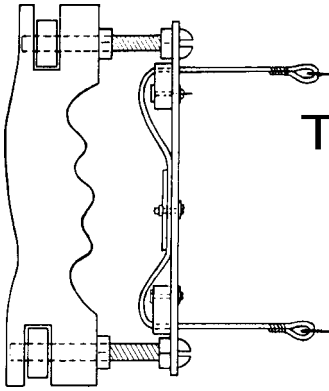

$2.30

THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 159

Produced by the Victorian Control Line Advisory Committee

October 2011

INSIDE THIS ISSUE

Contest Calendars
Excuse Me Mate But Your Model Is On Fire!
Around the Clubs
Contest Results
Treating Tin-Plated Tanks After Soldering
Notices
For Sale
Wanted

Copy Deadline for next issue is:
Wednesday October 19th 2011

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 2011

Oct-1-2	Ringmaster Fly-A-Thon 2011	KMAC
Oct 1-2	CLAS. NSW C/L STATE CHAMPIONSHIPS. Venue Twin Cities, Albury (F2A, F2C + Supporting events) Classic B, Vintage A, Combined Speed, F2F, Open Rat Race combining Class 2 T/R.	
Oct-2	CLAG Country Day	Moe
Oct-16	**Classic FAI Team Race,** Simple Rat Race, **Goodyear**	CLAMF
Oct-23	2011 Monty Tyrrell Classic Stunt	KMAC
Nov-6	Vintage Stunt and Vintage Combat	KMAC
Nov-13	**Speed,** F2B, Burford Vintage A Team Race	CLAMF
Nov-27	Dougs Vintage Stunt	KMAC
Dec-4	CLAG Country Day	Moe
Dec-11	Navy Carrier, **2.5cc Rat Race,** **F2C**	CLAMF
Dec-18	Club Day	KMAC

2012

Jan 5-8	CLAMF Aerosports Grand Prix	CLAMF
Jan-8	CLAG Country Day	Moe
Jan-22	Club Day	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.aerosports.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.
Secretary:
Steve Vallve
Landline: 94353480
Mob: 0409 935 358 Email steve.vallve@gmail.com
President: Mark Usher.
Mobile 0421 331 932
Home 9740 2531

COMING EVENTS

C.L.A.S. CONTEST CALENDAR 2011

DATE	EVENT	CLUB
Oct 1-2	CLAS.NSW C/L STATE CHAMPIONSHIPS. Venue Twin Cities, Albury (F2A, F2C Team Trial)	NSW.
Sun 9 Oct	Gordon Burford Day. (Details TBA)	KMFC
Sun 30 Oct	Phantom, Vintage A,Vintage B, Bendix T/R and Vintage 1/2A, Diesel G/Y	SSME
Sun 6 Nov	F2B Aerobatics	SAT (Kelso Park)
Sun 6 Nov	Combat. 1.6cc, Slow and Vintage.	KMFC
Sun 13 Nov	Combined Speed (contact Ron Blomberry for details Ph: 9956 5952)	SSME
Sun 20 Nov	Vintage T/R, 1/2A, A (2 divisions) and Vintage B.	KMFC
Sun 20 Nov	Cardinal & Classic F2B To be held at the CCMAC field, Rutley's Road, Doyalson North. Exit the Pacific Highway at Rutley's Road, find the flying field 1km in, on your right.	NACA
Sun 27 Nov	KMFC Christmas Party	KMFC
Sun 4 Dec	F2B Aerobatics To be held at SSME	Doonside.

KMFC - (Ku-ring-gai Model Flying Club) -
St. Ives Showground, Mona Vale Rd, St. Ives.
NACA - (Northern Area Contest Aeromodellers)
Contact:- Ian Smith (02) 49752292
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.

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.

Adelaide Aeromodellers Club
2011 Events Calendar

7. Sabre Trainer Racing – October 8th
8. Peacemaker / FliteStreak Stunt – November 5th
9. Biathlon – December 3rd

Notes:

1. All AAC events are at Unley Rd City opposite BMX Park.
2. Dates are provisional and to be confirmed.
3. Start time of all competitions will be advised in separate 'flyer'.
4. All AAC events to be held at the AAC field, Unley Rd, City.
5. All entrants must be MASA / MAAA members with a valid membership card.
6. Safety straps required on all handles in all events.
7. Mufflers mandatory on all glow motors 2.5cc and above.
8. MASA noise limit (96 dB) applies to all motors.

