

THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 91



Produced by the Victorian Control Line Advisory Committee

August 2005
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**Copy Deadline for next issue is:
Wednesday 17th Aug 2005
PRODUCTION SPECIFICATIONS**

Please remember when submitting copy that if you have access to a PC, or suitable typewriter you can save me retyping by giving me your items pretyped, and please use a good black ribbon for best reproduction.

Best of all is to send it on a 3.5" disk as a Windows Write, Word for Windows, or as an ASCII TEXT FILE or use Email

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

Email address:- acln@optusnet.com.au



COMING EVENTS



COMING EVENTS



VICTORIAN CONTROL LINE CONTEST CALENDAR 2005

AUG 7	Simple Rat Race (Whipping permitted).	SMAC
AUG 7	C.L.A.G. Country Flying Day "Diesel Day"	Knox
AUG 14	FAI Team race, 2.5cc Rat race, 1/2 A Combat.	CLAMF
AUG 28	Classic Stunt, Vintage "A" Team race, Combined Speed.	KMAC
SEPT 11	Classic Stunt, Vintage Stunt, Aust "A" Team race, Classic "B" Team race, Simple Combat. Combined Speed	Moe
SEPT 18	FAI & Combined Speed, Simple Rat race, 1/2 A Team race.	CLAMF
SEPT 25	FAI, Novice & Jnr Aerobatics, (Stuntmaster Trophy) Classic Stunt, Bendix,	KMAC
OCT 2	C.L.A.G. Country Flying Day	Moe
NOV 6	C.L.A.G. Country Flying Day Triathlon with SMAC	Knox
DEC 4	C.L.A.G. Country Flying Day	Traralgon

Events will be flown in order of printing.

Events in **Bold type** will be flown over hard surface

CLAMF Frankston Flying Field, Wells Rd, Seaford (Melway 97J10),
10.30am start

Contact :- G. Wilson (03) 9786 8153,

Events conducted by CLAMF at the KMAC Field (Melway 72 K9)
10.00am start.

Contact :- H. Bailey (03) 9543 2259

KMAC Stud Rd. Knoxfield (opposite Caribbean Gardens)
(Melway 72 K9) 10.00am start

Contact :- T. Matthews (03) 9560 0668.

SMAC Contact :- Reeve Marsh (03) 9776 5949

CLAG Contact :- Graham Keene (03) 51924485

Details of venues can be found on web site www.clagonline.org.au/home.htm

NOTE - All SMAC events to be held at KMAC flying field.
All events at KMAC except Aerobatic events to be run by
CLAMF, DAC & SMAC members

The third Sunday of each month is the regular
"**Brimbank Club Day**"

C.L.A.S. (NEW SOUTH WALES)

Contest Calendar 2005

DATE	CLUB	EVENT
Sun Aug 7	KMFC	F2B Aerobatics
Sat Aug 13	KMFC	CLUB STUNT (Novice)
Sun Aug 28	SSME	Slow Combat (Bonus points for WW2 Style model).
Sep 10-11th	MAAQ. CLASII Ipswich	
	MAAQ C/L Scale State Championships. J.Taylor	0733927679
Sun Sep 11	KMFC	"Classic Stunt, Vintage Stunt, Simple Rat, Slow Combat, SWAP MEET" CLUB STUNT (Novice)
Sat Sep 24	KMFC	F2B Aerobatics
Sun Sep 25	SSME	
Oct 1-3rd.	MDMAS as host club.	
	NSW C/L STATE CHAMPIONSHIPS	
Sat Oct 15	REMAC	Spring Vintage Stunt
Sun Oct 17	IMAC (Berkeley)	F2B Aerobatics
Sun Oct 16	KMFC	JUNIORS' DAY
Sat Oct 29	SSME	"Vintage 1/2 A, Vint B, Goodyear T/R, Combined Speed"
Sun Oct 30	SSME	"Phantom, Vintage A, Bendix T/R"
Sat Nov 5	KMFC	CLUB STUNT (Novice)
Sun Nov 6	SAT (Kelso Park)	F2B Aerobatics
Sun Nov 13	KMFC	"Vintage T/R, 1/2 A, A and B. "
Sun Nov 20	NACA at Gateshead H.S.	ClassicStunt&Cardinal Stunt.(I.Smith Ph:024975 2292)
Sun Nov 27	KMFC	1.6 and Slow Combat
Sun Dec 4	Doonside (Kelso Park)	F2B Aerobatics
Sun Dec 11	KMFC	Christmas Party and Fun Fly
"Doonside. Kelso Park North, Panania. "		
"IMAC (Illawarra Model Flying Club)- Flying site @Hooka Ck Road, Berkeley. NSW"		
"KMFC (Ku-ring-gai Model Flying Club)- St. Ives Showground, Mona Vale Rd, St. Ives. NSW"		
"NACA (Northern Area Contest Aeromodellers)-Gateshead H.S., Pacific Hwy, Gateshead. NSW."		
"REMAC (Ryde Epping Model Aero Club)-Peter Board HS, Wicks Rd, North Ryde. NSW."		
"SAT (Sydney Aeromodelling Team)-Kelso Park North, Henry Lawson Dr. Panania. NSW"		
"SSME (Sydney Society of Model Engineers)- Model Park, Luddenham Rd, Luddenham. NSW. "		
"WMFC (Werrington)-Entrance to flying site @cnr. Landers & Walker Sts, Werrington. NSW."		
"MDMAS (Muswellbrook District Model Aero Sports Inc.) Mitchell Hill Field, New England Hwy, Muswellbrook"		
"COMSOA (City of Maitland Society of Aeromodellers) Raymond Terrace Rd, Metford. NSW. "		

CLAG SPEED COMP.....

A COMBINED SPEED COMP HAS BEEN PUT ON THE
EVENTS AT MOE FOR THE ANNUAL COMP DAY..
IT WILL BE A FUN SPEED COMP TO TRY TO
ENCOURAGE THE MANY PEOPLE THAT HAVE SPEED
MODELS TO GET THEM OUT AND HAVE SOME "FUN"....
ANY SORT OF MODEL CAN BE FLOWN WE WILL FIND
A CATOGORY FOR IT ,{RACERS,COMBAT, ETC}
WE WOULD LIKE TO SEE SOME VINTAGE TYPE
MODELS.....SO DUST DOWN YOUR MODELS AND
GET INTO THE SPIRIT.....
I WILL FLY SOME OF MY MODELS BUT MY RESULTS
WON'T COUNT.
ROBIN H.

CLASII CALENDAR 2005

CLASII FIELD HAS NOW REOPENED AND EVENTS WILL BE HELD AS SCHEDULED. At this point in time the only competition scheduled will be the **Queensland C/L Scale Championships to be held at one of our two fields on September 10/11.** Further details will be advised later in year. **Please note Club flying days have been changed to SATURDAYS.**

Regardless of what day it is **flying is only permitted between 9am and 5pm** (i/c. engines are not to be run before or after these times) and in accordance with **MAAA, MAAQ and Club policy**, permission must be sought from club executives for **visitors** to use facilities on days other than **SATURDAYS**. Mufflers are to be used wherever possible. **Field entrance gate will be locked except for designated flying times.**

Aside from **published competition days**, after more than two casual visits, FAI licence holders would be expected to apply for Associate membership of Clasii. All members and visitors to the field will be required to sign an attendance book. This action assists in meeting insurance requirements and would be of great help in the event of a claim being made. Visitors to the field **MUST** show their current FAI Card. **NO CARD NO FLY** **Intending members** will be allowed two visits (training days) before being requested to apply for membership. Applications will be then be assessed by Committee and applicant advised of outcome before any fees are payable.

CLUB AND ASSOCIATE MEMBERS WILL BE ABLE TO ACCESS THE FIELD 7 DAYS PER WEEK BETWEEN 9am and 5pm

Subscribers to ACLN can have the latest edition of the newsletter (in colour) emailed to them as a PDF file at no extra charge.

Simply send a request for this service to the editors' email address which is on the front page.

The views and opinions expressed in ACLN do not necessarily reflect those of the Editor or Committees of Clubs or of the members of the Club represented in ACLN but are those of the respective authors.

Any comments, queries or complaints with respect to any article in this publication should be addressed to the author of the article.

