

THE VOICE OF CONTROL LINE
AEROMODELLERS FROM
AROUND AUSTRALIA

Number 74



Produced by the Victorian Control Line Advisory Committee

February 2004
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**Copy Deadline for next issue is:
Wednesday 18th February 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.

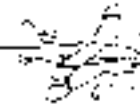
Best of all is to send it on a 3.5" disk as a Windows Write, Word for Windows, or as an ASCII TEXT FILE or use Email

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

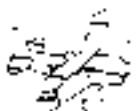
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COMING EVENTS



COMING EVENTS



CONTROL LINE CONTEST CALENDAR 2003/2004

FEB 1	Simple Rat race, Simple Goodyear.	SMAC
FEB 1	C.L.A.G. Country Flying Days	Traralgon
FEB 15	FAI & Combined Speed, 1/2 A Combat, Mini Goodyear.	CLAMF
FEB 22	Vintage Stunt, Class 2 Team race, Bendix, Classic Stunt.	KMAC
MAR 7	Hand Launched Glider.	SMAC
MAR 7	C.L.A.G. Country Flying Days	Traralgon
MAR 14	FAI Team race, Goodyear, Simple Rat race.	CLAMF
MAR 28	Monty Tyrell Classic Stunt Vintage "A" Team race, Classic "B" Team race, FAI, Novice & Jnr Aerobatics,	KMAC
APR 4	C.L.A.G. Country Flying Days	Maffra
APR 4	Simple Combat.	SMAC
APR 10-12	VMAA CONTROL LINE STATE CHAMPIONSHIPS	CLAMF, KMAC, CLAMF.
APR 17-23	57 th AUSTRALIAN NATIONAL CHAMPIONSHIPS BUSSELTON WA	
APRIL 25	Classic Stunt,	KMAC
MAY 2	Vintage "A" Team race, Aust "A" Team race.	SMAC
MAY 2	C.L.A.G. Country Flying Days	Knox
MAY 16	FAI & Combined Speed, Triathlon (Artil Trophy), 1/2 A Team race.	CLAMF
MAY 23	FAI (Yeoman), Novice & Jnr Aerobatics, Simple Rat race, Classic Stunt.	KMAC
JUNE 6	Balloon Burst, Limbo.	SMAC
JUNE 6	C.L.A.G. Country Flying Days	Moe
JUNE 20	FAI Team race, Goodyear, 1/2 A Combat, FAI & Modified Combat.	CLAMF
JUNE 27	Vintage Stunt, Combined Speed, Classic Stunt, Vintage "A" Team race.	KMAC
JULY 4	Simple Rat race (whipping permitted).	SMAC
JULY 11	FAI & Combined Speed, Jnr 2.5cc Combat, Mini Goodyear, Jnr 2.5cc Rat race.	CLAMF

Events will be flown in order of printing. Events in **Bold type** will be flown over hard surface
CLAMF Frankston Flying Field, Wells Rd, Seaford (Melway 97J10), 10.30am start

Contact :- G. Wilson (03) 9786 8153,
 Events conducted by CLAMF at the KMAC Field (Melway 72 K9) 10.00am start.

Contact :- H. Bailey (03) 9543 2259
KMAC Stud Rd . Knoxfield (opposite Caribbean Gardens) (Melway 72 K9) 10.00am start

Contact :- T. Matthews (03) 9560 0668.
SMAC Contact :- Reeve Marsh (03)9776 5949

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

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

CLAG Contact :- Graham Keene (03) 51924485
 Details of venues can be found on web site www.clagonline.org.au/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
1st Feb	SAT (Kelso Park)	F2B Aerobatics
8th Feb	KMFC	Gala Racing Day
15th Feb	KMFC	F2B Aerobatics
29th Feb	Doonside (at Kelso Park)	F2B Aerobatics
6/7th Mar	"MDMAS (Mitchell Hill Fields, Muswellbrook")	2004 HUNTER VALLEY CHAMPIONSHIPS
14th Mar	KMFC	JUNIORS DAY
14th Mar	Werrington	F2B Aerobatics and Classic Stunt
28th Mar	SSME	"Phantom, Vintage 1/2A, Vintage A, Bendix T/R"
4th Apr	KMFC	1.6cc Combat and Slow Combat
10-12th Apr	VMAA	VMAA C/L STATE CHAMPIONSHIPS
18th Apr	COMSOA	"F2B Aerobatics. Buy, Swap and Sell. "
17th-23rd Apr		"AUSTRALIAN NATIONALS, Busselton.
1st-3rd May	"ALC field, Chetynd St, Loganholme. QLD"	QUEENSLAND C/L STATE CHAMPIONSHIPS
15th/16th May	MDMAS (Muswellbrook)	VETERANS' GATHERING
30th May	SSME	F2B Aerobatics
12th-14th Jun		Venue to be confirmed N.S.W. STATE C/L CHAMPIONSHIPS
20th Jun	KMFC	Palmer / Aldrich Classic Stunt
27th Jun	KMFC	GALA COMBAT DAY
4th Jul	IMAC	F2B Aerobatics
11th Jul	KMFC	AGM. 2.5 Stunt, Simple Rat and Slow Combat
17th Jul	REMAC	Vintage Stunt (incorporating award for best All American)
24th Jul	SSME	"Vintage 1/2 A, Vint B, Goodyear T/R, Combined Speed"
25th Jul	SSME	Phantom, Vintage A, Bendix T/R
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
7th Nov	SAT (Kelso Park)	F2B Aerobatics
14th Nov	KMFC	Vintage T/R, 1/2 A, A and B.

The views and opinions expressed in ACLN do not necessarily reflect those of the Editor or Committees of Clubs or of the members of the Club represented in ACLN but are those of the respective authors.

Any comments, queries or complaints with respect to any article in this publication should be addressed to the author of the article.

