



THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 263

Produced by the Victorian Control Line Advisory Committee



May 2021

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PRODUCTION SPECIFICATIONS

Please send any submissions for publication by CD/memory storage device or use Email.

Contest results should be tab delimited, i.e. use a single tab between each column of results, if submitted by disk or email. This makes formatting much easier on the editor.



COMING EVENTS



KMAC will not have an event calendar as such this year. The club will still operate to the pattern of "last Sunday" in the month being the regular club day, but it will not have any formal contest/events scheduled. The Calendar below is of course dependant on whatever Covid health warnings may be implemented during the year.

VICTORIAN CONTROL LINE CONTEST CALENDAR 2021

DATE	EVENT	CLUB
May 9	Combined Speed , Coreflute Combat.	CLAMF
June 13	Classic FAI , Vintage A, ½ A Combat.	CLAMF
Jul 11	Combined Speed , Classic Stunt.	CLAMF
Aug 8	Carrier Deck, 27 Goodyear.	CLAMF
Aug 9-14	FAI F2 World Championships.	Poland
Sep 12	Combined Speed , Vintage Combat.	CLAMF
Oct 2-4	NSW State Champs. Racing and speed.	Albury
Oct 17	Corflute Combat, F2B & Classic Stunt.	CLAMF
Nov 14	Combined Speed , Warbird Stunt and Nobler Stunt.	CLAMF
Dec 12	Vintage A, Classic B, Classic FAI .	CLAMF

Events will be flown in order of printing. Events in **Bold type** will be flown over hard surface.

CLAMF Frankston Flying Field, Old Wells Rd, Seaford (Melway 97J10), GPS -38.086777,145.148009
10.00am start

Contact :- Secretary, H. Bailey (03) 5941 5978
Email :- clamf@ozemail.com.au
Web site :- <http://clamf.aerosports.net.au>

KMAC Stud Rd. Knoxfield
(opposite Caribbean Gardens) (Melway 72 K9) 10.00am start
Contact: President:- Reeve Marsh 0405 001 008
Email:- knoxmacvic@gmail.com
Web site :- <https://sites.google.com/view/knox-model-aircraft-club/home>

CLAG has monthly fly-ins at the Moe Race Track every first Sunday of the month.
Contact :- Reeve Marsh 0405 001 008



COMING EVENTS



C.L.A.S. CONTEST CALENDAR 2021

DATE	EVENT	CLUB
May 2	Classic Stunt.	SSME
May 23	F2B Aerobatics.	SSME
Jun 12-14	NSW STATE CHAMPIONSHIPS. Aerobatics and Combat .	CLAS
Jul 4	KMFC AGM.	KMFC
Jul 7-14?	MAAA West Wyalong Nationals. Control Line and Free Flight. Details TBA	
Jul 25	F2B Aerobatics.	KMFC
Aug 8	Peacemaker Day.	KMFC
Aug 15	Classic Stunt.	SAT
Aug 29	F2B Aerobatics.	Doonside
Sep 12	Slow and Vintage Combat.	KMFC
Sept 18-19	Classic B Team Racing and Fun Flying.	Rocky Rally
Sept 26	Gordon Burford Day.	KMFC
Oct 2-4	NSW STATE CHAMPIONSHIPS. Racing and Speed CLAS NSW at Twin Cities Albury	
Oct 17	F2B Aerobatics.	SAT
Oct 31	Classic Stunt.	Doonside
Nov 7	Festival of Speed.	KMFC
Nov 14	F2B Aerobatics	SSME
Nov 28	KMFC Christmas Party and Fun Fly.	KMFC.
Dec 5	F2B Aerobatics.	Doonside
KMFC -	(Ku-ring-gai Model Flying Club) - St. Ives Showground, Mona Vale Rd, St. Ives.	
SAT-	(Sydney Aeromodelling Team) - "Duck Pond", Ashford Road, Milperra.	
SSME -	(Sydney Society of Model Engineers) - Model Park, Luddenham Road, Luddenham.	
DOONSID-	Baseball diamond, Whalan Reserve.	

