

THE VOICE OF CONTROL LINE
AEROMODELLERS FROM
AROUND AUSTRALIA

Number 36



Produced by the Victorian Control Line Advisory Committee

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**Copy Deadline for next issue is:
Wednesday 16th August 2000
PRODUCTION SPECIFICATIONS**

Please remember when submitting copy that if you have access to a PC, or suitable typewriter you can save us retyping by giving us 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

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

Harry and Paul Bailey at

37 Thompson Street. Clayton VIC. 3168.

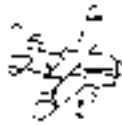
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COMING EVENTS



CONTROL LINE CONTEST CALENDER 2000/2001

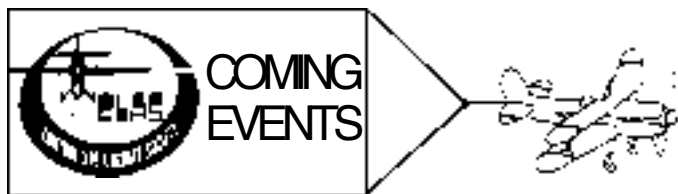
AUG 6	Simple Rat race (Whipping permitted). SMAC at Knox	
AUG 20	FAI Team race, 1000 Lap Goodyear, 2.5cc Open Combat.	CLAMF
AUG 27	FAI, Novice & Junior Aerobatics, Vintage Stunt, Combined Speed, Class 2 Team race.	KMAC
SEPT 3	Classic Stunt, Vintage Stunt, Simple Rat race, Simple Combat, Aust "A" Team race, Aust "B" Team race. Warragul	
SEPT 10	FAI & Combined Speed, 1/2A Team race, Mini Goodyear, Junior 2.5cc Combat.	CLAMF
SEPT 24	FAI, Novice & Junior Aerobatics, Classic Stunt, 1/2A Combat.	KMAC
OCT 8	Simple Rat race, Simple Goodyear.	SMAC
OCT 15	FAI Team race, Goodyear, Jnr 2.5cc Rat race, 2.5cc Rat race (Riverside Trophy).	CLAMF
OCT 22	FAI, Novice & Junior Aerobatics, Combined Speed, Class 2 Team race, Vintage "A" Team race.	KMAC SMAC
NOV 12	Triathlon.	SMAC
NOV 19	FAI & Combined Speed, FAI & Modified Combat, Mini Goodyear, 1/2 A Combat.	CLAMF
NOV 26	Monty Tyrell Memorial - Classic Stunt.	KMAC
DEC 10	Aust "A" Team race, Aust "B" Team race, Bendix.	SMAC
DEC 17	FAI Team race, 2.5cc Open Combat, 1/2 A Team race.	CLAMF
2001		
JAN 21	FAI & Combined Speed, Mini Goodyear.	CLAMF
JAN 28	FAI (Hearns), Novice & Jnr Aerobatics, Vintage "A" Team race, Aust "B" Team race.	KMAC
FEB 4	Simple Rat race, Simple Goodyear.	SMAC
FEB 18	FAI & Combined Speed, 1/2 A Combat, Mini Goodyear.	CLAMF
FEB 25	Classic Stunt, Vintage Stunt, Class 2 Team race.	KMAC
MAR 11	Hand Launched Glider.	SMAC
MAR 18	FAI Team race, Goodyear, Simple Rat race.	CLAMF
MAR 25	FAI, Novice & Jnr Aerobatics, Vintage "A" Team race, Aust "B" Team race.	KMAC
APR 8	Simple Combat.	SMAC
APR 13,14, 15,16	Victorian Control Line State Championships.	KMAC/CLAMF

APR 21 - 27	54 th Australian National Championships. Busselton, W.A.	
APR 29	FAI (Yeoman), Novice & Jnr Aerobatics. Vintage Stunt.	KMAC
MAY 6	Vintage "A" Team race, Aust "A" Team race.	SMAC
MAY 20	FAI & Combined Speed, Triathlon (Artil Trophy), 1/2 A Team race.	CLAMF
MAY 27	FAI, Novice & Jnr Aerobatics, Classic Stunt, Simple Rat race.	KMAC
JUNE 10	Balloon Burst, Limbo.	SMAC
JUNE 17	FAI Team race, Goodyear, 1/2 A Combat, FAI & Modified Combat.	CLAMF
JUNE 24	FAI, Novice & Jnr Aerobatics, Combined Speed, Vintage "A" Team race.	KMAC
JULY 8	Simple Rat race (whipping permitted)	SMAC
JULY 15	FAI & Combined Speed, Jnr 2.5cc Combat, Mini Goodyear, Jnr 2.5cc Rat race.	CLAMF
JULY 22	FAI, Novice & Jnr Aerobatics, Class 2 Team race, Vintage Stunt.	KMAC
AUG 12	Simple Combat.	SMAC
AUG 19	FAI Team race, 2.5cc Rat race, 1/2 A Combat, Combined Speed.	CLAMF
AUG 26	FAI (Stuntmasters), Novice & Jnr Aerobatics, Vintage "A" Team race, Aust "B" Team race.	KMAC
SEPT 2	Classic Stunt, Vintage Stunt, Aust "A" Team race, Aust "B" Team race, Simple Combat.	Warragul
SEPT 9	Vintage "A" Team race, Aust "A" Team race.	SMAC
SEPT 16	FAI & Combined Speed, Simple Rat race, 1/2 A Team race.	CLAMF
SEPT 23	FAI, Novice & Jnr Aerobatics, Classic Stunt, Bendix.	KMAC
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.	

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 CLAM.F 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
WMAA Horsham. Contact :- V. Cresp (03) 5382 4065
BRCAC Bendigo-Newbridge Rd . Marong
Contact :- S. Power 03 54 424 925

Competitors at CLAMF competitions are reminded that events **start at 10.30a.m.** and they should be ready to begin at this time.