The Editor and Committee of Clubs accept no responsibility or liability for any loss or damage incurred or suffered by anyone as a result of this publication or in reliance upon or as a result of acting upon anything contained in this publication.

The ACLN Editor obtains a large number of photographs of Control Line models and related matters whilst he goes about his editing duties. Many of these pictures do not get to be published due to space limitations. All is not lost for those of you eager to view these pictures as the Vic Stunt webmaster has set up a section in his webpages to display them.

The initial set of pictures are from this years Vic State Championships and the Richmond Nationals.

Go to <http://www.vicstunt.com> Refer, for the State pics, to the "Clubs section - CLAC Page" and for the Nats pics, to the "Aerobatics/Nationals section - Other Photos Page". All competition classes are catered for so have a look.

You might be there.

TOURNAMENT

"WINGS OF PORTUGAL" ÉVORA 2005

I'm pleased to inform that on the 9, 10 and 11 of September will take place the international tournament "Wings of Portugal" Évora 2005 in C/L and R/C.

The site is the local aerodrome of Évora a wonderful roman town, 70 miles east of Lisbon.

We have a lot of classes in C/L, Vintage Speed and Team Racing, Goodyear, F2C National, Fox and Quickie Rat, Clown Racing, Old Time Stunt, F2B etc.

In R/C we fly Old Time Powered and F3J National.

As usual I offer to all foreign participants, accomodation in a bed and breakfast basis, a banquet and a bus from the airport to the site.

You are very welcomed to enjoy our hospitality, lots of sun, good food and fun.

More information: www.clportugal.com

Julio Isidro
President of SAM Portugal 74

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The Cyclon PC-6 Combat Engine Tested

Our first exposure to Alexander Kalmykov's combat engines was at the 1996 World Championships where the British team was putting a bunch of very unusual engines through their paces. Their design was very much out of the rut and while showing great promise, that model did not reach quantity production. When the Cyclon PC engine subsequently made it onto the market, we were surprised to see an entirely different design with yet more novel features. Clearly this designer was not tied to conventional style! It was not long before Cyclon engines gained their share of competition successes.

The PC's design has evolved over a number of models, almost one new Mark per year, with the PC-7 being the latest offering for the forthcoming northern hemisphere combat season. We have not had the opportunity to examine one of these engines, but offer this report of the closely related PC-6M. The M relates to the rear crankshaft bearing of the conventional type, rather than the more sophisticated S version with the special crankshaft itself serving the purpose of the inner bearing race. There is almost nothing published about modern combat engine performance aside from a few quoted airspeeds when flying level. We thought it would be interesting to estimate and characterise the Cyclon's power and torque characteristics.



The PC-6 presents a neat outside appearance with crankcase finning now restricted to the cylinder. However a useful stiffening band remains around the base of the crankcase, approximately in line with the crankpin. The carburettor intake boss is reminiscent of the Super Tigre G-15 in that it is of rectangular shape and offset with respect to the cylinder axis. The Cyclon's is however offset to the opposite side and we suspect the aim is to put the crankshaft induction port where it aids rather than hinders overall dynamic balance. The Cyclon uses two superbly contoured mirror image transfer ports, covering almost the entire cylinder wall not devoted to the rearward facing exhaust port. Therefore the Cyclon uses the porting arrangement first envisaged by Dr. Schnürle as opposed to the Super Tigre's baffle-less loop porting or the three-port arrangement more commonly ascribed to the good Doctor.

In other respects, the Cyclon follows current high-performance engine practice and is built to the very highest standards. Checked weight was 128g bare or 156g with muffler and bearers. This is in line with other F2D engines and the latest bearers are significantly stronger than before. Alternative bearers are available that allow for offset cylinder axis, which of course eliminates or minimises the leading edge cutout in models. Bearer spacing is 27mm.

Into it

The defining feature of modern F2D engines is that they need almost no running in. Fit and finish of parts is of a high order and modern Russian piston alloys have largely eliminated the annoying distortions that older, less homogenous materials experienced before they eventually stabilised. It is now commonplace to run one tank of fuel through a new F2D engine and send it aloft next time at full pelt. Our PC-6 was no exception and performed steadily with a typical F2D propeller up front, once the correct needle setting was found. Starting was quite easy, without the extreme "squeak" when cold that is the bane of some other brands. However, it would not run for long on the prime, so the fuel supply had to be released promptly to keep it going. We later found that providing the engine was sufficiently primed to bounce freely, the simplest way to get it going was to point the carburettor downwards. Then with fuel dribbling out of the carburettor (distinct drops should be visible – not a steady stream), a couple of flicks and it was away.

Response to the needle was not critical and after a total of 15 minute's running the engine had settled down and tuning for

peak revs was straightforward. Tolerance to lean mixture setting was good, but not surprisingly it would then burn out plugs if this were prolonged. As expected, the Cyclon would not run on a very rich setting, cutting out from a chilled plug element. Such flooding is inevitable, so how did it respond when restarting was attempted? The simplest way was to point the nose straight up. Regular flicking was ineffective as the fuel had washed the oil from the piston sides and it would need a solid thump to get past the squeak and hydraulic buildup. The best bet was bouncing the prop smartly backwards, whereby the engine would pop on the misfire, belching out the excess fuel. A few more bounces and it would fire up. A simple and effective procedure once mastered.

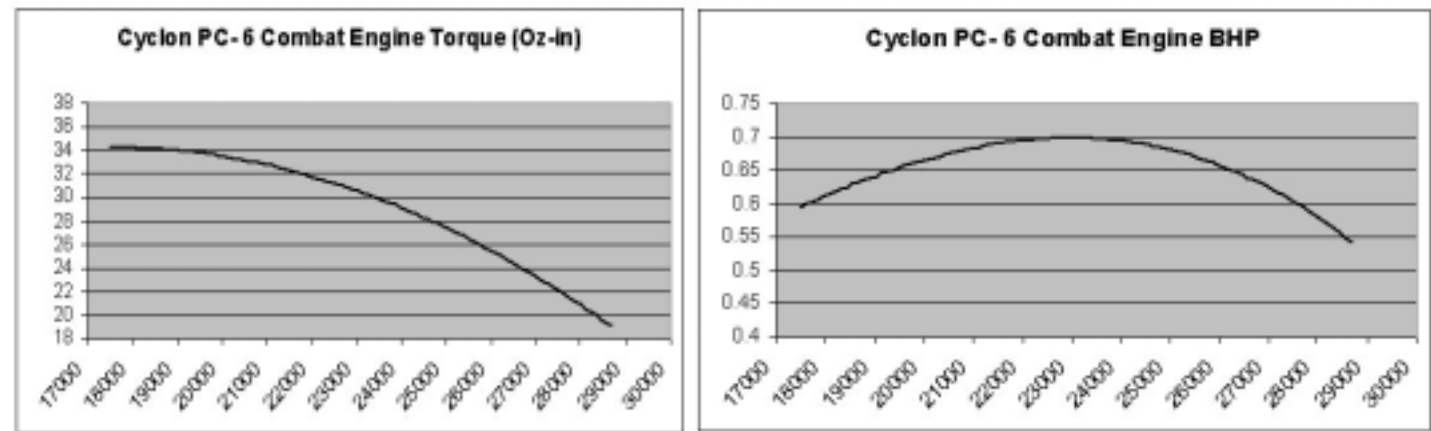
We made no attempt to adjust the compression ratio and it seems the factory setting was close to the mark. This is just as well, as our pin-spanner for earlier Cyclon engines does not fit this model. No plugs were blown once the approximate needle setting was established.

The trend with modern F2D propellers is towards smaller diameters and narrower blades. Typical numbers are diameter of 155-160mm (6.1-6.3 in.), maximum blade width of 12mm and maximum pitch of 96mm (3.8 in.). Actual pitch varies along the blade, often washing out to a lower number at the tips and of course cross-sections vary from one prop to another and even along each blade. Such props enable the engine to pile on the revs and our Cyclon had no problems running at speeds approaching 29,000 RPM with light propellers. In fact it seemed to “come onto pipe” at a little over 27,000RPM, gaining around 700 RPM in the process. At the other end of the scale, the Cyclon was a real pussycat purring at 17500 RPM with an APC 8x4 on board. All tests were performed with the engine mounted in a Dementiev F2D model and with regular F2Dfuel with 10% nitromethane content.