CLASII IPSWICH QUEENSLAND CALANDER 2021

May 1-2	Qld State Champs, All Combat weekend F2D Combat, Open Combat, Vintage Combat, 2.5 Slow Combat.
Sep 25-26	QLD State Champs, All grass Racing Weekend 2.5 Simple Rat, Vintage A, Classic B, 27 Goodyear, Classic FAI, 21 Bendix.
Nov 6	27 Goodyear, Classic B
Dec 11	Christmas Breakup, Vintage Combat.

Editors note:- I was saddened to hear that the hard fly-ing surface at Logan has been bulldozed for develop-ment of the water treatment facility.

To tune a model aeroplane engine. (2.5cc in consideration here)

By Matt Korhonen

Continued from last month.

Ok, did I successfully confuse everyone?

It might be time to try and expand and unconfuse.

Induction

Let's talk about the shaft timing, and specifically when the shaft opens. Also referred to as After Bottom Dead Centre or ABDC. I already mentioned that zero is the piston at the bottom of its stroke. So try to imagine 360 degrees and we are starting with the piston at the bottom.

As the shaft rotates to start the piston in its upward compression stroke vacuum is created until the hole in the crank shaft meets up with the hole in the crankcase (Carburettor, Venturi). The point at which the opening occurs is? Degrees ABDC. The creation of that vacuum can be called drag or resistance. Think of it along the lines of applying the brakes on your car as you drive. The more brake you apply the slower you go, and the same for creating vacuum. The more you have the greater the braking effect on the motor. Obviously the vacuum pressure can't be compared to the effect of compressing the fuel air mix, but neither can it be ignored because it exists and effects the motor.

So the longer you delay the opening of the induction the greater the vacuum and the more braking effect you have. This can be a really good thing if you are looking for a slow running motor and a bad thing if you're looking for high RPM. Now it can be really hard to imagine the effect when slowly turning a motor over in your hand, but try to remember that piston velocity will change things. So the faster the motor runs, the greater the effect. So a later opening induction can be really good for controlling a motors tendency to rev out, making for a stable running motor. (Like a stunt motor), also the later opening of the induction will help RC motors that need a stable and reliable idle.

We don't want to slow down a motor do we? The first thing you need to know is your induction timing before you think about doing anything. Most people buy a 360 degree wheel and make a hole in the middle of it so that it fits where the prop goes. Then you need a pointer (fixed) so we can zero the degree wheel. I found the easiest way was a bit of fine paper, just put it in the exhaust port and rock the piston and equalise the read out for the exhaust timing. When you rock the motor both ways from bottom dead centre and you get the same measure (piston hits the top of the exhaust port – liner) you have zeroed your degree wheel.

I like to shine a flashlight from the back of the case down the shaft when I time my opening and I just look for the light when turning the crank over to time the opening. Now we do this to:-

A) Know factually what the induction timing is.

B) Check for silly induction timing (Errors)

C)? A and B do it for me

Once you know what your induction timing is you can decide if it's good enough or if it requires adjustment. There are two ways to adjust the induction timing.

A) You can remove material from the crank shaft – If you have a meaty crank then you should be fine and there might even be enough meat for some voodoo!

B) Remove material from the crankcase – This might be the only sensible option for older engines with smaller more fragile crank shafts.

Whichever path you chose, remember to take about half the material you think you should remove. It's so easy to grind stuff away, but once it's gone can you put it back? Softly softly!

Remember what I said earlier. Open too early and your starts may suffer, and if you need low RPM reliability your induction time could be even more critical. Those using electric starters will have higher piston velocity than possibly those trying to hand start (flick). So if you go too far you could be doing yourself a serious disservice. Any event that requires restarting the motor may require serious consideration as to when to open the induction, especially if that motor solely relies on suction feed (non pressurised fuel system).

So to refresh. The slower the motor runs for any given induction timing, the lower the vacuum pressure to draw in the fuel air mix. The faster the motor runs the greater the vacuum pressure to draw in the fuel air mix for any given induction timing. So depending on your motors operating RPM range (piston velocity) and the where you want you motor to operate, you may or may not have some room for adjustment. Just remember, adjustments can always be made, but will they help or hinder? Sometimes it's important to know when not to change something.

