

THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 146

Produced by the Victorian Control Line Advisory Committee



August 2010
INSIDE THIS ISSUE

Contest Calendars.

Contest Results

Notices

Letters to the Editor

Around the Clubs

Construction of F2C Teamracers Using
Carbon Fibre

U.S. Nationals at Muncie

For Sale

Wanted

**Copy Deadline for next issue is:
Wednesday August 18th 2010
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 pre typed, and please use a good black ribbon for best reproduction.

Best of all is to send a CD 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:- hbbailey@optusnet.com.au



COMING EVENTS



VICTORIAN CONTROL LINE CONTEST CALENDAR

Aug-1	CLAG Club Day Combined Stunt	Knox
Aug-8	Speed , Classic Stunt	CLAMF
Aug-22	Club Day, Vintage A T/R, Classic B T/R	KMAC
Sep-5	CLAG Club day	Moe
Sep-12	F2F T/R, Classic FAI T/R , Vintage Combat	CLAMF
Sep 26	Combined Speed, Combined Stunt	KMAC
Oct 2-4	NSW State Champs (F2A, F2C) Also on the program will be Combined Speed , F2F T/R, Vintage A T/R, Classic B T/R	Albury
Oct-3	CLAG Club day	Moe
Oct-17	Speed , Simple R/R, Simple Goodyear.	CLAMF
Oct-24	Club Day	KMAC
Nov-7	CLAG Club Day, Vintage Stunt & Combat	Knox
Nov-14	Triathlon, Speed .	CLAMF
Nov-21	Vintage A T/R, Classic B T/R	KMAC
Nov-28	Monty Tyrrell Classic Stunt	KMAC
Dec-5	CLAG Club day	Moe
Dec 12	F2C T/R, Goodyear .	CLAMF
Dec-19	Club Day, Nationals Practice	KMAC

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

CLAMF Frankston Flying Field, Old Wells Rd, Seaford
(Melway 97J10), 10.00am start
Contact :- G. Wilson (03) 9786 8153,
H. Bailey (03) 9543 2259

Email :- clamf@ozemail.com.au
Web site :- <http://clamf.aerospots.net.au/>

KMAC Stud Rd. Knoxfield (opposite Caribbean Gardens)
(Melway 72 K9) 10.00am start
Contact :- Ken Taylor (03) 97380525
John Goodge 0439 972 006

Email :- johnnogo@bigpond.com.au

CLAG Contact :- Craig Hemsworth Mob 0433 809 862
Email :- chemsworth@childhood.org.au
Details of venues can be found on the club web site
www.clagonline.org.au

Brimbank Falcons Stadium Drive, Keilor Park Recreation
Reserve, Keilor. (Melways ref 15 C 5). Regular flying day
3rd Sunday of each month 10.30am.
BFCLMAC club President is Mathew Shears.
Email: "Mathew Shears" matshears@gmail.com
Ph home 03 5472 3881 Mobile 0432 491 794
Club Secretary is Steve Vallve
Email :- chitwillow@gmail.com, Phone: 5782 1693.



COMING EVENTS



DATE	EVENT	CLUB
Sun 8th Aug	F2B Aerobatics	KMFC
Sun 15th Aug	Diesel Goodyear, Sabre Trainer Racing & 2.5 Diesel Speed.	KMFC
29th-30th Aug	4th OILY Hand Diesel Day. (Contact Ian Cole 0427 015 792) Details TBA.	COWRA MAC.
Sun 29th Aug	Combined Speed	SSME
	(contact Ron Blombery for details Ph: 9956 5952)	
Sun 29th Aug	Electric Powered Stunt. F2B and Novice (contact I. Smith 4975 2292)	NACA
Sun 12th Sep	KMFC Triathlon	KMFC
Sun 19th Sep	Warbirds Stunt (for details, contact Ian Smith Ph: 4975 2292)	COMSOA
Sun 26th Sep	F2B Aerobatics	SSME
2nd-4th Oct	CLAS. NSW C/L STATE CHAMPIONSHIPS. (F2A and F2C) Also on the program will be Combined Speed, F2F T/R, Vintage A T/R, Classic B T/R NSW. Venue Twin Cities, Albury	
Sun 10th Oct	Gordon Burford Day. (Details TBA) SWAP MEET	KMFC
Sat 30th Oct	CLUB STUNT (Novice) and Club Race	KMFC
Sun 31st Oct	Phantom, Vintage A, Vintage B, Bendix T/R and Vintage 1/2A	SSME
Sun 7th Nov	F2B Aerobatics	SAT (Kelso Park)
Sun 7th Nov	Slow Combat and 1.6cc, Vintage Combat	KMFC
Sun 14th Nov	Combined Speed	SSME
	(contact Ron Blombery for details Ph: 9956 5952)	
Sun 21st Nov	Cardinal Stunt and Classic Stunt. (I. Smith Ph: 024975 2292) NACA (Hunter Sports H.S.)	
Sun 21st Nov	Vintage T/R, 1/2A, A (2 divisions) and Vintage B.	KMFC
Sun 28th Nov	KMFC Christmas Party and Fun Fly	KMFC
Sun 5th Dec	F2B Aerobatics	Doonside.
	To be held at SSME	
COMSOA - (City of Maitland Soc. Of Aeromodellers.) - Don Macindoe Memorial Flying Field, Raymond Terrace Rd, East Maitland. UBD Newcastle map 51		
KMFC - (Ku-ring-gai Model Flying Club) - St. Ives Showground, Mona Vale Rd, St. Ives.		

