

THE VOICE OF CONTROL LINE
AEROMODELLERS FROM
AROUND AUSTRALIA

Number 70



Produced by the Victorian Control Line Advisory Committee

September 2003
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**Copy Deadline for next issue is:
Wednesday 17th September 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.

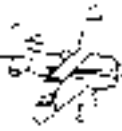
Best of all is to send it on a 3.5" disk as a Windows Write, Word for Windows, or as an ASCII TEXT FILE or use Email

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.

Email address:- acln@ozemail.com.au



COMING EVENTS



CONTROL LINE CONTEST CALENDAR 2003/2004

DATE	EVENT	CLUB
SEPT 7	CLAG Country Competition Classic Stunt, Vintage Stunt Aust "A" Team race, Classic "B" Team race, Simple Combat.	Moe
SEPT 14	Vintage "A" Team race, Aust "A" Team race.	SMAC
SEPT 21	FAI & Combined Speed, Simple Rat race, 1/2 A Team race.	CLAMF
SEPT 28	FAI, Novice & Jnr Aerobatics, Classic Stunt, Bendix.	KMAC
OCT 5	CLAG Country Flying Day	Maffra
OCT 5	Simple Rat race, Simple Goodyear.	SMAC
OCT 19	FAI Team race, Goodyear, Jnr 2.5cc Rat race, 2.5cc Rat race (Riverside Trophy).	CLAMF
OCT 26	FAI, Novice & Junior Aerobatics, Combined Speed, Class 2 Team race, Vintage "A" Team race, Classic Stunt.	KMAC
NOV 2	Triathlon.	SMAC
NOV 2	C.L.A.G. Country Flying Day	Knox
NOV 9	FAI & Combined Speed, FAI & Modified Combat, Mini Goodyear, 1/2 A Combat.	CLAMF
NOV 23	Monty Tyrell Memorial - Classic Stunt.	KMAC
DEC 7	C.L.A.G. Country Flying Day	Moe
DEC 7	Aust "A" Team race, Classic "B" Team race, Bendix.	SMAC
DEC 15	FAI Team race, 2.5cc Open Combat, 1/2 A Team race.	CLAMF
DEC 29	MASA CONTROL LINE STATE CHAMPIONSHIPS 2004	MONARTO
JAN 2	MASA CONTROL LINE STATE CHAMPS FINISH	MONARTO

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

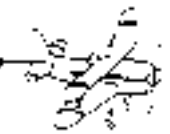
BRCAC Bendigo-Newbridge Rd . Marong
 Contact :- S. Power 03 54 424 925

CLAG Contact :- Graham Keene (03) 51924485
 Details of venues can be found on web site www.clagonline.org.au

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:
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."

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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 johnndt@iprimus.com.au

- Sept 13/14 **INTERCLUB COMPETITION**
"Festival of the Bridge"
Mouse/Clasii Team Races. Senior / Junior. 2.5 Slow Combat.
Also separate Junior Comp.
Trophies and Prizes including Perpetual Replicas.
A.G.M. to be advised.
- October 12th Fun Fly. (**BATHURST 1000**)
- November 9th. Clasii Rat, Mouse T/R Senior /Junior. Trierothon.
- December 14th. Christmas Breakup and Fun Fly.
- January 11th. 2004 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

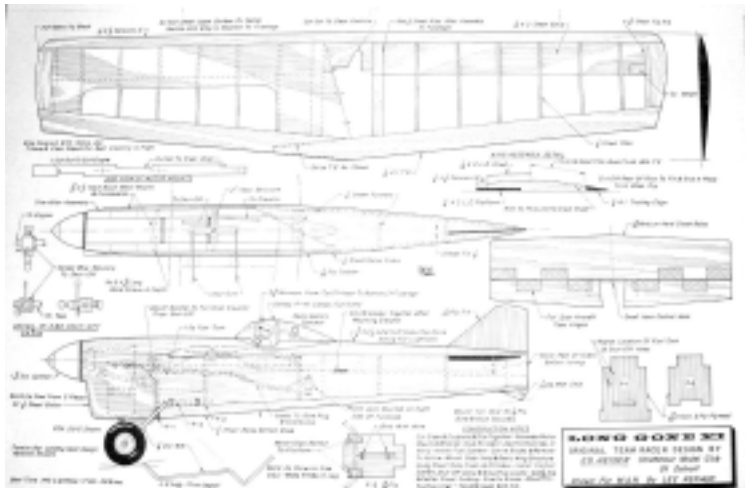
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Preview

In next months ACLN. I'll have the article and plan for the 'Long Gone V1', a Detroit designed American B racer from the Classic era of 1962. Here's a preview of the plan. *J. Hollowell*



ENGINE TEST: OS LA46S BLUER FROM BLUE

Derek Pickard looks at why the cute coloured OS LA46 series has had such a successful welcome and explains how it can be developed into an even better stunt motor.



The OS LA46S complete with stunt needle valve and venturi makes a good engine as stock and even better after easy modifications.

There aren't many bargains around these days. Nearly everything in our hobby is rapidly getting out of reach, but a good look at the line-up of engine supplies does reveal one good deal - the OS LA46S which has been in the market for a while. The difference between the much-loved old FP series on the new LA engines is not just the fin shape and dark blue colour, but more importantly these later motors have subtle but effective changes on the inside.

The alteration is the way the OS engineers reconfigured the new LA series to be easier (read: cheaper) to make. Gone is the centre boost port to the transfer facility but retained are the two normal transfer passages. This has the effect of reducing the transfer facility capacity which while taking away some top end does suit our need for a stronger mid-range. There are a few other changes introduced with the LA, such as the method of making the thin cylinder liner, but for us the porting is the most important and exactly what we want.

Within no time after the LA series of engines were first released, sport stunt fliers were raving about its behaviour. Not only did they find it had similar power as the previous FP but more importantly it was the way the power was delivered together with the near refusal to rev out. And this was straight from of the box with no modifications.

To answer the question why this engine is so good, the answer is simple - it's a fluke; in much the same way the ST46 was a few decades ago. That famous ST46 was in reality a bored out smaller engine (29-25-40) which grew larger from the early 1960s until it reached full capacity in

the 1970s. The result was a relatively light and compact short stroke engine with a reasonably high primary pumping capability (case compression). This combined with mild porting to produce one of the best traditional running stunt engines of all time. It was a fluke, as there's no way the Italian factory knew it was producing a stunt classic.