The Editor and Committee of Clubs accept no responsibility or liability for any loss or damage incurred or suffered by anyone as a result of this publication or in reliance upon or as a result of acting upon anything contained in this publication.

CLASII CONTROL LINE EVENTS CALENDAR 2004

Information on club activities can be obtained from President Mark McDermott 07 32889263 or Secretary. John Taylor 07 33927679 email johndt@iprimus.com.au

Note!

Due to road construction commencing on the new Bridge adjacent to field, disruptions to flying field have already taken place. Therefore all Flying activity at Clasii field has been suspended probably till after Christmas. Fliers are advised not to come to our field again until further notice. New and improved fields and surrounds will be the positive outcome from this activity
John D. Taylor Secretary/Treasurer

QLD STATE CHAMPS 2004

The committee of Aeromodellers of Logan City Inc are pleased to advise that the Qld State Control line Champs for 2004 will be held at the ALC field over May 1,2,3 long weekend.

All FAI events will be offered but other events (MAAA/MAAQ) will be subject to the requirement for 5 entries before the event will be conducted. Entry forms will be sent out to all C/L clubs by Brian Burke who will again act as event co-ordinator and registrar. If necessary you can contact Brian on (07) 32001308.

Good news on the costs for competitors. Due to the club gaining some unexpected support for the State Champs we are able to defray costs to the competitors by eliminating administrative charges. Furthermore to encourage those most important people, our juniors, we will also not be charging juniors to enter junior events and charging only 50% of the entry fees for juniors wishing to enter senior events. And yes we will still be providing trophies to placegetters so don't worry about that. Other little momentos are planned but you will have to enter to find out more.

We are also planning additional permanent seating for the fields as well as covers and marquees for spectators and competitors so be assured we will be doing our utmost to make you comfortable and give you an enjoyable weekend.

For those who have not yet visited us the club fields are located at the very end of Chetwynd Street Loganholme and there will be a signpost to assist you in getting there.

Terry Chapman
Secretary ALC Inc.

POSTSCRIPT to last months article on the ARF NOBLER From Ken Dowell

After the first occasion of it sitting in the sun at the field, the MonoKote slackened and wrinkled all over the entire model, making some of the existing problem areas worse and creating more. This was a problem I had never experienced with SolarFilm or EconoKote. Following a discussion with Ken Donnelly about this, I am eternally grateful for a loan of his hot (hotter!) air gun and the relevant data on temperatures required for different brand coverings.

MonoKote requires a VERY HIGH temperature to shrink - alarmingly high!

Figures are courtesy of Coverlite. MonoKote, for both adhesion and shrinking, needs **350° -380° F (176° -193° C)**. By comparison, SolarFilm requires **190° -215° F (88° -102° C)** for adhesion, and **220° -230° F (104° -110° C)** for shrinking.

This is a **HUGE** temperature difference, and important in that MonoKote over wood, such as the flaps and fuselage, requires a temperature that may well affect the fibres in the wood beneath the covering. It certainly expands the air within the wood, meaning little pin prick holes are essential to eliminate bubbles. Another potential problem is blistering of a painted surface adjacent to the covering - it really is VERY, VERY HOT!

MonoKote is certainly a heavier film, and probably more resistant to having a screwdriver dropped on it point first. However, in a prang, it tears just as easily as any other plastic covering. Strength-wise, it may be considered stronger, but that in itself also means it is more capable of warping structures if application of the heat required is not perfectly even on both sides.

The appearance has now definitely been enhanced with no long wrinkles along the fuse and flaps, and no slack spots in the tailplane and fin that I had been unable to remove due to insufficient heat. The flying characteristics may also be marginally better with improved airflow, especially over the tailplane.



Control Line Aeromodellers of Gippsland Inc.

Meeting held at Moe on Sunday December 7th 2003

Sixteen enthusiastic fliers made our Moe Country Day one to remember. The oval had just been mown, the day was sunny and clear and the on/off breeze was more helpful than a problem.

The eleven CLAGsters were joined by visitors Col Collyer, Kim and Marion Wareham, Adam Kobelt, Craig Hemsworth and local, Dale Carstein.

Our Country Flying Days seem to be attracting more City Folks out for a relaxed days social flying, methinks Ken Dowell has been spreading the word.

Remember gents, if "She who must be obeyed" also wants

a day out, Yarragon Village has a lot to offer, there's also the Gourmet Deli Trail which takes in the local area.

Setting the scene for the day, Col Collyer "Vagrant" Webra .40 and Adam Kobelt, "Freebird" and "Firecracker" ST .46 were in the air at every opportunity, both impressed with their considerable skill at the handle.

Craig Hemsworth wanting the best of both worlds, spent the morning in the surf, flew most of the day and returned home to the surf again; what a life. Flown with his usual precision were his "Da Ducks Guts" OS .35s and "Nobler" Fox.35, the "Nobler" is one very nice model.

Kim Wareham got in several flights, unfortunately a gust of wind claimed one model. Kim's wife Marion, later became a casualty when slicing onions, our newly appointed Safety Officer was called upon to find a bandaid, damage was minor.

Dale Carstein eventually got in a flight with his newly built Enya .15V powered "Peacemaker", loose fuel line, faulty plug, empty tank??, all contributed to a long delay getting the model airborne. Yours truly cutting the slightly long fuel line slightly short didn't help either.

Of note, from CLAG members, was an impressive display by webmaster Ken Dowell, with his new Top Flite ARF "Nobler" Brodak .40 powered. The model is very well presented, flies exceptionally well and appears to be good value for the approx. \$300 asking price. The Brodak .40 still needs more time but sounds very strong.