NACA - (Northern Area Contest Aeromodellers) - Hunter Sports H.S., Pacific Hwy, Gateshead.
SAT- (Sydney Aeromodelling Team) - Kelso Park North, Henry Lawson Dr. Panania.
SSME - (Sydney Society of Model Engineers) - Model Park, Luddenham Rd, Luddenham.
MDMAS - (Muswellbrook District Model Aero Sports Inc.) - Mitchell Hill Field, New England Hwy, Muswellbrook
DOONSIDE- (to be held at SSME) Luddenham.



Adelaide Aeromodellers Club

2010 Events Calendar

Aug 8th Novice and F2B Aerobatics #2
 Aug 14th/15th TBC by Whyalla MFC
 Whyalla Show CL Competition
 Sep 11th Vintage Combat #2
 Oct 9th Vintage A Team Racing
 Nov 6th Peacemaker Flite Streak Stunt
 Dec 11th Novice and F2B Aerobatics #3
 Provisional Dates for Scouts Air Activities Weekends at Armstrong near Blanchetown:
 22nd and 23rd May – Flinders Park Scouts
 21st and 22nd August – Hope Valley Scouts

Notes:

1. All AAC events at Unley Rd are on Saturdays, dates are provisional
2. Start time of all competitions is 11.00 am. Practice from 9.00am
3. All AAC events to be held at the AAC field, Unley Rd City opposite BMX Park
4. All entrants must be MASA members and with valid FAI licence
5. Safety straps required on all handles in all events.
6. Mufflers mandatory on all glow motors 2.5cc and above

For more info contact Peter Anglberger, tel 8264 4516



**Rebores and Repairs to most
 Taipan and all glo-chief
 engines.**

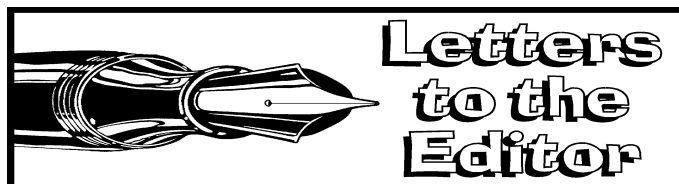
Adelaide Aeromotive Pty. Ltd. A.B.N. 115 387 061

Email us for a free quotation!

aamotive@gmail.com

Subscribers are reminded that they can receive Australian Control line News by email at no extra cost. This option would allow you to view the pictures in colour as soon as it is ready to be sent to the printers for publication.

If you would like to use this option just make a request to the Editor by email.



AN UPDATE ON THE HEALTH OF LES ORGAN

Last Sunday 27th June actually turned out to be a good day for our control line flying at Knox field. Attendance was high and the weather held to at least 3.00pm. I left a little early so that I could visit Les before heading home to Queenscliff. Apart from a light chest infection Les was in good spirits and had had a fairly good week. He was happy having some of his books and magazines to read and had managed to do some drawings, as he likes to do.

Space is a little limited but he has managed to draw a plan for a nice little stunter for 10 – 15 size engines, complete with his usual detailing. I am sure being able to get back to these activities is helping him settle in to his new abode.

He was in good chatty form, relating a tale of the old days when you had to make your own glue and dope and scrounge for covering material.

He and a friend decided to build a large Free Flight model (10 Ft wingspan)

This took many weeks and when it came to finding covering, a trip to a dress material shop provided something almost the same as silk, (but not silk).

Their next problem was to make some dope using acetone and old film negatives. ..Unexplained, quite what went wrong, but when this was applied and left over night to dry, the solution dissolved the material to a sticky mess all over the model.

Les wishes to thank those who are assisting his situation with purchases of his modelling stuff. He is keen to see as much as possible go to good homes.

**Les Organ..... Room 3
 Western Gardens Nursing Home
 40 Anderson Road
 SUNSHINE**

Ph : 03 8311 8888 (this is the Home's phone. Les does not have his own separate phone)

He is always pleased to have someone visit.

I will continue to update as I visit and inform you all accordingly.

**Alan Matthieson-Harrison.....(0414 273 180)
 AUS 4409**

Ed's Note:- See "For Sale" section for sale items.

**Newsletter Editor
 Harry Bailey.
 37 Thompson Street
 Clayton 3168
 Victoria
 Tel (03) 9543 2259**



KNOX 27-6-2010 27-06-2010

A low entry at Knox yesterday weather was good, but a bit wet due to rain and the grass was a bit long for take off and landing but it was OK for stunt. I think we must do something at Knox to prepare the ground as the council only cut it occasionally and they won't cut it short, as it is not good to cut lawns to short, but it's a common Aussie fault [I worked in the mower industry in a previous life], "But we are a flying club, not a garden club"

We may have to sow a grass that is better suited to cutting short and makes a good take of strip [capeweed and the likes is not ideal.] We only need to do part of circle that we use for take off.

The club has some money and club fees are low, we may need to get a mower [storage is the problem] or maybe pay someone to do just the circular strip although if we only get 2 entries it may not be worth it for speed, but T/R would need it. I'm not sure why people join a club and have models if they can't be bothered to actually fly.

I have been developing an electric/R.C. cut out to use on monoline to prevent damaging engines on high nitro if and when you set the fuel mixture to lean. It consists of a radio control unit from an electric flying model.

In the model are the small receiver and ni-h 6 volt battery and a mini servo pulling on a tube crusher in the fuel line.

On the monoline bobbin is a plug jack from the transmitter on my body and a push button that I press to stop motor, the TX arial is 'connected to the control wire up to the model.

At the end of the flight I can operate the cut out so as not to wear the motor out unnecessarily. If a flight setting is wrong I am able to stop and retune, in the allowed 3 minutes.

As the method of control is via the flying wire it is an acceptable method within the rules, and if used after the official timing it would not matter, also if used in the pylon official flight, it would not matter as you are cancelling flight anyway.

