

Futaba Pro Shop News

NEW TM
900 MHz
System



Christmas in July



Big Day Out



Scott's Big Build



Leslie V12 Model Aero Engine

What Went Wrong
Chasing 300 KPH
RC Flight Instructing
Zirolì Spitfire Sorties

TX Switch Allocation
How Many is Too many
F1 Air Racing
Road Trips 1, 2, 3



BADMAC Spitfire



Taming the RV-8



Gold Wings Training

Warning this magazine contains opinion



Slags, Slats or Slots?

Gilderslag here,

I hope you enjoy this lazy Christmas Holiday read. The boss threw his hands up and left it to me to finish the edition full of tips to help make the flying aspect of your hobby more enjoyable. Editorial is about having fun as well as assisting progressive Club Presidents to grow their club. The Stunt Pilot way by flying these things.

I love a slag as much as the next bloke but that acronym may have upset der ladies. Administrators too. There's a bit of biffo up the back on that.

SLAGs is Simulated Little Aeroplane Guys. Or Girls. Some who go for the synthetic popping out the front silicon de icing boots look. Like Slat and Slot leading edge devices. Dis pilotically incorrect subject is handed over to der boss.....

The Ultimate Leading Edge*

Before the turn of the last century I was on a family holiday and hired one of those gunda gunda boats that chug along at five knots. Took my kids out into the Gippsland Lakes for the day. Found an isolated spot and beached the boat. Swam for a bit then we went for a stroll, Walked past a couple in what they thought would be their isolated spot. The chap was reading an RCM News magazine. Had to make myself known. Thinking to get back into the hobby he picked up the copy from the local newsagent. He couldn't believe how the hobby had advanced.

I've long admired newspapers and what they stood for although Rupert Murdoch has dented the industry's credibility to quite some degree. Clever by half stuff advertising by way of editorial might impress would be advertising gurus and business owners but not me. RCM News was funded by advertising sales and the cover price. Chocked full of adverts and articles our best ever 128 pages featured a Spitfire. Contributors were paid per one thousand words and most took the opportunity to build up a balance and they could purchase hobby gear at wholesale prices. I don't like asking people to do something for nothing so I've written most of this myself.

As a kid I got to read what's known as the Crash Comics in The Aviation Safety Digest.

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To any great degree self analysis is something model aviation continues to lack. WG Gilderslag made his debut with the only bullshit I ever published. His advert on page 94 was published when the Toy and Hobby Fair was on. Hopes to get a few calls from tight arse modeller part time back yard hobby dealers with wholesale accounts to fund their hobby and big note themselves at the field were dashed. Didn't get one. Disappointed.

Selling Aeromodelling

One has to be reasonably determined to succeed at RC flying. My view is if you can achieve five flights in up to a 15 kph breeze and the plane remains in serviceable condition you are a successful flyer. If you want to get better at it do more flying. To help improve flying standards the best model clubs set a few simple fun tasks and conduct an occasional fun competition.

People who don't make that grade often volunteer for a committee position. Fair enough. Someone has to do those tasks. What has always intrigued me about aeromodelling is how certain personality types suddenly become experts on all matters pertaining to radio control flying. Another mistake made by some people who take up a position of authority is lowering flying standards to their level. Over the years I've had a few would be's on committees challenge my flying operations. "What seem dangerous to them would be if they were doing it". Factual reporting issues in RCM News ten years ago are now being called to account.

Video is where much information gets disemintated today. Having a laugh and gathering data to figure out what works on YouTube is where Gilderslag's cinematography exploits began. Cecil B deMille epics with the camera pointed at Mr Pototao head's are out. Short and sharp is the go. For example a number of How To examples explaining basic programming of Futaba radio gear are at Futaba.proshop.com.au

Hypocrisy from officials is one thing I suffer very poorly. The best Club President I ever had the privilege of offering my Father's brand to was Bryan Harper. A great salesman whose efforts were knobbed by nuff nuffs.

Yep. I know that feeling. Tim Nolan, doing a great job as MAAA President, is going through that angst now. Best Secretary I've dealt with since Chris Greenwood is Rhyl McCormack who does the job without agenda. Tyson Dodd resigning the position to spend more time with his family was welcomed by the majority.

Interesting reading MAAA Council Minutes on the MAAA website. Not only is publishing the minutes a good idea it's an obligation under the Model Rules. Keep an eye on the MOPs Page too. Change is coming your way. Tim Nolan is not going to continue as MAAA President next year and he is currently steering MAAA through some crucial negotiations. Hopefully someone equally capable will put their hand up. Having previously dealt with issues created by over authoritative types one mistake Tim has not made is thinking he is bigger than the hobby itself.

One change I would dearly like to see was covered by the 2012 cartoon (page 80) when Display Director's obligations were unilaterally changed by a previous MAAA President. Perhaps member Jungle will offer it this service. Thanks for your professional leadership Tim Nolan. Be proud of ANSW too. It continues leading the way.

What will the hobby scene look like two decades from now is concerning. If what's happening in Melbourne is replicated in the other capitol cities membership numbers will certainly be a lot less. Come and Fly days is a good initiative. Learning from past mistakes spending on money on PR is preferable to discarding those efforts and doing nothing. Big events skulking away to the country won't re-generate membership numbers at the current level.

Trailing Edge touches on why VMAA voted against confidence in the MAAA leadership team. Expressing a view without data is just an opinion. How I formed the view why the current VMAA President does not have the credentials required to steer MAAA is covered in the Trailing Edge. Explaining why there is another page after the Trailing Edge article in this edition is like the trailing edge on the ARFs I race. It has a blunt face right at the end. Putting it bluntly statistics from my RCM News YouTube Channel the Leslie V12 engine test flight video clocked up 8000 views. Changed to Futaba Pro Shop two months later it is now 106,000. Cheers Stephen Green.



Upset about content in this feebeby edition?
Click YouTube to complain.

Transmitter Switch Allocation

- LD Mixing adjustment
- SF Retracts
- SE Three Axis Gyro
- SA Dual Rate
- SB Auxilliary
- Slider Telemetry
- SF Retracts



- LD Mix adjustment
- SH Trainer
- SG Engine cut
- SD Dual Rate
- SE Flap
- Slider Telemetry

This page started with self preservation in mind and I have printed and laminated a couple of copies. One for the hangar and one in the TX case. This transmitter was a production sample on Mode 1 which I converted to Mode 2. My diverse range of model types include Fixed wing and helicopter with glo plug, spark ignition and electric

motor, glider with flap and or spoilers, retractable undercarriage, telemetry downlink, gyro systems and flight training it has taken me ages to decide on a standard setup.

Sport flying with mates, competing are other factors. Telemetry switching requirements used for glider towing or air racing differ.

Racers use airspeed and RPM on the right slider. Ditto for glider tug with altitude and variometer on the left. Voice gets drowned out as other piston and turbine engines take off so ceiling height limits and low battery alarms are set with the buzzer. Low battery is the most urgent vibration alert.

Taming the RV-8



Turn key models are an ever increasing share of the hobby market. I bought this model for a number of reasons. Passing on my own experience after I started ground looping Dad's Spitfire on take off was one. Information for someone transitioning from this high powered light weight aerobatic machine to a heavily loaded warbird was another. In short how would someone with less experience fare if upgrading to a typical much heavier more expensive all composite warbird? Time on the Spitfire was very helpful and gave me confidence test flying a Top Flite Mustang with a twenty grand V12 in the nose. Both models are featured in this edition.

Flex Innovations RV-8 60E

Cutting up the foam packaging and cardboard box for the bin then checking out the huge control surfaces and long servo arms reminded me yet again that not everyone wants to hover an aeroplane. Confirmed by the factory demonstration on You Tube this is clearly setup to do just that.

A few years back I tried toning a 3D style foamy sold to an elderly gent by a young bloke behind the counter. Customer had asked for something aerobatic. Kid did his job and recommended a model and the customer walked out happy. That changed when he got to the flying field. Setup out of the box the re-

ceiver ready 3D foamy was a handful. Reaction time from a seventy five year old didn't help. To reduce the control surface throws I re-jigged the servo arms and control horns mechanically but even with 30% EPA (ATV for non Futaba owners) it was still touchy. The other problem that arises when you do that is the control surface centring is less accurate. Not helpful if your reactions and eyesight aren't what they used to be.

Aerodynamic load on control surfaces is low when hovering. By its very nature this model is way overpowered so the control setup has

been flown flat out straight and level for three horizontal rolls. I would not try that with full power and wind it up with the nose down.

Watching the overwhelming majority of videos posted at model clubs continues to confirm rudder skill is pretty much overlooked in this country. Most pilot barriers are positioned on the edge of the runway too. Sooner or later someone standing at that position is going to get cleaned up by a model left veering on take off. Departing from right to left increases that risk. The first thing I look at to check someone's flying



60mm of flap with 3mm of flap elevator trim mix



A runway centreline improves safety

standard? Does the model maintain centreline during and after take off? Pretty hard when model strips don't have a centreline. This inexpensive safety initiative is the first thing I would do if I was a Club President. That line gives an immediate reference when a model begins to track off line. I can safely say that from experience from my own flying field for commercial RC training. Something else most fields lack is an aiming point after take off. A windsock placed on the inside line at each end of the strip is a good idea too. Can't get a windsock? Use ribbon.

Setting up the 5.3 kg RV-8 to replicate a newbie to warbirds I changed the 17.5 prop to a 15x8. Take off roll increased from three metres to ten. Improved flight time and still more

than enough power to pull over the top with authority in a Top Hat. A classic pattern manoeuvre. A 14x8 increased the take off roll to twenty five metres. Top Hat still possible but only if you nail it. For the sake of the exercise I ballasted up to 6.95 kg with the 15x8 and reduced rudder throw. We are getting close to replicating the Spitfire on take off. I'm not recommending you add the ballast.

On the landing side sixty mm of flap with a 3mm down elevator trim mix works. Flap deflection blanking off elevator response when the tail wheel settles is something to be aware of but overall this is an easy peesy model to fly.

I had no use for the gyro and removed it so I'm unable to vouch for its factory settings. Any product

that does not accept Futaba servo leads is dismissed out of hand here and adjustments made via a computer is of little interest to me too. Give me a few potentiometers that can be adjusted with a screwdriver at the field thanks.

AFR

This function is one reason top F3a and Scale Aero fliers fly Futaba. Leaving End Point Adjustment values at 100% then dialling the throws down with AFR retains the centring accuracy. The other feature Futaba offers is Hysteresis throttle stick mixing. The SZ and iZ series has a one point mix. MZ offers two. Futaba gear placed 1st, 2nd, 3rd and 5th in the 2023 F3a World Champs in Queensland. First place in junior too.

Leaving the long servo arms in place I dialled down the control surface throws with AFR. Hovering a fixed wing is certainly one application for triple dual rates although for the life of me I cannot come up with a useful reason for triple rates in sport flying, How to do that is available from the Futaba Pro Shop website. The model has ten flights to date and one negative of the control setup is the control surfaces bang against the stops in the wind. Putting the thing in the car too. I'm forever moving the rudder and elevator back to neutral.

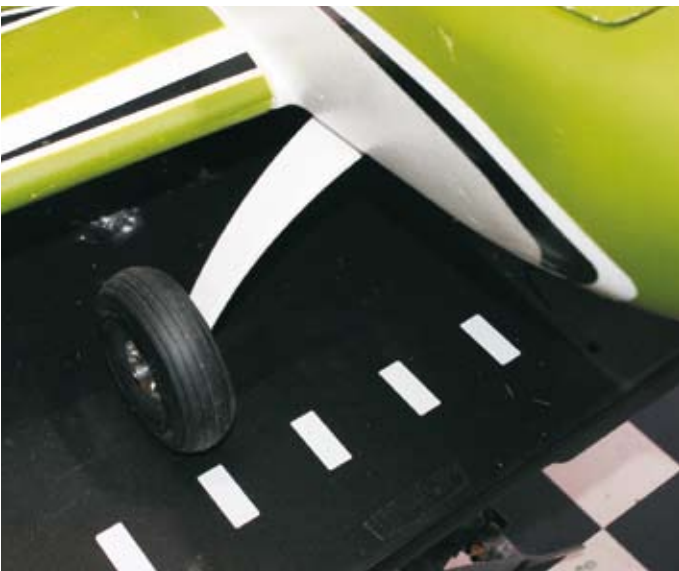
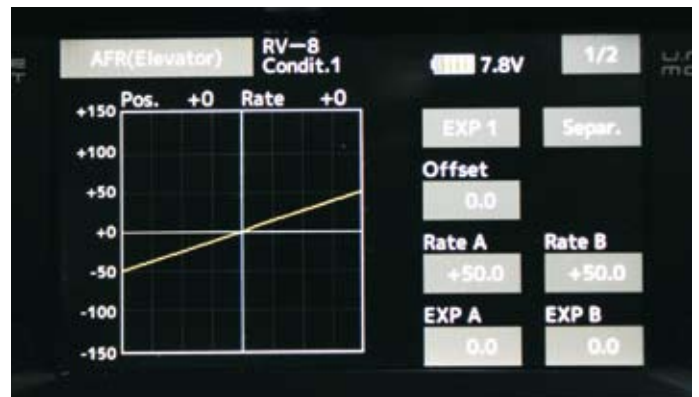
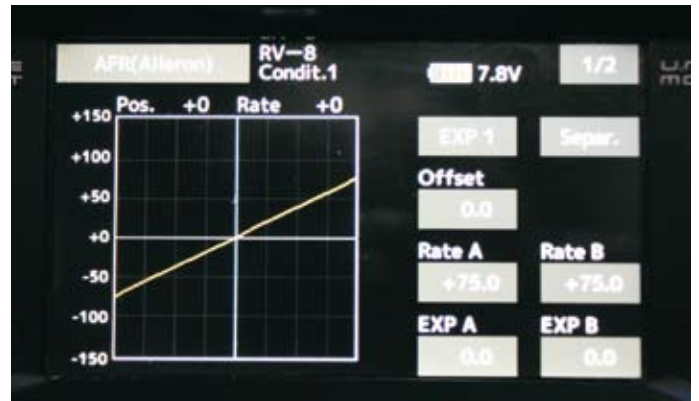


AUW to 6.97 kg? Not a problem



Checking the servo centring

End point	RV-8 Condit.1		7.8V	1/3
Ch Function	Limit	Travel	Travel	Limit
1 Aileron	135	100	100	135
2 Elevator	135	100	100	135
3 Throttle	135	100	100	135
4 Rudder	135	100	100	135
5 Gear	135	119	90	135
6 Flap	135	50	100	135



Dubro fibreglass plastic undercarriage



Dubro undercart on the Cassutt



Multiplex duralium

The RV 8 is a great product. I wouldn't put it up there with Multiplex quality but nothing I've seen yet does. Paint peeling off easily doesn't bother me but the undercarriage lets it down. When the left wheel copped a bump in touchdown on the first flight an almighty crack was heard. Expecting the plywood structure inside the fuselage to let go but I was pleasantly surprised the structure held up.

A big vice on sturdy bench and a heavy hammer is required to straighten the alloy unit. Which I don't have. No intention of persevering with that unit anyway it was swapped it to a Dubro fibreglass unit with five inch Kavan air wheels. That undercarriage has been successfully trialed on my 60cc Cassutt. Still plenty of prop clearance this works much better.

Buy lots of lead



Zirolu Spitfire Sorties

In model aeroplane form this Mk1 shares a similar attribute to the Sopwith Camel. WW1's number one English fighter had the 130 horsepower 173 kilogram nine cylinder Clerget 9B rotary engine hung on it's very short nose. This first Spitfire variant had a 600 kilogram twenty seven litre sixteen cylinder 27 litre 1030 horsepower Rolls Royce Merlin 11 engine at the pointy end. A .60 was the big end of town when model aircraft engine crankcases were cast in iron.

This Zirolu plan shows the ubiquitous Zenoah G62 and even though the OS GT 60 is somewhat lighter that does not account for 4kg of ballast required to balance this baby. A multi cylinder Kolm would go a long way to replacing much of ballast. Neither a Kolm I can afford nor have I seen running first hand.

Not am I so one eyed about ballast. Upgrading to a DA 85 will cost less than a Kolm. It will require less lead but it still needs two kilograms. Models are so over powered these days yet some modellers still hang their hat on boasting their build that does not require ballast. I've never seen the point. Particularly when it comes to adding weight to move the CofG aft. If it needs it put it in however if that's your thing and your heart is set on a Spitfire, best to go for a later model than a Mk 1.

Considerable flight testing to see how far aft the Cof G can go, some six flying sessions later I've shown the further most aft position in the next page. Suffice to say the first hop after modifying the original setup with lead mounted on the cowl, stable in straight and level flight it was not. So touchy it needed the tiniest poofteenth of elevator to turn. Gear back down and flown back in before more fuel was burnt, full flap moves the centre of pressure aft, which calmed it down a bit.

Incidentally when Dad contemplated building this model Steve Richardson's engine advice turned out to be spot on. Sixty cc has proven to provide plenty of power and it's a joy to fly. Split flap at 45 degrees produces the usual slight nose down pitch, trimmed by a 4% up elevator mix it flies in at 1/4 throttle very nicely.

A full throttle right rudder mix for take off switched by the retract switch produced a nasty swing to the left on the climb when gear up was selected. Not good. Big yaw during the climb out. Oops, should have programmed a delay timer but I deleted that for the time being. Actually experiencing full power for the whole flight was yet to happen because of insufficient cooling. The only time it really hammered was when the muffler rattled loose. Which has happened three times. The

rest of the time the Spit was dragged off the ground bog rich in order to get enough flight time to sort of the centre of gravity.

Back to the ballast. Gluing lead sheet into every nook and cranny I'm very mindful of what happens should the weight work loose which is why I glue rather than screw. Standard Operating Procedure or rather my preference for engine cowl installations is they must be able to be removed very quickly. The same applies to the spinner. Which came in handy sorting out the centre of gravity and the next problem.

Finding the best propeller. Tried a few different combinations during those hops so the first modification to the engine cowling was installing a hole to access the needle valves. Purchased a long carby style screwdriver and a torch. The mobile phone torch is too awkward plus that is one less instance that device is ruling my life.

Juggling the aft CofG with an overheating engine and prop selection resulted in quite a number of deadsticks. One landing was potentially nasty when the engine lost power but didn't stop. Not enough power to maintain level flight and try as I might for some reason the ignition cut off refused to work. A few hundred feet up gave me time to plan the approach. Brief thought of switching the TX off to kill the



Down and stopped in time again. Phew!

engine dismissed, established on final and repeated switched flicking abandoned to concentrate on landing. Slight incline up hill wasn't enough to pull up before the rough bit at the end. For the cost of one prop retracting the gear would do the trick but would the radiators rip out the bottom wing skins?

Chanced my arm and ran the wheels into the rough. Broke the prop and scuffed the cowl. A little damage around the fire-wall I was happy with that decision. Ignition cut off fault was mine. Working out switch logic across all my models I allocated

the servo operated choke to the three position ignition switch. Allocated ignition to the same switch. Down for full choke ignition off. Centre position gives half choke, ignition off. Up is ignition on, no choke.

First start of the day is easy with a Sullivan Megatron starter on 10S. Full throttle, full choke, ignition off, crank for ten seconds. You can hear the rpm increase when fuel reaches the cylinder. Back to a tad above idle, ignition on and bang. Let it tick over for twenty seconds. Rest of the day usually requires no choke. Unless it's a cold day. Warm up at full throttle

takes about thirty seconds. I re-jigged the choke to 100% ATV both ends and with ignition at 100% ATV it occasionally does not switch off. Logic behind that mix was one less switch function to worry about. Allocated a separate channel it now works as expected.

As mentioned Dead Stick landing is one manoeuvre this Spitfire has been put through quite a number of times. The first was at Northern Flying Group when the muffler rattled loose. The first of three at P&DARCS on to the bumpy Faraday Runway had me a little worried. Kept

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Tank empty gear down the CofG is 195mm from the leading edge. Measured at its widest point up elevator throw set at 35mm produces a good flying experience



In keeping with its heritage "Somewhat awkward to handle" is a classic British understatement



A rag protecting the empannage is the best way to assemble this way



Not scale but removing the cowl to tune the engine is not for me

the speed up and left it clean until established on final. Lowered flap and gear when I was sure it would make it and she bumped and bounced and the Robart struts clanged noisily against the stops. Thinking it might run out of room makes for an interesting decision with big models.

When I say big I mean heavy. This one is 19 kilograms. A ground loop risks breaking the model to avoid running off the end of the runway. Possibly not such a problem for this

home built airframe compared to a balsa ply ARF but running it straight off the end one risks breaking a fifty to one hundred dollar prop. In this instance I got away with a gentle ninety degree turn onto the main runway.

Finally got the Cof G and control throws sorted in the Yarra Valley. Then two more deadsticks throttling back to idle after climbing for spins it was time to fix the air cooling.



Lead distributed into every nook and cranny



Lead glued with silastic



Cooling air stage one



Stage two - flight tested

Airflow into the engine bay looked sufficient but the exit needed to be improved. Spent a day with Damien Mould in his fully equipped workshop. Damien did all the work and fashioned up two baffles. A plywood job cable tied to the engine standoffs and two Litho Plate numbers at the rear. To seal the front baffle Damo doped the plywood. Not with a brush but hand rubbed into the grain with a pair of disposable gloves. That worked a treat. A few hours later a coat of enamel. Job done. I checked out his next project. Sworn the secrecy all I could say his 300 kph prop job is "very exciting".

Back in my hangar I added a metal baffle each side of the cylinder and another behind the spark plug to duct air to another exit further back. Also added two small exits each side of the cowl.

Handling in the air is a breeze. Looks great through a slow roll. Flown gracefully she looks beautiful everywhere. Not quite so on the ground. Handling the long heavy fuselage in and out of the hangar and the model trailer is hard work. Fuselage being so long it's easy to bang into the ceiling. This model has to be held under the forward part of the wing saddle. Which tends to split the

wing fillets. Battle damage around the tail, wing fillets and cowl plus hangar rash on the elevator and rudder. I say the broken undercarriage door adds authenticity.

The 20x11 Menz wood prop turned out to be spot on. Take off requires around full right rudder. Being heavy I no longer worry about it lifting off prematurely before the tail lifts into the flying position. I hold that amount and gradually ease off when established in the climb after gear up.

To reiterate that point, compared to the lightly load ARFs and foamies I've been flying the past few years in-

correct take off technique taking off resulted in a little head scratching. Those modern light models accelerates so quickly and leaps into the air I was mindful to get the tail up in case a gust lifted it off prematurely.

Wrong. P Factor and insufficient rudder authority resulted in a few ground loops. A few dozen flights or so later this model I'm pretty confident now. Measured at the widest point fifty mm of right rudder is adequate although operating cross-wind from its left requires a longer take off roll because that amount is of throw is insufficient if full power is applied too early. I cannot get any more travel so sometimes I have to reduce power if it swings left. Not a big deal I've learnt to live with that. Importantly there is sufficient rudder authority to hold the nose up during the last sector of a slow roll. Which it does beautifully. When I get the timing right.

I took my time trialling the best needle setting for this propeller too. Scale Air Racing experience using higher pitch propellers I've learnt it can be quite easy to set too lean on the ground. After tuning a rich burbling setting on a cold ten degree winters day and dozens of flights later I richened the mixture a poofteenth. Haven't touch the needle since although I am yet to fly it on a hot day but if it needs to be leaned



I'm supposed to blip the ignition when inverted

slightly I don't have to remove the cowl to make such an important adjustment. Once again I just fire it up and a fast idle warm up for twenty seconds. Apply full power and wait until it starts two stroking. Which takes around thirty seconds.

In finishing I feel compelled to mention the CofG and elevator throw again. Due to decades of poor advice publishing excessive control throws on plans, in kits and ARF instructions, the thin tips on this elipitical wing have gained an unfair reputation within the model aircraft fraternity for tip stalling.

The settings on the previous page have been flight tested. In fact

the model had a number of flights much further aft and I can safely state provided you use my suggested elevator travel the published balance point works well. I use a higher rate of up elevator to taxi on soggy grass runways or spongy grass but low rate is selected for take off and the rest of the flight.

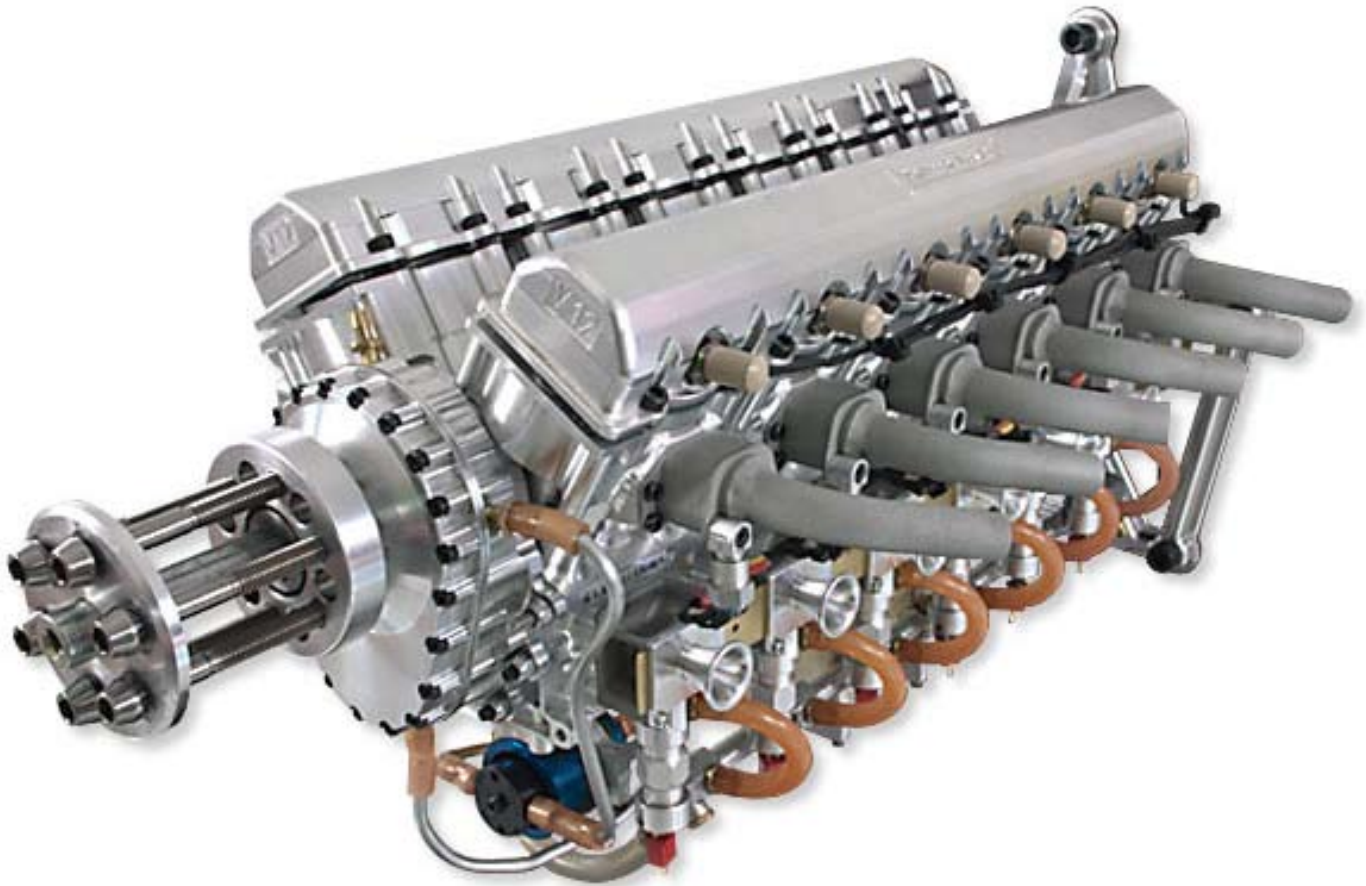
Flying in front of judges I learnt I was not meant to fly it inverted because the engine was supposed to cut out. Keen to enter another scale competition perhaps I can learn to blip the ignition through a slow roll. It's hard to beat a Spitfire yet somewhat surprising is how many ask if it's a Mustang.