So the LA46S is both stunt suitable and available at a good price for what the factory insists is normal OS quality. Just as importantly, the competitive nature of the modelling business and the proliferation of discounting mail order specialists, results in some very keen pricing. Right in there with the meanest prices are the OS LA46 engines albeit in radio layout with the carburettor.

A useful trick here is to order the radio OS LA46 for a steal of a price, but with it the stunt front venturi (part number 23312000) and the front needle valve assembly (part number 22311000). This gets a reasonable stunt motor at a very good price. If your OS dealer is competitive, you can order the motor with the right bits already fitted as the LA46S (part number 13410). But whatever you do, order one or two head shims at the same time (part number 24014100) as these come in very handy for use with higher nitro fuels.

(OS insists the only difference between the radio and the stunt motors is the fitting of a radio carburettor or a venturi. Nothing more. Also, no plug, no head shims nor alternative venturi sizes are supplied in the box. Those days have gone.)

[To answer the question why this engine is so good, the answer is simple – it's a fluke....]

Like so many motors now, these new OS engines are delivered with a rear NVA which is great for those who insist on shoving their fingers into a spinning prop. For other people, a front NVA is better because of its instant reaction to needle adjustment, it can drop into so many models without modification, and the layout allows a decent in-line fuel filter to be easily accommodated.

This way, an OS LA46 was bought and quickly converted with the venturi and front NVA. The work involved stripping for examination and measurement before a few easy mods to improve the stunt performance.

For the number crunchers among you, the stock LA46S weighs just over 9 ounces, has a venturi of 285 thou and the internals clock-in at 142 degrees exhaust, 115 transfer, 41-37 shaft inlet and 10.2:1 compression. These are typical radio numbers and very much in line with the old FP engine specs with the big differences being the LA's small transfer ports and the plastic backplate.

Construction-wise, the liner is a nickel-plated bronze alloy, the rod is bushed both ends and the case shaft is also bushed. Quality is reasonable but with the test engine the liner out-of-round measured half a thou at the top, which is not good, even though the working seal improved slightly after running. That amount of out-of-round is nothing OS can be proud of.

The motor is supposed to break-in after only a few tankfuls of fuel have been run through. However, the test motor took nearly an hour before the pinch at top stroke was suitably reduced to the right feel at running temperature. Thankfully, the earlier problem with the out-of-round bore came to nothing with the piston seal

improving as the motor recorded more running. From then on, the OS LA46S proves a good sport stunt flier providing reasonably good power and 4-2-4 control. The latter is undeniably the result of the reduced transfer porting facility which reflects the wisdom of some FP tuners who have always filled the third transfer port as part of their work.

In the air, this 46 works well but the best prop size to use is definitely smaller than say a Tigre 46 would run as this OS develops its best torque at slightly higher revs. An 11x5 is a good starting point. In action it can be set for a reasonable 4-2-4 run and gives good economy with 20% oil and 5% nitro fuel. Definitely a bargain and sport fliers rightly love them.

Stunt engine specialists have been modifying these engines since they have been on the market and fliers report good results. The modding work is made easier by the lack of a third transfer port so the specialists invariably do no more than raising the tops of the two transfer ports and adding a couple of head shims. The motor will then run well on 10% nitro and give even better 4-2-4 control. And all this can be done for a very attractive total price.

But a bargain can become an even bigger steal if a flier can convert the stock engine himself. So this is the formula which is exactly what was done with the test engine.....

Firstly, buy the LA46 engine from a mail order specialist at the cheapest possible price but also ordering the front venturi and needle valve assembly with two head shims.

If you can use a toothbrush, you can modify this motor for stunt. The work involves little more than taking it apart, using simple tools carefully and cleaning before re-assembly.

Take off the head and have a good long look at the way the ports are arranged in relation to the piston. Gently mark the piston top for the widths of the two transfer ports. Pull everything to pieces and have a look at the way it goes together for subsequent reassembly. Then thoroughly clean all the parts to avoid nasty bits sticking onto them and subsequently cause grinding damage.

What we're out to do is raise the effective transfer port timing. It needs only a small amount. The normal way of doing this is to file/grind the top internal surfaces of the two ports being careful to maintain the roof angle and ensure both ports heights are matched. If you feel confident to do this then do so without holding the cylinder in a vice or forcing the piston temporarily back in position (to check height levels) without prior cleaning.

The amount of metal to be removed is very little. Just 20thou (half a mm) lifts the timing from 116 degrees to 124 degrees and 30 thou takes it to a useful 127 degrees, which is about where we need it to be. Don't get too ambitious here and the very maximum is 40 thou (one mm), which lifts the transfer timing to just over 130 degrees.

For those who dislike such work or can't hold the liner with confidence, an easy alternative is to 'notch' the piston top where it relates to the two transfer port windows. The marks previously put on the piston crown

are where the top can be notched down to open the ports slightly earlier. This is done with the piston being hand-held to enable a small fine file where the notches are carefully filed into place with a shallow angle. But due to the way the top of the piston sides form the vital working seal against the liner; nothing too deep can be risked. Don't extend the notches down more than 20 or at the very most 25 thou and be careful that both are the same depth. This should raise the transfer timing to around 126 degrees and help the 4-2-4 stunt run.

[That amount of out-of-round is nothing OS can be proud of.]

Another slight alteration which all helps is to retard the intake timing where the case aperture meets the shaft by hacking into the alloy around 30 thou. But this wasn't done to the test engine as it's not vital.

Whichever method of modification is chosen, the material edges effected must be finally smoothed to remove inevitable burrs. Then spend twice the time again subsequently cleaning all the parts before re-oiling prior to assembly. And when putting it all back together, fit the two extra head shims.

The result of this work should be a slightly milder but a much sweeter running stunt engine that develops it useful torque lower in the rev range. It will settle to a 4-stroke setting that bit quicker and retain a stronger 4-2-4 behaviour in the air.

The test engine had its transfer ports raised to give a 126 degree transfer timing, two shims were fitted under the head for 8.5:1 compression and an air filter was fitted to protect the internals.

(While it's possible to machine the liner/case top retainer so lowering the liner to drop the exhaust timing, the amount which can be done before exposing the base of the piston at top stroke is really too small to justify such work. Don't bother.)

