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THE VOICE OF CONTROL LINE  
AEROMODELLERS FROM  
AROUND AUSTRALIA

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Number 67



Produced by the Victorian Control Line Advisory Committee

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**Copy Deadline for next issue is:  
Wednesday 18th June 2003  
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**

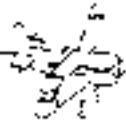
Contest results should be tab delimited, ie use a single tab between each column of results, if submitted by disk. This makes formatting much easier on the editor. Harry Bailey. 37 Thompson Street. Clayton VIC. 3168.

Telephone (03) 9543 2259.

Email address:- [acln@ozemail.com.au](mailto:acln@ozemail.com.au)



# COMING EVENTS



## CONTROL LINE CONTEST CALENDAR 2003

DATE	EVENT	CLUB
JUN 1	CLAG Country Flying Day	MOE
JUNE 8	Balloon Burst, Limbo.	SMAC
JUNE 15	<b>FAI Team race, Goodyear,</b> 1/2 A Combat, FAI & Modified Combat.	CLAMF
JUNE 22	Vintage Stunt, Combined Speed, Vintage "A" Team race.	KMAC
JULY 4	CLAMF A.G.M.	
JULY 6	Simple Rat race (whipping permitted).	SMAC
JULY 13	<b>FAI &amp; Combined Speed,</b> Jnr 2.5cc Combat, <b>Mini Goodyear,</b> Jnr 2.5cc Rat race.	CLAMF
JULY 17	KMAC:- A.G.M. and Auction	
JULY 27	FAI (Stuntmasters ), Novice & Jnr aerobatics Class 2 Team Race	KMAC SMAC
AUG 3	Simple Combat.	SMAC
AUG 10	<b>FAI Team race, 2.5cc Rat race,</b> 1/2 A Combat.	CLAMF
AUG 24	Classic Stunt, Vintage "A" Team race, Combined Speed.	KMAC
SEPT 7	Classic Stunt, Vintage Stunt, Aust "A" Team race, Classic "B" Team race, Simple Combat.	Warragul
SEPT 14	Vintage "A" Team race, Aust "A" Team race.	SMAC
SEPT 21	<b>FAI &amp; Combined Speed,</b> Simple Rat race, 1/2 A Team race.	CLAMF
SEPT 28	FAI, Novice & Jnr Aerobatics, Classic Stunt, Bendix.	KMAC

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

**WMAA** Horsham. Contact :- V. Cresp (03) 5382 4065

**BRCAC** Bendigo-Newbridge Rd . Marong

Contact :- S. Power 03 54 424 925

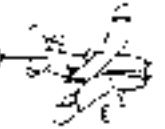
**CLAG** Contact :- Graham Keene (03) 51924485

Details of venues can be found on web site [www.clagonline.org.au](http://www.clagonline.org.au)

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.



# COMING EVENTS



## CLAS 2003 CONTEST CALENDAR

DATE	CLUB:	EVENT:
1st Jun	KMFC	Palmer / Aldrich Classic Stunt
7th/8th/9th Jun	N.S.W. STATE	C/L CHAMPIONSHIPS
15th Jun	IMAC TBA.	F2B Aerobatics
13th Jul	KMFC	"AGM, 2.5 Stunt, F2CN & Slow Combat"
19th Jul	REMAC (incorporating award for best All American)	Vintage Stunt
26th Jul	SSME	"Vintage 1/2A, Vintage B, Goodyear, Combined Speed"
27th Jul	SSME	"Phantom, Vintage A, Bendix T/R"
3rd Aug	IMAC (contact Owen Pearcey)	FUN FLY
10th Aug	KMFC	F2B Aerobatics
31st Aug	SSME	Slow Combat ( Bonus points for WW2 style model).
14th Sept	KMFC	"Classic Stunt, Vintage Stunt, Simple Rat, Slow Combat, SWAP MEET"
11th Oct	REMAC	Vintage Stunt (including special award for best Fox powered model)
19th Oct	IMAC (Berkeley)	F2B Aerobatics
9th Nov	SAT (Kelso Park)	F2B Aerobatics
16th Nov	NACA (Gateshead High School)	Classic Stunt
16th Nov	KMFC	Vintage A&B, Vintage 1/2A,
30th Nov	SSME	F2B Aerobatics
7th Dec	Doonside (at Kelso Park)	F2B Aerobatics
14th Dec	KMFC	Christmas Party and Fun Fly

"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 H.S., 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."

# CLASII CONTROL LINE EVENTS CALENDAR 2003

Flying field at Leichardt Park just past One Mile Bridge  
Ipswich

Members fly most Sundays between 9am and 1pm. Club competition days are held on the second Sunday of the month. Visitors are most welcome but please bring your F.A.I .card to prove current MAAQ membership. This is a Council Park with permission given to fly only control line planes, no radio and only between the hours of 9am to 5pm. Further information on club activities can be obtained from President Mark McDermott 07 32889263 or Secretary. John Taylor 07 33927679 email [johndt@iprimus.com.au](mailto:johndt@iprimus.com.au)

Jun 8 <sup>th</sup>	Fun Fly In
July 13 <sup>th</sup> .	Clasii Rat T/R Senior/Junior Vintage A & B Classic B
August 10 <sup>th</sup> .	Clasii Rat Fun Fly

.Events later in year will be advised at a later date, but as usual Clasii events will be held on second Sunday of each month

FOOD AND DRINKS ARE AVAILABLE AT THE FIELD ON CLUB DAYS. Visitors are requested to make a gold coin donation to club funds for fun flyins. Competition events commence 9.30am. Separate entry to apply to each event. Clasii (simple) Rat rules available from Secty.



