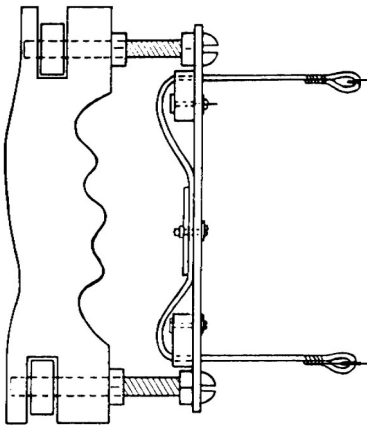


$3.20

THE VOICE OF CONTROL LINE AEROMODELLERS FROM AROUND AUSTRALIA

Number 259

Produced by the Victorian Control Line Advisory Committee

December 2020

INSIDE THIS ISSUE

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.

COMING EVENTS

VICTORIAN CONTROL LINE CONTEST CALENDAR 2020

DATE	EVENT	CLUB
Dec 6	CLAG flying day	Moe
Dec 13	Vintage A, Classic B, **Classic FAI.**	CLAMF
Dec 20	Club Day and Christmas Party	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), 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 or
Secretary:- Steve Vallve 04099 35358
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 :- Treasurer. Alan Frost
Email:- afrost2@skymesh.com.au
Phone:- 03 52817350

Send your articles for publication to Newsletter Editor

Harry Bailey.
3 Bailey Place
Pakenham 3810
Victoria
Email:-
hbbailey@optusnet.com.au

The scheduled Monty Tyrell Classic Stunt competition did not take place at the KMAC field on November 29. People and models did arrive but were deterred from flying because of the weather and secondly because the field had not been fully maintained during the covid restrictions and was in need of some care and attention. Some models were flown but not in a competition.

The club was however able to hold it's delayed annual general meeting.

Queensland Club Comps

Clasii 12th December,
Xmas Breakup. Vintage Combat

COMING EVENTS

C.L.A.S. CONTEST CALENDAR 2020

DATE	EVENT	CLUB
Dec 6	F2B Aerobatics.	Doonside. Whalan Reserve

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

SAT- (Sydney Aeromodelling Team) - "Duck Pond", Ashford Road, Milperra.

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

DOONSIDE- Baseball diamond, Whalan Reserve.

Hints and Tips.

I have been using this to help preserve my stored model engines for a few years and it works very well Gulf Western Air Tool Oil - Super-cheapauto

Maybe somebody shall find this as useful as I have.

Regards * Danny *

EDITORIAL

Well, what a year this has been with the effects of the corona virus causing some curtailing of our flying activities for most of this year. Lets hope that Australia's current very low case numbers continues and we can look forward to a much better 2021.

Seasons greetings to all our subscribers. Tight lines to all and we hope to be bringing lots of topical articles in the New Year.

Harry Bailey (Editor)

CLAMF Aerosports presents....

*2021 Control Line Air Racing, Speed, Stunt & Combat "**Grand Prix**"*

Dec 30th 2020 – Jan 2nd 2021 over 4 days

Location: 103R Old Wells Road Seaford VIC 3198

Plus Swap Meet and Social Activities...

Day	Venue	0900 - 1200	1300 - 1700
Wednesday 30/12/20	**CLAMF**	**Classic B T/R Combined Speed**	**Classic FAI T/R**
Thursday 31/12/20	**CLAMF**	**F2C T/R**	**Classic Stunt Goodyear**
Friday 01/01/21	**CLAMF**	**Junior Rat Race Vintage A T/R**	**F2A Speed**
Saturday 02/01/21	**CLAMF**	**27 Goodyear**	**Vintage Combat**