For further info contact Mal Dyer tel. 8186 1135

Doug Grinham is running an event we have called Dougs Vintage stunt at Knox on 25th of November 2011. The rules are below

All Australian Vintage Stunt Day Comp
GENERAL RULES
PULL TEST 10KG
STATIC JUDGING
Model to be neat and straight and adhere to plan, Max 20 points

Fix Flaps 20 points
Age of model up to 1960 points on sliding scale.
Bonus points for B-Plane and 2.5cc Models 5 points.
Engines age, all engines up to 1960 will receive 5 points.
Static points to be added to flight score
Pattern to be as current Vintage Pattern

Regards Doug Grinham.

Sun Aug 28, 2011 SSME Combined Speed results.

Many thanks to all competitors on the day, the weather was perfect, zero wind and blue skies for most parts.

The results are as follows

	Class	Time	Percentage
Andrew Heath.	F2A.	12.47sec	97%
Richard Justic.	Class 3 (10cc).	10.40 sec.	93%
Andy Kerr	F2A	13.13 sec	92%
Peter Chilton	Midge	11.43 sec	77%
Peter Chilton	Class 1 (2cc)	13.64sec	73%
Peter Chilton	Classic FAI	20.98 sec	58%

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RINGMASTER FLY-A-THON 2011 MELBOURNE.

October 1st & 2nd, 2011

There will be a concerted effort to contribute to this Fun Fly Event, with flights organised and conducted at KMAC on both days, Saturday and Sunday.

All flights whether at Knox or else where can be reported to me, Alan Matthieson-Harrison, Brimbank Falcons C.L.M.A.C.

I hope we can get our 4 major Clubs, CLAMF, KMAC, CLAG and BRIMBANK FALCONS to participate jointly as Melbourne, Australia Chapter of the Brotherhood.

So, come on start building or getting your Ringmaster together.

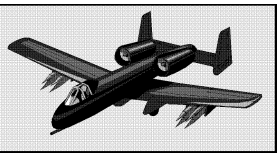
More information later.

Yours

Alan Matthieson-Harrison [AUS 4409]

Landline: 52583006
Mob: 0414 273 180
Email: adharrison5@bigpond.com

CONTEST RESULTS



Excuse me mate but your model is on fire!

That famous Australian Aviator Sir Charles Kingsford-Smith once remarked that “The only time having too much fuel on board is a problem was when your plane is on fire!” That famous “Wing-Walker” was known to have thrown almost everything that was not essential off the plane (like food, radios and first aid kits) in a quest to get more fuel on board.

With glow powered racers, the fire that sometimes ignites when starting is very hard to detect unless the pit man feels the heat or something besides fuel starts to burn. The alcohol flame is almost invisible until it gets its teeth into something else, such as paint or balsa wood, upon which the flame takes a yellow or orange tinge. Or you may hear it crackle as the model is devoured.

When looking for very small-scale detectors for my detonation detection system I came across some miniature infrared flame detectors (infrared light detecting diodes) used in tiny fire-fighting robots. They were very sensitive, robust, small and worked in the correct region to detect an invisible methanol or ethanol flame at 760–1100 nm wavelength. They were also very cheap and were available already mounted in a tiny IC board with 2 x M3 mounting holes. Out of curiosity I purchase one and set about testing it.

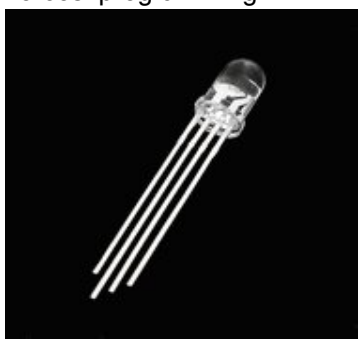
I was amazed to find it was very sensitive and could detect an invisible methanol flame instantly from about 60 cm away. The detector could also be set so that it only detected flames. Amazing enough to get me thinking. Maybe I could hook it up to the brain of the detonation detector and get it to indicate a fire has been detected by sending a visible warning signal or a flashing light, or activate a two-tone high pitched buzzer, or even do all three.