I have used it on my old ST G21/29 model OK, but was having a few fuel feed problems before Sunday which I had sorted but decided not to fly as we all had problem cart wheeling on landing, due to grass conditions.

If anyone is after plugs check out Pack Rat Aviation in the US on eBay I got cards of Fireball super cool, [he has other heat ranges, for \$34 \$US + post \$4.50 for one and \$1 for each additional one, he gives great service and only 7 days to my post box, tried one in old ST G60 yesterday and did 2 flights on 60 nitro OK, tunes great.

Robin.....

Combined Speed Results

Held at KNOX 27/06/2010

Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1 R Hiern	Class 3	ST G 60	12.91	11.57	D.N.S	11.57	250.37	83.75%
2 N Wake	Proto	FORCE .21	N.E.L.	35.40	D.N.S	35.40	163.66	68.15%
3 N Wake	Vintage Proto	Magnum .25	N.EL	47.31	49.00	47.31	122.46	65.02%
4 R Hiern	Class 5	Novarossi 21 5KT	ATT	ATT	DNS			0.00%

Combined Stunt, June 27, KMAC field.

The CLAG Combined Stunt in conjunction with KMAC Club day and Combined Speed, saw well over 30 models flying through-out the day utilising all four flying circles of the KMAC field.

The weather was just about perfect with a variety of models and several experienced judges and flyers available to lend a hand where sought. While the speed boys went very fast in a leisurely manner, stunt flyers stunted in a similarly leisurely and sociable manner. We had flyers and spectators who travelled from Gippsland, Ballarat, Maryborough and Japan, and some from just down the road.

Highlights were the very affordable flavour of the day plus the number of models in the air through out the day. There were a couple of flyers airing new models, and others stretching their skills with a couple of the new-to-competition flyers, flying the full FAI pattern. We look



forward to seeing more of these flyers at the competitions, perhaps?

Doug Grinham, a definite candidate for the next Master Chef series, put on a superb BBQ free of charge, very much in the spirit of the day of hosting the visitors to the Knox field, and the general exchange of good will.

Alan Harrison brought along for sale a variety of aeromodelling paraphernalia, indeed history, belonging to an ailing Les Organ. We wish Les well and know he would loved to have been there.

John Hallowell kindly took a few shots.

A great day all round, a jolly good gathering held in fine weather.

Next Combined Stunt 25 July, KMAC AGM.



Report by Craig Hemsworth

BRIMBANK FALCONS VINTAGE COMBAT COMP MAY 2nd 2010

1.	M. Wilson	W	W	L	W	W	W
2.	K. Maier	L	W	W	W	W	L
3.	B. Young	B	W	W	L	L	W
4.	M. Shears	L	W	B	W	L	L
=5.	H. Bailey	W	L	W	L		
=5.	J. Hallowell	W	B	L	L		
7.	M. Lewis	W	L	L			
=8.	M. Usher	L	L				
=8.	T. Caselli	L	L				



The usual scenario for Brimbank's combat comps held at the Knox flying site is as follows: Weather calm with a heavy overcast (i.e. perfect for combat), 9-12 pilots familiar with each others flying styles (or lack thereof), great bouts with lots of cuts and mid-air and much chuckling and mirth from onlookers. Oh, and Murray Wilson winning comfortably of course. This being the case, Sundays effort was an almost textbook event, with the following perhaps being noteworthy:

Murray was pushed hard all the way to the final (and in fact beaten 5 cuts to 2 in the third round) by an on-form Maier. Kens bid for fame was dashed by a mighty mid-air in the early stages of the final that left both models terminally earthbound and Murray one cut up for victory. In fact there were several great bouts that started at a frantic pace with several early cuts then a midair or other incident to bring the show to an abrupt end and entertain spectators. I lost count of the models destroyed – there were many, though I came off lightly for once only losing half of a model I originally built for the 2007 Nats.

For those of us with a secret hankering for blood sports, Tony is to be thanked for launching Mick's model into his own hand obligingly close to the CD's table. The thunk as the tip of his finger was launched skywards was audible from some distance. Seriously though, this should serve as a reminder to us all that even small engines and nylon props can do serious damage, particularly in the frenzy of a combat bout. We all hope Tony heals quickly and is not digitally dis-masted for life.

As I contemplated the draw for the 5th round I could see that I would end up flying Murray (certain defeat) or Ken (a loose cannon and my only chance of making the final!). Brazenly using my position as CD, I suggested tossing a coin to

decide whether Bryce 'Raging Bull' Young or myself would fly Wilson Jr. I lost – the toss and the bout... As a consolation I flew the Bull for third and was muscled from the ring battered and concussed but with pride and Squig intact!

I would like to thank Graham Keene and the Control-Line Aeromodellers of Gippsland for again sharing their day and their barbeque with us less genteel types. My thanks also to my fellow combatants – I had a blast, hope you did too – let's do it again next year.

Mat Shears

Combined Speed --Frankston 11-7-2010

Despite the weather forecast for high winds, we had a good day, the wind not causing any problems; this is a big advantage at Frankston as the scrub creates a wind barrier. Many times I go there not expecting to fly and eventually have no problems thanks to the bush.

Lance won with his Vintage Proto closely followed by my piped .21 sized Class 2, model still on 10 % nitro, next time out I will use more nitro.

I was also running a new Nova Rossi .21 in Class 5 but still on low nitro. I'm carefully running it in; the old engine is still going well after 8 + years. It was carefully run in.

Noel was running his monoline OS 30 in class 2, but it hit the ground on its second flight. Fortunately, only a prop was broken and he was able to fly a 3rd round.