## The Prop Doctor (Supercool)

### Application of Doppler to F2A speed

The method of Doppler analysis is described elsewhere on this website [www.supercoolprops.efel.com](http://www.supercoolprops.efel.com). In a nutshell, the engine sound radiated from a model in flight carries information which permits the in-flight determination of airspeed and engine RPM. This information is extracted by analysing the sound via the sound card in a computer, using physics first described by Herr Doppler and a computer code written by Richard Horne which yields the frequencies present in the sound.

The method has wide application, most notably in F3D pylon racing and Control-line speed events, which are both quite noisy events. However, the method, while robust, does require corrections to be applied to yield quantitative results, especially with respect to the airspeed component. F2A in particular poses a challenge. With the models circulating at one lap every 1.3 seconds (in your dreams!), the Spectrogram code yields results which are somewhat distorted. So why should this be?

The sound frequencies we require for the analysis are those present when the model is pointing directly at the microphone, and when it is pointing directly away from the microphone. We call these values Fcoming and

Fgoing, for want of something better. In the case of F2A, the amount of time this happens is measured in milliseconds, not long enough for the sound sampling period of Spectrogram.

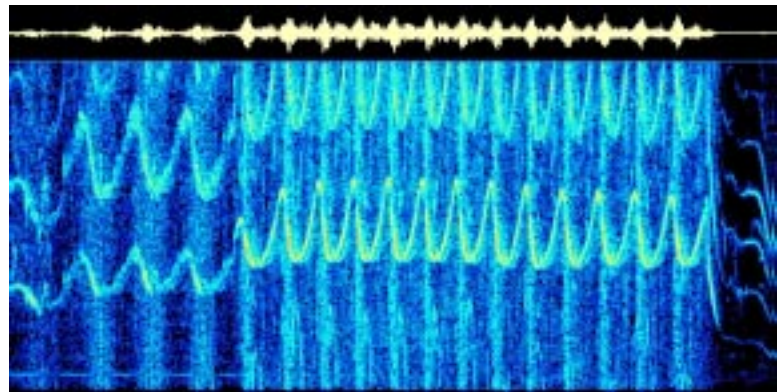
What does this mean? Well in Spectrogram, one is required to make certain settings which permit the program to work. In the case of F2A, these settings are the Sample Rate (Hz) and FFT size (points). They should be set to 11k and 2048 respectively.

Now with these settings, it takes the program about 186 milliseconds to work out the frequencies. In that time the model travels about 14 metres and changes direction quite a lot. This means that the signal we are trying to analyse has changed during the time of sampling. In the case of F2A, this introduces an error of about 20 kph in the Doppler-determined airspeed. That is not really cool at all! We don't want that! In contrast, there appears to be almost no error in the RPM result, so we are half-way there!

Now lets do something Supercool. Surely if we know what is causing the problem, then we can do something about it? Yep, sure can. It works this way.

First guess the speed of the model. Then we can readily calculate Fgoing and Fcoming just from the geometry of the model trajectory, which we hope we know, although not always! For each of these, we really need an average value over the 14 or so metres the model covers in the sampling time. If we do this all around the circle, then we can figure out a correction factor which is going to fix things up (we hope!)

Now from here on it gets messy, all that maths and geometry, not much fun, either to read or to write! No need to bother, all you really need is the code. If you log in to my website, both the source code and the .EXE files are there, along with a sample Spectrogram.



Now how good is this code? Hard to know. But with a model doing about 280 kph, the new code gave a value of 277 kph. Not bad, that's about as good as you will get from the Doppler method. Of course, you get this lap by lap, which is really good to see how steady is your motor run.

That's it, have fun, folks!

# Results of the 2003 South Australian Control Line Championships

## F2B Aerobatics

Name	Round 1	Round 2	Round 3	TOTAL
Paul TURNER	3100.5	3062.5	3157.5	6258
PJ ROWLANDS	3034	2975	3030	6064
Mark ELLINS	2645.5	2626.5	2875.5	5521
Richard SPURLING	2547	2701	2761	5462
Leon BAIRD	2283.5	2397.5	2190.5	4681
Ken TAYLOR	1860.5	1866.5	1698	3727
Peter ROWLANDS	1788	1758.5	1935	3723
Mike HAWKEY	2176	1377	446	3553
Maris DISLERS	337	837	0	1174

## Classic Stunt

Name	Round 1	Round 2	TOTAL
Richard SPURLING	1387.5	1382	1387.5
Mike HAWKEY	1291	1298	1298
Ken TAYLOR	1267	1164	1267
Maris DISLERS	950	1175	1175
Greg ROADKNIGHT	950	924	950