Induction Timing – When to close the induction ?

The hole in the crankshaft does two things (remember). It times the creation of vacuum to draw air / fuel into the engine. It also times the compression of the fuel air mix in the crankcase so it can be forced into the combustion chamber. The earlier you close the induction the more compression you create for the fuel air to be forced into the combustion chamber. The more compression, the more en-

ergy taken from the power stroke. Again, think about it like applying the brakes on your car. The more brake you apply, the more you slow down.

Now is the time to think about that 360 degree wheel again. Imagine the piston at Top Dead Centre or TDC. As the piston starts its combustion / power stroke, it begins to push down lowering the volume in the crankcase. Let that sink in for a moment. Remembering that the induction is still open, fuel air is going to want to move out of that opening, but it takes time for momentum to change direction, and what you want is for that induction to close before your fuel / air mix has the opportunity to flow in the wrong direction and blow out of the venturi (carburettor for some) which is a common occurrence with high timed engines run slow. Remembering that everything takes energy that occurs inside the engine. This is why it is important to time your engine for the RPM range you plan on running. There is little point putting timing in your engine meant for 30,000 rpm if you plan on running at 15,000 rpm.

In the instance of closing the induction RPM is your friend. The faster you run the motor the later you can close the induction without causing other power robbing issues. It can be a very fine line you have to walk and if you plan on making changes and I would highly recommend doing a little at a time, testing the results. If you make a change and nothing happens, then obviously doing more is a waste of time as something else is the limiting factor.

Now QC issues aside ..

Sports motors might close the induction anywhere from 30 degrees After TDC (ATDC) to maybe 50 deg ATDC. Your more high performance engines might be timed anywhere from 50 deg ATDC to 60 or 65 ATDC depending on variables such as application (RPM range). What's most important is to actually know where your induction opens and closes. If you plan on running at peak RPM and don't need any low RPM, then the closing time is less critical. Always do a little at a time and test the result, mods that return nothing simply mean you doing mods in the wrong place.

Exhaust Timing

The back of the motor, or the part where the piston goes up and down. Here we can do two things, keep it simple or make things slide rule complicated. The piston completes a lot of functions in it's travels up and down the bore of the cylinder.

Up travel :

Compressing the fuel air mixture as well as drawing in a fresh load of fuel and air VIA the crankshaft or induction system. This process absorbs energy much along the lines of applying the brakes on a car. The more compression you have and the more vacuum you have, then the more braking effect is produced.

Down travel :

Or the power stroke. Besides being pushed down by the burning fuel air mix the piston is compressing the fuel air mix for the next cycle in the process of a running engine. Again this compression takes energy, much like applying the brakes in your car. The more you compress the fuel air mix in the crankcase, the more braking effect.

Keep It simple :

Raising the exhaust timing gives you less compression and less power stroke, so depending on what your current exhaust timing is and the planned operating RPM of your engine, you may want to or not, make adjustment. It is to some extent a trade off and very dependent on the goal you wish to achieve. Remember piston velocity! The faster the motor runs will compensate the loss of compression if you raise the exhaust timing. There is little point changing the exhaust timing unless there is some specific goal or QC issue and the timing is out. (Many old engines) I can't remember how many old diesel engines had 180 degrees of exhaust timing (pipe timed), but certainly in such a case correction is warranted and one would want to lower the timing. (Anything lower would be better).

Generally, engines are timed around 140 degrees for sports motors up to 160 degrees for higher performance open exhaust motors. Anything outside these timings are usually specialised. I know that Team Race engine builders did experiment with lower timed engines (That fuel economy thing), but I think the horsepower race might have won over the fuel economy race.

Also experimentation with higher timed engines by those looking for even higher RPM numbers.