As only 2 contestants put up flights in Perky we cannot have a proper result of closest to average speed, but we put in times anyway, Perky is only for FUN, it is not Formula 1

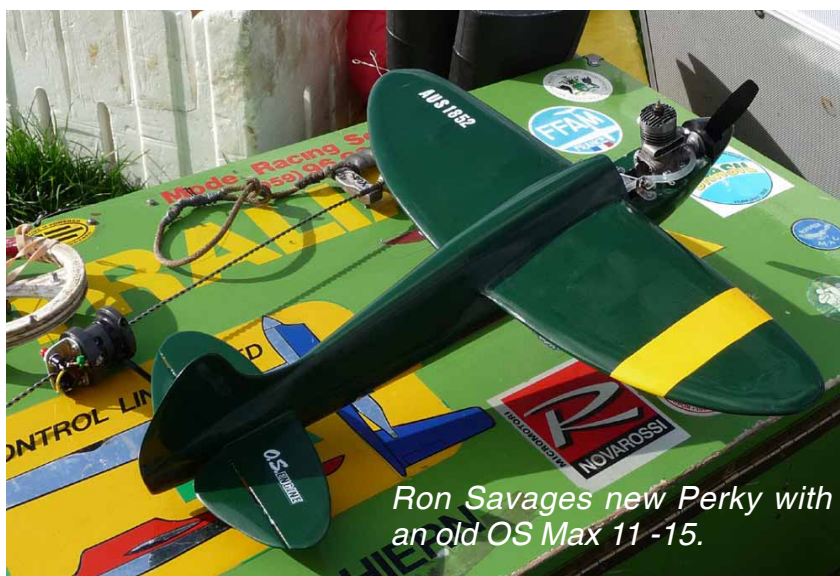
I flew Ron Savages new Perky with an old OS Max 11 -15. It went well for an old cross flow of the 50's. Due to the light motor it was a bit touchy even with a close spaced handle; Perky's seem to like to be nose heavy.

Speaking of Perky's where are they all? Hope it not another class started only to later fizzle out.

Next speed comp AUGUST 8th, all welcome.

Robin AJS

"On the monoline bobbin is a plug jack from the transmitter on my body and a push button that I press to stop the motor, the TX arial is connected to the control wire up to the model."



Ron Savages new Perky with an old OS Max 11 -15.



Results of Combined Speed held at Frankston 11/07/2010

Pos	Name	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	L Smith	Vintage Proto OS25FX	32.90	32.33	32.50	32.33	179.20	95.14%
2	R Hiern	Class 5 Novarossi 21 5KT	15.76	15.19	15.51	15.19	237.00	92.30%
3	R Hiern	Class 2 Novarossi 21	11.10	10.85	10.95	10.85	266.99	92.17%
4	N Wake	Class 2 OS 30VG	11.52	D.N.F	12.24	11.52	251.46	86.81%
5	N Wake	Class 5 Novarossi 21	16.62	N.E.L	17.97	16.62	216.61	84.36%
6	M Wilson	Class 1 OS CZ11 PS	17.60	N.EL	17.58	17.58	204.78	77.59%
7	A.Nugent	Class 1 Nova Rossi 12	18.09	18.06	17.94	17.94	200.67	76.03%
8	H Bailey	Class 1 Asp 12	21.72	21.84	20.93	20.93	172.00	65.17%

Carrier Deck was also scheduled to be flown but the windy conditions caused the event to be postponed till a later date.

CLAMF Aerosports new Club House.



During the week prior to the Frankston competition, the clubs "Shelter Replacement Project" took a massive leap forward and was open for business in time for the day's activities.

Construction of F2C teamracers using carbon fibre

By Grant Potter, as relayed by David Kidd

For our World Champs win in 2008 Hugh Simons and I used unmodified Lerner engines in Bondarenko retract models, but we knew that if we wanted to try some of our own ideas for better performance we would have to build our own models. That's what we have been doing this year in preparation for our title defence in Hungary. I have been busy building 10 models for Hungary and already the results look promising. The one plane I had finished in March is flying at about 16.0 secs for 10 laps with the new increased line diameter, 0.5 secs faster than we were in France.



Our Bondarenko model from 2008



Some of the new models built this year



Closer view of Yuri.

Materials:

Our new models are made mainly of carbon fibre, with just 5 small pieces of wood. I used:

100gsm and 94 gsm carbon fibre cloth

60 gsm Spectra for the elevator hinge

LC3600 epoxy resin, cured at 40deg C.

Rohacell-31, a polymethacrylimide foam made by Evonik in Germany

microballoons

(you can buy 100gsm carbon cloth from "Fibreglass and Resin Sales " in Australia)

Equipment:

Vacuum pump for vacuum bagging mouldings as they cure.

Thermostatically controlled heater and oven for curing the mouldings.

Moulds (I am lucky to have metal machining machinery available for making these accurately)

Wing Construction:

The wing consists of a carbon fibre skin filled with foam. It is moulded in an aluminium mould that you will get plenty of glimpses of in the accompanying pictures. If you want more detail I have a few more photos of the process on my website, which might help. You can find them at <http://www.dkd.net/clmodels/potter/cfwing.html>

The mould is a piece of aluminium 700 x 350 x 25mm thick with half the wing machined into it. ie 4mm deep at the center and 1.5 mm deep at the tips. This mould makes top half and bottom half of the wing (symmetrical section). The mould was machined on a CNC milling machine, and then finished by hand, starting with 320 paper and working down to 2000 and polishing to a mirror finish. Before it is used it has a quick polish to remove any residue. The mould is polished, mould release wax is applied (PLP10) and then polished again.



Mould ready to use. The reflections seen from the mould in this photo are of the wooden ceiling in my workshop. Grooves have been machined around the edges of the mould with a 8mm diameter ballnose cutter 4mm deep. 8mm diameter aluminium rods are put in these grooves and allow the excess epoxy to be easily pushed under the plastic to these areas. Small lines (0.5mm wide) have been machined at the edges outside the wing cavity to allow the top and bottom halves to be aligned during assembly.



