

THE VOICE OF CONTROL LINE
AEROMODELLERS FROM
AROUND AUSTRALIA

Number 60



Produced by the Victorian Control Line Advisory Committee

October 2002
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**Copy Deadline for next issue is:
Wednesday 16th October 2002
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

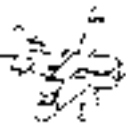
Contest results should be tab delimited, ie use a single tab between each column of results, if submitted by disk. This makes formatting much easier on the editor. Harry Bailey. 37 Thompson Street. Clayton VIC. 3168.

Telephone (03) 9543 2259.

Email address:- acln@ozemail.com.au



COMING EVENTS



CONTROL LINE CONTEST CALENDAR 2002

OCT 6	CLAG Country Flying Day	TRARALGON	
OCT 6	Simple Rat Race, Simple Goodyear		SMAC
OCT 13	FAI Team Race, Goodyear, Jnr 2.5 Rat Race 2.5cc Rat Race (Riverside Trophy)		CLAMF SMAC
NOV 3	Triathlon.		SMAC
NOV 3	CLAG Country Flying Day	MAFFRA	
NOV 17	C/L promotion and learn to fly Day Combined clubs organised event.		KMAC
NOV 24	Monty Tyrell Memorial - Classic Stunt.		KMAC
DEC 1	Aust "A" Team race, Classic "B" Team race, Bendix		SMAC
DEC 8	FAI & Combined speed, Nats practice		CLAMF
DEC 1	Aust "A" Team race, Classic "B" Team race, Bendix.		SMAC
DEC 8	FAI & Combined Speed, Nats practice		CLAMF
DEC 15	FAI Team race, 2.5cc Open Combat, 1/2 A Team race.		CLAMF
DEC 28 -	56 th Australian National Championships start. ALBURY - WODONGA 2003		
JAN 4	56 th Australian National Championships finish.		
JAN 26	FAI (Hearns), Novice & Jnr Aerobatics, Vintage "A" Team race, Classic "B" Team race.		KMAC

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

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

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

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

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

Contact :- H. Bailey (03) 9543 2259

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

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

SMAC Contact :- Reeve Marsh (03)9776 5949

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

BRCAC Bendigo-Newbridge Rd . Marong

Contact :- S. Power 03 54 424 925

CLAG Contact :- Graham Keene (03) 51924485

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



COMING EVENTS



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

LOCATION OF FLYING FIELDS

(ALL EVENTS START 9 am UNLESS OTHERWISE NOTED)

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

CLAS 2002 CONTEST CALENDAR

DATE	CLUB:	EVENT:
5th,6th,	CLAS	N.S.W. State Control Line
7th Oct		Championships
12 th Oct	REMAC	Duke Fox Memorial Vintage Stunt
10th Nov	SAT	F2B Aerobatics
17th Nov	NACA	Classic Stunt
17th Nov	KMFC	"Vintage, Vintage 1/2A, Vintage A and Vintage B Team Race"
24th Nov	SSME	F2B Aerobatics
8th Dec	KMFC	"Xmas Fun Fly, Slow Combat, Phantom Racing & Xmas Decoration"

CLASII CONTROL LINE EVENTS CALENDAR 2002

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

OCTOBER Sun 13th Scale Fun Fly
NOVEMBER Sun 10th **Ipswich Open Grass Speed & Team Race**

Championships Part 2

Combined Speed

Clasii (simple)Rat Open

Team Race \$15 per team

Prize nib Norvell 15 glo motor, 2nd & 3rd Trophies

2 Rounds of heats and fastest 3 to Finals

Junior 2.5 Rat Race

DECEMBER Sun 8th **Christmas breakup and Fun Fly**

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.



STALKER ST61 2-2-2

Derek Pickard tests the latest big Stalker designed to run at a constant two stroke which can also be set for a traditional 4-2-4 run.

The Keep It Simple principle is vital in everything. From basic design to functional operation, K.I.S. is nearly always the smartest way to go. I've never doubted what I had hammered into me during my technical education - that sophistication is applied smart simplicity.

The principle can be at odds for stunt power with the likes of some hard to tune 4-2-4 two strokes, sensitive piped two strokes and expensive four strokes. That's why this big Stalker has to be considered.

Nothing is simpler than this. And if this motor works well, it has to be rated as among the sweetest way to fly.

To put this engine test into perspective, it was over 8 years ago I first tested a Stalker engine. Although called an ST60, the thing was no bigger than a 56 and was the mildest of the mild as regards power development. But it was superbly made, started instantly, never needed tuning, performed well, was incredibly user-friendly and used very little fuel.

Subsequently, I sang the praises about the motor; its layout, excellent metallurgy, good running fits, etc. But pipes were all the go at the time and few believed alternatives had to be taken seriously, especially one with less power. Then the Ukrainian company upgraded the internals and increased the capacity to make later Stalkers a full 60 with an acceptable output. Not too long after that, the new generation of four strokes came on the scene and another potential change came into F2B.

(A quick declaration should be made here. My chosen engine for club F2B is a Saito 56 followed by a Stalker 61 4-2-4 run. Both represent value and performance. I also have a good piped 60 for the wind.)

My decision to revisit Stalker and its latest offering in the big engine class was the announcement that the new 61 is what the maker calls a "re-engineered" version of its 2-2-2 engine run.

Anyway, this 2002 motor of the proven layout arrived on test from the distributor in UK. The claim is made that this new version has been "re-engineered" which apparently means upgrades have been done to parts such as the crankshaft, head shape, backplate, etc. Utilising these modifications, this 2002 ST61 has been designed to run at a constant 2 stroke is a very conventional big Stalker. In fact, in some ways it is a full size 61 that is only a progressive development on the mild original ultra-sweet 56

that I liked so much all those years ago.

To put numbers into that statement. It has the usual 24x22mm bore and stroke for 10cc displacement, 9.2:1 compression and port timings of 125 degree exhaust, 105 transfer and 47-37 inlet. That folks adds up to a mild engine...and that is good for stunt.

