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THE VOICE OF CONTROL LINE  
AEROMODELLERS FROM  
AROUND AUSTRALIA

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Number 80



Produced by the Victorian Control Line Advisory Committee

August 2004  
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**Copy Deadline for next issue is:  
Wednesday 18th August 2004  
PRODUCTION SPECIFICATIONS**

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

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

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

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



# COMING EVENTS



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## CONTROL LINE CONTEST CALENDAR 2004

AUG 1	Simple Combat.	SMAC
AUG 1	C.L.A.G. Country Flying Day	Knox
AUG 8	<b>FAI Team race,</b> <b>2.5cc Rat race,</b> 1/2 A Combat.	CLAMF
AUG 22	F2B Stuntmasters Trophy & Yoeman Trophy Vintage "A" Team race, Combined Speed.	KMAC
SEPT 5	Knox flying day	SMAC
SEPT 5	C.L.A.G. Country Flying and contest Day Classic Stunt, Vintage Stunt, Simple Combat, Aust "A" Team race, Classic "B" Team race.	Moe
SEPT 19	<b>FAI &amp; Combined Speed,</b> Simple Rat race, <b>1/2 A Team race.</b>	CLAMF
SEPT 19	C.L.A.G – Brimbank Classic/Vintage Stunt at Keilor Park	KMAC
SEPT 26	FAI, Novice & Jnr Aerobatics, Classic Stunt, Bendix.	Traralgon
OCT 3	C.L.A.G. Country Flying Day	SMAC
OCT 3	Simple Rat race, Simple Goodyear.	SMAC
OCT 10	<b>FAI Team race, Goodyear,</b> Jnr 2.5cc Rat race, <b>2.5cc Rat race (Riverside Trophy),</b> Jnr 2.5cc Combat.	CLAMF
OCT 26	FAI, Novice & Junior Aerobatics, Combined Speed, Vintage "A" Team race, Classic Stunt.	KMAC
NOV 7	C.L.A.G. Country Flying Day	Moe
NOV 7	Triathlon.	SMAC
NOV 21	<b>FAI &amp; Combined Speed,</b> FAI & Modified Combat, <b>Mini Goodyear,</b> 1/2 A Combat.	CLAMF
NOV 28	Monty Tyrell Memorial - Classic Stunt. Vintage Combat.	KMAC
DEC 5	C.L.A.G. Country Flying Day	Moe
DEC 5	Aust "A" Team race, Classic "B" Team race, Bendix.	SMAC
DEC 12	<b>FAI Team race,</b> 2.5cc Open Combat, <b>1/2 A Team race.</b>	CLAMF
JAN 30	FAI (Hearns), Novice & Jnr Aerobatics, Classic Stunt, Vintage "A" Team race, Classic "B" Team race.	KMAC

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

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

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

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

Contact :- H. Bailey (03) 9543 2259

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

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

**SMAC** Contact :- Reeve Marsh (03)9776 5949

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

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

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

## C.L.A.S. Contest Calendar 2004

DATE	CLUB	EVENT
8th Aug	KMFC	F2B Aerobatics
29th Aug	SSME	Slow Combat ( Bonus points for WW2 Style model).
12th Sept	KMFC	Classic Stunt, Vintage Stunt, Simple Rat, Slow Combat, SWAP MEET"
26th Sept.	SSME	F2B Aerobatics
9th October	REMAC	Vintage Stunt (including special award for best Fox powered model)
17th Oct	IMAC (Berkeley)	F2B Aerobatics
24th Oct	KMFC	JUNIORS DAY
30th Oct	SSME	"Vintage 1/2 A, Vint B, Goodyear T/R, Combined Speed"
31st Oct	SSME	Phantom, Vintage A, Bendix T/R
7th Nov	SAT ( Kelso Park)	F2B Aerobatics
14th Nov	KMFC	Vintage T/R, 1/2 A, A and B.
21st Nov	NACA at Gateshead	H.S.Classic Stunt & Cardinal Stunt.
		(I.Smith Ph:024975 2292)
28th Nov	KMFC	1.6 and Slow Combat
5th Dec	Doonside (at Kelso Park)	F2B Aerobatics
12th Dec	KMFC	Christmas Party and Fun Fly

Doonside. At Kelso Park North.

"IMAC (Illawarra Model Flying Club)- Flying site @Hooka Ck Road, Berkeley. NSW"

"KMFC (Ku-ring-gai Model Flying Club)- St. Ives Showground, Mona Vale Rd, St. Ives. NSW"

"NACA (Northern Area Contest Aeromodellers)-Gateshead H.S., Pacific Hwy, Gateshead. NSW."

"REMAC (Ryde Epping Model Aero Club)-Peter Board HS, Wicks Rd, North Ryde. NSW."

"SAT (Sydney Aeromodelling Team)-Kelso Park North, Henry Lawson dr. Panania. NSW"

"SSME (Sydney Society of Model Engineers)- Model Park, Luddenham Rd, Luddenham. NSW "

"WMFC (Werrington)-Entrance to flying site @ cnr. Landers & Walker Sts, Werrington. NSW."

"MDMAS (Muswellbrook District Model Aero Sports Inc.)Mitchell Hill Field, New England Hwy, Muswellbrook"

"COMSOA (City of Maitland Society of Aeromodellers) Raymond terrace Rd, Metford. NSW. "

## CLASII CALENDAR 2004

CLASII FIELD HAS NOW REOPENED AND EVENTS WILL BE HELD AS SCHEDULED DEPENDING ON SUPPORT FROM COMPETITORS. SEE OTHER ARTICLE IN THIS MAGAZINE FOR DETAILS OF NEW FIELD CONDITIONS.

NB Please note that competitions will be held **every second month only** at this point in time, however days currently shown as Fun Fly could become a competition day if sufficient interest is shown to run extra or other events. **Third Saturdays will be general flying only.**

Regardless of what day it is **flying is only permitted between 9am and 5pm** (i/c. engines are not to be run before or after these times) and in accordance with **MAAA, MAAQ and Club policy**, permission must be sought from club executives for **visitors** to use facilities on days other than **Competition, Fun Fly or 3<sup>rd</sup> Saturday General flying**. Mufflers are to be used wherever possible. **Field entrance gate will be locked except for designated flying times.**

Aside from **published competition days**, after more than two casual visits, FAI licence holders would be expected to apply for Associate membership of Clasii. All members and visitors to the field will be required to sign an attendance book. This action assists in meeting insurance requirements and would be of great help in the event of a claim being made.