Rudder 50 mm either way
Elevator 35mm up 39 down



Stable approach with 2mm up elevator mixed and forty five degrees of split flap



Philtech Leslie V12 Model Aero Engine

Way back when we had access to the two 5000' runways at RAAF Williams I first met Phil from Philtech with his small V6 two stroke engine. Which I test flew in a Great Planes .46 size Mustang. It flew but power to make a Mustang perform like it should was not there. My comment that the trend towards larger models he would probably do better building an engine for a one quarter

scale Mustang must have been taken to heart. Twenty five years later a 108 cc V12 in a 1/5th scale Top Flite Mustang ARF was rolling along another bitumen runway. Sufficient in length but not as wide as the Air Force blacktop.

Expecting the torque reaction would be similar to my Spitfire was incorrect. Full right rudder wasn't required. A couple corrections to keep

the Mustang tracking along Runway 36 it lifted into the air. Gear up and build up speed for the 180 degree turn it flew past with a good turn of speed. So far so good.

After the flight the owner stated just seeing it lift off made the flight a success. For me that wasn't until it was back down in one piece. Limited space allowed only five minutes of





On final to conclude a successful test flight

fuel on board. The flight plan was warm the engine, stop, refuel and go.

In case I had to go around we flew two passes then setup for landing. Most Mustangs I've flown needed very little flap elevator trim mix but I could not remember it was up or down. Fairly sure it was up but the decision was to leave it neutral and

1. 108cc twelve cylinder
2. Cool Power 10%
3. Onboard Electric Start
4. Onboard Glo
5. Fuel Pump regulated to 6 carburettors
6. Three Stage Mixture Control
7. Liquid Cooled 50% Gycol Thermosta controlled
8. Gearbox ratio 1.35: 1
Four 4 blade 24x14 Prop
9. Gearbox ratio 2:1
Four 4 blade 30x14 Prop

deal with that on approach. Which can be clearly seen on the video.

Fifty ounce per square foot wing loading it whistled in. To avoid a bounce I eased off elevator a tad just before touchdown it planted on. And stuck. Phew! A little heavier than I

would have liked but I really didn't want a bounce to deal with. Correcting the slight swing to the left turned into a ground loop when the tailwheel parted company.

No flat for the wheel collar grub screw struck again. Which saved us





Philtech liner on the left, Fox on the right



Revised liners on test rig

a long walk. Fifteen kilograms rolls a long way on bitumen. Model and prop intact but my main concern with the undercarriage mounts is why I searched high and low for a hard surface. The only grass strip suitable was four hours way. Anyway the right hand plywood plate delaminated. An easy fix.

My biggest concern with this heavily loaded overweight model was getting one chance to nail a deadstick landing. Phil had no concerns with a mechanical failure as the engine had hundreds of hours of run time however correct cooling pump speed and propeller selection could only be confirmed with more flight testing. Initial thought was the prop needed more pitch and my gut feeling is the engine would pull more pitch and fly a quarter scale warbird.

In the meantime Phil set about getting the idle speed lower whilst I looked out for a more suitable test bed. The 1/3rd scale Spacewalker would have been perfect. I missed it by one day. Handing over to Phil.

Lesley V12 Engine Update

Philtech is current building a batch of ten engines, however, there are many parts of the prototype engine that need some tidying up. Also, some of the parts on the prototype were sourced from other engine manufacturers or part suppliers and are no longer available, hence Philtech will need to manufacture these parts themselves.

Cylinder Liner

One of the major parts sourced externally was the cylinder liner from a FOX 40 ringed engine but these are no longer manufactured. The Lesley V12 is a long

stroke design but most model engines are short stroke therefore are not suitable. So, we have made our own liners with some modifications. The booster port on the Fox liner was causing an imbalance of tuning between the opposing cylinders due to the liners facing opposite directions, so we have had to remove this port.

The Fox 40 engine was designed to run at over 12,000 RPM but the Lesley V12 sounds more like a scale Mustang engine running at 7,000 RPM and due to being a long stroke means that the Exhaust and intake ports can be lowered which will increase the torque of



Production tools used to manufacture the crankcase



Carburettor with regulator

the engine. To manufacture a cylinder liner requires some complex milling of the transfer ports and precision grinding of the internal bore, this all took me a lot of thinking and CNC programming, but we ended up with some new cylinder liners. Then, for the fun part, testing the new liners using just one segment with two cylinders is the best way for testing changes to the design.

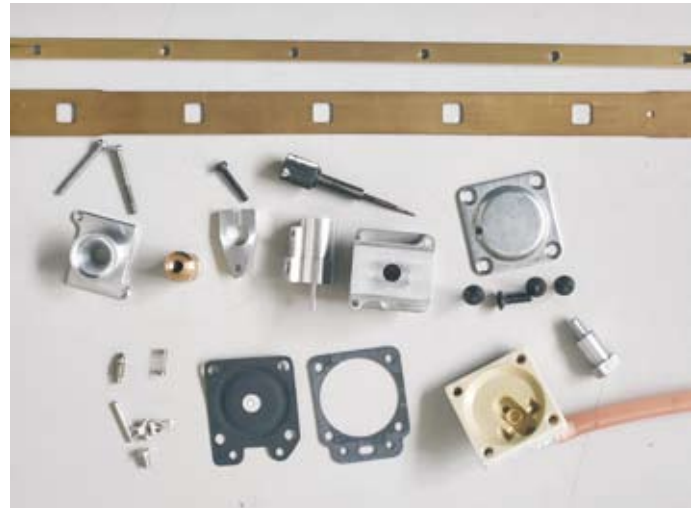
The result is that the engine now runs more in tune therefore idles at a lower speed, produces about between 5% more power at 7,000 RPM and importantly we are now able to build our own cylinder liners.

Crankcase

The Lesley V12 engine uses a modular design with a separate crankcase for each set of two cylinders. On the prototype the modular crankcase was a different design for the front, middle and rear segments, this was a typical over complication by me, so they have been redesigned and are a universal design to simplify manufacture. The changes to the cylinder liner design require the transfer passages in the crankcase to be updated. There have also been many other modifications to this part over the years of testing and now all these changes need to be included into the massive computer program that machines the crankcase for a solid billet of aluminium. It takes fifteen different tools on a four axis Computer Numerically Controlled Machining Centre to produce the crankcase. Phil from Philtech.

"Thanks to introductions by Bruce de Chastel his F3D credentials overseas may be a source of supply for these critical components". SG.

www.philtech.com.au



Dismantled carburettor



Precision grinding cylinder Liner



Cutting the inlet ports into the cylinder



1/4 scale P-51 project is next

Have you ever dreamt of flying?



by Scott Matthews

I did. As a young boy I use to take a ride with my Dad out in to the paddocks in Knoxfield Victoria, just off Ferntree gully road to watch them fly RC model aircraft. I would jump out of the white HQ sedan and hold the gate to the paddock open, Dad would, well, do the Dad thing and move off just as I neared the door handle of the car. Occasionally I would get to drive the car down the two tracks to the neatly mown RC runway.

A lot of Sundays were spent watching, throwing chuck gliders and running around with a spare propeller on a screwdriver. In the late seventies early eighties Dad had a small backyard Business, Control Tower Hobby Centre and visitors would come at all hours to talk and purchase RC gear. Unfortunately, the business ended and he gave away the hobby. All that remained was a few propellers and

some tools. Fast forward a few years and I built my first few RC models towards the end of high school 1989. Pilot QB 1800 glider, Aeroflyte Trident and a PAW 80 powered Aires glider were among the first few.

Dad was busy with work, but with his help I ended up completing a few models. With my brother, we went through all the errors trying to fly these gliders. One day Mum dropped us off in the paddock for a few hours, as she drove off, I realised the dry cell 27Mhz transmitter was flat. A long walk home ensued.

Joining the RAAF in 1989 I was fortunate to travel the country and participate in many varied RC events. Models slowly got more advanced, bigger and more costly. To be honest I had just as much fun and satisfaction from a neatly trimmed hangar rat indoor rubber band model.

A turning point for me in my lifelong aeromodelling career was a practice day at Sale and District Aeromodellers. I liked to be prepared and always told myself to fly at 80% capacity on display days and walk away happy. So, a quick practice on the Saturday, prior to Sunday display, with a Skymaster Hawk 100 jet turned to disaster as I inadvertently selected full flap, as opposed to flaps up and I drove that aircraft into the ground so hard. Driving home with three trash bags of rancid smelling composite material, I thought there has to be more to this.

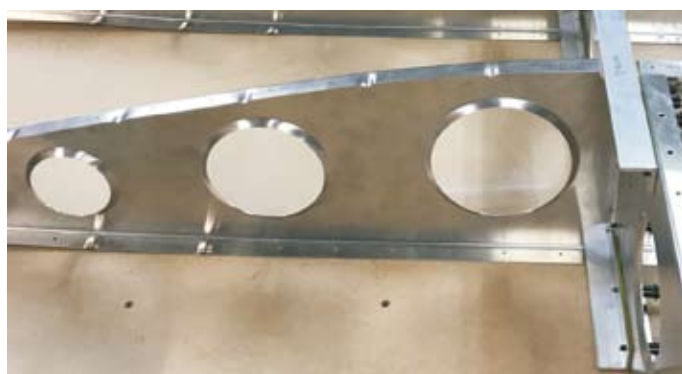
Enter the full-size dream. Living only 8 km from the local airport, I walked in one day and asked how do I learn to fly. Anyone who has done this, will understand the awkwardness of this experience. All new to me and before you know it you are drinking from the fire hydrant as they say, over loaded with information.



A big Futaba servo should move that quite nicely



Ready for the engine



Was aeromodelling experience helpful?



Ready for paint



As flight training progressed, I entertained the idea of one day building my own aircraft. A family holiday to the USA saw me visit the Zenith Aircraft Factory in Mexico Missouri, just happened to be driving past, honest.

Do the years of model aircraft building help with building a full size, absolutely. On occasions I found myself quietly muttering, I used to fly RC models. Those that have never played with models would often raise their eyebrows and give the opinion it holds no value. At least half would say they had a control line as a kid which was awesome.

So, what is involved in building a full-size Zenith CH750 Cruiser aircraft? I found the task very challenging in many ways. As a builder you need to make your own choices, none of which are necessarily wrong, on things like avionics, engine and finish system to name a few. From a kit, framing up the airframe is relatively easy, with the added complexity of the pure size of the thing. Simply flipping a wing over, becomes an event. Part of the challenge is working out how to complete tasks, build stands, paint booths, racks and shelves, whatever it takes.

Some work, some could be better, some ideas get trashed. Eventually the aircraft comes together.

The good old Internet, this can be a huge help, but also a battlefield. Tread carefully, I took the approach of going direct to the manufacturer rather than ask the world for opinions. During construction, often familiar terms or phrases would arise. Right thrust, incidence, CofG and adverse yaw all terms understandable to the seasoned RC modeller. I believe in some cases the RC modeller may even have a better grip on aerodynamics than the full-size guy that rents a Cessna four times a year.

So, with each day my build project came together. It was great doing those eye candy jobs, fit the tailplane, four bolts but it looks like you have achieved a lot. No one tells you how to do certain things, yes there are aviation standards to follow but for instance the fuel system. One vent, two vents? Header tank? Gas-colator? Fuel pump? Two pumps? What about gauges? One? None? Backup? You see what I mean? So, for me it was the basic necessities with no back up. I did slowly go

through scenarios, what if this fails etc. For me, look out the window and fly the aircraft. This resulted in a light, simple aircraft.

Test flying a new amateur built aircraft the biggest concern was harming someone else, namely my test pilot. Do I think I could have flown my own aircraft, of course. Could I handle a major issue in a new aircraft? No way. I handed control over to the local guru Gerard Lappin. The test flight was uneventful and I was soon in the left hand seat.

Flying a new aircraft, built by yourself and knowing every square inch was overwhelming to be honest. Trying to keep a new engine cool, fly a new aircraft and take in the words from an instructor as well as worry about every nut and bolt was very much task over load. We got it done. About six flights with an instructor, working on landings mainly and I had it sorted enough to fly solo.

So whatever your dream project is, do it. Start now get in to it, do it for you, make the time. Enjoy your flying no matter what it is, on to the next project for me. A replica full size Sopwith Camel. Scott.

A Big Day Out



A ride in the big one

A year or so ago I went for a hop in Damien's Christen Eagle. I have a little bit of full size time in my log book and as a passenger with Damien in his Eurofox, Savage Cruiser, Shock Cub and Autogyro so I had a pretty good idea what to expect. Or so I thought.

A very professional briefing covered the five point harness, how to exit the aeroplane and where to place ones noggin during take off and landing. The high compression Lycoming cranked over and burst into life. The difference between a standard aero engine can be heard out the exhaust. Full power applied slowly the tail rose and next thing we were headed up at an impressive rate. I was accustomed to 2 G turns in Cessnas shooting aerial photographs but man this thing really gets your attention.

A quick tour around the Yarra Valley my head then over to the right hand side for Damien to side slip the biplane back on to the bumpy grass strip at Lilydale Aiport. Flying with Damo is always a

comfortable experience. My eldest boy Andrew was treated to a flight for his 30th birthday. Andrew is a Paramedic and has just completed his first year of MICA training.

A few years back he expressed interest in the Heli Med side of the service and was able to check out Heli Med 3 Bendigo where Damien flew the Bell 412 machine. Two experiences Andrew thoroughly enjoyed.

Thanks Damo.

Introducing the little one

Not quite. This one is a half scale EWJ kit powered with a 222cc DLE four cylinder. Futaba 18MZ with twin FAASTest 3 ch receivers and a BUS Like every test flight I've witnessed with Damien this was another non event. Courtesy of a bump as it trundled along in a low power taxi test the aeroplane decided it was ready to fly. Full power was applied and away she went. Excellent performance and quiet thanks to the three blade



Andrew, now a MICA Paramedic, had an enjoyable aviation experience



DLE 222 is one sweet engine



Climb out after take off just like the big one



Almost there



Another successful test flight

prop and canister mufflers. The four cylinder donk is very smooth and hand starts so easily. A few flights later with a little altitude on hand until the engine cooling system and tune was confirmed. Damien is very adept at 3D printing so I await to see if there is any likeness between the half scale pilot and the full size one. Possibly a smoke system too. A big day done and dusted.

Another Big Day Out

The last time Captain Damien Mould, Captain Grahame Goodson and I got together at a flying field was for three glorious days of slope soaring at Lake Bullen Merri Camperdown. Combat was king however stewards are still yet to find the culprit who hot glued Goodson's combat wing to the ceiling. By the way anyone thinking of using hot glue to build a model be aware no paint came away when that wing was removed from the ceiling. Not much strength in that glue joint. Glue is quite heavy too.

The big day arrived for the Grahame's Bleriot to take to the skies. Russ Keep looked after the MAAA Heavy Model Inspection while we waited for Damien Mould to arrive with a drone to capture in-flight footage. I had a fly of Grahame's Espidita hotliner and resurrected my Father's old 1993 F5B hotliner, Grahme boated around his FMS Super EZ and Russ fired up hit Supercub for a few laps. As you can see Damo arrived in style and on time. Handing over to the other Captain....



Flying time from Lilydale twenty one minutes



Mavic Pro for in-flight footage



Russ Keep handles the MAAA Heavy Model Inspection

Severin Bleriot XI

I do know that a lot of modellers have not heard of kits by PAOLO SEVERIN. So for those, I would like to say that his kits are without a doubt, the best available. In my opinion, they are better than the kits from PROCTOR ENTERPRISES in the good old US of A, and those kits are superb!

My favourite full size aeroplane is the Piper Cub, specifically the J3. And as there was a J3 available from Paolo in ITALY, I ordered the kit. It was an absolute pleasure to build, however that is not the subject of this article.

He does numerous kits all a replica of full sized craft. I became quite intrigued by his kit of the 1909 BLERIOT. I did a lot of research, and



became so obsessed with the aircraft that I just had to have my own..... In the form of Mr. Severin's 1/4 scale kit. In a previous life, my vocation was that of a "real" pilot, and I am still involved with the industry. I was quite amazed to discover that very few other "proper pilots" had ever heard of Louis Bleriot or his aeroplane, especially as his achievement changed the course of history.....oh well.

The Bleriot kit was more a work of art than a model kit. For those who don't know, the BLERIOT was a monoplane, constructed mainly of wood. The fuselage was an open wooden structure, which was held together with brackets and bracing wires....no glue at all except in the

forward part of the fuselage, engine area and cockpit. Paolo's kit is a faithful reproduction of this process.

My first big surprise was when I collected the kit from Customs. The kit. Came in a reinforced container, measuring only 27" x 17" x 4.5" ! How on earth could a 1/4 scale kit fit in that small box? Also there was a 6 foot long small diameter tube, which contained the pre shape fuselage longerons and wing spars.

On full inspection, all of the kit was there, and what became evident was the absolute quality and detail of this kit. It really was amazing. Fast forward fifteen yes fifteen years. Test flight time.....and there was no way in the world that I would ever attempt to test fly the model.....

after all it was a wing warper..... no ailerons.....roll is by warping the wings through cables operated from a high torque servo which operated by actually moving the control column, which was topped off with a steering wheel that was probably taken from one of Bleriot's automobiles!

So the test flight was left to the capable hands of Mr. SG himself.

And he will write something about it here.....

"One final detail was missing so a pilot with time in an Eindekker was seconded from Dad. A bit rusty as his last flight was on 2006 in the F4C Scale World Champs in Sweden. In terms of flying qualities Dad's wing warper was a non event. Just another model.

With the cockpit complete the Test flight went pretty well. The Saito triple runs very nicely. After final checks we had it idling with the nose pointing into wind. Damo was ready with the drone. Throttle opened she quickly reached its terminal speed on the ground. My should I go or stop point was looming. It had been such a long winded process fuck it came to mind but I felt it was almost ready lift off. Thinking an on old three channel trick of wiggling the rudder might come into play but it lifted off.

With full up elevator I beaped in all the trim and she slowly clawed her way into the air. Elevator gradually reduced with airspeed I made a wide left turn and kept climbing. A



This pilot has Eindekker time



In the hangar ready for the third flight

few turns either way roll response was slower than I would have liked. Engine working hard I setup to land just in case it quit.

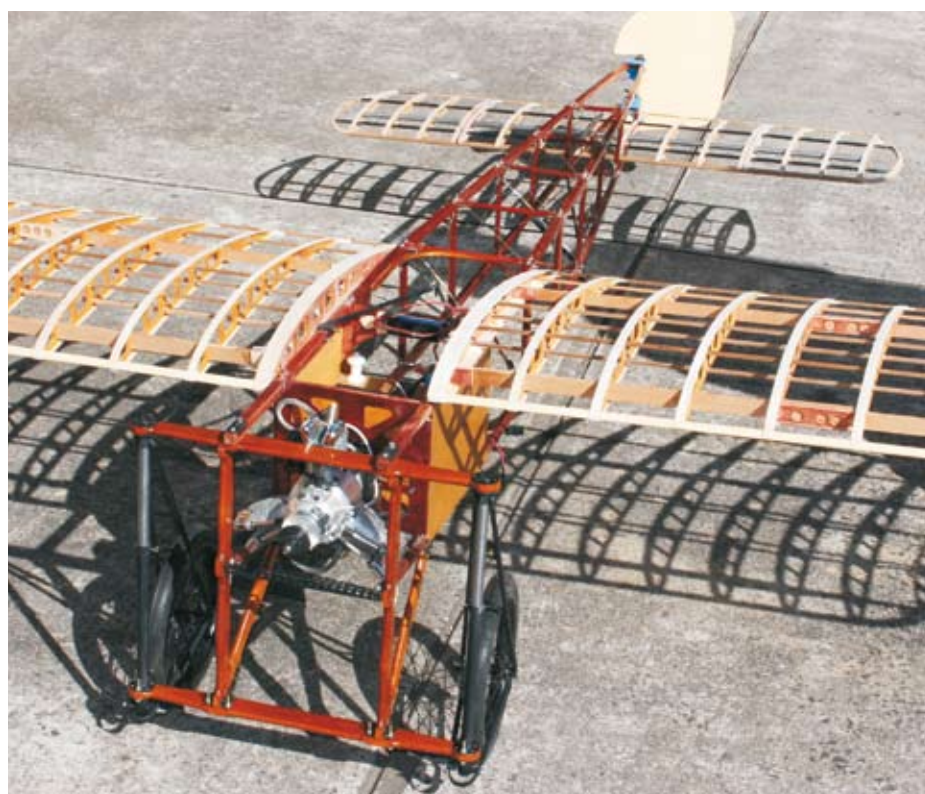
Holding full up elevator with reduced power approach was flown around half throttle to maintain a reasonable descent profile. The only way to flare was going to be a prop blast of air over the elevators. Dreading a big bounce I made reasonable fist of that and the flying Meccano set was down.

Damo had to go and after he departed we removed some ballast, increased the elevator travel and went again. Much better but after a few minutes that engine started to

sound like it was getting hot. Then it quit. Altitude in hand again a much steeper approach to maintain with excessive airspeed for the flare.

We didn't have to walk far to recover the model. Transferring a significant portion of kinetic energy into the ground does that. A couple of rigging wires on the undercarriage otherwise intact. Back to the hangar for minor repairs. A new prop need as it could do with more pitch were set for another flight.

A little back story it was very pleasing to see it fly as Grahame had agreed we fly this model from a speed boat across Port Phillip Bay as a PR exercise to promote my 2015 Sand-



Calling this kit a flying work of art is not over selling it

own F1 Air Race event. A few people asked why I didn't consider a helicopter. Already familiar with flying from a speed boats and two available was one reason. By the time paperwork to do the flight from a full size was completed the flight could be knocked over the other.

One thing Grahame didn't mention with the build was the manufacturers reply to his query about replacing the steel elevator tube with a carbon fibre one. Assurance it wasn't necessary resulted in heaps of lead needed.

Handing back to Grahame".

So now I wanted to do another of PAOLO's kits, however he had since retired and his kits were now being produced by TONI CLARK PRACTICAL SCALE in GERMANY. Very sadly, by now, Toni and his founding partner had passed away, leaving the company in the hands of this flu king fhuerrer (name withheld)

I attempted firstly, to purchase a 1/3 scale Piper Grasshopper. This was a total exercise in futility! So I changed my tact, and pursued a 1/4 scale Feisler Storch.

One of the recommended motors for the model was ZENOAH 38 with a reduction gearbox fitted. Now the Z38 is no longer being made, but one was at hand. So after communications with FF, the motor was sent to Germany, with the understanding that I would receive a quote for the modifications prior to commencement of any work.

Well the motor is supposedly still there. I was told the organisation had to pay some import duty, which is BS because the motor was not an import at all. I am still waiting for a quote for the modifications...So I am well out of pocket, and I would suggest extreme caution dealing with this organisation, such a shame that a reputable business has come to such unprofessional undertaking.

Grahame is the best impulse buyer I've never had the stock holding at the right time to take his money. He was always keen on the Severin Tiger Moth and I know that MAAA President Tim Nolan has one under construction.

Road Trip # 1 Christmas in July



MAAA President Tim Nolan runs up the big Spacewalker

Having raced F1 at Richard Emmett Field which is nestled in the Tharwa Valley NSW I've seen first hand John Armarego's vision for promoting excellence in a friendly environment and I set off for the nation's capital. The field is in NSW but my tent days are long gone hence accommodation in Canberra. Perhaps when I give the model trailer an upgrade with insulation and a diesel heater I could do as others have done and camp.

A spectacular place to fly and lots of interesting models. A great deal of planning and effort has gone into the food as a means of fund raising and this is down to a fine art. Lots of innovation such as the GPS self propelled mower, solar panels and water heating and the most important thing? A long runway sufficient for large models.

The largest was Tim Nolan's giant Spacewalker. Anyone who doubts how busy that voluntary position Tim spent quite a bit of time on the phone. A chore he wasn't able to escape from again on my next road trip. It's a big job. Watching his huge model cruise around on dusk with that marvellous backdrop was worth seeing. Great food and company, night flying this event is definitely worth considering. Limited numbers bookings are essential.



Tim's OS IL 300 powered Gypsy Moth



Byam Wight's electric powered Bronco demonstrated slow flight capability that defied its all up weight



Models left out overnight not a problem



Rugged up for frosty mornings



First flight of the day - Brrr



No he beat me to it. He's welcome



MAAA Registrar Dave Lewis cranks it up



Cruising the mountains



Logged heaps of flights



One of my better ones



Weathering skills a plenty



Fokker DR1 enjoys calm conditions



Home built fourstroke engine



Spectacular outside



And inside



Ex RCM News stunt pilot WG Gilderslag gets into the Christmas Spirit



ROAD TRIP #2 - Shepparton Mammoth Scale

Blue skies greeted everyone who made the trek to Shepparton in Northern Victoria for the fortieth Mammoth Scale event. Registration was quick and easy, and even though I am known to the organisers the important detail of checking the dates on my FAI card and Heavy Model Permits was done.

Upping the anti was Craig Bav-ery who moved the Mammoth Scale lever to eleven by parking his STOL machine at the Northern end of the field. Even though its MTOW is 600 kilograms I've often wondered if the new Futaba A703 servos would have sufficient torque. This plane is a FiFo (fly in fly out) full size RAA aircraft which remained parked right next to the Australian Scale Association tent for its members to hangar models overnight. A growing trend at big events which should be encouraged.

Next in line for the humongous award was David and Aaron Garle's fifty percent Fokker DR1 Triplane. Host club Valley Radio Fliers also made a tent available for anyone who paid the \$50 entry fee. Unsure if the big Fokker would take pride of place I made a mental note to finish early and park my two models inside.

How authentic is the DR1 you ask? It needed a wing walker to assist during the taxi. Crosswind got under the left wing on take off and Aaron was committed. Accelerated along the strip on one wheel waiting for aileron authority to pick the left wing tip up. No problem for someone who just finished 19th in the recent FAI F3a World Aerobatic Champion-



HPS A703 servos?



Hangar space much appreciated

ships in September. Congratulations that is a feat. Whilst on FAI World Champs credentials MAAA President Tim Nolan presented Hall of Fame Awards to Noel Findlay, Noel Whitehead, David Law and Melissa

for their achievements in F4C scale. Congratulations. Noel Whitehead has taken long service leave from competing at that level so anyone keen to represent Australia should keep a look out for team selection. Cost



Models hangared in the original shed

Additional hangar space by Aust Scale



Moki 400 powers this half Scale Fokker DR1



Phil Sing about to select gear up

for three flights works out around \$8,000 per flight for a Husband and Wife team with a European holiday thrown in. The air freight bill for one F4c model is enough to cover a one month holiday for two in Vietnam.