FEDERATION AERONAUTIQUE INTERNATIONALE

CLAMF Aerosports

Control Line Aircraft Modellers Frankston

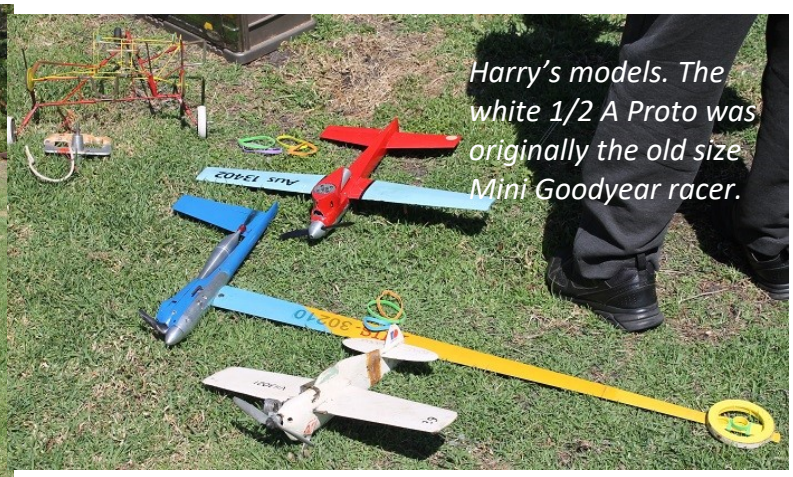
Entry $10 per person / event $40 maximum fly all events

AROUND THE CLUBS

Combined Speed and Classic Stunt 8-11-2020 at Frankston

This was our first contest since lockdown but we have been doing a little testing beforehand.
The usual speedsters turned up to fly, but Ken Hunting did not fly due to health issues, hope he gets better soon, we need you.
Mark Ellins, Murray Wilson and Harry Bailey flew F2A with their Profi's. Murray was the quickest. Mark is flying his again after yet another shaft blow-up, he decided to have a break from F2A, so I fixed up a damaged integral bearing shaft by machining that part of shaft to fit a normal bearing to get him going, seemed to work.
Harry flew one of Noel Wake's old Class 5 models with Novarossi .21, but it was a bit over-propped for 10% fuel.
I flew my Class 5 model NR.21 trying a few different props went OK and very close to record, I also flew my number 3 Class1. I tried another prop on second flight but too much pitch.
My number 1 Class1 is put away as I won't be able to keep up with it's pace any more .
Another Class 1 was Andrew, it did its usual times and reliable.
Another great day, thanks to all who came and thanks to Fiona for cooking the hamburgers.
Robin.

Pos.	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R. Hiern	Class 5	Novarossi 21	14.94	15.24	14.90	14.90	241.61	99.93%
2	M. Wilson	FAI	Profi	13.21	12.58	12.56	12.56	286.62	96.26%
3	R. Hiern	Class 1	Novarossi 12	16.48	17.44		16.48	218.45	94.42%
4	M. Ellins	FAI	Profi	13.10			13.10	274.81	92.29%
5	H. Bailey	Class 5	Novarossi 21	17.21			17.21	209.18	86.52%
6	H. Bailey	FAI	Profi	14.15			14.15	254.42	85.44%
7	A. Nugent	Class 1	Novarossi 12	19.12	18.77	18.40	18.40	195.65	84.57%
8	H. Bailey	1/2 A Proto	OS FP10 Diesel	34.56	32.87		32.87	109.52	78.43%



Harry's models. The white 1/2 A Proto was originally the old size Mini Goodyear racer.

Classic and Nobler Stunt 8-11-2020.

Held at Frankston field in good weather, with a bit of wind on 8th November comp, same day as speed.
We have only been able to fly speed and stunt during the Covid virus due to the 1.5 meter distancing rule, racing and combat were not allowed due to the need for social distancing.
There was a good entry of seven, most popular model was the ARF "Nobler", motors ranging from the good old OS 35S, 1 Brodak 40 a Double Star 40 and a Supertigre .46.
Col Collyer came down with his Ringmaster /OS 35S and Derek with his Nobler/ Brodak 40.
Andrew flew his "Caprice" a Bob Hunt design with a reliable Enya 45.
Harry Bailey flew a nice ex Doug Grinham "Dolphin" with a Double Star .40 but unfortunately lost it in vertical 8 and hit ground luckily not damaging model much as ground is very soft after all the rain we have had.
Winner was M. Ellins with Nobler /ST .46

Results ….

1st	M. Ellins –	Nobler /ST.46	=589 points.
2nd	M. Wilson-	Nobler /OS 35s	=570 points.
3rd	P. Stein –	Nobler /Brodak .40	=555 points.
4th	A. Nugent –	Caprice /Enya .45	=525 points .
5th	C. Collyer –	Ringmaster /OS 35S	=475 points .
6th	D. Pickard –	Nobler /Brodak .40	=455 points .
7th	H. Bailey -	Dolphin /Double Star .40	=249 points .