THE FOLLOWING PROGRAMME IS OPEN TO ALL MEMBERS OF
THE MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA
(M.A.A.A.)
LOCATION OF FLYING FIELDS

(ALL EVENTS START 9 am UNLESS OTHERWISE NOTED)

TAMWORTH MAC: CONTACT LEN SURTEES 02 67-61 8508
R.E.M.A.C.: PETER BOARD HIGH SCHOOL, WICKS RD.,
S.S.M.E.: LUDDENHAM ROAD, LUDDENHAM.
K.M.F.C.: ST. IVES SHOWGROUND, MONA VALE ROAD, ST.
IVES.
S.A.T.: KELSO PARK, HENRY LAWSON DRIVE
I.M.A.C.: BIRKLEY ADJACENT TO FREEWAY.
MUSWELLBROOK M.F.C.: MITCHELL HILL FIELD, NEW ENGLAND
HWY., MUSWELLBROOK.
DOONSIDE M.F.C. : EASTERN CREEK RACEWAY OFF REEN
ROAD, BLACKTOWN
NARROMINE: CONTACT STEVE BAKAC 02 68 89 2501
CLAS CONTACT MIKE COMISKY 02 9605 2062

DATE	HOST	EVENTS & VENUE
AUG 13	KMFC	F2B AEROBATICS
SEPT 10	KMFC	CLASSIC STUNT (F2B PATTERN)
SEPT 17	ILLAWARRA MFC	F2B AEROBATICS
<i>SEPT 30-OCT 2</i>		<i>NSW STATE CHAMPIONSHIPS</i>
OCT 15	REMAC	DUKE FOX MEMORIAL STUNT
NOV 19	SAT	F2B AEROBATICS
NOV 19	KMFC	VINTAGE A T/R, 1/2A T/R, VINTAGE STUNT
NOV 26	SSME	F2B AEROBATICS
DEC 2	REMAC	VINTAGE STUNT
DEC 3	WERRINGTON	CLASSIC STUNT TO 1970 WITH MUFFLERS
DEC 3	MACARTHUR MODEL AVIATION CLUB SPORT inc	SCALE DAY
DEC 10	KMFC	CHRISTMAS PARTY AND FUN FLY

All dates subject to change : for further details contact:-
Guy Bevan Hon Secretary CLAS 2 Kamilaroi Rd Bayview
2104 Phone / fax 02 9979 9595 Mobile 0412 465 802
Email: guybevan@hotmail.com

Queensland Control Line Events Calendar

DATE	FIELD
Aug 13	"Ipswich Open Championships" Vintage B, (MAAQ rules as flown at Toowoomba Nationals). Class 2 T/R, Mini Goodyear. N.B. All these events will be flown on GRASS at CLASII field. Min. 3 entrants constitute an event. CLASII
Aug 20	CLASII Rat, FAI Combat, 35 Slow Combat, Mouse T/R CLASII
Sept 10	"Ipswich Open Grass" T/R and Speed Rally Goodyear, Bendix, Combined Speed, (Including Proto & Jet Speed) Min 3 entrants constitute an event. Further particulars for these two open contests from Mark McDermott (07)32927679 CLASII
Sept 24	CLASII Rat, Aerobatics, Triaerthon, "Mouse T/R Interclub Challenge" CLASII

Oct 8	CLASII Rat, Scale Fly In,	CLASII
Nov 12	CLASII Rat, Class 2 T/R, Bendix, 35 Slow Combat	CLASII
Dec 10	CLASII Rat Final, Trophy presentations & Christmas BBQ breakup.	CLASII

Queensland News CLASII - Ipswich

Having proved that Class 2 T/R can be run successfully on grass some club members have been doing further testing of other model classes on grass.

Since returning from the Nowra Nationals John Taylor/Warren Shurmer and Mark McDermott/Peter Morandini have been extensively testing on the "GRASS" with Goodyear and particularly Mini Goodyear with John Taylors' Mini doing 18 seconds for 10 with more yet to come. Mark has modified his U/C leg rake, length and wheel size to allow the models to operate off grass without any problems whatsoever. So go to it fliers down South and West! You don't need bitumen circles to run these events.

Once again our recent Scale Fly In Day produced a wide range of models and fliers, particularly in the fun scale event we are flying. If you require further details on the Fun Scale event contact Warren Shurmer, or info can be downloaded from an American web site.

In response to some comments from Robin Hiern we are calling all the Speed guys to come to our upcoming "Grass T/R and Speed Rally" on September 10th.

Finally. Are Leo O'Reilly and Joe McGuffin really serious about a 2 tier membership to save the "Sport!!!" modeller \$5?

John Taylor

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Mark Ellins is getting serious about F2B stunt. He's acquired one of Peter White's Minato planes, fitted an ST46 and is now making great shapes.

At the last KMAC stunt competition in late June the results were: Peter White (Zodiac/Moki 51) from Doug Grinharn (Bear/Aldrich 50) and Mark Ellins. There were more fliers attending but they declined to take to the air in the windy conditions. Shame on them.

The judges were Vic Mitchell, Steve Mitchell and Bill Cecil.

THE "MAGIC" STUNT RUN.

By Kim Webby.

Why is it some modeller's engines just purr along and seem so effortless about their task?

FUEL: For the purposes of the tests on the flying field (coming eventually ..) it is essential that you **"KEEP THE FUEL BREW CONSISTENT"**.

For most engines a mix containing 5% Nitro, 20% Castor Oil and 75% Methanol is a good guide. Plain bearing engines should have a little extra oil, 22.5%. It is not usually necessary in the New Zealand climate to run higher oil contents that you read about in American articles because we don't have to contend with the very hot conditions.

Older ringed piston engines and those with cast iron piston/steel bore should have fuel containing Castor Oil or at least 10% Castor Oil if Synthetic oil is used. Like everything, Castor Oil has disadvantages but it seems to give the engine run a sweetness that synthetic oil doesn't.

You might have noticed some of the "Pro's" putting a squirt of "Armor ALL" (Silicone spray) in their fuel can. This acts as an anti foaming agent and is a good idea to help eliminate foaming fuel caused by engine vibration. The tiniest drop in a litre of fuel is sufficient but note that it needs to be done before you go flying because it does not seem to last long periods.

GLOW PLUGS: Forget the "OS No 8" cliché or at least turn it into and OS No 7! There are no hard and fast rules, in fact if you really know your stuff you can set up an engine to run satisfactory on almost any glow plug heat. However on the fuel suggested containing 5% Nitro, a MEDIUM HEAT plug is where to start. A lot of people use plugs that are too hot and their engines behave too aggressively.