Plenty of scale models to check out this year and the trend to bigger continues. A pair of big F-86 Sabres, quite a few radial engine Stearmans, a gorgeous Travel Air Mystery Ship built by Garry Bergen from South Australia who has attended each Mammoth since the second event. Laser kit cutter Peter Goff's two Harvards exemplified outstanding craftsmanship. Likewise John Armarego's Sopwith Pup although I'm yet to see that fly.



Gorgeous Moki powered Travelaire by Garry Bergen won Pilots' Choice



38kg - twin 5,000 mAh battery packs - thirty month build



Crosswind two years in a row John waited until proceedings had finished and flew it early evening in calm skies. Yes bi-planes were well represented this year.

I finally got to see my favourite biplane. The magnificent red SE5a built by Graham Brown its new owner Steve Millar re-engined it with an OS



Museum scale SE5 now flown by Steve Millar



Parked overnight



Chap closed one lid and lifted another



Darcy Wilson did a great job flying ex Brian Hutchinson Fairey Swordfish



This Travelaire flown by ASA President Alex Butler

FG40. Flukey winds on the Saturday most of the WW1 jobs remained parked.

WW11 jobs operated all weekend. I had one fun encounter zooming up down and around with a pair of Zeros. Peter Goff's Harvard and Texan are another two examples a number of flying museum scale artworks one gets to see at events like the Mammoth. Very impressive

indeed. Peter's Aero Scale kit cutting business sponsored a \$500 voucher towards a laser cut kit.

Fog greeted the sun on Sunday. The temporary hangars were full and my models down the back indicated it would be some time before access was possible. Fly all day, dinner by the campfire, a bit of night flying followed by a few drinks to kick start a long night of tall tales.





Scale Aero Products kit cutter Peter Goff with two beautiful creations



Factual reporting is what we do here and this is not one of those not letting the truth get in the way of a good stories comment.

Skulking around very early Sunday morning to count up how many caravans were on site, and finding out what happened to the big Fokker

a chap exited the gents and made a beeline for his Holden Ute. Opened the cover and climbed into the sleeping bag. That would be a much easier sell compared to the time I convinced my girlfriend to sleep in the boot of a Ford Fairlane instead of a rain soaked tent.

Think a Stearman is the best way to show off a radial? The sleeker nose on the late Clive Butler's Travelaire Bipe is better. Another masterpiece flown by Darcy Wilson was ex Brian Hutchinson's Fairey Swordfish.

Which brings me to an observation of the number of Father Son combinations flying. There were quite a few. I got into the hobby because of my Dad but none of my four children are interested in flying RC. Which is where airshows are a vital method to attract new people. It



Two big ones and one little



Yet another who never grew up

also helps clubs pay back in kind for sponsorship support from the hobby trade.

With continual improvement and other events growing in popularity in mind I think it would be a good idea for this club to consider reinstating a North South Runway. I broke an oleo strut last year on the third attempt to land the Spitfire in a stiff crosswind last year. Of course it was my choice to take off but the point is the club charges admission for the public and when the wind gets up far less flying occurs.

Fly Ins attract a wide range of pilot skill and aircraft types. A North-erly departure point from the pilot box would provide sufficient runway into a head wind and separation from the public area in case of a left hand swing off line. I've never felt comfortable standing so close to the edge of the runway as a 30 kg jet thunders past at 70 kph. Nor do I see the point of making pilots move along that barrier after each arrival.

Ditching those infernal tiny metal runway markers would be most wel-

come too. Clearing the runway cost one participant the left hand prop on his twin. Widening the entrance gate would be a timely improvement for participants instead of lifting large heavy models over the fence. Overall an excellent weekend run by a well oiled administration.

Called into a friend's private motor museum on the way home. Sue and Gary are both into man versus, oops, woman, versus manufactured machinery. Before they met Gary race F2 cars and Sue spent quite some time riding sidecar for her Dad in a three wheeled Morgan. Keen to have a go herself but never given the opportunity she started acquiring her own collection.

The Rolls Royce which belonged to hotelier and raconteur Lou Molina would be familiar with many Melbourne motor car traders. For many years Lou owned the Anchor and Hope Tavern in Church St Rich-



mond. I digress again but a mate of mine's father built the roof which opened up to let in the night sky on warm summer evenings. It also worked a treat getting rid of punters at closing time in Winter. Ten minutes of cold air was usually enough to go return Anchor and Grope, correction Anchor and Hope night spot back to its equally popular luncheon mode. Incidentally Sue and Gary loaned the Roller for a wedding. Park brake left off it rolled down a hill into a tree. Car okay. Fate of the tree not known.



Sue's Spitfire



Lou Molina's Roller

Road Trip # 3 BADMAC Warbirds



Greeted by a pair of bright banners adjacent the driveway we rolled in at 6.15 PM on the Saturday. Reversed the trailer into a spot under the watchful eyes of one chap. Guessing he may be a truck driver or perhaps just someone whose other hobby is watching people back their boats down various boat ramps around the Gippsland Lakes. I too have enjoyed that at St Kilda Marina when I shared a beachfront unit with Prop Head Ted. Don't know who Gipp was or what he did.

Anyway the pressure of the chap watching me got me wondering who was responsible for those infernal curved mirrors that have made reverse parallel parking much harder. What were they thinking with that lot? Perhaps he was keeping an eye



Welcome to BADMAC
(Yes the prop does rotate)



Excellent signage

on the gorgeous Hirobo Bell 47 G helicopter nearby. Parked the trailer to an acceptable standard I made a bee line for that gentleman watching my efforts to ask “Is this yours?” “Nope”.

So my first impression of this warbird event was that heli in military livery which has now shamed me into putting more effort into the cockpit detail in mine. Hence the

extra photographs. Anyone into scale helicopters is definitely worth talking too so I followed up that the next day.

Wandered past a few drunks huddled around the campfire. Correction. Flying Operations done for the day just a few chaps imbibing to ward of the cold cold wind that would further enhance their five star camping experience. I wonder how many invested in a diesel heater for the caravans,



Entrance to a Model Airport



Spoiler alert- prop, aileron and flap linkage are the only giveaways



Another scratch built masterpiece by Brian Hutchinson about to fly



Rolling



Gear down turning downwind





ROTO 135 three cylinder four stroke



Canons remove for transport

Wow

motorhome and impressive toy haulers too. Dad and I left for our three star experience at a motel in town.

Returned Sunday morning to setup the Spitfire and Dad's warbird. Unfortunately the winner of my "Loser of the Week" trophy was decided

right after I unpacked the Spitfire. One of the undercarriage air lines was missing from the retract valve. I've been accused of many things but flying a Spitfire with the gear locked down at a public event was not going

to be one of them. At any rate the type was very well represented.

Should questions be asked I was looking forward to hearing my Father's take on what constitutes a warbird. I'd heard it on the way there



Spitfires were well represented

Pilot Entry Form		Entry No.
		Cap \$5
		Entry Fee \$20
		Camping Fee \$10
		Total \$25
PILOT <u>Brian Green</u>	FAI No. <u>583</u>	
CLUB <u>BAWBAW R/C</u>		
<div style="border: 2px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> Aircraft <u>ロ-クママク</u> </div>		
1. Type: _____	Brand: _____	
Build type: <u>Scratch</u> / Kit / ARF	Weight: _____ Kg	HM Permit checked: <input type="checkbox"/>
Engine: <u>Hacker T50</u>	brief history of full size: <u>ロ-クママク</u>	
<u>Military Spotter & Light Transport</u>		



Unflappable Tony Wilson takes in Brian Green's explanation about his unusual and little known Japanese military aircraft

in the car but would the organisers believe it? Spitfire back into the trailer then I Googled the Japanese translation of Loadmaster for Dad. Which was duly copied on to his entry form. His detailed explanation was convincing enough that a bright orange highly visible high wing

monoplane was in fact a warbird. No doubt assisted by the effort put into that entry form.

Bumped in to Carl Bizon, ex VMAA President and ex MAAA VP. Victorian aero modellers have a lot to thank that guy for. Under his leadership we now have a number of flying

fields with security of tenure. I'm a member at Northern Flying Group which manages Vic State Field Melbourne. Haven't been to the Echuca one yet but BADMAC is a cracker. Three hundred acres, great facilities and active committee trying to build something great. Another club that

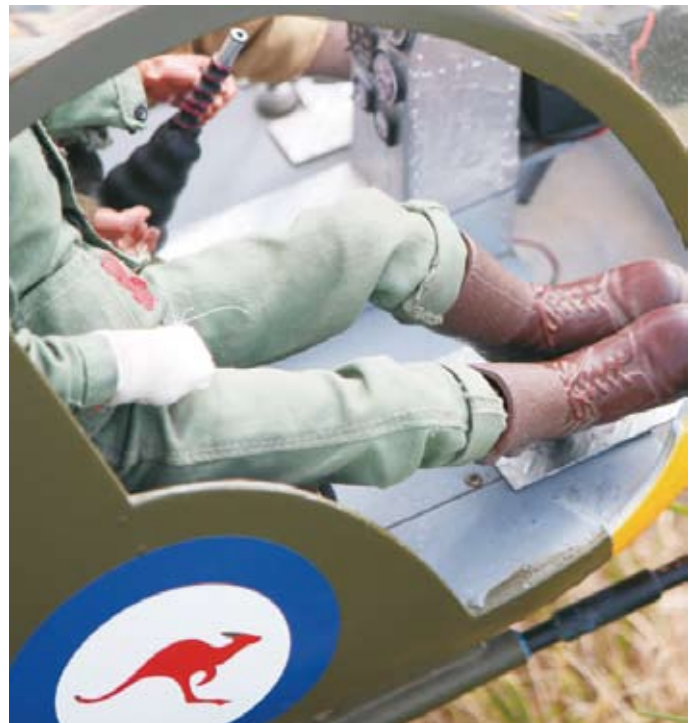


Hirobo Bell 47 G in Australian Army livery



Gives me a few ideas for mine

owns 100 acres is P&DARCS where my membership contributes to the upkeep of a bumpy runway. Whether that club catches up to what has been going on around the country in my lifetime is doubtful. A ramshackle collection of buildings and over



Very friendly in this cockpit

should be bulldozed to start again. Speaking as a shareholder in the Co-Op selling the one hundred acres to a farmer with a ten year lease to the model club would not upset me nor a few other shareholders thinking the same way.

Strong wind kept a few grounded. Thirty years ago only a few would be tempted and my hat goes off to who put that Morane Saulnier up. Quite a few of Brian Hutchinson's marvellous models in the pits. Actually it's high time to ditch that motoring turn of phrase. I



Carl Bizon and Adrian Fasham did a nice display with two Skymaster PC 21s



Bronco



P-47



P-38 is another Brian Hutchinson beauty



P-51





Thoughtfully designed taxiway and engine start area reflects the size of models today



Nice



Capping off a nice flight



Another Hutchinson warbird flown by Darcy Wilson



Fourstroke powered Dynaflight SE5



Catering for small electric models is another section of this conveyer belt running parallel to the runway. (I think the 1/3rd Morane Saulnier is a Seagull ARF)



MAAA money well spent

would love to own his P38 sitting on the apron. Didn't have the money at the time but it was very pleasing to see it did not end up with a cashed up bogon of limited flying ability. Ditto for his other marvellous models.

The pair of PC21s turbo props were impressive. Nice landing in difficult conditions by both pilots too. Ditto for Darcy Wilson whose humongous Brian Hutchinson Fairy Swordfish now operating in the Wilson fleet.

Spitfires were very well represented although my effort let the team down badly. Normally I take two models to any event but the trusty old AT-6 Texan needs a bit of work. First flown in 2009 the covering is pretty shabby and I'm tired of patching it up.

Quite a Pity I didn't get to fly because this club has thought through an issue that is an ever increasing bug bear for me at flyins. Useable taxiways versus dumbing it down where you have to hold the model.

Excellent food. Burgers and Hot Chips, signs on the road to attract onlookers, excellent runway and apron. Way to go this club is doing it right. I look forward to flying here in the future. BADMAC has a glider tow on Australia Day. Faster than Cub on descent initially I might get to try out my F1 glider towing service with the Cassutt.



Overnight model storage



Thanks for coming hope you enjoyed your stay

Chasing 300 KPH

Miles Hawk Speed Six

I knew little of this famous English manufacturer until the 1997 Adelaide Golden Era Air Races. In 1996 NSW scale modeller of some note Ken Burke submitted a build article and plan for a one quarter scale Speed Six around the OS 120 fourstroke. Dad re-engineered the thing for sixty cc and ditched the thick scale aerofoil for something much much thinner. Balsa skinned foam wing with full depth spar and carbon fibre underneath Dad went for a painted finish with a Moki 60 inline twin on glo. I started mine much later and rushed to get it finished and went for a Solartex finish. Engine was a 70cc Stihl chainsaw engine converted to glo.

What a great product Solartex was but like many successful model brands the children of the founders are not interested and it has gone. Oratex offers a similar woven heat shrink which is a similar concept but I've never used it. A few years later my Hawk was repainted and its wonderful flying characteristics came in very handy display flying at Victorian motor racing circuits. When crap weather presented itself that plane was so much easier to look good operating off bitumen compared to the Sukhoi. Particularly in a crosswind.

Built for Team Green to revisit Adelaide a few years back this latest Hawk Speed Six had the nose re-



Will it race it or just be a high speed scale model?

shaped somewhat to house the brute of an engine, Desert Aircraft DA 85 thumper with internal canister and a huge chunk of propeller.

In 2006 Seagull Models produced its Miles Sparrowhawk ARF which did its debut at the Shepparton Air Races. The owners of Seagull attended to watch the three MT 62 cc powered Model Engines offerings by Mark Collins, Cliff Fiddes and Mike Farnan race. I shoe horned the

3W 58cc methanol engine into mine. Extra pitch prop made it a lap quicker but the fibreglass wheel fairings distorted at high speed. Fixed with a ply former at the bottom. Which often broke loose. Watching the other three battle it out the corner of my eye those guys were having fun.

Yep, all bets were off at Shepparton. Would the workers beat the boss? An idea used years later when Neil Addicott raced Mike Farnan



Brilliant F4c scale Hawk Major at Shepparton also flown in Sweden World Champs by the late Brian Borland (NZ)



Bloody wheel spats. Ran out of time in 1997 for Adelaide I used laminated cardboard. Which got wet on the first day. Fifty bucks of CA pumped in to harden them up got me through the event



The Model Engines crew crank them up at Shepparton 2006



Internal exhaust, no problems



58cc 3W factory methanol donk too fast for opposition at Shepparton. A bit quick for Seagull's fibreglass wheel pants too. Added a former later



Got some expert advice on the exhaust manifold from Richo's Radio Active

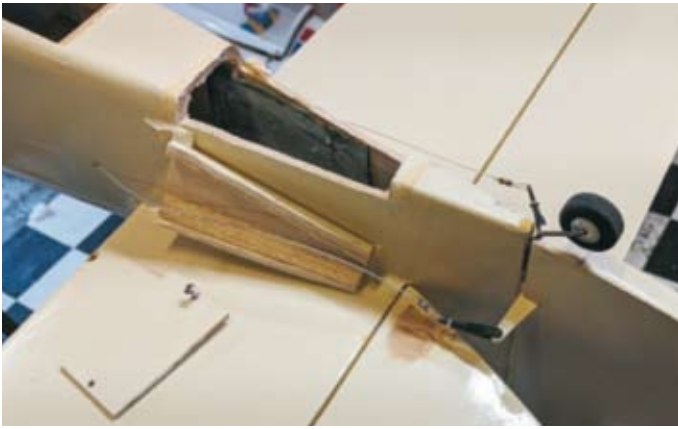
for prize money at Sandown. That was great until RCM Nws Air racing columnist Byron Simpson mid aired with my number one advertiser. From a Display Directors point of view you could not ask for a better outcome. All the heavy bits landed where they were supposed to and the gentle breeze blowing inwards saw kids in the grandstand catching balsa and covering film confetti. That left a crowd catch cricket ball for dead.

Due to the lack of suspension and undercarriage structure inside the wing but if you ever see a Seagull Sparrow Hawk new in the box somewhere, that would make a brilliant 40-60cc float plane. Internal servos are a big plus. I float planes rule.



Ballast added fore and aft to meet the now defunct Adelaide power loading rules now removed

The OS GT muffler in the Spitfire has worked loose twice and rather than fit another genuine gasket we opted for some goo. Spotted the exhaust gasket on the DA and before going down that path I rang a guru. The factory gasket is fine with manifolds. An extra gasket is



More lead

the go if using a Bisson style muffler. Thanks Richo.

After all the trials and tribulations adding weight to that Spitfire now I am facing up to more lead to deal with. Not adding but removing. Should I set about removing it. Built for the 3lb per 10cc power loading rule for Adelaide Golden ERA Dad has lead sheet everywhere. Once she is set up the next thing is finding a suitable racing prop. We have a Bolly and Supercool but they are no longer available so what if I break them? Maybe I'm over thinking that. Reckon if I broke one of those suckers the plane would also be broken.

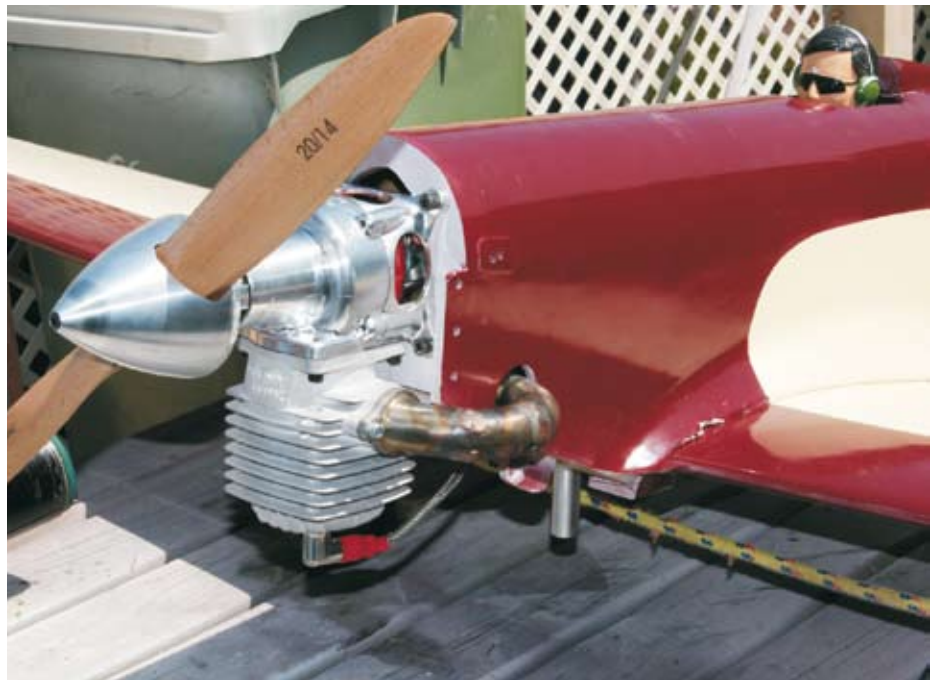
Last on the list is the pair of wheel fairings. Back to my 1997 easy peezy Japanese paper effort? If you look closely at the pic below right my laminated cardboard numbers didn't work out that well in wet grass. Took a bit of trial and error getting the mounting blocks to stay glued too.

Engine vibration from that Stihl was numbing to say the least but the spats were sorted by the time I got to the competition. Or so I thought. Wet grass from the rain on the first day rendered them useless. Super glue came to the rescue and they made it through the five rounds. Thinking to go with Litho Plate this time but given my history with the spats maybe I will fly the thing before I fiddle around with wheel pants on this one.

Futaba has updated a few servos in its wide range and by the time this is published they should have arrived. Like a number of my ARF air racing efforts I've used the entry level servos that meet the minimum requirements. Not as a cost saving



Large internal canister muffler takes up a lot of room



Big bangar DA 85



Cyano to the rescue

effort for myself rather knowing what minimum requirements work reliably makes my job as Display Director easier at an air race meeting easier.

Making race proven information available increases the chance of attracting new competitors too. After checking the gear train in the S3072s in my 60cc Nemesis the new U400s

SBus 2s look suitable for aileron and flap on this model. Whether the Hawk gets to race or just becomes a high speed quarter scale model remains a work in progress. Adelaide Air Races have finished plans for a grudge race with Byron Simpson's DA 85 Mew Gull at a Victorian air racing events are underway.

Instruction

Let's face it the old fashioned box with a wing stuck on top trainer has all but had its day. As a simple reliable power source the humble two stroke glo engine is hard to beat but five bucks a flight for fuel, twelve dollars for a plug, glo engines days for flight training are almost finished too. Motorcycles lost that battle against the four stroke. Outdoor power for the home handyman has gone electric. Lawn mowers too. Given the choice between the FMS Ranger or Boomerang what would most beginners go for?

The photographs below might indicate my bias on this touchy subject has been clouded by my own experience fifty two years ago. What would be the chances of an instructor test flying a model like the Northerner back in 1972? Zilch. Ditto for the 1980s, 1990s. What about in this millenium?

I've long held the view when a beginner rocks up the club should do it's best to fly the model they present with. Sending someone away because the model may not be suitable for flight training is akin to not being served when you want to purchase a dishwasher. Once you leave you are unlikely to come back. One positive thing that has changed is the number of clubs now see the value in a club trainer on line ready to go.



FMS Ranger with Reflex stability system. Available in three sizes 850,1200 and 1800 mm wingspan

With MAAA's Come and Fly Day initiative in mind I setup a Seagull Nemesis to operate all day. I bought it second hand for F1 but it was a bit rough. The 16iZ TX is good for quite a few hours of continuous operation. Not knowing how long I packed a spare TX pack. Zenoah 26cc petrol engine with magneto ignition meant one less battery pack to charge. Eagle Tree Guardian three axis stability system, a buddy box lead and a pair of basic Futaba 6L transmitters. Mode 1 and Mode 2. At \$159 each it wouldn't be uncomfortable if one was dropped. Slave TXs were allocated aileron and elevator.

Got to the field a few weeks before to fine tune the whole thing. First on the list was mechanically adjusting the linkages for straight and level at half throttle. That way if a beginner knocked the trim when handed the transmitter the reset was in the centre.

Pegged the model away from the pits and ran the engine at half throttle. Twenty seven minutes later it quit. Flight timer was then set for twenty five minutes. Timer activates by the throttle cut switch. Ceiling height at the club is 400 feet and the medium speed buzzer alert was set to 350 feet AGL. Operating over water the distance buzzer was set to 500 metres.



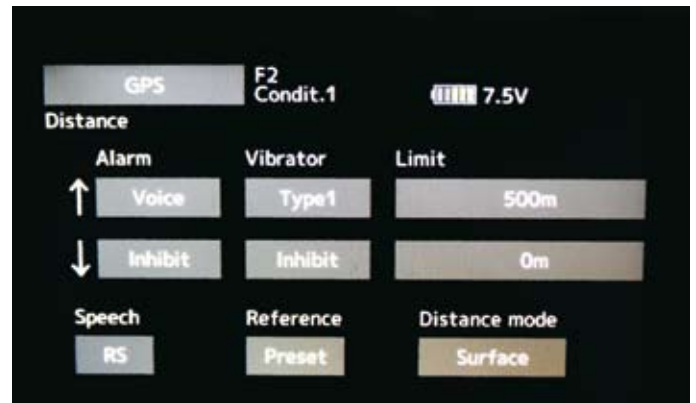
My three channel second trainer



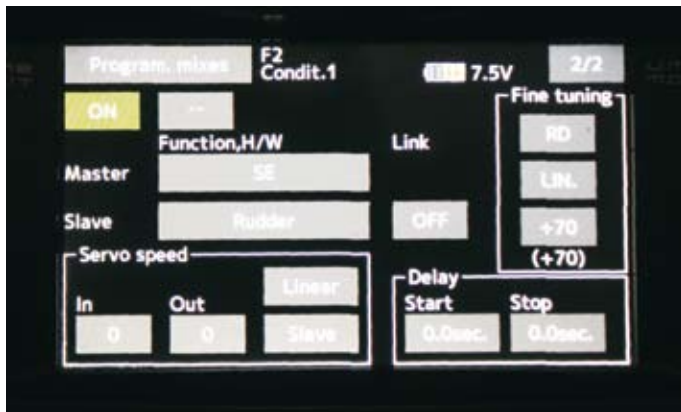
My first 4 ch model F3a Northerner Mk1



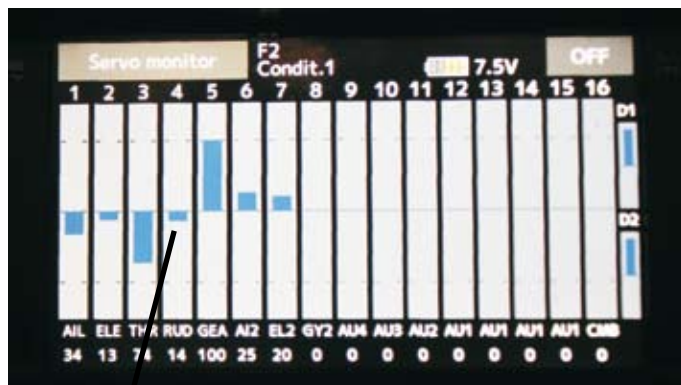
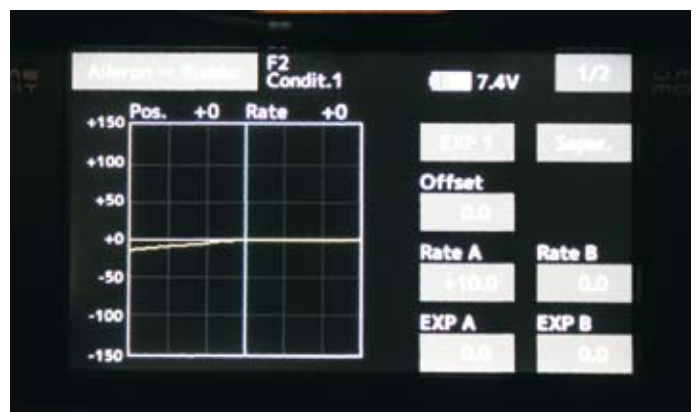
Altitude alert



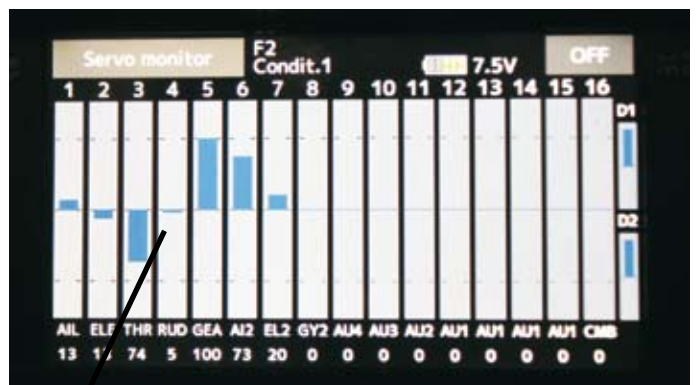
Distance alert



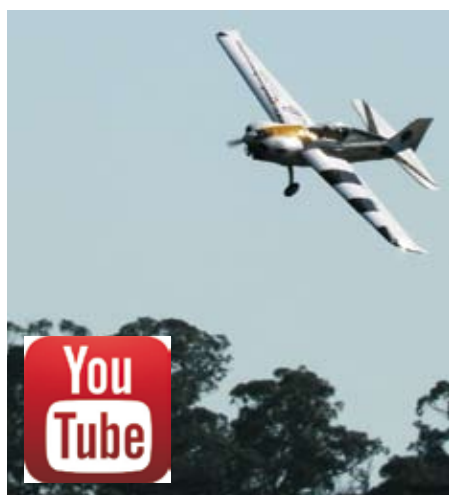
SE switch activates Stability Mode and a small left rudder mix with left aileron



Rudder channel neutral



Rudder channel with left aileron



Basic flight training in blustery conditions (pic by Mick Gunn)

That figure is on the Area Approval on the wall in the Northern Flying Group club room. Zero wind engine at idle the Nemesis would just make the strip from that altitude and distance. A dead stick would increase the gliding distance. It didn't take long to sort that lot out.