Robin Hiern [Judge]

Andrew Nugent flies his "Caprice".

COMBINED SPEED 22-11-2020 FRANKSTON.

This is our second speed contest for the month, catching up on lost time due to lockdown.
A fairly low key contest with 2 regulars away, Ken Hunting still with health issues and Andrew Nugent with a family commitment.
Murray was first up with his F2A trying a different motor which went well, he is always trying different combinations.
Mark also flew his Profi which is getting better now shaft is OK.
Harry flew his F2A Profi for three improving flights and just got into the 13's at 13.99
I flew my Class 5 and Class 1 again trying a few changes, not quite as fast as 2 weeks ago.
Murray finally got to fly his Class 5 model [Kansas Twister] design like mine, it is an old style model with elliptical wing and tail they fly great, his has a Novarossi of unknown origin /mods. It went well just needs more prop work and maybe more comp.
Harry flew his Class 5 but a fuel feed problem caused his withdrawal.
Weather was not as good as 2 weeks ago very humid with a little shower causing a short break.
Thanks again to our timekeepers Ron Savage and Neil Baker.
After the comp Neil did some testing with his Goodyear model powered by a newer Nelson, but he was not happy, so he is going to try something else [how about a Gillot Rossi??!!$$] sorry Neil?
Robin speed

Pos	Name	Class	Engine	Flight 1	Flight 2	Flight 3	Fastest	Km/h	%
1	R. Hiern	Class 5	Novarossi 21	14.95	15.09	15.10	14.95	240.80	99.60%
2	M. Wilson	FAI	Profi	12.84	12.94	12.65	12.65	284.58	95.57%
3	R. Hiern	Class 1	Novarossi 12	16.47	16.82		16.47	218.58	94.47%
4	M. Ellins	FAI	Profi	12.95			12.95	277.99	93.36%
5	M. Wilson	Class 5	Novarossi 21	16.34	16.18		16.18	222.50	92.03%
6	H. Bailey	FAI	Profi	14.47	14.12	13.99	13.99	257.33	86.42%
7	H. Bailey	Class 5	Novarossi 21	N.E.Laps					0.00%

Kansas Twister

Thanks to Nobby Baker for the pictures.

Super Sunday for our last official competition of 2020.

Write up of KMFC fun fly race & speed day held on Sunday 8/11/20. Just added a little humour to brighten up the day, after a restrictive year.

Pitt area shows the Enforcement of social distance amongst the large crowd

John Nolan shows his Dooling 29 powered Harold De-Bolt Speed-Wagon

KMFC Top Brass John Nolan & Steve Rothwell with Club mascot & field safety officer Lily. — Her duty is to prevent stray dogs entering the flying space.

Steve Rothwell with his Knockout 300Klm speed entry, which would have made all other models look like rubber powered units; following a hurried pilots meeting and without having to crank the engine, Steve was awarded overall trophy winner. However Steve being an ail-round good guy declined this due to the safety of the hundreds of spectators and no safety cage.

Trevor Perry and his precision tuned pit team, fresh from observing the Bathurst Supercar races pit crews were on their toes — Steve Rothwell - tunes the engine / John Dodds — assist with holding / Wally Bollinger — gives directions while Trevor cranks —Hard to beat?

Carl Mattis with his 2 entries.

Powerful combination of Steve— John—Carl. Pre flight attempt.

Pictures and information from Warren Williams.

POWER—COMPRESSION – FUEL.

The purpose of an internal combustion engine be it 2 or 4 stroke is to inhale as much of the chemically correct mixture of fuel and air through the ports. It is then compressed creating heat then near to top dead centre (TDC) the mixture is ignited causing heat therefore expansion thus driving the piston down and turning the crankshaft.

This is Torque, then by a calculation of RPM gives Horsepower.

Generally, increasing compression ratio gives more torque but too much can cause detonation which is very bad.

Basically, detonation is caused by a spontaneous combustion of fuel and gases after initial ignition by plug causing and explosion.

Visible signs of detonation are sandblasting of head and ring around piston crown near cylinder wall. It can flair out the very top of the piston crown causing rubbing of very top of crown on walls creating more heat which can make matter worse.

If this happens, the piston top must be relieved or it will continue.

Detonation can also be caused by having too lean a fuel/air mixture, overheating, overloading or too hot a plug or any combination of the fore-mentioned.