In the old days :

Back in say the 60's to early 70's there was one easy solution. Jack up the head to lower compression and throw more nitro-methane at the engine. The lower compression reduced the brake effect and the higher nitro fuel compensated for the lack of compression ratio . Problem with that was that in higher quantity Nitro no longer wants to remain in solution. If memory serves, problems began to creep in at or north of 50% nitro content. Back then in the USA 30% nitro fuel was considered sport fuel and many engines made in the USA had low compression and as a result are difficult to run on a straight methanol mix (if not almost impossible).

Lets make it slide rule complicated :

The piston travels up drawing fuel air into the engine as well compressing the fuel air mix in the combustion chamber. As the fuel ignites the piston begins its downward travel. As it does so the induction timing is closed and the fuel air mix in the crankcase begins to be compressed. As the piston moves down the volume in the crankcase becomes smaller. Then the exhaust port opens and the burning fuel air begins to be expelled. Now we come to the by pass timing or some times referred to as kick down. This can be 10 degrees or more.

The goal is to get the exhaust moving out of the engine before you spray a fresh charge into the engine. (This is all quite slide rule friendly). The longer you delay the transfer the more pressure builds in the crankcase. Remembering that the exhaust port is open now and the exhaust wants to get out more than push down on the piston.

General rule here is to leave it alone (by pass timing), unless you know that the mod works or you have deep pockets and lots of spare parts. Check out those 3.5cc car / buggy engines, they be seriously trick after the slide rule guys got to work.

A mod that works :

One of the easiest mods ever that was utilised in many early engines was Sub Piston Induction. Many early engines had small fragile crankshafts with very little induction. One way to feed the engine more air, was to open the engine to fresh air by allowing the piston skirt to clear the bottom of the exhaust port. Not a lot is required, because as soon as the skirt clears the exhaust vacuum will be lost. But in more modern higher performance engines it was considered a cheat. Especially in applications where pressurised fuel systems were not permitted. It was like going with a over sized venturi but not loosing any suction.

Another mod was done by Fox. He flowed the crankshaft. This entailed using aluminium Devcon. The shaft was partially filled and contoured so as to allow fuel air flow with less energy loss. I did this mod myself and it was worth around 1000 rpm with no other modifications. Only problem is the introduction of too many variables. Like how well will the Devcon hold? These motors were called Combat specials and only select people got them (Sponsored). The other thing was the back plate, on a Fox 15 BB the fuel air mix has to change direction several times on its way to the bye pass port. Fox also flowed the back plate, filling with Devcon and re grinding for a more direct travel path. (less energy loss)

Exhaust Mod :

An exhaust mod that gained some favour was the notch. A small cut in the upper side of the exhaust port. Essentially a small cut (raised) was made in the middle of the exhaust to delay the beginning of compression. So say you had a 140 degree exhaust, you put a small cut in the exhaust that say closed at 150 degrees. The aim here was to delay compression whilst trying to maintain the power stroke as long as possible, as the small cut would not allow the exhaust to escape suddenly ending the power stroke. On larger engines several problems cropped up, the main one being the creation of a hot spot. How much of a problem this would be with smaller engines?

Another easy mod was machining a washer that would fit between the crankcase and cylinder (top) that lifted the cylinder in the case. This effectively raised everything as well as lowered the compression ratio. This did need more nitro to be fed to the engine to compensate for the lower compression, but the power increase was relatively good. If memory serves this was a mod done to older low timed glow motors like the old Super Tigre 15. I did this mod myself, but at a time these motors had already become redundant.

Next month my topic will be about tuning with fuel.

2021 VMAA State Championships.



We got the absolute perfect weather window. The 2 days after were OK. But either side of Easter the contest would have been a write off.

Sometimes things are just meant to be.



After last years failure to hold the State Championships due to the Covid 19 lockdown, we Victorians took pleasure in welcoming our interstate visitors for a most enjoyable contest at the CLAMF and KMAC fields. Some contests had low entry numbers but all events were flown and completed.

Three new records were set in Combined Speed. The usual prize giving could not take place at the hotel due to covid restrictions but the catering provided at the CLAMF barn on Sunday evening was a great success with 25 people in attendance to feed on a great spread organised by our club ladies.