In the flight testing I will describe glow plugs in more detail but for now I thoroughly recommend you try an OS No 7 Idle bar plug. This is the plug that I have success with and it seems to have helped sort out numerous problem engines over the years I have flown stunt

Idle bar plugs offer advantages for engine runs where the engine is breaking from 4 stroke (rich) to 2 stroke (lean) to control the speed of the model through manoeuvres. On smaller engines and those set up to run at a constant relatively high RPM, standard plugs are OK. The OS No.3 is very similar to the No 7 but is a standard non-idle bar plug

The Firepower range is also worth a try. I have a complete set for testing engines and there is an excellent selection of heat ranges e.g. Cold, Cool, Medium, Warm, Hot. I use the set to determine where to start with adjusting fuel and compression ratio.

PROPELLERS: Props must be balanced. My preference is for wooden propellers because they are very light and do not act like a flywheel. The object is to have the engine relatively lightly loaded so that it will gently switch from rich to lean and vice versa when required. Heavy plastic props load the engine up delaying this action that will mean the power will turn on or switch off too late!

For most engine / model combinations, pitches between 5" and 6" will generally work best. The manufacture's instructions will guide you with the approximate diameters to work with. Some engines will tolerate being really loaded down with big props but it pays to avoid this if you can because if the engine is working hard it introduces additional problems, e.g. overheating, lacquering of the internal engine parts which in turn leads to poor inconsistent runs.

FLIGHT TESTING: If you are still with us we are now probably ready to start flight testing to tune the engine correctly for the model, and the flier!

Begin trials by fitting a medium glow plug and set the engine to a comfortable speed so that the model will not "fall out of the sky" when doing basic manoeuvres like loops. Prop the engine so it is not too heavily loaded. On a 35 to 60 powered model at 60 ft to 70 ft line length, this equates to about 5 to 5.5 second laps, 50-60 mph. It is a rare model that can be trimmed to fly safely with speeds lower than this, i.e. higher lap times

Lap times: With the help of a timekeeper, time the lap times both upright and inverted. The object is to have them identical. If the engine run inverted is SLOWER (richer) than upright then the tank needs to be adjusted or shimmed higher in the fuselage. If it is FASTER inverted then the tank needs to be lowered. It is important to get this even before going any further.

It is also useful to time the lap times early in the run and late in the run preferably on a flight where a schedule is flown so the engine is working normally. If the engine is speeding up towards the end of the run (getting leaner) then it could mean the engine is running too hot. If a uniflow tank system is used, with the overflow blocked off airtight, the problem is most likely with the engine. Look carefully at the cooling system and improve it if you can. Next you can experiment with plug heats, trying a hotter plug first.

If the engine is slower towards the end of the run (getting richer) then the engine is overcooling. If the model is still safely flyable, leave this for the time being but at a later stage if it still persists then the oil content can be lowered slightly. I have had to go as low as 17% oil content to cure this problem with some engines

4/2 Stroke switching: The next steps involve a lot of flight trials to tune the engine to suit your flying style. Try flying loops or horizontal eights not worrying too much about quality of shape and keeping a little higher than normal so that you can "focus your ears" on the engine run. Listen to the note of the engine as the model climbs into a loop and goes over the top and down again. If you are running the engine slightly rich so that it is 4 stroking in level flight then the aim is for the engine to gently switch lean as the model climbs into a loop. The engine should then softly switch back to rich as the model starts to descend in the second half of the loop to govern the speed of the model

If the engine stays lean right through the loop or switches off too late so the loops gradually get faster and faster and it's a grim matter of hanging on by the third loop then something definitely needs to be changed!

At this stage I usually do some simple glow plug trials to determine what to do with the compression ratio and/or Nitro content in the fuel. To play safe, try a warmer plug first but I suspect in a lot of cases a cooler plug might tame the engine to something nearer comfortable. When I first

flight tested my Moki 51 it required a cold plug for it to perform somewhere near normal! If the change of plug heat makes a big difference it tells us what we can do next

I now like to tune the engine to run on my favourite glow plug, the OS No.7, medium heat, idle bar.

If you find a cooler plug is necessary to remove the aggressiveness from the engine run so it "puffs" then it tells us the compression ratio is too high. Make or purchase some head shims and keep adding them until the switching from rich to lean and back to rich in loops are just at the right points on the loop to achieve an even comfortable model speed. You can also lower the Nitro content in the fuel but it is wise to have at least 2-3% to ease starting, because in stunt, starting IS a manoeuvre!

If a warmer glow plug is necessary then you could if you want to, run a higher Nitro content or higher compression but these are not really necessary and it would be easiest to stay with a warm or hot plug heat.

Once you arrive at the combination that suits you it is vitally important you stick with the same fuel brew. Even a change of oil content or change from castor to synthetic oil is enough to throw everything out of balance. For example if you change from using a fuel with castor oil to a fuel with a blend of castor-synthetic, the engine run will change dramatically and you will probably need to lower the compression ratio further.

Most engines for stunt seem to tolerate quite a lot of decompression to remove aggressiveness from the run. My Moki 51 required an extra 0.5mm (0.020") of head shims to make me reasonably happy. It was obviously factory set for straight FAJ 80/20 fuel.

GENERAL: In reality changing plug heat, Nitro content in fuel and compression ratio can all achieve the same thing. In the end it is usually a combination of all three that is most practical.

Propellers will make a big difference to the engine run. When you start to get results with the engine set up, try lowering the pitch of the prop to gear the engine down a little so that the engine will have more freedom to switch. If you can run 5" pitch you will most probably be surprised by how much more lively the model feels.

In most cases the changes I have described will improve the majority of engines being used. You can experiment further with venturi sizes and if really serious, change the exhaust and transfer timing, but I have not intended this article to delve that deeply, trying to concentrate on the simple solutions.

In most cases I have not given examples or remedies to keep this article as short as can be. However to reinforce the importance of all the *SIMPLE THINGS*, I will give this example from a recent contest.

The problem engine was an OS LA 46 that ran inconsistently. Sometimes but not always it would break into a 2 stroke and not switch back. Often it would cut part way through a flight. The engine was side mounted on a profile model which was very well built. We made two small adjustments which transformed the engine run so that it did the right things.

First we tightened the collet on the Supre Tigre needle valve and secondly we then supported the over long fuel line with a rubber band to stop it vibrating.

No amount of engine rework would have cured these problems!