Also included is Stalker's excellent version of ABC metallurgy, curved piston top deflector and the new top hat combustion chamber.

In stock form, the engine is fitted with a 315 thou (7.8mm) venturi that runs a 4mm NVA and the maker advises the use of a 12x6 two blade prop and maybe experiment with the various settings to keep a good constant two stroke run.

An excellent inclusion with the motor is the spares and kit. This includes venturis of 300, 285 and 280 thou, head shims, a pile of exhaust and venturi O-rings, spare head bolts and a tool to unscrew the rear backplate. The previous good design of light muffler has been made even better by the use of a carbon fibre main tube and an interior that has no baffles.

The weight tops the scales at just under 12 ounces, which is good.

But where this big Stalker really impresses is with a prop and fuel. From new the slight nip at the top of the engine stroke is soon broken-in and the thing is ready for flight. Modusa is a company that not only stands by its engine with a generous warranty, but it is very definite about the lubricant. A good quality straight synthetic is recommended.

The reason the company is so insistent on the one lubricant is the varying quality of castor oils around the world. Some are junk. But where I live, the Castrol M does not suffer from any ills and so I chose to run the test motor on a 50/50 mix of Castrol M and Klotz red to a total of 20% lube content. Also used was 5% nitro and 10 drops per litre of Armour All to reduce tank frothing. Did y'all get that? Such a brew is what I have always used in my own Stalker 60 to give a great stunt run and it is in absolutely perfect condition after 5 years use.

The test plane was a Jazzer designed and built by Doug Grinham. It is a full size 60 plane originally for Doug's superb running Stalker Pro 61 of a few years ago. It flies very well and has a number of club stunt wins. It is a very good plane that weighs in at 62 ounces for 700 squares. During the short time I've had it, the power has been my own Stalker 61 4-2-4.

Over the years I've had that big Stalker it has proven excellent. Running an emptied muffler, a beautiful four stroke growl is emitted around the circle and it always has the right amount of power. So I was replacing a top performing engine with a test unit set for a simpler 2-2-2 operation. Anything less than an equal had to result in criticism. Tough old world aint it.

But over the 8 years I've been enjoying engine tests, I've learned how new Stalkers impress - no doubt the result of the maker's single focus expertise.

In the air, this engine does exactly what Stalker says it will do. On test it was equipped with an Eather 12x5.75 three blade CF prop and an Enya #3 plug. For the 70 feet lines, the engine speed was set at around 8000rpm on the ground for a lap time of 5.5 seconds. Set that way this new Stalker 60 two stroked for the entire F2B pattern while producing fistfulls of power without hesitation. Only 115cc of fuel was used. It was also insensitive to tank position, near enough was good enough.

Repeat flights were simply a matter of "start it and forget it" with the same settings as the engine always repeated the 2 stroke throughout stunt run. Very impressive.



As Stalkers have an excellent reputation for long-term durability and are backed by an exceptional warranty, obviously this test motor gets the best possible recommendation.

DECLARATION OF INTEREST.
This engine was provided for test by Modusa, 4 Arundel road, Kingston Upon Thames, Surrey KT1 3RZ, UK and sells for \$US205 (£135).
Website
www.modusa.co.uk

The 2 stroke version of the Stalker 60, complete with carbon fibre bodied muffer with the excellent spares and tool kit. All very impressive.

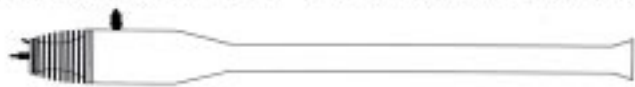
So the 2-2-2 big Stalker with the stock compression and the stock 0.315" venturi is good straight out of the box with nothing need doing. It gets the nod as being exactly what Stalker claims, a 2 stroking serious stunt engine.

But the story does not end there. Colleagues in stunt also fly with this new engine and they have found that by simply lowering the compression with shims, fitting a slightly bigger pitch prop and richening the needle slightly reduce the revs, this new Stalker will hold a very reliable 4 stroke for the pattern. They also use the stock 0.315" venturi but with 10% nitro and ground release with 7500rpm prop speed when the

Test plane was the Jazzer with a CF 3 blade prop.



PULSE JET Aeromodellers



of Australia

The Pulse Jet Aeromodellers of Australia are now an incorporated association and have been registered with the MAAA and have been accepted as a National Special Interest Group. Own aim is to promote the use of Pulse Jets with model aircraft and have an increasing membership across Australia.

PJAA now have a very informative web site, which can be found at:

<http://users.pipeline.com.au/jcadams>

We hope to see a good turn out of Jet models at the Albury Nationals and we welcome any interested Pulse Jets enthusiasts to come and have a look.

Bob Fry
AUS 11924.
Bob.fry@wpcorp.com.au

W.A. Control Line State Championships report

On Saturday the 7th of September The TARMAC club hosted the first State Championships day for 3 events - Vintage T/R, Bendix T/R and Vintage Combat . The weather was perfect after having strong winds and rain most of the previous week. A steady flow of spectators called in and were entertained with a continuous show of racing heats and combat bouts throughout the day.

A big thankyou must go to both the Mercurians and TARMAC for supporting the day and the biggest thankyou must go to Scott at ACE Radio Controlled Models of Midland for sponsoring all the events and providing gift vouchers for the first three place getters in each contest.

Kevin Sharpe keep the racing events running smoothly in his role as contest director and everyone was keep well in line while also given every opportunity to prepare properly for their races. Norm Kirton keep the action going as CD for Vintage combat and everyone enjoyed themselves with good sportsmanship being shown by all. Thank you to both the CD's, time keepers, cut judges, officials and all the extra people that help out with clearing away afterwards, everyone was talking of how the day was a great success.