## Vintage Stunt

Name	Round 1	Round 2	Static	TOTAL
Maris DISLERS	481	451.5	73	554
Richard SPURLING	468.5	469	67	536
Mike HAWKEY	460	349.5	62	522
Ken TAYLOR	337.5	0	72	409.5
Peter ANGLEBERGER	255	182.5	58	313

## F2A Speed

Name	Round 1	Round 2	Round 3
Hugh SIMONS	281.04	289.40	<b>290.17</b>
Maris DISLERS	168.67	-	<b>270.96</b>
John WALKER	240.31	<b>268.41</b>	259.95
Ted BURFEIN	133.47	160.90	172.30

## F2C Team Race

Name	Round 1	Round 2	Round 3	Final
R Justic – P Stein	Disq.	3:21.75	3:16.22	<b>7:19.78</b>
R Fitzgerald – M Ellins	3:24.9	3:20.52	DNF	<b>7:22.31</b>
Geoff Potter – R Harvey	3:55.79	3:52.84	3:27.28	<b>7:51.98</b>
G Knight – Grant Potter	DNF	<b>3:42.31</b>	DNF	-
B Langworth – T Burfein	<b>4:06.72</b>	4:06.74	5:39.65	-
J Hallowell – K Baddock	<b>4:11.40</b>	DNF	DNF	-
P Cameron – M Dislers	DNF	-	-	-

## Combined Speed

Name	Class	Round 1	Round 2	Round 3	Percent
John WALKER	Sport Jet	-	-	<b>232.70</b>	96.4
Murray WILSON	Midge	122.74	-	<b>129.40</b>	79.3
Harry BAILEY	B Proto	184.66	185.69	<b>186.35</b>	78.1

*Below John Walker with his Sport Pulse Jet with "pump man" Ted Burfein in the background.*

## Vintage A Team Race

Name	Round 1	Round 2	Final
G Wilson – M Ellins	3:33.60	-	<b>7:48.76</b>
B Langworth – H Bailey	3:59.03	3:57.75	<b>8:14.57</b>
J Hallowell – K Baddock	3:36.34	-	<b>8:47.09</b>
G Knight – R Harvey	<b>4:14.81</b>	4:34.42	-
M Wilson – R Fitzgerald	<b>5:07.44</b>	5:47.77	-



## Goodyear Team Race

Name	Round 1	Round 2	Final
R Fitzgerald – G Pretty	3:22.65	-	7:07.52
G Wilson – M Ellins	3:54.56	-	8:36.81
M Dislers – M Poshkens	4:01.27	5:57.57	8:38.22
B Langworth – N Baker	4:30.81	4:29.16	-

## Classic B Team Race

Name	Round 1	Round 2	Final
J Hallowell – K Baddock	3:20.16	3:14.44	6:20.30
G Wilson – M Ellins	3:17.58	-	6:40.56
B Langworth – G Potter	3:26.92	3:10.31	DNF
H Bailey – M Poshkens	3:49.73	3:44.42	-
G Knight – R Harvey	4:14.47	3:53.09	-

Name	Place
Maris DISLERS	1
Graeme Wilson	2
Greg PRETTY	3
Keith BADDOCK	4

## F2D Combat

Results
W W L B W
L W B W L
W L W L W D
LL

## 1/2A Combat

Name	Place
Graeme WILSON	1
Harry BAILEY	2
Murray WILSON	3
Greg PRETTY	4
Leon BAIRD	=5
Maris DISLERS	=5

Results
W W W W W
W W W L L
W L L W
L W L L
LL
LL



*Winner of F2D, Maris Dislers*

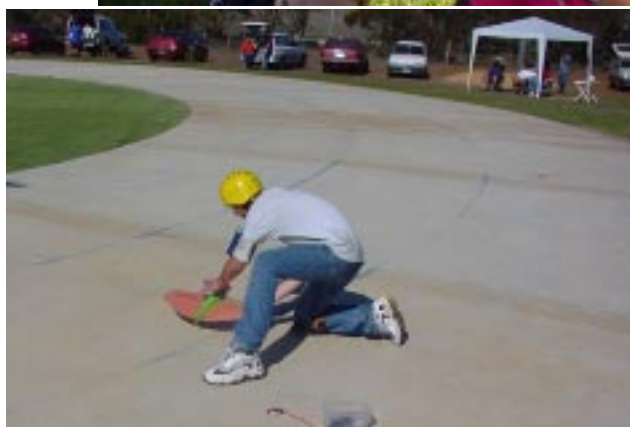


*Fast paced action as Ray Harvey pits Gavin Knight's Crescendo.*

*While the men flew Combat, Fiona, Wendy and Robin got serious about their knitting*



*Action in the F2C final with Potter, Justic & Fitzgerald*



*Grant Potter pits on the hard stand at Monarto in South Australia*

# South Australian State Championships photo gallery

*Pictures by John Hallowell*



*Geoff Potter gave his all in the final and announced his retirement from F2C when the race was over.*

*Paul Stein shows the F2C pitting style that makes him one of the best in the business*



*Mark Ellins pits the F2C racer. Was unlucky not to record a sub 3.10 heat with Rob Fitzgerald.*



*John Walker holds onto his jet in Combined Speed*



*Visiting British World Champs flyer Bernie Langworth teamed up with a former countryman in Harry Bailey in Vintage A.*

*Below:- Ken Taylor's 'Klassique' stunt model.*



*All the finalists in F2C*



*Beautifully finished Nobler by Richard Spurling*



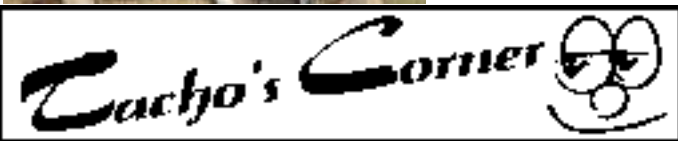
Vintage A finalists at the Sth Aust. State Champs.