Lastly, it is important to use an after run oil following a day's flying. For quite a number of years I have gotten into the habit of sucking the last few drops of unused fuel from the tank then squirting CRC 5.56 into the venturi, flicking the prop to disperse it through the engine. I then plug the venturi and exhaust with a wad of tissue paper. At the same time give your control lines a squirt and put them in a sealed plastic bag. However you need to use a more permanent oil for long storage of engines, but CRC or WD40 is fine for several months. Apart from keeping the engine free, it penetrates the needle valve and stops oil setting in there.

If you forget to do this treatment you will find the first run(s) of the day will be lean as the fuel flow cleanses the needle valve assembly. By using the after run treatment you should not have to make needle adjustments as often.

If you can persevere and sort out the engine department you will remove a lot of worry so that you can concentrate on the **FLYING!!!**



TARMAC Notes for June and July

Vintage combat was held on June 17th. It was presided over, and as you would expect, well run by Jim Stivey. He is a glutton for work, often to his own disadvantage as he often misses out on competing to make sure that the events run properly. The Stivey family was also represented by Lorraine, who spent the afternoon slaving over a hot barbeque and distributing hot sausages to the starving aerobods and spectators. It must be said that there was very little really hot combat. On the bright side, there were not too many broken models, but even starting engines seemed to be a problem for some of the competitors. The good thing about this event is that it is attracting new competitors to combat competition, but they will need a little time to settle in to this demanding form of competition. It is not as easy as it looks is it? We will need some more combat events, more practice and more participation.

It was won by recently returned C/L modeler Steve Walton flying an Orcrist. In second place was Bob Fry, wielding a 'Super Splinter' and in third was Trevor Letchford who is busy learning yet another of the many facets of control line flying. There is no stopping him. The weather was clear and sunny but cool and became more bitterly cold as the day progressed. Grant Lucas, having done his homework and weather studies for the day, told me that it was perfect weather for a speed record attempt. But he has not yet repaired his blindingly fast .60 powered speed ship. That is the one that self destructed while punching a big hole through the four inch diameter aluminium reticulation pipe at the flying field just before the Nationals.

I have noticed that the Vintage racing column in the Australian Control Line News has been absent from the last few issues and I must say that I miss it. The column has vanished without trace or comment. The long time columnist (John Hallowell) not only put a lot of effort into promoting vintage racing in Australia, but if my memory serves me correctly (it often doesn't), he was the winner of the very first Vintage A & B races in Australia. He also provided the plans for me to build my first Vintage team racer; the lovely gull winged 'Pacemaker'. I would like to say thanks to him for the pleasure that he has given me over the past few years by his encouragement, and hard, regular, and probably thankless work. This has allowed the rest of us to keep in touch with the doings of the racers in the other parts of the country. I hope that this is only a little holiday from print for him, but perhaps it needs a few of you East coast gentlemen to cruise past his hacienda and say thanks in person (a little groveling wouldn't hurt either) to get him started again. How about it?

I don't get a lot of aeromodelling mail pouring in as a general rule (just bills). That is probably because I don't write many letters myself. However I recently got an interesting and humorous letter from our wandering

TARMAC notes reporter Jim Trevaskis, who is now spending a life of idle luxury in NSW. He sent a visitors eye report on the Nowra Nationals and his adventures in getting to them which made very good reading. He has promised to find me some occasional news from the East coast and interesting snippets of engine related articles for future TARMAC notes. I am awaiting those with great interest, and so, I hope, are you.

Every once in a while, I am given to idle thought; the rest of the time, I am idle without thought. Here are a couple of those thoughts. One of the things that I like about aircraft is that most of them have a certain beauty of line and form. Even though there have been some designs that only a mother could love, in the main they are designed with aerodynamic function in mind and the finished shape is usually easy on the eye. It isn't always the same with other items that are more subject to the whims of fashion than to the demands of performance. Have you noticed that products as diverse as wristwatches and shaving razors to mention just a couple of items that could be (and once were), purely functional without upsetting too many people, are now designed to look as though they had been made to match the décor on a 1950s Wurlitzer juke box? Why is this?

Another thing that bothers me more than a little is the constant change that is going on about us in the name of progress. No sooner do you discover a product that actually works as you want, than it is removed from the market place to be replaced by another that is not as good. Or worse, not replaced at all. That is just progress, which I am constantly being reminded by irritating nit pickers around me, is a part of life. Maybe so, but I haven't seen any rules that say you have to like all of it (That is probably one of the changes in the pipeline). You can, of course, approach this unfortunate fact of life with a philosophical outlook. Like my pal Geoff, who sagely observed to me some time back that progress is okay as long as it doesn't change anything.

It is that time of year again. The new financial year (plus added GST). It is time for you to pay your club fees and return to financial status. If you don't pay your fees, you have NO insurance and must not fly until you do. TARMAC members should see Alasdair Taylor our long suffering treasurer to square this away as soon as possible. Other club matters you should know about, are the locations of upcoming meetings which, I am sure you will all remember, are always held on the fourth (NOT last) Friday in each month. The July meeting will be at Bruno's house, 87 Hardy Road, Ashfield. August at Adrian Dyson's, 70 Wittenoom Road, High Wycombe. September at Jim Stivey's, 11 Maud Road, Maida Vale. October, Dick Morrow's, 11 Ropele Drive, Parkwood.

While I am on the subject of club meetings, our last one was reasonably well attended, which always comes as a surprise, especially when it is also the Annual General. However, all went well and we ended up with a full complement of club officials as desired. Among the items brought along for show and tell (always interesting and should be encouraged at all meetings) was a tremendously useful tool for anyone interested in indoor modeling. The tool was a Leeson rubber slitter (sometimes referred to as a rubber 'Stripper'). This

beautifully made device can be used to slice the rubber motor strip into narrower strips of great accuracy down to a width of about 20 thousandths of an inch. It has a width adjustment graduated in .001" with one full turn of the adjustment being .025". That enables you to tailor the power of the rubber motors to exactly the needs of each different model. The quality of workmanship is superb. The Slitter came with a short piece of rubber strip in position and already partially sliced as an example. I successfully damaged the sample piece with a trial practice and Trevor Letchford finished the job by shaving strips off the edge of the sample piece until nothing was left. I don't think that he could help himself. It is a pleasure to use. To get your own hands on one of these, contact Charles Leeson, 99 St Georges Crescent, SANDY POINT, NSW 2171. Or Email at Leeson@zip.com.au.