"El Presidente", Geoff "Stiffy" (his neck) Ingram, amazed all with his, attitude activated throttle controlled "Thunderstreak" Enya .35 with OS R/C carb. A flap attached to the outboard wingtip is linked to the carby, providing full power when the model noses up. Minor adjustments made later became major, when the outboard wing cried "enough" and left the plane. The models advanced years, balsa fatigue and stress fractures (may need some NDT), were later blamed. Despite this mishap, the throttle control appears to work very well, when all is sorted I am sure Geoff will reveal all.

Steve and Vic Mitchell had an entire oval, (the greener one) to themselves. Steve's "Trio", Merco .35 (4th rebuild), was given an airing, also his all-sheet "Mini Nobler" OS .15 was seen aloft flying very nicely, must be that newly built chicken hopper tank, a nice piece of work.

Vic's "URK" Enya .15iv seemed to have minor stability problems but was kept well under control. Tell us gents, "why sky blue, is it to add a further degree of difficulty ???".

Yours truly got in several flights with the coreflute, (corrugated plastic sheet) sports/combat model I am developing. I can't claim this as an original idea, Ed Carlson from the States designed the model, I have made some, I think, further improvements. His article is in this issue, have a read, build one yourself, I will detail my changes later, I still have a few minor niggles to sort out.

Ken and Frank had their Moki .51 powered "Pacer" and "Eclipse" models circulating very nicely, love the sound of those Moki's.

Mr Good Vibes did some **very**, low level flying with his Merco .35 powered "Roughy", running at a very consistent

four stroke, nice.

Ron Jones, got in a few flights with his ever reliable "Peacemaker" and "Too-up" models.

Johnno bought along his "Nakke" Stalker .40RE and "Plagiarist" Stalker .51RE just to show us, "how models should be built". They truly are beautiful models, hopefully Ken got some photos. Just don't mention, the "Fox" or "castor" when near Johnno, you have been warned.

Peter Roberts gave his, very light, "Peacemaker" OS .15 MAX111 a solid workout, a slipped line unfortunately later claimed the model. He then obliged by flying my "Half Fast" OS .25LA, thanks Peter, it's always worthwhile having an experienced persons opinion, I'll make the changes suggested.

Ken Donelly was spotted with his "Skyray" OS .25LA out on a couple of occasions, but was happy to chin wag. He was later joined by wife Coral who had done the Yarragon Village thing.

That barely begins to sum up our brilliant day, great people, memorable conversations, great site. Our next meeting is January 11th, again at Moe, all are welcome, come and join us.

Graham Keene Sec./Treas. CLAG Inc.

Our Club, C.L.A.G recently made contact with the Central Arizona Control Line Club through its editor Ted Kraver. A link to their site can be found at www.clagonline.org.au, these guys are into everything and certainly know the meaning of FUN. A recent article from their October newsletter is one I thought warranted sharing. I have built one of the .15 size models as per the instructions and yes it is a good basis for a "trainer", but with a few modifications it is now a more than decent sport/combat model. Read on, I will detail my modifications in the next A.C.L.N. Graham Keene

CARLSON COROPLAST COMBAT CLAMS By: Ed Carlson Edited and made readable by common folks by: Ken Gulliford

The "Clams" were conceived as a low cost, low construction time, highly durable control line combat trainer. The building material for the wing/elevator is Coroplast (a corrugated plastic material commonly used for outdoor signs by relaters and politicians is case your looking for a cheap source of building material).



The basic .049 - .15 size wings use 4-millimeter thick material. Scrap posters and signs work fine, but new materials are quite cheap; 4' x 8' sheets are available for about \$10.00 locally. One sheet will build 16 wings with a 27" span and a 12" length if the patterns are laid out in a staggered fashion, with grain running span wise.

The initial basic design is symmetrical from center, and has a 27" span, 4" chord at the tip, 10" chord at the outboard edges of the elevator, and an elevator of 2" x 9 1/2". The elevator hinge is the upper surface of the Coroplast material with the lower surface (one strip one, bay wide) cut out about 1/8" wide across the bottom where the elevator meets the wing. The plastic wing / elevator, when cut out, should weigh about 4 oz. (112 grams) and have a wing area of about 165 square inches.

Engines that weigh 3 oz. (90 grams) or more should be mounted with the propeller just forward of the leading edge of the wing. If using a lighter engine, such as the MP Jet .060, mount it about 1/2" forward of the leading edge of the wing. Motor mounting beams can be made from 1/4 x 1/4" hardwood, to as large as 1/2 x 1/2" hardwood, but 3/8 x 3/8" is probably best, and should be from 6 to 7" long. Drill the motor mounts to accept your engine first, then position them under the wing against the bottom, and drill holes near the leading edge and near the aft end of the beams, approximately 1/2" from the ends. Fashion either two more beams, or plywood about 1/8" thick, to fit on top of the wing to carry the tank and the bell crank. This upper assembly will be through bolted to the motor mounting beams below, and sandwich the wing between the wood parts.

The favorite size uses a .09 engine and a one-ounce fuel tank. It also has a 3" bell crank with a blind nut type button end for the control lines, but you can use normal lead outs and line clips. The center of gravity should be about 1 3/4" aft of the leading edge. The center of the line guide should be about 2 1/4" aft of the leading edge and about 3/4 oz. (20 grams) of tip weight is recommended. Nails stuck into the outboard tip corrugations and taped in place are an easy source of tip weight. These can be placed at the forward edge of the wing tip, or more rearward as necessary to fine tune the C.G.

The all up weight, with a 3 ounce engine, is about 11 ounces (312 grams) and will fly at about 50 mph on an .09 engine with a 7 x 4 prop and using 42' x .012" stranded flying lines. Normal flying time is about 5 minutes on a one-ounce tank.

Clams will fly the full stunt pattern, but squares are wide, and all maneuvers are sloppy. They will pull streamers in nice wide turns, and give you a bit of time to think about combat tactics.