Contests started on Friday morning. Only three teams had models for F2C and Murray Wilson was acting as pilot for two of them so we could only run two up races and the Justic/Stein team flew a full quota of races plus some extras as a volunteer team. A final three up race was not possible so placings were determined from the heat times.

F2C Results

Team	Rd 1	Rd 2	Rd 3	Rd 4
Murray Wilson/Ron Lacey	<u>3:08.92</u>	3:14.08		
Murray Wilson/Mark Poschkens	3:18.97	<u>3:11.03</u>	3:12.41	
Richard Justic/Paul Stein	3:20.14	3:49.23	<u>3:16.90</u>	3:29.32



There were some elegant models ready to race, on display for **Classic FAI Team Race** and some close racing ensued. During the final race there was some model contact during a pitting incident between the teams of Owen/Owen and Nugent/Ellins which caused the Nugent/Ellins model to make ground contact causing undercarriage damage which put them out of the race. Michael and Robert Owen surprised themselves with the win as the model was making it's racing debut.

Classic FAI T/R Results

Team	Rd 1	Rd 2	Final
M. Owen/ R. Owen	4:49.81	4:18.10	8:47.91
P. Cameron/ R. Fitzgerald	4:04.04	DNS.	10:13.54
A. Nugent/ M. Ellins	4:20.27	4:10.71	DNF 103
M. Wilson/ N. Baker	4:56.49	4:26.55	
H. Bailey/ K. Hunting	64 laps.	4:28.54	
R. Justic/ K. Baddock	4:42.48	DNS	



A big thanks to Neil Baker for providing most of the photographs of the Vic State Champs.

“SPEED 2021 at VICTORIAN STATE CHAMPS “

Speed had a good entry again, good to see, both events had 11 entries, later reduced for various reasons.

FAI was run over 2 days, 2 rounds Friday and 2 on Saturday, with Combined Speed on Saturday morning.

Murray Wilson ended up on top just in front of Andrew Heath, Rob Fitzgerald has been going well lately but had trouble getting a good setting despite practicing and engine strip downs.

They all seemed to be slower than in practice.

Harry flew for the first time in ages due to having an operation, he unfortunately got into oscillations due to coming out of the dolly at a steep climb angle and clipped the ground, but fixed up for next day and had a good flight. Mark Poschkens flew Murrays Mk 3 Rossi model for some good flights and for first time in the pylon, he seemed to enjoy it. Also using a Rossi was Andrew Nugent flying my old Rossi asymmetric model powered by my original Mk 2 from early 70's, he did not fly Saturday due to health reasons.

John Walker had some good flights as well.

Richard Justic was the only non Profi user apart from the Rossi's, he used his Zalp and had more success.

He has also bought one of the new FORA F2A speed engines, it was test flown Friday evening and went OK once the head was lowered, it will be interesting to see what happens next as it would be good to get a new motor in the class.

I used my Transitrace timer and found it great, but had backup from usual timekeepers Ron Savage and Terry Dodds, just in case I stuffed up, thank you.

Robin Hiern



F2A Speed Results

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Flight 4	Fastest	Km/h	
1	M. Wilson	FAI	Profi	12.56	12.35		12.35	12.35	291.50	97.89%
2	A. Heath	FAI	Profi	13.53	12.61	12.45	12:46	12.45	289.16	97.11%
3	R. Fitzgerald	FAI	Profi			12.53		12.53	287.31	96.49%
4	J. Walker	FAI	Profi			12.75	14.32	12.75	282.35	94.82%
5	R. Justic	FAI	ZALP S15		12.89	13.14	13.34	12.89	279.29	93.79%
6	M. Ellins	FAI	Profi	13.02	13.02	13.03	13.18	13.02	276.50	92.86%
7	H. Bailey	FAI	Profi			14.43		14.43	249.48	83.78%
8	M. Poschkens	FAI	Rossi 15 FL mk 3	15.95	15.55	15.40	15.51	15.40	233.77	78.51%
9	A. Nugent	FAI	Rossi 15 FL	15.65	15.83			15.65	230.03	77.25%

COMBINED SPEED.