Not so with this problem. In basic stability mode the plane did a nice easy thirty degree banked turn. All the student need do was steer it around on aileron and the model would maintain height. Once they got the hang of that George was switched to the assist mode and elevator was introduced.

Getting it to turn left without losing height was not happening. Playing around with rudder and aileron trim

didn't help so I set about using free mixers to sort that out. After trying numerous combinations a simple left rudder mixed to aileron solved the problem

Chuffed with how it all went. On the day I burnt three litres of fuel in blustery conditions. Changed the TX battery in the afternoon. Broke one prop when I had one guy landing. Should have taken over but thought he was going to round out in time. Had a slight brain fade myself and landed short. Doing the walk of shame bought a cheer. Damien Mould operated his Super EZ and Mick Gunn a Boomerang 40 all day too. Thanks to Andrew Sill's very effective Facebook campaign Baw Baw RC Club picked up a few new members too. Job well done.

Go for Gold

What to do after attaining the MAAA Silver Wings proficiency? Go for Gold. The hardest manoeuvre in the MAAA Gold Wings manoeuvre schedule is three horizontal rolls but that's getting way ahead of ourselves. The first thing one must learn in aerobatics is how and where to position the model. Putting my instructor's cap on the ability to consistently fly a line parallel to the runway sixty metres out is the first step. Procedure turn, also known as a Dumbell turn, at each end is part of the schedule. Then there are the figure eights. Not too taxing a manoeuvre to learn but a positioning skill to learn none the less.

First aerobatic manoeuvre I introduce is the inside loop. Next is an Immelman Turn. Then a Split S. The last three are turn around manoeuvres. A half Immelman at one end is an easy way to gain altitude and position the model to head back inverted. The trick to exiting the top of the Immelman is elevator neutral before the nose is level with the horizon. Initiating the roll when the nose is level results in a descent. Some times quite rapid. We don't want that. The idea behind half looping into inverted flight is to learn how much down elevator is needed to maintain straight and level.

A Split S at the other end is an easy to teach way to position the model for an inside loop. After the



Post Bronze Wings Test he loved this flight on my 200 kph Classic Pattern model

pull to forty five degrees this gives time for the student to confirm wings are level before pulling back to half throttle then applying up elevator. That way the model should exit the loop on line.

Another turn around manoeuvre is the half Cuban Eight. A little harder than the Split S but once the Student can consistently fly up and down along the flight line and perform those manoeuvres I take a deep breath and introduce the three horizontal rolls.

Which is all about up and down elevator timing. I say that because in 1972 my Father demonstrated the manoeuvre a few times. He turned around half way through to check if was still watching. Turned back, model inverted pulled up elevator

and splot. " See, don't do that" .

Another vital thing I look for is to be able taxi and turn to take off maintaining direction and no or little yaw to the left after take off. More important is a correction to get back on track. A stable approach and land within ten metres of a chosen spot, back track to clear the runway demonstrates airmanship. Apparently this term is soon to be changed to airpersonship.

Moving on to aerobatics I set about practicing for an up coming Classic Pattern competition in February with Dad's Whistler. First item on the list was to decide if the electric setup could complete the schedule of manoeuvres. First problem was sourcing the battery packs. I wanted a 6S Hacker setup but it wasn't going to happen. Australia is a small market and the age old problem importers face came into play again. The size of the market versus the population does not mean this market should be the same as the USA. Brian Simpson has had that agency for twenty years and needed to top up a few popular sizes battery packs. The company had increased its minimum order requirement to the point where purchasing a year's supply of product already in stock was no longer viable.

So the first flight was with a ten year old 12S Turnigy helicopter pack split in half. Prop on the Hacker A60 was the recommended 17x8. Heaps of grunt but it wouldn't complete the



Stand straight, shoulders parallel to the runway and don't move is RC flight training F3a style



Dad's electric powered version of his 1973 World Champs F3a design was scratch built from a few photographs

schedule. Before learning to throttle back a bit I cooked one pack in the process. It swelled in flight and was quite the job to remove it from the aeroplane. Velcro is too fiddly for me. I prefer to secure battery packs without it. After deciding on new battery packs that was changed quick smart.

Rather than pontificating what prop with telemetry sensors that provide accurate data the quickest and easiest way was done by dead reckoning. I just ordered a few sizes to try where it counts. In the air. First prop was an 15x8 APC E. Model Engines import the NCE range of LiPos and these have proved themselves in my fleet of 3S models. A 6S 5400 mAh pack and the 15x8 APC the Whistler now completes the Classic Schedule. On a windy day. Cooling system is up to scratch too.

Incidentally the framed photos of the Aussie team above are at odds with NSW F3a scribes on social media would have you think they had invented the caper. Moving on from that hot gossip the hottest day the Whistler has flown during Spring was 25 degrees. The hand thermometer can be left on the battery pack and ESC heat sink quite comfortably. Performance is good too. More than enough vertical.

In flight tuning to get roll rate and elevator throw for my preferred looping diameter followed by knife edge mix was completed after a few flights. Next was aileron differential and loop tracking. The first is done by flying directly away from yourself and pulling to a vertical upline. Otherwise known as a vertical climb.

Pull up then do a half roll. If the model yaws off line reduce the down going aileron travel. If the nose has

yawed to your left after the half roll to the right increase the differential. This reduces the drag from the down going aileron. Airspeed after the half roll decays side and down thrust also come into play but first I check the lateral balance.

Flying directly away from myself I fly an inside loop and check for wings level at the bottom. Followed by an outside loop. A few grams in the wingtip sorted that. Ordinarily I don't go for conspiracy theories but each time I get a puncture thoughts of tyre companies designing a product for the building industry that somehow manages to penetrate my radial ply tyres each time I pass a building site cross my mind.

CofG is decided by the amount of down elevator required to maintain inverted. Last on the list is enough elevator travel for a reliable stall for the spin entry. Dual rate can come in handy here. And here. Grass during Spring grows so fast in Melbourne and to satisfy club members still flying with 2.5 inch wheels the mowing team would have to be on duty daily. The elevator travel set for F3a manoeuvres is insufficient to cope with hauling it off long grass. Whilst I could setup triple rates instead I went for a large travel with gear down which reduces to the in-flight setting when gear up is selected.

As mentioned Dad built this model from a photograph. Years of designing his own and flying others aside it's nice to fly but there is one niggle. Hopefully the judges won't have read this but it pitches nose down after the half roll in a vertical upline. Sporting a tad of up elevator trim straight and level is a tell tale sign it has too much downthrust.



Australia's 1973 F3a team Barry Angus, Jeff Tracey and Brian Green

The quickest way to check is trim for straight and lever at full throttle then pull the power back to idle. If it pitches upwards the down thrust needs to be reduced. Which is quite a bit of work to re do the spinner ring. I went for the easier option of just learning to fly it as is.

Keeping loops small was giving me confidence to work on shapes and positioning. I had made already made a mental note not to make them too big because it gets a bit ugly on rudder at lower airspeed. We went flying the day after we returned from BADMAC Warbirds and I flew a couple of the Classic Pattern schedules Letting my looping shapes go through to the keeper he commented it was bogging down.

All of this sorting out has been using two battery packs. If you want to get better, not just practicing for Classic Pattern, two is not enough to get you anywhere. If you are going



Using two of these infernal tech screws is a community service by reducing the risk of a puncture on the way to the field



for Gold (wings) you should try for five flights each time you go flying. Less talking, more flying.

Two stroke engine screaming in for a manoeuvre remains a big part of the spectacle of Classic Pattern. Electric doesn't have that but clean quiet power in a great flying aeroplane is making up for it. If you intend going for gold, don't buy new shit thinking it will improve your flying? Even good shit. Good advice helps too but I got out of the Novice Class into Expert at the 73 MAAA Nationals flying a model with a warped fin.

To pass the Gold Wings Test with someone like me testing, flying past yourself then pulling vertical and maintaining an upline for seventy five feet would be noted. Maintaining centreline after take off is a good dis-

left and right up and down the field fifty metres outside the edge of the runway is next. Do that ad nauseum. If you don't know what that means at a crusty old Fokker would say "look it up". In other words do it again and again and again.

Get that happening then do a loop on the up wind leg. To turn around at the other end try a Split S. Exit that and gather it up so you fly past yourself straight and level. Keep doing that until you get that right. Then try a roll on the down wind leg. Avoid the potential Walk of Shame practicing spins by making sure you let the model fall vertically at least seventy feet to build airspeed before the pull out.

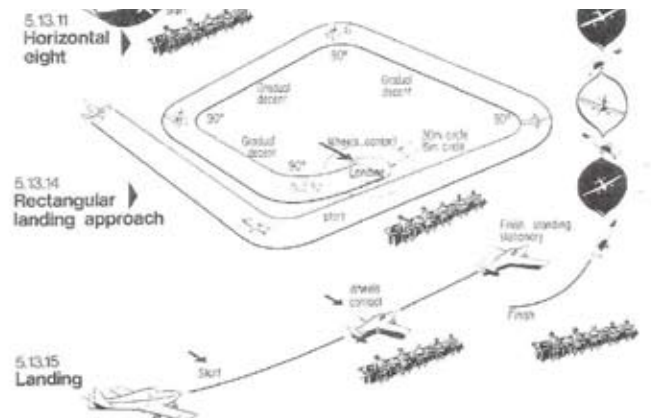
Perfect manoeuvres are not what I look for. The main point of the is to verify if are you in front of the aeroplane's position and heading. For me it's the ability to avoid getting into trouble in the first place is what this test is really about.

My MAAA instructor rating has never really meant much to me. Not being handed out willy nilly and currency every three years indicates it is now being treated seriously. Any instructor or pilot doing a Gold Wings flight test on a sub 2 kg model isn't treating it seriously.

Swapping my Instructor cap for a Display Directors on a Gold Wings rated pilot means you have passed that test on a given day. Thats all. Fly regularly. The important thing is currency.



A good low wing sport model you are comfortable with will suffice



Recreational Pilot License

Back in the 1990s I scored a contract to photograph seventy six housing developments across Melbourne metro area. Brief was one oblique aerial and four ground shots at each location. Some were done with a .60 powered helicopter and fixed wing model aeroplane. The rest were done in a Cessna. How hard could it be to open the window and shoot a photograph from a plane? My first plan was to knock over eight locations at a time. Which is where I learnt about motion sickness.

A condition exasperated when looking through a camera lens. I quickly learnt to locate the site, have the pilot position the plane then fire off a quick snap or two. That didn't happen straight away. Heaving outside the window at eighty knots peas and carrots don't stick to the airframe. Followed by swig of water that was better than using a sick bag.

Later I went on to do vertical site context photography for residential town planning applications. Essentially this was bank and yank photography by way of a sixty degree banked turn then shoot through the open window. I didn't guarantee vertical but near enough served its intended purpose. Maintaining altitude in a sixty degree turn results in 2Gs. Which took a bit of conditioning. Negative G after the pilot rolled out did me in quicker than positive. Then I started to fly with one pilot. Michael Waldon.

Mike produced a morning FM radio show on Gold FM and was available after 11.30. That symbiotic relationship served us well. One day the subject of traffic reports came up and my observation they were out of date by the time they were aired was confirmed by someone who actually put those puffed up adverts to air.

During all this I got my Student License and started logging flying time. On paper the 29.5 hours with first solo in my log book I made the mistake of thinking that made me look like a dufus. So I stopped logging the time. Waiting for the right moment to slot in actual lessons never happened. Like many others COVID 19 changed my mindset to the "life's too short". Loss



600 KG 100 HP Aeroprakt Vixxen A32

of partner, terminal or divorce witnessing what happens to people in the 60s and 70s hit me. When will I get my Pilot License if I don't do it now?

I'm very lucky to have two professional pilots as friends to bounce questions off. Captain Grahame Goodson and Captain Damien Mould. Grahame is ex Australian Navy with carrier time, Instructor with Saudi Air Force, gliding, aerobatic flying school and RPT. Damien recently retired from a life time of commercial helicopter flying and introduced me into the world of recreational aircraft. I've been up in a number of his planes, Eurofox, Savage Cruiser, Autogyro and recently the Christen Eagle.

Cost is a consideration for my full size flying ambition. My interest is touring and a six hundred kg two seater with five hours of fuel will do what I want. Although my heart says do it in a Cessna the performance of the Vixxen I'm learning in leaves a C150 for dead. By the time I spent to doosh on GA I could do the big lap of Australia and get change. Plus I'm flying a new aeroplane not something forty years old.

RAA license should cost around ten grand. I have thirteen hours time logged and about to go solo. Flying these little planes is harder than how I remember Cessnas. Open the throttle in a Cessna one gets time to check engine rpm and airspeed alive. Not so with this Vixxen. It happens so fast it's off the ground and I'm still catching my breath. Quite comfortable picking if the approach is high or low but it has taken me a little time to get in front of the aeroplane to make the

numbers in the circuit and final.

Distortion from the curve in the windscreen to see the correct picture is another lesson to be learnt. Picking which one of three grass strips landing at Lilydale is harder compared to piano keys and centreline at Moorabbin or Essendon Airport. Adverse yaw during the correction and forgetting to look to the end of the runway, instructor calling for right rudder to kick it straight during the flare I've just started seeing all that when this was published.

A change of spectacles is required too. Not for looking out the window rather the instrument panel. A few years ago I found out I needed glasses the hard way. Crashing my Funjet was the early indicator. Not recognising my girlfriend walking down the street confirmed it. That was not appreciated. One pair for reading and another for driving works fine but not being able to read the instruments in the plane has been giving me grief.

I had a break after quitting my sales job and my original instructor was no longer available on the days I can fly. He purchased a Tiger Moth so if you are interested in a joy flight in one he operates out of Lilydale. I did a Tiger Moth flight around Rotarua in new Zealand and it was great.

Anyway at nine and a half hours time I had to change instructors. My first flight with Jarrod on a windy day was okay so I managed to remember most of what I had learnt. I'm also lucky enough to have Damien and Grahame answer my questions anytime. Thirteen hours and I'm finally feel in front of the aeroplane in the circuit. Almost ready to solo.

Remote Pilot License (RePL)

Four long days spent sitting on a hard chair in front of the computer paid off on the Thursday when I passed my AROC (Australian Radio Telephone Operators Certificate) test and my RePL (Remote Pilot Licence theory). Day five was a practical flying DJI Phantom quadcopters. The only quad similar in specification to a Phantom was the Minivet I reviewed in RCM News back in 2016. So I began practising nose in flying with my small heli. Passing the first test means I am licensed to broadcast on VHF aviation frequencies. The second means I am licensed to fly remote controlled multicopters for commercial reward for companies that hold a Remote Operators Certificate.

Heaps of amazing software is used in drone flying. The agriculture sector is one reason why the Remote category is quite apt to quantify the possibility of this 64 year old, with 5.5 hours on a Phantom in the log book, gaining employment flying \$100,000 multicopters for someone else. I have little interest in that type of flying anyway but passing that course is a requirement to gain the fixed wing qualification. The next step is to complete the fixed wing component then finalise a Remote Operators Certificate. A ReOC is the remote version of a full size Air Operators Certificate.

Cost of the course was \$3990 for AROC, RePL, and ReOC in the 7kg



Best not to wear this down the street

multicopter category. Fixed wing component was another \$1250. This included all costs including what's required for the Operators Certificate to be submitted to CASA. The Recognised Training Organisation I chose was John Fleming's FPV Australia. I knew John from RCM News magazine days. Straight shooter with first class product knowledge, keen to promote and always paid his bill on time.

Theory was conducted in a virtual classroom by Instructor Jason Wuttke. Like my full size flying I try to put my model aeronautical experience aside and listen. Excellent manner he managed to hold my attention for four days although five grand of skin in the game does tend to focus the mind somewhat too. Some very

interesting airwork Jason has done with drones. Such as night flying with an infrared camera weigh pointing Koalas for the Parks Division at Kangaroo Island after the bushfires. I think I heard this correctly but technology has progressed to changing insulators on high tension pylon line pylons can now be completed with a multicopter. Wow.

The practical flight test had me worried as the only multicopter I have flown was the Minivet reviewed in RCM News magazine back in 2013. Like the Phantom it was GPS equipped with return to home mode therefore coming to grips with switches wasn't a concern. Flying it in manual mode was. Before the theory I had confirmed Mode 4 was available on the Phantom but on the



Minivet product review 2016



Getting valuable nose in hovering time



Flight test was similar to MAAA Bronze and Silver Wings manoeuvre schedule

day it turned out DJI have removed that mode. Had it transpired I was unable to demonstrate safe rotary wing flight on the wrong mode my Hughes 300 was in the boot ready to go. Turned out the manual component was flown in Attitude Mode. The machine was setup on Mode 2 with 30 degree bank and tilt Geo fenced to 45 metres AGL and 90 metres out. Put simply this is the mode that anyone can fly. If you get confused let go the sticks and it hovers and remains on station until you collect your thoughts.

Flight test was similar to the MAAA Bronze and Silver Wings rating. My competition background kicked in flying figure eights to nail the 45 degree headings and equal turn diameters. Likewise the rectangular approach. Sounds like part of the FAI Scale manoeuvre schedule doesn't it? Point of interest circle was hard. The machine has to complete a nose in circle aiming the camera at a fixed point. Keeping a constant distance from the centre with tail rotor and

lateral cyclic on the opposite to what I am used to (aileron and rudder) in a fifteen 15 kph crosswind was hard. Such is the capability of the machine I managed that to an acceptable level although a customer paying for that vision might be wanting the money back. Of course there are brilliant programs that do that autonomously.

Attending that day was a chap who owns a helicopter business who has decided to get acquainted with the technology. He succinctly pointed his children were at him to try it plus he could acquire a considerable fleet of 30 kg payload drones for less than the cost of one full size rotor blade.

Another chap's business has fifty remote pilots on the books contracts to Government departments. He recently acquired another firm and took over the role of Chief Pilot. He had a full size Helicopter Commercial License with 350 hours on Robinson R22s and 44s. To give some idea of scale the Snowy River people were looking to employ one hundred

remote pilots. Which leads me to another chap with a heli CPL but with two hundred hours having difficulty getting work. Those guys were on the 25 kg class T600 drones.

The young guy on 7kg with me did the course to do something more interesting than his current job as a storeman in a factory. Which ties in with how I would sum up this experience. Situational awareness was hammered during both theory and practical. Of the six people who enrolled five had some aeronautical background yet a young guy with precious little knowledge was able to complete the program. He can start looking for alternate employment.

Attaining a qualification was very satisfying. I've cherry picked a few things I used to do last century and am working towards that. Even though I am now licensed to make radio calls when I resume my RAA Pilot License training doing so in an aeroplane at the right time is a skill yet to be acquired.

Another bonus was time spent practising nose in helicopter flying can go towards my MAAA Bronze and Silver Wings flight test. It had never occurred to me until recently I should hold that rating. A non reportable incident at Christmas in July fly in suddenly put that into perspective. That's an anecdote on page 58 on a recent experience of mine.

My way or the Huawei
Correction, Highway. Another thing that had never occurred to me was pointed out by the commercial helicopter pilot. All data from DJI drones gets uploaded to the cloud. Where is it stored? The People's Republic of China. Yes



Four students on the 25 kilogram course



Hacked out this bush strip with a hand mower. Piano keys and centreline sped up the learning process

ordinary citizens all over the free world are providing the Communist Party with vision and weigh points gratis. On Friday December 22nd I completed the fixed wing componet flying the amazing Parrot AR Drone. Twnety years old tecnology we reviewed when it was released. Coming to grips with the control logic took me a few flights. Learning the What Ifs setting return to home GPS function is a whole new skillset. I can highly recommend FPV Australi to anyone considering RePI.

Back to the Future

One of the more satisfying times was in my 30s flying RC commercially. Time spent at my flying school I met plenty of interesting people. The majority

were business owners wanting half a day off during the week to get away from it all. Starting that again today would have to be sub 2KG operation otherwise the business would have to become a Recognised Training Organisation. Cost and paperwork quite overwhelming. Operating through MAAA is a different matter but my interest is cherry picking what I consider to be the more interesting flying opportunities.

Line stringing has been my favourite ever since Dad and I completed eleven spans in the Victorian Alps



Dad built the wing and I built the fuselage



A .46 ARF stringing lines in The Otways

in 1977. The longest 1.6 km point to point two pilot operation. I later refined to 800 metres single pilot with an ARF .46 trainer. Today my 1.2 kg Super EZ romps in 500 metres of 90kg shark line. Drones can perform now this work but attaching alone to anything rotary wing has drawbacks. An expendable fixed wing offers a low cost and low energy alternative. Fixed wing foam is far less susceptible to bird strikes and a single 1,500 mAh 3S battery pack reduces the fire risk.

A glo engine still remains the lowest risk of fire. The only engine failure was a very difficult job near Apollo Bay Victoria. Sharp forty five degree turn after take off into a very steep descent towards the rising terrain the other side of the ravine. The Tigre Trainer 40 engine almost at idle it spluttered and quit after the line was released. I had always relied on OS Engines hence reservations using the Thunder Tigre donk in the first place. That was first and last time. Finished the job though so I got paid.

In fact I never failed to finish a line stringing job. What I really enjoyed was turning up to a site and accessing which side to launch and land. Mounting flying in windy



TV and film with Dad. He designed and built the fuselage I built the wing



Super EZ line stringing



Project on the backburner but good to go

conditions makes for some interesting landing approaches. An electronic stability system makes that so much easier.

Meeting a Director's unrealistic expectations TV and Film was often stressful. Multicopters are a brilliant platform for that now. The other fixed wing operation I think I can sell is dropping ashes into a river, bay or ocean. Did that for my brother a couple of years back. No one around, easy approaches and no obstacles. I was really quite nervous about a very simple flight.

Fully loaded the RV-8 comes in just under the 7kg MTOW dictated by my license. I have a small twin on the building board designed to lift a 3 kg payload and operate under 7kg. At this stage the only reason I can envisage needing a 25kg rating would be banner towing. Reckon there's a quid in that too but that type of flying is boring as bat shit. Never having seen bat droppings I



Even though I bought the cheapest product, triple sifted of course, the local supermarket is beginning to think I'm a keen baker. Testing with flour the RV-8 lifts a 1.7 kg payload with ease



Clarendon Street South Melbourne

can't really attest to the validity of that statement but most other products of that nature are boring to me.

Coupled with the memory of 225 nappies a week with triplets having photographed every sewage treatment plant around Melbourne dealing with excrement remains indelibly stamped. Speaking of excrement the way practitioners in the growing drone industry were treated by model clubs is why that sector treats model aircraft with a fair degree of disdain.

Aerial photography is another interest. Not from the ground though. Quadcopters have killed any meaningful profit from that enterprise but shooting from a Cessna still has advantages. For example take producing a plan view site context photograph of a dozen house blocks with little or no distortion at the edges. From a Cessna that needs 1500 feet AGL. Which can be done in controlled airspace too.



Cessna's rule

That service might still be of interest to companies not want to be involved in anything illegal At that height a small drone cannot be flown VSOL. (Visual line of Site) Getting approval in controlled airspace would cost a bit and I'm guessing nigh on impossible in Melbourne's Northern suburbs near Melbourne Airport. Unlike drones where job done after few orbits and the public don't have a clue.



Printed version is quicker to deal with the disgruntled

What Went Wrong?

with Stuart Claire

“Hardly any is the standard reply from a radio service technician when asked how many owners admit to pilot error when something goes wrong. That has not changed. Despite huge advances in selectivity and range radios still fail on the downwind turn to base. Engine failures reduce vibration but radio failure a few feet above the ground still gets a guernsey. So often the up elevator input just before the crash goes unnoticed. Another



Properly impaled there was no need to rush over given? Documenting pilot mistakes is generally not appreciated in model aviation. The editor doesn't seem to have a problem talking about his so it's over to him”.

Thanks Stuart. The Gee Bee is easy to explain. Not mine. Not me flying it. The Ugly Stick was easy enough too. It went in after a total

radio shut down. How did I come to that conclusion? The failsafe did not activate and it went in at full throttle. Post crash the radio gear worked perfectly. Installing the switch harness into a Dubro internal switch mount during the build is a fairly simple job but it took me two hours of fiddling and the on off action wasn't as positive as usual. Apart from headaches for a few earthworms muttering what



Now worries it'll buff out is quite feasible with a traditional build



Make sure you pick up all the pieces



Cracks in the fuselage now add character

the Mayor of Hiroshima said no one was hurt. Model repaired it flies again but not with that receiver. What to do with that RX makes for a very interesting question. It's not unusual to use a crashed or old receiver in a glider. Depends on the glider. Something I learnt after an experience slope soaring at Mt Hollow Back.

I lost visual against the backdrop on a gloomy day flying a Sig Samurai. Three pairs of eyes couldn't spot it made me nervous. The Samurai sports the RG14 aerofoil or as I like to call it, "Five Mile Final" A term used after my first attempt at landing one. Pitcheron wings means crowd mix or side slip not available. Nose down that thing really scoots. If you want to outrun an eagle attack it's pretty handy. Fortunately it went in

a hundred metres away Phew! I have a foam flying wing called a Gulp which is pretty handy to attempt outrunning an eagle too. Chancing an old receiver in a 100 mph glider? Not a good idea. Junk it or use it in a light neutrally stable model.

That RX is now in a 1kg Super EZ. Fail safe set with up elevator, touch of left rudder, engine cut. Switching off the TX in the air the model does a few stalls then settles into a slow left hand descending orbit at 35 kph.

The crash below was caused by human error. A write off caused by running out of fuel low, inverted. Rolled out and watched my drag bucked design bleed off speed so rapidly it made the turn but no airspeed left to flare. It thumped in. Wings lev-

el just a low speed impact. The 40cc twin cylinder engine was so noisy it was embarrassing so I wasn't bothered repairing the model. That model used twin receivers so I could get my head around setting up Futaba's extra channel system instead of purchasing the 14 ch unit.

That second 8 ch receiver had been in a crash but it was only for auxillary functions that would not affect flight controls, throttle or ignition in this 40cc model. Retiring a receiver in an old timer might seem a good idea but why risk it when a genuine R6015G mono receiver retails for less than A\$50. If your club's Area Approval allows boating about above 400 feet the six channel telemetry receiver costs A\$82. SBA-02A Altitude sensor retails for A\$55.

Should a full size appear the quickest way I can think of to get an old timer design down is to connect the fifth channel servo to the front wing dowel and flick the wing off. The sixth channel can deploy a parachute. An idea demonstrated by Graeme Pentland at a VMAA Trophy Inter Club competition in Geelong.

Technology

The 850mm wingspan Cessna 150 inspired foamy retails for A\$329. Weighs in under 300 grams it is equipped with electronic stability and GPS return to home function. The stability system does not arm until a GPS position has been acquired. When the landing light in the cowl stops flashing the elevator returns to the neutral and you're good to go. Applying a risk analysis template what harm could a 295 gram model possibly



High value cargo jettisoned before impact was never recovered



RC interrupted free flight with one horsepower in the nose



AUW 295 grams, stability system with GPS return to home function. What could possibly go wrong?