The test plane was an All Australian Mk2 - a typical 1950s club stunter without flaps with 630sq inch area. This Ken Taylor design dates back to 1955 and Ken made this plane a few years ago using silk for the wing covering. It weighs 51oz.

With a stunt modified OS FP40, small tongue muffler and an 11x5 two blade prop, I had flown the plot to fourth place in the Australian Nats Vintage Stunt Championship last summer. The plane is good but the modded FP40 always lacked real power, so the upgrade to a bigger motor was welcome.

(This partial failing of that FP is so typical of some stunt conversions on that popular 40. By the time the engine had its liner lowered, the transfer port tops raised, the compression lowered and the shaft sleeved for milder timing, the 4-2-4 run was acquired at the cost of noticeably reduced power.)

When the OS LA46S and its large muffler were fitted with a tad more tip balance (to offset the heavier OS muffler), the weight increased to nearly 54oz, which is bordering on the acceptable for the wing area. But the increased power had to be an improvement.

From the time the bigger blue motor replaced the FP40 and was first flown running 10% nitro 20% oil fuel and a

two blade 11x5.5 Bolly two blade fiberglass prop, the new OS LA46S impressed. It quickly settled to an acceptable run and easily adjusted to a strong 4 stroke.



Test plane was an All Australian Mk2. It had previously used a modified FP40 but performs far better with the LA46S.

The only negative aspect to the new engine was the retention of the OS radio-style large muffler. This is heavy and with an inverted engine demands yet more weight to the wing tip to keep the plane trimmed. But that big muffler is easily replaced with a lightweight tube or tongue type from the usual stunt specialists such as RSM, Dixon, etc.

In the air, with 60 feet 15 thou lines, the plane had the right amount of power and was better than its previous behaviour with the modified FP40. What was a good 1950s plane suddenly became an excellent vintage/classic flier. The extra 15% capacity with well laid-out ports powering a slightly better prop certainly did the trick.

The value of the mods is the way it's easier to achieve and keep a good stunt setting without too much risk of a rev runaway. The slight drop in power is insignificant compared to the benefits of a good stunt run. And right every time counts for lots.

[If you can use a toothbrush, you can modify this motor for stunt.]

Not only did this modified LA46S transform the plane's performance over what the modded FP40S did, but it clearly spelled out real potential as regards how big a plane it could fly..... such was the amount of extra power. Putting a figure on answering the obvious question of how big, around 56oz and 650sqsq seems the biggest that can be confidently recommended. However large the plane may be, the importance of keeping the right size prop matched to the engine's power characteristics must not be forgotten. Not too much pitch nor too much diameter is vital to keep the revs in the optimum part of this O.S. power band.

As regards the obvious question of: Can this modded new OS LA46S be considered a replacement for the famous old ST46? The answer is no.

The reason is the old Tigre has a better layout for stunt which not only has a noticeable amount of extra mid-range torque, but does so with even more controllable delivery at less revs to power a bigger prop. What the OS does is produce its best torque at slightly higher revs so cannot turn the same size prop. This Japanese motor

demands less prop at more revs. Put into numbers: where an old Tigre will handle an 11.5x5.5 or even 12x5.5, this OS won't be happy with more than 11x5.5.

So make no mistake, although this OS engine is good it's not a bargain-priced Japanese update on the famous old Tigre 46. Life's never that cheap.

However the margin is not huge. And with the lack of ST46 availability together with the low price of the LA, helps make this new OS is an acceptable engine for medium size planes. What started off impressing sport flyers a couple of years ago should soon make its presence felt in the serious end of aerobatics.

Conclusion: The engine deserves its success. Every flier can afford one and easily modify it for an even better stunt run. Definitely recommended for mid-size planes.

Declaration of interest: Derek Pickard bought this engine from an O.S. mail order specialist before converting it for stunt.



GRINHAM REGAINS STUNTMASTERS

The sun was shining, the turn-up was good and the trophy looked tremendous. The only problems was the wind and only 4 were brave enough to fly. The result had to be a lottery with the gusts.



Winner Doug Grinham (left) holds high the trophy he's just regained from PJ Rowland and Mark Ellins.

And that was the story of this year's Stuntmasters Trophy. Defending champion, Mark Ellins, was very serious. He had acquired an ex- Doug Harlow Stiletto for his ST46 and had been out practising for the two previous weekends. Unfortunately, the immaculate big white plane hit the

ground and was destroyed the day before forcing Mark to fly his proven Manito which is now showing its age and gaining weight with each repair.

On the day, only 4 were in it. While other experienced fliers opted to stay on the ground, stunt newcomer Adam Kobeit with his newly acquired Firecracker/ST46 was determined to show his stuff no matter what the weather. And his big yellow stunter did well but a loud crack was heard during the first competitive flight, large cracks were discovered afterwards and he wisely opted not to risk a second go.

For the top 3 fliers, it was a matter of getting up there and seeing who got lucky with the conditions. Scores were understandably low as the gusts threw the planes around. In the end it went to Doug Grinham who had the luck on his second flight to get only steady winds to put the by far the best flight of the day. His wining margin was as large as the different as the variations in the gusts.

RESULTS

Judge: Peter Roberts

Doug Grinham	(Jazzer3/Stalker 61)	790
PJ Rowland	(Vortex/Moki 51)	670
Mark Ellins	(Manito/ST46)	589
Adam Kobelt	(Firecracker/ST46)	338



Newcomer Adam Kobeit did a great job with a Firecracker/ST46

News from ZVA

By Charlie Stone VH 4706

TARMAC Notes for July and August.

I never thought that it would happen. But it has. A pair of mass produced Almost Ready to Fly (ARF) control line models have landed in the marketplace and they are selling very well. TopFlite models, who used to produce authorized kits of the George Aldrich designed 'Nobler' stunter and 'Flite Streak' profile sport/combat model are now producing both designs in ARF form.



Here is a photo that shows what you get in the kit of parts for the ARF Nobler being produced by TopFlite. From all accounts they are quick to assemble and if the directions in the detailed and well written instruction manual are followed a good flying model will result. Even though the assembly is easy, I would NOT recommend that anyone without previous control line experience try flying this aircraft without help from an experienced Control Line flier.