Carbon cloth layed out. This is for the top side of the wing... carbon cloth is 94 gsm cloth. cut at 45 degree bias.



The cloth is laid out in the mould. The white stuff is 60 gsm Spectra at the hinge line. Epoxy is put on the cloth roughly, in one position. Plastic sheet is put over the mould and sealed to a 2mm thick plastic sheet below the mould. It is sealed using caulking compound such as "No More Gaps". A sheet of Cloth underneath the mould enables air to be removed easily. The grey tube seen exiting the far left of this picture goes to a vacuum pump.



The epoxy is spread out underneath the plastic using a piece of balsa wood. Care must be taken not to remove too much epoxy and leave it dry. Too little epoxy and there will be cavities where the cloth overlaps. This will then require filling after the wing is finished. The piece of Spectra that becomes the elevator hinge is fully penetrated by the resin. Later, the carbon skin will be cut around the elevator, with a 1mm wide strip removed at the hinge line to allow the Spectra to flex.



The carbon is wet out with resin and the excess runs to raised areas. Later, the bottom wing half will be moulded in this same mould, with the elevator consisting of just 2 layers of carbon fibre cloth, positioned on the opposite (outboard) side of the wing. It too will later have the carbon fibre skin cut through the elevator outline to allow the elevator to move.



A piece of cotton bed-sheet cloth is cut and applied over the top of the first plastic sheet (vacuum bag). Then another plastic sheet is sealed completely over the first. The second bag has the air removed and applies even pressure over the carbon and epoxy. The epoxy I use is LC3600, which I cure at 40 degrees C. The Carbon and epoxy is pushed down again after 1 hour and then again after 2 hours. The mould is heated from below with a water bed heater to 40 degrees. Insulation is put over the top and allowed to cure for 12hrs



After 12 hours the bags are removed. The carbon and epoxy is sanded with 240 grit to roughen the surface. 3 grams of epoxy is applied and spread using a card first. then a brush. 1 gram goes to the brush.



Rohacell-31 is cut to size and placed on top. Rohacell-31 is a polymethacrylimide foam made by Evonik in Germany. It

is something like foam polystyrene but stiffer, and not affected by diesel fuel. If it is unobtainable, a polyurethane foam could be substituted. The Rohacell is vacuum bagged down and allowed to cure. 6 hrs at 40 degrees.



After the bag is removed 3mm is trimmed from the leading edge and tips. At the bellcrank a 10mm diamond is also cut and filed. Micro balloons, Q-cells and epoxy are mixed until they are stiff. This mix is then applied around the edges and at the bellcrank centre. This cures for another 6 hours at 40 degs.



The wing Rohacell surface is then sanded flat. I use a 5" flap disc on my milling machine by sliding the mould by hand underneath. The bed is raised until the carbon skin is reached. It's important to take care to remove dust from beneath the aluminium while sanding.



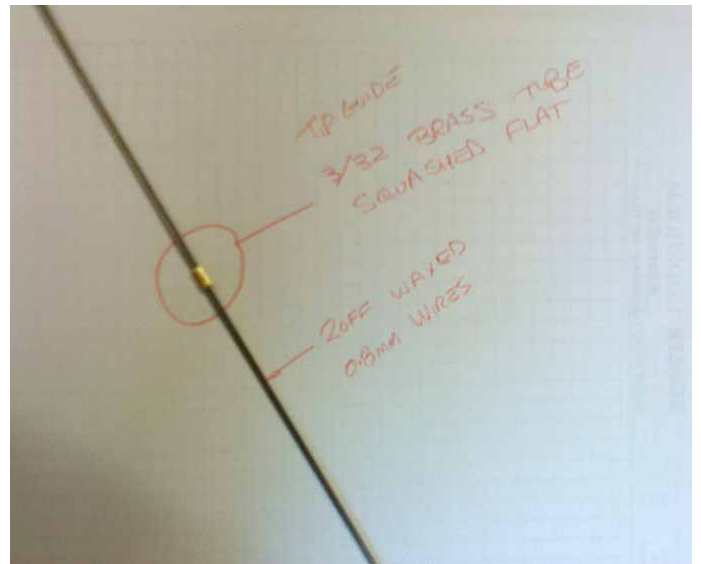
Looking at the wing top half after it has been removed from the mould and tack glued back in place using small alignment marks visible in the flashing. This is done to both top and bottom wing halves to remove any pre tension. The grooves for leadouts to the tip are made in the top half of the wing only. I cut them with a razorblade mounted on a small metal block.



This is a view of the bottom half of a wing, made previously. The 2 wing halves will be joined using small marks to align them. 12 grams of epoxy is mixed and coloured red and some of this resin is applied to a plastic sheet with a 16mm brush and uniformly spread out. This plastic sheet is then put onto the foam (Rohacell-31), coating the foam in epoxy, and the same happens to the second side. The remainder of the resin is painted around the edges with a brush. 2 Grams stays on the plastic sheet and 1 gram with the brush; some is expelled from the wing. About 6 grams is required to join the finished wing.



A second mould was cast from the original to help assembly and to support the wing shape whilst under vacuum. Seen here is the wing being vacuumed together between the original mould (bottom) and second mould (with the coarse outer surface) (top). After 6 hours it is removed, excess epoxy is removed with methanol. The LE edge and tips are trimmed to the finish. The TE edge is cut to the finished size using a template.



Finally the wingtip leadout guide is inserted and glued into place.

