

# THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 264

Produced by the Victorian Control Line Advisory Committee



June 2021
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#### **PRODUCTION SPECIFICATIONS**

Please send any submissions for publication by CD/memory storage device or use Email.

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



**KMAC** will not have an event calendar as such this year. The club will still operate to the pattern of "last Sunday" in the month being the regular club day, but it will not have any formal contest/events scheduled.

The Calendar below is of course dependant on whatever Covid health warnings may be implemented during the year.

# VICTORIAN CONTROL LINE CONTEST CALENDAR 2021

DATE	EVENT	CLUB	
June 13	Classic FAI, Vintage A, ½ A Combat.	CLAMF	
Jul 11	Combined Speed, Classic Stunt.	CLAMF	
Aug 8	Carrier Deck, 27 Goodyear.	CLAMF	
Aug 9-14	FAI F2 World Championships. Cance	elled	
Sep 12	Combined Speed, Vintage Combat.	CLAMF	
Oct 2-4	NSW State Champs. Racing and speed.	Albury	
Oct 17	Corflute Combat, F2B & Classic Stunt.	CLAMF	
Nov 14	Combined Speed, Warbird Stunt and		
	Nobler Stunt.	CLAMF	
Dec 12	Vintage A, Classic B, Classic FAI.	CLAMF	

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), GPS -38.086777,145.148009 10.00am start

Contact:- Secretary, H. Bailey (03) 5941 5978

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: President:- Reeve Marsh 0405 001 008

Email:- knoxmacvic@gmail.com

Web site :- https://sites.google.com/view/knox-model-

aircraft-club/home

**CLAG** has monthly fly-ins at the Moe Race Track every first Sunday of the month.

Contact :- Reeve Marsh 0405 001 008



#### **C.L.A.S. CONTEST CALENDAR 2021**

DATE	EVENT	CLUB
Jun 12-1	4 NSW STATE CHAMPIONSHIPS.	
	Aerobatics and Combat .	CLAS
Jul 4	KMFC AGM.	KMFC
Jul 7-14	1st West Wyalong Nationals.	
	Control Line and Free Flight.	West Wyalong
Jul 25	F2B Aerobatics.	KMFC
Aug 1	F2B Aerobatics.	Doonside
Aug 8	Peacemaker Day.	KMFC
Aug 15	Classic Stunt.	SAT
Aug 28-2	9 Oily Hand Diesel weekend.	Cowra
Sep 12	Slow and Vintage Combat.	KMFC
Sept18-1	9 Classic B Team Racing and Fun Flying.	Rocky Rally
Sept 26	Gordon Burford Day.	KMFC
Oct 2-4	NSW STATE CHAMPIONSHIPS.	
	Racing and Speed CLAS NSW at	Twin Cities Albury
Oct 17	F2B Aerobatics.	SAT
Oct 31	Classic Stunt.	Doonside
Nov 7	Festival of Speed.	KMFC
Nov 14	F2B Aerobatics	SSME
Nov 28	KMFC Christmas Party and Fun Fly.	KMFC.
Dec 5	F2B Aerobatics.	Doonside
KMFC - SAT-	(Ku-ring-gai Model Flying Club) - St. Ive Mona Vale Rd, St. Ives. (Sydney Aeromodelling Team) - "Duck P Road, Milperra.	_
SSME -	(Sydney Society of Model Engineers) - N	lodel Park,

SSME - (Sydney Society of Model Engineers) - Model Park, Luddenham Road, Luddenham.

DOONSIDE- Baseball diamond, Whalan Reserve.

#### **CLASII IPSWICH QUEENSLAND CALANDER 2021**

Sep 25-26 QLD State Champs, All grass Racing Weekend

2.5 Simple Rat, Vintage A, Classic B, 27 Goodyear,

Classic FAI, 21 Bendix.

Nov 6 27 Goodyear, Classic B

Dec 11 Christmas Breakup, Vintage Combat.



#### 1<sup>st</sup> WW National Championships 7-14 July 2021 Bulletin 2

#### Introduction

Entries are a bit slow at the moment, so we need to speed up that process. If you need any information about program or entry, please go to the NSWFFS web page and download the entry form. We need your entry soonest and avoid late payment.

#### Combat and Racing

Will now be held on the AB field and two circles for combat have been prepared. The main circle will be used for competition and the additional circle for practice and a walk off if necessary. Both circles a relatively close to the camping area and a short walk will get you to that area. There is a hard stand circle for racing and that has been professionally marked. Some photos of the combat area are attached.