Combined Speed was held on Saturday morning in hot conditions.

Three Australian records were broken in the process, Murray Wilson re-broke his Class 3 .60 record, as well as breaking (just), the Class 5 .21 record. Unfortunately he was about an hour to late as I had already broken it by a larger margin.

I have been model testing lately but kept damaging props and a model due to dolly problems, it's a dolly I have used for 40 years, so I wrecked all my good props, also the changes I tried did not work, so I put the engine back to standard setup and it worked.

Harry Bailey flew his Class 5 for 2 consistent flights as did Ken Hunting with his OS 11 model in Class 1.

David Axon came and flew his Sport Jet, John Walker had his Jet as well but it would not start, I can relate to that. Andrew Nugent flew his NR 12 model and did same old speed, it's time to update it inside.

Mark Poschkens flew an old ST G21 /29 model on 2 lines, the only other .29 was Ric's Nelson model.

We had nearly a full range of MAAA events except Class 4.

I flew my Proto model but a broken NVA stopped that.

A good contest with no damaged models (well maybe a little bit to Greg Nelson's 12/A Proto) and it was Fun.

We now have a Full set of Aussie records so that when we go to the Nats it will be a fair contest, don't expect to find the records on the MAAA website, they are stuck back in 2017 when the first three 10% nitro records were set, that's despite numerous update requests.

They don't acknowledge the rest of the records, a pretty poor state of affairs.

However I am keeping track of records, we will do our own thing.

Robin

Combined Speed Results

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R. Hiern	Class 5	Novarossi 21	14.45	15.39		14.45	249.13	103.04%
2	M. Wilson	Class 3	OS 60 RV	11.14	10.68		10.68	271.24	101.08%
3	M. Wilson	Class 5	Novarossi 21	14.91	14.81		14.81	243.08	100.54%
4	G. Nelson	1/2 A Proto	THK .09	26.75			26.75	134.58	96.37%
5	R. Hiern	Proto	OS 30VG	28.21	N.E.L		28.21	205.38	94.97%
6	H. Bailey	Class 5	Novarossi 21	16.70	16.99		16.70	215.57	89.16%
7	A. Nugent	Class 1	Novarossi 12	18.75	18.82		18.75	192.00	82.99%
8	R. Justic	Class 2	Nelson .29	11.58			11.58	250.16	81.00%
9	D. Axon	S JET	Dyna	14.65	14.36		14.36	201.73	79.78%
10	K. Hunting	Class 1	OS 11	21.26	20.55		20.55	175.18	75.72%
11	M. Poschkens	Class 2	Super Tigre G21/29	14.34	13.77		13.77	210.37	68.12%



Greg Nelson's 1/2 A Proto model.



John Walker's pulse jet.

Vintage A Team Race numbers were reduced down to three teams when Paul Stein's "Dimpled Dumpling" had some shut off problems. Heats were dispensed with and it was straight into a final race. The first and second placed teams were racing "Olympian/R250" models and Nobby Baker had a good engine tune producing the fastest air-speed.

Vintage A Results

Team	Final
M. Wilson/ N. Baker	6:54.35
H. Bailey/ K. Hunting	7:23.39
M. Owen/ R. Owen	8:05.10

M. Owen/R. Owen M. Wilson/Neil Baker H. Bailey/K. Hunting



Vintage A teams.

Of the twelve **Vintage Combat** entries, five were from Victoria and the rest were interstate entries.