The early start time of 9:00am did not seem to cause undue hardship for anyone and the first heat was under way by 9:30. Vintage Team Race was up first with 6 teams eager to get to show their stuff. 4 teams were using Oliver Tiger engines with the remaining 2 teams using Tiapans.

Charlie Stone with his Vintage pilot and team partner Norm Kirton, had excellent air speed with an immaculate scale model "Typhoon" but were just short on range and had to pit

twice in both heats but still managed the second fastest time of the day. Fred Adler and Jim Stivey using a Tiapan powered Pluto were maintaining good air speed and put together some very good pitting to get the fastest time of the day after their DNF in the first heat. Bob Fry and Alasdair Taylor had their CS Ollie / Pluto circulating with respectable speed but found the quick restarts eluding them but still scraped into the finals with a time less than a second behind Norm and Charlie.

	Heat 1	Heat 2	Final
Kirton / Stone	4.15.50	4.04.88	7.50.49
Stivey / Adler	DNF	3.51.31	8.12.80
Fry / Taylor	4.22.03	4.05.29	8.15.34
Bellis / Gannon	4.31.75	4.08.78	
Letchford / Walton	5.05.88	4.55.91	
Sherburn / Dyson	6.52.58	DNF	

Richard Bellis piloting Dave Gannons beautifully presented MK 1 VooDoo looked sweet in the air and was flying faster with each heat and narrowly missed a spot in the finals. Steve Walton was working hard with a Tiapan powered Humpty Go-Cart to get a better tune and more speed. The recently paired team of Mark Sherburn and Adrian Dyson have started to put in heat times which should readily improve with fine tuning of the their model set up and pitting practice. Three teams were using engines that have been in the skilful hands of Darryl Mills for blueprinting to come up to the high performance requirements now essential in Vintage team race. The heat times unfortunately are not an indication of the model speeds, in fact nearly any model could have made the finals and won if only the perfect race could have been achieved, but that's racing! The racing was close and everyone had a ball!

Bendix T/R

Five teams entered three team finished. Bendix has not been flown for a while in WA and unfortunately it showed. Fry / Taylor had a short appearance with a missed catch and broken Fuselage and first timers Sherburn / Dyson had a fly in on take off which resulted in the lines snapping and a fly away and a 400m walk into the bush with a garbage bag.

Again the winners of Bendix this year went to a team using a borrowed model from Bob Fry and this time an ASP engine on loan from Darryl Mills. Dave Gannon relied on consistency with his pitting technique and Richard Bellis showed he has talent in both racing as well as combat to achieve the fastest heat time and win the final as well. (some say combat fliers make the best racing pilots!) Jim Stivey & Fred Adler had the fastest model but inconstant runs held them back to second place. Trevor Letchford & Steve Walton were having a nice day in the sun but had DNF's in the heat and final. They were also using borrowed gear but apparently not from the right source. The three teams that managed to get through practice to actually race looked like they enjoyed themselves with the big toys and hopefully we might see a resurgence of Bendix racing again.

	Heat 1	Final
Bellis / Gannon	4.36.28	8.39.75
Stivey / Adler	4.44.41	9.33.16
Letchford / Walton	DNF 71	DNF 104

A BIT OF VINTAGE

Vintage Combat

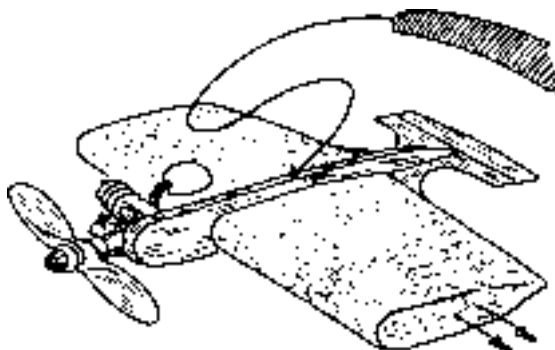
A larger number of contestants were expected this year but for various reasons just Nine entries made it to the circle. This is the event is the most hotly contested and is looked forward too by both contestants and spectators. This year was one of the best competitions yet with bouts fought out with mercurial skill and only a couple of models down with minor damage which should be up and going again soon.

With each round guys like Adrian Dyson and Mark Sherburn showed more aggression and really started to get into the groove. Jim Stivey's first bout up against Adrian showed that Jim had not lost his killer instinct even though he had not competed for several years, Jim delicately picked off his opponents streamer in three successful attacks. Kim parks was the only person to use Glo engines (G15s) and when they were on song they had the edge in speed over all others. Inconsistent engine runs saw Kim knocked out in his second bout and finish early, mumbling something about buying a G20/15 Diesel. Steve Walton was also an early retirement after being knocked out by his own team partner, Trevor Letchford. Letchy was doing well until he met up with a more determined Adrian Dyson who was eventually pipped for third place by a hard working Richard Bellis. Bob Fry flew off against Matt Pickin who had been quietly carving up his opponents and deserved his entry into the final bout of the day. Bob came out the victor but had to use every attacking and evasive manoeuvre possible to keep that terrier Matt the "Pitt Bull" Pickin off his tail.

Bob Fry	W	-	W	W	W
Matt Pickin	W	-	Bye	W	L
Richard Bellis	W	-	W	L	W
Adrian Dyson	L	Bye	W	L	L
Trevor Letchford	Bye	W	L		
Mark Sherburn	L	W	L		
Jim Stivey	W	-	L		
Kim Parks	L	L			
Steve Walton	L	L			

The format of having multiple events on one day seems to work well with our Eastern states counterparts and this is the first time in many years it has been tried in W.A. From the comments around the flying field the day was a great success (although tiring) and we should have a go with a similar format again next year.

Bob Fry
AUS 11924.