Intending members will be allowed two visits (training days) before being requested to apply for membership. Applications will be then be assessed by Committee and applicant advised of outcome before any fees are payable. **CLUB AND ASSOCIATE MEMBERS WILL BE ABLE TO ACCESS THE FIELD 7 DAYS PER WEEK BETWEEN 9am and 5pm**

Sunday August 8<sup>th</sup>

**Fun Fly**

Saturday August 21<sup>st</sup>

**General Flying 9am~1pm.**

**Sunday September 12<sup>th</sup> Clasii Rat T/R (with muffler); ANNUAL INTERCLUB MOUSE CHALLENGE;** Vintage A; Classic B. \$5 entry fee (1~4 entries inclusive)

**Saturday September 18<sup>th</sup> General flying 9am~1pm.**

Sunday October 10<sup>th</sup> **(BATHURST 1000) Fun Fly.**

Saturday October 16<sup>th</sup> **General flying 9am~1pm.**

**Sunday November 14<sup>th</sup> Clasii Rat T/R (with muffler); Mouse T/R; JUNIOR RAT T/R; Scale Fly In and Swap Meet \$5 entry all-inclusive. Lucky Ticket Prize.**

**Saturday November 20<sup>th</sup> FINAL GENERAL FLYING DAY FOR 2004 9am~1pm.**

Sunday December 12<sup>th</sup> **Christmas Fun Fly, BBQ and Breakup for 2004**

**FIELD WILL BE CLOSED UNTIL Saturday January 15<sup>th</sup> 2005 for maintenance.**

**General Flying Saturday January 15<sup>th</sup> 2005 9am~1pm.**

**All enquires should be addressed to Club President Mark McDermott, Phone 07 32889263 Fax 07 32940308**



The KMAC Auction has been and gone for another year.

Remember to put your little gems to one side for next year.

Thanks to those of you that attended.



## Club News

- The Frankston Club has been trying to obtain a long term lease on it's Council owned flying field for some time.
- The Council has now offered a 9 year lease on the property and the rental is not a scary fee. Details are yet to be finalised but security of tenure of one of the country's purpose built flying sites is to be welcomed.

At the recent CLAMF AGM the previous committee was re-elected. Thanks to all members that attended.

## 2003/2004 CLAMF CHAMPIONS

	pts	events
1. Mark Ellins	106 (Senior)	31
2. Graeme Wilson	88	25
3. Murray Wilson	67 (Junior)	24
4. Jim Ray	65	18
5=. Harry Bailey	61	22
5=. Ken Hunting	61	28
6. John Hunting	51	25
7. Noel Wake	28	8
8. Alan Lumsden	19	9
9. Lance Smith	9	5
10. Vern Marquet	8	5
11. Neil Baker	4	1
12. Paul Stein	3	2
13. Kim Wareham	2	1

Mark Ellins is a competitor that takes part and succeeds in many contests throughout the year. His regular stunt flying has continued to bring him that extra edge in the point accumulating system.

Murray Wilson is the lone junior competition flier. Most of his contest are flown against people many years his senior so his points score is all that more commendable. Congratulations go to both of you.

## 2004 U.S.A. NATIONALS

Results have filtered through that the Australians have triumphed at the AMA Nationals in F2C, Goodyear, F2A & Junior Combat.

In **F2C** Mark Ellins & Rob Fitzgerald won with a 3:18 heat & 6:44 final, an AMA & Australian record, Steve Smith & Colin Brown (UK) 2<sup>nd</sup> & Bernie Langworth & John Broadhead (UK) 3<sup>rd</sup>. Richard Justic & Paul Stein (AUS) with a 3:23 were 4<sup>th</sup>.

In **Goodyear** Rob Fitzgerald & Greg Pretty won using a model specially built for the event from a 3 view scale drawing, the one everyone uses off the aeromodeller plan is slightly different but allowable under Australian rules, not so in the USA, the fuel also has to be 10% nitro.

In **F2A** Richard Justic took 3<sup>rd</sup> place with a 282km/h time, 2 Englishmen were 1<sup>st</sup> & 2<sup>nd</sup>.

Ryan Comiskey took out 3<sup>rd</sup> place in **Junior Combat**. Well done to all the other Australians who competed at the US Nationals but results of your events have not surfaced as yet.



The Tarmac notes article in last months ACLN certainly raised some correspondence to the Editor and to the article writer regarding Vintage Team Race issues. Some points of view approved of the writers comments whilst others expressed a different point of opinion.

The use of fibre glass in Vintage A T/R models obviously has its supporters but there are others that believe it should be ruled out of model construction methods.

ACLN does not wish to be the forum for an ongoing debate of the subject matter but clarification of the rules wording may be needed and this can only be done through your State rules delegate in the form of a rule change proposal at the next MAAA rules conference.

Ray Fairall recently submitted an article on the vacuum bagging of T/R wings. He has now submitted an article to put forward his case for the use of fibre glass.

To put the case against the use of fibre glass, Charlie Stone has submitted an article.

In fairness to both parties here are both of the articles.

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**Dear Editor**

One of the gentlemen named as authors of an article printed in ACLN on vacuum bagging has contacted me regarding my comments about the Vintage A rules in the last lot of TARMAC notes. He believes that my reference to materials available in 1957, taken in conjunction with mention of his article implies that he is a cheat.

That was not my intention, and if it was read that way, I am sorry and wish to tender my most heartfelt apologies to both the contributors to that most useful article.

What I was in fact doing, was to harp (as I am sometimes wont to do – perhaps tiresomely) on the fact that things, these days, are not being done as they once were and as the Vintage A rules suggest they should be.

It was pointed out to me that fibreglass cloth was available before 1957 and I know that to be true. Although I have never seen any literature or building instructions describing the use of fibreglass of any sort for finishing wings back before 1957.

If you have close to hand a copy of the TARMAC notes for February of 1996 you will be able to check that I mentioned this matter there. In case you have mislaid them, I will append a copy so that you can understand what I am on about.

The issue for me, is not the existence of fibreglass cloth, the laminating resin used, or the technique of application, but that though relatively heavy fibreglass cloth was in limited use pre 1957, it is my belief that the light weight woven fibreglass cloth material typically used in aeromodelling today (around 25 grams per square metre) was not available at all (let alone commercially) until at least the very late 1970s to early 1980s. I would welcome any verifiable evidence to prove me wrong.

The rule in question says: 'Only materials available in 1957 may be used in construction.' It seems that the point at issue here is the definition of the word 'Material' and if others see it differently from me. Perhaps I should look at it from a different angle. It was in 1879 that Thomas Edison used carbon filaments in his experimental light globes, so we know that they have been available for a long time, and isn't carbon fibre cloth just a lot of carbon filaments woven together? Would that line of reasoning be acceptable for the use of carbon fibre in Vintage A?

After the following article was written in 1996, I discussed this matter at length with a friend who has worked in the reinforced plastics industry, specialising in Aviation plastics for the last 35 years. He confirmed my views and recollected that one of the first of the lightweight twills was 92110. That weighed 100 grams per square metre and became available in the very early 1970s. It was rapidly put into service by the German sailplane manufacturers who were then (as now) at the cutting edge of reinforced plastics manufacturing technology. Among others, GlasFlugel used 92110 for their standard class 'Libelle' design. The really lightweight cloths such as the 25 grams per square metre stuff were, as I have stated above, not available until much later.

Regards, Charlie Stone

### **From TARMAC notes Feb 1996**

There has been lots of discussion, and even (dare I say it) argument on what should and shouldn't be acceptable practice in Vintage A team racing. Some of this controversy has revolved around the use of reinforced plastics. I have heard several views regarding what types of material were available in the pre 1957 period and whether they should or should not be used in today's racing. I, like everyone else, have some opinions of my own, and unlike some of my peers, evidence to back up what I say.

My humble opinion is that despite what was or was not available during the heyday of 'A' class racing, we should aim for a level of technology that was in actual use by modellers then. (So its back to using a spraybar, chaps).

Some of the materials in dispute here were definitely in existence before 1957. In some cases only in the dim recesses of research laboratories and at enormous cost. Knowing from first hand of the impecunious nature of most modellers of the time, it is not too surprising that these materials were not in widespread use, even if their existence had been known about.