Vintage Combat Results

Entrant	Rd 1	Repechage	Rd 2	Rd 3	Rd 4
T. Caselli	L	W	W	W	W
G. Nelson	W	-	W	W	L
M. Wilson	W	-	W	L	W
R. Owen	W	-	W	L	L
L. Baird	L	W	W	L	
R. Phippen	W	-	L		
K. Maier	L	W	L		
N. Robertson	W	-	L		
M. Owen	W	-	L		
G. Whitbourne	L	L			
E. Nutter	L	L			
M. Stewart	L	L			



F2D results

Entrant	Rd 1	Rd 2	Rd 3	Rd 4	Rd 5	Rd 5	Rd 7
M. Wilson	W	W	W	L	W	W	W
R. Owen	W	W	W	W	B	L	L
M. Poschkens	W	W	L	W	L		
L. Baird	W	L	B	L			
A. Kobelt.	L	W	L				
G. Nelson	L	L					
R. Phippen	L	L					
M. Stewart	L	L					



Diesel 27 Goodyear was a very sporting event but it was also very competitive. Have a look at the times from the heats. Only four seconds separated the top four best times. In a sporting gesture, a couple of teams withdrew to allow junior Nathan Baddock to fly in the final race with father Keith. Hunting/Bailey had to stop racing as the engine mounting plate developed some serious metal fatigue.

27 Goodyear Results

Team	Rd 1	Rd 2	Final
P. Stein/R. Justic	DNF 75	<u>5:13.22</u>	11:13.81
N. Baddock/K. Baddock	6:20.32	5:38.29	11:59.73
K. Hunting/H. Bailey	6:27.92	<u>5:14.61</u>	DNF 59
R. Fitzgerald/G. Nelson	<u>5:13.62</u>	DNS	
R. Lacey/M. Wilson	<u>5:16.89</u>	5:54.00	
M. Owen/R. Owen	DNF 65	-	



Above:-
R. Phippen versus
M. Wilson.



Goodyear Results

Team	Rd 1	Rd2	Final
M. Wilson/M. Ellins	3:20.40.	DNS.	7:02.70
R. Justic/N. Baker	3:56.05.	DNS.	DNF 162
R. Fitzgerald/M. Poschkens	3:21.38.	DNS.	DNF 142
R. Owen/R. Justic	4:50.94.	4:30.42	
H. Bailey/ K. Hunting	DNF 52.	5:21.93	



1/2A Combat Results

Entrant	Rd1	Rd 2	Rd 3	Rd 4	Rd 5	Rd 6	Rd 7
M. Wilson	W	W	B	W	W	L	W
G. Nelson	W	W	W	L	B	W	L
N. Baddock	W	W	L	B	L		
R. Owen	L	L					
E. Nutter	L	L					
L. Baird	L	L					



Greg Nelson, Murray Wilson Nathan Baddock

Junior Rat Results	Rd 1	Rd 2	Rd2
N. Baddock	45 Laps	<u>59 Laps</u>	54 Laps
K. Baddock	54 laps	70 No Pit Stop	<u>56 Laps</u>

Victorian State Championships 2021 - Aerobatics events held at KMAC Sunday 4/4/2021

F2B Results	Model/Engine	Score
1st - Mark Ellins;	(Yatsenko New Classic, Retro 76)	Best flight 1052.00
2nd - David Nobes;	(Sukhoi profile, OS LA 46)	Best flight 823.50
3rd - Derek Pickard;	(Runaway, Stalker 61)	Best flight 657.00
4th - Peter Rowland;	(Nobler, OS 35)	Best flight 472.00

Classic Stunt	Model	Score
1st - Mark Ellins;	(Nobler)	Best flight 600.00
2nd - Andrew Nugent;	(Caprice)	Best flight 557.00
3rd - Derek Pickard;	(Nobler)	Best flight 447.50

Vintage Stunt	Model/Engine	Static Score	Best Flight	Total Event Score
1st - David Nobes;	Jamieson Special/Attwood 49	116,	259.50,	375.50
2nd - Greg Nelson;	Ringmaster Biplane/Oliver Tiger replica	95	111.00	206.00
3rd - Derek Pickard;	Nobler/Brodak 40	29	151.00	180.00
4th - Reeve Marsh;	Hearns Hobbies Demon/Enya 29	97	no flight score	



Pictured at KMAC's Easter Stunt State Titles is Derek Pickard at the controls of his Classic Nobler. The inside story is half way thru the flight his belt broke and he completed the pattern with his left hand in his pocket keeping up his trousers.