Aviation Myth Buster

do? Granted there isn't a great deal of energy to dissipate. Not so for a multi car pile up on an adjacent road or freeway. It might just be my sample but its return to home waypoint has never worked. Actually if that waypoint is where the model was manufactured it works perfectly. I never bothered to send it back but when that feature is activated it takes the shortest route home. Via the centre of the earth.

Switched off this great flying little aeroplane recovers instantly. A point that was hammered home during my RePL drone course.

Redundancy

A topic that we might see more of in Australia for aircraft weights above 25kg (50 lb). Where do you start and where do you stop? More complexity requires a greater understanding of the system. What is manageable and what is not is often a split second decision. Setting a landing attitude elevator

mix on the FMS Super EZ you could practice flying an approach with an elevator trim setting using throttle to manage the descent profile. Another way is a simple spot landing competition. Invariably Damien Mould and I do that when we finish a day's flying the big ones. What's the point you ask?

Years ago in a club fun fly touch n go competition a chap tried looping instead of tight circuits. Wheels touched, full throttle applied. Undercarriage departed taking the bottom of the fuselage with it. Sitting on the bottom was the battery pack. Which bounced and rolled to a stop. Watched the plane do 7/8ths of another loop. A couple of earthworms muttering a retainer on the battery lead would have saved their home.

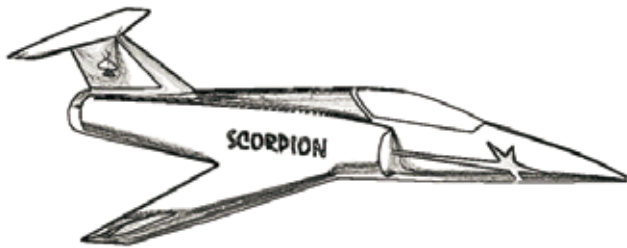
An elevator servo died just after my 2.5 cc quarter midget pylon racer was released for take off. Looped it around until I found a throttle setting to juggle it back in. Undercart and ply plate removed. Battery pack



remained on board. Almost pulled that off.

If aileron is lost on a high wing model that can be managed with rudder. Neutrally stable a low wing is much harder but I have managed that using a snap roll a few times to get the wings somewhere near level.

Taking off one of Dad's low wing gas turbine models in those early days at Mangalore the nose wheel hit a large hole and bounced the model into the air. Minus the nose gear. The jet started rolling to the right. Ah, no aileron. Top rudder applied gave me a couple of seconds to decide it was unmanageable. The engine was cut and it went in. No fire. Cause of the crash was wiring loom suddenly free to flap about the aileron and flap leads were ingested into the turbine. Another experience in those early days



Bolly Scorpion with an aerobatic wing planform and symmetrical aerofoil (rendering courtesy the Bolly Book)



1999 Qantas Australian World 500cc Motorcycle Grand Prix Phillip Island

of jets was a fail safe condition during the turn on to final at a Monarto Jet weekend. Returning all controls to neutral control kicked back in and I was able to recover the model. Avoiding further control inputs after the wing was levelled I killed the engine. Which stopped the electric fuel pump. One small up elevator command it landed short of the runway but down okay. In this instance understanding how the failsafe system worked is what saved the model.

To this day it bemuses me how many times I hear claims of interference. The jet pictured above flew at an international motorsport event on 36 Mhz PCM. All sort of microwave transmissions, UHF, VHF comms to the helipad you name it, I never had a problem. I've flown Kraft, Sankyo JR, Hitec and Futaba in all manner of places and have never had an issue with interference.

A few servo failures but not one I can recall since the early 1980s. Not with my own models that is. Most model aircraft club fields are located near motocross tracks, gun clubs and

dog kennel. At one time or another every brand of radio I can recall has suffered claims by people who have no expertise that a particular brand has problems at a particular flying site. Anecdotal evidence from the local guru doesn't cut it. Another factor is a back yard hobby dealer pushing one brand. Without data all that is left is opinion.

Radio Master16 Mk11

A few of these are getting around flying fields. Might seem good value as it will talk to four different RF protocols. Great. Five dollar Orange receivers in big planes worked a beauty didn't they? Plenty of complaints about FR Sky RXs patching into Futaba TXs doing the rounds too. The potential for a big problem here is do these radios meet the Australian Standards.

The published antenna output for this Radio Master set of 1 watt is way beyond what ACMA allows. FPV fliers use it for superior range. Many RC model clubs operating under an Area Approval have a 500 metre distance from the transmitter so that feature is irrelevant. What is relevant is retailers selling radio gear this gear in this country must display the RCM label.

Brands like Radio Master, FR Sky and Turnigy are sold by any number of retailers importing direct. What about the JETI sets I found advertised by Jet Products Australia? Or these sets at Dragon RC? If these happen to be grey imports they still should have the RCM Label. Factory Authorised Australian agents for Futaba, JR, Multiplex, Spektrum, JETI) and Powerbox do the right thing. Putting on my Futaba Dealers hat and

complaining might seem churlish but what is the responsible Government Department doing about Australian retailers selling it? Nothing. Let the buyer beware is quite expedient.

Swapping to my Contest or Display Director hat I will not allow one of these sets to fly at an event I am responsible for. In the event of an accident having to justify why I let it fly is potentially risking my financial future. Why? It does not meet the MAAA Insurance requirements. No RCM label at an MAAA registered field gives the Insurance company an instant get out of jail card to recover its costs. Last time I covered this issue it was unlikely an Australian compliance condition by MAAA Insurance Cover could be removed to accept FAA and European specification.

Model clubs continue look the other way. Punting large models



900 GHz TX Module (page 67)



Not for MAAA fields



Will someone will pay big time for using one of these sets at an MAAA field?

around a pylon course in front of the general public? F1 Air Racing Inc won't be taking that chance. Hiding behind a limited liability legal entity would not prevent any lawyer listing a club committee as a defendant in litigation either. A major claim against an operator not compliant with insurance conditions is a no brainer. Modellers can go blue in the face arguing it meets the Australian standards but not with me. Show me the paperwork from an authorised compliance testing station. Better to take the pain early from one grumpy individual than face an angry Barrister if someone was hurt and a major insurance claim was lodged.

I agonised whether or not to raise this issue. Considering the late Peter Bons experience after being hit in the head by a 2kg old timer on a glide approach through the car park at a model club won out. Pete nearly died. A major head injury cost his career as an airline pilot. Family life turned upside down. MAAA unable to assist he fought insurance company for ten years before settling. And he did nothing wrong. I've never heard what the outcome for the model aircraft pilot was.

Situational Awareness

Is another phrase we are likely to hear more of at flying fields. I had a potentially very nasty moment with my helicopter at the Christmas in July weekend. Two days of relaxing fun flying was the order of the day. That changed after I set up a throttle and lateral cyclic (aileron) mix on the Bell 47G scale heli. Descending on approach in forward flight requires right cyclic so I began setting up that mix. Ripped it off boomed around and lined up for a steep approach. Let me tell you when a 8.7 kg big helicopter heads towards the pits with an out of control situation it sure gets everyone's attention. Word went out straight away. I was just about to deck the thing when I realised it wasn't lined up with people, tents or cars at the Northern end. Had it been a Public Display I would have just crashed that chopper.

Making wholesale changes to programming at an event increases risk. Is this acceptable where the public has been invited? I recovered the heli by applying power and headed it away then into a hover to sort out the problem. Pulling the power back initiated a sharp left hand turn. I slowly backed the thing in and shut it down. Swash-plate mix was set the wrong way. Doh. Biggest mistake was not allocating a switch to the mix. I could have just turned it off.

Another thing realised was I have never held a helicopter rating. I have Gold Wings and Instructor for fixed wing but it never dawned on me to get the Silver Wings for choppers.

Another trap is flaperon mix. Did a control check on the orange FF1 racer a few weeks before heading to Can-



berra. Took off, applied left aileron to check the low wing it started rolling upside down. Ailerons were back the front. Oops. Recovered and flew a curved approach and got back in. Shut it down, disconnected and swapped the leads over. Now I mark each aileron servo and extension lead.

Expecting everything works the right way it's easy to do a control check and miss it. Verifying controls correct takes an extra second or two. I used to do that but became complacent.

900 MHz

Radios manufactured in Europe have been offering the discontinued 2G mobile phone frequency for a few years now. Whether this feature is taken up by Japanese manufacturers will depend on the American market. Redundant receiver systems is being considered for GIANT models by MAAA right now. Tempting as it might be to mandate dual frequency systems when major players don't see the need would leave MAAA open to accusations of pandering to commercial interest. Again. There's a policy that needs fastracking. People are flying this gear now and there isn't one.

Getting back to a redundant twin receiver split control system setup I wonder how many would cope with an out of trim condition caused by an aileron or elevator servo failure on one side anyway. Test flying models for people is one way to hone your craft because despite best intentions failures do happen.

Skills I've picked up to manage situations have been learnt from simple and serious competition flying. And instructing. Victoria used to have a great inter club competition. A mixture of serious and fun unfortunately it was dumbed down too much and interest dropped off. How many clubs runs a simple fun fly today? To use Stuart Claire's catch phrase, "Hardly any".



Bell 47
(pic courtesy Keith Quigg)

Day trip



Sam Addicott wheels Dad's Supercub in for a memorable landing



Shuts the OS Super Gemini down and re-starts using this FEMA onboard starter



Neil Addicott's wonderful Panther and his latest project about to take to the sky

Scratch Built & Kit Rally

Gradually shrinking numbers reflects the change from building your own model to ARF and RTF but an enjoyable day out none the less. Neil Addicott's

refurbishment of Grahame Goodson's Supercub was a standout. As was his Vario Hughes 300. Which is almost ready to turn a blade. Neil's son Sam did most of the flying and demonstrated

the very cool onboard starting system. Andrew Smallridge had an exciting flight with his Panther. For the past twelve months he has been delving into 3D printing and Alan Foley's Eagle is



Alex Bulter's gorgeous Travelair 4000



Waly Burston Stopmes on the aileron



Eindekker by Roly Gorman



Ian Farrar opens the tap



Glenn Orchard greases the Heinkel in



Peter Harris poses the Pup for the camera



Brian Green taxis the Loadstar



Beautiful Stinson Voyager





Exciting flight by Andrew Smallridge



Brian Green backtracks the Loadmaster



Andrew Smallridge continues his venture into 3D printing



Ivan Chiselett mans the control tower



Kevin Chiselett mans the counter

a very neat example of what seems obvious to me. Once bigger and more affordable printers become available it's the next big thing.

This article stuck up the back of Like Barry Manilow LPs in record collections is not a slight on events of this nature. Just a case of factual reporting and a reflection of committee members previously serving on VMAA helping to preserve a club that is being left behind. Full of its own importance for way too long one of my favourite memories was organising five mates into a small club and beating it to win a VMAA Interclub Trophy.

Conducting a public display here has been on my wish list for years but with the few remaining Old Fokkers on committee I won't waste any more time on that endeavour. Managed an absolute pearler landing the Spitfire. Which capped off a rather pleasant low key day out.



Had a great day with the Spitfire

F1 Air Racing

This article could be seen as one of self interest to combine my interest in racing, building, flying and promotion. I've been plugging away at this since 1997. For some years aviation has been experiencing trouble attracting pilots. Airlines now offer direct entry to someone with 150 hours of commercial. Full size passenger transport has become so reliable people now complain when the flight is delayed by weather. Has flying become that boring? You wouldn't think so at events such as the Avalon Airshow. People still come in droves to see the jets.

There are numerous reasons to justify the drop in interest in aeromodelling. I put lack of interest in aviation as one. Meaningful promotion is another. Around the country clubs do a sausage sizzle at Bunnings or display in a shopping centre but nothing beats flying planes in front of people at an airshow. A model airshow.

Promotion in a country town is much easier than in a big city. Affordability of mainstream advertising on country TV and Councils have become acutely aware of the value tourism puts into the town too. Born and bred in a city whatever efforts I have made have come to nought. Petty politics by administrations, club officials even the hobby trade, each time I've got something going it hit a brick wall. In a city of 4,000,000 Melbourne no longer has any model airshows.

Where the hobby will be in a decades time is subject of much discussion. Making a difference and leaving the hobby in a better place than when you started is "Hard Yakka". (For overseas readers *Yakka* is a major brand of tradesmans' work clothing and that saying is standard Aussie slang for hard work.)

Of all the competitive pursuits I've had a crack at Air Racing offers the most amount of fun for the least amount of practice. Thermal gliding, scale aero and F3a aerobatics, even the simpler scale manoeuvre schedule requires practice. Sure getting to the pointy end in this discipline requires



Supporting the 2023 Train and Hobby Show with an interesting exhibit

time and effort too yet time and time again it has proven anyone who can complete the MAAA Gold Wings manoeuvres and complete each ten lap round with no pylon cuts and land consistently will end up in the top half of the results.

A brand new basic 35 cc F2 ARF setup costs around \$1850. A new F1 setup is around \$2100. Difference being the bigger engine and prop. Servo requirements are the same 6.5kgcm torque and minimum 1700 mAh battery pack in F1 and F2. Second hand models pop up on RC Trader and Facebook too.

Erosion of building skills has been happening for years. Erosion of radio

installation skills has been happening for yonks too. Throw turn key top end models flown by inexperienced pilots into the mix. When it comes to a racing event this gives Dudley Doo Rights a free kick claiming safety concerns. Dumbing down of flying standards has been a problem for yonks too. A common factor has been people who volunteer to be on a club, state or national committee who invariably base their own sport flying capability as a base level.

For example at two big flying events, instead of training and testing people to taxi a model pilots are expected to walk their planes. Holding the fin. Holding the fin on my Seagull



Supporting VMAA at the 2023 Avalon Airshow



Supporting the hobby trade with flying by Special Interest Groups



Kid won a raffle at Sandown I often wonder if they succeeded in the hobby



Supporting "The Flying Show" exhibition

Nemesis means I have to be half doubled over thus further enhancing amateur status in the general community. A simple rethink of temporary or permanent fencing would placate legitimate safety concerns.

One of the requirements at the next F1 Air Racing event is to taxi the model on to the runway, turn and go. Taxiing off to clear the runway saves time too so we can get more rounds of racing in. Traditionally race scoring includes one dropped round. Instead of pandering to



Supporting VARMS, a progressive city based club



Flying a Hobby Zone Super Cub at Cobram 2012 sold \$700 worth of raffle tickets





Simpler wing bolt system

competitors who don't bother to read or understand the rules our Racing Failsafe settings will be checked before engine start in the first round. Failing the test results in a DNS (Did Not Start) costing the competitor his or her dropped round.

Radio systems must have a C Tick or RCM label and the receiver must be the same brand and the transmitter. Pylon racing requires man power. Two sets of pylon lights is great but attracting sufficient marshalls has been a problem. Like full size gliding one way to get around that is pilots to prove the went around the pylon. Bolting an adventure camera into a sixty cc bangar is another but it's not reliable. A video camera adjacent each pylon with one or two marshalls is one alternative. I've trialled that at NFG. Anyway the course layout will be determined by how many marshalls we can get.

Back in 2012 the Cobram event attracted sixty eight entries and we enjoyed eight rounds of racing over two days. Whether we get those numbers again is unlikely but forty aeroplanes in Melbourne is certainly feasible. To pad out the program and balance attrition I can ring around a few mates to bring two planes each to put on a good airshow to keep the crowd entertained. Just like Sandown 2015. That's not a problem.

Neither is the concept of ARF racing. I've been putting up with what's wrong with ARF products compared to building a kit from would be experts since the Lanier days in 1970s. Mentioning that brand really shows my age but suffice to say that tire-



Out of the box 250 KPH ARF racer kit costs \$899



Spray painted directly on to white Oracover

some debate has been a fundamental mistake at club, state and national level. That fight has been won and lost.

What poo pooing ARF and RTF products really said to a prospective member or competitor is the product he or she bought isn't suitable. "We don't encourage that sort of thing here" is the same as telling that person his or her money isn't good enough. My how the tide has turned. At the GIANT end of the market it's the home built large models that give more cause for concern today.

Formula 1

To encourage today's potential competitor to try something different I tried spray painting directly on to the standard white Oracover. Only preparation was scuffing the film with steel wool and rubbing down with

acetone. You can see where paint has peeled off in places. Some of that is hangar rash but the interesting one is the wing. Which can be clearly seen flexing during a high g turn at 225 kph.

At any rate if they don't want to put in that much effort a simple can of spray paint to colour wheel pants and cowl has proven enough for pylon marshalls to identify four predominately white aeroplanes.

Getting to the nub of all this for me the thrill of racing something I've designed and built myself. Which puts me into the dinosaur category but there are a few of us left. At least four I've spoken to.

The ARF categories have been fully sorted. One mistake traditional pylon and other SIGs has consistently made has been at entry level. The original 15-500 better known as Quicky 500 ran into problems very



185 KPH out of the box Formula 2 Seagull Models racer kit sells for *899. 35 cc petrol engine retails for \$395.



Changed the F2 engine rules after this 2016 final



Simple SBus 2 setup with five Futaba U400s and one U301 servo, R3006 receivers, leads and switch harness \$450



Landing judges added a bit of theatre and helped the announcer work the crowd during 2016 Sandown F1 Air Race

early. The worst thing to do is have new people blown way by experts with hotted up engines.

Formula 2

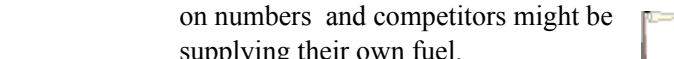
Offers newcomers the thrill of racing with readily available off the shelf product in a very easy plane to set up and fly. Futabas new U400s HV digital servos are suitable for both F1 and F2. Retail price of \$45.00 each there is no need to try aftermarket units. With twin aileron and twin elevator servos the typical PWM setup needs seven channels. Prop pitch is limited to 12 inches. RPM limit in F2 is to prevent hotting up engines or fuel. RPM limit in F1 is to keep speeds to around where they are now at 250kph.

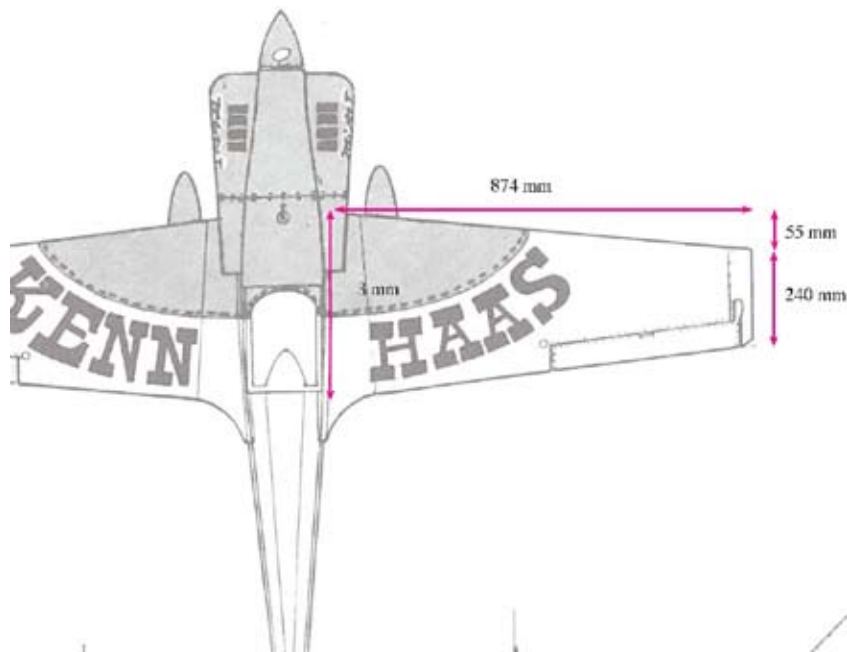
Model memory name and/or number will be recorded during processing. Racing with a different memory to what was entered will result in a zero. Any model with a free mixer assigned to throttle to reduce end point will result in disqualification. These settings will be randomly checked at the start or end of a heat.

Red Bull and Texan

Problem promoting Red Bull has been experienced campaigners using this as a back up category. Which is understandable but hotting up engines and fuel and blowing newbies away kills it.

Texan category has been running for twenty seven years. There is no commercial value in promoting glo engines any longer. To stop the whinging models must have retracts. Depending on numbers and competitors might be supplying their own fuel.





Lil Misty



Solid half inch fire-wall for the big bangar



Great colour scheme

Goodyear

On the building side there might be a few still interested. F1 is the ARF whereas Goodyear is the builders class. If required all three can be run together just like Bathurst 500 (miles) later 1,000 kilometres did years ago. I still love watching spending the day watching that race but it was a bit more interesting when different categories were on track together. The change was made as speed slowly increased and professional drivers became the norm.

F1 Air Racing Inc

Started out with five like minded members who want to keep it simple. An easy to police set of rules have been published. Promoting the concept of operating above the minimum standards is a core value. As is promoting the hobby and interest in aviation, big or small. Supporting VMAA and MAAA owned flying fields is another. Income will be generated from entry fees and gate takings.

Vic State Field Melbourne is booked for May 25th - 26th 2024. That's two weeks after Mothers Day. Host Club is Northern Flying Group. Vic State Field Eastern is booked for 19th - 20th October. That the weekend after Bathurst 1000. Host club is BADMAC. By the way one other important change. Bank right before you Yank. Not left. Safer and fun too.



I so wanted to compete in this very exciting five plane final

Redundancy

900 MHz

With the ever increasing amount of dollars flying around on Citizens Band frequencies redundancy in large and giant models is worth thinking about. Not having the sophistication and undeniably superior performance of FFAST and FFASTest protocols dual frequency RC systems have been available in Europe for a little while now. Instead of purchasing a new radio then paying for software upgrades, like JETI, Futaba has done a good thing by its owners by releasing what I assume is an interim dual frequency module setup. 16iZ, 18SZ 18MZ and 32MZ sets it can also be used with the original 16SZ and 12 K. The last two sets require a separate power supply for the module.

The 900 GHz TX module mounts on the back of the transmitter with double sided tape and plugs into the SBus port. The 9001 receiver is linked to the TM 18 transmitter at the factory. All you do is select dual receivers in the System menu. Go to the second page and switch on CRFS. Then link the second receiver. Just like you would with a second FFAST, FFASTest or T-FHSS receivers. Which connect by way of the FLDS-1 dual link device. The system will handle up to sixteen channels.

FLDS 1

Seemed the way to go but after reading the instructions this device is designed for a power bus setup. By the way if using this product I think there is a fopah in the instructions. "Don't mount FLDS-1 away from magnetic bodies". Perhaps that should read "Please mount away from magnetic bodies".



For twin receivers into a power supply



DLPH

It's been a long time coming but Futaba now has its own dedicated power bus system. An all Futaba setup is the way to go. Twin receiver and twin battery inputs with 60 Amp FETs the specifications quote it will handle eighteen high powered Futaba servos. SBus setup with two FFAST or FFASTest or T-FHSS receivers.

Power is supplied by the higher battery voltage which is selected automatically. 2S LiFe and up to 3S LiPo although Futaba servos should not be operated on 3S. More efficient than the opposition they don't need to.

R7308

This receiver is the first with the dual link device built in. A few more receivers are due to be released during the next twelve months. The system is approved for use in Japan and Australia. This is just speculation but a complete radio is unlikely to be produced until USA and or Europe come onboard.

Linked this to my Test Model Memory, connected the 9001 through the SBus 2 port and powered it up. Bang it works. I did get a little excited about the instructions but after reading a couple of times once again the writer assumes you purchaser understands what he or she is doing. My first question was about failsafe



Delivers sixty amps continuous

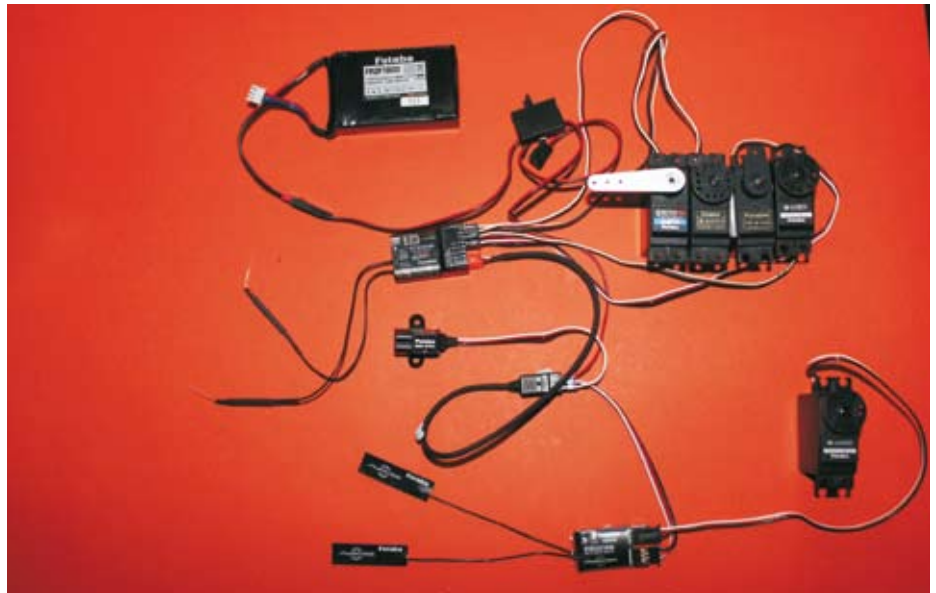


2.4 GHz antenna angled down is my preferred and proven position. 900 MHz unit swivels out of the way to tuck the other antenna back in

because it states in signal loss the 9001 throttle can be set to hold alternatively after one second in hold it then moves to a preset position to cut the engine. So do the failsafe settings in the R7308 still function? I assume if the 2.4 signal is corrupted the 9001 takes over and those settings don't activate. Otherwise what is the point.

Connecting a few servos I set the failsafe positions then switched off the TX. Yes they moved. Okay that provides an answer to a transmitter shutdown. Not having something to generate interference nevertheless I was comfortable enough with that. Telemetry sensor connected through a hub with the 9001 would not work. I tried another hub then another sensor. Read the instructions again and the penny dropped. The 9001 is factory set for Mode A. Reset to Mode B. The LED flashed twice re-booted and telemetry worked. By the way in case your forget, my website has a number of two minute videos on basic functions like that.

Dual conversion receivers have been around since the 1970s. Essentially the incoming RF signal is split in two and is sampled. If one is corrupted it gets discarded. Basically what we have here is a similar concept but on a different frequency. Improving the quality of the RF signal has always started onboard the aeroplane. One thing 2.4 GHz has over the previous 36 MHz PCM technology in spades is its ability to operate reliably in poor installations. Keeping antennas away from wiring, servos, ignition modules, fuel pumps



900 MHz receiver connects through the SBus 2 port

and large metal objects remains key. Making sure the end of each antenna wire does not come in contact with the fuselage is very important because that de-tunes any antenna. Not sure what the difference with the 900 MHz antenna is but each wire ends inside a flat piece of plastic. I assume you just use double sided tape to affix them.

The other half of a strong signal is the transmitter antenna. I point mine down just like have on 27, 29, 36 and 40 MHz. As I see it pointing a single 2.4 antenna to one side risks weakening the signal when approaching to land from that direction. The 900 antenna is different and this is covered in the instructions.