When I was a younger lad of about 16 (this does go back a bit!) I flew A T/R to the then current Australian Rules in the 1956/7 Rule book. The models, all four of them, started one behind the other and if the rearmost started first then the pitman carried it forward over the top of the other three and then placed the model on the ground for take off. None of this pansy segment stuff! When all four models were in the air pilots then had to jog around a 200 L drum just to keep things easy and honest. So take out the drum and shorten the lines to 46' 8" and life then becomes a piece of cake! Until father time racks up three score and then things hit the fan. There's a good possibility the remaining ten will pass faster than intended!

The other small detail overlooked is we used 52'6" line lengths, a fact which has been refuted by some who should have better memories. Please refer to a copy of the above mentioned rule book.

The concept of going to 49'6" lines for 8.5 laps to the 1/2 mile seems to me to be only half baked, giving a percentage change of about 5.5%, hardly noticeable towards the end of a race when the combined effects of booze, ciggies and age are added up. Perhaps we were wiser when younger and used 52'6" lines! Besides it keeps timing easier for an old bloke like me when a complete lap is dropped!

A few people mentioned more run ins would happen but in days of old it was not a problem and unless piloting skills have dropped over the years I cannot see why we should not go to what worked for us previously, with perhaps a little less emphasis on super lightweight models and a tad more tip weight, an item which I always indulge in to excess believing one must first finish if one wishes to finish first.

Another aspect seldom spoken out about is the amount of old timers who have gear in the archives and find the prospect of giving it a go a bit too daunting, perhaps the longer lines will be all it takes to provide the necessary motivation. My own pet hobbyhorse is to run a "B" grade event for all those who cannot better a nominated time.

Also to be considered is the potential that may be possible and what line length would best be suited. Gazing into my crystal ball, plus a few random observations on the test bench and the rare practice flights that have been boomers I think somewhere in the vicinity of 6' 25" is a reality but would require one of those magic days when everything goes right.

Perhaps a few words from some other of the modelers who actually flew "A" T/R to the old Aussie rules in the fifties would be worthwhile, just in case my vision is a bit cluttered by nostalgia.

The Aussie rules of old, if I am not mistaken, were influenced more by the then American rules than the British. Perhaps in days of old the Yanks were a bit faster than the Poms, not that anybody wants to remember such trivial details.

Andy Kerr.

TARMAC Notes for August and September

As stated last month, I will be away from home at the time these notes are needed, and I was going to take a break for a month or so. However, I have been given some stuff that is both interesting and doesn't involve any work from me that I can send in to the editor nice and early for a change. Here it is.

Control line folks tend to be very interested in engines of all types. Mostly because they are so dependent on them for flight (you don't see any control line gliders do you?). A new, purpose built, stunt engine has been commissioned by John Brodak, who has a huge retail sales business focused on C/L in the USA. This motor has just come onto the market and I have here a review of this engine written by Leonard Neumann who runs the 'Stuka Stunt' website. There are also a couple of photos of this engine sent over by Brian Gardner of Bri-Stunt in NSW. I heard that Brodaks had ordered a first batch of 100 engines and enough spare parts for about another 50. The demand has been so great that they assembled all the spare parts and have sold the lot.

Here are some observations on the new Brodak 40 from Leonard.

The engine on the outside bears a lot of similarity to the Double Starr 40 (made in the same factory), but that is about where the similarity ends. It has the same Fox 35-ish 3-bolt back plate, but this is not a "bored out" Fox 35. The bolt pattern, in fact, is made to fit the OS 35S, 40H, 35/40 FP, 40/46 LA pattern. That means you can mount this engine where you had previously mounted (or intended to mount) an OS engine of similar size...except...it matches the 35S shaft length, but the shaft length is slightly shorter than the FP or LA. Thus, with a slight change in needle location, it is a drop in replacement for the OS 35S and a great choice for a classic size airplane.

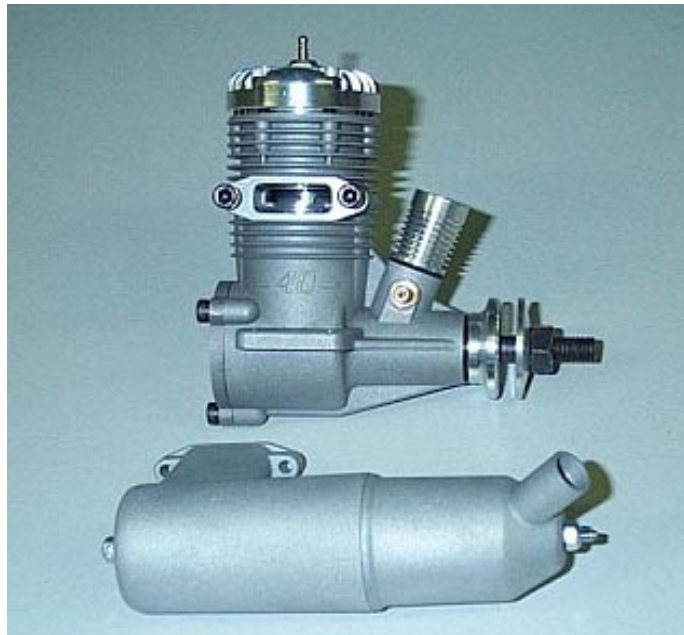
The muffler mounting arrangement is similar to a Fox 40, but the bolt spacing is just slightly wider. This is one thing I have never quite understood with manufacturers. If the bolt spacing were made just slightly narrower, which could easily have been done without changing the size of the opening, it would allow the interchanging of other mufflers that were already available

The muffler that comes with the engine is also unique. This muffler is very similar in construction to the RC version of the OS. The weight, however, is considerably less. Actual weight of the engine (on my gram scale) is 191 grams or 6.74 ounces. Weight of the muffler with screws is 50 grams or 1.76 ounces, for a total weight of engine plus muffler of 8.5 ounces.

I might add that the "stinger" on the muffler is slightly small by my standards (as was the OS) and the engine would probably benefit with an after market muffler that is slightly less restrictive. It would "bark" a little louder with a little larger diameter stinger on the muffler, but it would still provide ample muffling and the power gain would be worth it.