It may come as a surprise to some people to find that actual production of Shell 'Epicote' Epoxy resins commenced in the USA in 1949. By 1954, they were producing 11,000 tons per annum. The main applications were for paints, varnishes and printing inks. Their uses as laminating and casting resins had been realised, but not much used by 1955. Woven glass cloth was also being manufactured around 1949, but it was heavy weight and was used for purposes that other cloths were wanted. It was used for shimmering ball gowns among other things.

Now to return closer to our subject, on page 7 of the Aeromodeller Annual of 1956-57, you can see a photograph of a Dutch team racer built of fibreglass. It was made by a Mr Van de Dyk. The type of plastic used is not specified, but the weight of 27 ounces is clearly listed. This would be typical of the techniques used then. I first laid eyes on a fibreglass model around the late 1950s. It was a speed

model of Len Armour's and used a Polyester fuselage reinforced with chopped strand mat, and metal wings. The fuselage was very solid, thick, strong and heavy. It could have performed perfectly as a club, and needed two men to lift into the back of his Vanguard van. Actually I am doing my old friend a disservice, because it worked well, but my point is that though some of the materials were around 40 years ago, the methods of use had not been refined to the state that they are now. Some forward thinkers were playing with them, but in the main, they were not being used by the average modeller at that time.

So there you have it. Epoxy was available pre 1958, but awfully expensive. Not that it matters, since its use has already been deemed acceptable in current models. Woven glass cloth is also legitimate, but not the modern lightweight cloth. If you want to use 6 or 8 ounce per square foot cloth, I imagine that would be OK if no subsequent rules come along to bar it. The truth of the matter though is that the very-few models built with plastics in those days almost certainly used the cheaper Polyester resins then coming in to use for car bodies (Corvette) with Chopped strand mat reinforcement, and skin thicknesses around 1/16 of an inch as a minimum. (CS 1996.)

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## Fibre-Glass, History, Vintage A Team Racing and the "1957 test".

Ray Fairall

[asrgf@alinga.newcastle.edu.au](mailto:asrgf@alinga.newcastle.edu.au)

I note with interest the comments, made by a correspondent in ACLN 79, on both the legality of the use of fibre-glass (FG or GF) on Vintage A model wings, and my article on Vacuum Bagging, published in ACLN number 77. The remark was made that "only materials available in 1957 are allowable for use". The writer is apparently seriously misinformed concerning the history of the material.

What do the rules actually say?

### 4.14.1 General

Class A team race is a nostalgia event re-creating pre-1957 Class A Team racing.

(stuff deleted)

f) Permitted Modifications: The following modifications may be made in the interests of practicality:

i) The model may be strengthened, provided that the outline is not changed in any way. Only materials available in 1957 may be used in construction; however, modern adhesives may be used and metal motor mounts are allowed..

Obviously Vintage A racing in its current form is different to that practiced in the 1950's. The event has adopted the pitting rules, which I believe were first introduced into the FAI Team Racing class in the 1960's. This means that the wing especially must be strengthened. The original designs from Aeromodeller or Model Aircraft would have a very short life otherwise.

It is common practice to use Spruce (or similar timbers) for the racer leading and trailing edges, and for tips. The core of the wing (at least) is always balsa. It is also common practice in NSW to then coat the wing/tailplane in epoxy/glass to strengthen them both for catches and to protect them against damage in "tumbles" on rough flying fields. It's generally accepted in NSW that fibreglass is a legal

material, because it is common knowledge that it was available prior to 1957!

The rule permitting strengthening covers the use of spruce but it also passes the "1957 test". Epoxy is normally used as an adhesive, so it doesn't need to pass the test; however it has a long history of availability prior to 1957. So in order to satisfy the contrary argument it's necessary to look at the history of the fibreglass. Note that the rule doesn't say where the material was to be available, only that that it was to be "available in 1957". Nor do the rules say that the material had to be used on Vintage A models prior to 1957, once again simply that it was available by that date.

### Fibreglass History.

The ancient Phoenicians and Egyptians made glass, and both made glass into fibres which they used for decoration. In 1870, a John Player, patented a process using a steam jet for producing "mineral wool" insulation from glass. The product was a form of glass fibre. In 1880, a Herman Hammesfahr was awarded another patent for a type of fibreglass cloth that had silk interwoven with it. It was flame retardant.

Modern fibreglass dates from 1936 when Corning Glass patented a product they called "Fiberglas". They further developed the material by experimenting with spinning the fibres into a cloth like state. In 1941 they succeeded in producing, via heat-treatment, a flexible cloth suitable for use as reinforcement in plastic laminate.

Polyester Resin was patented by DuPont in 1936, and enhanced by the Germans by improving its curing process. Both Fibre-glass and Polyester Resin were used extensively by the Allied Aircraft Industry from 1942. This was in the form of low pressure plastic laminates made by impregnating the fibreglass cloth with the resin. They were especially used in applications associated with airborne radar. (1)

From the earliest days in its development, the glass fibres were woven into a cloth (of various weights) which looked much like an expensive white satin. J.E. Gordon, a pioneer wartime UK scientist, reports that (circa 1944) "... during the days of clothes rationing and before glass cloth was widely familiar I had a large roll of such cloth stolen from the laboratory, no doubt to be made into underclothes. Since glass fibre is an irritant to the skin I watched the women employees, over a considerable period, to see if they scratched themselves. However, either they were all innocent, or else possessed of great self-restraint, for I never caught anybody". (2) The point here is that very light weight weaves were available and in use from the earliest days.

After the war, fibre glass became a domestic consumer material. Its first application was in building small boats and canoes. Steve Mitchell relates "...despite the popular notion today, fibreglass and plastic resins were not "new" technology in the mid-1950s". He goes on to date the first fibreglass / polyester sailing boat to 1942. (3)

The first Fibre-glassed body Sports Car, the Chevrolet Corvette, was released to the American public on September 28, 1953. (4)



The earliest dated textbook on Fibreglasing techniques in the Newcastle Library was published in 1954. It includes a section on Vacuum Bagging, establishing that this was a mature technology in its own right by this date. (5) It could therefore be said to pass the "1957 test".

#### Fibreglass in Australia.

The success of the Corvette (probably) encouraged Bill Buckle of Bill Buckle Motors of Brookvale, Sydney, to design and build in 1955, the Buckle 2.553 Litre Coupe prototype (with Glassfibre body), powered by a Ford Zephyr six cylinder engine. This went into production in early 1957. (6)



The 1957 production Buckle 2.5L FG bodied sports car.

In 1958 Buckle went on to import the rolling chassis of German Goggomobils, to which he added his own fiberglass sedan and sports bodies. The latter was of course the famous Dart. (7)

It is significant that the production of the first Glassfibre cars in the country took place on Sydney's northern beaches, because it was the introduction of the Glass coated Balsa surfboard that really brought the material to the public's attention. Much of the later development of the GF board took place in the same region probably with a fair amount of unofficial "cross-linking" of technical expertise with employees of Buckle Motors..