Winner of FAI Aerobatics was Paul Turner and his superb 'Wind Wiper'



Keith Baddock and Maris Dislers flying hard and fast in FAI combat.



The new MVVS 49RE with rear header pipe and quiet muffler. Just cut the alloy lengths to the preferred lengths and join with plastic exhaust tube.

## ENGINE TEST: MVVS 49RE SWEETER FOR STUNT

*Derek Pickard looks at the newly upgraded MVVS49 stunt motor which now boasts rear exhaust, lighter weight, new head design, different porting, quiet muffler and a sweeter stunt run.*

Some makers never stop upgrading their products trying to please customers while other manufacturers do little while claiming the maximum.

Fortunately, on the good side of the ledger is MVVS. For years the Czech engine specialist has been including stunt engines in its line-up with the well regarded 49 having carved out a niche following.

Not content with just a good product, the maker has continued development and has now taken the latest - and third - version of the 49 to its best stunt performance with various minor and major differences.

This schnerle ported stunt engine has proven it self to be a pocket powerhouse in previous versions but MVVS never got it completely right. The first 49 had the unusual (and impractical) rear exhaust and rear inlet layout while its successor corrected the NVA with front mounting but only

a side muffler was supplied. Both performed well but the layouts needed more work for the final plot to be perfected.

MVVS with its UK-based supplier have now moved to ensure its stunt motor (the Czech company calls it the Akrobat) is now to be taken very seriously. The combined talents of the two have upgraded the design, used lighter alloys to reduce weight, altered the transfer porting for an easier 4-2-4 run, developed a new combustion chamber and fitted a rear exhaust system.

Engine supplier and stunt enthusiast, Just Engines, was the main force behind the development of the stunt rear exhaust system. This versatile

arrangement has a header pipe/riser which can allow for the fitting or a tuned pipe or the conventional stunt-type muffler. The header is fixed to the engine by two bolts and the muffler utilises a plastic sleeve for its join to the header.

The lengths of the tubes in both the header pipe and the muffler are supplied long and are subsequently cut to suit the application. This means the engine can be customised to fit any model as well as accommodating lots of engine angle offset while still using a centered long exhaust.

Both the header pipe and muffler are made from thick wall alloy which means the final layout is an ounce or two heavier than other similar devices. In fact at 3.5 ounces cut to the length on the test plane, this exhaust is definitely heavy when compared to, say, the Stalker rear muffler at just over 1.5 ounces.

To comply with the need to keep our hobby quiet at various flying sites, the Just Engines muffler is just that - a muffler. The quietening effect has been achieved without the use of a restrictive baffle. Instead, this new muffler has the smart trick of pushing the tail pipe forward into the centre volume of the muffler with the forward tip sealed and an outlet hole machined into the pipe around the back just below the top. This avoids the normal positioning of the inlet to the tailpipe at the very end of the muffler volume body - where the concentration of peak exhaust pressures do the obvious. This new smarter reduces noise without removing power. (I can remember using a similar trick in the mid-1970s when quietening off-road racing 250 two stroke motorcycles. Nothing is new.)

The Just Engines header pipe is 200mm long to give a number of options. I cut it as short as practical as I did with the intake pipe for the muffler. The total length of the two in the test plane was to allow for the total exhaust layout to be accommodated between the rear of the engine and the undercarriage mounting. (Fliers wanting other layouts can cut accordingly.)

The muffler body is 80mm long and 37mm diameter. Although the weight is over 2 ounces, it is well made and the heavy wall construction with the internal baffle substitute has the effect of reducing noise. And among the advantages of a rear exhaust is the way the muffler weight is located closer to the centre of gravity than with a side outlet.

As delivered, this engine is set-up for a slightly high compression ratio so if you prefer the better running higher nitro fuels, the head has to be removed and a minimum of one of the two shims fitted (provided in the box). For the numbers people, I found this meant using one shim for 5% nitro and two shims for 10 nitro. And since this 49 was to be tested in a big ship, both shims were fitted; which meant going down in compression ratio from 9.3 to 8.3:1.

Lifting the head reveals the new combustion chamber layout which is a development on the normal 360 degree concentric squish band and a central plug location. But MVVS has now repositioned the plug for the element to be in the centre of combustion - vertically as well as horizontally.

Also on the inside is the altered porting. Whereas the exhaust to transfer used to be around 140 to 120 degrees, the exhaust lead (<sup>3</sup>blow-down<sup>2</sup>) has now been reduced to 140/130 timing. This is done for a better stunt run at the cost of all-out power.