I programmed the on-board computer to seek the IR detector channel to check every 20 microseconds to see if the threshold value has been detected. If it had not been exceeded then do nothing, but if it had, then send me a message, activate a warning LED and set off the two-tone buzzer alarm. I programmed in two tones as alarm frequencies, and it was lots of fun too making it as annoying as possible. I was amazed as how much sound energy a tiny 15 mm buzzer alarm will output. At 92 dB the buzzer was plenty annoying enough (ask anyone within earshot!). The programmed message could be anything from “Come here Mr Watson” to “DANGER FIRE DETECTED”. I chose the latter.

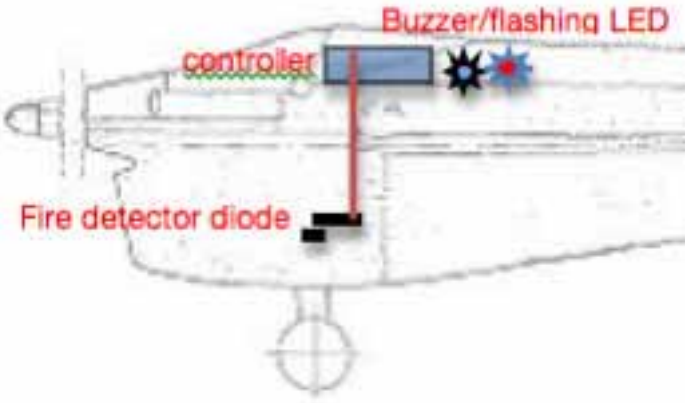
Now I have a fully functional flame detector to go with my detonation detector, all running off the same microprocessor system; all for $6.00 extra plus the cost of the buzzer ($2:00), some wire, and an extra bit of no-cost programming.

DF Robotics Flame detector

12mm PC mount 3-5V Buzzer



RBG LED



The signal from the flame detector diode is sent to a microprocessor on board the model, the processor then activates the high volume buzzer and also the flashing LED to warn the pitman that a flame has been detected. The processor also sends a wireless message back to the main controller base station via the microprocessor with a message that a fire has been detected. This is recorded on a laptop monitor and is logged with the date and time. The controller in my case is an Arduino Fio microprocessor connected to a wireless transmitter, transmitting to a base station connected to a laptop. The laptop is doing the recording and logging, and can reprogram the model’s system in an instant, but the model’s system also has a 2 Gb mini-SD logger on board the model that also records all outgoing data as a back-up just in case. The model’s system is powered by a 3.7V 850 mAh LiPo slimline battery.

There are enough channels on the microprocessor to monitor multiple engine temperature points and RPM, as well as detonation and fire warning functions. Things like plug condition, battery state etc. may be monitored also, but some novel things like XYZ G-force can also be added to give us an idea how fast the model accelerates and stops, and also

measure the force of the pitman's grab!

Revs and temperature data can also be fed to a mini-LCD window embedded in the model in real time, allowing the pitman to see engine RPM and temperature as he restarts and lets go the model. The embedded LCD window can also show glow plug state (blown/unblown) as well as plug lead voltage during restarts. Might be useful.

Lance Smith August 2011

AROUND THE CLUBS

18th September 2011

Speed was run at Frankston in ideal conditions in contrast to the weather that we were presented with the week before.
A disappointing entry, I don't know what to do; I personally can't be bothered to build gear to fly with only a few people entering.
The "Perky" of Pauls finally reached the potential of the Super Tigre motor, it now holds the ''unofficial fastest Perky title''
My old Enya decided it did not want to run properly so we did not have enough to get an average speed as we need a minimum of 3, at one time there were 6 Perky models in circulation. Another event dwindling!

"Merlin" glow plugs are now available in Australia. I am going to find out who in Melbourne stocks them, you may have to order them in as there are 57 varieties available from std. type through to Nelson style, and Glow Bee in all heat ranges.
These plugs are made in the USA by Al Kelly. Al used to make C/L props years ago he is now flying FAI Speed in the USA.
Go to the MERLIN web site and check them out.

If your local Hobby Shop does not know who to contact, the Aussie agent is Dynamic Hobbies in Melbourne.

On 1/2 October in another speed comp if you want a drive to Albury, it seems that nothing happens for months then everything happens at once.

Results of competition Held at Frankston 18-09-2011

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R Hiern	Class 5	Novarossi 21	14.24	14.03	14.07	14.03	256.59	99.93%
2	R Hiern	FAI	Profi	N.E.Laps	N.E.Laps	12.86	12.86	279.94	94.01%
3	N Wake	Class 5	Novarossi 21	15.34	15.38	15.37	15.34	234.68	91.40%
4	N Wake	Class 1	OS 12 TZ	15.19	15.09	15.02	15.02	239.68	90.81%

Speed competition action.