#### Surfboards

In his book, *The History of Surfing*, Nat Young credits Preston Peterson with being the first person to build a

fibreglass surfboard in July 1946. He did this with the help of a Brant Goldsworthy, who owned a plastics company in Los Angeles which had been producing GF aircraft parts during the war. Goldsworthy was also the first to sell cloth and resins to the public in the mid 1940s. Most of the pioneer surfboard developers were inspired (in construction techniques or technology) by people who worked in the aircraft industry or did so themselves. (8)

In 1956 American surfers and their new glass covered balsa boards competed in the Victorian Olympic Surf Carnival. The local surfers were amazed by the performance of their boards. This created a huge demand for copies. Young credits Roger ("The Duck") Keiran as being the first person to build a glass covered board in Australia in the summer of 1956. Quote, "He had acquired enough balsa to build three boards from Arthur Milner, a timber merchant in Melbourne, who supplied the trade builders for the war supplies mentioned earlier. The fibreglass and resin he had seen on the visitors boards was now easy to come by". (9)

This last quote by Nat Young is crucial as it establishes that FG passes the "1957 test".

There was an explosion in the popularity of these surfboards. This was the start of the surfing craze here in Australia. It dwarfed the parallel craze for control line models. Fibreglass repair kits for surfboards were available in hardware stores. There is also anecdotal evidence to suggest that the kits predate 1956. These kits were also used to repair wooden boats, furniture and model aircraft wings.

Hence Fibreglass was a commonly available material in widespread use in Australia prior to December 31, 1957!

#### Conclusion

The use of Epoxy / Fibreglass to Vacuum Bag Voodoo (or other racer) wings is completely legitimate under the current MAAA rules for Vintage A Team Racing. Both Epoxy and Glassfibre were commonly available materials in 1957. Epoxy of course is an adhesive anyway, and thus not covered by the rule. However Araldite (for example) was introduced on the market in 1946! (10) Laminating Epoxy has a history as long as GF. Polyester Resin could just as legally be used. Vacuum Bagging as a technique of application of the glass is not disallowed by the rules, because they say nothing about techniques. Vacuum Bagging was a well developed technology by 1957 anyway and similar techniques for holding surfaces together have been used in various industrial processes for hundreds of years.

#### References

- (1) 'The History of Fiberglass'  
<http://www.psrc.usm.edu/macrog/mpm/composit/fiber/fibeglas/history.htm>
- (2) 'The new Science of Strong Materials'  
J.E. Gordon, Penguin Books 1972 Page173.
- (3) 'The Birth of Fiberglass Boats'  
Steve Mitchell  
<http://www.boatus.com/goodoldboat/BirthofFiberglass.htm>
- (4) Corvette History  
[http://www.diy.net.com/diy/ar\\_1962\\_corvette/article/0,2021,DIY\\_13704\\_2278436,00.html](http://www.diy.net.com/diy/ar_1962_corvette/article/0,2021,DIY_13704_2278436,00.html)
- (5) 'Fiberglass Reinforced Plastics'  
Ralph H. Sonneborn  
First Edition 1954 Rhinhold Publishing Corp.

New York  
Page 5

- (6) Bill Buckle Motors  
[http://www.geocities.com/bob\\_billiards/goggo.html](http://www.geocities.com/bob_billiards/goggo.html)
- (7) The Goggomobil  
<http://www.csse.monash.edu.au/~lloyd/4/Goggomobil/>
- (8) 'The History of Surfing'  
Nat Young  
Parm Beach Press  
Pages 61-67, 88-93
- (9) ibid p89
- (10) Geigy, Ciba and Sandoz (1758-1970)  
[http://www.novartis.com/about\\_novartis/en/3companies.shtml](http://www.novartis.com/about_novartis/en/3companies.shtml)

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## Engine test: Stalker LT-EX 61 LS Pro

### TRADITIONAL WAS NEVER SO ADVANCED

*Derek Pickard takes a very close look at the long stroke 61 which is now available from the new Stalker marketer, Kaz Minato.*

There are two distinct sides to what stunt enthusiasts insist is best. Put simply, it comes down to traditionalists who believe the wheel needn't be re-invented only refined along the lines of continual development and those who'll always try the latest new alternatives that boast mechanical advances. Unfortunately, the two never agree.

This test details the argument of continual development. So the other side can switch off now. Goodbye.

In the short time that Stalker has had its top-of-the-range engine on the market it has won fans who insist this is powerful, predictable and totally dependable.

This engine incorporates everything the company believes should be in a top stunt unit. They also say the motor represents the very peak of conventional power plant development and it is unlikely they can go further along this path. Accordingly, they insist this is not only their best, this is the best they can produce. Nice to know.

The new big Stalker is not just a full size 61 but the LS stands for long stroke which is more suitable for the intended rev range. Instead of the normal 24mm bore by 23mm stroke to achieve the full F2B size, the layout has been reversed to 23 by 24mm stroke. That in itself is nothing sensational but take a look at the engine, "*it is no less than a gob-smacking 80mm tall off the mount*" and looks as though the bore/stroke relationship is far more radical.

And the rest of the motor is everything Stalker believes to be the best in conventional building. The casing is fully

sculptured and very light to the extent the mounting lugs are over-done. And the new muffler mount with the reverse adaptor between the cylinder and primary pipe may look cute but again it is over-done. There are times when designers try too hard and alter things for the sake of being seen to do something.



**Stalker LT-EX 61 LS Pro and its alloy/carbon fibre muffler.**

As for the internals, the excellent AAC construction incorporates a curved deflector piston in a well squished combustion chamber above acceptable 140 to 120 exhaust and transfer timing. The intake shaft is ported to 56 ABDC and 41 ATDC. Stock venturi is 296 thou and the head is set at 9:1 compression. And that folks is all very conventional.

The provision for lubrication is over done. There are a series of unusual vertical slots cut out of the lower inner liner just below the exhaust port as well as a couple of holes below the transfer port. Like the holes in the conrod, these are all for maximum lubrication. Nice but a little of the over-kill as they are not vital.

Totally new is Stalker's decision to write the word *Exclusiv* on the front of the case just behind "*an arrow which shows the direction of crank rotation. This is getting silly*".

Practical considerations include a quarter UNF prop nut thread and a piston/liner fit that is so good a mere ten minutes break-in time is sufficient. (Our measurements revealed the liner out-of-round is only a couple of tenths of a thou and the total liner taper is barely 6 tenths of a thou. Experience with previous Stalker metalurgy and machining says although these numbers may be small, full confidence can be had in both seal and long-term durability.)

And talking of seal, the company has redesigned the muffler mount arrangement so that instead of the muffler header pipe sticking into a receptive hole in the back of the cylinder, the new layout is the reverse. Now the two sealing rings are on a spigot that screws onto the back of the cylinder and receives the new header pipe around it. "*Nothing clever here, just a reversal of previous.*" Considering the fact that the earlier design worked okay, nothing is gained.

But the muffler is like all big Stalker mufflers, excellent in being light, compact and effective. The two alloy end pieces are glued onto the carbon fibre body which incorporates a single minimal baffle at the end.

Total weight of the engine is 11.5 ounces and the muffler is 1.5 ounces making a total weight of 13 ounces. This may be no more than an ounce lighter than the previous conventional weight Stalker 61 but it is an improvement. And every ounce gained costs big dollars at this end of the scale.

Mounting layout is the same as previous 61s but be warned the new mount lug sculpturing allows no hole opening nor elongating. A precision fit is the only way to go. Like everything on this motor, it is very much one for the fussy pro.