They are made from highly accurate laser cut parts and reportedly build straight and light. Nobler models are being finished at weights around 35 to 39 ounces depending on engine choice and fly very well. They are finished in plastic film (Monokote) and come with a clear and detailed instruction manual that is available for study on line at: <http://www.topflite.com/manuals/topa1005-manual.pdf>

The first release of these kits has been in America where they are selling like hot cakes. They are not available in Australia at the time of writing and initially it was said that the agent for TopFlite products was not going to import any. Apparently, after a number of local requests this is no longer the case and a limited batch will be brought in, and should be here around the time that these notes are in print. I understand that initially, there will be just a dozen of each design available. The Nobler will reportedly retail for \$255 and the Flite Streak at \$170. If you fancy owning one of these, Ace models in Midland (WA) (who will sell by mail), has some on order and can be contacted at (08) 9274 4519 or on their web page at: <http://www.tnet.com.au/~ace/>

Fred Adler is making noises about having another of the vintage stunt days some time in October. Watch for further details. A recent visitor to our field was Johnny Orr, a modeler who was very active in the 1950s. He was one of the intrepid team that braved the Nullabor to attend the 8th Nats at Mallala in 1954 along with Frank Southwell and Brian

Sadler. He came looking for Dicky Gibbs, but for once Dicky wasn't there. He stayed all afternoon watching the models and reminiscing about the early days.



This is something that not too many folks will have seen lately. It is an attendance card for the 8th Nats at Mallala in South Australia 1954/55. Supplied by J Orr.



Dragged from the TARMAC archives is this picture of the late George Pappas in his summer attire at Perth Oval in 1949. This was a popular venue then, and we flew there from time to time up to the late fifties. The model is his Control Line team racer. The photo was supplied by Theo Merrifield.

I have several contacts this month with new and recycled control line fliers. One such is Noel Webb, currently located in the Gascoyne, but soon to be moving to Perth where he is planning to join the tethered flying crowd at TARMAC. Other, more local gossip tells me that Fred Adler is at long last building a peanut scale model. He didn't say what the design was, just that it will not be likely to happen again. It seems that watch making is not his forte and he prefers models large enough to be assembled with a mallet. (Not EXACTLY his words). More good news is that there will be an expansion in the ranks of team race competitors. Andy Lawson and Noel McMillan are looking for a bit of light relief from the pressures of Pylon racing, and have teamed up for a crack at the two older team race classes. Noel is reportedly building a Voodoo for Vintage A and Andy has started on a Crescendo for classic B.

Alasdair Taylor having been suitably impressed by the last vintage stunt day has told me that he is getting to work on a Mini – Nobler. He has also been busy dealing with another of our club problems (the gate).

The habit of the Golf club locking the entrance gate on Saturday afternoons has been mentioned in these notes several times. This is allegedly to slow the entry of vandals that are apparently only allowed out by their mothers when we want to fly on the oval. Some of the more cynical TARMAC members (me included) suspect that there might be other motives. Whatever the reasons for the security, it introduces irritation into our simple lives and tends to discourage visitors from watching and perhaps participating in the flying. The solution (we hope) is a doorbell to be built into our club sign at the gate. Alasdair Taylor has finished making the hardware and we will soon have a gate buzzer switch, with "push for attention" incorporated in the TARMAC sign. So if the gate is locked and you don't have a key, just press the button and very soon our butler Jeeves will be along to open up.

In my slow and painful search for some records of West Aussie Control Line history, I have received some more photos courtesy of Hans Bertina, John Bowles, Dave Campbell and Darryl Mills. Ray Sherburn has unearthed and supplied an aeromodelling poem written by an anonymous author (perhaps it was Ray himself) and Alwyn Smith sent me some copies of West Australian reports from the late 50s. These were written for Model News by Noel Mitchell (How I wish that I could get him to write a few of his memories). You will get to see some of this stuff in the future.



This is Hans Bertina with his 'Crusader' stunter. The photo (taken in the late 1960s) was supplied by the man himself.

I still need lots more photos (mugshots) of past C/L personalities and other photos from the past. Here is a list of names. If you have a photo of any of these guys I would like a chance to copy it. Please write or email me or tell me how to arrange it. The list is:

D Anderson, Kim Ashton, R Bassett, Bruce Bellis, Rob Benkesser, Mick Best, Dave Blain, Jeff Bolitho, Alf Bridle, M Brunning, Don Burt, D Compton, Steve Coy, Ken Datson, R Day, Richard Dobbs, Paul Drayton, Roy Farren, Geoff Foster, Ken Foster, Phil Garstone, Rae Garstone, Garth Giles, Ian Green (Kalgoorlie), Gordon Greenacre, Ian Greenacre, Brian Greeve, Gerry Hancocks, J Hardwick, J Hawter, B Haydon, John Henderson, Selwyn Hewer, Barry Humble, Ross Jenkins, R Kelly, John Kowalski, Norm Lindford, Peter Lynn, Clarrie (Curly) McMeekin, Bill Mitchell, Wally Nilan, Barry Nilan, Ray Noel, Tony Ostle, Barry Owens, Bob Pine, David Poole, Bob Redman, E Robinson, Ray Sampson, Kevin Sharp, Kevin Shepheard, Lee Skipworth, Pete Somers, Peter Sonneman, Tony Spackman, Bob Spackman, Bernie Sparks, Geof Spehar, R Spencer, R Smith, Neil Stocker, Alan Thomas, Doug Tunstall, Ken Turner, Ross Tolchard, K Valdman, Gus Van Rhyn, Rex Vellender, John Voak, Hans Vos, Laurie Walsh, L Williamson, Elvyn Winter, Bill Wormley

News from the world of full sized aviation is that the Defence department is asking for tenders for the acquisition of a fleet of up to five new generation (I suppose that means jets) air-to-air refuelling aircraft for the Royal Australian Air Force. The intention is apparently to have the aircraft entering service from 2007 to refuel not only the F/A-18 aircraft, but also F-111

aircraft (if they still have them), the new Airborne Early Warning and Control aircraft and the Joint Strike Fighter. I hope that they move a bit faster than they usually do with defence force acquisitions if they want it all to be working by 2007.