Cooling duct and wheel mount construction:

The cooling duct was moulded from carbon fibre as the fuselage is lower beneath the wing than our previous models were. This is done to keep part of the wheel inside the fuselage to reduce drag, and eliminate the need for a complicated and problematic retract system. To make the manufacture simple the wheel is mounted on the center line of the fuse beneath the air outlet slot. The mounting was incorporated with the cooling duct for strength and simplicity. The complete system was few grams lighter and much simpler to manufacture than balsa cooling and outlet duct and wheel mount after the patterns are made. The wheel mounting is stronger. It's very fast and simple to manufacture once you have the moulds.

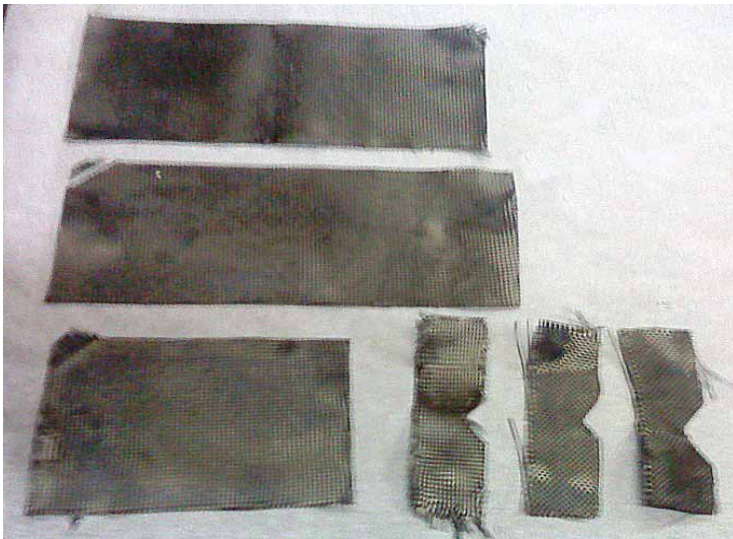
Actual construction is described in the accompanying pictures and captions. If you want more detail I have a few more photos of the process on my website, which might help. You can find them at <http://www.dkd.net/clmodels/potter/cfcd.html>



Female Aluminium Patterns were machined the same size and shape as the internal cooling required for the engine. These were done from aluminium for accuracy and because of ease of manufacture. Once used for casting a male pattern in aluminium powder / epoxy resin the female



Aluminium powder and epoxy resin were cast over the machined aluminium female patterns to make a male pattern (as seen in the front of the photo). 80 durometer Poly Urethane pressure patterns (seen at the back of the photo in brown colour) were cast over the male patterns.



The carbon fibre used for one side of the cooling duct, 100 gsm carbon cloth cut at 45 degrees bias is laid out on silicone paper (glad bake). Epoxy resin is added (LC 3600). Another layer of silicon paper is put over the top.

The epoxy is spread out between the sheets of paper. When the paper is removed the cloth is left rich with resin. The excess resin will fill the gaps where the cloth can not be pushed over the moulds.



1 Vertical layer of carbon fibre cloth is placed on the pattern. 1 horizontal layer is added, and so on. All the pieces of carbon cloth are shown laid out on the male

patterns in this picture.



The cloth and patterns are placed inside a thin stretchy plastic bag (fruit and veg bag). The bag is sealed and vacuumed down.



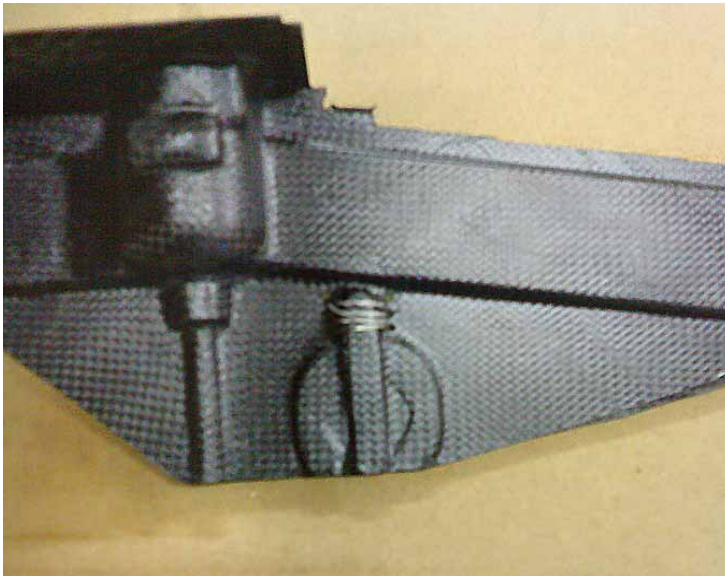
The poly urethane female pressure moulds are placed on top over the plastic bag. A piece of metal is used at the top and bottom the distribute the clamping force from the G clamps. This forces the cloth and resin into the sharp corners of the pattern.



The whole assembly is put in the oven at 50 degrees for about 6 hours and afterwards is post cured at 80 degrees for 3 hours.



The carbon cooling duct halves after being removed from the Patterns. Ready to be joined. The two halves are aligned for joining using a mandrel at the cylinder fins and a mandrel where the U/C leg goes. The halves are slightly roughed with sandpaper and glued together with epoxy.



Three holes are drilled beside the U/C leg, 0.35 multistrand control line wire is used to bind around the leg to prevent the mould halves splitting under load, this is then covered with epoxy and micro balloons.



Cooling duct / undercarriage mount ready to be installed in the fuselage sides with epoxy/microballoon mixture.