Test plane was Perth modeller Peter White's beautiful 60 inch GEO XL which weighed 59 ounces. The fuel was 10 nitro and 20 lube (15% synthetic/5% castor) which pulled a 12.5x5.75 two blade wood prop with 66 feet lines (eyelet to eyelet). A ground setting of around 7300 gave a relatively fast 5.2 second lap but test conditions were windy.



**Peter White's GEO XL was the test plane.**

With the Glo Devil idle bar plug the new big Stalker four strokes steadily with just the hint of a two stroke blip on level flight and all the way through the pattern. Fuel consumption is an amazingly low 125cc for the pattern. Excellent.

At all times on the downhill parts of all manoeuvres, this motor holds its four stroke setting dependably. Not needle sensitive at all, very much set and forget.

The only drawback with this new motor is, like all big Stalkers, the stock muffler has a long neck which is difficult to accommodate in a model which hasn't been design for it. And the maker does not offer a short neck version of the new LS-type Stalker muffler. Initially, that forced the use of the shorter flatter Stalker 40 muffler with its different baffling and all went well in test flights. But the long factory muffler was subsequently cut down to more manageable proportions and just to make things interesting to see if the slight 2 stroke could be removed, an extra 5 thou shim was added.

The baffle-less muffler was louder but not too bad as the

lines were lengthened slightly as the ground revs raised to 7500. At that speed the engine stayed in its faster four stroke for the pattern and even managed to richen slightly on downhill legs. Whammer slam bam, "gotya, an excellent setting."

Head to head with a top big Tigre, the difference would be a good ST60 may have a very slight power edge, but not much, and against that it would offer no better 4-2-4 running. The other problems with the big Italian are the extra weights of the engine and the much larger fuel consumption - much of which finishes up all over the model. Thankfully, Stalker have proven those days have long gone.

Conclusion: Excellent motor, highly recommended. Declaration of interest. This engine was supplied by Stalker of Ukraine but is available for \$(US)240 with payment by credit card from the maker's new distributor Kaz Minato at MNT International, 3-12-6 Higashi, Niizashi, Saitama, 352-0002, Japan.

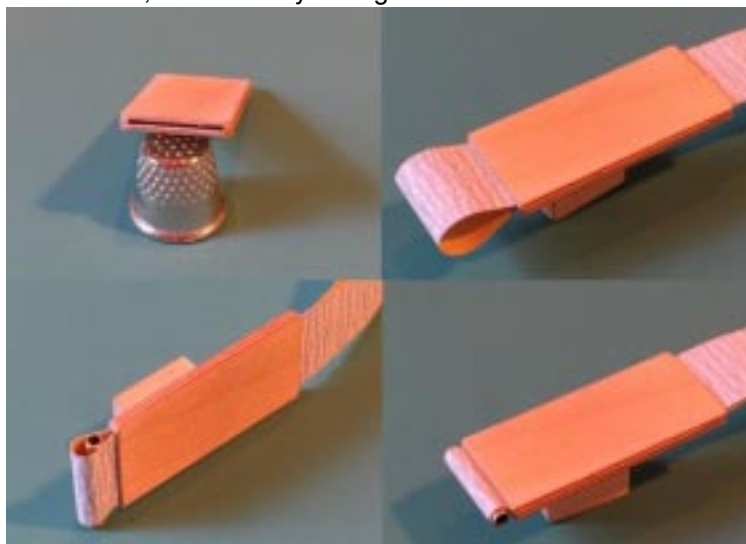
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## TARMAC Notes for June and July

The 2004 Australian nationals may be over, but thanks to Jim Stivey, they need never be forgotten. At least the control line and free flight bits that Jim captured on video anyway. Jim has transferred these digital memories on to a series of three DVDs that can be had by any interested parties. They cost \$10 each or \$30 for the set and will be contributing to the club finances. All you have to do is to catch the TARMAC club treasurer Alasdair Taylor in a weak moment, cross his palm with silver and you too can re-live that busy week of the Nationals. Alasdair's email address is <[VK6KIF@bigpond.com](mailto:VK6KIF@bigpond.com)>.

It has been said that the difference between a beginner and an expert is sandpaper. I feel a strong kinship with the chap that said, 'I may not be an expert, but I am the shortest fingered beginner in the business.' Sandpaper by itself is useful, but it is much better when used in conjunction with blocks and formers to control the shapes that you want to cut. Flat blocks for flat or convex surfaces and curved ones for concave surfaces. So when I saw this handy little tool that had been created by Derek Moran of California, I knew that you might like to see it too





Here are four different shots of Derek's fillet sanding tool. The old saying that a picture is worth a thousand words is very true. Here we can see the ply holder by itself, then with sandpaper strip installed, with the chosen form in place and finally with the paper pulled tight and ready for use.

Derek has written a brief explanation to go with his more or less self explanatory photos. He says; "I made this little tool for sanding small, constant radius fillets. This tool holds sandpaper wrapped around a suitable form and gives you a handle to grasp. Fresh sandpaper is quickly and easily advanced. Construction should be obvious from the pictures. This version of the tool is made from scrap 1/32 ply and measures approximately 3/4 x 1 3/4 x 3/32. The size and proportions are not critical, but I made mine to fit 5/8 wide strips of sandpaper. I have a straightedge that's 5/8's wide, which makes cutting the strips easy. Use CA to glue it together. If you plan to wet sand, give the wood a couple coats of dope first. The pictures show a length of 1/8 tubing as the fillet form. You could also use wire, dowel or even o-ring stock as a form. If you can't find stock exactly the right diameter, build up something smaller with wraps of masking tape. Derek Moran."

Up to date I have used wooden tools that do a similar job. They are constructed from pieces of dowel of various diameters attached to popsticks that serve as a handle. The paper wraps around the dowel and is held tightly in place by a bulldog clip that doubles as an extension of the handle. Assembled with CA glue they take but a few minutes to make and have worked well for me.



Examples of the fillet sanders that I have used. A piece of dowel of the desired diameter is glued to a popstick, wrapped with sandpaper of an appropriate grit and clamped with a bulldog clip or even just with your fingers. These are also handy for sanding fillets or other concave surfaces.



To continue for a moment on the theme of shaping fillets, here is a type of tool that can be used to form fillets from one of the putties that folks use for that job. Be it an epoxy and micro-balloon mix, one of the proprietary products sold for the job or just plastic wood. They are just metal balls

(ball bearings) attached to a handle. You can solder (or epoxy) brass tube handles to ball bearings to make them yourself. If you are using these, it helps to wet them with an appropriate solvent (with epoxy mixes use methylated spirits). That stops the mix sticking to the ball and dragging lumps out of the fillet as you smooth it out.

Back in the late 1940s and early 1950s, there were a series of fictional, but humorous stories printed in either Model Aircraft or Aeromodeller that featured an eccentric and inventive Scottish aeromodeller called McGillicuddy and his pet seagull Drambui. If you have any idea where I could get access to these I would appreciate hearing about it. A list or summary of the titles of the stories would be handy, but best would be to get scans or photocopies of the relevant articles. Can anyone help please?



Unlike the often strangely deformed, oil soaked or battle scarred machines that serve as Control Line trainers, here is something that looks a little different and works very well. It is a semi scale Winjeel built by Russell Christensen for his son Tom. It has the markings of the aircraft that he flew during his RAAF training course.