.21 Speed model ready for flight.

During the day, CLAMF club members took advantage of the good weather and participated in some sports flying and model testing. Numerous Stunters, Combat and Team Race models were put through their paces.

Here is a selection of pictures taken on the day.

Murray Wilson had modified the plumbing on his Half A combat model. The inboard mounted vent completely eliminated a misfire that had been taking place during flight manoeuvres.

John Hallowell brought a squadron of his team racers to test.

Mark Ellins managed to slow down the airspeed of his Yatsenko to an acceptable level.

This Veco Chief was built by Derry Brown. Club President, Paul, gave it a few flights.

A newly constructed (but as yet unpainted) old FAI combat model (now called Vintage) placed alongside a current FAI F2D model.

Pit man Mark Ellins and battery boy Gavan Opperman.

Despite the forecast gale warnings, we had a good turn up with a variety of models and skills. We managed to get continuous flights up until early afternoon before the winds finally ended the day. A number of flyers took the opportunity to discuss their models and their flying, and get a few tips from the more experienced.

Here are few highlights, apologies to those omitted, my fading memory with limited re-call capacity.

It was great to see Matthew Shears deviate from the mania of combat to the relative gentile contrast of aerobatics. Matt had a new, very neat own designed model powered by a healthy Brodak 25. Matt put in a good number of flights in both the calm and windier periods and showed that his model is well balanced and very capable of excellent performance.

Doug Grinham flew his tried and trusted Jazzer with Retro 60 eee-awing (Doug's description) happily at a very leisurely 5.6 to 5.7 sec lap. This design has to be one of the most enduring Aussie stunt designs, it has seen many variations over the years, and have found themselves in the hands of many Aussie pilots, a most refined design, quite an icon indeed.

Mark Ellins flew his very impressive Yatsenko model, Peter Koch had a superbly running OS 40 FP powered (Brodak) Oriental that handled some very rough conditions quite comfortably. Alan Mathieson Harrison took advantage of fine tuning a very neat flying Thunderbird (Mk1). Dave Lacy had a neat tissue and paint combo Phoenix (?), and Gavan Opperman flew a trusty (elderly) Stalker powered model (name of which escapes me Gavan). There were other flyers and another circle operating also.

A couple of dodgy characters, Doug and David.

Peter Koch's Oriental.

Alan Mathieson Harrison's Thunderbird behind Doug Grinhams Jazzer.

Matt Shears own design model in the foreground.

Next CLAG-Brimbank contest event Vintage Stunt and Combat, KMAC Nov 6

Day	Venue	0900 - 1200	1300 - 1700
Thursday 05/01/12	CLAMF	F2C Team Race	1/2A Combat Combined Speed
Friday 06/01/12	CLAMF	F2A Speed Classic Stunt 2 Rounds	Navy Carrier
Saturday 07/01/12	CLAMF	Classic FAI Team Race F2B Stunt 2 Rounds	Vintage A Team Race Swap Meet 1530-1800
Sunday 08/01/12	CLAMF	Classic B Team Race	Vintage Combat

FEDERATION AERONAUTIQUE INTERNATIONALE

CLAMF AIR RACING

Frankston Victoria

Treating tin-plated tanks after soldering

One of the bugaboos of making tin-plated tanks is finding a way to clean them adequately after the soldering is done to ensure no muck is left in the tank. Once they are fitted into the model, muck leads to fuel blockages, leaks, corrosion and inconsistent running.

Most modern fluxes used in lead and soft silver soldering are low-temperature, film-forming antioxidant types, which are for the most part acidic and form a glass-like film over the metal surfaces during soldering.

Flux type	Base	Activator	Form
1 Resin	**1** Rosin **2** Without rosin	**1** Without activator **2** With halides **3** Without halides	**A** Liquid **B** Solid **C** Paste
2 Organic	**1** Water-soluble **2** Water-insoluble		
3 Inorganic	**1** Salts	**1** Ammonium chloride **2** Without ammonium chloride	
	2 Acids	**1** Phosphoric acid **2** Other acids	
	3 Alkaline	**1** Amines and/or ammonia	

The glass-like film-forming fluxes that most of us use are the hardest to clean, as the films formed during solder may eventually dissolve from cold-solder joints around the tin edges of the tank or at feed pipe joints, eventually producing a sprinkler that requires resoldering. The film may also dissolve over time in the tank and release beads of solder or metal filings that suddenly start blocking the feed line or needle valve.