We experienced an unexpected degree of vibration across the entire speed range. This was later tracked down to improper mounting on the model’s 27.5mm deep centre rib, which prevented good seating of the bearers. After suitable modifications, we expect the vibration to be essentially eliminated and would expect that potential performance is likely to be somewhat better than our figures indicate.

Performance Curves

The David Anderson power absorption curves stop at 20,000 RPM so we resorted to guesswork when extrapolating them for our purposes. This of course introduces further errors to a method that is not altogether accurate. In particular the slope for the APC 7x4 prop’s power absorption curve seems quite at odds with those either side, particularly at higher speeds where it seemed to produce implausibly high power & torque figures for the RPM obtained. We made a conservative estimate for that data point, more in keeping with expected performance. Further data points would have been really useful, but with spot tests of our companion PC–2 engine close to the observed performance of the PC–6, our curves are presented with reasonable confidence as broadly representative of typical Cyclon performance.



	PC 2			PC 6			New engines with minimal running. Regular 10% Nitro F2D fuel.
Prop	RPM	BHP	Torque	RPM	BHP	Torque	
APC 8x4				17500	0.625	36.0	
APC 8x4 trim				18600	0.58	31.4	
APC 7x4	21500	0.68	31.9	22000	0.72	33.0	
APC 7x4 trim				24500	0.72	29.6	
APC 7x3	25000	0.58	23.4	25700	0.62	24.3	
APC 7x3 trim	27500	0.52	19.1	28,700	0.55	19.3	

Note:
All BHP figures are extrapolations of Andersen Curves. Therefore any errors would increase with RPM. The slope of the APC 7x4 prop is significantly steeper than the prop sizes either side. If this line is extrapolated, BHP figures would be 0.80 and 0.85 respectively with that prop. This seems unlikely, hence an estimate was used for a mid-point value between the

extrapolations of Trimmed APC 8x4 and APC 7x3 curves.

Notwithstanding the potential for inaccuracy, the TREND in BHP figures suggests typical modern F2D propellers are too small!!!

Peak power of 0.7 BHP is delivered around 23,000 RPM with reasonably flat declines either side of this figure. Reference to the torque curve shows it beginning at a very good 34 oz-in at 17500 RPM, but dropping off significantly across the range of speeds tested to 19 oz-in at 29,000 RPM. We have not seen any comparable data for other F2D engines, aside from Richard Herbert's report on the Star 2.5cc combat diesel (Aero Modeller, June 1995). Richard's curves of for the Star engine reported a strange bump coinciding with the result for the APC 7x4 propeller. If our theory about the inaccuracy of that absorption curve is correct, the Star would actually have developed 0.6 BHP and 31 oz-in torque at the 21,000 RPM recorded. This gives a more plausible shape to the Star's BHP and torque curves, which are surprisingly not much different to our Cyclon's. For the record, strict interpretation of the Anderson curves would have given similar humps in the Cyclon's curves, with extrapolated BHP of 0.85 and 39 oz-in torque.



The interesting part

Igor Dementiev quite convincingly battled around the skies at the 2002 World Champs against the glowplug competition with his Star diesels fitted with props reported to be hand made copies of the APC 7x6. The torque developed by the Cyclon is at least as good as the diesel, perhaps because of its superbly packed crankcase giving excellent primary compression. So why fit the Cyclon with tiny modern F2D propellers that have it revving beyond its peak on the ground? Would a larger prop be better? Flight tests were made to give further insight.

The Dementiev F2D model will be covered in a separate review, but suffice to say it was an excellent test bed. We tried four propellers. The APC 7x4 and 7x5 are well known. The Netchukin is also well known amongst F2D users and does not differ greatly from the latest designs. The fourth test prop is a McCollum copy of a Russian F2D prop obtained by us in 1982. It has 175mm (6.9 in) diameter and maximum width of 15mm. Pitch starts at 89mm (3.5 in) peaks mid-radius at 95mm (3.8 in) before washing out to 76mm (3 in) at the fairly narrow tip. Here are the results.

Propeller	Ground RPM	Seconds for 10 laps	Airspeed KPH
APC 7x5	19,100	25.0	144
APC 7x4	22,000	24.2	149
McCollum Russian	24,100	23.7	152
Netchukin	28,000	25.2	143

The difference between the fastest and slowest at a little over six percent is not very great, but worthwhile if you can get it. The figures obtained are "honest"; level flight at 3 metres altitude with arm fully extended. It was easy to get a bit more speed with a slight lead from the handle when the larger props were used, but not so with the Netchukin which was running much closer to the engine's RPM ceiling. In view of our bench testing it was a bit surprising that the Netchukin performed as well as it did, considering it was working way beyond the measured peak BHP mark. However, it has been observed many times that high-speed glowplug engines tend to fare significantly better in the air than bench-testing would predict. Furthermore, the engine's good dynamic balance at the highest speeds allows it to wind out with little hindrance. For regular F2D fliers, the performance with the unfashionably large APC props is also a bit of an eye-opener and perhaps an invitation for further investigation.

Airspeed while flying level is one thing, but popular wisdom would predict that the oversize APC props would bog the engine down badly in tight turns. While this is quite difficult to measure, our subjective opinion is that this was not so. Even with the 7x5 propeller, the Cyclon held good speed in manoeuvres. Obviously, the engine's excellent torque at lower speeds came to the fore here and in that respect it was performing just like a diesel.

At the other end, we were able to achieve the exhaust resonance "step" on the ground with the Netchukin prop. When

released, the engine sped up further as it reached flying speed. Inevitably, revs dropped off in tight turns and at times the engine note fell off the step indicating that in-air RPM with that prop had dropped to around 27000 RPM or possibly less.

On a more subtle level, there was a variation in “feel” such that changes in direction were very sprightly with the Netchukin prop and rather softer with the larger ones. Different prop weights would of course affect the model's CG location. Checked weights were APC 7x5 = 10.1g, APC 7x4 = 10.8g, McCollum Russian = 8.7g and Netchukin = 5.9g. Typical modern F2D props weigh between 5.5-6.3g. Also, the spinning propeller and crankshaft act as a gyroscope and gyroscopic force became more apparent with the larger and heavier propellers resulting in outside loop diameter significantly greater than with inside loops. Further fine-tuning of the model would be required to get the best results from each of the four propellers.

Conclusion

Our experience with the Cyclon engine was a positive one. General handling and performance are quite up to the standard required for F2D combat. While our example was not able to match the maker's claim of 22 to 23 seconds for ten laps, further fine-tuning of compression ratio and propeller will no doubt pay dividends. It seems there is quite a range of potentially useful set-ups that will work with the Cyclon engine, either with popular propellers or something a bit more exotic. While not a criticism confined to the Cyclon, we are not keen on needle valves that rely solely on the friction a compressed piece of silicone fuel tubing to retain the mixture setting, although if one takes the time to get the tubing length just right, the system works well. We fabricated a simple ratchet from piano wire to give more positive settings.

In terms of price, the PC-6 is a stand-out winner if bought in batches of ten for the “wholesale” price. So how did the rest of its batch-companions fare? Most have been put into use and are working very well. One came with a too-high compression ratio that had to be adjusted and one more is yet to settle down. We have no idea whether the unusual performance characteristics are confined to the Cyclon's alone, so further testing of popular F2D engines will be conducted in the future as opportunities arise.

Report by Maris Dislers



TARMAC Notes from May and June

We have finally had confirmation of the bad news that we have been expecting about our flying field. The golf club and TARMAC have been given until September the 30th, 2005 to get out of the Kalamunda road site. So much for the six months consultation that was publicly announced. We are seeking other locations, but to the date of writing there are no positive results.

The photo of Rod Ashtons 'Quest' B class team racer pictured in the march TARMAC notes has triggered off some interesting responses. Firstly, Alex Cunningham called me to relate his recollections of that particular model and to explain the mystery of which engine was fitted to it. It seems that the model was built for an Eta .29 and that was the engine in it when the photo was taken. However the Eta was reluctant to start on demand and although fast, was possessed of such a prodigious thirst that race range was severely compromised. Rod got around this by providing the plane with a heart transplant in the form of a twin stack OS .29. This was not as quick as the Eta, but had better range and starting.