An impressive aspect to this MVVS is the excellent construction layout. The head is fixed by four

screws that go down into the cylinder fin jacket. The liner/barrel is separately held into the crankcase with another four screws. This way the head can be removed for shim tuning with a minimal risk of turning the liner inadvertently to mis-match the piston fit. It is all well thought out with high build standards. And then there are the little things which impress; like the method of not using a gasket for the back plate - instead a thin O-ring is fitted so the cover can be removed without fear of breaking a weak paper gasket.

A interesting change is the way this latest engine tops the scales at 11.7 ounces whereas the previous model weighed 12.3 ounces. As both engines appear the same apart from the new case, obviously a lighter alloy has been used.

Size-wise, this 49 fits between 35mm width-spaced bearer spacings.

Like a growing number of engines these days, this one has a choice between a rear or a front NVA. I chose to run the front version because it allows a longer fuel delivery pipe that can accommodate a decent-sized filter. MVVS<sup>1</sup> front NVA is an off-set type similar to the old Tigre 46.

Another improvement is the better piston/liner fit. The previous model was very tight and demanded considerable breaking-in. From new, this engine had only a reasonably tight piston/liner fit but which quickly ran to normal running clearances. (Previous experience has affirmed the final piston/liner fit is one which remains for many years. A friend bought an MVVS 49 stunt nearly ten years ago for serious use and it is still in excellent condition.)

In the air, the performance is exactly what the maker claims it to be - a true stunt 49 suited to traditional ST46-size ships. One difference though is this new MVVS 49RE needs less fuel from a smaller tank which offsets the new Czech engine's extra weight compared to a fuel hungry old Tigre.

The 4-2-4 behaviour is like always a matter of matching compression with nitro and prop. Testing revealed it was happiest with a 12x5.5 Bolly fi-glass two blade set to around 8200rpm. This then pulled the big test ship on 66 feet lines.

Going a little over-the-top and trying a true 60-size prop (12x5.5 Eather three blade) saw the Czech predictably unable to cope and resort to running at a constant 7600rpm without a 4-2-4 break.

No attempt was made to test the engine with a tuned pipe, but from the specs it can be predicted that the performance should be good.

The plane for the engine test was the same Karousel used for the previous heavier version of this MVVS with a side muffler. Only this time, the nose was converted to accommodate the rear exhaust. Originally built for a Moki 51, the plane is on the slightly heavy side making a powerful engine vital. Fortunately, designer Ken Taylor used a thick wing which gives lots of lift that combines with the good engine output to haul the whole plot through the F2B pattern.

The modifications for fitting were as simple as blocking the hole previously needed for the side mounted muffler and hacking great lumps out of the cowl base for the rear pipe and large muffler. Additionally, lower side cheeks were fitting to the front lower fuse as a cowl is no longer used. Also, a rear muffler mounting facility had to be incorporated. A recommended method is to use a version of a typical pipe mount which allows ordinary plastic cable ties to be hold the muffler. And if the mount incorporates a



positive stop to the rear then the muffler has nowhere to go if it loosens slightly.



**Exhaust layout shows the 3 fixings and the way the plastic joining tube counters the engine off-set.**



**Test plane was the big Karousel altered to accommodate the rear exhaust.**

Here a bit of honesty has to be revealed.....because I never fly in noise sensitive areas, I chose to drill out the muffler's rear tail pipe to the full internal diameter. This slightly increased the noise but gave a bit more power. I also made a venturi extension to fit an air filter. (All my engines have filters, use more than adequate oil and last forever.)

Running 20% oil and 5% nitro, this MVVS handled the test plane through the F2B pattern for only 90cc of fuel. Such a light fuel load definitely helps to offset the ounce of extra weight of the thick-wall exhaust. Upping the nitro content to 10% raises power a touch and a fuel capacity closer to 100cc is needed.

The only real downside of the MVVS 49RE, is the cost of the rear exhaust with the price of the engine. The two added together take what was previously a bargain engine into the same price as some other top stunt motors. That's a pity, but the engine is still a good unit and there's no doubt the rear exhaust is the best way to go. Another little grumble is the choice of an unusual 7mm as the shaft size; but that's no more than an occasional irritant

The Just Engines' stock rear muffler on the 49RE is quiet. It can be flown near the church grounds on Sunday afternoon and only the recently dead would object. For sites with a noise problem, this is suitable. And most importantly, the exhaust muck exits under the fuse well

away from the model - the way it should be.

Conclusion: This is a well made stunt engine with a good performance and a reasonably quiet muffler.

Declaration of interest: Derek Pickard bought this MVVS from Just Engines, Newby Farm, Newby Cross, Carlisle, Cumbria CA5 6JP, UK (email justengines@enterprise.net or web www.justengines.unseen.org). The motor sells for £65, the rear manifold and muffler are another £50 (add VAT for UK sales) and air post is £4.

(PLEASE NOTE: In a recent test of the Stalker Pro 61 2-2-2, I described the engine as giving an excellent 2-2-2 run. That was my part of the test and it was correct. But I also stated input from colleagues insisted that simply lowering the compression, fitting a bigger prop and richening the needle sees the engine transform into a 4-2-4 performer. W-e-l-l, subsequent testing by myself has found that to be wrong. The 2-2-2 Stalker is just what I found it to be.....an excellent 2-2-2 engine. Trying to convert it with shims/nitro/prop merely slightly reduces the power slightly while the engine retains its designed 2-2-2 run. Sorry about this folks, but obviously my colleagues were confused and that third party mis-information has to be reported. I've now gone back to doing what I've normally done - fully stating my findings while always respecting the experiences of good fliers.)