It is really hard to clean the inside of a 10–15 mL tank and it is inevitable that some rubbish remains behind trapped in the flux residue, only to be released at some critical moment—for instance, during heats or finals—thus cooking up your best engine.

Convention wisdom has been to wash the tank out with meths or fuel (or both) and hope that the stuff dissolves away. These solvents do dissolve the old rosin fluxes but for the most part we have moved away from them. Most conventional fluxes used today are metal salts, which DO NOT dissolve in meths or kero or white spirits.

Now, what if there were a way of completely cleaning up a soldered tank, that would actually form a beneficial, corrosion-resistant, permanent film over the inside and outside of the tank, reveal incorrectly soldered joints, and release any loose solder by eliminating flux residue?

I have developed a cleaning solution that that is designed to do exactly this. It will attack and dissolve the glassy flux completely, coat the metal surfaces to stop corrosion. This solution is simple and relatively safe to use, and the ingredients come from the local supermarket, so are dead easy to obtain.

The origin of the solution is a simple application of basic chemistry; we drive the flux to form a completely water-soluble ammonium salt using 'mass action' to tip the chemical reaction in favour of that super-soluble ammonium salt. It also forms a kind of permanent protective 'chemical anodising' film over all the metal surfaces.

The formula for the solution is as follows:

1. 400 mL cloudy ammonia (Woolworths 'Home Brand' works fine)
2. 100 mL Morning Fresh dishwashing detergent

Pour the ammonia solution into an airtight glass container. Add the detergent and mix gently by rocking the container from side to side, then store it until you need it.

Make sure the tank is completed first, including all soldering (such as mounting straps) and drilling of mounting holes etc. Remove filling or Robinson valves; it is only the things that have been soldered that need treatment here. (If you resolder the tank in any way, you have to repeat the cleaning process. I have to make that quite clear.)

Find a capped glass jar that will enable you to cover the whole tank, including the filling, overflow and fuel feed lines, completely. Take the cap off the jar. Fill the jar with cleaning solution then carefully microwave it (without the cap) until the solution temperature is about 60–70 deg C. Avoid boiling the solution; you will end up with a microwave full of detergent foam. Alternatively, use a water-filled pot on the stove to carefully heat the solution in the jar.

Using an oven mitt, remove the jar of cleaning solution from the microwave or pot. Lower the tank into the jar, taking care to ensure the tank also fills with cleaning solution. Place the cap on the jar and leave the tank in the solution for at least three hours. Rock the jar back and forward a few times to help expel air bubbles from within the tank.

After 3-4 hours the solution will have cooled. Remove the tank with some kitchen tongs, taking care not to splash yourself. The solution is reusable, so drain the solution from the tank back into the jar. I use a tea strainer to filter the liquid from the tank and always find something interesting.

Now, wash out the tank with clean, warm water, then test for leaks. Any solder that may have shaken loose in the cleaning process may be rattling about. The inside and outside of the tank should now look very clean and evenly dulled over the whole surface. I usually repeat the whole cleaning process once more before I consider the tank ready to use. Do not be surprised if the tank now leaks, as the flux that you have cleaned out may have been plugging up small holes or cracks. If this is so, resolder the leaks and repeat the cleaning process again, and then once more to be sure.

The cleaning solution can be used at least 5–6 times, but after that it is best to make up a fresh solution. You will be really surprised how much solder, tin, copper and brass will have accumulated in the bottom of the jar (see the picture above), I know I was.

Once cooled, an insoluble sludge of metal bits, solder and flux residue will settle out, for best results just discard this bottom layer to reuse the solution.

Lance Smith.

http://www.wightsmodelaircraft.com.au/

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ANDREW'S PANS.