Increasing compression can also rob power due to the extra work involved pushing the piston up inside the cylinder, a trade of must be reached.

This is where a Dynamometer or a proper test prop will tell you which is better.

Fuels used, vary the detonation point that is why we use methanol as it is more resistant to detonation, compared with say petrol.

When fuel burns it produces different amounts of heat (BTU's). It stands for **British Thermal Unit**. It's a form of measurement that measures energy. One BTU refers to the amount of energy that's required to increase the temperature of a pound of water by 1° F. Heat is what we are after, they also have different air fuel ratios, for example, methanol does not produce as much heat per pound as petrol but because methanol /air ratio is around 4.5 to 1 you use nearly 3 times as much as petrol at 13 to 1 so you end up with more heat therefore power and it cools internally.

Another fuel ingredient we use is nitromethane however it is a relatively poor fuel BTU wise but when it burns it liberates heaps of Oxygen so we can burn more fuel.

Slight problem with high quantities of Nitro in high speed engines is that it burns slowly so sometimes it is still burning when piston is going down the bore, so we use propylene oxide to improve the flame speed much the same as we use DII /amyl-nitrate in diesels.

When the fuel is ignited by the glowplug or spark plug it is not an explosion but more of a flame front starting at the plug and burning outwards just like a bushfire.

When it fires, using a glowplug it is determined by the heat range of the plug and the heat of the compressed fuel, if to hot it fires too early (over advanced) so we need a colder plug, if too cold ignition is retarded, needing a hotter plug.

It's best to use a high compression then set timing with plug not vice versa.

We mostly use taper seat plugs or drop in plugs now for racing as they make the combustion chamber a nice smooth shape, not disrupted by a ¼ " thread.

In general I run very high compression even when we used 60%nitro but head shape has to be right or detonation occurs, I did not blow many plugs especially in Novarossi's

To run high compression you must have close head squish clearances to stop detonation, if it detonates and you raise the head too much it may be worse as squish not working fully.

For 2.5 cc motors I like around .006 to .010 thou, if still too high head bowl needs to be opened so you can drop head again.

The hemi head I found works and is easy to replicate using ball end mills, size depending on how wide you have squish band, I use a 3/8 inch one for 15 mm bores.

Blown plug are not always due to high compression, sometimes a motor has low compression and then leaned out too far to get power from it, unfortunately some piston and liners blow plugs whatever you do, lower comp /run richer /lighten prop load etc.

When we went from high 60+% nitro to 10% I did not hardly alter comp just reduced Pitch heaps to get revs back and wound needle in a bit.

Stunt engines run entirely differently due to wanting a 4—2 switching run, they have very low comp to get a fast 4 stroke then switch to a 2 stoke when the nose is raised, the Fox 35 has only 6.5 to 1 ratio to get this, that is why stunt engines require a HOT plug to keep fire alight, if you raised comp you would get heaps more power but would scream around 2 stroke, which may be OK if you used a fine pitch prop to keep speed down.

As a comparison I run my speed motors around 18.5 to 1 successfully. They do not 4 stoke unless way too rich, mostly want to 2 stoke making needle setting a bit tricky finding correct setting without going to lean.

I find that high compression motor is not as effected by little changes in weather whereas a low comp is.

Some say that a low comp engine revs faster, maybe if prop load reduced way down, revs for revs sake is useless.

With a racing diesel i.e. FAI team race they run as much compression as they can to get the speed and economy trying to avoid a cook up needing a stop to lower comp, sometimes they use different fuel mixes during race and if cooks up they switch to a easier fuel but I'm not sure what is in it.

I have asked guys to get there Ideal setting then back of comp and see what happens, it will be slower.

Fuels make a big difference that is why team racers use tetra-ethyl- lead in fuel to reduce detonation, allowing them to increase compression, same as our old petrol had lead in it, but lead is a dangerous substance.

When I used to circuit race a Cooper S in the early 70's we used RF100 octane fuel we bought at the track, one day at home in the country I drove it up the road [not registered] but it ran out of fuel so walked back home and got some Super petrol 98 octane from fathers drum, put that in and idled back home only ¼ mile downhill, when I switched it of it ran on and would not stop and I had to put in gear and stall.

I used to run high compression of 13 to 1.