Göran Olsson, Swedish team race mechanic and owner of what is probably the most comprehensive Control line website in the known universe, has yet another triumph to his name. He has designed and developed a working opto-electronic timing system for F2A Control Line speed competitions. This consists of a sensor that is linked to an associated computer. It displays both the time for 9 laps and the models corresponding speed. It can also display the time and speed for each lap. The sensor is contained in a 250 mm high box with a vertical slit opening on one side. In operation the box is placed on the ground with the slit facing the circle at a 20.5 meter radius (for the case of F2A, with 17.69 m lines). At this distance the box will stay clear of landing models, but will need protection from dollies.

The prototype unit has been tested in Sweden and will probably be used at the World Championships in France. Since Hans Bertina will be attending the World Champs and has promised me a write-up of the events, you may get to hear a little about how it went there. Anyone that is interested in this development can read a detailed description of the principles and design on Goran's web page at <http://www.plasma.kth.se/~olsson/cl.html>. Goran is planning to make kits available for sale when he is satisfied with the final product. Email him at olsson@plasma.kth.se for more information. This could have other uses.

I am running out of space now, so to finish off, I am happy to report that the weather finally turned from rotten to absolutely wonderful overnight. So the second weekend in July had vast hordes of Control Line aeromodellers all over our flying field and 3 circles in operation all afternoon. At times during the afternoon, the air was so still that the smoke from the engines lay about like a fog bank. Mixed in with the mob of wrinkly old rotators, were several teenaged and healthy looking, active young chaps. Very encouraging. Among these seething masses, I found Hans Bertina, who brought with him a freshly finished Stunter. Powered by an ST.60, it is a KA10; a kit from Tom Dixon in Georgia (USA) of a Russian design featuring that very Russian looking, large, forward placed cockpit canopy. Hans tells me that the wood supplied was good and very light and that the wing is built over a solid foam core, although it has the appearance of a normal built up wing. I would have expected that to result in a heavy model, but it was surprisingly light. Hans has been using this kit as a practice in finishing, as he has two more stunters ready for finish and he wanted to be sure of

perfection in technique before risking them. One of these is an own design and the other a vintage classic. I am really looking forward to seeing them and will do my best to produce a few photos. As usual, when ever anything new or of interest appears, I forget the camera. That is all for this month. Tight lines and light breezes.

Charlie Stone VH4706
 Email<cestone@bigpond.com>



1999-2000 Club Championship results

This years senior champion Robin Hiern regularly attended and competed successfully in many of the events flown throughout the year. Congratulations to Robin and junior champion Murray Wilson.

Seniors

1st	Robin Hiern	208 points
2nd	Mark Ellins	151
3rd	Graeme Wilson	104
4th	Noel Wake	86
5th	Jim Ray	79
=6th	Harry Bailey	74
=6th	John Hunting	74
7th	Ken Hunting	70
8th	Peter White	66
9th	Callum Agnew	41
10th	Peter Roberts	38
11th	Andrew Nugent	22
12th	Peter Van Meurs	20
=13th	Peter Hetherall	15
=13th	Paul Stein	15
14th	Colin Holmes	9
14th	Vern Marquette	1

Juniors

1st	Murray Wilson	14
2nd	Paul Bailey	11



CONTEST RESULTS

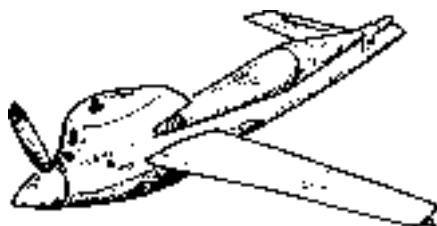


Pos.	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Speed	%
1	S Reeve	S/Speed	OS 15	22.39			22.39	160.79	98.26%
2	R Hiern	Class 1	OS CZ11 PS	15.18	15.24		15.18	237.15	97.83%
3	R Hiern	1/2A	AME 049	13.3	11.3	10.99	10.99	131.79	87.53%
4	C Agnew	Class 1	OS CZ11 PS	17.56	17.07	17.3	17.07	210.9	86.99%
5	N Wake	Class 4	OS 40	11.07	11.18		11.07	261.68	86.23%
6	N Wake	Class 2	PICCO 21	12.8	12.63	12.41	12.41	233.43	80.58%
7	J Hunting	Midge	PAW	DNF					0.00%

Combined Speed held at Frankston 9/07/00

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R Hiern	FAI	Profi	-	12.95		12.95	277.99	98.07%
2	R Hiern	Class 1		15.20	15.48	16.00	15.20	236.84	97.70%
3	N Wake	Class 1	OS CZ11 PS	15.81	15.75	15.78	15.75	228.57	94.29%
4	R Hiern	1/2A	AME .049	10.96	10.48		10.48	138.21	91.79%
5	R Hiern	.21	Novarossi 21	17.97	15.42	15.78	15.42	233.46	90.69%
6	N Wake	FAI	Irvine 15R	15.57	14.63	14.28	14.28	252.10	88.94%
7	C Agnew	Class 1	OS CZ11 PS	-	16.94	16.89	16.89	213.14	87.92%
8	H Bailey	Proto	Novarossi 21	34.01	32.90	31.35	31.35	184.81	85.55%
9	V Marquette	Vintage	McCoy 29	54.00	52.59		52.59	110.17	68.45%

Proto



Important. Speed Rule Changes

Class 1. 2cc

Due to the O.S.CZ11PS motor not being made any more, and there are no other .11 motors as good, it has been suggested that we change the maximum size of motors allowed to 2.2cc (.13c.u.) This move would enable the use of the very good existing R/C car engines and there will be more of them to come, as this is a booming car size worldwide.

We firstly based our class on the .10's which were derived from the car market. The cars have now gone to 2.1cc so we should follow.

This enables new competitors to get into the class and be competitive. There are still some older .11's (Enya-CS-Webra) but these are not as fast as the O.S.

At current speeds the rotational rate at the pylon is getting too fast, and as it is an entry-level class we should go to longer lines to make it easier for the novice. The safety breaking strain margin on the lines is marginal and by going to longer lines ie. 15.92 meters (52ft 3inches) instead of the current 14.47meters we will solve both problems. The timed flight distance would be 10 laps for 1kilometer instead of the present 11laps.