**Herb Hanna bought an MVVS 49 when they were first released (with the then impractical rear inlet) back in 1994. It has given 8 years excellent service. For the past 5 years the engine has been in this oversize Grondal Nobler which he used to compete at the World Championships.**

## TARMAC Notes for April and May

Sometimes there isn't much to write about and other times I wonder which bits I should leave out. This is one of those times when I have lots to choose from, so this month we will go from the very latest in aviation, through some current items to reminiscences of the early days.

Most aeromodellers will be familiar with the name of Burt Rutan, an ex-aeromodeller who transferred his affections to full sized aviation specializing in composite construction. He designed the home built VariEze and a series of other canard aircraft such as the commercial Beechcraft Starship and the Voyager nonstop round the world on one tank full of fuel record holder. Burt's latest idea is to produce a low cost and safe means of launch and recovery of an orbital spacecraft. His company 'Scaled Composites' has built and is now testing the aircraft. Here are a few brief details for you.



*This is the actual orbital craft. It is called 'SpaceshipOne'*

SpaceShipOne is launched in a process similar to the one used by NASA and Air Force supersonic test vehicles in the 1940s and 1950s: The spacecraft is carried by the launch aircraft 'White Knight' up to 50,000 feet and then it launches like an aircraft into a steep climb. It has manual stick-and-rudder controls for subsonic flight, as well as electric controls for supersonic flight and cold-gas thrusters for space flight. The thrusters are operational and have been demonstrated. On re-entry, the rear portion of the spacecraft (including its twin tails and massive flaps on the trailing edge of its wing) are meant to create enormous drag and slow it down to the point that it can glide easily back to the ground in what Rutan calls a "carefree re-entry". Tests have shown it has a wide margin for its re-entry angle and enormous stability - with a maximum speed of mach 3.5 and an eventual descent speed of 155 knots. This will be far easier to maneuver than the precise angling and cannonball speeds that NASA's space shuttle requires. "We go straight into the atmosphere and the pilot can re-

enter without touching the controls," Rutan said. SpaceShipOne's "flight profile" (what the aircraft is expected to do and how) is to reach a 54 nautical-mile maximum altitude, over a flight path (from launch off the White Knight to a ground landing) of just 35 miles. For your information, NASA considers anyone who flies over 50 miles high to be an astronaut.



*Here is 'SpaceshipOne' mated to the 'White Knight' launch vehicle.*

Of late there has been a little more stunt action at the TARMAC field and even a few new models appearing on the scene. Adrian Dyson has finally finished his Geiseke variant of the Aldrich 'Nobler' and very nice it looks too.



*Adrian Dyson's Geiseke Nobler at it's first outing.*

Since the transfer of Peter White from the Victorian wilderness to this hotbed of West Australian culture, he appears to have settled in nicely and is becoming a regular fixture at the flying field with a range of stunts that all perform perfectly. Of course that other stunt stalwart Phil Trueman has recently produced another PA .61 powered Geo XL (the third). After it's first couple of flights he pronounced that it was slightly better than his last one. (As far as I am concerned, it could only be slightly better as the last one is absolutely awesome.) He has found some new tricks with pipe adjustment that have produced yet more power from the big PA engine. For those of you that don't know, Phil has been competing in stunt since 1957 when, while still a junior member, (he was 16 years old) he won four important championships in one year. They were WA State stunt and combat and Mercurians stunt and combat. A feat never repeated by anyone else. Since then he has won state stunt about ten times. An interesting fact is that he flies with the down line at the top of the handle, which is the opposite to the normal practice. Perhaps that is the secret of his success. It was not a great surprise to me to find after the State Stunt championships for 2003 had been held that Peter and Phil were both in the money. Peter White was first, Phil Trueman second and Charlie Stone a distant third.

On a sadder stunt related note, I hear that American stunt flier Rolland McDonald has passed away. He was a member of the famous Strathmoor Model Aircraft Club that

most of the prominent Detroit stunt flyers belonged to. Rolland was one of the originators of the I beam wing construction that was widely used from the mid 50's into the 70's and designed the Detroit stunter that became the default name for this type of wing structure.



*Norm Kirton's ETA .29 powered 'Dalesman' classic B team racer.*

Norm Kirton has finished his 'Dalesman' classic B team racer. It is painted in the colours of Ken Long's 1960 prototype and it looks great. This one is ETA powered as they all were back then and I can't wait to see it in action.

As promised last month, here is a bit more of WA's aeromodelling history kindly provided by Ray Sherburn. The story of one of our early model clubs, the Perth Balsa Butchers. I have to admit that I don't really care if this does bring the wrath of the local cat lovers society down about our ears.

#### Perth Balsa Butchers

The Perth Balsa Butchers was a model aero club formed just after the finish of WWII. I shouldn't say it formed, it really just accumulated by the getting together of 8 to 10 teenage aeromodellers who lived in the Cottesloe and Mosman Park area. It was a club with no President, no secretary, no treasurer, no fees, but a large committee.