The first Clam is still flying well after four or five engine changes, and at least eighty flights including twenty or more full power crashes (full ground interruptions into the grass) and ten mid air collisions. Propellers are the most frequently replaced parts. The lower motor mounting beams were replaced once, but there have been no other repairs required (yet).

The .15 powered Clams fly best on 52' lines and require a bit of stiffener span wise in the wing (bamboo or carbon fiber) inserted in the corrugation and taped or glued in place. All the clams fly with a distinctive bow in the wing, but only the .15 powered ones need reinforcing. Don't get

ridiculous and put anything more powerful than a Cox Medallion or TD type engine on one of these, it will become seriously less fun to fly. However, two well-matched Clams with Cox .09 engines and streamers on them locked in mortal combat is a real blast to fly. We have never seen the end of a flight that did not punctuate itself with a great big toothy smile.

The 50th Hunter Valley Championships (2004) will be held at the Mitchell Hill Field, Muswellbrook on the weekend of March 6th and 7th.

The HVC is the oldest continuing regional annual championship in Australia that still incorporates all three Aero-modelling disciplines R/C, C/L, F/F

For details see:

<http://www.angelfire.com/journal2/randall/HVC2003/> for Events, Entry fees and Accommodation details.

Sat 6th March

R/C Sailplane Open, 2 Metre, RES & Vintage.

C/L Vintage 1/2A Team Race, Vintage A Team Race, Classic B Team Race, Classic Stunt.

F/F 8pm Night Scramble.
Hot dinner served at 7pm

Sun 7th March

R/C Texaco, Duration.

F/F HLG and Catapult Glider.

C/L Combined Speed, Junior Simple Rat, 2.5cc Slow Combat, Aerobatics

Inquiries to : Grant Potter, 21 Kingdon Street,
Scone NSW 2337.
Phone 02 6545 3012
Fax 02 6545 9341
Email: potters@maxnet.net.au

Catering all weekend
Camping on the field encouraged
Good, clean amenities on site

No Administration Charge

Junior \$5.00 per event (Maximum payable \$20)
Senior \$10 per event (Maximum payable \$40)
Team events-\$10 per senior person, \$5 per junior person

TARMAC Notes for November, December and January.



The space program of Burt Rutan's company 'Scaled Composites' that was first mentioned in these notes last May, has taken another step forward. On the 100th anniversary of the Wright Brothers historic 12-second flight over Kitty Hawk, North Carolina, the privately financed passenger-carrying sub-orbital rocket plane broke the sound barrier on it's first powered flight. This was it's eighth flight.

After being released from the White Knight carrier plane high over Mojave, California, the test pilot started the hybrid rocket engine and put SpaceShipOne into a steep climb. Nine seconds later, it broke the sound barrier and continued its steep climb.

At motor shutdown, 15 seconds after ignition, SpaceShipOne was climbing at a 60-degree angle and flying near Mach 1.2 (930 mph). The pilot continued the maneuver to a vertical climb, achieving zero speed at an altitude of 68,000 feet. He then configured the ship in its high-drag "feathered" shape to simulate the condition it will experience when it enters the atmosphere after a sub-orbital space flight.



This is the Burt Rutan designed orbital craft called 'SpaceshipOne' in flight

After descending in feathered flight for about a minute, the pilot reconfigured the ship to its conventional glider shape and flew a 12-minute glide to landing at a landing strip in the Mojave.

On touchdown, the left landing gear retracted causing the rocket ship to veer to the left and leave the runway with its left wing down. Damage from the landing incident was minor and will easily be repaired. There were no injuries, according to a press release issued by Scaled Composites.

Building up a library of publications related to the club members interests is always a good idea. Finding somewhere to store it and keeping track of the stuff can be an issue, though it is worth the trouble for the benefits it provides. The TARMAC club library has just added two videos from Bob Hunt on making and using the 'Lost Foam' wing building system. These are well worth studying if you have an interest in building light and accurate stunt models. They are well presented and interesting, but despite that, I did lapse into unconsciousness a couple of times (probably less than usual though)

More or less coincidentally, the latest issue of 'Stunt News' magazine (November 2003) has articles on two wing building/jigging systems. One is the 'Lincoln Log' method and the other is on the lost foam process. Both articles are of interest and there is also a useful method described for the accurate location of a model's Centre of Gravity. If you are not already a

subscriber to Stunt News, you should consider becoming one. It is well worth the money. TARMAC members, of course have only to see the club librarian for access to several years issues.

Here is another of those photos that I threatened you with a while back, showing West Aussie modelers who have been around for a while. Here we have a youthful Bruno Butkevicius with a piped speed engine. Bruno has a bit less hair these days, but still seems to have a weakness for speed models. He is well known for the beautiful woodwork in his models. It is almost a shame to cover it with paint. This picture was supplied by Garry Turna.

One of my interests is model engineering and I am a member of the West Australian Society of Model And Experimental Engineers. The Society was formed in 1931 and has been continuously active since then; although, like other branches of modelling the number of active members has dwindled in recent years and the average age has risen. The members between then have an enormous store and range of knowledge on subjects from fitting and machining to engineering, radio, chemistry, steam power, aviation, ships and all points between. I can't use it as an excuse for my low output of model aircraft, since the meetings are only held on the first Tuesday in every month and really that is all the time that I spend on it.



With some aeromodellers active in the modification and manufacture of model engines and more of them improving their workshops with machine tools like lathes, my wife ('Her in the kitchen' as my good friend Norm Kirton is wont to say) suggested they might also be interested in a group such as the SMEE. If any of you are interested in finding out a bit more about this venerable society, feel free to give me a call. You will find my phone number in 'Windsock', or use the email address at the end of this column.