It has also been suggested that the 2.2cc motored models

use .355mm (.014") lines instead of .3mm for the up to 2cc motors to even things up, but having 2 line sizes in a class could be a complication not worth the effort for a .2cc difference in motors.

I have done back to back tests on the three different line sizes on my 2cc model.

Flight 1	15.20	236kph	14.47 x .3mm lines
Flight 2	15.48	232kph	15.92 x .3mm lines
Flight 3	16.00	225kph	15.92 x .355mm lines

We should also increase pull test to 40g

3.5cc Speed Class

In Victoria we have started a 3.5cc speed class. This is because of the big range of good R/C car motors available and some of the other classes falling off in popularity due to lack of motors eg. 5cc. Fliers have suggested that we make the 3.5cc class an official event. The general opinion is that we should frame the rules as listed below.

Motors:- Max 3.5cc

Aircraft:- Only conventional upright models with equal length wings.

Propellers:- Only 2 blade props

Fuel:- Open except for M.A.A.A. banned ingredients.

Lines:- 2 only. 17.69mtrs (58.03ft) X .455mm (.018") single strand, flown for 9 laps = 1 kilometre

This is the same as flown in the U.S.A. except they use 10% nitro in all classes. This is how we have flown it, without any problems. Speeds of 150mph+ have been flown with the promise of more to come. A provisional record has been set at 160mph.

Pull test:- 40g

A poll that I have taken over the last few months on these changes suggests that these rule changes are what YOU modellers want.

Please let me know your suggestions on this subject so that I can get a democratic vote. Only modellers that either fly speed now or intend to in the future should vote on these proposed changes

Contact Robin Hiern

37 Ellery Court. Cranbourne. 3977 Vic.

Tel (03) 59 96 0339

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1411-26

F2ACW01	6 X 6.2	Bendix01 9 x 6
F2ACW02	6 X 6.3	Bendix02 8.5 x 6.5
F2ACW03	6 X 6.4	
F2C04	6.3 X 6.1	
F2C05	6.3 X 6	Supercool
F2C06	6.8 X 5.8	

AROUND THE CLUBS

Control Line Aeromodellers of Gippsland

From Peter White

The July flying day, held at the Moe Race Course, was run in very pleasant conditions - little or no breeze, quite sunny and warmer than you could normally expect for mid winter.

A total of seventeen turned up, including new faces Brian Turner and son Damien, Ted Hall who we had not seen for some time and Warren Frith who is not always available but usually manages two or three outings a year.

Greg Beevor didn't fly but spent the day pitting for son Andrew or Graham Keen while Steve and Vic Mitchell along with Bill Cecil did a superb job in preventing the boundary fence from falling over.

Following the BBQ lunch, a meeting was conducted at which office bearers were elected, these being Geoff

Ingram (President), Paul Richardson (Vice President) and Graham Keen (Secretary/Treasurer). Membership presently stands at ten.

The good weather provided plenty of incentive for nearly everyone to put in at least three or four flights.

The line up consisted of Ted Hall with an Enya 35 powered All Australian. Ron Jones with a Banshee/Irvine20, Graham Vibert with a Top Flight Nobler and a 40th anniversary Fox 35, Warren Frith (Rogue/O.S.15), Graham Keen (Wildcat/O.S.15, Delta/Enya 35), Andrew Beevor with a Stunt Runt/Norvel 061 and a Falcon/O.S.15, Geoff Ingram with the Wombat and a re - installed Taipan 19 and Paul Richardson with his Doctor/ recalcitrant O.S.40 combo.

In addition to the above collection Robbie Hiern and Peter Roberts brought along a mini - airforce which included a number of free flight models.

Robbie had his Thunderbolt fitted with a Frog 500 (the Frog having thrown its shaft some time back is now running with an O.S. 35 shaft), a Mini Lord 1/2A combat that was powered by a Frog 150 until the rod let go, a Midge speed model/AME 049, an ED Racer Glow powered Gook Speedster and two free flighters - a Tomboy/DC Merlin and an aging open rubber model.

Peters' collection consisted of a Cox 049 powered autogyro which resembles a venetian blind in a hurricane but which flies remarkably well and covers a lot of ground on its glide, an Ironmonger/Taipan 2.5, a Madcap free flight coaxed along by an ED Bee and a Magic Carpet with a DC Merlin up front.

Yours truly flew a Keil Kraft Stunt Queen and a Zilch X-Pendable, both running Frog 500's.

Graham Keen and the Beevors, Andrew and Greg, put in some time with newcomer, Damien Turner who was going solo by the end of the day - well done Damien and teachers!

Geoff's' Wombat was back to its old self again with the lower power of the .19 (as against the previously installed Fox35) enabling Geoff to perform the old hovering, taidragging tricks including putting the tail down, dropping on to the wheels taxi-ing and taking off again.

All in all a successful day was had by most (ask Paul about the value and parentage of the O.S.40FP) with a small group staying to the bitter end to slink away from the field in darkness.

Our next day will be at Hobsons Park on Sunday 6th August. Because the place is now privately owned and parts of it have been fenced off, newcomers may have difficulty finding their way in.