I had only just absorbed that bit of news, when Dick Gibbs, who has been tirelessly hunting down news and photos for the TARMAC archives, left me a message that he had been in touch with Don Hall. Don was a close friend of Rod Ashton and had also built an Eta powered 'Quest' team racer at the same time as Rod. He also had some old photos that he was kind enough to let me copy. Don was very interested in speed and high performance engines and built a successful 10cc speed motor of his own design. He was very active in control line modeling here in the late 1940's before moving on to other interests – mostly related to motor racing and his speed shop.



The beautifully built 10cc speed engine built by Don Hall and used first in a tether car and then in several of his speed models. The engine was built from raw (solid) castings that were produced in Melbourne around 1947 or 1948 by a chap called Cecil White. It is based on a Hornet engine, but incorporated Don's own ideas and features from both Dooling and McCoy racing motors. Here it is fitted with a glow plug, but in the cars it was used as a spark ignition engine and in that form it produced more power.



Some real history here from the TARMAC archives. Here is very early speed model built by Don Hall. This aircraft, powered by his home built 10cc engine (shown above) is seen here being started on what was the first electric starter used in this state. This photo was taken in 1948 and was supplied by Don Hall.

More news from the flying field is that Kevin Cook has finally, after much hard work and a number of model re-builds, mastered the skill of flying inverted. He now is only rarely seen flying the right way up. It is really good to see this progress. Another success story is Dicky Gibbs, who has at last mastered the reverse wingover and tells me that it isn't as daunting now as it used to seem.

Now all this learning and practicing of stunt flying has been put to good effect in the novice and classic stunt events recently held at BASI field. All the entrants in Novice Stunt have been improving in leaps and bounds. It was won by Stephen McMurray who has been putting in a lot of practice and has improved enormously in a very short space of time. In second place was Simon Wedd and in third was Dick Gibbs.

It will come as no surprise to find that Classic Stunt was won by Peter White using a Fox powered Nobler. In Second place was Charlie stone with a Veco powered Thunderbird and in third place was Stephen McMurray using an ST .51 powered Lark.

In May we had the annual Vintage combat competition. Despite the absence of Matt Picken and Gary Turna, who usually come along for this one, we had a good turnout of competitors.

The combat day was helped along by food provided this year by Tracey Letchford who spent the day slaving over a hot Barbeque.

The results were: First place Trevor Letchford, second place Fred Adler and third place Peter Mills.



Tracey Letchford caught here torturing an innocent sausage at the Vintage combat day at BASI field.

It seems that the range of almost ready to fly (ARF) control line models is just going to keep on expanding with the addition of Mike Pratt's 'Primary Force' to the list as the latest offering from the SIG company.



The SIG contribution to the expanding range of ARF C/L aircraft. The 'Primary Force' is covered with SIG's new AeroKote film and has five hundred square inches of wing area and an all up weight of 36 to 40oz. It is fitted with adjustable leadouts and a tip weight box. It retails in the USA for US\$135.

Here is a tip from Jim Stivey that you will either, (like me), think is handy and worth remembering, or perhaps you won't think so and you will have forgotten it by the time that you might need it.

Did you know that if you wanted to convert something, anything quickly and you have access to the net and 'Google' then it will do it for you. For instance in your 'Google' search bar type: convert 100f to c and you will get:

100 degrees Fahrenheit = 37.777778 degrees Celsius

or

convert 567 mm to inches and you will get:

567 millimeters = 22.3228346 inches

It will even do your maths, try this: 234 x 456 and you will get:

234 x 456 = 106704



I once called Peter White a 'prolific builder'. In hindsight I feel that doesn't do justice to his output of beautiful stunters. This stunning specimen is just one of several that he has just finished. It is entitled 'Illusion' and is his re-creation of a Yuri Sirotkin design. In flight the beautiful, fully elliptical wingform looks fantastic. It has only flown a few times yet and is still being trimmed. It shows great promise.

I like long walks. Especially when they are taken by people who annoy me.

Charlie Stone

VH4706

Email cestone@bigpond.com

VINTAGE A & CLASSIC B AT THE RICHMOND NATS

VINTAGE A was first away on Super Saturday at the Richmond Nationals.

18 teams lined up in both A & B grades to contest an event well known for it's 'serious fun'. Weather was quite reasonable early, but the wind was picking up as the day progressed. The ground was deceptive. The grass was dry, cut close and looked smooth enough. However, just about every pilot managed a tumble at some stage or another. And that was to be crucial in determining who crossed the line first in the final.



The winning Vintage A model

The shock of the day was the withdrawal of Steve Rothwell and Dave Hines who managed to break a rod in practice. All Steve's R250 motors had been passed on to others so he didn't even have a spare! Reminds me of the story of the boot maker's son who never have a decent pair of shoes... because the boot maker was always too busy working on other people's shoes. We would have offered Steve a spare Gillott, but the possibility of the headline 'Rothwell wins with Gillott' would have been just too confusing!

Found out at the Nats that Steve is making an Oliver Cub replica later in the year. That motor will be great for Vintage 1/2A and possibly even for a new class of Mini Goodyear to replace the aging Pylon Specials and bring some rotational sanity back to the event! It would also encourage interstate teams to have a crack at the Victorian dominated M/G.Y. class.

Grant Potter & Brian Hoggan's Dimpled Dumpling with R250 was as hot as a Playboy centrefold! With airspeed to burn, it was clearly the fastest Vintage A model at the meet. Pity Mark McDermott's super quick Gillott racer couldn't be there. It would have been a real speed fest. Grant and Brian's best ever second round heat time of 3.11.6 was simply stunning. It was definitely no fluke as they did a 3.11.81 at the Hunter Valley Champs.

A sub 3.10 heat is certainly on the cards! Who's going to be first? Speaking of sub tens, the world F2C record was Roland Surugue's 3.09, but that was reduced a couple of weeks ago to 3.04.3 by Kramarenko/ Chayka.

Charlie Stone arrived with his wife Chris and large German Shepherd. Unfortunately, the many time WA State Champs Vintage A winner didn't pack his racers. Reckons the dog would have eaten them on the way. The brief stop

was part of a long drive all the way from WA to Qld and back to attend their helicopter pilot son's wedding. So Charlie helped with timekeeping and took time to meet and chinwag with lots of modellers who were previously just pictures and names in ACLN.

While on the wonderful west, reigning Busselton Nats winners Graeme Wilson & Mark Ellins were full of promise with their long awaited R250.

The first heat of 3.24.2 was the fastest heat ever for this super experienced team. Shows what having the right motor can do. Their second heat looked as if it may be faster, but a landing mishap put paid to their chances of beating the 3.23 cutoff time for the final. So they missed out by 1.2 seconds.



Peter Camps & Stan Pilgrim

The 3.23.0 belonged to Peter Camps and engine guru Stan Pilgrim. The familiar white and pink Voodoo 1 was right on the pace. The second round however was to prove a disaster, with their reserve model running into the rear of Peter Van Meurs Alien in mid flight, totalling both racers. Pilot Murray Wilson's eyes bulged like young grapefruits....despite his combat experience, he certainly looked shocked as the two models hit the deck as though they had brick parachutes!

It was an unfortunate end for the venerable Alien. Since winning the Waikerie Nats back in '92, this model has competed in just about every Nats and Victorian State Champs since then. Peter says it was probably time to build a new model anyway...

Gavin Knight and Ray Harvey were off the pace from previous meets and this was reflected in slower times than usual, with a best of 3.44.8. Generously, and probably just for once, they gave some other teams a real chance of making the final three.

Andy Kerr and Richard Justic were also not as quick as expected. Laps and airspeed were strangely elusive and reflected in their best time of 3.37.8. Don't write 'em off yet... They'll be back with a vengeance next meet! Andy's got more tricks up his sleeve than a Las Vegas magician.



Harry Bailey and Jim Ray teamed up for a tilt at the title. Practice form was good, but at the end of the day, it was the special Oliver Tiger engines from NSW that gave other teams the edge. When Jim gets his ordered R250, he'll be as happy as a pig in you know what.

John Hallowell and Keith Baddock were pinning their hopes on the R250 Voodoo 5. The Gillott special had been relegated to a spare. The decision was justified with a posted time of 3.22.7 and second choice for the final.