Mounting the receiver as per the instructions dictates some form of isolation from vibration. Mine are mounted on a rectangle of Dubro latex foam. Vibration might seem non-existent in gas turbine engines and electric power but here are a few other factors to consider. Charging along a bitumen runway at 80 kph produces vibration. Add shocks from bumps in the runway and landing loads. So does subjecting your model to a trip in a model trailer. A three hour road trip is the equivalent of eighteen ten minute flights. Plus another eighteen to return home. Not many people do that much flying in one weekend. Lower specification unbalanced tyres is standard practice in the trailer industry too. I've noticed a few screws unwind after long trips. It should be said my model trailer has ten inch Mini Minor wheels which

rotate at higher speeds than conventional wheels nevertheless this is something worth noting.

Another thing worth noting in the instructions is the mention of a potential slight latency issue in high voltage multi servo setups if the 900 MHz takes over. Other than highly skilled competition flyers I doubt anyone else would notice the difference.

Would you recognise it and if so would you panic and land immediately? So many models get broken by rushing and over reacting to a manageable problem. My understanding is this does not happen with dual FAAS test and T-FHSS protocols.

Now that we've dealt with the nitty gritty the largest model in my fleet is 60cc and weighs 19 kilograms with four flap wing, twin elevator servos, rudder, retracts, throttle, choke and ignition running twin battery packs into a R7114 receiver. I have nothing in 25kg plus range therefore this back up technology is more of interest for my commercial flying ops with my 7KG RV8.

That model has the R7108 and SBS-02A altitude sensor. What to do. Swap out the R7008 for two 7308 FAAS test receivers or just keep it simple on one? I will be using this system in the RV8.

The Futaba T18 system was supplied by Futaba Australia. www.rcwholesale.com.au

Will History Repeat Itself?

The Leading Edge

Years ago I received a letter from CASA stating that, "If they received another complaint, my display flying operations would come under closer scrutiny. Someone (a VMAA member) had taken exception to my flying a third scale Sopwith Pup in windy conditions at Phillip Island and complained. He also alleged repeated flying over the crowd. My reply to CASA explained how years of aerobatic training was used to reference the crowd position to the flying line. Standing on the thirty metre line coupled with the habit of not turning my body as the plane flew past, my shoulders were used as a reference line not to cross. If the model edged toward that line, my neck would not past would not twist past ninety degrees. Simple, effective and safe. I also questioned the experience of the person complaining to make a better judgment than my assessment of suitable conditions. I never did receive a Show Cause.

In regard to Display Procedure, MAAA operations may be receiving closer scrutiny. Via the Minister for Transport's Office to CASA. The credit for that goes to Peter Coles, due to the treatment of Luskyntyre 2012 by MASNSW. This event raises funds for Rotary International to fly children in from overseas to receive life changing surgery. Once the interpretation of the contentious MOP paragraph from CASA's Legal Department was forthcoming, (page 46) Peter Coles (Display Director) was happy to sign off on the MAAA Form. How ironic that a Public Display, approved by CASA was rejected by NSWMAS. Entrants who were contacted later by a NSWMAS Official and informed that their Insurance Cover would not apply, might be interested to know that the matter has now been referred to ASIC.

The handling of this issue has made it apparent that well meaning amateurs are creating potential insurance compliance issues. Check the MOP 019 Advisory on the MAAA website to see what I mean. "Quote, " *The bottom line is that the MAAA has in fact sought to reduce the Public Display pilot standards within MOP019 to bring them into closer alignment with the CASA Regulations.* " Yes Minister? This stuff writes itself.

Associate members (which is what individuals are) should be acutely aware that not following Manual of Procedures may leave them exposed to invalidating their insurance cover. I would be grateful if it could be explained how it is in my (and your's) interest, that the first we know of

any change is if we happen to look at the Live Document. A procedure on how pilots do that, prior to every take off would be most welcome. I have since signed (albeit somewhat begrudgingly) a Display Director's Permit application for Cobram Air Races. If the MOP remains the same after the upcoming MAAA conference, this will be the last Airshow that I conduct under the MAAA umbrella.

Now I am questioning the value of my MAAA insurance cover. I have requested a copy of the MAAA Policy to read it for myself. The MAAA Insurance brochure states that this information is available on request. Peter Coles is still waiting for his copy. He requested it in February. I have flown around 2,000 hours under CAR 101, with my own insurance policy which was (and is now) easier to remain compliant than under MAAA MOPs.

This issue has product reviews from tiny little indoor models, a great EP glider glider and powered models in both medium size electric and 30 and 111 cc Aroabats. Prior to sending the three indoor models (Uberlights) off to Bruce Corfe in Perth to review, I took the opportunity to fly them. From my two x two metre square front porch. Keeping the speed down, it was possible to stay within the confines my front yard of a typical quarter acre block. Has the day has arrived when I don't even have to go to the local park for a quick fix of flying?

The number of small models on display at the 2012 Toy and Hobby Fair would indicate this trend is well and truly upon us. Advances in electronics was a theme at the fair. The combination of 3 axis rate gyros is poised to open up the flying experience on the more advanced designs. Increased stability, auto recovery in trainers and ever reducing prices will increase temptation for would be model pilots to teach themselves to fly. There is a bit more on one good old fashioned three channel design fitted with current technology in Learning to Fly. Radio systems with Iphone and Adroid apps were on every stand. Telemetry is such that manufacturers are now quoting operating speeds on some models. The fast ones.

It was with some sadness when I heard of the passing of John Hughan. John was a long serving member of the Lilydale Club (L.D.M.F.A) in Melbourne. Although he did try his hand at aerobatics he was first and foremost, a pylon racer. He competed in all classes and without doubt his most famous design was "The Hughan Cry".



Slope Soaring at Camperdown

John was good for a joke or a funny story, always well told. Another claim to fame was his exceptional wit in the club newsletter, written under a non deplume. I spoke to John last year to ask if he had any objection to my using it. "Optic Nerve" lives on. John was particularly adept at shutting down club meetings once matters such as the postage bill came up for discussion. Whether it was from on the committee bench, or up in the back row, John was often the one to say "Let's refer to that committee and open the bar". Tall stories would start. A club meeting with a bar. That's another fun ritual that has gone to God.

I used to joke to customers about the first of the cheap .46 Chinese glo engines, that they were recommended to people who had undergone heart bypass surgery. Part of the recovery process is walking. Those owners got plenty of practice when learning to land. Another activity that often involved walking was slope soaring. Brisk south easterlies, twenty six degrees and a few mates made for very enjoyable days slope soaring at Camperdown. Sloping is very relaxing and great fun, though the traditionalists groan when we front up with a number of models (all electric powered) to cope with almost any weather conditions.

Gliding is one sure way to improve your appreciation of aerodynamics and the ideal slope is an electric glider. This saves the arduous walk back up the hill if the lift bombs. Outrunning the eagles that patrol this site is possible with some gliders. My new Top Gun Adventure (courtesy of David Hipperson) was able to outdive a couple of attacks. Then I had to see what it was really made of. Speed was hard to estimate hammering at the bottom of a full power dive from altitude. The motor was turned off when it stopped unloading and my guess is easily in excess of 250 kph. Will GPS telemetry calculate ground speed correctly in a near vertical dive? Also wondering what is the best way to program the failsafe on such missiles?

It has been four years but next issue the cover price will increase. But it's not all bad news. To compensate, eight more pages have been added. Just like this issue.

Lukityre 2012 was postponed due to rain.

Display Flying

by Stephen Green

This subject is rather close to my heart and it is topical right now.

It would be fair to say that most aeromodellers' and administrators' perception of risk associated with remote controlled flying, has been of the Public Liability nature. Injury to person and property. The outcome of some incidents eventuate as insurance claims. A hand in the propeller and damage to cars are the usual suspects

Our most common cause of flying accidents is not radio failure. It's pilot error. Setup plays a key part in outcomes, because a poor or unreliable setup can put the pilot under increased pressure. Too much control throw often the culprit or incorrect needle setting. (aka lean) When a problem suddenly has to be managed, this is when setup and flying experience counts. Setup problems and solutions are discussed ad nauseum. Performance of gear is second. Improving flying skills comes a distant third.

Receiving good advice is a huge part of becoming a better pilot. Some years back I happened to be standing with a few people at the inaugural OS Engines day at Burley Field. This is the P.D.A.R.C.S. Club in Melbourne. Just in front of us was an experienced modeller who started his engine and it quit. After it happened again one of the men in our group suggested the idle was too rich. The modeller was either in too much of a hurry, didn't care. Perhaps he didn't know who was offering the advice. The chap next to me happened to be the President of OS engines, and the man who offered the advice, was their Chief Engine Designer.

Complacency is a big factor. Learning from your mistakes can be hard on the ego. Radio failure often gets the blame. Understanding and following correct practice, all mentioned in the instructions is the key to radio reliability. In terms of risk assessment, my most memorable flight was at the Ballarat Aerodrome. I had been invited to fly at a Full Size Airshow. The local model club couldn't do it because the VMAA policy at the time discouraged participating near full size aircraft. Checking out the obstacles lurking in the proposed flying area, one item consumed all of my interest.

The NDB. Non Directional Beacons are a pair of radio towers with an antenna wire strung between. Clanging into the thing



Under the wing of a Nan Chang, Ballarat Aerodrome 2001

was not the problem, radio interference was my primary concern. A phone call to Giles Hill put my mind at ease. Luckily he was at work. At Air Services Australia in his role as a maintenance engineer for communications, navigation aids etc. The frequency of the tower didn't concern me but 500 watt output had me worried.

There isn't room now, so in the next issue I would like to share a few things that I have learnt, and applied, when flying in high pressure environments. In the meantime, positioning of the aeroplane by not putting it in potentially dangerous situations is the biggest problem I have seen at flying fields. And displays. When it comes to flying I have an ego. No doubt about that. I have always taken great pride in my flying and any achievements have come about from taking advice. And practicing. Hail rain or shine.

SAFETY IS PARAMOUNT

The invention of desk top publishing occurred around the same time as decent facilities started appearing at model fields. Those not so interested in flying, were able to sit back and watch others. Then the signs started appearing. Circa 2012, there is a bit more to being an official than uttering these words in a briefing.

As an interest group, we should be flying at the Avalon Airshow. But we no longer do. Since an incident involving a model at Avalon, it seems people in power have become reticent about participating in large Airshows. Over the years I have watched with interest how that display has been conducted. Years ago, someone parked a full size helicopter in our flying area overnight. In the morning a few others did the same. Rather than demand they be removed, we were told by the Display Director to not overfly the choppers that were parked in a vacant paddock. My Great Planes F-14 was

not capable of making that turn safely and not overfly the crowd. So I elected to leave sufficient room by turning around those helis. During that day, after I was grounded, models repeatedly pulled tight high angle of bank turns and busted the thirty metre line. Many flew over the crowd.

At the most recent Airshow, luck ran out but fortunately, no one was hurt. The manoeuvre? A tight turn in towards the crowd to line up and land. One factor in that incident was the way that the display was conducted. When the idea was changed to launch as many models as possible a number of experienced pilots (myself included) no longer made themselves available. We felt this was a recipe for disaster. The increased chance of a mid air was one reason. Another was that this made us look like amateurs. Media has a habit of portraying aeromodellers as frustrated pilots who cannot afford to fly real planes. A disciplined flying display capped off with a perfectly serviceable landing is the best way to overcome that perception. The best display ever performed at Avalon was by Ian Bendle and Glenn Carter, who flew a synchronised display with 35% Extras 300s.

When acting as a Display Director, the use of rudder (lack of) on take off and the second turn back in, alerts me as to whom I should keep an eye on a little longer.

If officials are going to devise Display Pilot Credentials, I suggest basic fun comp manoeuvres as the starting point towards a minimum standard. Maintaining a constant 45 degree climb, spot landing and touch-n-goes, most loops in a minute. Sounds familiar? The local club fun competition recently. Which is where I gained many of these skills in the first place. It would be an interesting exercise to run Club Instructors and Gold Wings rated pilots through such a program. That would bruise a few egos.

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Grand Southern Model Aero Cross Rally

Pics by Skycam

Nestled in the Maitland area of N.S.W is a full size aerodrome named Luskintyre Park. In this picturesque part of the world seven people combined resources to set up an airstrip to operate the aeroplane of their choice. Their passion for the Tiger Moth is self evident and the very well maintained grounds give the first inkling that this is a special place. This is where the owners, pilots and visitors lucky enough to score a joy flight congregate.

One of the hangars is devoted to restoring the De-Havilland airframes back into flying condition and two grass strips plus the large open area in between allows flying operations into wind. Just as it should be. Pilots from all around the country drop in for a cuppa and a chat in the well appointed homestead that also affords dormitory style accommodation.

How Peter Coles convinced the owners to shut up shop for a weekend is an article in itself but with a few charitable causes in tow that's what happened when the nine owners of the Luskintyre Airfield through Mr Frank Williams made it available for a public model air display. A host of marquees housed food and wine vendors, the model trade, a live band and the large central tent was just the place to sit down in between walks to the varied flying displays on offer.

Spectators could wander around within a large rectangle with control line on the left, the scale flight line in front, float planes operating off the lake behind and at the far end of the easterly strip was scale AT6 racing. The air race course was the best part of a kilometre away and a large coach was also provided to ferry spectators up to

watch the action. At 4.30 on the Saturday a world record attempt of getting a hundred foamies into the air was planned. After taking all this activity I couldn't help thinking that his was like a mini nationals. You could see quite a varied spectrum of model aviation here.

The public who each paid \$10 admittance at the gate were entertained by the very wide selection of large scale models. This certainly reflects how active the scale scene in NSW is, they really have it happening up there. Three acts that flew and flew all weekend were the two glider tugs and the large twin Zenoah G62 powered Cessna 421 flown by . The twin won the Pilots' Choice trophy and it is certainly a great model but a supposed effect of subliminal advertising must have been a factor because every time I looked around,



Chris Bislin being interviewed for the Six O'clock News



that model was in the air. It was flown very well all weekend and was a great way of demonstrating that models can last for years. Even a twin.

A spectacular demonstration of longevity but of the inversely proportional kind was the Edge 540 during a much underated airshow manoeuvre, the full throttle low inverted beat up. For those who missed it we offer a photograph as a reminder of what can happen a second after the pilots finger slipped of the elevator stick. There were a few incidents associated with take off and landing which help to thrill the crowd but the weekend confirmed how entertaining model's can be when you great models flown safely by competent pilots in front of a crowd.

This was further highlighted on the Saturday when model activity was halted for a formation flyby of R.A.A.F CT-4s and a Grumman Avenger flown by Paul Bennett. Paul returned a few minutes later



Early Sunday morning.



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Grand Southern Cross Model Aero Rally



Electric power has made its way into CL.



Brodak Strega and a 1957 Nobler were two of the models featured in control line demos flown by Warren Leadbeatter. .



Blue skies.



Floatplanes.



The P-38 by Tom Panagiotopoulos was one of the many impressive large scale models.



Model Aviation.



Desert Aircraft Australia.

Grand Southern Cross Model Aero Rally



My favourite WW1 fighter this lovely SE5a by Garry Welsh.



Extra 300 powered by Wren Turboprop. Tom Watson's other model was very much in keeping with the venue, an inline four cylinder OS IL 300 powered Tiger Moth.

after strapping on a Pitts to perform a great aerobatic demonstration. Then Chris Bislin stole the show with his 33% Extra.

For as long as I can remember a smooth graceful aerobatic routine by an F3a model has always been appreciated by the general public. A five minute routine would still work today but the crowd was not treated to that type of demo. We all witnessed something better. After getting a couple of pics the camera was put down so I could enjoy seeing one of these large scale aero-

batic machines wrung out to within an inch of it's life. That's what it probably looks like to untrained eye but it was a brilliant expose of total control on all three axis with deft use of throttle to keep the whole show aloft.

A large part of the routine included angles of attack way beyond the stalling angle. Incredibly low exits from inverted flat spins with a knife edge pull out back to a hover. During the slow, low, tight rolling circles just over one wingspan the rudder could be clearly seen cycling from side to side. After a mixed bag of slow stuff high Chris wound that DA 170 right up and boomed in flat out on a beat up and then wack! Sixty

degrees of up elevator applied at 200 kph really got my attention. When that Composite ARF Extra just stood on its tail and just stopped mid air.

I couldn't believe how well all that sophisticated equipment is sorted out. What really impressed me during that particular manoeuvre was the strength of that light weight airframe to with stand huge Gs'. The servo gears did not strip, the elevator hinges held true as did the tailplanes and the engine mount and firewall withstood what would be enormous gyroscopic force. The throttle response on the engine, the centring of the control surfaces plus the power of the servos ganged together to



The Winner of Pilot's Choice will need a hundred hourly after logging many flights all weekend.



H Store



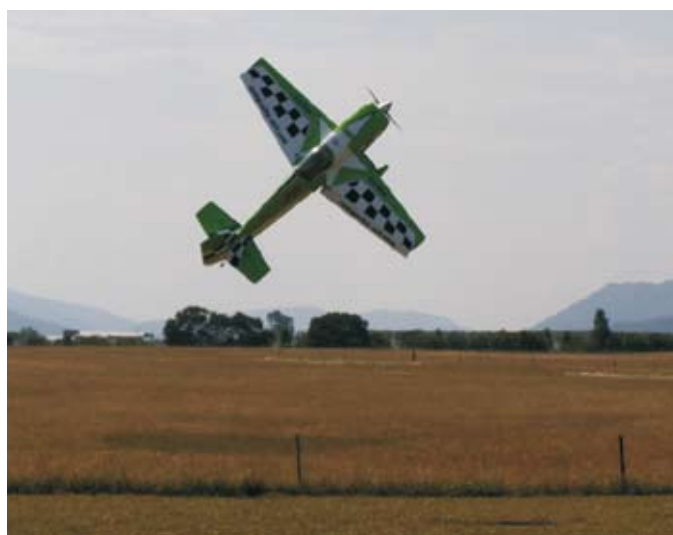
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Grand Southern Cross Model Aero Rally



Austars Cessna Ag Husky ready for another glider tow, flown all weekend by Paul Collins.



Show stopping demo, or how to safely abuse a Composite ARF Extra by Chris Bislin.

Darren Marshall's Willy Monster ready for tug duty.

bang over what are huge barn doors. It all has to worked perfectly for the pilot to achieve this level of precision flying and that gear has to undergo many flights of practise. This demonstration also highlighted the value in developing a relationship with a specialist hobby business where advice and back up is just a phone call away. Whether you are just staring out or going for gold that is something not really available on the internet.

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Grand Southern Cross Model Aero Rally



One of Peter's pair of Texan on loan for the weekend.



GSMAR organiser Peter Coles finding time to play with his Moki powered Balsa U.S.A. Stearman.



Congratulations to Peter and Elaine Coles.

In the trade marquee Desert Aircraft and Model Aviation displayed specialist product for the large high end segment of the hobby equipment and H Store and were also supported with extra stock by Model Engines, O'Reilly Model Products, Ace Hobby Distributors and The Hobby Headquarters.

The record attempt did not happen as the hot humid conditions took their toll but for those who did stay the live music was a

treat. The chap hiding in the trees and looping the little Piper Cub to the music can come again. After his ill fated attempt to fly it up the windsock others brought out their foamies so next time, nightflying is on.

Maybe that World Record attempt of one hundred foamies can be achieved. After the foamies were put away a few wines and beers made for a very relaxing Saturday night for those who camped overnight.

SO HOW DID IT ALL GO?

1,378 people attended the event and Rotary Overseas Medical Aid for Children (ROMAC) received a cheque for \$15,000.00. This was partly from the residue of the event and partly from a donation from Elaine and Peter Coles. This will cover the surgical correction of Litiana and David legs. Litiana is having her operation within a week in Auckland and David will have his operation at the Westmead Children's Hospital in Sydney in about 5 weeks. The Rural Fire Bregade in Forster made \$500.00, the Lochinvar Public School made \$2,300.00 and the Rural Fire Brigade of Luskintyre raised \$1.300.00

Luskyintyre Park has been booked for 2012 and will alternate with Bowlyie. The layout will be modified to include a heli flying aera and more room will be allocated for the scale plus the race course will be moved close but swung ninety degrees.

The general public will able to wander around to see our wonderful hobby within thin four flightlines. As is always the case some of them will find their way into a hobby shop. In order for our hobby to prosper exposure of this quality is vital for aero modelling. Stephen Green.

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MOP amendment duds rural communities

by Stephen Green

GRAND SOUTHERN CROSS RALLY

“Hi to all participants in Luskintyre 2012

The MAAA have changed MOP019 as of December 2011, which states that the Display Director (me) must ASSURE (guarantee, warrant) that all pilots have full control of their aeroplanes and do not lose orientation during the entire flight. This is an impossible Operational Procedure and totally unacceptable (and questionable), but more importantly brings into question the validity of the MAAA insurance cover for all modellers at Luskintyre. Therefore Luskintyre 2012 is cancelled. Many thanks for your interest, My kind regards Peter Coles.”
(This is Peters interpretation ED)

Airshows, such as the SAAMBR article in this issue of the magazine, are the life blood of creating new members for model clubs. Many involve local charities with the proceeds used for community groups. Small public displays by model aero clubs happen all around Australia. Country fire services, SES, local hospitals and service clubs such as Rotary and Apex benefit. A classic example is the 1991 World Championships held in Wangaratta.



The rural economy was then in deep recession and this event pumped millions into the local economy. That was the local Chamber of Commerce’s figure. Just imagine the local headlines if an event such as this was lost due to incorrect rules. Plus the multitude of local displays that raise money for local causes. I wonder what the local Federal Member would say to CASA?

What a shame for Peter and Elaine Coles. The inaugural bi-annual event in 2010 was a runaway success and it captured the imagination of spectators and pilots alike. Myself included. Organising an event of this magnitude takes a lot of effort and planning and the involvement of Rotary International opens doors to assist in almost every area of business. The end result raised funds to bring young children from overseas for life changing surgery. This event did a marvellous job of presenting our hobby in a very professional manner to the general public. The local community has lost a substantial amount of money for that weekend. Any Rotarians involved must be shaking their heads in disbelief about the administration of the model aircraft regulations. Me too!

When it comes to the Law, ambiguous re-wording of a procedure creates ramifications. The MAAA may be clear about what is intended but three experienced Display

Directors disagree wholeheartedly. The result, no Public Displays. The M.O.P now reads..

7.9 The Display Director is responsible for ensuring that: (a) All pilots flying in the Display are of suitable competence, and for radio controlled aircraft they shall be capable of flying their display aircraft in a competent and safe manner and complete all the display manoeuvres without any loss of control and orientation.

I believe this issue will be on the agenda for the MAAA Conference in May. Darrin Braybrook was just about to make a presentation in Queensland to get the Gold Coast 5000 off the ground. That event has stalled. Unfortunately for Cobram Air Races the timing was critical.

COBRAM AIR RACES

My refusal to sign the Display Directors form for the second annual meeting at Cobram stopped the event dead in its tracks. No one from the Club wanted to sign the form either. The Moira Club had to inform the Local Council and ask if the \$2,000 grant for radio advertising could be side-lined. And if the remaining half of the improvements grant was in jeopardy? To support the local community that got right behind the event, club members took a vote to downgrade it from a public event and run

TV Interviews



Large attendance



Public Displays are the life blood for model clubs that desperately need to attract new young members

Enthralling flying

downgrade it from a public event and run it as a closed competition. So for 2012 the event is still on for competitors. As a fund raiser? Well it won't be so good but at least the motels will be full. As to the future, the main problem, for me, is the definition of "loss of control and orientation." What does that actually mean? How can anyone possibly be responsible if a pilot collapses or the radio stops working. "It wasn't the intention" won't really help me in court.

The next problem is systematic. The Display Permit Application was filed in January, only to find that the MOP had changed on November 18th, yet the Education Document only became available on January 17th 2012. How can anyone plan an event with confidence the regulation will not change mid stream. The MOP could be changed on the website when I am actually conducting the event. Does that then mean I could be operating illegally. As the person responsible, what is my exposure if this happens?

Removal of the Gold Wings standard is another issue. Which is what I suspect what this was all about. The new method of ensuring pilot competence might be okay for small club displays where everyone is known, but how would big events such as Adelaide Golden Era fare? Or the Shepparton Mammoth? It attracts over a hundred entrants from all around the country. A problem with acceptable flying standards not being policed is more the point.

Concerns with Heavy Models at Airshows came up during discussions. Surely the point is more about Pilot Standards? There is some pretty serious equipment flying today but what about my 1.5 kg foamy? It tops 200 K.P.H. Making everyone fly beforehand is completely unworkable. This must be re-thought. But that is not my biggest concern.

I have seen a letter a letter from C.A.S.A. devolving (passing on) all responsibility to the M.A.A.A. The Education Document has opinion, linking insurance cover with compliance to the MOP, which can be changed at any time. In that document is this next paragraph.

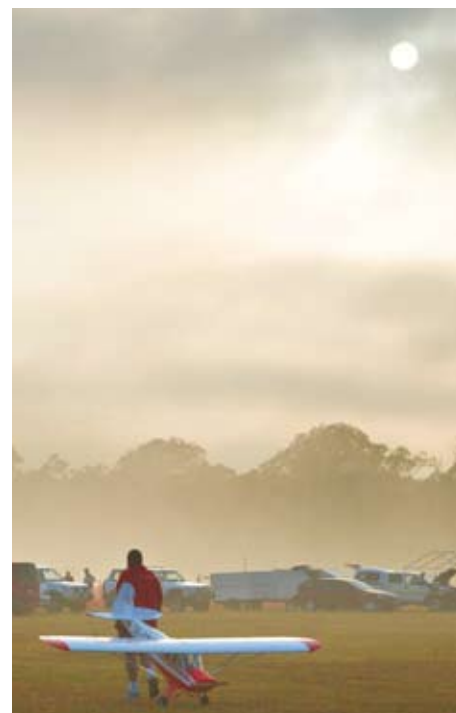
"Any words that are written can be subject to differing interpretations. The MAAA MOP's are MAAA documents which the MAAA can consider changing at any time without reference to outside organisations. The MAAA has been advised that if there

is an incident, and the interpretation of an MOP is raised, this could only cause questions on insurance cover if the member had not fulfilled the MAAA intent."

Hopefully you can understand why I won't be signing anything until this issue is sorted out. I would be happy to sign something that was achievable. Numerous times I have operated under the previous MOP. A Public Display Permit Application for Cobram was filed, with a request to exempt the event from MOP 019.7a, but to conduct it under the previous wording. Which Mike Close (MAAA President) kindly sent me. Hopefully this will be considered on its merits, given that the Cobram Air Race was inadvertently caught up in this. It will be interesting to see what other Clubs do?

With the exception of the M.A.A.A. Secretary which is a paid position, all others on both the National and State Bodies are voluntary. Decisions have to be made. Fair enough, that's why we have committees. By and large they do a marvellous job and it is unfortunate that this article was published in this magazine. Somehow the handing of this, was a missed approach that has gone completely pear shaped. Diametrically opposed points of view plus the problem that Live Documents can create made it a given.

In the future, spending members funds to have critical M.O.P.s written by a Specialist Aviation Legal firm would not upset me



The sun has not set on the Grand Southern Cross Rally, Luskintyre 2012 (Skycam pic)

in the slightest. Then implemented in a timely manner. If not happy, I can consider organising an alternative cover, if required, that will not be subjected to surprise changes. And deal direct with C.A.S.A. Which is how Luskintyre 2012 is now being conducted.

C.A.S.A. has handed responsibility to the M.A.A.A. It can change the requirements without consultation. At 9.20 am Monday January 23rd the previous MOP appeared on the M.A.A.A. Website. Early that evening it had reverted back to the newer version. Apparently at HQ there was a loss of control and orientation. Who ensured that it would not happen?