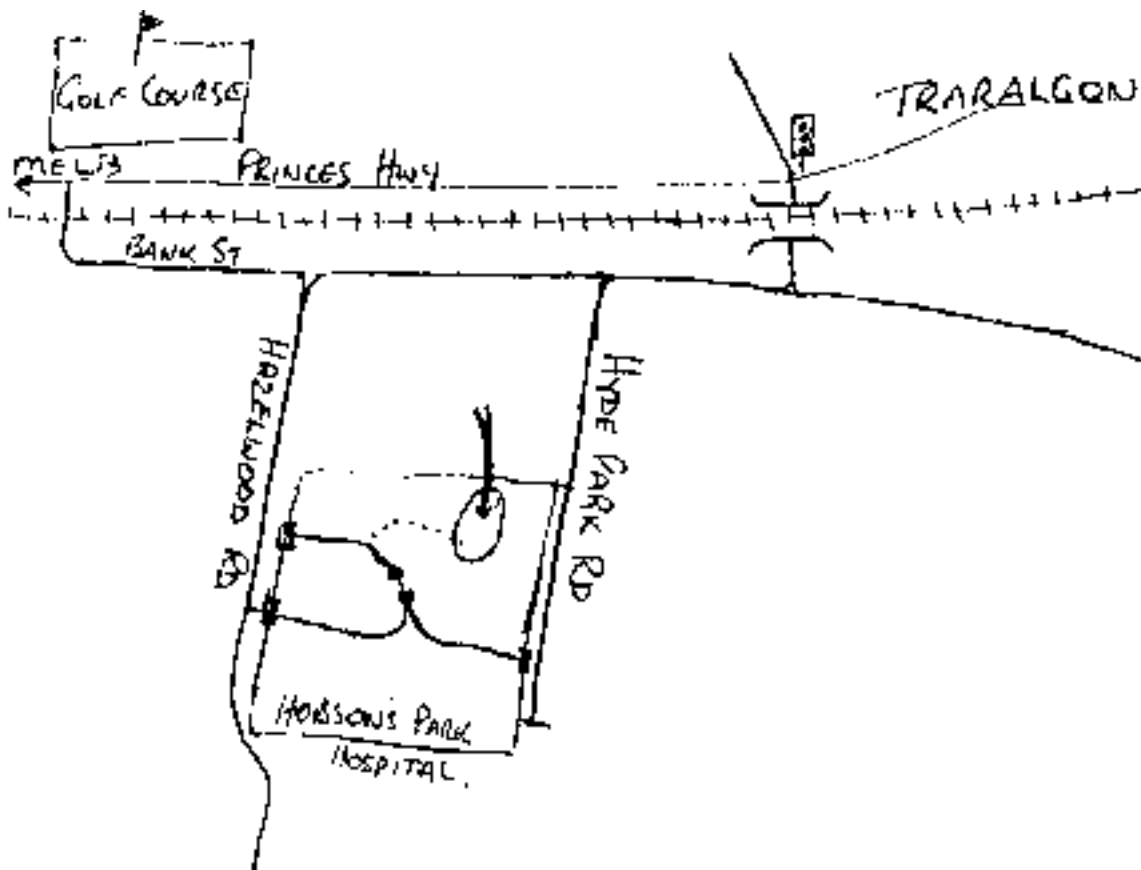
Entry is by way of either the Hyde Park Road gate or the second gate on Hazelwood Road, drive into the heart of the place, turn North through a roundabout or two and make your way to the right off the road towards the oval.

Refer to the map below or contact Paul or me on the numbers below if you have any problems.

I'm sure Graeme Wilson or John Hallowell could give you more details on the racing events. As per last year, there will be a free BBQ

The September #rd competition day at the Warragul Showgrounds draws closer. We'd like to see a good roll-up for Vintage and Classic Aerobatics, Team Racing, Combat and Rat Racing.

For general details contact Paul Richardson on 51 47 2374 or 0402 066 753 or Peter White on 5623 5120 or 0401 496 265



World C/L Championships Gossip

Searching the Landres 2000 Net site has not yet produced any information or official results but an over-seas correspondant has sent this information.

In team race the winners were Perrat/Perrat using a Titov engine. All finalists did a heat time under 3:14 and the final winning time was 6:28. Second place getters used a Mazniak for a time of 6:45 Third place had a DNF. Of the Australian teams, Fitzgerald / Cameron had a best time of 3:28, Justic / Owen 3:33 and after five rounds (including 2 re - flights) Wilson / Stein could only manage 3:47 due to the compression backing off. The two Singaporean flyers that attended the Vic State Champs this year bought the third place getters model/engine combination for \$3000

In Combat, Robert Owen made it to the 3rd round.

In Speed the winner was Perron of France with a speed of 297.5 KPH. A close second was Ken Morrissey of England with 297.0 KPH Third was P. Halman. Brian Howser did 280 KPH and John Walker from Australia had a speed of 270 KPH

More news and results when they arrive!

Class 2 Team Race

From Ian Garton

Just before Christmas 1999 you noted in ACLN that Robin Hiern had supplied a New NovaRossi, modified to Class 2 T/R specifications to one of the "Hot shot teams from Queensland"

After a couple of months surreptitious checking if anyone else had a NovaRossi, and finding no one, we concluded you were referring to us (John Major and Ian Garton). Up to this point we did not realise we were a "Hot Shot team", but thank you for our promotion. (If you really meant someone else please don't set us right).

John and myself shared the purchase of the new NovaRossi but it fell to me to construct the new plane. It

will be based on our current Class 2 "Lunar Sea" which is shown in photo below.



The new plane will be called "Lunar Sea 2" and by now you will have worked out the pun in the name, because John and myself, with a combined age of close to 120 years think that continuing to compete in T/R is pretty close to lunacy, be it one or too. (Or also)

Lunar Sea is powered by an 'MVVS 21Fire' also reworked by Robin Hiern. It was originally piped but the hot starts with the pipe were way beyond my skills so it is now run without the pipe. Times are high 16's but with low nitro range brew we get 50 laps or so, offsetting to some degree the lack of speed. The main problem with Lunar Sea is it's lack of reliability, with bits falling off, failing to operate, or clogging up every time we try to race.

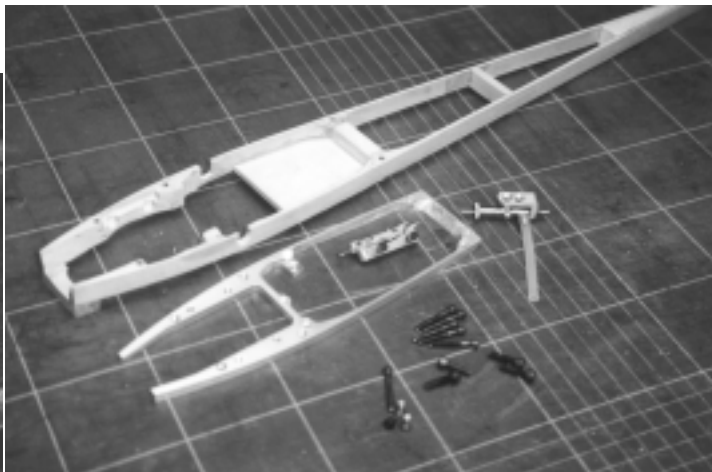
Lunar Sea 2 has been designed to avoid these weaknesses discovered in the original and some other photos are attached.