Graham Patterson and Wayne Wilson enjoyed the competition. Graham is always smiling and looks as happy as a possum up a gum tree. They worked hard to record a best time of 3.53.6.

Time for the final. A lone Victorian team against two of NSW's best. A tough job, but someone had to raise their hand. At Contest Director Andrew Heath's call to go, all were quickly away. Potter/Hoggan established a commanding early lead with an airspeed advantage and 61 laps on the first tank. It looked like this team was home and hosed with a two stopper.

Stan and Peter had less than perfect stops and lost valuable time. Every second is precious in a final like this. John was bringing the model in on a long glide to avoid any mishaps and Keith had a very simple technique of winding the prop over very quickly 3 times and then giving one hard flick. It worked every time.

Meanwhile, Grant and Brian's race plans were fast going out the window. A sudden loss of laps meant they were now going to have three stops. And to make matters worse, there was a tumble on landing and the motor was now going off tune. Brian thinks the R250 was still too new to be pushed as hard as it was. The red Voodoo 5 of John and Keith was clearly catching up to the Dimpled Dumpling! And when the 180 laps were up and the watches stopped, the Vics had won by a mere 6/10th of a second! R250's were 1st and 2nd. Peter and Stan made 3rd, but it's just a matter of time before these two take home the trophy. Great team racing. Great fun. Particularly for the winners...

Results of Vintage A at the 58th Nationals.

1. Hallowell / Baddock	3.44.7	3.22.7	7.03.6
2. Potter / Hoggan	3.38.1	3.11.6	7.04.2
3. Camps / Pilgrim	3.23.0	DQ	7.19.3
4. Wilson / Ellins	3.24.2	3.32.5	
5. Justic / Kerr	3.45.5	3.37.8	
6. Knight / Harvey	3.46.5	3.44.8	
7. Bailey / Ray	3.48.3	4.11.3	
8. Patterson / Wilson	4.49.1	3.56.6	
9. Wilson / Van Meurs	4.25.2	19 laps	

The race confirmed what most aeromodellers already know. The R250 represents the future of Vintage A in this country and probably the world. Pardon the pun, but when more engines start circulating, and the playing (read flying) field is even more level, then lots more teams will become involved in Vintage A team racing.

Right now, Andy Kerr's brainchild, **VINTAGE A 'B' Grade** is going ahead in leaps and bounds. Not one team broke 4 minutes in 14 timed heats, which is about the standard the event was intended to be. With two 4.01's though, a couple of teams got mighty close!

The final was hotly contested with a big crowd yelling encouragement. It was amazing how all models would repeatedly come down at the same time and then take off at the same time! It certainly kept pilots and mechanics on their toes and provided spectators with extra excitement.

Ray Bucholz and Rod Smith from Queensland came home first, just ahead of Matthew Littley and John Nolan. Trevor Letchford and Dave Nolan were third. To the victors, the spoils.



Results of Vintage A 'B' Grade at the 58th Nationals.

1. Bucholz / Smith	4.17.7	4.01.4	8.48.7
2. Littley / Nolan	4.15.1	4.01.9	9.02.2
3. Letchford / Nolan	4.23.6	4.08.1	9.21.0
4. Rogers / Harvey	4.31.5	4.13.4	
5. Sherburn / Dyson	4.26.7	4.15.4	
6. Gapps / Brodie	4.29.4	4.37.6	
7. Blake / Gray	6.15.9	62 laps	
8. Ardill / Fairall	DNS	DNS	

CLASSIC B was the next event. The breeze had picked up a bit, but not enough to worry the bigger, more powerful models. Saturday's wind was a forerunner to the big blow

that was to cancel all events on Sunday. Just seven teams lined up, with work commitments causing others to withdraw. Among them, Lance Smith and pilot Murray Wilson. Lance had worked hard to be competitive for the Nats and would have certainly been a big chance to make the final three.

At the risk of sounding like a broken record, work issues also stopped Mark McDermott rocking up with his super fast racers that are reported to circulate in the low 15's for 7 laps. So Ray Bucholz and Rod Smith flew the flag for Qld but could only manage a best time of 3.57 for the 70 laps. Harry Bailey again teamed with Jim Ray. The experienced Victorians were looking the goods in practice with speed and range. They used the State Champs winning Crescendo and the B-Backtrack, but couldn't find the magic formula for starts, so they had to be content with a 3.29 which is about 23 seconds away from Jim's best times.



Greg Ardill and Ray Fairall had an interesting set up. A Norvel .25 in a blue Crescendo. Certainly showed some potential. This motor may be the one to put the wind up the more common OS 25's in the near future. The Norvel features Revlite ceramic cylinder / piston technology and makes bold claims for power and fuel economy. Norvel is an enterprise jointly owned by Americans and Russians.

The Sherburn/Dyson Classic B model broke a prop during practice.



Flying the flag for Western Australia were Mark Sherburn and Adrian Dyson with a best time of 3.46. There are quite a few hot 'B' racers over there. We certainly missed sandgroper regulars Hans Bertina and Ian Thompson who

arrived too late to fly in Classic. Hans has promised to be there with a new model in South Australia next year. Rob Fry, Alasdair Taylor and the Lekny's, Colin & Ryan are just some of the others who will surely be very competitive come the South Oz Nats after Easter in 2006. Who knows, even Charlie and Norm could be tempted to come!

The new Hallowell/ Baddock "Rocket" model was the quickest on the day.



The new Rocket campaigned by John Hallowell and Keith Baddock was going well, recording a 3.15 heat. The triple Nats winning Flying Purple People Eater was flown in round 2 and also posted a 3.15. These were the two FTD's.



Just a few laps behind were Graeme Wilson and Mark Ellins on 3.21. They were certainly consistent with smart landings and restarts, but outright speed is something the Double Dice didn't have. Gavin Knight and Ray Harvey were having fuel troubles and two heats of over 5 minutes did not do this talented team justice.



The original Rocket that made the final at the first Albury

Nats has been beautifully refurbished by Brian Burke. It is again a potential weapon, now being wielded by the hands of Ray Bucholz and Rod Smith. Unfortunately the engine starts weren't as quick as they should have been and a couple of slow heat times resulted.

Time for the final. All were away together with the Rocket having the best airspeed, continually overtaking the Double Dice and Backtrack. Keith was ably assisted by John Nolan on battery and stops were almost a blur. As expected, Graeme and Mark & Murray were doing the same. Just a fill and a flick to be in the air again. Jim was having a few probs getting his usual fast restarts, so the team was falling behind. John and Keith's race went according to plan, and the Rocket had a comfortable 20 second win in 6.22.

Open Combat

	Rnd 1	Rnd 2	Rnd 3	Rnd 4	Rnd 5
1. Graeme Wilson	Win	Win	Win	Win	Win
2. M Comiskey.Jnr	Win	Win	Win	Loss	Loss
3rdM Comiskey.Snr	Win	Forfit	Loss		
=4th Brian Burke	Loss	Win	Loss		
=4th Peter Wallace	Loss	Win	Loss		
=5th Ryan Comiskey	Loss	Loss			
=5th Rod Smith	Loss	Loss			

The winner in Open Combat was Graeme Wilson



Classic B finalists

Results of Classic B at the 58th Nats at Richmond.

1. Hallowell / Baddock	3.15.0	3.15.8	6.22.0
2. Wilson / Ellins	3.21.9	DNS	6.42.0
3. Bailey / Ray	6.01.8	3.29.9	7.01.4
4. Sherburn / Dyson	4.19.9	3.46.7	
5. Bucholz / Smith	4.30.6	3.57.0	
6. Ardill / Fairall	4.21.0	1 lap	
7. Knight / Harvey	5.26.1	5.03.6	

John Hallowell,
VH 1984

Richmond Nationals Results

Bendix T/R

(80 lap Heat - 160 Lap Final)

Pilot/Pitman	Heat 1	Heat 2	Final
Hallowell/Baddock	03:50.3	04:01.8	07:34.2
Bonello/Heath	03:38.7	DNS	08:24.8
Wilson/Ellins	04:15.8	DNS	08:25.8
Bailey/Ray	04:24.0	DNF 50	
Stivey/Taylor	DNS	04:27.2	

Final Results - MINI-GOODYEAR

(200laps - 5 pitstops FINAL)

Pilot	Pitman	Final Time	Placing
G Wilson	M Ellins	07:18.4	1st
H Bailey	J Ray	DNF 165 laps	2nd
J Hallowell	K Baddock	DNF 0 laps	3rd

Four teams had entered this competition. One team did not arrive and the Hallowell/Baddock team had the misfortune to blow a plug in practice and the broken element found it's way down the side of the piston and the resulting damage made them a non starter. At this point it was decided to go straight to the final. Mark & Graeme had a clean run to the finish but the OS CZ11PS engine in the Bailey/Ray model kept blowing plugs and after the fourth one blew they gave the chance of finishing a miss.