#### Camping

Limited powered sites available; bookings required ring Roy Summersby soonest (Mob 0413 588 720). Ladies and gents' showers and toilets as well as camp kitchen with BBQ, fridges, microwave ovens, kettle, hot and cold water, dining table as well.

#### **Indoor Control line Aerobatics**

Murray Howell will supervise and manage the indoor centre for this demonstration event and there is an attachment at the end of this bulletin for further information. An additional day Saturday 10 July at the indoor centre has been reserved.

#### Indoor and Outdoor Hand Launch Glider

An outdoor glider worldwide event called the 'Heave Ho postal event' is for real enthusiasts. Sponsored by Len Surtees Sting Gliders Mk 11. Rules attached. There is also a gathering of competitive indoor HLG flyers trying to win the national contest. Unfortunately, the indoor centre is a little small for a world record.

#### E-RES and F5J at WW Nationals

There is a change the two electric old timer days to one day of E-RES (Electric 2m glider with rudder elevator and spoiler controls only) The rules are posted here <a href="http://www.aefanet.com/images/stories/Rules/Draft">http://www.aefanet.com/images/stories/Rules/Draft</a> E-RES Rules Master 2021 02 24.pdf

#### Pulse Jet Flying

We have a volunteer to give us a demonstration of pulse jet flying on our hard stand pad late in the eventing. Be there to see the glow and enjoy the gentle throb of a monster in action.

#### Conclusion

I will keep you posted as much and as quickly as I can.

Coordinator Terry Bond Mob 0417 027 579. Email; karenand007@gmail.com

Article for Bulletin No 2 Indoor Control line aerobatics

We have all seen and or competed indoor events at some stage. Mostly being Free Flight or RC.

On the 10th of July during the West Wyalong Nationals a

few of us will be showcasing indoor F2B control line aerobatics from 3:30pm to 7pm. These models are the idea of Slovakian Born Igor Burger, an F2B world champion who has revolutionised electric F2B aerobatics and now indoor control line.

These models are constructed from 3mm thick foam (depron) with some carbon spars for strength, and very easy to build.

The models use an active timer like we use on our large F2B electric models, but a version for indoors using a Spin 11 ESC, a light motor with KV 1400 to 1500 rpm/V for max power boost uphill. It should be as light as possible.

The model flies with a relatively large prop which gives good vertical performance. We use an orange GWS 10x4.7 at approximately 4500 rpm.

The Model flies lap times like our large outside models, this means approximately 5.3s. Line tension is secured by large yaw angle approximately 20 degrees and large nose area.

These models are flown on 5m long fishing lines. Using low stretching Spiderwire lines 0.12mm on very light handle as the model does not pull too much.



Many pilots around the world in many countries are now flying these models and having local and international competitions. They are also great for the kids and beginners.

My aim is for as many pilots that are interested to come along and have a go. I would love to see more pilots flying these models and eventually having fun competitions at our major State and National events.

Please come along and have a go. Everyone is welcome.

Regards

Murray Howell

Please use this link to watch the indoor Gee Bee video:

https://www.facebook.com/jozef.ornth/videos/10217954355080026/

Download the plans at:

http://maxbee.net/download/geebee\_cl.pdf?fbclid=IwAR3j1y6vdaRcX0Cy0BLtGmsqW6AeccxWuM7zPRZ6zQG08r3hA-7Ttfd26hI

### Victorian State Championships Results.

The Champion of Champions trophy was awarded to Murray Wilson at the conclusion of all events on Monday afternoon. Points are awarded to competitors based on the success in each of the events that they entered.

Murray Wilson was the clear winner based on the fact that he enters nearly all the events and generally has a high success rate.

Here are the points scores for the Champ of Champs from Easter.

Murray Wilson 41
Greg Nelson 29
Robert Owen 26
Richard Justic 20
Mark Ellins 20
Rob Fitzgerald 18
Harry Bailey 17





Combined Speed results, held at Frankston on Sunday 16-05-2021

Following some pleasant weather in the midweek prior to our

comp, Sunday brought some winter chills and warm clothing was the order of the day. Murray Wilson flew his F2A model to get very close to the current Australian record.



Pictured right:-

Ken Hunting, Andrew Nugent and Robin Hiern.



Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Flight 4	Fastest	Km/h	<u>%</u>
1	M. Wilson	FAI	Profi	12.15	-	-	-	12.15	296.30	99.51%
2	H. Bailey	Class 5	Novarossi 21	16.75	16.73	-	-	16.73	215.18	89.00%
3	R. Hiern	Class 1	OS CZ11 PS	20.38	18.39	18.46	-	18.39	195.76	84.61%
4	A. Nugent	Class 1	Novarossi .12	18.47	18.51	18.62	-	18.47	194.91	84.24%
5	K. Hunting	1/2 A Proto	CS .09 D	35.59	35.05	38.86	-	35.05	102.71	72.47%
6	R. Hiern	Class 2	Super Tigre G21	13.36	-	-	-	13.36	216.83	70.21%

# **Australian Speed Records 26/06/2021**

This is a copy of the current MAAA official classes and others that are not official classes.

The MAAA has not updated their web pages to show the official records and the official classes listed below have all been set since the introduction of the 10% nitromethane rule.

Robin Hiern has volunteered to update this chart as and when new records are claimed.

Class	Distance (km)	Laps	Record	Km/h	Holder	<u>Engine</u>
Class 5	1	9	14.89	241.77	R. Hiern	Novarossi .21
Class 4	1	8	15.09	289.16	R. Hiern	ST X40
Class 3	0.804672	6	10.80	268.27	M. Wilson	OS .60 VR
Class 2	0.804672	7	9.38	308.83	R. Justic	Nelson .29
Class 1	1	10	15.56	231.36	R. Hiern	Nova Rossi 12
Proto	1.609344	14	26.79	216.26	J. Jacobson	
FAI (F2A)	1	9	12.09	297.77	A. Heath	Profi 15
Jet (Open)	0.804672	6	10.00	289.68	Provisional	
Sports Jet	0.804672	7	11.46	252.86	J. Walker	Bailey
Midge	0.402336	6	8.85	163.66	K. Baddock	Novarossi .09
1/2 A Proto	1	10	25.78	139.64	H. Bailey	OS 10
Vintage Proto	1.609344	14	30.35	190.89	R. Hiern	OS 25 FX
Simple Speed	1	10	20.00	180.00	Provisional	
Vintage/FAI	1	10	16.22	221.95	U. Rossi	ST.G20
Vintage 2.5cc	0.402336	6	8.43	171.82	R. Hiern	ED Racer Glow.
Vintage .29 1960	1	10	17.20	209.20	????????	????????
Vintage 2.5 1957	1	10	18.58	193.76	R. Hiern	OS Max-2-15
Perky	1.609344	16				
Classic FAI	1	10	14.11	255.00	E. Rumpel	Rossi .15
1/2 A Speed (.049)	0.402336	10	16.04	180.60		

# Munro Oily Hand Weekend.

Quite a few of us control liners took a trip down to Gippsland on 1st—2nd May to the Munro Oily Hand weekend. The weather was brilliant with hardly a breath of wind for the whole weekend. Perfect for the free flight models. A great friendly atmosphere with a varied mix of Radio, Free Flight and Control Line Models.

The field has camping facilities with showers and toilets. A roast lamb with vegies followed by dessert, evening meal was provided on Saturday.

A bunch of very friendly people who are interested in all forms of our hobby.



# Some notes from the Classic Stunt competition held at Luddenham on Sunday 2nd May 2021



1 Caprice

Weather was excellent, and a reasonable number of competitors turned up to fly.







Photo 1 - Tony Bonello with a new beautifully finished Caprice model, could not show his face, as I stuffed up the photo, Tony graciously volunteered to judge, so unable to compete.





Placings were:
1st, Steve Masterton

2nd, Brian Eather

3rd, Reg Towell



Photo 2— Close up of Tony's "Caprice".

Photo 3— Garry Lynch - with a "G- Max 61 Model"

Photo 4— Steve Masterton - with "Tigre 46 powered Stampe Monitor"

Photo 5— Reg Towel! - with "Mark 1 Thunderbird"

Peter Laing Eric Nutter Mark Mc Dermott

Photo 6 — John Hamerslag - with his "Nobler".