All in all, however, it looks quite good for a modern

Schnurle engine, designed from the ground up as a stunt motor, with proper timing, AAC construction, and the aforementioned light weight.



Here is a photo of the Brodak .40 that has been supplied by Brian Gardner (BriStunt). He has got one to test run. In his words 'Fits and machining quality are magical.'

The venturi that comes with the engine is quite tall-1.325 inches above the mount at the front end, which means it will clear the cowl quite admirably on most cowed installations, making for easy choking. The bore of the venturi is .302, which is pretty much in line with this type of engine and its timing, considering the 1.57 diameter of the needle assembly with which it is equipped

While mentioning the needle assembly, it uses two holes opposite one another similar to the Fox 35 (but with an ST type needle with much finer threads). The holes in the spray bar, as on some of the Fox 35 engines, are just slightly off center, meaning care must be taken if removing the needle to turn it around for a profile installation to make sure that the two holes are pointing slightly down, not slightly up. Although this was probably by design, the venturi cross hole is slightly off center as well, meaning it fits in the case one way, but not the other. It would thus be best not to remove the venturi, or, if one had to, to make sure that it was replaced in its proper orientation.

This goes for the back plate as well. Although the three mounting lugs are evenly spaced around the perimeter, they are cast in a way that it fits properly only with one lug faced down. This is obvious when one examines it carefully, but could be missed by the careless "tinkerer".

The engine uses a cast case and machined parts everywhere else. Even the piston and rod are machined from bar stock, not cast as on the later OS engines. It uses true AAC construction (aluminum sleeve, chromed, with an aluminum piston) and the sleeve is a reasonable, for its size, .070 thick (compared to .085 for the Nelson made PA .61). The head is hemi shaped with a narrow squish band. Even a glow plug is furnished which is unusual in engines

these days.

The porting in the case and the sleeve jump out at you as being different. The "standard" for Schneurle engines these days is to have two by pass ports in the case, one on each side of the exhaust, and one "boost" port opposite the exhaust. On this engine the case has two huge bypass ports that wrap around from each side of the exhaust and almost meet at the back side. There are then two boost ports cut into the sleeve which are fed by the same ports in the case that feed the adjacent by pass.

On the "normal" Schneurle engine the boost port is cut lower in the sleeve and designed to boost the high rpm of the engine. It is common practice of the engine reworkers to grind these ports at an angle so that they meet the height of the side by pass ports. This has already been done on the Brodak 40, but it leaves me to wonder why it wasn't just cut square to match the side ports. Perhaps the thought was that the fuel would shoot up in a more turbulent fashion, but once this port opens, it opens, and the angle really makes no difference. Of course, if there is no help, there is also no hurt.

Over all, the engine appears to be of very good quality and workmanship, and worth every bit the US\$99.95 retail price on the engine. Given the early performance reports, it would give much less reason to buy an old 35S or Fox 35 for that classic ship. What you have here is an engine of the same size and weight, but with much improved quality and greater power, while being timed for the classic 4-2 break. Even the instruction sheet that comes with it is quite complete, although the translation from Russian to English wasn't all that great. The recommended fuel is at least 22% oil of 50% castor, 50% synthetic and 10% nitro.

For those who might be considering the engine, the recommended prop is a 4 or 5 inch pitch of 10 or 11 inch diameter, and it is recommended for planes up to about 44 ounces in weight.

Leonard Neumann



A new Classic B racer built by Mark Sherburn. A sort of enlarged and modified VooDoo powered by OS .25. I think that the engine has been breathed on by Darryl Mills. It looks good and is in the process of being race tuned now. The photo by Adrian Dyson.

I received this mysterious message. It said; 'Your Village called. Their idiot is missing.'

Charlie Stone
Emailcestone@bigpond.com

VH4706

SUBSCRIPTION APPLICATION ARE YOU BORROWING?

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Remote Doppler recording.

From Supercool

The Doppler method for determining airspeed and in-air RPM has now gained wide acceptance. See previous articles on Doppler on my website www.supercoolprops.efitel.com for more information. The method has application in R/C pylon race and C/L speed events, where mufflers are not required. F3D and F2A are two events that benefit particularly from in-flight evaluation of engine and propeller performance.

However, there is one disadvantage to the method, which applies during single-handed testing. This disadvantage relates to the position of the microphone. In the case of F3D, the recording microphone should be placed at least 200m past #1 pylon, and in F2A and F2C 50m from the edge of the circle. This is highly inconvenient in both cases, enough to deter even the fittest modeller, or in my case, one whose knees now creak like the doors of a haunted house!

There may be a solution to this problem, which I now propose. I have not tested this method in the field, so I cannot guarantee that it will work. So the risk is yours, a situation which suits me just fine!

There are now on the market little walkie-talkies (transceivers?) with good range, many features and a reasonable price (since you need two). The pair I have are Uniden UH-040XR units that operate on the UHF band at 476 MHz. I paid AUD99 each for them from Dick Smith some time ago. I note that recently similar units have been going for AUD89, which I would call good value for such quality items.

The idea is to place one unit at the point for sound detection, with it fixed on transmit (PTT), using perhaps a cable tie to hold the switch down. With a range of up to 3 kilometres, there should be no problem with positioning, even for F3D. This idea will not work if the unit has an internal timer which switched the unit off as a power saving measure. My units seem to be OK in that regard.

A second unit is placed in the pits, where it is set to "Monitor" and connected directly to a tape recorder input. On the Uniden unit, if the Monitor key is held down for 2 seconds, it stays on permanently, an ideal circumstance. The Uniden has a 3mm output socket labelled SPKR. An ordinary mono (or stereo) audio cable will fit that socket, and may be run directly to the MIC input on the tape recorder.