TARMAC secretary Adrian Dyson suggested at our last club meeting that for a bit of variety, we try flying 'Triathlon'. This one model per competitor event is popular in Victoria and South Australia. Entrants fly a single model generally powered by 2.5cc engines, for points in three different events on the day. One round of Stunt, one of Rat Race and (probably) finally one bout of Combat. Adrian has said that he will sponsor this with a 'Modest prize', but hasn't said what that will be. It might be a framed Playboy centerfold that he has 'modestified' with an inked on bikini. Who can be sure?



From the archives we have this photo of Theo Merrifield taken back in the dreamtime by Dick Beilby. Theo has

been actively aeromodelling since the dawn of time with all types of model. I always think of him as a Free Flight flier, but here he has been caught with a control line speed model

Another suggestion made at the last club meeting came from Alasdair Taylor, who thinks that we might expand the current interest in vintage combat which at present is limited to 2.5cc sized models. He put forward the idea of vintage OPEN combat. That would call for designs published before 1965 and to use the old cross flow .35s and .40s like we used to before the coming of the FAI classes. I might even be talked into that. Combat has always come in all sizes. The late Geoff Barnes and myself used to fly combat with ED Bees (1cc diesels of approximately 1/4 gnat power) on tiny flying wings built from the wingtips of previously crashed planes, and I have been embarrassed by having the mighty Bee stop running when it hit a 1/2" wide crepe paper streamer. It was lots of fun.



The Australian C/L World Champs team in Muncie USA

Dennis Percival tells me that you can tell you are getting old when you know all the answers but no one is asking you the questions.

Charlie Stone VH4706  
Email [cestone@bigpond.com](mailto:cestone@bigpond.com)

The American Nationals were held after the conclusion of the World Championships.

Some Australian competitors from the World Championships stayed to compete and managed to take the top places and break AMA and Australian records in the process. See page 3.

## Control Line World Championships Results

### F2A (Speed)

#### Overall

Place	Score	CompID	Name	Country	Flight1	Flight2	Flight3
1	295.9	A007	Parramon Luis	ESP	295.6	291.5	<b>295.9</b>
2	295.9	A011	Magne Jean	FRA	0.0	291.0	<b>295.9</b>
3	292.5	A013	Halman Peter	GBR	292.3	286.9	292.5
17	281.8	A001	Justic Richard	AUS	0.0	0.0	<b>281.8</b>
18	280.8	A002	Heath Andrew	AUS	<b>280.8</b>	0.0	0.0
19	278.7	A024	Bell Bill	NZL	<b>278.7</b>	276.4	273.9
26	273.8	A003	Gapps Ian	AUS	<b>273.8</b>	269.2	252.7

Australia came 6th in the Country order

### F2B (Aerobatics)

Place	Comp ID	Country	Name	Rd 1	Rd 2	Score	Final 1	Final 2	Final 3	Score
1	B063	USA	Werwage, William	2861.0	2988.0	2988.0	3032.0	3014.0	3094.5	6126.5
2	B012	CHN	Han, Xinping	3020.5	3020.5	3036.5	2917.0	3074.5		6111.0
3	B022	FRA	Beringer, Remi	2793.5	3025.5	3025.5	3051.0	3023.0	3023.0	6074.0
49	B002	AUS	Rowland, PJ	1680.5	2527.0	2527.0				
57	B001	AUS	Parisi, Guisepe	2435.5	2252.0	2435.5				

### F2C (Team Race)

#### Overall

Place	Country	Name	Elim 1	Elim 2	Elim 3	Semi 1	Semi 2	Final
1	FRA	Surugue, Pascal / Surugue, Georges	3:17.7	3:21.5	3:15.6	3:09.6	3:25.2	6:42.7
2	UKR	Kramarenko, Valeriy / Chayka, Yuriy	DNF: 1	3:20.2	3:17.1	3:15.3	3:23.2	7:02.0
3	RUS	Shabashov, Yury / Ivanov, Vladimir	3:15.9	DNF: 493:12.4		3:11.5	DNF: 83	DQ: 185
11	AUS	Fitzgerald, Robert / Ellins, Mark	3:48.3	3:23.7	3:20.0			
27	AUS	Justic, Richard / Stein, Paul	3:52.7	DQ: 0	DNF: 84			

### F2D (Combat)

#### Overall

Place	Name	Country	Score	Record
1	D045 Trifonov, Igor	RUS	8-1	W D001 W D029 W D002 W D016 W D040 L D023 W D060 W D043 W D046
2	D046 Shalaev, Alexander Jr	RUS	7-2	W D028 W D062 W D037 W D036 W D017 L D061 W D024 W D031 L D045
3	D043 Faizov, Boris	RUS	6-2	WD049 LD017 WD058 WD023 WD004 WD032 WD061 LD045 W FO:D031
11	D004 Norrie, Peter	AUS	3-2	WD013 WD044 LD005 WD041 LD043
21	D003 Comisky, Michael A Jr	AUS	2-2	WD007 LD032 WD029 LD061 LFO:D036
29	D002 Comisky, Michael	AUS	1-2	LD014 WD022 LD045
29	D001 Owen, Robert	AUS	1-2	LD045 WD007 LD018

# A SIMPLE THRUST TESTER

## Introduction

A thrust tester can be useful for measuring the **static** thrust produced by a propeller at a particular RPM.

Also, a number of thrust versus RPM figures can be obtained to allow plotting a graph of thrust versus RPM for particular propellers, allowing propeller comparisons to be made.

This is a description of a simple thrust tester that uses the model's engine to drive the propeller, mounted on a flat surface, and tethered to the tester, thus measuring the "pull" produced in either gm or oz.

Different figures would be obtained with the model suspended in free air, or in flight, the figures you will obtain with this set up, are easily reproducible any time, and are useful for comparison purposes.

You will also discover that some props' perform very poorly, and are only suitable as paint stirrers.

## General Description

The picture below shows the general arrangement of the tester, tethered to a Doug' Grinham "Manito"

The black cord connects the model to the tester lever, the model sits flat, and the thrust is in-line

The white cord tied to the G clamp is a back-up tether

The sheet metal cover in front of the tester shields the digital scale from direct prop' wash, preventing erratic readings



## Construction

The next picture shows the components parts of the tester;

- # The "heart" of the tester is a digital scale, Scaleman FS-910 maximum 2300gm / 81 oz from Dick Smith. Any other direct reading scale would be suitable.
- # 3mm sheet aluminium base, including a grey plastic cover with holes drilled, to position the scale via it's rubber feet.



The base also supports the vertical arm, attached using a small brass hinge.

The base is fitted with four rubber door stoppers for mounting feet.

- # Vertical arm, cut from 12mm x 3mm alum' flat, 200mm long.
- # Horizontal arm 12mm x 3mm flat, 100mm long.
- # Sheet metal wind deflector, folded up from scrap zincalume to suit.
- # Support block, and G clamp.

## Calibrating The Tester

The picture on the next page, shows the vertical arm with six holes for attaching the model, labelled 0.6, 0.8, 1.0, 1.2, 1.4, 1.6, these are measuring ratios, as explained below.