Have you ever had trouble unscrewing the Phillips head screws on an engine? Possibly some previous owner has butchered them to the point where you can't get your screw driver to grip. First make sure that the screwdriver that you are using is in good condition and not contributing to the problem. Then go to your local auto fixit place and buy a small tube of the finest valve grinding compound they have. A small dab pushed into the grooves gives the bit all the bite there is to get. Actually from time to time there is a product called Screw-Loose or some such thing just for this purpose that appears on the market. It is valve grinding compound also. It is a tip that might be worth remembering.

Since the first of the Top Flite ARF control line models are now available from selected model shops (Ace Models of Midland in Western Australia have a good stock of them), I thought that there must be a few folks out there who would like to see an evaluation of the ARF version of the George Aldrich 'Nobler'. With a bit of luck, this may help some people (perhaps with limited building facilities or time), to easily get their hands on a good control line stunter. The West Aussie version of these notes are for once a bit different to the ACLN lot. They include this month, Graeme Wilson's words on the late Ron Wilson and the excellent review of the Nobler that was in the last issue of ACLN, written by Ken Dowell.

To finish off this month, here is one more little tip that can be handy to know and some newer builders may not be aware of. Every now and again in the best organized workshops, you need to use some gap filling glue. Possibly due to prang damage or for whatever reason. Very small gaps can be filled, or small fillets can be made with good old baking soda (Sodium bicarbonate) and thin CA glue (Zap). The process is to brush some baking soda into the gap and drop on some thin CA while holding the parts together. The glue will set off instantly as the soda acts like zip kicker and the joint or fillets will be as hard as rock and about as easy to sand off. Don't stick the tip into the baking soda while you are doing this or you will seal the tip. Of course the right (and lightest) way to build models is without gaps as this fix up is not a substitute for good joinery.

Mankind has a perfect record in aviation; we never left one up there!



South Australian State Championships pictures.

Top left; Graeme Wilson and Mark Ellins in one of the day's best 1/2A Combat bouts.

Centre; Spectators watched Stunt, Combat and Team race at Sturt Reserve, Murray Bridge.

Bottom; Trevor Letchford drove across the Nullabor to fly in F2C, F2F, and Goodyear T/R

Top right; "Flying Purple People Eater" again gobbled up the opposition in Classic B T/R.

Centre; Gavin Knight's new Classic B is given attention by a top pit crew, Ray Harvey and Paul Stein.

Bottom; Ken Hunting pits the "Nike" Classic B model.



South Australian State Championships pictures.

Above; Ray Harvey and Gavin Knight arrived at Murray Bridge with two brand new Vint A racers. This "Tiger Terror" showed real potential. They placed second in the final.

Below; Contest Director Maris Dislers under his Jungle Jim hat.

Top right; The winning Vint A "Voodoo" of Hallowell/Baddock. Range of over 60 laps per tank helped to achieve a final time of 7:08.17

Right; Wilson/Ellins "Voodoo" is a regular finalist and obtained third place in Vint A.

Right; Paul Turner holds up P J Rowlands' (the F2B victor) arm. P J was also the winner in Classic Stunt. Brian Eather is the third person.

Bottom right; The newly erected shade area was put to good use at the Monarto hard surface.





South Australian State Championships pictures.

Top; F2F finalist.

Centre; P J Rowlands with his winning F2B model.

Bottom; Ray Harvey prepares to race in F2C

Top; Goodyear finalist.

Centre; Neil Baker and Harry Bailey with the "Miss San Bernadino" Goodyear model that was raced in F2F.

Bottom; A car boot sale is always of interest.



South Australian State Championships pictures.

*Top two models are (Left) Ray Harvey's newly completed **F2C** racer and (Right) Paul Steins F2C. The other four models featured are variations on the **F2F** theme.*

Centre; Mark Poschkens' winning F2F

Bottom; Harry Baileys F2F

Centre; Trevor Latchfords F2F had a few problems early in the week but with the help of pit man Robert Owen managed consistent times.

Bottom; Kieth Baddocks F2F fitted with a Nelson 15D was the fastest in every round but was unfortunate to run in during the final.

Back issues of this newsletter can be found on the following web sites.

<http://www.vicstunt.com/>

<http://www.dkd.net/clmodels/>

2004 SOUTH AUSTRALIAN CONTROL LINE STATE CHAMPIONSHIPS RESULTS

FAI TEAMRACE – F2C		State	rd 1	rd 2	rd 3	final
1.	G.Wilson/P.Stein	VIC	5:09.65	3:19.31	3:46.07	7:14.38
2.	R.Fitzgerald/M.Ellins	SA/VIC	3:28.61	3:13.40	dnf 46	dnf 151
3.	K.Hunting/J.Hunting	VIC	4:44.33	4:25.40	4:22.74	dnf 107
4.	G.Wilson/S.Suter	VIC/NZ	3:35.48	3:48.32	dns	
5.	G.Knight/R.Harvey	NSW	3:44.90	dnf 23	dnf 81	
6.	T.Letchford/R.Owen	WA/NSW	5:08.41	4:33.92	dns	

F2F TEAMRACE		State	rd 1	rd 2	rd 3	final
1.	R.Fitzgerald/M.Poshkens	SA	4:53.12	4:24.87	4:33.27	9:36.84
2.	H.Bailey/N.Baker	VIC	6:07.22	6:02.14	4:48.09	10:13.49
3.	J.Hallowell/K.Baddock	VIC	4:52.94	4:23.53	4:19.53	dnf 139
4.	J.Hunting/K.Hunting	VIC	5:25.71	5:02.35	4:56.80	
5.	M.Wilson/P.Stein	VIC	5:12.84	6:31.54	5:50.28	
6.	T.Letchford/R.Owen	WA/NSW	5:30.00	5:20.69	dns	
7.	P.Cameron/M.Dislers	SA	6:05.27	dnf 29		

*Bottom picture:-
Pilots Rob Fitzgerald,
Ken Hunting and
Graeme Wilson keep
the centre tight during
the final of F2C Team
Race*

F2F Competition from Robert Fitzgerald

The South Australian Championships were held over the New Year period. F2F was run for the first time in this country and proved to be a great success.

