if you use the clubroom facilities, ensure the gas bottle is turned off after use.

Help required

The clubhouse is in need of some minor repairs which Graham Jenner is happy to do but he needs a couple of hands to replace the fascia above the kitchen window along the roof edge. See Graham this coming clubnight to sort a date and time.

For Sale / Wanted

Nothing brought to my attention for this month, but we do have a club auction coming up for the November club night!

APA Champs report 5th/6th October

The Australian Precision Aerobatics Inc. is the National body for F3A Aerobatics. Like most things it was borne from like-minded modellers many moons ago here in Victoria. We, I say that as I'm their Secretary, run two competitions per year; the Masters and World Cup at the end of March and the APA Championships at the start of October. Once again this year Albury was the location with Twin Cities Model Aero Club as our hosts on 5th and 6th October. Twenty-three competitors came from QLD, SA, NSW, Vic, ACT and Tasmania. Many of them, along with a few from WA had gathered in QLD for the Masters earlier this year. It was great to catch up with 'old' friends and make new ones. It was also easy to spot the Victorians and Tasmaniacs, being pale and pasty,

amongst those from the warmer states of NSW, SA and QLD. Scott Kay from Tasmania was our CD with me as his Flightline director. F3A has 5 classes with YVA having a member in each but the top class "Master"

Bill Wheeler – Sportsman

Mario Schembri – Advanced

Daniel Wheeler – Expert

Fernando Monge – F3A

Friday was set aside for practise with people arriving through the day, we arrived at 8:50am, and joining the queue. By lunchtime that queue was quite empty as some had been practising since 8am and run out of batteries. Further back down from the clubhouse Control-line combat and speed was underway; that caught a few by surprise especially when the speed models tuned pipe suddenly kicked in. Anyway, just when you think everything is under control, Murphy steps in. My Vanquish suddenly let go of something during my second practise flight. As I came around it appeared to be missing a prop! What fell off though wasn't the prop but the chin cowl. Daniel took my transmitter and landed the model. The engine had shaken itself loose taking out the chin cowl and the front of the canopy fairing. The carbon prop had broken about 2" off either end and twisted the 3 engine wires into a tight ball. That curtailed my competition as a competitor. This left us the following for the competition:-

Sportsman – 3 entrants

Advanced – 5 entrants

Expert – 6 entrants

F3A – 6 entrants

Masters – 3 entrants

Flying got underway at about 9:06am Saturday morning. A slight crosswind pushed a few models around but it was nothing everyone couldn't handle. Running two flightlines we completed 44 flights by lunchtime. At the end of the day, around 5:30pm we had completed a further 58 flights. This meant every class had completed 4 rounds of competition. The Aerobatics fraternity use an electronic scoring system with each judge logging in at the start of their session, entering the pilot number and making sure they're in the right class and round. The system then whispers each maneuver in their ear and they enter a score for it. The system, known as Notaumatics, is now widely used throughout the planet and owes a lot of its development to some cluey Australians. Some shuffling of judges was required through the day as we ran two rounds per flightline most of the day and there was a few clashes to sort out. After that it was back to the motels restaurant for beer and viddles.

Sunday left us two rounds for all classes. We wanted to finish on the Masters class flying the last two rounds of F19 schedule on their own on one flightline so everyone else could sit and see how it's done. This schedule is only flown every now and again and unlike all other F3A schedules features crossbox maneuvers. We completed flying about 2pm and packed everything away. Presentations to all placegetters followed including the APA Champion for 2019.

Sportsman

1st – Adeh Becker, 2nd – Peter Webb, 3rd – Jamey Bellicanta

Advanced

1st – David Nugent, 2nd – Peter Readett, 3rd – Rob Hulett

Expert

1st – Sean Readett, 2nd – Michael Rutledge, 3rd – David Carkeek

F3A

1st – Ben Goode, 2nd – John Brann, 3rd – Phil Spence

Masters

1st – Russell Edwards, 2nd – Scott Kay, 3rd – Jason Arnold



My Vanquish minus a few bits it needs to fly...



CD Scott Kay's home for the weekend. Laptop, wifi routers and raspberry pi's running the judging system. Fellow Taswegian Ben Goode's model in front. Also of note, that's Scott's fuel at the front, he was the only IC powered aircraft there using a YS200 CDI in a 5kg model.



Victorian Precision Aerobatics President and fellow YVA member Fernando Monge distracted from the F3A Aerobatics by the goings on across the way at the control-line circles.

The CL event was also well attended for both speed and combat. Most models flown were diesel engine powered, confirmed by the coughs and splutters as the tank empties especially the combat models. One or two of which seemed to hit the deck without actually combating anyone...



"Here Dad, you fly it." Said Daniel never!

His BJ Craft Eternity, prepared by me ☺
Just needs a minor adjustment to downthrust, now done, to have it dialed in. Then it's practise all he can to get into the F3A class.