Photo 7— Brian Eather - with his immaculate

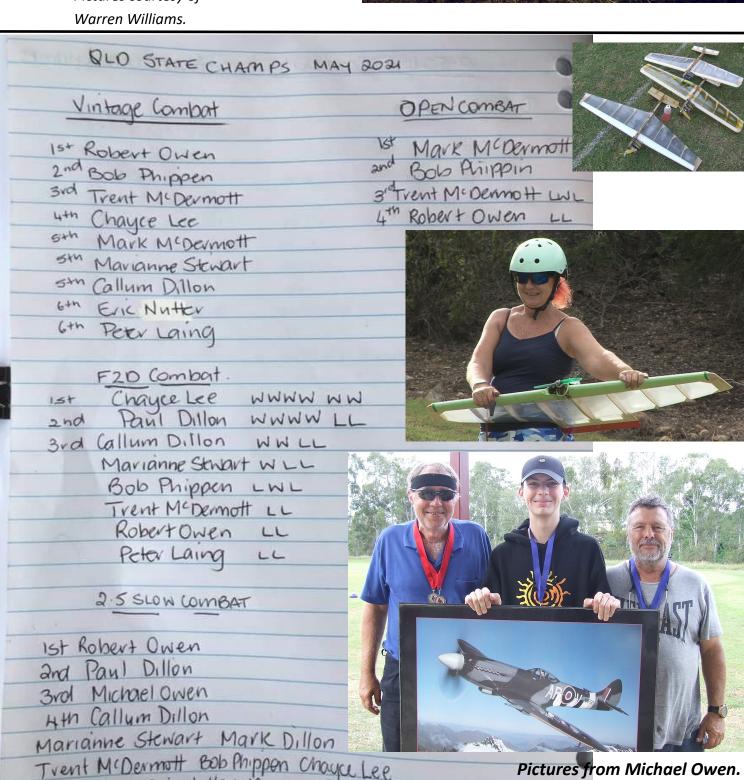
"Venus".

Photo 8— Neil Alleyn - with his "Oriental"

Pictures courtesy of



#liveforcombat



# To tune a model aeroplane engine. (2.5cc in consideration here)

#### By Matt Korhonen.

#### Continued from last month.

#### **Engine tuning.**

We have talked about Engine Timing, now is the time to talk about engine tuning. I have already mentioned that some decades ago people used fuel to tune their engines. So I will start with diesel fuel and diesel engines (we will be somewhat specific and talk 2.5cc and smaller).

A long time ago the go to fuel was a simple 1/3 - 1/3 - 1/3 mix.

- A) It was easy to calculate
- B) it worked well enough for most people
- C) Castor / Kerosene / Ether

Before more complex mixes became the norm the 1/3 mix was pretty standard. To control the compression folks used somewhat larger propellers than we do today. The rule being the larger the diameter of the propeller, the less compression the engine needed. This is why a lot of people ran 8 inch Dia propellers on their 1.5cc engines and 9 inch Dia propellers on their 2.5cc engines. Essentially to give the engines longer life by not hammering the moving parts with a lot of compression.

#### **Ignition Improver.**

Don't ask me! but somewhere along the line someone added ignition improver to diesel fuel and the rest is history. Everyone has their favourite improver and the amount they use. Amyl Nitrate I believe is what the British went with and there are all sorts of figures quoted for its use. Generally from what I read people used between 2% and 4% AN.

Remembering that the greatest absorber of energy inside the engine is the process of compressing the fuel air mix for ignition. In a diesel engine that ignition improver can be very important for making power. Everyone has their favourite fuel formula, but for me it was all about testing and evaluating for the best performance. So how much do you lower the compression? Or should that be how much ignition improver do you use?

That's where testing enters the equation. Back in the day I used the Henry Nelson Ignition Improver. And talking with people, they swore black and blue anywhere from 1.4% to 1.7% was the go. For myself, my standard % was 1.8. And for higher performance needs I went 2%. (Maybe more?)

- A) Your engine needs to start (Team racing), RELIABLY!
- B) Your engine needs to run at peak power without being overly sensitive (cooking)
- C) Your engine needs to be easy to tune.

For me personally, I used the ignition improver in amounts that allowed me to achieve reliable power. This means testing.

#### Castor Oil.

Castor was very much the go to oil for half a century until synthetic oil started making inroads, especially with the high Nitro Glow Boys! Did I already mention castor and nitro don't mix well when the nitro content gets too high? How much castor you use very much depends on what your engine demands. Lets take the Super Tigre G15 into consideration, this engine was very much loved and hated. I had a few of these engines and they almost always cooked when I ran them on my standard 20% oil mix. (Early Days). This was probably why I ran the G20/15D instead of the G15D. It was not until years later when I was experimenting with fuel that I discovered that the G15 diesels wanted 25% castor to run reliably. (Wont get into that now).