Mini Goodyear finalists

JET Speed

Class	Entrant	Round 1	Round 2	Round 3	Best Time	%of Record
OpenJet	Andrew Robinson	12.3	11.92	12.1	11.92	86%
SportJet	John D Taylor	NT	17.78		17.78	70%
SportJet	Dave Axon	14.85	15.4		14.85	83%
OpenJet	Dave Axon					

Combined Speed

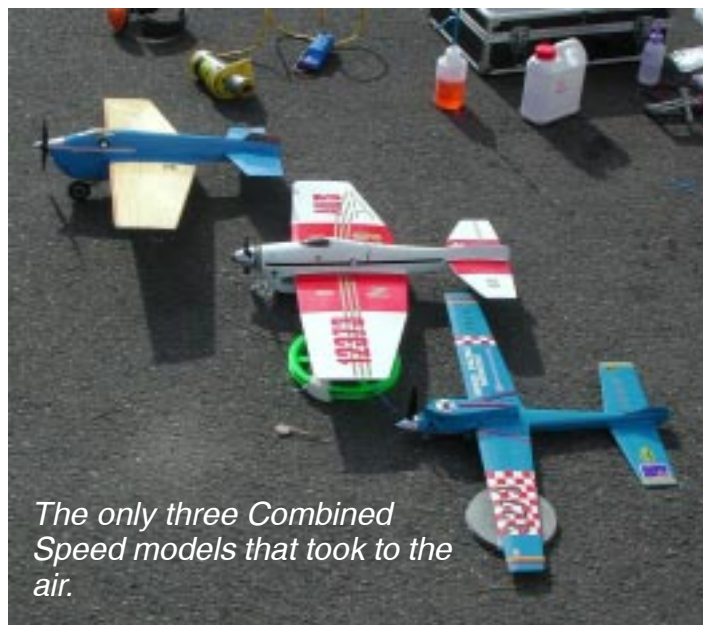
Class	Laps	Entrant	Round 1	Round 2	Round 3	Best Time	% of Record
1	10	Richard Justic	20.4	17.06	16.62	16.6	86%
Proto	14	Harry Bailey	30.31	30.09	30.88	30.1	80%
1	10	Goran Milosavljevic					
Proto	14	Richard Justic					

Goodyear T/R

(100 Laps - 2 pitstops HEAT)

(200 laps - 5 pitstops FINAL)

Pilot	Pitman	Heat 1	Heat 2	Final
G Wilson	M Ellins	03:42.9	DNS	07:40.7
H Bailey	J Ray	04:06.4	04:15.3	DNF 104
R Justic	R Owen	06:00.3		DNF 19
J Stivey	T Letchford	08:18.7	DNF	
M Sherburn	A Dyson	DNF 50		
G Knight	R Harvey	DNS		



The only three Combined Speed models that took to the air.

F2C Team Race

Pilot	Pitman	Heat 1	Heat 2	Heat 3	Heat 4	Final Time
Robert Fitzgerald	Mark Ellins	03:15.5	03:18.1	DNS	DNS	06:44.9 (New Aust record)
Gavin Knight	Ray Harvey	03:20.7	03:49.7	03:24.2	03:36.6	07:04.4
Hugh Simons	Grant Potter	66 DNF	03:21.1	03:21.9	03:16.4	DSQ 96
Ian Thompson	Hans Bertina	03:28.5	03:26.1	03:27.5	03:22.4	
Andrew Robinson	Sean Suter	03:33.3	DSQ	03:37.8	03:26.2	
Richard Justic	Robert Owen	70 DNF	03:40.9	04:41.1	03:45.1	
Trevor Letchford	Dave Nolan	03:59.8	66 DNF	80 DNF	04:24.4	



F2C is the ultimate team race piloting and mechanical tuning challenge. The time, effort and expense that these teams contribute to the hobby is commendable.

Much of the racing was hectic but without any serious mishaps and the spectators loved it.

The finalists are seen here at the flying site at the Penrith Lakes Regatta Complex

Nationals 2004 - F2B AEROBATICS Expert

Competitor	Qualifying Rounds		Final Rounds		Score
	Round 1	Rd 2	Round 3	Round 4	Best Qual +
					Best Final
1 Masaru HIKI (Japan)	2988.5	-	3095.0	3137.0	6125.5
2 Kaz MINATO (Japan)	2953.0	-	3020.5	3167.5	6120.5
3 Mark BATTY	2986.5	-	3019.5	3133.0	6119.5
4 Paul LAGAN (NZ)	2881.5	-	3021.5	3104.5	5986.5
5 Joe PARISI	2857.0	-	2872.0	3088.5	5945.5
6 Brian EATHER	2860.5	-	2733.0	3082.0	5942.5
7 Brian GARDNER	2859.5	-	2972.0	3011.0	5870.5
8 Reg TOWELL	2909.5	-	2822.0	2953.0	5862.5
9 Peter WHITE	2860.5	-	2743.5	2995.0	5855.5
10 PJ ROWLAND	2831.5	-	2745.5	3020.0	5851.5
11 Murray HOWELL	2720.0	-	2653.0	3006.5	5726.5
12 Paul TURNER	2761.0	-	2853.0	-	5614.0
13 Dave SIMONS	2700.0	-	2573.0	2762.0	5462.0
14 Kevin BARNES (NZ)	2740.0	-	2715.5	-	5455.5
15 James BATTY	2599.0	-	2682.5	2771.5	5370.5
16 Mark ELLINS	2561.5	-	2528.0	2681.5	5243.0
17 Bruce HOFFMANN	2549.0	-	2387.5	2682.0	5177.0
18 Tony BONELLO	2432.0	-	2317.5	2670.0	5102.0
19 Frank BATTAM	2077.5	-	2471.0	2778.0	4855.5
20 John ELIAS	2234.0	-	-	2541.5	4775.5
21 John McINTYRE	2104.5	-	-	2565.5	4670.0
22 Rob FITZGERALD	1886.0	-	2012.5	2464.5	4350.5



*Stunt Judges in action / Ken Dowell
- Herb Hanna - Joan McIntyre*



Mark Batty - "Sukhoi" / OS 40 FP

F2B AEROBATICS Advanced

Competitor	Qualifying Rounds		Final Rounds		Score
	Round 1	Rd 2	Round 3	Round 4	Best Qual +
					Best Final
1 Stephen BAKAC	2015.0	-	2226.0	2484.5	4499.5
2 Steve MASTERTON	1732.0	-	2335.5	2468.5	4200.5
3 Ouki MINATO(Japan)	1305.0	-	2077.5	2254.0	3559.0
4 Paul KENNY	0990.0	-	2007.0	2073.0	3063.0
5 Steve TODD	-	-	2228.0	2657.0	2657.0
6 Peter ROWLAND	0840.0	-	1333.5	1542.5	2382.5
7 Bill SWAN	0293.0	-	1696.0	2011.0	2304.0
8 Denver HARVISON	-	-	1650.5	1686.0	1686.0



*Ouki Minato - "Oriental
(Modified)" / Brodak 40*



Final adjustments are made before the start of the F2C final.

F2B at the Australian Nationals

From Peter and PJ Rowland

Friday, July 08, 2005

Official Practice.

Official practice day today and at these NATS we are fortunate to have a few international guests: Masaru Hiki, Kaz Minato and his son Ouki from Japan; also Paul Lagan and Kevin Barnes from NZ; all flying very well. With the international flavour of the event, and with competitors who have placed in the top 15 in the world meant that Australia's best pilots were pushing their skills to the limit. Extra emphasis was put on practice with everyone from advanced pilots to former Nats champions not settling for less than their best during practice in anticipation for great scores against world class competition.