An illustration of their typical haste in these matters is that once upon a time (I imagine the time was 1987), the Defense force chiefs (with a little help from their friends in Canberra) came up with a project for the replacement of the Huey and Kiowa helicopters with a new, armed reconnaissance helicopter. The project (called 'AIR 87') has now reached the stage where after about 16 years they have made a decision. They will be buying (in the fullness of time) some Eurocopter 'Tigers'. Perhaps you remember that a couple of years back, the demo model crashed at Townsville during an amazing display of the 'Hold my beer and watch this!' variety. (Thankfully while being flown by the French test pilot and not someone employed by the Australian taxpayer). So, one day we will have some new helicopters thanks to AIR 87. They might even put a big funnel above the rotor so they can be re-fuelled by our new tankers.

It is painfully obvious to me that the world is descending into a very sad state. Lunatic politicians, thieves, rogues and other undesirables are on all sides of the world. (Thank heavens that it is flat and we only have one side to worry about). Wars, economic and otherwise being fought everywhere. Money is the new God. Which brings me again to the unhappy subject of insurance. In a burst of defeatism, I have decided that there isn't a lot that I can do about the new increases in cost except whinge about being ripped off, so that is what I am doing. Having got that off my chest, I will get back to the building board.

As I will not be near either a keyboard or (more importantly) any sources of information for a month or so, some of you may notice a break in the flow of TARMAC notes. I had rather hoped that there might have been a rush of volunteers to take over, but for some reason that hasn't happened. Still, I am sure that the Editor will be able to make good use of the space that will be freed up.

With the demands on everyone's time lately, there is sometimes a temptation to rush things. It might be worth remembering the old saying. "There is never enough time to do a job properly, but there is always enough time to do it twice."

[Late addition]

I have found a volunteer to fill in for me next month. The gentleman in question is Peter White, who is (as is widely known) a gentleman and a scholar (he can write too).

Charlie Stone
Email cestone@bigpond.com

VH4706

Newsletter Editor

Harry Bailey.
37 Thompson Street.
Clayton.
VICTORIA. 3168.
Telephone (03) 9543 2259.



European C/L Championships

Final Results:

F2A SPEED (27 Competitors)

1st: Luis PARAMON	298.0 ESP
2nd: Jean MAGNE	295.6 FRA
3rd: Serguei KOSTINE	295.1 RUS

F2A, Junior

1st: Matthew HART	282.1 GBR
2nd: Lucas GROSSI	279.3 ITA
3rd: René BIRNSTEIN	264.8 GER

F2A, Teams

1st: GBR (4th, 5th, 10th, plus Matthew Hart's (Jun) 14th)
2nd: RUS (3rd, 8th, 9th)
3rd: FRA (2nd, 6th, 16th)

F2B AEROBATICS (48 Competitors)

1st: Serge DELABARDE	5913.00 FRA
2nd: Gilbert BERINGER	5876.00 FRA
3rd: Jiri VEJMOLA	5858.50 CZE

F2B, Junior

1st: Richard KORNMEIER	5561.00 GER
2nd: Anton STRAKHOV	5458.50 RUS
3rd: Petr DURCAK	5190.50 CZE

F2B, Teams

1st: FRA (1st, 2nd, 7th)
Sorry, rest of teams not listed!

F2C TEAM RACE (23 Teams)

1st: BONDARENKO/LERNER	6:42.10 UKR
2nd: OUGEN/SURUGUE	7:10.90 FRA
3rd: MARTINI/MENOZZI	DNF (167 Laps, broke a prop) ITA

F2C, Juniors

Nil

F2C, Teams

1st: UKR (1st, 4th, 6th)
2nd: FRA (2nd, 12th, 16th)
3rd: ITA (3rd, 13th, 19th)

F2D COMBAT (I think about 70 Competitors)

1st: Andrius RASTENIS	LTU
2nd: Boris FAIZOV	RUS
3rd: Stanislav CULACHININ	MDA

F2D, Junior

1st: Cesar PICADO	nation to be confirmed.
2nd: Alexandre SHALAEV	RUS
3rd: Johnathon CRABTREE	GBR

F2D, Teams

1st: MDA
2nd: RUS
3rd: LTU

General Notes:

1. Kramarenko/Chayka (UKR) are claiming a New World Record of 3:10.50 for their time in the 2nd heat. (For info, the current record is by MARET/PERRET (FRA) with their 3:12.2 from the 2000 World Champs).

2. Generally not as well attended as I had expected, with a number of "faces" absent, and as above, only 23 Teams in F2C. Pity.

3. In my own personal opinion the Judging of F2C was generally not performed to any worse standard than one would expect at a comp at this level, and certainly not to the low standards that some earlier comments on this net led us to expect. Again speaking purely personally, there were very few Jury decisions that I disagreed with. F2C circle marshalling, line check, results, etc were as well run as one would expect with people of the experience of the Gilbert (FRA) family running it.

4. General organisation was a bit "bitty", with a notable lack of timely information on several occasions, and with some "interfacing" and coordination problems apparent between the specialists running the technical aspects of each discipline and the overall contest management. However this was a huge undertaking for what is a pretty small C/L club, and also, this was their first time at this level so again, my own opinion entirely, but I felt that both thanks and congratulations were definitely in order.

5. Weather was generally VERY hot for this area (midday/afternoon temps of 35C in the shade - 40+ in the open) every day except one. Those days did however have a pretty constant breeze which did not cause any flying problems but did help to keep the apparent temperatures down. However the Tuesday night saw a large thunder storm front break through the whole area, and although the worst of it was on the Atlantic Coast (about 120 Km away) it was still bad enough in the Rouille area to cause significant problems on the main camp site (near to the flying site), resulting in large numbers of tents being wrecked and many campers having to be temporarily rehoused in a nearby school. A real test of the organisation which although I was not personally involved (the Swiss team were in a hotel some 25 Km away from the site) from all the comments I heard, the organisers came through that one with flying colours.

6. The rain that accompanied the storm did create some problems the next day however. Not only were temps (for 1 day only) down to about the low 20's but the only field where all the parking for everyone was ended up being unusable due to the single entrance being too muddy until the ground had dried out and some sand had been dumped later that day. As all the access roads to the flying site are only narrow country lanes for at least 2 Km until reaching the site (plus an un-metalled farm track to the main club house - running right past the F2C circle!),

parking was very difficult that day, and if the rain had continued there would have been serious problems (if it had rained like it did at the 2000 Worlds in Landres the Rouille site would have been impossible). The strong winds and accompanying turbulence during that 1 day also caused some problems to the F2B fliers though I'm happy to say that as far as I saw, no one lost a model as a result. F2C was largely unaffected by the winds that day as with such a small number of teams (23 total, 9 for the Semis) the Gilberts and Dave Rudd and the rest of the F2C Judges were able to slot all the races into a window with sensible weather. Not having any competitors in either F2A or F2D I saw little or no action at either of those circles.