So there I was trying to get my G15 diesels to work with fuel they did not want to know about. Castor does more than just lubricate the motor, it also caries heat away with it. So the more Castor you use the more protection you have and the more heat it removes.

Castor is also thick and heavy, so the more you use the heavier you fuel becomes and the more energy is required to move it through the engine. Now the opposite of that is also true, the less oil the less energy required to move it through the engine. I did work out the RPM figures for the % of oil, but that was a long time ago and I have forgotten. But less oil = more power! / Higher RPM!

#### Less Oil.

Now there was a person/s a long way away using very little oil successfully. I think what was possibly lost on people was that those engines running low oil are very carefully fitted (FITTED) to run low oil and low oil means less protection and shorter lived parts. (Yes – more power, but at a cost). So if you don't understand what is required to run low oil, I would suggest you forget about it and maybe try synthetic oil.

#### Synthetic Oil.

Generally synthetics are much less viscous than castor oil (low viscosity – lighter – thinner) and therefore would require less energy to move through an engine. The problem being that the synthetic oils back in the day offered less protection. One option was a castor synthetic blend. I can't get into oil here as deeply as I would like because it's a thing on it's own. But once again it comes down to testing and understanding.

#### Kerosene.

Testing, and more testing. I think people have used everything from pump diesel to Jet Fuel (Aviation Kerosene). I don't remember what difference there was, but I used the supermarket kero and I used the aviation kero from the local airport. I don't remember the difference.

#### Ether.

Very much like ignition improver, people have their favourite % to use. Ether is what ignites your fuel air mix under compression. I would say the rule here is to use as little as you can and still have reliable starting. Generally people swear by all sorts of % numbers, but a good place to start is 35% and then move down till starting is effected. For me 30% was the norm as I got reliable starting at this number, but at one time I did go as low as 25%. At the time I had been gifted some AN and I have to say — It works. Anyways ...

#### Using fuel to tune your engine.

With diesel fuel you may have too many options. 4 Components working together and each one can increase or decrease engine performance.

- A) For me, reliability was most important. I don't like wasting time trying to start a powerful motor.
- B) What does the motor need to do?
- C) Most diesel engines need to START. If your motor is not starting reliably, are you feeding the motor the fuel it wants or are you forcing fuel on the engine it does not want? Do you want the mountain to come to you? Or do you go to the mountain?
- D) The engine needs to run reliably. An engine that cooks to easily is not reliable.

The fuel is something that you have control over (if you mix your own), so why not experiment and give your engine what it wants.

#### **Glow Engines.**

Much easier topic. There are essentially two components (That I am willing) to talk about here. The oil and the nitro content. If you wanted more power or a smoother running motor you added more nitro to your mix. Back in the day, Nitro as high as 65% or 70% were not unheard off. Castor will not mix with such high % of nitro, so a lot of people were forced to use synthetic oils which would remain in solution. Also other exotic ingredients were incorporated that today are known to be cancer causing, so I wont go there. Up to around 40% nitro should be OK with castor.

#### Control line stunt. (Aerobatics).

Nitro and castor were blended to give the best engine runs (2 stroke / 4 stroke). Nitro used to be anything from 10% to 20% (maybe more) depending on the engine and oil could be from 20% to 30%. The nitro was used for power and smooth running and the castor to control the 2 stroke (well, so I was told once). In this class of flying the motor requires to smoothly and reliably transition between 2 stroke and 4 stroke.

#### Racing engines.

Folks are after peak power here. And back in the day Nitro was the tuning tool of the trade. Wanted to go faster? You fed your engine more nitro. There used to be some very exotic and dangerous (to your health) blends in the day. These blends would often take the nitro content up to 70% (higher?). There were problems with this much nitro (besides cancer). The oil was one and the other was the melting of glow plug elements.

In this day and age we have a lot of exotic oil blends (Synthetic) designed for 2 stroke use which would / should be suitable as a replacement for castor if you chose to chase nitro content. Also there are a lot of fuel additives to experiment with.