Items to note from the competition:

Best airspeeds were around 23/10. Of course these airspeeds will improve as people develop on from their first F2F attempts and there was some discussion on what was a good airspeed to attempt to keep the event at.

Many said that this speed was about the right level. This speed made it very easy to instruct newer pilots where the correct position of the pilot is, how to get and stay in the correct position when overtaking and being overtaken. However, this still leaves a large gap to the F2C level at around 18/10. I can see that speeds will drop to the 20-21/10 when sorting out models. The Nelson engine is already the minimum requirement to win the event. There are many second hand Nelson engines available here and replacement parts are still available from Henry on request. So we do not have the problem where someone has equipment that nobody else can get or afford.

Other engines of that era (Rossi, Cippola, CS) do have this supply problem. Non F2C engines (MVVS) are obtainable but require re-work and are harder to use than the F2C engines when trying to get the airspeed and keeping range.

The tank size of 15cc is far in excess for F2C designed engines and converting the extra laps into airspeed may take the event away from basic F2C engine operating/fuel system principles. However, any reduction in tank size will eliminate other engines.

The least experienced racing competitor in the event was the builder/mechanic of the winning model.

We allowed 1/8 Scale Racing (Goodyear) models in the event as some competitors had these models already built and were easily converted to the required tank size. These models are under the 12sq dm requirement but do suffer from long fuselages and none performed any better than the F2F specification models.

We have a rule that the CD can disallow experienced competitors from racing if they team together and are not participating within the spirit of the event.

In summary we think that the event will become popular in Australia. If we allow the lesser-experienced competitors control the pace of development then we will have a good event now and into the future.

Rob.

VINTAGE "A" TEAMRACE		State	rd 1	rd 2	final
1.	J.Hallowell/K.Baddock	VIC	3:31.98	dns	7:08.17
2.	G.Knight/R.Harvey	NSW	3:50.01	3:37.62	7:34.14
3.	G.Wilson/M.Ellins	VIC	3:39.85	dns	7:44.68
4.	M.Wilson/P.van Meurs	VIC	3:49.41	3:57.52	
5.	T.Letchford/R.Owen	WA/NSW	4:09.70	4:28.22	
6.	J.Hunting/K.Hunting	VIC	dnf 5	4:12.35	
7.	H.Bailey/N.Baker	VIC	4:24.59	4:37.32	

CLASSIC "B" TEAMRACE		State	rd 1	rd 2	final
1.	J.Hallowell/K.Baddock	VIC	3:12.31	dns	6:08.12
2.	G.Wilson/M.Ellins	VIC	3:27.20	dns	7:12.08
3.	H.Bailey/N.Baker	VIC	3:55.55	4:07.00	dnf 41
4.	J.Hunting/K.Hunting	VIC	4:18.04	3:58.86	
5.	G.Knight/R.Harvey	NSW	4:19.04	4:49.46	



<u>1/2A COMBAT</u>	state	1	2	3	4	5	6	pts
1.R.Owen	NSW	W	W	W	W	L	W	4
2.A.Kobelt	VIC	B	W	L	W	W	L	1
3.M.Ellins	VIC	L	W	W	L			0
4=.G.Wilson	VIC	W	L	B	L			-1
4=.M.Wilson	VIC	W	L	L				-1
6.H.Bailey	VIC	L	L					-2
7.G.Pretty	SA	L	W/D					-2

<u>GOODYEAR</u>	state	_rd_1	_rd_2	_final
1.R.Fitzgerald/G.Pretty/M.Wilson	SA/VIC	3:32.51	dns	7:13.07
2.T.Letchford/R.Owen	WA/NSW	4:39.82	dnf 53	9:36.46
3.J.Hunting/K.Hunting	VIC	4:53.62	4:57.23	9:36.55
4.M.Dislers/M.Poshkens	SA	4:01.52	dnf 10	
5.G.Wilson/M.Ellins	VIC	dnf 77	dnf 57	

SA Champ of Champs

<u>NIGHT SCRAMBLE</u>	Entrant	Points
1.G.Wilson VIC 407	R Fitzgerald	18
2.R.Fitzgerald SA 305	M Dislers	11
3.D.Putterill SA 207	M Poshkens	9
4.R.Melton SA 151	M Newcombe	6
5.M.Dislers SA 146	G Pretty	6
6.M.Poshkens SA 120	P Anglberger	1
7.D.Pickard VIC dns	P Cameron	1

<u>COMBINED SPEED</u>	state	cl	rd_1	rd_2	rd_3	%
1.K.Hunting	VIC	Midge	10.68	10.26	10.37	86.3
2.J.Hunting	VIC	Midge	10.69	10.68	11.36	82.9
3.P.Van Meurs	VIC	Proto	30.30	29.94	30.49	80.6
4.M.Wilson	VIC	Midge	11.18	12.24	N/T	79.2
5.R.Owen	NSW	4	12.19	dns	dns	78.3 (18.3m lines)

F2B AEROBATICS

Entrant	Round 1	Round 2	Round 3	Score	Placing
P J Rowland	2007.5	2024.5	2112.0	4136.5	1
P Turner	1965.5	1990.5	2027.5	4018.0	2
B Eather	1983.0	2034.5	1845.5	4017.5	3
R Towell	1833.5	2010.0	1989.0	3999.0	4
T Gee	1880.5	1769.5	1801.0	3681.5	5
D Grinham	1540.0	1752.5	1818.0	3570.5	6
J Elias	1670.5	1761.5	1690.0	3451.5	7
A Kobelt	1670.0	1687.5	1753.0	3440.5	8
J McIntyre	1390.5	1740.5	1686.5	3427.0	9
F Battam	1673.0	1723.5	1635.0	3396.5	10
M Ellins	1504.0	1707.5	0	3211.5	11
D Pickard	1366.0	1342.5	1415.5	2781.5	12
P L Rowland	823.0	954.0	954.0	1908.0	13