Kind regards, Andy Sweetland (Swiss Team Manager)

Luddenham 24th and 25th July Results

VINTAGE 1/2 A TEAM RACE

	HEAT 1	HEAT 2	FINAL
P.Camps/ S.Pilgrim	4.06.95	4.24.57	9.46.03
G.Patterson/A.Heath	5.20.94	DNF	10.25.56
T.Bonello/P.Brodie	5.02.88	4.41.67	137 Laps
G.Knight/ R.Harvey	6.32.96	49 Laps	

VINTAGE B TEAM RACE

	HEAT	HEAT	FINAL
G.Knight/ R.Harvey	3.43.08		7.46.19
G.Patterson/A.Heath	5.05.12		18.50.87
T.Bonello/P.Brodie	5.53.32		61 Laps
B.Hoggans/S. Rothwell	4.23.96		

GOODYEAR TEAM RACE

	HEAT 1	HEAT 2	FINAL
G.Patterson/R.Justic	5.07.57		
G.Knight/ R.Harvey	82 Laps		

PHANTOM TEAM RACE

	HEAT 1	HEAT 2	FINAL
P.Camps/ S.Pilgrim	5.09.94	4.57.43	9.45.09
T.Bonello/I.Gapps	4.47.03		9.50.38
G.Knight/ R.Harvey	5.56.28	5.00.53	11.39.72
P.Brodie/R.Owen	5.41.17	5.18.60	
G.Patterson/A.Heath	5.24.93	5.31.05	

VINTAGE A CLASS TEAM RACE

	HEAT 1	HEAT 2	FINAL
P.Camps/ S.Pilgrim	3.54.84	3.52.18	7.01.03
S.Rothwell/A.Heath	3.29.22	3.21.57	7.10.03
A.Kerr/R.Justic	3.27.33	4.07.25	67 Laps
G.Knight/ R.Harvey	3.57.59	86 Laps	
G.Patterson/I.Gapps	4.12.95	4.04.01	
B.Hoggans/R.Owen	4.42.71	48 Laps	

From Tony Bonello

Results from the CLAMF day 10/08/03.

2.5cc Rat Race	ht laps	final laps
1. C.Ray/J.Ray	246	476
2. M.Wilson/A.Lumsden	159	367
3. J.Hunting/K.Hunting	224	338

Sunday July 27th at KMAC

Whilst the Aerobatic models were competing in one circle for the Stuntmasters Trophy the other grass circle had been booked for Class 2 Team Race.

Lots of rain had fallen during the preceeding week which was rather ironic considering that Stage Two water restrictions had just been imposed in Victoria due to water storage capacity dropping to a low 41%.

Conditions under foot were slippery and combined with this was the other handicap that the grass had not been newly mown. Not ideal for safe racing of these single wheeled models.

Despite these handicaps three teams were keen to put models in the air so a compromise racing solution was applied. This was in the form of a one up time trial under normal racing procedures.

First to go were Hallowell/Baddock using a "Montezumas Revenge" model powered by a Nova Rossi .21. They flew two heats and both times were around 3:08 for 70 laps.

Next to go were Wilson/Lumsden. The model they were using was the same "Beesting/Nelson .29" combination that they used to gain first place at the recent Nationals. At the "GO" signal the engine fired at the first flick and was away with a consistent roar. With a stopwatch time of 14.1 secs for 7 laps the resultant time could be quick. At 37 laps the fuel expired and the model came in for an excellent pit stop. Another first flick start and away to complete the 70 laps. A time of 2:44 was enough to have shattered the existing heat record and shows the potential of this team when things get fair dinkum.

The record holding team of Bailey/Ellins were last to go. They were using their tried and trusty "Motezumas Revenge/Nova Rossi .21" combination. In the first heat they were a little bit lean on the fuel and the engine cut out on take off after the pit stop. A tweak of the needle and into the second heat. The pit stop was a little ragged due to a tumble and the model had to be retrieved and carried forward. A quick restart and onward to a personal best of 2:50 for the 70 laps.

A worthwhile effort on a day when staying at home and keeping warm seemed a better proposition.

Results	Heat 1	Heat2
Wilson/Lumsden	2:44	-----
Bailey/Ellins	-----	2:50
Hallowell/Baddock	3:08	3:10



**Control Line Aeromodellers of
Gippsland Inc.**
**Country flying day held at Agnes
Brereton Park Traralgon August 3rd**

"You should have been there!" That fairly well sums up the brilliant day enjoyed by all at Traralgon. Despite forecasts of strong winds, (this is becoming a familiar line), Traralgon put on a dead calm sunny day. In fact, too calm, as some models were being upset flying through their own turbulence.

Eight regulars and three guests put in many flights as

space was not a problem. Vic and Steve Mitchell wandered off into the distance and were seen entertaining some very interested locals. I was kept busy with guests Dale Carstein and Ben and Joshua Bright.

Dale who usually flies R/C, has decided to give our most interactive form of model flight a go, his newly built "Too-up" Enya .15V flying very well.

Youngster Joshua, was assisted flying a slowed down "Peacemaker", his first three flights all without incident. Looks like dad Ben might be building a model shortly.

Ben, who was responsible for the Traralgon Control Line Club many years ago arrived with an elderly "Chipmunk" ST.46; after a dust off and some fresh fuel the model was soon in the air, flying very smoothly.

Ken Dowell had the "Pacer" in the air most of the day, his only complaint being that a slight breeze would be helpful. John Goodge brought along a fleet of beautifully hand crafted models, after about flight number ten, he retired with a weary arm, "what are ya Johnno?"

Mr Good Vibes, forgetting this is a noise sensitive site, made a return trip back to Morwell to obtain a muffler for the Fox .35; as he has now acquired a healthy percentage of Fox production of the last few decades, finding a muffler was not a problem. "I believe it was N.I.B. Johnno!" On his return Graham entertained all with his fast flying very manoeuvrable "All-American"

Al Presidente Geoff, ran a tanker full of diesel through the "Freebird" PAW.49

I think he too eventually retired through exhaustion.