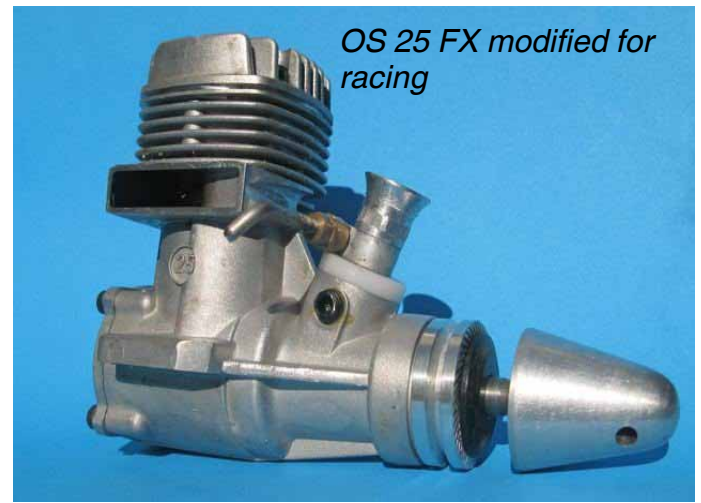
NEWSFLASH!... NEWSFLASH!... NEWSFLASH!

It has just been confirmed that the OS factory will resume production of the OS 25 FX in September 2010.



OS 25 FX as purchased from O.S.

That's great news for Classic B enthusiasts as these engines are highly competitive out of the box. With a Steve Rothwell B Class banjo, needle and venturi and a head modified by Lance Smith to get the compression ratio right, anyone can be ready to race!



OS 25 FX modified for racing

New Models



Mark Ellins has taken delivery of his new Retro 76 powered Yatsenko stunter. He has put it through a couple of test flights.

U.S Nationals at Muncie.

Andrew Robinson has sent these photos of the results sheets from Jet Speed at the US Nats.

EVENT	JET					
CONTESTANT	1	2	3	4	BEST	
HEMPLE	186.589	188.012	190.138	—	190.138	3 rd
COTTON	ATT	181.745	ATT	—	181.745	7th
ROBINSON, ANDREW	185.397	186.977	ATT	178.748	186.977	5th
BOLTON	ATT	187.898	196.000	ATT	196.000	10 th
PERKINS	176.054	182.058	184.984	ATT	184.984	6th
CAPINJOLA	184.984	189.338	191.006	—	191.006	2 nd
GRAY	ATT	ATT	ATT	—	—	10th
WHITNEY	ATT	152.662	—	—	152.662	8th
MARK	ATT	190.078	ATT	—	190.078	4 th
WILLIAMS	125.210	—	—	—	—	9th

New Zealand and Australia seemed to predominate in C/L events, John Taylor gets 3rd in sportsjet behind Robert Bolton and Andrew Robinson with Rob taking out fastjet with a new US record.

Andrew notes:-

I also flew Team Race for Les Akre from Edmonton, Canada and together we won F2C-N, Texas Quickie Rat and Clown Rat racing.

I won Sport Jet and Robert won Fast Jet.

Fast Jet Results



Sport Jet Placegetters, L-R 2nd Robert Bolton, 1st Andrew Robinson, 3rd John Taylor, 4th Jet Bill Capinola

Andrew and Rob flying the flag at Muncie during the American Nationals.



EVENT	Sport Jet					
CONTESTANT	1	2	3	4	BEST	
P Hemple	147.120	145.22	147.361	—	147.361	
J. Taylor	145.258	ATT	148.418	150.40	150.40	3 rd
B. Robinson	148.66	147.048	147.409	—	148.66	
B. Andrews	143.94	145.161	—	—	145.161	
S. Williams	ATT	134.114	—	—	134.114	
A. ROBINSON	152.403	150.655	150.120	—	150.120	1 st
R. GRAY	145.033	148.700	—	—	148.700	
S. Perkins	149.07	149.317	149.033	—	149.317	
R. Bolton	ATT	151.073	149.404	150.278	151.073	2 nd
J. Rhoades	145.337	144.173	—	—	145.337	
B. Capinola	149.343	147.809	150.315	—	150.315	4 th
D. MARK	149.070	—	—	—	149.07	

Sport Jet Results

Rob Bolton with Fastjet gold



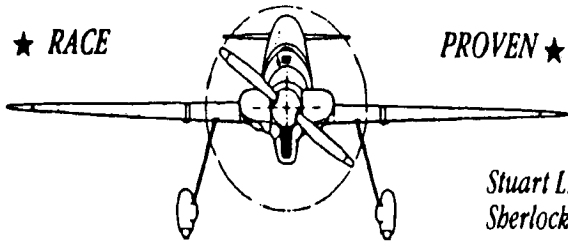
SUPERCOOL RACING PROPELLERS

42 Hepburn Way, Balqa, 6061 W.A. Australia

Email: props@inet.net.au www.supercoolprops.com

★ RACE

★ PROVEN ★



Stuart L.
Sberlock

- ★ Minimum induced loss computer designed propellers
- ★ Advanced technology precision mouldings

K43141-26

F2C11 6.4 X 6.2

F2C12 6.4 X 6.3

F2C13 6.4 X 6.4

F2C14 6.4 X 6.5

Supercool

First in Racing

F2C11 to F2C14 now with Suzuki low Re, high Mach airfoils

SUBSCRIPTION APPLICATION ARE YOU BORROWING?

If you have just finished reading somebody else's copy of Australian Control Line Newsletter why not get in now and order your own copy?

For Australian and New Zealand residents the cost is \$25 Aus and other countries \$35 Aus

For this amount you will receive eleven issues of this newsletter and be up to date on Control Line both in Australia and elsewhere.

There is also the additional option to have it sent to you by email if you desire.