For the tester to provide accurate thrust figures, it can be calibrated using a known mass, say 1Kg, this could be a ready made mass from a balance scale of some sort, or you could use the old water method, (1 litre of water weighs 1Kg at sea level )

## A possible calibration method;

- (a) Clamp the tester to the edge of a table, with the cord passing over the opposite edge supported by a smooth pulley.
- (b) Suspend an ice cream container on the free end of the cord.
- (c) Zero the scale.
- (d) Carefully pour 1 litre of water into the ice cream container.
- (e) Slide the cord up and down the measuring arm until the scale reads 1000gm.
- (f) Mark that position on the arm = 1.0
- (g) Slide the cord down the arm until the scale reads 800gm, mark that position = 0.8
- (h) Mark other measuring ratios as desired.

The reason for marking the measuring arm with ratios less than 1:1 is that some thrust figures will exceed the maximum scale reading of 2300 gm / 81 oz.

I marked the other ratios because I could.

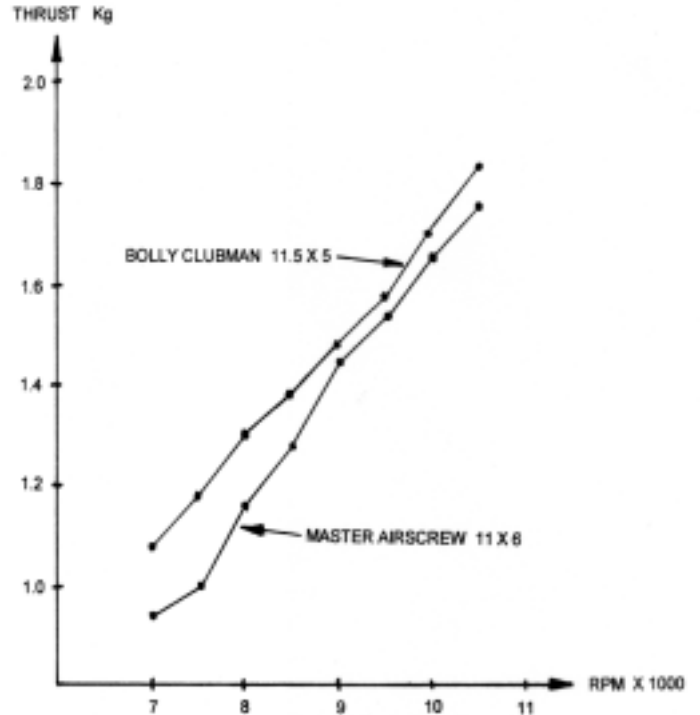


### Setting Up

The picture below shows a possible set-up. RPM can be adjusted over a reasonable range via the engine mixture screw. Although it is tedious taking, say, ten RPM and thrust readings, for one prop', the information gained, when comparing with other props' is valuable and very interesting

### Typical Results

The graph shown below is a comparison between a 11.5 x 5 Bolly Clubman, and a 12 x 6 Master Airscrew, driven by



### Summary

The thrust tester is simple to build, the expensive part is the scale at around \$55-, maybe a spring scale tied to a tree would do the job

Frank McPherson KMAC / CLAG MAAA 58427



### Taking Thrust Figures

- Switch on the scale.
- Rest the measuring arm on the scale, and have the cord slack.
- Zero the scale.
- Move the model forward by hand, to check the scale is reading o.k, and to check the reliability of the tethering cords.
- Start the engine, and allow the model to move forward, gently.
- Set the desired RPMs, take the thrust readings.

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**MASA Control Line State Championships 2005**  
**To be held In Monarto / Murray Bridge, South Australia.**  
**Hosted by Adelaide Model Aerosport**  
**29 Dec 2004 – 2 Jan 2005**  
**Bulletin 1**

**Program of Events:**

	Wednesday 29 <sup>th</sup> Dec	Thursday 30 <sup>th</sup>	Friday 31 <sup>st</sup>	Saturday 1 <sup>st</sup> Jan	Sunday 2 <sup>rd</sup>
9am-1pm	Open Practice	(G) F2B (H) F2C (H) F2F (H) F2A	(G) F2B (H) F2C (H) F2F (H) F2A	(G) F2B (H) F2C (H) F2F (H) F2A	(H) Goodyear (H) Combined Speed
2pm-6pm	Open Practice	(G) Classic Stunt (G) F2D (G) Classic B T/R	(G) Classic Stunt (G) Vintage A T/R	(G) Vintage Stunt (G) 1/2A Combat	(H) Open Rat Race

**Flying Sites:**

(H) *Adelaide Model Aerosport, Monarto:*

Located on the Princess Highway, 6km on the right travelling towards Adelaide from Murray Bridge.

(G) *Sturt Reserve, Murray Bridge:*

Located on Sturt Reserve Road, being the continuation of Seventh Street off the town's main street, Bridge Street. Next to the Murray River and the BUNYIP.

**Conditions:**

1. All entrants to be current MAAA or FAI affiliated organisation members and Licences will need to be produced at the event.
2. Programmed events will be run as per current MAAA rule book.
3. Junior competitors as per specified MAAA age requirements.

**For more information contact:**

Rob Fitzgerald  
 35 Main Street,  
 Eastwood, 5063  
 South Australia  
 Ph: (08) 8271 2889  
 Email: [rfitzgerald@cssp.biz](mailto:rfitzgerald@cssp.biz)

**CONTEST RESULTS**



From Western Australia

**Sun 11th July 2004 Trial event – Classic B**

Team name	Heat 1	Heat 2	Final
THOMPSON / BERTINA	3:19.60	pass	6:50.15
FRY / TAYLOR	3:41.66	3:38.77	8:35.34
SHERBURN / DYSON	3:52.08	DNF 37	10:42.73
HOOGENKAMP / LEKNYS / LEKNYS	4:02.56	4:13.00	
KIRTON / STONE	7:32.62	6:53.73	
BELLIS / BUTKEVICIUS	DNS	pass	



**Sun 11th July 2004 BENDIX STATE CHAMPS**

Team name	Heat 1	Heat 2	Final
FRY / TAYLOR	3:52.53	3:32.34	7:19.84
HOOGENKAMP / LEKNYS / LEKNYS	3:57.20	3:59.00	8:44.88
BELLIS / GANNON	3:56.74	4:27.03	DNF 37
STIVEY / ADLER	DNS	4:40.10	
THOMPSON / BERTINA	DNS	DNS	

# CONTEST RESULTS




## TRIATHLON (ARTMIL TROPHY)



PL	Entrant	STUNT	pts	RACING	pts	COMBAT	W/L	pts	TOTAL
1	G.Wilson	132	4	70 nps	1.5	266	W	5	10.5
2	P.Stein	121	3	69	4	113	L	3	10
3	M.Ellins	133	5	66 nps	1.5	99	L	2	8.5
4=	H.Bailey	118	2	74	5	21	L	1	8
4=	M.Wilson	78	1	55	3	172/240	W/W	4	8

The Triathlon (Artmil Trophy) for 2004 was flown in very windy conditions at the Knox field on Sunday 27th June. Thanks to Jim, Glenis & Colin Ray for running the event with help from John & Lance. As can be seen from the results everyone at some stage had problems. Murray crashed in Stunt and didn't finish the pattern, Mark & Graeme failed to do a pitstop in Rat race and in Combat mid airs were the flavour of the day. It was a pity more didn't compete. All models used were the Kieth Baddock designed "Terminator"



*The Victor of the day Graeme Wilson was happy to have another Triathlon success and have his name put on the trophy to break the recent monopoly by his friend and rival Mark Ellins*