Sunday evening at the CLAMF barn.



For Sale

For Sale.

38µ (micron) Mylar laminating film (heat activated adhesive).

Suitable for C/L combat models, great for F/F models.

Even better with tissue doped over it for a 'vintage look'

This is very close to the 'Oz Cover' that was sold by Saturn Hobbies many years ago.

1m x 5m \$20 + postage at cost.

feraldoghunter@gmail.com

Danny Mz mob # 0477224751

Speed pans for sale. 2cc size (\$25) and 21 size. (\$30)

Also small amount of Nelson type T/R pans. (\$25)

All pans in the "as cast" state. Not finished.

Andrew Nugent. andrew.n5@bigpond.com

I am clearing out my shed and have complete models, ARF models, kits and engines for sale. Too many to mention here. They are mostly Stunt related.

All the relevant information can be found here:-

<https://sites.google.com/view/steves-stuff/home>

Regards Steve Vallve

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Taipan propellers in the following sizes available:

Flexible white nylon 7x6 \$2.20 each.

Small number of black (Glass Filled)

7x4 & 7x6 left @ \$2.50 each

9x6 Black GF \$3.00 each

10x4 Black GF \$3.50 each

10x6 Black GF \$3.50 each

+ letter post or parcel post rates depending on size, weight & quantity ordered.

Pure, first pressing Castor Oil:

Note: New price increase below due to a 20% price increase from my supplier effective 1/12/19

2.5 litre \$35 +3 kg satchel Auspost price

4.0 litre \$50 +5 kg satchel Auspost price

4.9 litre \$60 +5 kg satchel Auspost price

Pick up only 5lt castor oil price is \$60

Above prices inclusive of new container cost

**Premixed Diesel fuel in new 500 ml & 1 lt steel containers
\$22 & \$35 respectively**

I cannot post diesel fuel (i.e. dangerous goods) unless you can arrange with your own courier

PayPal "gift payments" accepted

Bank EFT deposits accepted.

Cash accepted.

PH Ken 0433 797 058 combtokid@hotmail.com

As some of you already know I have taken over the manufacturing of CL props for Supercool props.

Email me for any enquiries / orders

F2C, GY, Speed, Free Flight & other props available.

Contact Ian Thompson

iandthompson@msn.com mobile 0451085325

Be considerate with phone calls. I am in WA & there is a time difference from Eastern States.

U.S. Hard rock maple bearer wood, precision cut and machine sanded.

Cost \$4.50 each plus postage. All lengths 12"

Sizes: 3/8"x3/8"

3/8"x1/2"

1/2"x1/2"

Also, I now have a stock of 3/16" sq. and 1/4"sq rock maple spars.

All spars are precision sanded with 150 grit. \$4 each plus postage.

TCA Italian glow plugs in Australia.

I have for sale a large range of TCA glow plugs.

TCA supply Luca Grossi the current F2A European champion.

There are std type 1/4x32 thread, Nelson style tapered seat with flat coils and the "turbo style" tapered seat.

Italian made TCA Nelson type combat plugs arrived for those that might be interested, \$8 each plus postage.

email: atheath296@gmail.com

I can now produce wings and tailplanes that are shaped on a Computer Numerically Controlled (CNC) router and can be any planform and shaped with any section although I have my favourites. The finish and accuracy of these products has to be seen to be believed.

They have laminated leading edge and reinforced front panel on the outboard wing for catching.

Internal control grooves and bellcrank assembly are also part of the package. They are ready for glassing as supplied. A shut-off actuator can be supplied as part of bellcrank assembly if required.

I can also supply spruce for leading/trailing edge etc. cut to any section size.

I can be contacted via Facebook or

Mobile 0404205562

Ray Harvey

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WANTED

I am chasing a Gillott Rossi, MK2 or MK3 for Goodyear T/R, not worried about condition as long as it is complete.

Email me at weapon61@yahoo.com.au

Cheers Neil Baker

Wanted.

ST46 needle valve assembly and a tongue muffler or standard muffler.

Kim Laughton Mob Tel:- 0403 327 311

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