Moe legend Ron Jones, also gave his "Peacemaker" OS.15FP a solid workout, both model and pilot enjoying the still air.

Our next meeting on September 7th, is the Country Competition Day at Moe.

Graham Keene Sec./Treas. C.L.A.G. Inc



The 10th of August saw our first inter-club Simple Rat comp. There is plenty of interest from juniors and seniors with more models being built. Three teams are using Brian Burke specials. These models are really well made and are a treat to fly.

First up were the two juniors, Mathew Redmond and Trent McDermott. This was Mathews first race. After a little bit of practice the first heat was run and these young guys flew really well.

	Heat 1	Final
Mathew Redmond/Stan Redmond	71 laps	150
Trent McDermott/Mark McDermott	59 laps	146

After a short break it was time for the seniors to exhaust themselves. Mark and Paul Dillon teamed up against Rod Smith and Rob Edgerton the remaining team consisted of Mark McDermott with Stan Redmond doing the flicking.

The heats were very close with a tie resulting in the heat between the Dillons and Smith/Edgerton with 78 laps a piece. McDermott/Redmond scored a narrow win over the very competitive Dillons with 83 laps to 81 laps.

The final was outright hustle and bustle with all teams trying to get the edge in the air and on the ground. The

three pit crews did a good job getting models in the air quickly, and the victors on the day were McDermott/Redmond.

	Heat 1	Heat 2	Final
McDermott/Redmond (Thunder Tiger)	83	DNS	170
P. Dillon/M. Dillon (O.S.15LA)	78	81	159
R. Smith/R. Edgerton (O.S.15FP)	78	DNS	144

Thanks go to the competitors for showing up for the first of many more Simple Rat days to come and of course a big thank you to Brian Burke for C D-ing the events. Hopefully we can get some Logan flyers competing with us!

Mark McDermott

MASA Control Line State Championships 29th Dec 2003 - 2nd Jan 2004 F2F Competition

Objective:

To gain experience and encourage those new to CL Racing in the format of F2C, but using less expensive/complicated equipment. Experienced F2C racers are encouraged to team with someone with less experience.

Rules:

As per F2C with the following exceptions.

Model:

- Profile fuselage 25mm max thickness
- No minimum fuselage cross section area
- Side mounted engine
- No part of the model shall aid cooling of the engine
- 15cc fuel tank capacity including fuel lines
- model does not need to prevent the piston of the engine from being visible
- Goodyear racers will be allowed in the 2004 event provided that they are 1/8 scale (9sqdm wing only area) and meet all other F2F requirements.

Engine:

- No cooling ducts attached to the engine

Propeller:

- Commercially available thermoplastic propellers only (e.g. Taipan, APC)

Teams:

- It is up to the CD's discretion not to allow teams that consist of a high level of experience to compete together.

Race:

- Heats – 2 mandatory refueling pit stops
- Final – 5 mandatory refueling pit stops

TELL THE WORLD ABOUT OUR BEST-KEPT SECRET!

We have to make a choice. Promote or perish. I'm talking about the hobby/sport of flying control line model aircraft. It may be a cliché, but the writing *is* on the wall. The signs are clear. It's danger time. There simply aren't enough young people or fresh faces at our flying fields. The problem of how to increase dwindling numbers must be tackled head on. And tackled NOW, not next month or next year.

Where are the modellers of the future going to come from? Will there still be control line clubs in 10 or 20 years? Ask yourself, do we really want to be a *secret society*, an aeromodelling arm of the Exclusive Brethren? That's not the way to go. We've got to shout it from the rooftops that our branch of the hobby is loads of fun, extremely satisfying and rewarding. And that's just for starters...

You can't rely on tomorrow to take care of itself. Today's club's and their members have the future of control line in their own hands. They alone are responsible.

We've just got to tell the kids and anyone who'll listen that flying control line is *cool*. Explain to them about the heaps of enjoyment to be had with these fantastic flying machines. Detail the joys of building, flying and running engines. Get them out of their stuffy rooms, away from the computer games and out into some healthy fresh air, sunshine and genuine enjoyment.

Survival won't happen by itself. There is no magic wand. Club members have to make it happen through a concerted effort. Like a business needs a plan to prosper, so do aeromodellers. Our plan must be not only to survive, but also to forge ahead.

The recent A.C.L.N. article by Reeve Marsh on Pilot Proficiency Ratings looks a step in the right direction, particularly for youngsters coming into the hobby. It's one thing to get young fliers to hold the handle for a flight or two at a Display Day. They have to be taken to the next level. Make an offer of a proficiency rating. Set them goals and watch them respond. It's called being pro-active.

As Keith Baddock often says, aeromodelling is not easy. Even experienced flyers sometimes need help from their peers. Youngsters need patient guiding in the often difficult to learn skills of building and flying model aircraft. Perhaps the idea of a mentor system should be encouraged where each inexperienced modeller has direct access to advice from a person with control line knowledge and skills. Every new club member would benefit from this.

Simple items such as handles, lines or bellcranks can be difficult to find among mainstream hobby retailers. You can't blame them for concentrating on the R/C gear. After all, they are in business to earn a living. And unlike the sixties, control line flyers are now thin on the ground. Newcomers need plenty of 'how to and where to' advice to help avoid frustrations and difficulties that may influence them to move on and pursue other interests.

I'm looking forward to our next major 'Learn to Fly & Display Day' and am building extra models with this in mind. Some spare combat models, because streamer chasing creates the sort of excitement the crowd want to see. And a trainer to supplement the existing club models. Can't have too many of those. It's surprising how most of the parts needed to construct these models can be found among the various bits and pieces in the workshop.

Club members are urged to look ahead and consider the *importance* of these displays in recruiting new control line enthusiasts. The next event must be even better than the last. It's a real challenge to make the day a success. Attention to presentation details will make the difference between a few new members and failure. Ask yourself what you can do to help. Use initiative. If you come up short of an answer, ask a committee member.

One of the best things anyone can do is to simply chat and interact with the people who respond to the advertising by coming to the flying field. Promotion can usually take the form of community service announcements. It doesn't have to cost the club any money. Major newspapers will put the event in the 'What's On' pages. Local papers will often see a story worth publishing, so send pictures and an article about the club and details of what is happening on the day. Probably the best promotion is via the radio, where many stations are happy to promote community events. In fact it is often part of their charter, so be bold and write 15 and 30 second promotions. You may find they will be read word for word!