The day was nothing short of great weather, perhaps if anything a little too good, with wind down to less than ½ Knot and drift was minimal. Ideal conditions to practice in to get trim changes finalised and engines set. The only real drama was the lack of wind. Every now and then, usually in consecutive manoeuvres, you would find yourself flying through your own wake turbulence and pushing the model around quite violently.

The site is a very large sporting complex with enough land to allow everyone their own circle if so desired. The grass was cut just prior, all circles marked out and nothing left to chance. If all that sounds too good to be true, all the competitors were treated to an opening ceremony of VERY low flying full size Hercules doing low passes.

There were several Herc's flying, doing practice from the RAAF Airbase which is a stone's throw away from the sporting complex. Also making their presence felt were F-18's, also doing the odd low pass. Sends shivers up your spine when you are flying a vertical 8 and directly above you a mere 1000ft is a Hercules looking down on you or a F-18 roaring overhead.

If anyone wasn't really excited with the air show display, the weather, and the international flavour, then they didn't have a heartbeat. The 2004/5 Richmond NATS promises to be one of the greats.

Looking over the field was a "who's who" of Aerobatics, with former Nats winners everywhere you look - a VERY strong field. Nice to see Peter White make the drive all the way from WA flying a very nice GEO XL with Stalker .61 for power.

Mark Batty was putting in good practice with his aging Profile Stunter, which still seems on rails.

Brian Eather has his firecracker with Stalker .61 Brian's aircraft I had not seen before yet he tells me it's a good 2 yrs old. Features a Rabe Rudder.

Brian Gardner has his new model Obsession 3, still with the RO-JETT .61 on pipe, and flying his usual consistent flights. It features unique end plates on the tailplane, which Brian has been using with great effect for a few years now.

Paul Turner has his old faithful yellow Wind Wiper with ST .46 flying slow and steady in the great weather.

Joe Parisi still uses the powerful Saito .72 now sporting inverted setup and a new model called "Farcical". Joe is trying a few different combinations with this model, which features a thick constant cord wing, flying superb.

Kaz Minato is flying an all moulded Blue Max with Stalker .61 for power; today he was trying a 4-blade prop on it yet still managed good flights.

Frank Battam is flying his Gee-Bee racer, with Saito .56 for power.

Bruce Hoffman has his old Tempest with Saito .56 after earlier in the week crashing his beautiful "Miss Australia" which is a Paul Walker P51 Mustang.

Dave Simons, Paul Lagan, and Masaru Hiki are all flying the Yatsenko Russian take-apart models - all flying great, with slightly different lap times between them.

PJ Rowland brought a new Tiger skin model also with Stalker .61 for power, flying some nice shapes.

Nice to see Murray Howell, the 1998 Nats Champion, flying great again, flying Miracles with ST.46 on Pipe with wrap-around header.

Reg Towell was absent at today's practice, and from what I was told he had a minor tank issue that required tools from home to repair. Reg is flying a P51 Mustang also with 4 stroke.

A full field this year of 25 for expert, the format is 4 Rounds, on 4 days, with the best score of rounds 1 & 2 added to best score of rounds 3 & 4; winner takes all. With the day drawing to a close we turn to 8am tomorrow for round #1 and see who has the best score to settle the dust and really start the event.

Saturday, July 09, 2005

Round #1

At 8am the pilots all met for a quick briefing, with judges explaining the fundamentals to the pilot, and any questions raised were answered. For a 1st at these Nationals was a new safety process, whereby we were to sight any safety issues and implement any solutions to avoid such problems.

With Tabulation being done by Pat Hasler, using a portable laptop computer, and using a very simple Excel program both supplied by PJ, scores were accurate and on the board within 5 minutes of your flight ending.

Round #1 started with Dave Simons flying very neat rounds with his fairly new Russian take-apart model. Dave is very happy with the performance and is seeking many tanks of fuel for practice.

Several fliers who were in the 1st sector of the day were treated to some spectacular weather, with wind down to a gentle drift; and with the sun shining, good scores were being posted.

Next up for this early round performance was Joe Parisi, flying his new stunter called "Farcical"; the round was clean and scored 2881, his model pounding out tons of power via the Saito .72 and made short work of the clean semi-turbulent air.

Mark Batty, a 3 times Nationals winner, was next flying his high mileage well known Sukhoi, and flew a typical near-perfect Batty pattern and was thus rewarded with a 2986. Marks score was so good that when the round finished his was to be the 2nd highest score, beaten only by a fantastic flight by Masaru Hiki with a mere 2½ points difference.

With many of the fliers checking the scoreboard trying to see a pattern of what the judges might be looking for, many were saying "its tight manoeuvres under 45°." Step up to the plate Reg Towell, flying his beautiful Paul Walker mustang, and flies a relative open flight, smooth and precise scoring a tidy 2909 with only the top 3 scoring

higher.

By the time Kaz Minato was due to fly, who was 10th, the wind had turned from a soft drift to something with the potential to ruin the entire day. Kaz flew in winds close to 15-20 knots and with his engine run a little on the rich side, Kaz appeared to be fighting the model to go where he points it, but every time he hit the marks. With many steps being taken backward, and from side to side, many people were heard to comment "he'll struggle in the verticals" with the verticals to come, Kaz flew his composite Blue Max perfectly, not losing control once. Landing to a well-earned applause. Kaz was given a deserved 2953.

With the wind now strong, many thought no one would be able to catch Mark Batty on the scoreboard, until Masaru Hiki flew. Without any practice flight beforehand, Masaru flew a very impressive flight, with many pullouts to 4-5 ft marks consistency; his Russian take-apart flew on rails and when his flight was over the score of 2988.5 was top of the day, and in strong winds was considered by all to be justified in 1st place.

With round one over, top 5 places in Expert are 1st Masaru Hiki 2988.5; 2nd Mark Batty 2986; 3rd Kaz Minato 2953; 4th Reg Towell 2909; 5th Paul Lagan with 2881.5; and a further 6 more pilots scored in the 2800's, which is the top 11 separated by less than 200 points, or another way 66 points per judge.

Sunday, July 10, 2005

Round #2

With the day starting at 6am for some, it was obvious that today was not going to be a great day. As aeromodellers we all know these days, a Sunday morning, keen for a day of flying you peek out the window to check the weather and its so windy you wouldn't even fly a kite, and back to bed you go.

Sunday Morning at this years Nats saw most of the fliers standing under a shelter escaping the winds, and a meeting was held. With winds speeds not exceeding those strong enough to cancel the round, the outcome was Round #2 is going ahead, those who wish to fly may do so, but it's a throw away round if you cannot improve on Round #1, thus DNF top scored round #2.

Many of the competitors took time out to use the day as a chance to see other events or perhaps do some sightseeing, I know the Japanese team ventured off to Sydney to sightsee and were very grateful for the otherwise lost day.

Monday, July 11, 2005

Round #3

Day three saw a reversal of how the winds behaved in round #1, starting out mild - strong, and easing off by 11am to near perfect conditions toward the latter half of the day.

With all eyes on who top scored the 1st round, today saw much of the same with tight crisp manoeuvres being rewarded. Masaru Hiki also flew another "cold" flight to put the Australian fliers to shame with round #2 highest score of 3095 which was well clear of everyone else in respect to margin.

To give an indication 74 points separated 1st - 2nd, however from 2nd - 6th, which were Paul Lagan 3021, Kaz Minato 3020, Mark Batty 3019, Brian Gardner, 2972, PJ Rowland 2945, the spread was only 76 points - very crowded at the top of the scoreboard.

Unfortunately today's weather was a factor of battling the wind in the early half of the day with a further 8 of the top fliers not being able to better their score from Round #1. Hard luck flight of the day was clearly Joe Parisi, after receiving fairly decent wind conditions, Joe pushed his aircraft right through the pattern, which was surely going to score high, everyone waited for his engine to quit. And waited and waited. 7mins 40 seconds into the flight the motor stopped and blew a great round.

The day ended just shortly after lunch, many decided to go and get some lunch and return to the field later on, as it was predicted at around 2pm "Stunt Heaven" was at the Nationals. As the day grew longer many fliers were out in force practising, the weather was that good, and there was a real relaxed feel to the entire site. With as many as 5 circles going at once, everyone was getting up and putting in as much airtime as possible.