The original members were Ray Sherburn, John Shaw, John Dewhurst, Maurice George, Ralph Brough, Stan Smith, John 'Lank' Griffiths, and a few irregulars who came and went. We flew control line regularly at Davis Oval in Mosman Park and sometimes on Manners Hill Park in Peppermint Grove.



*Ray Sherburn*

My first engines were a K Kestrel 1.9cc diesel, and an E.D. Bee 1cc diesel. We all had diesels in those days and mixed our own fuel. The method of filling our model tanks was to run a tube from the fuel bottle to the fuel tank, and then we put our mouths over the top of the bottle and blew like hell. By the end of the day we all went home with swollen lips that we called lubra lips.

One day when we were flying at Peppermint Grove the local council park officer came down and told us to leave because we were making too much noise. We left, but that night we all went around to his house and chucked rocks on his tin roof. Next week we flew at Peppermint Grove again, but he didn't show up and we never saw him again.

We wouldn't get away with that in this day and age.

Sometimes we were visited by members of other clubs and in particular I remember Dickie Gibbs and Alex 'Lampwick' Cunningham, from the Thermal Thumbers Model Aero Club. Now and then we visited the Thermal Thumbers who flew control line on the Perth Esplanade every Sunday morning. We enjoyed their company and we swapped ideas which was a benefit to everyone.

The only time we got into trouble with the police was when Ralph mugged an old ladies cat by holding an ether soaked rag over its face until it staggered away like it was drunk. The big fat local police sergeant rode his bike over to Davis Oval and made us all sit on the grass while he gave us a lecture. We all promised to be good from now on and not cause him any more 'pain and paperwork' (his words) and then he sat down with us and talked about model aeroplanes. He was a good bloke and we had great respect for him, so we tried very hard not to get into trouble again. Ralph copped all the blame for this but it did take four of us to hold the cat down.

One day we saw the new Frog 500 glow motor being flown on the Esplanade, so a few of us bought one each. They seemed so big and powerful that we were actually afraid of them for a while.

John Shaw and I decided to build the Juggler stunt model from the Aeromodeller Magazine plans and fitted our new Frog 500's. We found that we could do aerobatics that we only dreamed about before. We practiced the F.A.I. stunt pattern until we thought we were pretty good, and then decided to enter into the W.A. state championships, but we ran into a problem. Because the Perth Balsa Butchers was not registered with the W.A.M.A.A. (now changed to A.W.A.) we could not enter. In those days the M.A.A.A. did not issue Australia wide numbers. Each state issued their own numbers and my number was W.A.61. We solved the problem simply by joining the Thermal Thumbers and we soon received the W.A. numbers that allowed us to enter the state stunt champs held at Perth Oval on 5th August 1951. I'm sure that Noel Mitchell was one of the judges and I think that Don Hall was another one.

The results which exceeded our wildest dreams were as follows.

1st	John Shaw	Juggler	Frog 500
2nd	Rod Ashton	All American	Frog 500
3rd	Ray Sherburn	Juggler	Frog 500



**MASA Control Line State Championships 2004**  
**To be held in Monarto / Murray Bridge S.A.**  
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**29 Dec 2003 – 2 Jan 2004**  
**Bulletin 1**

***Program of Events:***

**Monday 29<sup>th</sup> Dec**

Open Practice  
 Hard & Grass Surface

**Tuesday 30<sup>th</sup> Dec to Friday 2<sup>nd</sup> Jan**

Surface: Hard	F2A	Grass	F2B
	F2C		F2D
	F2F Team Race		Vintage Stunt
	Combined Speed		Classic Stunt
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			½ A Combat

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***For more information contact:***

Rob Fitzgerald  
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 South Australia  
 Ph: (08) 8271 2889  
 Email: [rfitzgerald@cssp.biz](mailto:rfitzgerald@cssp.biz)

**Results of the Brimbank Park Field Fund Raffle**

Drawn Sunday 18<sup>th</sup> May 2003  
 First prize winner...Charlie Impiombato, from East Keilor  
 Second prize Winner...Cabe Jones from Wantirna  
 Third prize winner....Col Arnold from Tullamarine  
 The Brimbank Falcons wishes to thank everyone who supported our fund raiser and congratulations to the prize winners.  
 Regards  
 Alan Matthieson-Harrison ( SEC.)

**The drought conditions in the Wimmerra area of Victoria has claimed another C/L event cancellation.**

The lack of grass ground coverage in Horsham has prevented even the R/C flyers from taking to the air as dust and engines are not a good combination.

Having both this and the Bendigo event cancelled leaves the Melbourne Club members without the opportunity to have a weekend flying away from home unless an alternative venue can be found to replace our regular country treks.



**Club Notice**

The June CLAMF club meeting will not be held at the secretary's home. Please contact Graeme Wilson about the change of venue.

The A.G.M. will be at the secretary's home on Friday 4th July. Supper & picture show will be provided on the night. (B.Y.O. chair!)

The Bendigo Club have informed ACLN that the Northern Area District Championships will not take place in August this year due to the shortage of organisers within the Bendigo Club.