VINTAGE STUNT

Entrant	Round 1	Round 2	Static Score	Total Score	Placing
D Grinham	363.0	380.5	115	495.5	1
M Dislers	341.5	377.0	100	477	2
F Battam	360.5	351.0	108	468.5	3
M Newcombe	286.0	358.0	102.0	460.0	4
J McIntyre	362.0	370.5	86	456.5	5
D Pickard	370.5	357.0	78	448.5	6
J Elias	356.0	349.0	91	447.0	7
D Lacey	314.0	344.5	82	426.5	8
P Anglberger	240.0	149.5	68	308.0	9

CLASSIC STUNT

Entrant	Round 1	Round 2	Total Score	Placing
P J Rowland	1128.5	1144.0	2272.5	1
R Towel	1091.5	1045.5	2137	2
F Battam	1026.5	1044.0	2070.5	3
D Pickard	940.0	1007.0	1947	4
J Elias	806.0	354.0	1160	5
D Lacey	674.5	285.0	959.5	6

Newsletter Editor

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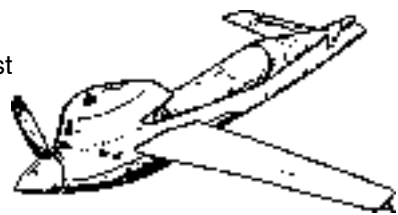
CONTEST RESULTS

SMAC results 7th December 2003 at KMAC
Classic B team race,

1. Wilson/Ellins	DNF 38	3:25.63	6:54.82
2. Hallowell/Baddock	3:57.87	3:15.32	7:36.80
3. Bailey/Smith	3:46.27	3:45.56	10:01.94
4. Hunting/Hunting	5:01.84	5:47.47	

CLAMF Results Dec 14th
Combined Speed

	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest
1 N Wake	1	OSCZ11	15.61	15.58	16.11	15.58
2 N Wake	5	Picco .21	17.11	16.30	16.47	15.30
3 V Marquett	Vint Proto	Enya	44.50	44.15	43.94	43.94
4 J Hunting	Midge		14.5	-	-	14.5
5 K Hunting	.49		-	-	-	-



Noise Police Outwitted.

The evil noise police with their dreaded decibel meters have been thwarted at Kuring-gai MFC by the advent of electric flight. Bob and James Armstrong show their neat little trainer here.

It took off from a strip of outdoor carpet, thrilling the spectators. Power is from a twelve volt Buzz Flight motor from the UK. Power source is two 7.2 V RC model car battery packs of 1700 mA, worn by the pilot and feeding the motor through two insulated copper control lines. Next month we hope to bring news and pictures of the ultra-smooth F2B model, and the 19 for 10 mark 5 voodoo.

AROUND THE CLUBS

Vintage A

Rothwell/Hines	3.22.53	—	6.49.11
Camps/Pilgrim	4.01.12	3.29.57	7.00.37
Justic/Kerr	3.26.22	—	7.24.53
Bailey/Hoggan	4.11.31	3.34.51	
Knight/Harvey	3.39.24	4.06.13	
Ardill/Fairall	4.23.57	4.38.97	

By the time the turn of Vintage B came around the wind was too strong, (as in branches coming out of trees). Special welcome to Harry Bailey who came all the way just to fly for Brian Hoggan. Very sporting— thank you Harry. Thanks also to Dave Simons who donated the major prizes, as he has done for several years now.

GAVIN KNIGHT WINS CLAS RACING TROPHY

The CLAS perpetual racing trophy, for which points are earned in all team races in the CLAS calendar, was won in 2003 by Gavin Knight. Gavin's regular pit man Ray Harvey was second, and Steve Rothwell had two wins on the last day of competition to slip past Peter Camps and Stan Pilgrim.



Results of vintage team racing at Kuring-gai MFC 16th Nov 2003

Vintage 1/2A

Rothwell/Nolan	4.19.09	—	9.00.12,
Knight/Harvey	4.57.19	—	9.14.25
Bonello/Brodie	5.35.66	4.57.19	11.37.07
Ardill/Fairall	5.12.61	5.51.60	

- Final tally was:
- 44 1/2 G Knight
 - 40 R Harvey
 - 35 1/2 S Rothwell
 - 32 P Camps, S Pilgrim
 - 25 R Justic, A Kerr, J Nolan
 - 24 T Bonello
 - 19 A Heath
 - 17 D Hines, G Patterson
 - 16 P Brodie
 - 12 D Bailey, I Gapps
 - 11 H Simons
 - 10 Grant Potter-
 - 9 1/2 B Hoggan
 - 9 Geoff Potter
 - 8 1/2 R Owen
 - 8 G Ardill, R Fairall, P Tilley
 - 3 R Fisher, W Rogers
 - 2 R Bonomo, T Ransome
 - 1 D Bonello

BEARCAT III

From Ian Smith

In the 1960's and 70's, Al Rabe evolved a series of stunters of high performance, great beauty, and with many major technical innovations. Rabe's designs of the Bearcat, P51 and Sea Fury were not only highly realistic, they were used by Rabe to place in the upper level of national and international competitions.

The Bearcat I was designed in the mid 60's, the II and III then evolving, the III being built in 1969-70, and achieving 2nd place in the 1970 US Nats.

In 1975, a friend, an early member of KMFC, Rod Murdoch, built a Bearcat I. I just wanted one, being so impressed by it. But let's not rush, hey- life gets in the way of things. So, in 2001 I learned that Tom Dixon was selling kits of the Bearcat III. Mine arrived in two huge boxes. Building started in February of 2002, and was finished in December that year.