Please make payments payable to "Control Line Advisory Committee"

You can order from:

G. WILSON

P.O. BOX 298

SEAFORD

VICTORIA 3198 AUSTRALIA

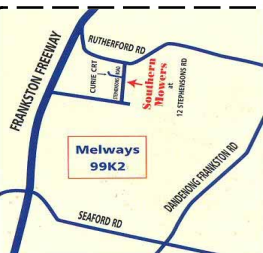
NAME _____

ADDRESS _____

POSTCODE _____

TELEPHONE _____

EMAIL _____



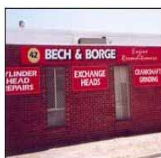
SOUTHERN MOWERS
12 Stephenson Rd, Seaford
Ph 9775 1015
Fax 9775 1018

These businesses assisted CLAMF when the Toro Mower was in need of serious repair.

Contact

Bech and Borge Engineering Pty Ltd (ABN 36 006 187 506) can be contacted as follows:

Phone (03) 9544 8600
Fax (03) 9540 0609
Address 42 Caninich Road,
Oakleigh South VIC 3167
Email enquiries@bechborge.com



Engine Reconditioning Specialists

WANTED

WANTED

Purchase Dynajet Pulse jet, reasonable price and condition.

Also badly bent tail pipes off Bailey, Dynajet or Jetbill pulse jets. Realistic price!

Contact John Taylor (Qld) 07 33927679, Fax 07 33927529, mobile 0407150791 or email

johndt@iprimus.com.au

WANTED (to use, not collect/ogle/store/waste... well, maybe waste...)

X29 or G21/29 conrod (yes they are the same)

Prefer new. Will consider used rod(s) or complete engines

Richard Justic rjustic@au1.ibm.com

Tel 02 9621 1968

Mob 0408414998

Tell your friends about "Australian Control Line Nostalgia", the most comprehensive summary of Australian Control Line on the World Wide Web.

Ron Chernich has installed a new control line discussion forum as an adjunct to ACLNostalgia. Looking a bit like the Barton forum (it's powered by a new version of the same free software), we hope that in time it will grow to become a worthwhile Australian contribution to the aeromodeling scene. See it at www.dkd.net/forum and register to check out all its features.

Back issues of ACLN are archived, indexed, and may be searched here.

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

For Sale

U.S. Hard rock maple bearer wood, precision cut and machine sanded.

Cost \$4 each plus postage

All lengths 12"

Sizes: 3/8"x3/8"

3/8"x1/2"

1/2"x1/2"

email: aheath14@australia.edu

OS 40 FP low time motor, reworked by
S.Reise USA,

\$150

Call RON (03) 9531 0305 or 0410 938 769

email kryon11@bigpond.net.au

Castor oil for sale!

Highest quality first pressing de gummed.

\$45 for 5 litres (due to a price increase from my supplier)
(including container) + P&H

\$10 in Victoria

\$15 SA, TAS & NSW

\$20 QLD, WA & NT

Premixed diesel fuel also available – POA

Taipan white nylon brand new propellers

8x4 & 8x6 \$2.95ea

7x4 & 7x6 \$2.75ea
+ Parcel Postage cost

Ph Ken 03 9398 8244

Email: combtkid@hotmail.com

FOR SALE.

Mc Annely style speed pans for 2cc speed. \$25.
Mc Annely style speed pans for 2.5cc speed. \$25
Nelson type T/R pans. \$25

These pans are a gravity sand cast unit and as such need some cleaning up. They are cast from AA601 Aluminium alloy and when polished up look very good. You will need to drill and tap them to suit your engine.

Available from Andrew Nugent 0437469402, 95511884.

andrew.n5@bigpond.com.

Please allow \$6 for postage and packaging for 1 pan for interstate buyers.

For overseas postage allow \$12



FOR SALE

Balsa wood sheets, about 50 sheets of quality balsa wood in 1.5mm, 2.5mm, 3.5mm, 5mm and 1 in 9.5mm. All sheets are 4 inches wide and 4 feet long.

Half shop prices per sheet.

Some engines, and about 600 modelling vintage magazines, wood, props, electric starters.

Seller has given up the hobby due to old age (84) and health reasons.

Telephone Ray at (07) 3814 2308 anytime.

Stalker 61 Gold Head Pro

Ex Peter White Motor. I have not used it since buying it off Peter. The motor is in as new condition and comes with rear exhaust and spare prop nut and washer, 295 size venturi and needle.

I am asking \$240 for the lot.

Please ring Greg Barclay on 0422 894 855 or email at barkers58@optusnet.com.au

ITEMS FOR SALE FROM LES ORGAN

Magazines :

Flying Scale

R C Modeller & RCM

Airbourne

Model Builder

Aviation Modeller International

Any of the above..... 15 Magazines for \$10.00

Kits :

Aeroflyte OSPREY Rubber Power..... \$15.00

Aeroflyte SAND PIPER Rubber Power..... \$15.00

Engines:

ASP 21..... \$60

OS Max S 30..... \$60

OS Max 111 29... \$50

Fuji 19..... \$40

..all engines are used.

Les is drawing plans again and if anyone wants a Les Organ original, [no copies taken,] he has a nice little sport stunter for 1.5cc drawn and an ellipticle wing stunter for 2.5cc / 3.5cc drawn. \$ 20.00 each.

All items plus postage or call and I will bring to the flying field.

I will continue to update as I visit and inform further.

Alan Matthieson-Harrison

AUS 4409 Mob 0414 273 180

A.C.L.N. ADVERTISING

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

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

AUSTRALIAN CONTROL LINE NEWS

If undeliverable return to:-

G. WILSON

P. O. BOX 298

SEAFORD VIC 3198

**SURFACE
MAIL**

www.hobbycave.com.au



**Supplier of Control Line, planes, engines, parts, pilots
& accessories.**

Distributors for Brodak  **& RSM** 

**For further information & details go the website or
contact Shane Adams on 0438556998.**

Printed by Minuteman Press
3/14-16 Hartnett Drive
Seaford, VIC 3198
Phone: 03 9773 5586