On one circle was Brian Eather and Joe Parisi helping each other to trim and get that perfect setting. The others were occupied with Paul Lagan, Brian Gardner, Murray Howell and Dave Simons, all talking exchanging ideas and I even saw a little plane swapping/testing and the Nationals weren't over yet.

In another circle was Kaz Minato, Masaru Hiki and PJ Rowland, the Japanese team were very friendly and Masaru was more than glad to hand out advice to anyone who would listen.

Flight after flight saw fellow competitors, from different parts of the world, different states, all helping each other with anything to help gain an advantage. It was a fantastic and rare sight, where else but in Control Line would you see such sportsmanship. Sure, we all want to win, but there is more to Stunt than the victory.

Tuesday, July 12, 2005

Round #4

As round #4 commenced those who flew yesterday and practiced all day were hoping for a repeat of the perfect late afternoon weather, and we were given that weather. Soft gentle drift and semi-overcast mild temperature saw everyone in the field with a chance to improve and post a good score.

Unfortunately Kevin Barnes from NZ had a minor incident with some rogue wake turbulence and ended his chance for a final flight. Paul Turner also had to return home for a private matter, which meant he was also unable to fly.

Onward everyone marched; some of the best flights in the contest were flown in this final round. With a slightly reduced field, high scores were the order of the day, with everyone performing at their best; the weather was so impressive 100% of the field scored their BEST flight in round #4.

We were treated to a great display in this final round with 9 pilots scoring over 3000+, pilots were excited about the conditions, enjoying the Nationals experience and we saw it all today.

Each of the Russian take-apart models flew great, each set up slightly differently, Paul Lagan flew a little faster, Masaru Hiki flew the quickest and Dave Simons groaning around the sky.

Another great flight was from Murray Howell, who borrowed Brian Gardner's spare model with tuned pipe, after getting used to flying it the day before. Murray flew it to a solid 3006.5. Always difficult to fly someone else's model.

Those running tuned pipe engines were Murray Howell,

Brian Gardner and Tony Bonello. The Saito's worked very well for those who were using them, including Joe Parisi, Reg Towell Bruce Hoffman and Frank Battam, all report no problems and seem to have this power-plant under control.

Another strong engine shown was the Stalker .61 with Kaz Minato, PJ Rowland, Peter White, Brian Eather, Kevin Barnes and Mark Ellins. This is also a powerful reliable engine with many different styles of running also being displayed - a versatile engine.

With Round #4 coming to an end everyone was awaiting scores to go up after the top 3 were really shooting it out. With 3 distinct different styles and approaches Mark Batty with his low tech profile model against the might of the high tech moulded Blue Max of Kaz Minato, and Hiki's Russian model it was always going to be tight.

Kaz Minato flew a great pattern, very accurate, to a top final round of 3167.5 ahead of Masaru Hiki with 3137; Mark Batty pushed all the way with a 3133 and that was top 3 for the round and Top 3 for the Nationals.

Those who scored 3000+ were Paul Lagan 3104; Joe Parisi 3088.5; Brian Eather 3082; PJ Rowland 3020; Brian Gardner 3011; and Murray Howell 3006.5. Peter White just missed out but flew a brilliant pattern for 2995.

The top 10 was a tight bunch of scores but overall the top 3 final total was even closer, without a doubt one of the hardest, closest fought Nationals in a long time.

Masaru Hiki 6125.5

Kaz Minato 6120.5

Mark Batty 6119

Clearly the 2005 Australian Control Line stunt Nationals is going to go down as one of the "greats" to attend, international guests flying superb, Australian Nats champions everywhere you look. An amazing flying site with spectacular views of the RAAF air show.

We might not have been blessed with the weather all the time, but we were given 3 world class judges: Ken Dowell of Melbourne has one of the sharpest eyes for stunt and picks up almost everything you wish he would miss. Joan McIntyre has judged at World Championships, as well as a host of overseas contests; she is a tough judge but well respected by the fliers. Finally Dallas Hanna, a long time pilot has been around and seen as many Nats as most, also a keen F2B flier with his opinions in Sydney also sought after.

A great CD was Pat Hasler who did the tabulation. Everyone commended him for his patience and how well he ran the contest without any problems - just as good as any world contest.

It was great to see our international guests. Congratulations to Masaru Hiki, winner of the Expert F2B aerobatics; and to Kaz Minato and his son Ouki who flew brilliantly One of the highlights was to watch this very talented 13 yr old fly his modified Oriental in the wind with Dad busy in the background, pacing, shouting out advice, on his knees – praying at times, enjoying every second of the experience. Ouki won Junior Stunt and placed 3rd in our Advanced Stunt - watch out Kaz, he's going to be one of the top fliers.

Paul Lagan and Kevin Barnes travelled from New Zealand, and their support was welcome as they invited all of us to compete in the upcoming World Cup Stunt event in Cheviot N.Z. Anyone wishing to go may contact either Paul Lagan or Dave Simons for more information.

Thank you to everyone else who helped make the 2004-2005 (58th) Australian "Richmond" Control Line Nats a huge success.



Kaz Minato - "Blue Max" / Stalker 61



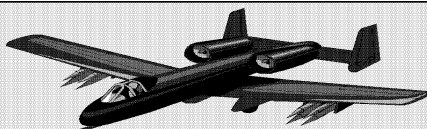
Three "Sergei Yatsenko" models with Discovery Retro 60's

Masaru Hiki - Dave Simons - Paul Lagan



Steve BAKAC - "Vector 40" / OS 25 VF w/pipe

CONTEST RESULTS



Combined Speed Sun 26th June at KMAC

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R Hiern	Proto	Novarossi 21	25.73	25.90	DNS	25.73	225.17	93.76%
2	N Wake	Class 5	Novarossi 21	15.39	15.61	15.27	15.27	235.76	91.81%
3	N Wake	Class 4	K&B 40	14.56	DNF	DNF	14.56	247.25	89.15%
4	V Marquet	Vintage Proto	Enya 30	48.47	42.61	42.01	42.01	137.91	85.69%
5	K Hunting	Midge	Taipan	attempt	10.50	dns	10.50	137.94	84.29%
6	R Hiern	Vintage .29 1960	McCoy 29	21.24	21.10	DNS	21.10	170.62	81.52%
7	R Hiern	Midge	PAW	12.15	DNS	DNS	12.15	119.21	72.84%
8	P Roberts	Proto	Super Tigre G21/29	35.27	34.03		34.03	170.25	70.89%
9	V Marquet	Midge	PAW	12.89	13.70	DNS	12.89	112.37	68.66%
10	N Wake	Proto	Cippolla 20	40.15	42.21	44.37	40.15	144.30	60.09%
	R Hiern		S/T G15 RV diesel		NEL	29.49	DNS		



Class 5
Novarossi 21



All rugged up in the speed pits.

Combined Speed Sunday 17th July at Frankston

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R Hiern	Class 5	Novarossi 21	NEL	14.59	DNS	14.59	246.74	96.09%
2	R Hiern	Class 1	Nova rossi 12	15.44	DNS	DNS	15.44	233.16	94.82%
3	N Wake	Class 1	OS CZ11 PS	16.25	15.83	NEL	15.83	227.42	92.48%
4	R Hiern	Class 2	Orion .28	12.12	11.22	DNS	11.22	258.18	89.13%
5	V Marquet	Vintage Proto	Enya 30	42.24	nel	41.40	41.40	139.94	86.96%
6	L Smith	Proto	Novarossi 21	29.74	29.45	31.16	29.45	196.73	81.92%
7	P Roberts	Proto	Super Tigre G21/29	34.44	35.61	33.78	33.78	171.51	71.42%
8	N Wake	Proto	Cippolla 20	41.27	<u>42.45</u>	NEL	41.27	140.38	58.46%

MINI GOODYEAR at CLAMF 17/07/2005.

	heat	final	engine
1. C.Ray/J.Ray	4:13.81	8:33.25	CS 11Glow
2. M.Wilson/M.Ellins	3:58.53	8:56.87	OS CZ 11PS
3. H.Bailey/P.Roberts	4:10.36	9:05.16	OS CZ 11PS

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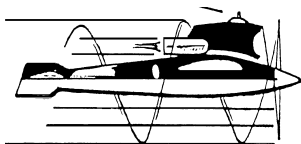
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