The kit involves a foam wing and a moulded (3/32 " balsa) fuselage. Construction was challenging. No major problems with the wing or other flying surfaces- except that I used built-up control surfaces as in the full - size Bearcat. Assembling the wing, tail, engine mount and stringer - power system to the moulded fuselage halves beat me. So I used a different method. Tie the engine / tank former housing to the wing, and other formers that meet the wing, add stringers and remaining rear forms, put on two monocoque sides (4" wide 3/32" balsa), add tail surfaces, hook up control, then plank top and bottom of fuselage. Take vallium and a long holiday.

The rest was less of a problem. Carbon veil was necessary to reinforce the 3/32" fuselage sheeting. The ribbed control surfaces were covered in polyspan with lightweight tissue on top. I added further "scale" features - bent and built up U/C legs, scale-like tail-wheel mount (using hot air gun, bent bits of credit card tied to the wire strut), in-board gear cover, wing-tip lights, gun ports, and cooling / engine air inlets at the wing roots. The canopy frame is an add on , made from light-weight fibreglass (four layers) and epoxy , moulded on a spare canopy. Simulated trim tabs were added to the flaps, elevators and rudder, whilst the tips of these surfaces were faired into concavities in the fixed surfaces. The main wheels are 3" Sullivans with a diamond tread.

The paint is Forminex and, with the exception of the nose art, the trim was sprayed using low-tack contact plastic film. Getting the sizes right, and getting the mask to adhere to 3-dimensional curves were challenges. Judicious air-brushing of black and grey was used to give apparent depth to the simulated wheel- wells.

The engine is an ST 60, using a four blade 12 x 6 Bolly prop, and a 6ounce plastic clunk tank on uniflow. Dave Curry devised and made an internal muffler connected to the "real" exhaust pipe in a fat silicon tube. Works a treat. York Bratley did the nose art, scanning from photos of the real thing, then manipulating on his computer and printing out sticky decals, which need fuel proofing.

Don't tell anyone, but the weight is 73 ounces. However, the plane flies beautifully, glides forever, and is a great joy

to watch in the sky. Glen Walker (NACA) has made a video of one of the early flights.

The due credits are:-

Designed and developed:	Al Rabe
Kitted:	Tom Dixon
Built and Flown:	Ian Smith
Muffler and Cockpit detail:	Dave Curry
Nose Art:	York Bratley
Engine:	ST 60
Prop:	Bolly 4-blade, 12x6

Want to talk about it? Try (02) 4975 2292.

See you then, Ian.

PS. Current production (May, 2003) includes a Rabe Must...., my third. But, that's another secret.

Gala Race Day.

Kuring-gai club in Sydney is holding a gala race day on Sunday 8th of February. This is an informal get together of racing people, a chance to tune things before the Hunter Valley champs, test new models, brag a little, and so on. No formal racing events are planned, no entry fees, just pleasant socialising- and relaxed flying. Inexpensive barbecue lunch.

Enquiries-to John Nolan 9997 3434.

WANTED

New in the box ENYA 19 C/L motor (any model) also need a venturi restrictor for an old OS Max III 35. (Will the sender of this ad please re-submit your contact details. Ed.)

For Sale

3 x Profi powered F2A models complete, inc spare parts, Suit new speed flyer.

\$1600.00 + freight.



Contact: John on 0265732259 or e-mail pssj.walker@bigpond.com.au

More Items for Sale on back page

AUSTRALIAN CONTROL LINE NEWS

If undeliverable return to:-

G. WILSON

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**SURFACE
MAIL**

For Sale

Something has to go, my models or my boat.
I'm keeping the boat.

OS Max S35 c/w OS-703 Muffler, original box & doc's.
Refurbished, not run since.

OS Max S35 c/w OS-703 Muffler mounted in modified
Aeroflyte Aurora.

OS Max III - 35 c/w OS-703 muffler.

OS Max III - 15, cracked exhaust port, runs well,
mounted in solid wing trainer (tired).

Enya 40BB Model 6002 and muffler N.I.B.

Enya 19 - V Model XXXX and muffler, mounted in
scratch built KeilKraft Spectre, have copy of original
plans. Runs and flies perfectly.

2 x Enya 15 - IV Model 3304, mounted in built up wing
profile body aerobatic trainers, both run and fly well.

SIG Super Chipmunk kit, circa late 70's, complete in box
including laminated plans and original decals.

Complete flying kit, lines, handles, spare plugs, plug
spanner, battery & leads, ni-cad plug starter c/w car
charger, spare props (x25) and flying box.

Plans, magazines, wheels bits & pieces.

\$800 the lot or will separate.

Phone or e-mail for photo's.

Rob MacArthur

Phone: 03 9754 3618

Mobile: 0409 191 263

e-mail: rmacarthur@bigpond.com

I have recently purchased 250g of Ferrocene (98%)
(Diesel Ignition Improver) from Sigma Chemicals. Yes it
was much cheaper per gram than buying the 50 grams I
had intended to purchase, but as it is used at the rate
of 0.3 - 0.5 grams/litre it is enough to make up between
500 and 800L of fuel!!!! I am keen to know if anyone else
would be interested in using the stuff. I am happy to sell it
at cost, which would be \$0.40/gram. It's a very effective
replacement for Tetra Ethyl Lead (TEL), there is no
disadvantage to adding too much. ie It does not cause
the engine to overheat, (other than throwing money away)
and it is nowhere near as toxic.

I'm happy to weigh out 10g+ quantities if anyone is
interested

Lance Smith

Tel Bus 03 97904109

Home 03 9708 8315

email: smithlw@optushome.com.au

For Sale: Super Tigre ST46 ex-Doug Harlow, excellent
performance, complete with competition muffler, ready to
go. \$150.

Derek Pickard 03 9889 1149

"Klassique" Stunter

\$200 ono

(Suitable motor for "Klassique" available if required)

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