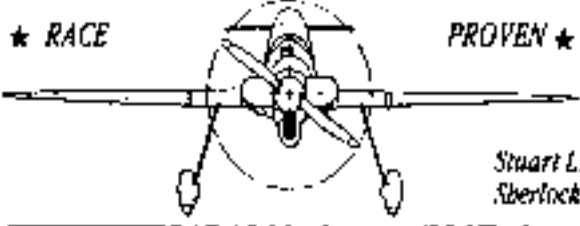
Well thats just about it. Oh, I use a Digitor tape recorder, it is very cheap, well featured and battery life seems to be much better than the old Realistic brand. The only problem that may apply to the system is whether the transmitter has a threshold level for sound input. That is one of the bad features of mobile phones when used for Doppler in F3D: they tend to cut in and out. I have not been able to find a threshold on my Uniden units, but if there is one it will soon show up in field tests!

Now a tip for F3D. There is no reason why multiple transmit units should not be used. The Spectrogram trace works as well for multiple models as it does for one, just makes identification a bit of a problem. So I suggest having 2 transmit units, one 200m past #1, and one 200m out past #2 and #3. This way you get speed/RPM in the straights, and speed/RPM as an average in turns of going around 2 and 3.

Do let me know how you get on with this, and good luck trying!

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F2ACW02	6 X 6.3	Bendix02 8.5 x 6.5
F2ACW03	6 X 6.4	
F2C04	6.3 X 6.1	
F2C05	6.3 X 6	<i>Supercool</i>
F2C06	6.8 X 5.8	<i>First in Racing</i>
F2B	11 X 5	

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AROUND THE CLUBS

NOW FLYING STUNT AT KMAC



Craig Hemsworth has again demonstrated his excellent building skills. This latest model is a classic and vintage legal Bumstreak which features Detroit wing construction and is powered by a Tigre ST40.

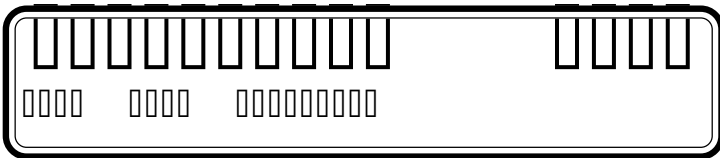
Recognise this plane? You should - it's Peter Roberts' famous old Classic that he built many years ago and brought out again for a "last try."



Gareth Pickard is back flying after a 12 year break. And he's got his hands on the same old Flite Streak he previously flew. (One of his hands is holding an electric starter - for a PAW diesel!!!!)

RULE BOOKS

Hard A4 size copies of the Control Line FAI & Australian rules are available 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"



Our last team race day saw good weather and a good pitch, although a little dry. If I had won the toss I would have batted first. Only three teams rolled up for Vintage A and Classic B.

Vintage A.

Ian Garton and John Taylor had trouble early in practice and pulled out. This left Ray Buchloz and Rod Smith up against Paul Dillon and Mark McDermott. We all had some practice and decided to run just a 180 lap final. Rod was using his C.S. powered Mewing and I was running my C.S. powered Voodoo (no Timmy in this race) The Dillon/McDermott team finished first in a fairly good time of 7:24.02. Buchloz/Smith came home in 9:02.24

Classic B

Ian Gartons luck improved for a while until battery problems finished the final pursuit abruptly. It was good racing between the three teams of Ian Garton/John Taylor, Ray Buchloz/Rod Smith and Paul Dillon/Mark McDermott. All pilots flew well and pit crews were getting good starts.

The final ended up with a Dillon/McDermott victory

Results

Paul Dillon/Mark McDermott	6:25.02
Ray Buchloz/Rod Smith	9:14.16
Ian Garton/John Taylor	70 laps (Battery failure)

There should be a couple of more starters in Qld in the near future in Vin A and Classic B. More new flyers are tempted towards Classic B because it is so easy to obtain engines.

Hopefully we will have at least one more race day before the wets.



Mark McDermotts Vintage A Voodoos complete with timmy Tigres, weighing in at 11 1/2 ounces



Above :- Vintage A world race record holders Mark McDermott and Paul Dillon

Below;- Classic B flyers from left Mark McDermott/ Paul Dillon (with son) and Rocket model, Ian Garton and his Double Dice, Rod Smith with his Rivetter and Ray Buchloz and John Taylor.



Mark McDermotts new Bendix model. This Mustang was built by Brian Burke and circulates in the high 15 secs for 7 laps .





AROUND THE CLUBS

Control Line Aeromodellers of Gippsland

From Peter White

To those of you who have spent long hours at your letterbox waiting for the postie to deliver your newsletter containing my usual incisive reports on the C.L.A.G. flying days, I apologise. However, I can explain. Firstly the August report on the Moe day was put into the computer where it was devoured by the inner workings of said equipment leaving me too emotionally crushed to compose another one.

My intention was to include it with the report on the September Warragul competition day but even that report hasn't eventuated due to demands on my time and energies with packing for my impending move to Perth. If you have never attempted such an upheaval, have a very good reason and think twice before you do and if you have moved house, you've probably vowed "Never again".

At this point, the best we can manage is to say that the Warragul comp was very successful due to good weather, suitable venue and a reasonable roll up of enthusiastic competitors.