Tell them you saw it in RCM News, Australia's popular radio control flying magazine 41

MAAA response to MOP Duds

(Published June 2012)

Rural Communities

The MAAA thanks the Editor of Radio Control Model News for the opportunity to respond to the article ‘MOP amendment duds rural communities’, published in the March-April edition of Radio Control Model News magazine (RCMN Article), albeit two months later. The MAAA is concerned that the Editor, by publishing a one sided assessment in a widely read bi-monthly model magazine, has provided the public, as well as MAAA members, with a subjective view which has the potential to complicate and confuse the situation.

The MAAA certainly does not fear debate associated with its activities but is keen to ensure a balanced presentation of the facts. In the RCMN article, the Editor referred to an MAAA ‘Education Document’ but neglected to include the reasons for the changes to MOP019 contained in it. These reasons have been widely circulated to MAAA State Associations and through them to clubs and members and they will be reiterated in this response.

The MAAA agrees that Displays are magnificent opportunities for both model

aviation and the community. Over the years the holding of Displays of all types has provided great benefits including: raising funds, whether for charity or otherwise, enjoyment for the participants, model aviation shown as a spectacle, or inspiring the next generation of model fliers. The MAAA, State Associations, clubs and members totally support these activities. However, it is obviously important for Displays to be conducted in a safe and professional manner.

It is disappointing, but illustrates the lack of balance, that the RCMN article did not acknowledge the role of the Civil Aviation Safety Authority (CASA) in the regulation of model aviation. Additionally, the MAAA is concerned about the reference to a draft letter from CASA devolving all responsibility to the MAAA. The MAAA is not aware of any such letter being issued and does not believe this is CASA policy – we query whether CASA was quoted out of context?

CASA is the Federal Government Regulator for civil aviation, including model aviation. The Civil Aviation Regulations (CASA CASR)

1998 PART 101 are Federal legislation. They apply throughout Australia including to the MAAA and strict liability penalties can be applied by CASA for failure to comply with their Regulations. CASA Regulations Part G 101.140 covers public flying displays. The safety standards required by CASA are:

(c) he or she [the director of a display] ensures that: (i) having regard to the events making up the display, proper precautions are taken for the safety of the participants and spectators; and (ii) the operators participating in the display are competent to carry out each proposed manoeuvre safely.

One of the drivers for change to the MOP was MAAA’s concern that the reference in the previous version of the MOP to ‘Gold Wings’ was being incorrectly interpreted by some as being the only mandatory requirement for pilot competence.

The Gold Wings standard cannot, by itself, ensure the Part 101 Regulations are met because: CASA’s interpretation of the term “ensure” in the context of a model air-

aircraft display does not require the Display Director to guarantee the competence of the pilots in question.

CASA's interpretation however is for the Display Director to take all reasonable and prudent steps to ascertain whether the pilot appears to have the necessary competencies to safely perform the manoeuvres/operations in question.

This may involve the Display Director making appropriate enquires and taking appropriate steps to satisfy himself that the pilots have the necessary licences, certificates and the like to safely attempt the manoeuvres/operations in question.

It may also involve the Display Director in taking precautions, or making inquiries which are specified in the legislation (Part 101) or in the relevant MAAA procedures manuals.

Ultimately, no one can guarantee that even an apparently qualified and experienced pilot will not make an error that leads to an incident or accident and therefore the requirement to 'ensure' competence and safety does not rise to this level.

Applying this advice, MOP019 has never placed any impossible conditions on Display Directors and is considered a reasonable standard to promote safety.

The RCMN article says there is a worry about linking insurance with compliance with MAAA MOPs.



Yes of course there is a link. The insurer has to have a basis to assess the risk they are accepting and the insurer has determined that compliance with MAAA MOPs is a requirement for insurance cover. One of the main exclusions applicable in the MAAA policy and relevant to the MAAA MOPs is:

This Policy does not apply to or include legal liability;

13.1) for or arising out of the deliberate, conscious or intentional disregard by the Insured's technical or administrative management of the need to take all reasonable steps to prevent Injury or Damage.

Note that it says deliberate, conscious or intentional disregard.

This wording seems reasonable to the MAAA.

The MAAA is disappointed with the way this has been debated as it believes the RCMN article does not reflect a fair and balanced assessment of the wording in the current MOP019. Whilst the

MAAA will review it at the May Council Conference, to make sure it is as clear as possible, there is no evidence that there is anything significantly wrong with the current MOP. Any policy, procedure or opinion can be challenged but the MAAA is confident that the current wording is reasonable and accurately reflects the standards expected by CASA under Part 101.

MOPs lowers the cost of insurance per member but changing insurance related procedures without warning is just not on. A good way for MAAA to avoid future disappointments of this type of article being published would be to improve the system of communication to Club Members. By the way if the general public did purchase this magazine, I would be next door to Reg Grundy's home in the Bahamas. There is more background in the Leading Edge on page 6 and I will be reserving further comment until after the MAAA conference. ED.

Confessions of an Advertising Salesman

Also known as Bloopers

Flying model planes in front of a crowd, advertising and promotion of radio control flying has been an interest of mine ever since I was invited to fly at one of the Aviat 70 series of Airshows conducted at Moorabbin Aiprort.

“It’s a great business dont fuck it up”. With those words ringing in my years when my Father threw me the keys to publish RCM News Edition 114 here are a few things that happened along the way.



RCM News edition #114 Editorial

“With a choice of a few to choose from, it was quite hard to decide which photograph to place on to the front cover. Sixteen year old Valley Radio Fliers member Lucy Simkin holding her twin Cessna 410 at the Twins and More day at Northern Flying Group field? Also at that field, but on a different day, was the test flight of a superb Piper Pacer built by Jim Brennan.

All three models in question feature in articles on events in which they flew. The need to promote modelling to the younger generation is a given but so is the workmanship and incredible attention to detail on Jim’s Piper Pacer. Contemporary ARF modellers, not of a mind to punching a big hole in the sky right from take off, might



Back in 1987 before the grey hair set in be interested to read that his 10.1 kilogram model flew with a Satio 180 fourstroke engine. Initial prop choice was an 18x6, which is scale in diameter. With a few flights now logged, increasing the pitch to pull the RPM down to achieve a low revving sound is next. Much can be learnt from a modeller who has been there since proportional RC first started.

My visit to the Victorian State Flying field to photograph the test flight was an eye opener. That complex continues to improve and it is a great place to fly a model aeroplane. The strip is now fantastic. The MAAA loans made available to purchase flying fields is a worthwhile program indeed. The association is awash with funds waiting for that purpose. State Associations are keen to help clubs with any proposals to secure flying sites. To develop a site that caters for the range of entire range of aircraft weights that can operate within the confines of the property, requires around 100 acres. Smaller sites specifically for small electric powered craft would no doubt be easier to sell to council.

Flutter is something I have experienced a few times but taking off knowing that flutter would occur is a new way to fly. The Bionic Bird by Axion is something else. It flies on flutter and its a great laugh to boot. I hope Louie the Fly is next!

Winter weather has arrived early this year in Melbourne. Hardy souls braving the elements can opt for



Organised and funded by Peter and Elaine Coles the Grand Southern Cross Rally was the best, biggest and most imaginative model plane event I ever participated in

calmer skies as indoor flying gains momentum. Anyone can fly a contra heli in their lounge room, but more advanced machines and fixed wing requires more room. Bruce Corfe has sent in a piece on the Perth indoor flying scene, which is also replicated in Melbourne. . Most country towns would have a stadium or hall suitable for that activity.

Speaking of hardy souls, flying off water is another fun part of aeromodelling. Retrieving a model floating in a lake after the engine took a gutful of water is not suited to winter ops, but that time could be spent in the workshop gearing up a floatplane. I have seen some marvellous radio installations designed to keep water out and a standard sport model can be rigged onto floats very quickly. Extra time spent with sealing as much of the wood in an airframe as possible and the edges of the covering, is certainly worth the effort.

The previous two issues have featured articles written by myself and the MAAA, both espousing differing views as to the change to Public Display Permit procedure. The change to the MOP affected the Cobram Air Races and Luskintyre Park because both Display Directors were unwilling to sign on the line. To solve the stalemate over Luskintyre, NSWMAS offered its support running the flightline, but apparently it balked when asked to take full financial responsibility. This is the entire point of my objection.

Once the explanation on that new wording was forthcoming, somewhat begrudgingly I signed to save my pet event, the Air Races. In terms of Insurance cover, my view is that the “Ensure” wording has the potential to leave the Display Director high and dry. CASA might very well say they would not prosecute on the basis that no one can guarantee no loss of control or orientation. But that is not the point. When it comes to accepting premiums, insurance companies work very well indeed. They are also very efficient on the other side of the ledger too. Defending oneself against the Insurance Company’s attempt to recoup funds after settling a claim is the problem.

Peter Coles

Should I be in need of legal assistance against an Insurance Company, my lawyer would be referred to the MOP, where Display Directors obtain guidance, as to what procedures should be employed to ensure against loss of control and orientation. What is the minimum flying standard required to fly in front of the paying public?

At the MAAA National Conference in May, this matter was referred back to the Executive.

It would be a good idea to start by instructing State Bodies to stop placing their own interpretation on Insurance related matters. For example a Display Permit Application granted to myself to run an Airshow at Sandown Raceway, with a stipulation that the event must be not for profit, yet the Insurance Policy covers volunteers. Surely if a pilot is not being paid, he would be covered. Many members (including myself) have flown at the Avalon Airshow as part of the VMAA display. Why is my effort different? Quite a number of MAAA registered pilots (Associate Members), including myself, will be attending the Fly-In at Luskintyre Park next time. It was a great event. With a number of full size aircraft participating and relevant State Model Association not wanting to duplicate the Display Permit, CASA has instructed that the Permit Application must now go direct through them. Pilots who have paid their MAAA membership, have a right to know if they will be insured.

Two items for discussion at the MAAA Conference were of interest to me. Number one, canvassing for ideas regarding the worthwhile use of funds, as the bank balance keeps accumulating. Some three million dollars I believe. Sponsoring a substantial prize for model aeronautic ops such as the UAV Challenge, or school flying programs springing up around the country would be a good thing. As licensing of individuals and companies to

operate small UAVs gains momentum, the general public will become accustomed to seeing rotor craft types flying in the suburbs.

The second (item 26.2 on the agenda) Disiplinary Procedures submitted by The Executive, "Discuss how the MAAA deals with members who publicly challenge MAAA in a manner that could bring it into disrepute." My preference is not to be publishing articles such as this, but did so to ensure that those with a different view were heard. I have received quite a number of emails from model clubs and individuals with similar concerns. To avoid future comment, sorting out this Display Permit debacle and coming up with something workable would be a good place to start.

Exclusions in MAAA Insurance Policy regarding workmanship and suitability of goods for their intended use is interesting reading indeed".

Circa 2023 the more things change the more some things remain the same seems relevent.

2015 Sandown F1 Air Race

Bite off more than I could chew and chew like buggery my biggest mistake was getting involved with Blair Collins Ultimate RC Events. Who some how got the idea he could take the event over and run it for profit. MAAA President Neil Tank stopped him dead in his tracks. MAAA Vice President Carl Bison got the last of the money back I had dropped into Blair's account. Time lost during that cofuffle prevented me from trying to attract a corporate sponsor.

Airside was all organised except on the day my brother had an anxiety attack and turn up four hours late. Which was embarrassing as I quickly began to look unorganised. Two people who jumped straight in to help were Mick Lynch and Greg Lepp. Mick got the netting up for the chuck gliding area. Greg Lepp took control of the flight line. A huge sigh of relief as I had get the pylon course sorted for 12 pilots invited to race for Beta Electrical prize money. F1 Air Race was the hook for promotion.

A little bit of house keeping here. Blair sold MAAA on the idea to throw a few grand on radio avdertising. The upshot of the whole thing was the event cleaned me right out of cash and I copped a bill. I began to cut it out by publishing MAAA advertisment at no charge. Treasurer Brian Dowie told me to charge the ads out at three grand. Not conforatble with that I introduced the fold out flap to justify the increase in price. Unfortunately I don't think he told anyone else. Secretary Kevin Dodd told me MAAA had written my obligation off any. Not happy with that against my name the full page adverts continued and invoiced until the account was zero. Plus one extra for interest.

Putting those planes in front of people in 35 kph cross wind aside that event doesn't fill me with pride because it failed to continue.

2016 Sandown F1 Air Race

People second guessing MAAA Executive at the moment should consider the cost of employing Sustainable



Hempe 50% Pitts Special
Jet Eagle 40% Vampire
Multiplex 100% the Rockstar
Multiplex Acromaster



Australia Post Print Publication PP100009283

Scott Matthew's brilliant job on his plane was to help me attract an event sponsor



Chuck gliders at Sandown 2015



Full colour multi page program for the general pubic



How to make a model squadron
Sandown 2016
Extreme Zone Avionics

FLIGHT SCHOOL



Australia Post Print Publication No: PP100009283

**David Law's Spitfire at Sandown.
I mistakenly claimed credit for this
fantastic cover shot by Steve Barrow**



**In between races Byron Simpson did
a fantastic job working the crowd at
Sandown**



**Best display flight I have ever had the
privilege to watch the Mybo A10 by
Damien Mould at Sandown. A brilliant
expo to inspire a few into RC**



Uber Eats gag was fun

Marketing is also a reflection of what happens at club and state level. "Great idea who is going to do it". MAAA had the money and just used a small portion of it. If the event achieved anything at least now it there is a line entry in the accounts budget for promotion. One difference between AMAS and MAAA is paying its bills? AMAs dudded me and refused to pay for its last advertisement.



**Best managed flame out was the Hawker
Hunter flown by Neil Addicott at
Sandown**



Most memorable mid air was when RCM News Columnist Byron Simpson and RCM News biggest advertising account Mike Farnan thrilled the crowd in 2016



Dave Cahill - best announcer



Tanks a lot



WHAT A DOG



Aerofoil section on this Barbara Jean ARF make this dog of a model suitable for recovering from tip stall practice



The photographer will probably take umbridge and tempting as it was this cover shot would have sold more magazines but I didn't want to risk credibility if it was a fake and so opted for a static pic



Top of the best scale builder list without doubt is the late Jim Brennan



Most accomplished designer, builder, flyer, competitor and all round aeromodeller I have ever met is SA's Richard Mudge



Method of transport for Hobby King's B17 gives an insight to this incredibly cheap nevertheless crappiest model I spent countless hours sorting out



Best Chick Marie Pedroz



In the RTF trainer stakes theARES Crusader had the goods to take on the ubiquitous E Flite Apprentice but the whole shebang folded before it got off the ground



Fun Cub was tops until the FMS Super EZ came along



AT 6 Grudge match by the Shepparton boys at 2011 Cobram Air Races was a real hoot



Never having raced before somehow Byron Simpson who didn't read magazines took out first place in Reno



That two day event paid for this and more



Sullivan Products manufacture the best starters hands down



Jet engine retailer Bogun Thrust Jets was his own best customer



Dumbest knifing of a President goes to Moira Model Aircraft Club

Flights that will never happen again



Inverted beat up under the bridge at Turn 12 Gardner Strait 1999 Phillip Island Motorcycle Grand Prix



Our place in the paddock



Best inverted pass Albury and Wangaratta Jets prior to becoming person non grata



RC helicopter aerial photographic shoot inside a Loy Yang Cooling tower was a very tricky two minutes- phew!



Sloping at Beveridge 20 km from the CBD. Can you still call it sloping?



Parking a model in the tower a rather unusual decision by an airline pilot



Reviewing this great flying FMS Olympus turned into my worst recommendation ever when Dad bought one a few years later. His fuselage was warped and no amount of computer mixing would overcome it



Most satisfying mobile touch n go at Luskintyre Park



Sounds like thunder goes like a chicken, Thunder Chicken Engine project never happened



Best drone cinematographer Dale Henderson Fluid Motion Films

The Stunt Pilot

is W G Gilderslag



I've been busy the last few months logging jet time and I had some spare time on my hands after walking away from a prop job. All the recent wet weather has soaked flying fields everywhere and when the sun does shine again the grass will quickly grow. Thoughts turned to how low time pilots would cope when they arrive at the field only to be greeted with less than ideal runways.

LANDING

"Any landing you can walk away from is a good one!" Have you heard that saying before? A favourite with pilots but not so much so by the owners of aeroplanes. (See pic on the right ED). Some people forget that landing cannot occur unless the achievement of getting an aeroplane into the air is successful.



Checking for pot holes.



Walked away with a broken watch.



THE TAKE OFF

Getting an aeroplane off the ground is pretty easy. Almost anyone can do that. That's what's a tricycle undercarriage is for. Taking a man's aeroplane off takes more finesse. As does keeping it straight to maintain the line. What sort of aeroplane am I talking about. A taildragger of course.

DIGITAIRE FOR SPEED

In the late 60's Brian Green (Dad) held the Australian record of 2mins 28 seconds or an average speed of 109.59 K.P.H.. The model was based on the semi scale USA Formula 1 (450 sq inch wing) rules and it was powered by a loop scavenged front rotor OS 40. From memory it turned a 10x6 prop at around the 11,000 rpm mark. This sparkling performance would now be achieved with a .40 powered trainer.

HISTORY LESSON

Another thing that has remained constant is the FAI Pylon Course. The official designation is F3D and four models take off from a standing start to complete ten laps of the 450 metre course. To reduce the chance of a collision on the ground the starts are staggered at one second intervals. The basic rules are a .40 cubic inch (6.5 cc) engine running on 4-1 methanol castor oil mix and some minimum fuselage and wing dimensions. These rules have varied between the 450 square inch wing area of US Formula One and the 600 sq inches for F.A.I.

BRIGAND.

An English design of 600 sq inches with an Austrian made rear rotor HP 40 turning the Top Flite 9x7 toothpick wood prop at 18,000 r.p.m it was good for 1min 59 seconds. The simple venturi meant no throttle control so the engine was shut off by pinching off the fuel line with a servo. After lapping at an average speed of 136.16 K.P.H you pulled up then shut off the engine for a glide approach.

Similar in spec the John McGrane designed 600 sq in Minute Man was powered by the OS 40 rear. When that was replaced with one of Ranjit Phelan's worked OPS 40 with his Magic Muffler the smaller 8.5 x 6 wood turned at 24,000 and that poor old model had never gone so fast. It suffered aileron flutter twenty seconds into the first flight with more horsepower.

After trimming the ailerons in span that model was good for 1min 30 seconds or an average speed of 180 K.P.H. You know you are alive when racing three other models at a one minute thirty ten lap race.



See the venturi? That's a binary throttle, on or off.

Jim Orenshaw gives Gary Davidson's racer the heave ho.



the model at full power and start the watch upon release. This teaches one to take off with the needle valve slightly rich.

When it's windy you learn to flatten out the bottom and tighten up at the top to prevent drifting backwards. Save that skill for an aerobatic comp because the increased loop diameter takes longer so don't do it. After the wheels leave the ground count to ten then drag that stick right back. Check the rate doesn't induce a tip stall first.

The Megafly will do fifteen loops a minute.

CLIMB AND GLIDE

A thirty second engine run is more than enough for most 46 powered jobs to bust the standard 400 foot ceiling height restriction so check the local laws before going vertical. Scan the horizon too for any

We love Top Gear and we love the Stig but can he fly? Okay Hotshots bring it on!



Commence looping now. Avoid digging up worms by making the first half a trifle bigger than the second.



Fifteen loops per minute is on the money.



Good!



Wasting precious seconds.



Perfect!

The Stunt Pilot

incoming spam cans also. Hold the model at full power and start the watch upon release. Up at the top the engine must cut out and the watch stops when the wheels touch. Novice pilots can have the engine idle but this practice does open the door for the less chivalrous to set a fast idle.

To negate the myth that a high wing glides better than a low wing, you hotshots should fly the last round inverted. (Make it easy for them and let them roll inverted at the top). If the model sports a flat bottom wing for this category you've been sold a Pup but if somehow it wins first place take up gliding. You were born a natural.

The watch stops when the model starts to roll out from inverted but that practice is for those who paid far too much for their A.R.F. A self respecting show off will land the thing inverted.

If the engine is mounted upright this will test the glue joint of the fire-wall. Smart Alocs who read this and swing the engine around ninety degrees to gain an advantage will find the quality of metal in the carburettor will be tested. Inverted landings can be tough on the needle valve. Speaking of that, the setting that got you through the loops should be the go here too. Even more interesting is deducting one second for every metre the model is away from a spot in the centre of the strip. Livens things up a bit.

The VMAX 46 was propped with an 11x8 APC at 10,000 rpm. Keeps the noise level



Best rate for thirty second climb and glide.

Hold it off as long as you can. My score was 2 minutes 37 seconds after take off.



It's too late now baby, it's too late but if you must wimp it, first drop the nose to build up speed then roll out.



No worms or engines were hurt during the making of this article. All three competitions can be completed with these manoeuvres can be done with one tank of fuel. Those who espouse the virtues of EP are welcome to try all this with one 6S battery ! With all that ballast I'd love to see twelve landings in two minutes.



The inverted landing, a sure fire way to get the crowd going and test the glue bond on the fire-wall simultaneously.



The Stunt Pilot



Was that LiPo battery charged? At least a glo engine gives an inkling it is going to stop.



Shake the model and listen for that clunk, most important!



Remove the plug fill the cylinder with fuel and spin it over. Be careful, if it makes your eyes water that's bad. Wear glasses.



Remove the needle and flush the jet through.

of loops I want to see the uncut video. That's been tried before and it's a dud.

TEST PILOT

As your ever increasing skills are observed by the masses being asked to volunteer for test pilot duty becomes part of that deal. And it's a great deal so take it on. They won't even think about the main benefit which is the "Relentless testing of your saving skills." Being caught out with the unexpected goes with the territory therefore a few little tricks of the trade to protect your reputation have been included.

GROUND SCHOOL

Using this project as an example firing up an old engine is one typical example of what you may face when people are milling around watching your handwork.

The VMAX 46 engine had not been run for four years and it would crank over but not fire. Remove the needle, open up to full throttle then pump fuel though to flush

out the jet. Then remove the plug and fill the cylinder with fuel and crank it over with the starter to blow all the fuel out. Re-install the needle and glo-plug, check it doesn't hydraulic then crank that baby up. Works every time and you look like a hero. Checking the clunk line isn't hard up against the rear of the tank is a must before taking off. Hold the model vertical and shake it around. Listen for the clunk. If it doesn't well there is enough fuel in the line

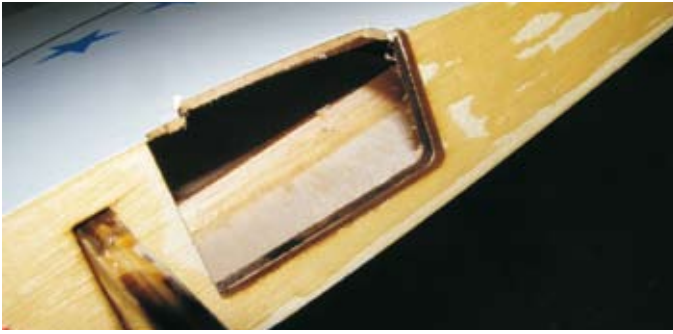
Always a toss up which event should be left until last but having survived this article the Megafly will be subjected to limbo and musical planes next. Spring is coming and another item on the list is creating a Megafloat. As much as we all love the Piper Cub on floats, no disparaging remarks on that subject thank you but this water based activity is where wing down under offers a distinct advantage. When that wind blows up.

THE GUILD OF STUNT PILOTS

Entry into the Guild requires dragging the fin through the water and that just isn't the done thing with a Cub. A seasoned campaigner also knows when to treat something deserving of more respect. Not to the model but those elderly chaps who love them so.

No matter how good you think you may be, there is always another walk up wanting to knock you off. Uncontrolled charging around the sky like a crash looking for somewhere to happen is not what this is about. That just scares people, especially me. And officials who also happen to be the people charged with grounding you. There is a lot more to showing off an aeroplane than this but when you become proficient in these manoeuvres in all weather you are on your way. The best pilots stay the best by flying a lot so get started. If you don't have a mount try a Megafly.

The Stunt Pilot (tricks of the trade)



A look inside reveals no hot glue. So that's why it coped with my rather rough treatment !



Make your own access to service the nose gear steering arm.



Some say this stinks! I say it saves time.

It's a great little aeroplane. Sceptics of the low wing theory can opt for its sister, "The Wasp". By all means send photo's of your exploits or check out some video on YouTube, WG Gilderslag STUNTPILOT

The VQ Megafly is distributed to hobby shops by The Hobby Specialists
www.thehobbyspecialists.com.au
 tel 02 6260 2265



The flat has already been filed on the nose gear steering arm . Do yourself a favour, file one for each the wheel collars as well !



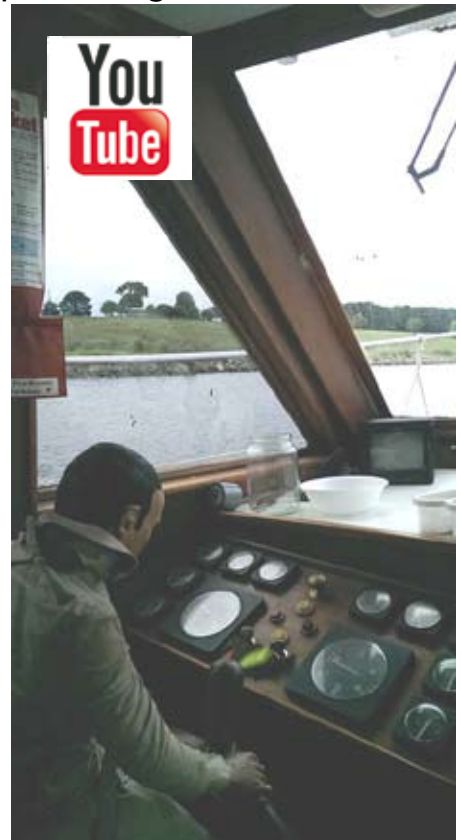
Snow Tyres ?

Top Tips

Ven you get famous like me dose PR peoples ghost write dem article from your English into proper talking



Helping the next generation



Rule Number 3
 If it floats flies or fucks it's cheaper to hire it



Rule Number 1
 8 hours is out, now zero zero



Rule Number 2
 Dealing with Old Fokkers

Sankgo Radio Control Company

I am coming to this country on trip to Toy and Hobby Fair to talk with hobby companies for agent as no replies to my letters.

The Sankgo is the fastest new production from not many company in Russia. We now get best product and make copy for kitplanes but only old copyright.

Remote control transmitter is made from is from 1970's design but better with new integrated circuits from new reliable China components.

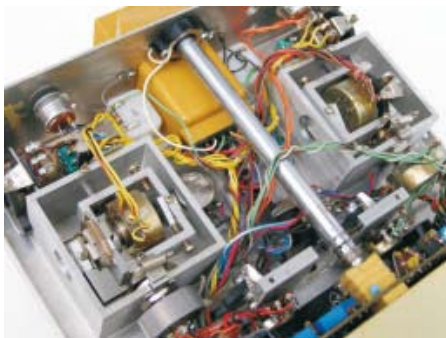
Transmitter has smooth control stick assembly and trim is on opposite side for smooth flying adjustments. FM signal on 27MHz for long range and battery lasts eighty five minutes and charging unit is 240 Volt.

The receiver box is made with the two fuselage servo motor inside for easy use and battery and other controls plug in. Much better than old way. Electric is heavy and power is 120watts off 650 motor for glider.