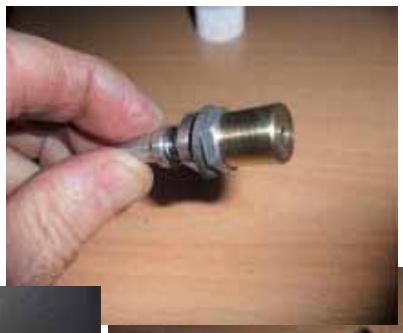
For some time now I have been selling my speed and team race pans through this newsletter. I would now like to offer some limited machining services. I have also been doing this type of work for some time via Lance's Classic T/R site. This can be viewed at the following link. http://web.me.com/flyingkiw1/Classic_FAI_Teamrace_Site/Andrews_Racing_Parts.html

I have included some pics of recent work, and more photos can be seen on the above site. I can't see myself doing complete engine rebuilds as I don't have the skills and equipment to do this. Examples of work will be prop nuts and shaft extensions, carbies for most engines, Vintage T/R type tank and bottle valves and other machining as requested. So if you have a job that needs machining let me know and I'll see what I can do.

Regards,

Andrew Nugent.
Tel (03) 9551 1884

andrew.n5@bigpond.com



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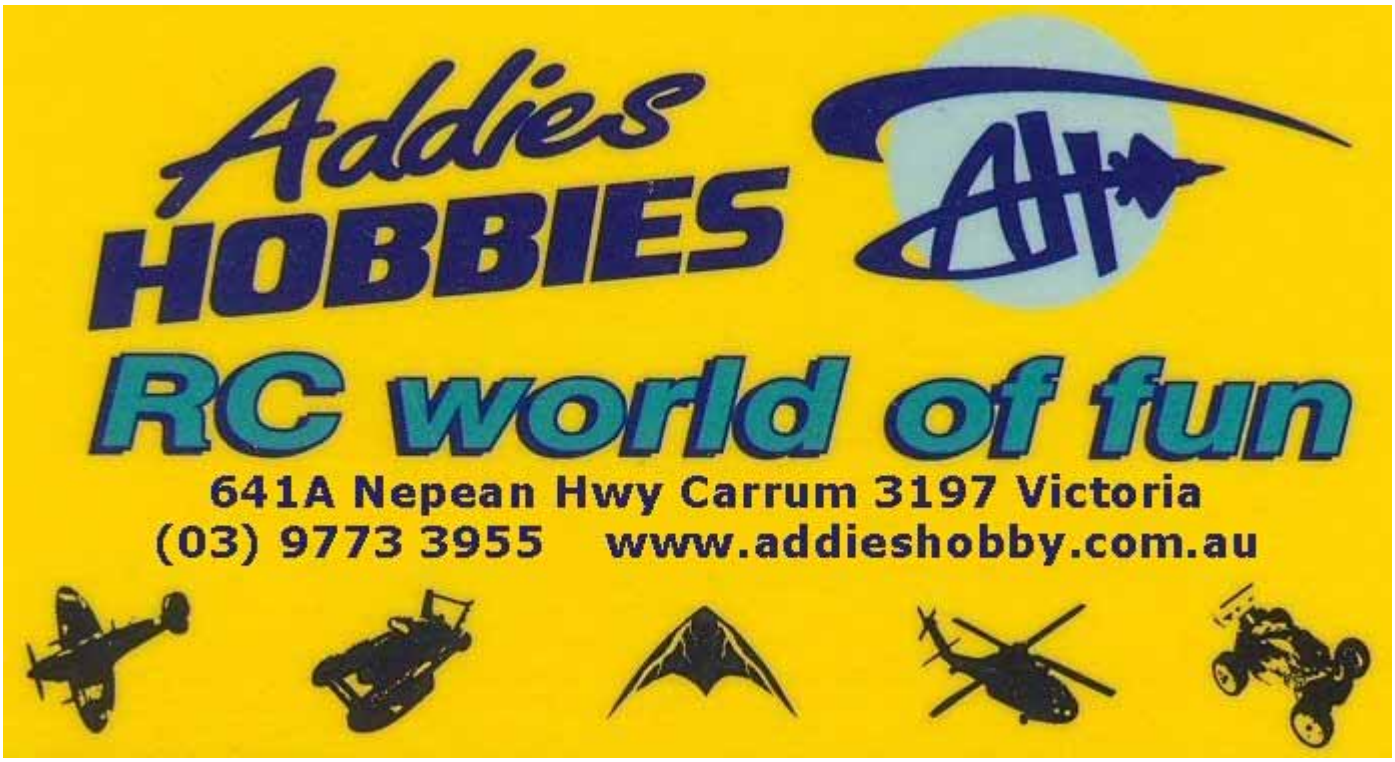

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