

P&DARCS

Pakenham & District Aircraft Radio Control Society

THE NEWS MAY 2013



O.S ENGINES DAY 7th APRIL

A busy flight-line on the Eastern Flying Strip
(Note the rain in the distance, it seemed to circle the field all day)



Frank McPherson

REMINDERS:

**# NAME BADGES MUST BE WORN AT ALL TIMES, NO BADGE, NO FLY.
(TO STOP FREELoadERS USING YOUR FLYING FIELD)**

VISITORS MUST BE SIGNED IN, AND WEAR A "STICK ON" NAME BADGE

WHEN STARTING A GAS POWERED MODEL, OR ARMING AN ELECTRIC POWERED MODEL IN THE PITS, THE MODELS MUST BE RESTRAINED

ELECTRIC POWERED MODELS SHOULD BE ARMED AT THE FLYING STRIP AND DISARMED AFTER LANDING

**Next Club Meeting, Sunday MAY 5th
At The Burley Field, 1-00 pm start**

BURLEY FIELD

Wenn Road Cardinia

www.pdarcs.com.au

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Editor's Bit

The O.S Engines Day was a great success, the weather demons did not disturb the flying too much, a little rain in the morning, but a stiff breeze persisted for the rest of the day

There was a good number of flyers participating, lots of spectators, and good food provided by the Cardinia Primary School catering team

Addies Hobbies provided modeling sales, and did very well, (According to Wayne of Addies Hobbies) , with large discounts on all sorts of quality modeling equipment
The next event at our flying field is the Bi-Monthly Twi-Fly on Saturday 27th , lets hope we get a calm nite' so the lightweight models can have a go also

The result of a full – size not being restrained, ouch \$



Frank McPherson Editor



What's On

At P&DARCS 2013

Look in the Club Calendar on page 7

From the VMAA Events Calendar 2013

May

4th-5 th	VMAA State Championships: Scale, Bendigo	BRCAC
4th-5 th	Large-Scale Racing Warrnambool	WMAC
4th-5 th	Annual Fun-Fly Mildura	SAM
5 th	Sports Aerobatics (for beginners) Greensborough	GMAC
11th-12 th	Victorian – S.A. State Champs: Old Timer Cohuna	CMFC
17th	MAAA Rules Conference, 7,30 pm Friday night At the Mantra Tullamarine Hotel, Tullamarine	MAAA
18th-19th	MAAA Council Conference (venue as above)	MAAA
18th-19th	VMAA State Championships: F3A Aerobatics Bendigo	BRCAC
18th-19th	IMAC Scale Aerobatics Albury	TCMAC
19th	Pylon Racing, Q500 & EF1 Werribee	WMAA
19th	Mid-May Muster. Scale Fun-Fly Bairnsdale	BADMAC
25th	“Classic Pattern” Aerobatics, for ‘early’ .60 size models Yarra Valley	YVA
25th-26th	Horsham Fun-Fly. All welcome ! Horsham	WMAA

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PRESIDENT

April 2013.----a busy month!!

Every weekend there was--is ---some activity in which club members could become involved, either to fly or as a spectator, but in both cases to enjoy the fellowship of aeromodelling.

We have, at the time of this writing, already had the OS day at our field, the VMAA Trophy at the state field, and the next two weekends will see, on the 21st, the VFSAA scale competition at our field, and of course, on the 27th(Saturday) our own regular bi-monthly Twi Fly.

The Twi Fly is a most enjoyable afternoon / evening which I recommend. Bring a model if you like--especially if it has lights fitted,--bring your BBQ food (or whatever) for dinner, and don't forget the important other ingredient for a good happy night,---your partner. Hope to see you there,--it's good fun.

Bill' Reynolds, Pres'

SECRETARY

General meeting held 6th April 2013 at the "Burley Field" Wenn Road Cardinia, Meeting opened at 1300hrs Members present, 25

Apologies. D Glossop, P Webber, D Jenkins

Minutes of the previous meeting, accepted. Moved P Somerville
Seconded P Harrison, Carried

Business arising from previous minutes. Nil

President. Car park in front of hay shed to be drive through for modelers on the O.S. day.

Social. VMAA Trophy 13th & 14 April at the State field.

Field. Phones are now working and web site up and running. Getting quotes for the improvement of our driveway. Thanks to Norm Morrish for the work he has done.

Treasurer. Will have a surplus at the end of this financial year. Proceeds from the sale of models etc. from the estate of member Alan Menlove has been donated to the club, by his wife Bevra.

Safety. Discussion on electric planes, for safety it is advisable to arm the plane on the flight line (Pilot lost 2 fingers whilst carrying his plane to the pits and was still armed a few weeks ago)

General. F McPherson and I Chiselett had a look at the hydraulic lifts for the machinery and stated is what the club needs to protect our machinery,

Motion. Moved N Morrish Seconded A Foley "That the club purchase a hoist ", Carried

At the Monty Tyrrell public were seen at the flight line, for safety reason in future events, no public are to be on the flight line, this to be policed by flight line marshals or designated, person/s.