#### Engines.

Lets remember that a lot of engines were built around the fuel available in the day. Back in the 70s 80's here in Australia 15% nitro was considered sports fuel. A lot of American engines would not run on that fuel. I had a Fox 15 plain bearing sports motor that would not run on anything less than 30% nitro (American Sport Fuel). So if you have an old engine and it wont run! It could be the lack of nitro.

So keep in mind, if your engine is not running the way you want it to, it may be because of the fuel. Engines that cook might want more oil, engines that wont run smooth or hold a tune might want more nitro. (Yes, it might also be the glow plug – but we will assume it's not).

#### Glow plugs.

Generally you need a selection. Hot / warm / medium / cool / cold. If your engine wont hold a tune, tends to spit a lot and just die then the plug may be too cool and a warmer plug needed. It could also be the engine design. I had one Taipan PB glow that would not run at all until I threw a idle-bar plug into it. Then it went from being a horrible monster to the sweetest running motor. For some reason I think raw fuel was being directed directly at the plug, effectively putting out the fire.

And on the other end, if you are killing plugs you may want to switch to a cooler plug. Hot / Cold — what the parking lot? Warm plugs generally have a weaker / finer glow element that takes less heat to glow. These plugs may be used in lower compression or lower nitro applications where the motor may be turning less RPM. Generally the faster you run a motor, the more nitro you use, the more power you extract — You use plugs with a stronger / thicker element that will withstand greater pressure / stress / heat. These plugs may also require more power to reliably start your motor as they require more current to glow sufficiently. ( No glow = no start )

What to talk about next?



For Sale.

 $38\mu$  (micron) Mylar laminating film (heat activated adhesive).

Suitable for C/L combat models, great for F/F models. Even better with tissue doped over it for a 'vintage look' This is very close to the 'Oz Cover' that was sold by Saturn Hobbies many years ago.

1m x 5m \$20 + postage at cost.

#### feraldoghunter@gmail.com

Danny Mz mob # 0477224751

Speed pans for sale. 2cc size (\$25) and 21 size. (\$30)
Also small amount of Nelson type T/R pans. (\$25)
All pans in the "as cast" state. Not finished.
Andrew Nugent. andrew.n5@bigpond.com

I am clearing out my shed and have complete models, ARF models, kits and engines for sale. Too many to mention here. They are mostly Stunt related.

All the relevant information can be found here:-

https://sites.google.com/view/steves-stuff/home

**Regards Steve Vallve** 

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**Note:** New price increase below due to a 20% price increase from my supplier effective 1/12/19

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iandthompson@msn.com mobile 0451085325

Be considerate with phone calls. I am in WA & there is a time difference from Eastern States.

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

Cost \$4.50 each plus postage. All lengths 12"

Sizes: 3/8"x3/8"

3/8"x1/2"

1/2"x1/2"

Also, I now have a stock of 3/16" sq. and 1/4"sq rock maple spars.

All spars are precision sanded with 150 grit. \$4 each plus postage.

#### TCA Italian glow plugs in Australia.

I have for sale a large range of TCA glow plugs.

TCA supply Luca Grossi the current F2A European champion.

There are std type 1/4x32 thread, Nelson style tapered seat with flat coils and the "turbo style" tapered seat.

Italian made TCA Nelson type combat plugs arrived for those that might be interested, \$8 each plus postage.

email: aheath296@gmail.com

I can now produce wings and tailplanes that are shaped on a Computer Numerically Controlled (CNC) router and can be any planform and shaped with any section although I have my favourites. The finish and accuracy of these products has to be seen to be believed.

They have laminated leading edge and reinforced front panel on the outboard wing for catching.

Internal control grooves and bellcrank assembly are also part of the package. They are ready for glassing as supplied. A shut-off actuator can be supplied as part of bellcrank assembly if required.

I can also supply spruce for leading/trailing edge etc. cut to any section size.

I can be contacted via Facebook or

Mobile 0404205562

Ray Harvey

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I am chasing a Gillott Rossi, MK2 or MK3 for Goodyear T/R, not worried about condition as long as it is complete.

Email me at weapon61@yahoo.com.au

Cheers Neil Baker

Wanted.

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Kim Laughton Mob Tel:- 0403 327 311



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Free Flight - Timers & Programmers.

Cox Engines - Surestart & Bee Engines; Glow Heads; Tanks; Gaskets; Props; Mounts; Parts & Accessories.

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#### AUSTRALIAN CONTROL LINE NEWS

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