The technical specification is low for Western countries but it works good and is not much costing. Same for your country in Australian dollars is only \$68.00 plus shipping for complete system. Electric power motor and controller for glider is \$31 no battery. Interested company my telephone for Australia in April 04
WG Gilderslag



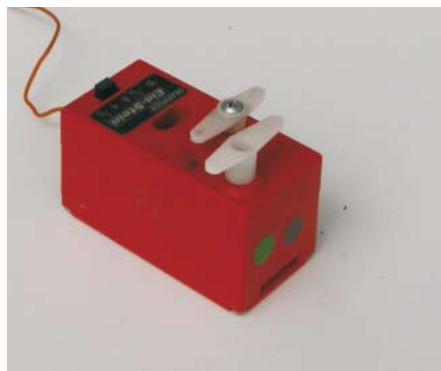
Six channels FM opposite trim-folding antenna-steel box



1970 design no computer.



240v charging transformer.



3 in 1 unit.



12 v Cobalt 65mm motor strong steel case 365 grams 8x6 propeller 120 watt.



Electric motor speed controller 15 Amp 120 gram.

The Trailing Edge

Whether it be at Local, State or National level one thing I've noted is decisions have been more beneficial to growing the hobby/sport when the man at the top is an active flier. One or two on committee who have run a business serves the membership even better.

One club that is doing it right is BADMAC. Three hundred acres great facilities it has room to punt a 400 kph jet and stay within the boundaries. Over flying rights not required. In two decades how will overheads for flying fields like this be covered?

Promoting the Hobby

The average age of Model Aeronautical Association Australia Affiliate Membership is now sixty six. What shape the hobby will be in twenty years time is subject to much consternation by people wanting to make a difference. As a long time Affiliate Member of with fond memories of National Championships, with control line free flight and radio all in the one place long gone, I have no objection to MAAA funds supporting the non radio control

sections of the hobby. But there are limits.

Just like the overwhelming majority of Affiliate Members I have had little to no idea what is going on come the next MAAA conference either. It is refreshing to see MAAA Council Minutes are now available via its website. Show Cause notices issued to one Ordinary Member and three Affiliate Members makes for some interesting reading. Free Flight fraternity proposed a no confidence motion in the current MAAA Executive. Free Flight's motion of no confidence in the Executive was soundly defeated.

What a few free flight Old Fokkers could possibly offer radio control modellers escapes me. VMAA voted for the no confidence motion against the MAAA President too. Its reason for doing so is yet to be reported in the minutes. Victorian Clubs it represents have a right to know why. Tim Nolan is not standing again as President. Hopefully someone equally capable will put their hand up.



ANSW airshow, vision under Tim Nolan's leadership

BIG PICTURE EVENTS

Building an event so they will come is a hard gig in this country. Recently I got involved with behind the scenes issues about the Festival of Aeromodelling. Which was something of no direct concern to me. Issues with the event that did not pass the pub test were sorted out then MAAA threw them a bone just in time. It would be great to see that Queensland event continue to grow to be a major event on the calendar. Everyone I've spoken too really enjoyed it.

Claims the Festival being the biggest event on the calendar throws down a challenge to this Victorian who has always been in interested in promoting big picture events. Put

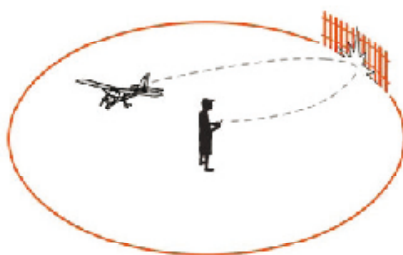
Take off with



Get your family into the thrill of flying with the World's most popular radio control trainer



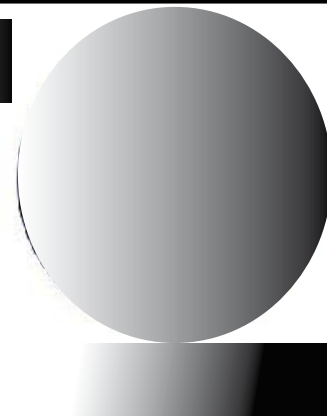
E-Flite Apprentice STS Ready to Fly



Revolutionary SAFE Technology makes learning to fly a breeze



Free 32 page E-Book



Get into the air the fast easy way with 1  Victorian Model Aircraft Association

Apprentice S RTF \$649

Four FREE introductory flying sessions at your local VMAA registered airfield
Offer Ends June 30 2023

Discounted Club 2023-2024 membership



YouTube

aside the 1991 World Champs, which is what kicked RCM News off, Peter Cole's Grand Southern Cross Scale Rally is the best model event I have seen. Ever.

Dad's South Pacific Scale Masters was yet another example of a committee boycotting a great idea to fullfil self importance. Advertising revenue from RCM News magazine is what paid to fly out a Word Champs credentialled competitor and his Sopwith Snipe from England. The net result of the boycott was most of that SIG's Victorian members missed the opportunity of competing in an International event.

One of my efforts was Cobram Air Races. I thought that was well on the way towards becoming a big event. Advertising revenue helped with promotion and a great club President resulted in 68 entries and a two day competition that covered the clubs annual overheads. What would entry numbers have been a decade later if it hadn't been nobbled by self interest?

Another big picture event by RCM News to grow the hobby too has faded into oblivion too. 2015 Sandown F1

Air Race. The difference between Sandown and everthing else was this put aeromodelling on display just 20 km from the CBD. From 2017 to 2019 the Train and Hobby Show picked up the \$10,000 tab for the race track and grand stand hire. COVID put a dent in its coffers and like other exhibits the airshow now has to pay its way.

The Expo Manager talked me into sitting in on its working group for the 2024 event. The first condition I set was there is no point considering the airshow unless he got the Victorian Model Aircraft Association involved.

VMAA has provided a static exhibit and it supports the Avalon Airshow but unfortunately the State Association doesn't see any value in an RC airshow close to the CBD where RC flying is the feature event. I am unable to reconcile why the VMAA committee has supported Drone Racing at Sandown with member funds to the tune of a few grand at Sandown but not aeroplanes, helis and gliders. At a working group meeting for that event I asked VMAA President Reeve Marsh that question and did not get an answer. He went on to explain to the other groups, quote,

" we are administrators not marketers".

Which is at odds with TO PROMOTE line that begins the first three lines in its Statement of Purpose. At one meeting we were told VMAA does not even have a marketing budget. With a few hundred grand in the kitty it should have one.

A few years back Reeve asked me to come up with a metric to persuade committee to support the event financially. He needed to make a business case. Accounting for member funds I understand but running a Not for Profit with an annual turnover of a hundred grand is not what I call a business. That doesn't apply here.

Asking ten RC business owners to put in \$1,000 each could work but I can't think of ten who would. For the 2024 event I created this basic retail proposal to assist Reeve during a face to face meeting with a business owner who operates two hobby shops in Melbourne. See below. Its aircraft section is a wall of foam aeroplanes. The other business I thought capable of entertaining such a spend was Hearn's Hobbies in the CBD. Which also owns The Hobbyman in an outer

Exclusive RC Airshow Sponsorship Opportunity



Four in-flight demonstrations on the race track



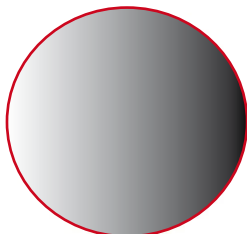
Return On Investment

Revenue from just 52 sales of this basic package over four months = **\$33,748**

That's twenty six new customers per retail outlet

Plus additional up sell revenue opportunities for the Sales Team

Extra Battery Packs - Charger Upgrade - Radio Upgrade



trainandhobbyshow.com.au

2024 Train and Hobby Show

Trains Planes and Automobiles plus new attractions featuring Trading Card Game Tournaments, Trading cards, Pop culture, Dungeons & Dragons displays.

Plus model railways, radio control vehicles (cars, trucks, tanks, plane, helicopters, drones and boats), crafts, clubs and vendors all to showcase what hobbies offer

In conjunction with the Victorian Model Aeronautical Association, (VMAA) the F1 Air Race and model air show spectacular and R/C car race demonstrations



Expected visitor numbers is 20000 + over the weekend

Advertising Schedule to benefit your business

CH9/ 90 / 94 / 99 TV advert Reach 19.7 Million Viewers

3AW / LightFM radio advert Reach 1.5Million Listeners

Advertisements over the PA on all three days Reach 20,000

Signage rights Reach 20,000

Front Cover shot on Model Railways in Australia magazine Circulation 15,000

Article in VMAA Newsletter Circulation 2500





VICTORIAN MODEL AERONAUTICAL ASSOCIATION



Secretary: Norm Thompson
PO Box 155
Doreen Vic 3754

24th January 2017

Mr Stephen Green
117/51 Rathdowne st
Carlton Vic 3053

Stephen,

I am writing to inform you that the VMAA has withdrawn its approval for the Sandown public display scheduled for the 12th March 2017.

After a review of the application and subsequent consultation with other parties it was decided that there were too many inconsistencies for the display to go ahead in the manner which the VMAA would be comfortable with.

We understand the effort you have put in to this event so far and as such Greg Lepp will contact you by phone to answer any queries you might have regarding the above.

For and on behalf of the VMAA committee

rgs

Norm Thompson
Secretary Vmaa



Author's questionable jet operations as a Heavy Model Inspector flying at a public display previously published in RCM News were noted by MAAA years later

suburb. Coming up with a metric for that was easy. Based on the average spend of getting into the hobby today sixty beginners would cover the cost. Anyone with a sales background would understand that is easily achievable. In the aeromodelling world however the commercial reality is different.

If this sixty beginner program was successful how many would be persuaded to join a club in Melbourne? Anyone in the hobby trade knows the answer to that. This is why.

One large rural town in Victoria has two model clubs. It also has a traditional High St bricks and mortar hobby shop. Which does not send beginners to one of the clubs because committee members there openly tell newcomers they cannot fly that model because it wasn't purchased from its preferred garage based business. This has been going on at model clubs for years but not as overtly as happens in Bendigo. Adding flying instruction that takes a long time into the mix is why industry produced ready to fly foamies with stability systems.

Any club that does not cater for this is sealing its own fate. If the Commercial Instructor MOP becomes too arduous that will dissuade anyone offering that vital service. Any club official sprouting we don't want that sort of thing here is in nobby land. There has always been a need. Operating from my own field in the 1980s I had three instructors and twenty plus students on Saturdays. Tired of waiting and feeling guilty taking up someone's time for nothing was common.



Just another runway for the capable

The second condition re Sandown was sighting the Area Approval. Despite repeated requests this was withheld until I bought it up at a meeting. Where I was shown the document on a mobile phone, in front of non aeromodelling people. Whilst the 400 feet ceiling isn't a problem I could not see what radius from the pilots was allowed. The original permit allowed 500 metres either way. I requested that be changed to allow a greater distance to the Northern end to allow more room for high speed heavier loaded aircraft to position. A legally binding document I have every right to see kept hidden. Why? The President was a bit miffed I didn't trust his judgement.

Years back VMAA told me it did not approve of my commercial flying operations at motorsport events. It told CASA too. Then it lowered the standard required to fly at the Avalon Airshow. The result was a jet crash into the spectator area. No one hurt, aircraft and one wheelie bin damaged. Chap being the Airborne magazine jet columnist gave me no joy either. A few years back this organisation told the regulator that binoculars could be

used to sight old timer models at 2500 feet. Considering our operations were coming under the spotlight this was embarrassing. It also threw me under the bus withholding a Display Permit for Sandown at the last minute. NSW supported me. VMAA did not

Jets

Problems with model jet flying at airports emerged years ago. It was not helped by self serving jet engine retailers who held club committee positions. Eighteen jets totalled in a three day weekend at Temora Airport and a few fires my dummy 2015 magazine article emailed to NSW Jet Flyers President was never published but it sure stuck a chord.

Rather than acknowledge the problem two jet clubs, with jet engine retailers on committee, complained to their two jet buddies Kevin and Tyson Dodd. VJAA banning me from jet events didn't change anything. Now they are getting change forced upon them. The difference between flying at a club field day and an airport where aeromodelling is in the public spotlight is this. Even if the public are not invited the aviation community is still there. Loudmouths espousing they know better today should keep their mouths

Fifty Grand Festival of stacks

Each of us is only as good as our last landing but seriously, fourteen crashes at a GA Airport should ring alarm bells. Pretty embarrassing! Articles of this nature would be best dealt with in house but the chance of this appearing in a State newsletter is remote. It would never happen. In the meantime, any club president considering inviting a jet flyer to your annual display is welcome to contact me as to the pilots' credentials. If I don't know them a couple of phone calls is all it takes.

Over the years a lot of people have done the hard yards to organise events such as this. Considerable space in this magazine has been devoted to promoting flying at major public places in an effort to raise our public profile. In a positive way. As usual a small minority spoil it for the majority who do the right thing.

The advantage that endless bitumen for test flying models at full size aerodromes comes with an extra level of responsibility. It's a public place. Aeromodelling is on show. Even well heeled modellers couldn't buy enough hot dogs to keep the aero club happy if one disgruntled operator wanted the whole show shut down. Is that why they were moved away from the largest flying collection of warbirds in the country?

Getting a few self titled "Jet Jocks" to remove a hand from their jocks



to fill out a form or two would good start too. For the second year in a row I have been asked not to publish the weight of a model. This happened at Temora 2014 and also at Wangarratta. That isn't a civil aviation offence but if the person who signs for the event is not interested in that, he or she should not be signing for it. Relying on model insurance liability cover depends on complying with MOPs

Orientation has always been a potential issue flying swept wing planforms. As speed creeps up towards 250 kph flying skill can be found out rather quickly. All very cosy for the firms selling this gear but the full throttle brigade screwing bigger and

bigger engines are getting further and further behind the model. Higher speed is making this a bigger issue. More and more pilots are becoming momentarily disoriented.

Take off and landing rolls longer than the 300 kg aeroplane I flew up is not a civil aviation offence either nevertheless it is a reflection of our flight training regime. Does anyone else find that embarrassing? Take off procedure used previously at Wangarratta that increased safety for pilots and callers standing on the edge of the runway was missing.

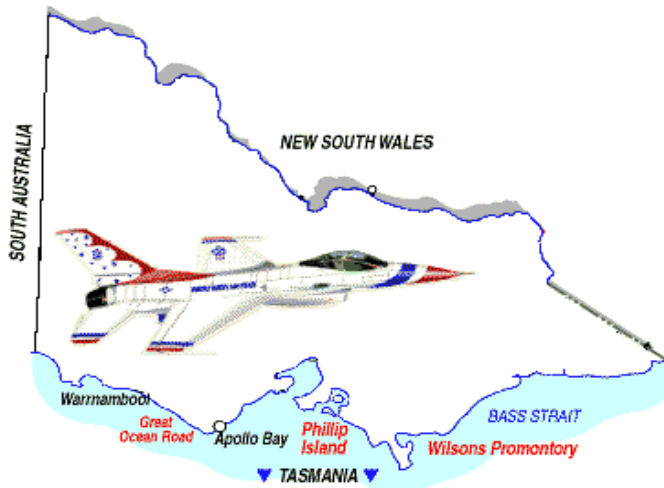
If carnage is your thing, pencil it in for next year, but go on the Friday.



300 kg dry



A great scene, most do the right thing but there are problems



VICTORIAN JET AEROSPORT ASSOCIATION INC

PRESIDENT Phone: ~~0408 309 408~~
~~XXXXXXXXXX~~

Vice President
Ken Mollison Phone 0408 998 689

TREASURER Phone: 03-9439 5753
David Lowder 0438 363 004
Email: djlowder@optusnet.com.au

SECRETARY
Shane Bartlett Phone 0409 441 769

Tuesday, October 13, 2015

To: Stephen Green

C/O RCM NEWS

CC: VJAA Committee
JFANSW Committee
AMA Committee

Re: Persona non grata

Stephen

It has been brought to our attention your un-informed and unfounded vilification of the Jet Flyers Association of New South Wales Inc. and the Victorian Jet Aerosport Association Inc.

Speaking on behalf of the VJAA, I find it abhorrent the insinuations you have made in regard to our so called reckless disregard for safety at jet events.

The VJAA along with the other Jet Based SIG's around Australia take great care to ensure the efficacy of our Jet meetings and that best practice to safety is applied. Your allegations are simply wrong.

The damage you have attempted to inflict upon the Jet Community is simply unacceptable. The VJAA committee have agreed that you pose a risk to our future concerns and in turn have decided that you are 'Persona non grata'.

Please be advised that until such time you receive any contravening information in writing from the VJAA, you are no longer allowed airside of any VJAA run jet event.

Because these events are run at Full Size airfields that we pay access rights to, they become our private event and not open to public.

If you come onto the airside of any of these events whether by yourself or as a guest of one of the legitimate attendees you will be deemed trespassing and be asked to leave, if you refuse then we will simply hand the matter over to the authorities.

Shane Bartlett
Secretary
VJAA

shut and let Tim Nolan's team do the job they volunteered to do. Flying a model aircraft from within your own property not above 400 feet and not within thirty metres of someone not associated with flying operation is your right. Flying over someone else's land or above 400 feet becomes a privilege. With conditions. Low skilled pilots with a 1kg Fun Cub

requires forty acres. Two hundred acres is needed for a low time pilot to keep a 350 kph 20 kg jet within the boundaries.

I have no idea what is coming as MAAA rewrites its MOPs but completing my commercial RePL gives me possible insight into what the regulator might be considering. Based on previous experience huffing and puffing by Jet

Jocks on social media about impending changes to MOPs should be ignored.

Unfortunately not following proper process created a blight on Kevin Dodd's good work as Secretary. His decision to override the pilot selection criteria and allowing Shane Bartlett to fly a jet Sandown 2016 was a bad one. It pissed off the qualified pilots for one

thing. I supplied phone numbers of the other jet flyers for MAAA President Neil Tank to contact for their view if Bartlett was up to the required standard.

Ultimately Dodd's decision to ignore the advice so one of his mates could fly resulted in onboard video footage busting the thirty metre line after take off and over flying houses posted on You Tube the next day.

Yet one more embarrassment in front of the aviation and general community. I was thinking to disable his model with a powder fire extinguisher and cop the bill. Blocking the runway to prevent Bartlett taking off was easier but in the end it was not my problem.

Offering younger flyers experiences afforded to me by my Dad was Sandown. A big picture event to grow the hobby. Bigger event than NSW or Queensland. One of my own personal goals was to use that event to drive people to an air race meeting in Melbourne the following month.

In 2019 I handed the keys for the Sandown to Keith Quigg who took it on with gusto. Shops and importers still keen to support the event



My NSW versus Victoria theme never happened

his ten grand proposal was stifled by VMAA. November deadline looming and no decision in sight Keith gave up and quit. Turning up at Avalon and Sandown each year to wave the VMAA there's no denying Reeve Marsh's dedication. Spending time with Reeve at Train and Hobby Show meetings demonstrated to me he does not have the negotiating skills or understanding of the radio control segment for MAAA President. RC is the majority which pays the bills and an avid free flight and control lineer negotiating with the regulator would not be in our best interest.

Nor is accumulating large piles of cash in bank accounts for a rainy

day. Four one hour trips in the car to support VMAA exhibit at Avalon Airhsow. Talked my way in without a pass using the Spitfire. Treasurer Arthur Bablis handed me \$25 for lunch money and commented something along the lines he was doing me a favour because protecting members money so they get no complaints was the go. Give me a break. Three hundred grand in the coffers and it won't spend ten on Sandown. Member complaints is the same line Old Fokkers at PDARCS use when they don't want to do something. Where's the evidence? Who did they ask? If a model club with twenty grand in the bank does

SUGGESTIONS to REVAMP the 2023 VMAA TROPHY

1. The event was designed to promote interclub competition. It was never envisaged to promote aeromodelling to the general public.

2. To encourage as many clubs as possible categories should reflect a mixture of competitive fun flying tasks. Scored by way of counting or a stop watch.

3. With a few hundred grand in the bank the VMAA does not require sponsorship by selling the naming rights. Promoting one brand will alienate a certain percentage of modellers.

4. \$1000 is not a substantial prize today. Selling sponsorship for individual categories would work. If I were selling the concept I would make \$250 Ampol Fuel Vouchers available for country clubs to enter and attend.

5. Tradition has its place. Leave the name alone.

6. Modellers are a pretty resourceful bunch. Set a simple set of rules that can be easily policed for each event then let ingenuity run its course. Built, ARF, Glo, Petrol or EP in Aeros, Scale and Heli? Leave it to them.

7. Specialisation of traditional FAI categories makes it too hard and too

AEROBATICS A



Biplane*

* Sport or scale no F3a style, flown to a suitable Classic Pattern manoeuvres



or a Twin.

CONTROL LINE



Junior Entry. Two flights. Judged by model coming to rest closest to the spot

AEROBATICS B



3 Channel radio - elevator - throttle

AEROBATICS C

Short Routine to music

SCALE VFSAA Flying Only Rules

GLIDER VARMS ALS Rules

HELICOPTER
Ask two Helicopter Clubs for suggestions

FPV DRONE
Ask DRONE CLUBS for suggestions

FREE FLIGHT



Maximum wingspan 24" Best of two simple hand launch chuck glider timed flights.

expensive for many clubs to be competitive. From a personal perspective this event is not as satisfying for competitors from those disciplines. They enjoy a better experience at their own SIG's State Titles. It also offers competition modellers a way to put back into the

hobby at local club level
8. These suggestions are not dumbing it down rather looking back at what previously worked or would work at club level today. There is a lot of expertise in country clubs. Most cannot field a full team but those who choose six categories

can still be competitive. Anyone who attended a Nationals in the 70s would have witnessed control line and free flight. My favourites were Indoor Rubber and Wakefield, Team Race, Speed and of course Combat.

Stephen Green



Don't bullshit a Bullshitter

not promote itself and needs a new mower make it buy one. Put more meaningful money into promotion. Why VMAA voted in the affirmative for the no confidence in MAAA leadership would be good to know as well. A rhetorical question really it seems executive bullshitted committee members by not involving them. Were they consulted? I've asked around. Will that be reported in the minutes? Not likely.

Successfully selling the concept of model plane displays to the Australian Grand Prix Corporation and the owners of Calder, Winton, Phillip Island and Sandown motor racing circuits was done with a flying demo. The sponsor was happy to pay three grand for my air displays at those motorsport events. Which paid my rent once a month and gave me a pretty good feel for what public acceptance of model plane flying is about.

At a National level, for yonks I've been thinking about a proposal to Airshows Downunder to get RC flying back into the program. Flying off that runway is a peace of piss. Volunteering to become involved with Avalon again won't happen if the static exhibit remains the same. It's a cheap and tired old look. I'm not on my own with that view either.

As far as passing on skills to promote the hobby I have done my bit. RCM News gave me a national voice and matters of such ilk were represented impartially to the best of my ability. Before publishing the MAAA Duds Rural Communities piece (Page 79) a journalist was asked if she thought it was objective.

Victoria's aeromodelling community benefited when a businessman used to writing million



Futaba Pilot Link, twin RX and differential wheel brakes

dollar checks was at the helm. We now have four State Fields. A number of clubs also own fields here as well. Hopefully NSW can get another state field North of Sydney. Hopefully the noddies running Hawkesbury will get be put back in their place soon by it members. The late Bob Carpenter must be turning in his grave. Bob understood what promoting was about.

The number of forums on RC Groups Australia forums shows how much activity has reduced in the past decade. RC Groups Australia is down to one page. I don't see anyone park flying these days either. Will renewals will fund model club overheads two decades time? A doubling or tripling of fees seems inevitable.

F 1 Air Racing Inc

At age sixty four and before I get too old I just want compete against top competitors in a race meeting that is worth winning. Putting the hand out for sponsorship from the hobby trade won't happen until we have something worth sponsoring so the air racing club has to start by paying its own way.

Generating funds from spectators at the gate is the only way I see it will prosper. 1997 Yarra Valley Air Races charged \$10 per adult children free. It took ten grand at the gate. Vic State Field Melbourne and Vic State Field Eastern have been booked. This club is how I intend putting back into aeromodelling. Putting the past aside I took a deep breath and registered it through VMAA.

Shooting the Messenger

It's really hard to get an event going and so easy to have it torn down.

My credentials will never be good enough for VMAA. Getting bagged each time my name is mentioned continues. A hangover from previous incumbents who have continued to hold back change at Burley Field. Sandown too. Mike Close's unilateral change to Display Permit obligations in 2012 is what led to the creation of AMAS. Neil Tank saw the value in main stream media promotion. That that costs money. Now everyone is second guessing decisions. Tim Nolan inherited the problem of ageing demographics and cut costs accordingly.

In memory of the late Peter Bons raising the issue of ACMA Compliance will probably put me back into the trouble maker category again. An article in Wingspan would be timely but unlikely. I bought it up here because this goes on at club fields every day and people look the other way.

When I hear people bagging me or my Father, whether that be at club, state or local level, I ask myself this. What have these people ever achieved? If you are on a committee and don't like how business is conducted say something. Have your say. Don't ask me to do the bidding anymore. Reporting issues raised in these final few pages is no longer my problem. RCM News magazine is over and out. Done and dusted.

Glider Towing

One thing I've longed to do is spend a weekend towing gliders. BADMAC has one on the Australia day weekend and the Cassutt is getting a hundred hourly done and a few gadgets added.

SJG. AUS 5932.

Futaba Pro Shop



He who has the most toys wins?



Appreciated by the hobby trade of course but as I see it that should read “He who sells the most wins.”

Friendly competition between mates by way of banter fuels this fire. Mine’s bigger than yours or look what I’ve got plays out right across the country at flying fields and garages (aka hangars) every day. Back to the question though. How many is too many? Geared up in flying condition I have seventeen. One of my mates has fifty, ready to go. A good dozen of those are in the 25 kg category. He can fly them too. Dollar wise I cannot compete at that level and another consideration is how much real estate is required to hangar them. Transporting too.

With three build projects still to complete I don’t want any more. I cannot fit them in. This is why I stay out of motorcycle shops. And music shops too

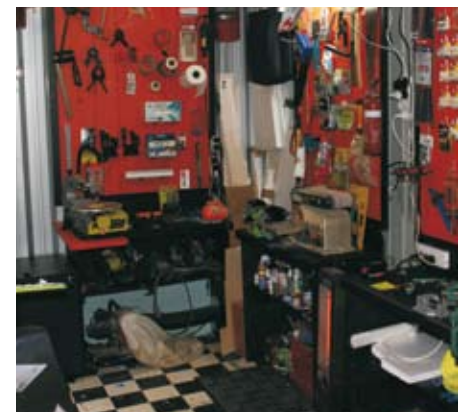
I live in a one bedroom flat eight kilometres from the CBD. Models are hangared in a car size storage unit at Kennards. Workshop sorted nicely until I put in a wall of Futaba gear. Now I have to be very careful moving models around. Twenty four hour security what’s good about this arrangement is I can stuff around late into the night or early morning and not disturb the neighbours.

Firing up the Dremel makes enough noise to wake the dead but I’ve never had a complaint from the Funeral Directors next door. Should a project turn into a six can job I can leave the car or motorbike and walk six hundred metres back home.

Monitoring battery conditions aside another consideration with so many models is maintenance. Remembering how to fly each type plus which switches do what becomes a

challenge across multiple types. Size is another consideration.

Even if I could afford the really big stuff needing a team of people to put a model together does not interest me in the slightest. Everything in my hangar is a single pilot operation. Transported, assembled and flown by myself.



Small workshop