Placings in the **Vintage Aerobatics** were as follows -

1. Robbie Hiern	Frisky/Taipan 2.5	403point
2. Geoff Ingram	Demon/Frog 500	376
3. Dave Lacey	Madman/K&B Stallion	367
4. Graham Vibert	All American/Fox 35	348
5. Andrew Beevor	Wildcat/OSLA46	328
6. Graham Keen	Peacemaker/OS15 FP	238
7. John Goodge	Demon/Fox25	222

Classic Stunt results

1. Peter White	Nobler/Veco 35	2722
2. Mark Ellins	Nobler/Fox 35	2489
3. Geof Ingram	Windy/Enya 35	2439
4. Andrew Beevor	Wildcat OSLA46	2039
=5. Dave Lacey	Skylark/Merco 60	1941
=5. John Goodge	Nakke/Stalker 40RE	1941
6. Graham Vibert	All American/Fox 35	1734

Congratulations to Andrew Beevor, Graham Keene and Graham Vibert. This was a first competition attempt by Andrew who had never flown an overhead eight or a cloverleaf until today and by Graham Keene whose vintage pattern was looking quite neat until he ran out of air during a vertical eight. Graham Vibert acquitted himself well, particularly in vintage, in his only competition efforts since his debut at our first Warragul day some four years ago. Well done guys- keep it up

Our thanks go to everyone who helped in any way - Peter Roberts, Dave Lacey and Robbie Hiern with judging, Ken Donnelly with tabulating the scores, Paul Richardson with the snags for the BBQ lunch, Graham Keene with carting and setting up the prizes, table and BBQ etc, and everyone for co-operating by being ready to fly on time. To anyone I have forgotten to name, I thank you too.

I expect that the team race boys will have a report on the day also. Thank you guys for attending,

running your own events and helping to make the day a success.

Always remember that wherever you go, that's where you'll be.

Safe flying!!



CLASSIC B T/R

	Heat	Final
1. J.Hallowell/J.Goodge/G.Keene	3:26.29	6:49.53
2. G/Wilson/M.Ellins/M.Wilson	3:45.97	6:57.95
3. H.Bailey/P.Roberts	3:57.71	8:08.00

John Hallowell did not have his regular pit man on hand to do the flicking of the OS25LA and so enlisted two of the locals to stand in as pitman and battery person (gender political correctness). They did an excellent job in bringing the LA to life at every pit stop and were the eventual winners in front of the other two models with OS25FP power.

AUSSIE A T/R

	Heat 1	Heat 2	Final
1. M.Wilson/G.Wilson	4:06.28	dns	8:16.00
2. J.Hunting/K.Hunting	4:42.47	4:53.56	9:20.09
3. J.Hallowell/M.Ellins	4:39.12	dns	9:26.56
4. K.Hunting/J.Hunting	4:31.22	dns	
5. H.Bailey/P.Roberts	5:18.53	5:03.88	

Some mixing and matching of team members was done to facilitate getting all five models to take part. Some of the locals were tempted to try their hand at lap counting and timing and a good time was had by all concerned.



Pictures from www.clagonline.org.au

CONTEST RESULTS

SMAC Contest Results - held at Knox on 8th September 2002

A less than "full strength" turnout meant there was a fair bit of "I'll help you if you'll help me" going on - in one particular heat it looked like Mark Ellins would have to pit for all three teams! Although both Vintage A and Aussie A team race were scheduled to be run, the somewhat windy conditions saw Wilson/Ellins the only team interested in Vintage A.

Aussie A Team Race

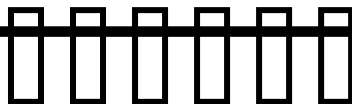
Place	Team	Round 1	Round 2	Final
1st	Ray/Ray	4:30.59	4:27.68	8:52.75
2nd	Wilson/Ellins	4:05.77	-	9:08.63
3rd	Hallowell/Bailey	4:34.39	4:24.33	10:04.03
4th	Bailey/Hallowell	4:45.66	-	
5th	Ken Hunting/?	5:08.72	5:00.49	

Many of the models used were recycled Vintage A models. The Rays were using an OS15FP engine and were managing to get up to 53 laps to the 15cc of fuel. Hallowell/Bailey used OS15FP engines in a Footprint and a Voodoo. Wilson/Ellins used a trusty Taipan in a Footprint, and I think Ken Hunting used a Pluto model.

CLAMF CLUB CHAMPIONS 2001/2002

Points for the club championship are allocated relating to the number of competition events entered, number of entries and where the members placed.

1.	G.Wilson	131
2.	M.Ellins	115
3.	H.Bailey	72.5
4.	K.Hunting	72
5.	J.Hunting	65
6.	M.Wilson	58 (Junior)
7.	J.Ray	56
8.	N.Wake	49
9.	C.Agnew	46
10.	P.White	31
11.	P.Stein	21
12.	D.Shackleford	17.5
13.	P.van Meurs	6
14.	A.Lumsden	4
15.	V.Marquet	3
16.	K.Wareham	2



At the recent Scale Fun Fly which was held on October 13th at the ALC club in Queensland (which was well attended) the collective opinion of those present was that CLASII should run the 2003 Qld C/L State Titles.

The date has yet to be set.

The following article was taken from the August edition of the Linecheck newsletter.

THE LIGHTER SIDE OF RACING

The following piece appeared a few years ago in the Novocastrian News and the 3 Kings "Court Circular" I think it's timeless and make no apologies for reprinting it here.

From The Depths of The Armchair

I KNOW CAUSE I WAS THERE

By Noel Stephenson

A while ago (1990 I think) there was a much reported Class A Vintage team race at Croydon which generated as much hilarity among the participants as it did amongst the spectators. I know, cos I was there! I seem to remember that one aircraft broke up in the air and another regularly took off whilst clipping the prop and sometimes across the circle. The eventual winner splayed the UC, lost the comp setting and spent many laps staggering around being over taken by the other two, before the pitman got it sorted and paralysed the opposition. Despite the apparent chaos, flight and pitting discipline stood firm and no really dangerous situations occurred.

Was it Mike Rolls who said that as one gets older one remembers every nice thing that happens? In any case I remember one golden day with amusement and affection and a strong sense of deja vu.

It happened this way _____

At the time, we were still using 2 pitmen per team, 42ft lines and no segments (or helmets, remember!) and things were a bit hectic with 8 of us galloping around. One little boy together with his milk pail, containing about 4 pints of creamery - fresh milk ducked under the ropes and positioned himself so as to get a ringside seat.

Before he could be removed, one of the pitman, circulating at high speed to get to his aircraft, skidded wide and put his size 9 straight into the pail. The milk reached the pitmans waist (both inside and outside his trouser leg !) while the pail clamped tightly over his shoe. Undaunted, he continued on his merry way, spraying milk in all directions and pursued by the howling youngster. The crowd loved it!