Yet at the track I used to go up back straight at Calder and switch off at full throttle and then pull out spark plugs to check mixture with no hint of running on, all due to 2 octane difference.

The old myth about lowering comp when adding nitro I don't buy.

Horsepower is a measurement of torque [twisting force from crankshaft] in inch/ounces then a calculation of the rpm, we need a Dynamometer to measure the torque and a tacho for rpm.

However some engines have high horsepower due to high rpm even though torque is low, an F2A speed engine is an example, they produce 2.2 hp @ 40000rpm, but need tiny props to accomplish that.

Say we put one of these in a stunt model that had a size .40 in which has around say only .6hp @ 12000 rpm and a lot more torque to swing the 11inch prop required.

It probably would not get off the ground due to small prop, yet stunt engine will do the pattern, it's a different type of horsepower.

The aim is to get as much mixture into cylinder that is why we have a liner full of ports and wild timings to allow it to breathe, also why we have to rev motors more than in the old days due to timings especially exhaust timings.

These things make the power band narrower, making prop selection more critical.

I think we may have come close to the limit of engine development as far as getting more mixture into cylinder is concerned, however better materials will help.

FUEL	BTU's per pound	Air/fuel ratio
Methanol	= 9800	4.5/1
Ethanol	= 12500	7/1
Petrol	= 19000	13/1
Kerosene	= 19900	15/1

Robin Hiern…. `

For Sale

For Sale.
38µ (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 selling off engines from the estate of the late Ross Boyd for his widows benefit. Can you please advertise these:

Johnson 35, Stunt Supreme, excellent, in box	$200.00
Cox Olympic, very good (in tatty box)	$350.00
E.D. Racer Mk2, very good (spinner anodizing gone)	$125.00
Webra Mach 1, excellent	$250.00
Elfin 2.49 beam mount, F.I. very good	$150
Merco 35 redhead R.C., with muffler, in box, pristine	$175
Glo Chief 19, circa 1960, very good, enlarged mounting holes	$150

Regards Ian Smith

Tel:- 02 4975 2292

MACCA'S MACHINING & MILLING SERVICES

Tank Valves
Filler Bottle Valves
Shaft Extensions
Engine Plates
Venturis and threaded inserts and general machining.
Phone 07 3288 9263
Mobile 0402 295 370

Taipan propellers in the following sizes available:

Flexible white nylon 7x6	$2.20 each.
Small number of black (Glass Filled) 7x4 & 7x6 left @	$2.50 each
9x6 Black GF	$3.00 each
10x4 Black GF	$3.50 each
10x6 Black GF	$3.50 each

+ letter post or parcel post rates depending on size, weight & quantity ordered.

Pure, first pressing Castor Oil:
Note: New price increase below due to a 20% price increase from my supplier effective 1/12/19

2.5 litre	$35 +3 kg satchel Auspost price
4.0 litre	$50 +5 kg satchel Auspost price
4.9 litre	$60 +5 kg satchel Auspost price

Pick up only 5lt castor oil price is $60
Above prices inclusive of new container cost

Premixed Diesel fuel in new 500 ml & 1 lt steel containers $22 & $35 respectively
I cannot post diesel fuel (i.e. dangerous goods) unless you can arrange with your own courier

PayPal "gift payments" accepted
Bank EFT deposits accepted.
Cash accepted.
PH Ken 0433 797 058 combtkid@hotmail.com

As some of you already know I have taken over the manufacturing of CL props for Supercool props.
Email me for any enquiries / orders
F2C , GY, Speed , Free Flight & other props available.
Contact Ian Thompson
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

WANTED

Wanted.

Enya 45 BB complete with muffler.

Derek Pickard 0419 388 075
businessmedia@hotmail.com.au

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 😉

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 Australia and New Zealand the cost is $35 Aus and other countries $50Aus.
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 an additional option to have it sent to you by email if you desire.
Annual email only subscriptions are $15 per year.
You can order from:
M.WILSON
P.O. BOX 298
SEAFORD
VICTORIA 3198 AUSTRALIA

NAME_____
ADDRESS_____
_____
POSTCODE_____
TELEPHONE_____
EMAIL_____

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 (M.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:-

M. Wilson
P.O Box 298
Seaford 3198
Vic

SURFACE MAIL

Printed by Digital Reprographics Pty Ltd.
Shop 2. 415 Nepean Highway.
Frankston Vic 3199