Just a note, 5kg model with 2 5s 5000mAh batteries installed.



CD Scott Kay, the only IC powered model, Xareltoo; YS200 CDI.
5kgs without fuel

Daniel's Electric Eternity in the background.

And now for something completely different...

I found the following doing some reseach on propeller noise reduction.

What makes the noise of a propeller, or rotor based aircraft? What would a "quiet-engine" propeller aircraft sound like?

5 Answers



Christian Nelson, Veteran of the industry.

Answered Nov 24 2016 · Author has 478 answers and 2.5m answer views

It's the propeller and the local air velocity over the blades.

The engine is relatively quiet in these configurations, more so with turbine engines believe it or not. The propeller itself is the problem.

When a propeller spins at full speed the tips of the blades can reach speeds near or in some cases over, the speed of sound. This creates something called a wave drag and it's one of the fundamental barriers that limit propeller performance. The resulting shock waves at the tips are the culprits for why propellers are so loud. In cases where the tips go over Mach 1, the shock waves create little sonic booms, which is the main reason why some aircraft sound a lot louder than they have a right to be.



XF-84H Thunderscreech. So named because of the ungodly amounts of noise it put out, it was developed to study the feasibility of supersonic propeller aircraft, by modifying an existing F-84F Thunderstreak airframe. The tips of the props reached supersonic speeds and the resulting sonic booms created so much noise that it was reportedly audible from tens of miles away, the vibrations from the noise broke some electronic equipments at the airbase and it made the ground crew literally sick that they had to be taken to hospital.

There are ways to make prop planes quieter (thankfully) and more efficient. One of the most popular and easy ways to do it is to increase the number of blades in a prop. By increasing the number of blades you are effectively lowering the load each blade has to carry and as a result you can have the prop spin slower, which reduces the noise immensely.

The Supermarine Spitfire is a good example of this, though the number of blade increase was made to allow for more power extraction rather than noise concerns, it nonetheless is still useful for that purpose.



Spitfire Mk.I, the original Spitfire was designed with a 2-bladed fixed pitch propeller.



Spitfire Mk.II. Utilising a 3-bladed constant speed propeller.

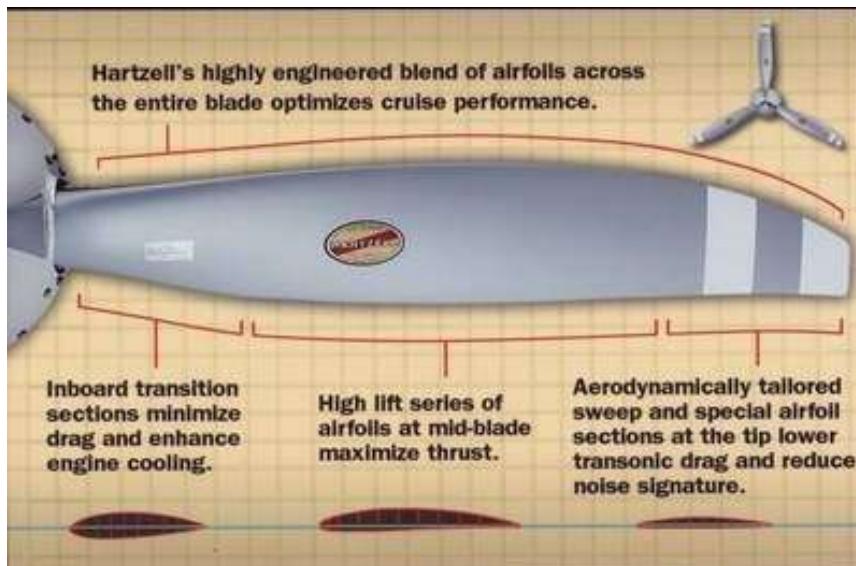


Spitfire Mk.VII with a 4-bladed propeller.



Spitfire Mk.XIX, with a 5-bladed propeller. The Mk.XIX had a Rolls-Royce Griffon engine which was a lot more powerful than the Merlin, hence the need for a bigger, more bladed propeller.

Another way of decreasing noise levels is to take advantage of aerodynamics and design what's called a scimitar prop. This works the same way as sweeping the wings of a high performance jet airplane, the increased sweep near the tip of the blade retards the formation of sudden onset shock wave in there and results in more power extraction with the same number of blades, no shock wave also means less noise.



Hartzell's scimitar blade design is popular amongst light sports aircraft.



C-130A with its original 3-bladed props.



Later models of the C-130 used a 4-bladed Sabre design (if it can be called that).



The most recent C-130J model uses a 6-bladed scimitar design.

The above article is taken from

<https://www.quora.com/What-makes-the-noise-of-a-propeller-or-rotor-based-aircraft-What-would-a-quiet-engine-propeller-aircraft-sound-like>