Look at the big picture. See the forest as well as the trees. If focus is not put on promoting control line at a beginner's level, it will be just a matter of time before there is no one flying at the elite level. It's possible Stunt, Team Race, Combat and Speed may become just a memory for old timers, albeit a pleasant one.

Whenever you can, at the flying field or elsewhere, take the time and effort to explain and show how control line model aircraft work. Be proud of your chosen hobby and pastime. *Don't keep it a secret*. The continued, long term existence of control line aeromodelling is at stake.

John Hallowell
VH 1984



Photo of new Classic B 'Swooper' for the Hallowell / Baddock racing team' Has FP 25 up front. It should be in the air at Moe.

EASTCOAST COMBAT, SPEED & TEAM RACE CHAMPIONSHIPS
(Incorporating the 2002/3 Queensland State F2A & F2C Events)

All events listed below if adequately subscribed, will be held at the control line facilities of the Aeromodellers of Logan City Inc., adjacent to Chetwynd St, Loganholme Q. 4129 on:

Saturday 4th and Sunday 5th October 2003

Entry fees are \$10.00 per individual per event, i.e. \$20.00 per team per team event. The primary Closing Date for entries is Friday 12th September 2003 whilst "late" entries will be accepted up to 30th September 2003 if prior indication has been received. These are to be returned to:

The Registrar, 2-24 Appaloosa Court, Murrumbidgee, Q. 4125

All cheques or money orders are to be made payable to A.L.C. Inc.

EVENT	OTHER TEAM MEMBER	FEES PAYABLE	
F2C Team Race			
Bendix Team Race			
Classic B Team Race			
Vintage A Team Race			
2.5cc PB Rat Race			
F2A Speed			
2.5cc Slow Combat			
2.5cc Fast Combat			
	Total Fees Payable		

Entrant (print name please): _____
 Address: _____
 Telephone No.: () _____ AUS No.: _____
 Signature: _____ Dated: _____

The F2A Speed and F2C Team Race events will only proceed if two (2) or more entries are received by the primary closing date of 12th September 2003. All other racing events will proceed if three (3) or more teams enter by that date.

2.5cc Plain Bearing Rat has no model specification requirement. However engines must be unmodified plain bearing types whilst fuel delivery must be via suction with tanks mounted outboard of the model centre line. Refuelling to be by filler bottle or syringe only. Line length must be 52'3" (15.92m) and 10Kg pull test will be applied. Heats will each be of 5 minutes duration with one (1) pit stop and the Final will be 10 minutes duration with a minimum of three (3) pit stops. 30 seconds warm-up and an OPTIONAL 30 seconds cool-down will be applied to both heats and final. However those competitors who choose to keep their engines running during the cool-down will not be permitted to add fuel before release. Fuel must be added at all pit stops and the final stop required must be taken prior to 4:30 (heats) and 9:30 (final).

Both 2.5cc Combat events will be run to a modified "Round Robin" format to afford every participant the opportunity of contesting an equal number of bouts. Depending on the number of entries received v time available each competitor ideally will fly against each other contestant. Each competitor will be responsible for his or her own preparation and line testing and will only advise his or her availability to continue AFTER this has occurred. Both events will be limited to one model, engine and lines per bout. However entrants in 2.5cc Slow will be limited to a maximum of two (2) models for that event. The two (2) minute forfeit rule will not apply to either combat event. To promote safety a one (1) metre radius "combating" circle will be marked for use whilst combat is taking place. Both competitors may be disqualified at the discretion of the contest director should a "fly-away" occur. The winner will be the competitor who is awarded the most streamer cuts for the whole event, An associated championship will be awarded to the competitor who wins the most bouts. In all other respects, equipment and dynamics the events will conform to 2.5cc Slow and F2D Modified rules respectively. Assuming sufficient entries are received by the primary closing date for all events to proceed, the intended programme Will be as follows:

Saturday 4th	Sunday 5th
0900 2.5cc Slow combat	0900 2.5cc Fast combat
0900 F2C Team Race	0900 Classic B Team Race
1030 2.5cc PB Rat	0900 F2A Speed
Noon Bendix Team Race	1030 Vintage A Team race

Enquiries, ftuther information or expressions of intent may be obtained from or directed to:

Brian Burke (07) 3200 1308 or Noel Comey (07) 3341 0457

RULE BOOKS

Printed A4 size copies of the Control Line FAI & Australian rules are available in a spiral bound folder from
CLAC,
PO BOX 298,
SEAFORD, 3198.
 The cost is \$8.00 for Book plus \$2.50 postage.

Please make cheques payable to "Control Line Advisory Committee"

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"

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Phone Trevor Taylor (Home) 03 9333 142

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Do you have or know of someone who has plans for a bendix model?

Brian Gardner

bgardner@hatch.com.au

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Call Ken Taylor (03) 9738 0525

I have for sale 2 off 500ml glass measuring cylinders brand new, never been used, in a box, ready for shipping to anyone who wishes to purchase one for \$50.00.

Please phone Grant Potter (02)65453012.

"Wife says sell something to pay for eBay purchases",so-

Untouched,Reg Leece hand-cut kit of "Coy Lady",Fox 35 40th Anniversary(NIB with spinner),NIB Fox 25 with stunt venturi,and NIB Arne Hende replica Amco 3.5 BB diesel.

\$500 the lot,

will not separate (yes,I know most modellers are tightwads,but this lot cost ME around \$750!)

Phone BOB ALLAN on 0351455548 AH, or Email me at bobshirl@bigpond.com

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A large number of NIB glow, spark and diesel engines suitable for C/L or collecting. Lists available from:

DAVID OWEN, PO Box 1739, Wollongong NSW 2500
 Phone 02-4227 2699

or email [<owendc@1earth.net>](mailto:owendc@1earth.net)

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Comes with alloy pan

\$ 50.

Ph Ron (03) 85012814

Notice

Brian Gardner wishes to advise his customers that the shop is now closed until November 2nd.

AUSTRALIAN CONTROL LINE NEWS

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Hrs. Monday to Friday 8.30 a.m. - 7.00 p.m. Visitors by appointment