## Notice

Modusa of England are no longer the Stalker agent. I (BriStunt Products) will continue in the roll of Australian agent, now dealing directly with the factory. Due to travelling work commitments I have chosen not to take on the global distributor roll at this time. If anyone has questions regarding Stalker engines they can contact me on:

Brian Gardner  
 BriStunt Products  
 14 Gentles Ave  
 Dapto, NSW 2530  
 ph 02 4262 5110

[bristunt@fishinternet.com.au](mailto:bristunt@fishinternet.com.au)

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### Newsletter Editor

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

# For Sale

FOR SALE F2B pro stunt stuff:  
 New in box Tom Dixon built balsa sheeted foam multi-colored wings and tail for Stiletto 660 F2B 60 inch stunter, light, strong and superb quality, cost \$235 sell \$125,  
 New Stalker LT-EX 61 LS Pro stunt engine with muffler, probably as good a power unit as is available today, cost \$460 sell \$300,  
 OS VF40 with tuned pipe, previously hailed by some experts as the way of the future, great screamer but inconsistent top end stability (transfer capacity too big, pipe capacity too small, convergent cone wrong angle), only a few flights before I realised the bleeding obvious, been on shelf for years, cost far too much, sell for \$5 or will swap for one very large banana.  
 Derek (03) 9889 1149

OS MAX-H 40RR (Rat Race?) from the late 60's I believe. Used but in excellent condition. Has a venturi you can get your thumb down! Does anyone have any information or wish to give the brute a good home? No idea what its worth so I'll trust you chaps; may swap for similar capacity stunt engine or perhaps a small FF diesel in good nick.  
 Phone Mat on 03 9376 0087  
[matshears@earthling.net](mailto:matshears@earthling.net)

FOR SALE  
 Top Flite Gieseke Nobler kit, in untouched mint condition ( can you believe these are now 25 years old ! ). Comes with Carolina Taffinder tank & slimline wheels plus a NIB Enya 35 5224 ( round venturi ) \$290 + postage  
 Phone BOB ALLAN ( AH ) on 03 5145 5548.  
 Thanks,  
 BOB ALLAN.

FOR SALE  
**The following items are for sale as a bulk lot, will not be split.**  
 5 x 1/2A Russian combat wings.  
 1 x Rasputin combat wing (2.5cc)  
 1 x Tomas 049 combat wing  
 1 x Todd Deason 049 combat wing  
 1 x Litehawk (USA) 049 combat wing  
 1 x 1/2A Faisov combat wing  
 2 x 1/2A foam combat wings  
 1 x Ohm special Goodyear model  
 2 x PAW CT PB & BR Diesels  
 1 x OS 15 FP (as new)  
 1 x Taipan 1.5cc BR Diesel  
 1 x OS 10 FP Dieselised  
 1 x VA 049  
 2 X Cox TD 049 (as new)  
 \$1000.00 the lot.  
 For enquires phone Peter Gibbins 03 5381 1866.

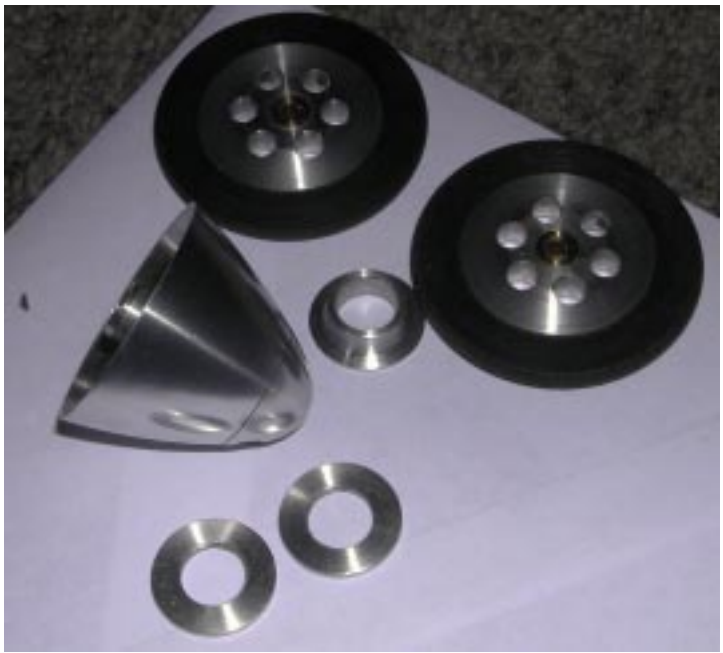
HOME WANTED  
 CLAMF have a photo copier which is going to be got rid of unless someone would like it, needs to be serviced but does work.  
 For enquires ph 97868153.

# WANTED

Many years ago I flew control-line aircraft, and have an urge to do so again. Have a suitcase full of engines, lines, props etc but no plane. I remember an aircraft I think called a Taipan trainer? Solid wing, square fuselage and bubble canopy. Easy to build and fly, do you know of the plane I'm thinking of and if so where can I get a set of plans?  
 John Lever  
 Koorlong Vic Email [levkoor@bigpond.com](mailto:levkoor@bigpond.com)

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Back issues of this newsletter can be found on the following web sites.  
<http://www.vicstunt.com/>  
<http://www.dkd.net/clmodels/>



Some modelling bits and pieces are sometimes difficult to acquire. The editor was having a problem locating anybody that could supply a 1 1/4 inch aluminium spinner for Vint A T/R. Ian Russell in the U.K. suggested I try Stuart Robinson in Yorkshire. Stuart makes a variety of C/L racing goodies. I ordered and received these items in due course. This is not an advert from Stuart but on the basis of these samples I can recommend his workmanship.  
 The spinner cost 13 pounds and the wheels were 7 pounds for the pair.

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- Pans.

### \*\*\* Kits \*\*\*

- "Arrow" - 2cc - 2.5cc speed kit includes pan, pre cut wood, hardware, plans etc. **\$90 .00**
- "Ol Blue" - 2cc Mini Goodyear - pre cut wood, hardware, wheel, shutoff, plans etc. **\$69 .00**

### COMPONENTS FOR THE COMPETITION & SPORTS MODELLER

- |  |                                   |
|--|-----------------------------------|
| Goodyear Shut Offs                     | Venturis                          |
| Head Inserts ¼ x 32 & Nelson           | Check Valves                      |
| Wheels 27, 40, 50 & 60mm               | Stunt Mufflers                    |
| Racing Undercarriage Leg & Box Sets    | Line Reels                        |
| Prop Nuts, Prop Drivers & Extensions   | Piston Rings                      |
| Elevator & Flap Horns                  | Pan Hold Downs                    |
| "Adjustable" Team Race & Stunt Handles | Alloy Wings                       |
| Tank Valves - Pressure & Suction       | Exhaust Extensions                |
| Single Blade Counter Weights           | Mono-Line Torque Units            |
| Mono-Line Handle Units                 | Single Strand Lines               |
| Paxalon & Steel Bellcranks             | Bobbin Bellcranks                 |
| Magnetic Prop Balancers                | Time Traveller valves and fillers |

**" Plus Many More Items "**

**For Mail Order or for complete price list to :-**

**Robin Hiern Model Racing  
Services**

**P O BOX 976 CRANBOURNE 3977 VIC  
Phone 03 59 96 0339 Fax 03 59 96 0307**

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