The pan is cut from 5.5mm ballistic aluminium, all by hand. This aluminium is very tough and threads very well. All components including tank are attached to the pan. (The ballistic aluminium is a relic of when I supported my kids by doing "Bank Jobs" as an architect for bank security installations).

Pan / Crutch assembly



The crutch is mountain ash and attachments are by Tee nuts and 4x40 socket heads counterbored flush and into thickenings in crutch. The engine belts are threaded and lock nutted.



Disassembled pan, crutch, shutoff and remote NVA

Wings (Completed since photos) are 6mm + 3mm balsa, finished all over with epoxy and 1/2 ounce glass.

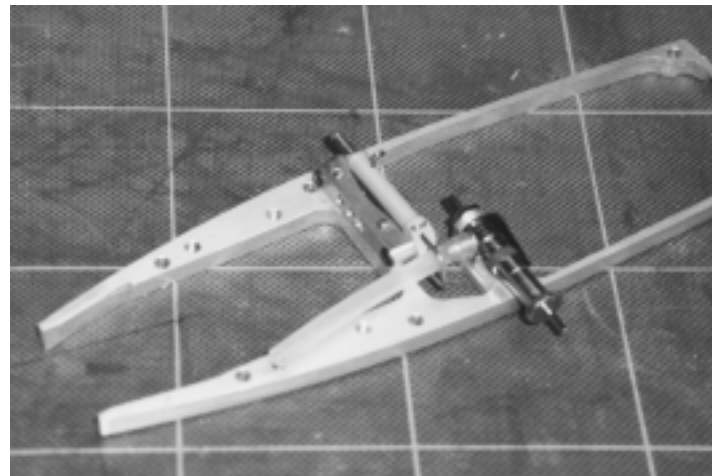
The tailplane (Also complete) is .4 ply each side of 1.6mm balsa with hinge fixed by the alternate aluminium tube method, all held on by epoxy fitted 1/2 ounce glass.

The on board power has been a continuing source of trouble in Lunar Sea. (You can see the troublesome telephone jack lead just ahead of the wing in the photo) Lunar sea 2 will have a PCB tailplane with all the wiring inside the plane fully supported against vibration.

The tank (Good on Lunar Sea) is heavy gauge brass, lapped joints and suction feed with filler valve supplied by the boys at Muswellbrook. (We'll probably re - use the Lunar Sea tank)

The wheel is sprung with alternate wheels for hardstand or grass fields.

Since assembly is completely carried out using 24 hour epoxy and the fuselage components are glassed inside and out the building process is excruciatingly slow (plus I'm pretty lazy) so I don't expect the next plane to be finished much before Christmas. I will send more stuff at that time.



Pan inverted, shut-off and NVA attached

F.A.I. Rule changes

Class F2B - Aerobatic Models

c) 4.2.16.3 Reverse Wing Overs (one required) – Switzerland

Add after last sentence:

All turns to and from level flight should be of approximately 1,5 metres radius, not exceeding 2,1 metres.

d) 4.2.16.7 - Consecutive Inside Square Loops (two required) - Switzerland

Remove terms "equal sized" in the third line, as to read:

Consecutive inside square loops are judged correct when the model starts from normal flight level and flies a square course consisting of two loops, each with four inside turns of approximately 1,5 metres radius and straight equal sized segments.....

Remove the following sentence from paragraph "Errors":

~~Sides of loops are not equal.~~

e) 4.2.16.8 – Consecutive Outside Square Loops (two required) – Switzerland

Remove terms "equal sized" in the third line, as to read:

Consecutive outside square loops are judged correct when the model starts from level flight at 45 degrees elevation and flies a square course (starting with a vertical dive) consisting of two loops, each with four outside turns of approximately 1,5 metres radius and straight equal sized segments

Remove the following sentence from paragraph "Errors":

~~Sides of loops are not equal.~~

These three proposals were approved unanimously by the Plenary Meeting – Effective immediately.

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F.A.I. Rule changes F2C - Team Race Models

b) 4.3.6. – Organisation of the Races

i) France - Add this sentence at the end of paragraph 4.3.6.a-

Qualifying races with less than 3 teams will be put at the end of the draw, in order to allow a three team race utilizing team (s) which have been granted an attempt.

Unanimously approved by the Plenary Meeting – Effective immediately

ii) Denmark - Amend paragraph 4.3.6.c as follows:

When it is not possible to organize a reflight for a team which has been granted an attempt, the judges will ask for volunteers (from different countries in the case of CC and W.CH) to fill up the qualifying race. The jury will organize an appropriate draw for the race among the volunteers and the team with the attempt. If there are no volunteers, the team will be allowed to fly alone to complete their qualifying race reflight during the same round (requires an exception in the corresponding rule 4.3.8.)

Unanimously approved by the Plenary Meeting – Effective immediately

iii) Denmark – Amend paragraph 4.3.6.d:

The teams may be allowed to run their motors just before entering the circle under the organiser's supervision so the running does not interfere with the starting procedure of a heat. Mechanics are not allowed to walk with a running engine

Unanimously approved by the Plenary Meeting – Effective immediately

iv) Denmark - Amend paragraph 4.3.6.e

A pitting area (4.3.2.a.) is occupied by each of the models which are to participate in the race. The model of the team designated first during the draw occupies the place chosen by that team. The other teams choose one of the remaining free pitting areas in order of the draw. The chosen pitting areas are considered occupied until the race is finished.

Unanimously approved by the Plenary Meeting – Effective immediately

v) Denmark - Amend paragraph 4.3.6.f:

After entry to the circuit, it is forbidden to start a motor before the first signal has been given by the Circle Marshal, unless allowed by the Circle Marshal.

Unanimously approved by the Plenary Meeting – Effective immediately

WANTED

Copy of plan or tracings of kit parts for "Aeroflyte
Taipan" 2.5cc trainer. Will consider to buy genuine kit.

Taipan 2.5cc Glow P.B.

Taipan 1.5cc Glow in good or excellent cond.

Ron Varnas (03) 9579 1143

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Magnum 40, reworked by Tom Dixon

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Advisory Committee"

The Northern Area District Championships

are to be held at the Newbridge Road flying site in Marong on the
weekend of 12th-13th August

Events on Saturday will be

Junior Simple Rat Race

Simple Rat race

Simple Goodyear

Sundays events are

1/2 A Combat

Vintage A Team Race

Australian B Team Race

Catering will be available on Sunday

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