**A.C.L.N. ADVERTISING**

For the newer readers, we point out that "private" (personal) ads are free to subscribers, and "commercial" ads are \$20 per quarter page, or \$5 for business card size. Commercial Advertisers can receive a free business card size ad for submitting original articles of interest to A.C.L.N. readers.

Copy or artwork for ads should be sent to the editor, cheques to the treasurer (G Wilson P.O. Box 298 Seaford, Vic 3198); if you want to save a stamp, I can forward on any cheques sent with ads but please make them payable to "Control Line Advisory Committee".

# CONTEST RESULTS



## RACING RESULTS SSME 30th March

### JUNIOR RAT

- 1 Lachlan Hines
- 2 Michael Gapps

### PHANTOM

- 1 Bonello/Gapps 9:54.57
- 2 Bailey/Tilley 10:33.82
- 3 Ardill/Fairall 1 lap
- 4 Simons/Nolan 5:50.94
- 5 Owen/Brodie 6:12.04

### VINTAGE 1/2A

- 1 Potter/Potter 8:52.37
- 2 Knight/Harvey 9:28.06
- 3 Bonello/Brodie 9:38.99
- 4 Ardill/Fairall 73 laps
- 5 Simons/Nolan 16 laps

### VINTAGE A

- 1 Kerr/Heath 7:33.60
- 2 Rothwell/Bailey 8:17.56
- 3 Simons/Nolan 8:25.38
- 4 Knight/Harvey 4:11.94
- 5 Potter/Potter 5:19.97

### BENDIX

- 1. T. Bonello/Heath 7:42.70
- 2. D. Bonello/Gapps 8:39.21

## CLAS RACING TROPHY POINTSCORE

- Ray Harvey 18
- Gavin Knight 18
- John Nolan 15
- Tony Bonello 14
- Andy Kerr 14
- Dave Bailey 12
- Peter Camps 12
- Richard Justic 12
- Stan Pilgrim 12
- Steve Rothwell 11
- Geoff Potter 9
- Grant Potter 9
- Peter Brodie 8
- Peter Tilley 8
- Andrew Heath 7
- David Hines 7
- Ian Gapps 6
- Graham Patterson 6
- Hugh Simons 6
- Greg Ardill 5
- Ray Fairall 5
- Bob Fisher 3
- Daniel Bohello 1
- Robert Owen 1

## Results of the SMAC Vintage A and Aussie A contests held on 4th May 2003

### Vintage A

- |     |                                       |         |         |         |
|-----|---------------------------------------|---------|---------|---------|
| 1st | Hallowell/Baddock<br>Voodoo/CS Oliver | 3:55.47 | 4:27.28 | 8:07.72 |
| 2nd | J.Hunting/K.Hunting<br>Voodoo/Taipan  | DNF 24  | 4:07.00 | 8:36.95 |
| 3rd | C.Ray/J.Ray<br>Pluto/MRS CS Oliver    | 3:55.91 | DNF 88  | DNF 51  |
| 4th | G. Wilson/Ellins<br>Footprint/Oliver  | 5:15.78 | 4:09.02 |         |
| 5th | M.Wilson/G.Wilson<br>Voodoo/Taipan    | 5:14.60 | 4:16.90 |         |
| 6th | Bailey/Roberts<br>Footprint/Taipan    | 4:46.25 | 4:24.13 |         |

### Aussie A

- |     |                                     |         |         |         |
|-----|-------------------------------------|---------|---------|---------|
| 1st | Bailey/Baddock<br>Footprint/OS 15FP | 4:10.45 | 4:14.84 | 8:18.57 |
| 2nd | Ray/Ray<br>Fury/OS 15FP             | 4:16.41 | 4:22.79 | 8:36.63 |
| 3rd | Wilson/Ellins<br>Voodoo/Taipan      | 4:04.53 | -       | 8:58.04 |
| 4th | Hunting/Hunting<br>Pluto/MARS       | 6:40.97 | DNF 46  |         |

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# Letters to the Editor

Dear Ken Taylor

As I don't know your adress or phone no., I am sending this to you through A.C.L.N.

Your article re the builder of model rule is one I have always agreed with for most of my recent competition flying in both Qld. State and Australian National Championships. Why should any "Silvertail" with heaps of money to afford a professional builder to construct, finish and trim a winning model have an advantage over the "battler" with little funds, even though his (the "battler") flying skills are not that much different than those of the "silvertail". I have competed in various Q'ld. Champs as well as the 1955 Archerfield Qld., 1958 Camden, 1993 Bundaberg. and the 1999 Toowoomba Nationals.

In the late 50's / early 60's I flew one of your designs, the CENTAUR and was wondering if you still have the plans available.

Rodger Adams

Bald Hills Qld. 4036

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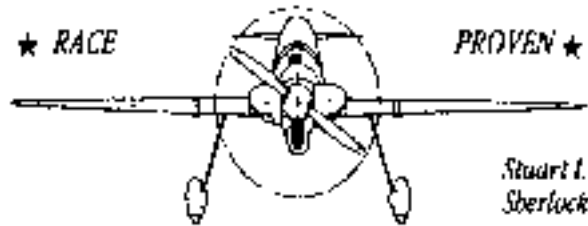
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