However, the poor pitmans trials were not over yet. On reaching the aircraft, he re-fuelled and released it. Unfortunately as he tried to move out of the circle, the pail on his foot caused him to stagger and he stood upright, arms wind milling wildly in an attempt to keep his balance. You can guess the rest.

As he stood fully upright, he moved directly into the path of a landing racer. The pilot saw him and jerked on full up elevator, but although the model's attitude changed, its flight path did not and the model bounced off the top of the pitmans cranium in a fully- stalled condition. I was watching all this from a few yards away and the memory I have is that of the model's wings folding down to cover his ears, like the flaps on a deerstalker, while the dazed pitman slowly sank onto his knees in a pool of spilled milk. By now the crowd was hysterical and applauded wildly. We left the arena to thunderous acclamations.

Near disaster? It was indeed. We've come a long way since those days. Haven't we?

C.L.A.S. Inc. NSW State Control Line Championships

5th, 6th & 7th October 2002



CALENDAR OF EVENTS

Grass Events (G): Kelsa Park North, Henry Lawson Drive, Milperra - Entrance Opp. Maxwell Ave. | 8:00am to 6:00pm - Gates Open 7:30am)
Hardstand Events (H): Sydney International Regatta Centre, Penrith Lakes, Castlereagh Rd, Penrith. Enter Gate 'A' over bridge. Carpark on left.
Stunt Co-ordinator: Gary Tansley Combined Speed Co-ordinator: Andy Kerr Combat Co-ordinator: Robert Owen
Hardstand Events plus Grass Racing Events Co-ordinator for Vintage A & B, Bendix & Goodyear: Stephen Rothwell

Event Entries Co-ordinator: Joan McIntyre

Saturday 5th October 2002		Sunday 6th October 2002		Monday 7th October 2002	
Time:	Event:	Time:	Event:	Time:	Event:
8:00 AM	Practice (G)	8:00 AM	Practice (G)	8:00 AM	Practice (G)
9:00 AM	Jnr. Combat (G)	9:00 AM	F2B Aerobatics: Round 3 (G)	9:00 AM	Jnr. Rat Race (G)
9:00 AM	Vintage A Racing (G)	9:00am	F2C Racing (H)	9:00 AM	Classic Stunt (G)
9:00 AM	F2B Aerobatics: Round 1 (G)	11:00 AM	F2A Speed (H)	9:00 AM	Vintage Stunt (G)
11:00 AM	F2D/Aust Fast Combat (G)	12:30 PM	2.5 Slow Combat (G)	10:00 AM	Goodyear Racing (G)
12:30 PM	Vintage B Racing (G)	1:00 PM	F2B Aerobatics: Round 4 (G)	10:00 AM	Open Combat (G)
1:00 PM	F2B Aerobatics: Round 2 (G)			11:00 AM	Combined Speed (G)
2:00 PM	Bendix Racing (G)				

CONDITIONS of ENTRY:

1. All Entrants must be current MAAA members & Licences must be produced
2. All Events as per current MAAA Rule Book or CLAS Special Rules
3. Approved Safety Hard Hats to be worn by all pit crews at all racing & combat events.
4. All combat motors to be attached to the hull/rank pivot by wire as per MAAA rules & this attachment must be visible.
5. Control Lines & their terminations will be subject to a safety check, including a pull test.
6. Model Processing from 8am until 15min. Prior to each event. Late entries at the discretion of the CD.
7. Vintage Stunt as per MAAA rules. Documentation required.
8. Classic Stunt as per MAAA Control Line Provisional Rules.
9. Entries close Friday 27th September 2002. Late entries subject to approval from CLAS Secretary & Contest CD.
10. All events run on prepared grass surface or hard surface.

SLOW COMBAT - CLAS Special Rules:

1. Motors not to exceed 0.15cu.in.(2.5cc) and must be plain bearing. No engine modifications.
2. Propeller diameter 7" or 8". Propeller pitch 4" or 6". Minor adjustment for balance only (Sports Prop)
3. Fuel: Glow fuel standard PAF max. Diesel to have a maximum 2% LPN.
4. Tank: Standard wedge or square section only. NO chicken hopper or pressure bladders.
5. Two models per flying day, with one model per hour.
6. All models must rise off the ground at all times. Failure to do so will incur a penalty of 100 points each session.
7. Any competitor will be disqualified, if in the opinion of the CD, they breach the implied intention of the rules.
8. All models must resemble an aeroplane and the CD may direct a model to be slowed down.
9. All pre 1986 PAF combat rules apply unless contradicted by the rules above.

JUNIOR SIMPLE RAT RACE - CLAS Special Rules:

1. Rules as per MAAA Rules for Junior Rat except only plain bearing engines will be used and NO pressure fuel tanks

For more information contact:

John McIntyre - C.L.A.S. Secretary
19 Alston Drive, Berowra Heights NSW. Phone: (02) 9456 1546

Gary Tansley - C.L.A.S. Vice President
P.O. Box 135, Milperra NSW 2214. Mobile: 0407 700 149

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STERLING, BEECH BONANZA -	\$40
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SIG, BANSHEE -	\$50

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WANTED

The organisers of the 56th Nationals in Albury/Wodonga would appreciate the assistance of some volunteer C/D's for the following events.

Class 2 Team race	29/12/2002
Junior 2.5cc Combat	30/12/2002
Open Combat	03/01/2003
Vintage Stunt	03/01/2003

If you can help please contact
 Graeme Wilson (03) 9786 8153
 Email vmaareg@ozemail.com.au
 or Jim Ray (03) 9546 7170

FOUND. At Knox, 8/9/02. Set of 18 thou. lines on small grey M.R.S. line reel. Double looped soldered connections.
 Contact; John Hallowell, 9347 4428.

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