Motion. That the club accept the resignation of R Till as Public Officer. As advertised in the news letter, the club voted the secretary to take on the roll of rules secretary as required by the new constitution in accordance with the new constitutional rules

Moved Norm Morrish, seconded Ivan Chiselett. Carried

Meeting closed at 1343hrs.

Next General meeting Sunday 5th May 2013at the Burley field 1300hrs

Don White Secretary

TEAM CAPTAIN

Greetings Members,

The VMAA Trophy was held at the state flying field in Darraweit Guim over the weekend of April 13th & 14th.

This year there were a total of seven clubs entered, which gives you some idea as to the size of this two day event.

This year P&DARCS was represented with a flying team made up of six club members with most of us flying in two events as below.

Roly Gaumann - Fun Scale

Cliff McIver - Scale Aerobatics & Fun Fly

Kevin Fryer - Old Timer

Andrew Burgdorf - Club Racing & Musical Landings

Paul Webber - Helicopter Hovering Circles & Helicopter Novice

Steve Malcman - Combat & Most Unusual Model

The PDARCS flying team secured an overall third place which is a great effort by our flying team members. Paul Webber came through for us in the helicopter events taking an equal first place in the hovering event and second place in the Novice event. Cliff McIver achieved a first place in Scale Aerobatics as well as a third place in the Fun Fly event. Roly Gaumann also went on to take out second place in the Fun Scale event. Well done guys!

The first event on the Saturday morning was the Combat, which I flew in and managed to gain two streamer cuts and unfortunately two mid -air collisions, earning me a total of 300 points. One streamer cut is equal to 100 points and a mid air is equal to 50 points per model involved. Unfortunately the second mid air resulted in my model spinning to the ground in an inverted flat spin, which I am told was quite spectacular to watch. I was out for the remaining rounds of this event

I would like to personally thank each of the team members for their time and efforts in entering this inter-club event and I hope next year we have a similar team but with competitors in all of the events.

I strongly encourage any club members who are interested in participating in the VMAA Trophy for next year to consider supporting your club as is it really is an enjoyable weekend for all involved.

Photos of the VMAA Trophy Event are on page 8

Steve Malcman P&DARCS Team Captain



WEBMASTER

Well, the Telephone line was fixed, after I made a second call and logged another fault. I had to meet the Telstra Tech at the field. The 3G modem worked well to provide weather data while the line was faulty. Turns out that the fault was caused by the fire near Cardinia Road

Once the line was fixed, I then had a battle the internet provider, because that did not come back when the line was fixed. In all it took me several hours to get it all going again.

You should see an improvement on the speed of the Webcams. I played around with things while the line was faulty and installed some other equipment to help.

I still plan to attack the Westcam at some stage to improve the image, and fit a wide angle lens to the Hay shed cam

Paul Webber, Webmaster

REGISTRAR

Inductions / Orientation

There are still three members that require an induction \ orientation session. Please give me a call or email to arrange a time. I now have Frank McPherson to give me a hand if you wish to make a time during the week.

Please note that I will not chase you to make an appointment.

Changes to your contact information

Let me know of any changes of your details by email registrar@pdarcs.com.au (preferred) snail mail (Club mail address) or least preferred by phone (my mobile).

Membership to date, refer to the spreadsheet below

Paul Webber, Registrar

Phone 0417 558 779

Email: Registrar@pdarcs.com.au

	Paid 2012-13	Unpaid	New 12-13
Associate	6	0	1
Full	99	0	1
Junior	0	0	0
Life	3		
Non-flying Full	0	0	0
Pensioner	36	0	0
Probationary	16	0	8
Student	2	0	0
Spouse	1	0	1
Resigned		18	
Lapsed		11	
Re Joined	2		
Passed Away	2		
Sub Total	163	29	11



SOCIAL DIRECTOR

The last two months have been busy at the club with the Monty Tyrell & OS Days.

I hope you made the effort to attend these events

The OS day was a windy one but we still had people flying & with Addies Hobbies at the field with lots of special offers, I know a number of new planes were purchased.

This added an attraction which obviously proved popular.

Coming up we have our bi-monthly Twi-Fly on the 27th April, with May shaping up to be a quiet month.

If you have some suggestions for activities that we could run at the club in the winter months, why not let me know at social@pdarcs.com.au

Daniel Jenkins, Social Director

SAFETY OFFICER

Nothing to report

Alan Foley Safety Officer

BUILDINGS OFFICER

There are ongoing works to be done around the club e.g. paint storage cupboard door, clean out and finish the storeroom next to the West charging station, vent in the computer cupboard to the outside, repairing main gate fences and signs etc. etc.

But none of them effect the real activities of the club (i.e. flying model aeroplanes)

These, and other works, will be done eventually when I get around to organizing working bees etc..

At the Model Engines "trade night" on Wednesday 10th April they were showing us electrical battery chargers rated up to a working range of 80 amperes but still requiring separate 12 volt supply.

As our present system would go into "melt-down" and the street lights in Cardinia township would "brown-out" I personally think that we have provided sufficient 12 volt supply to the two charging stations and that any future charging facilities should be 230 volt only with users providing their own transformers/rectifiers

This comment may not be relevant to my portfolio but I thought I'd put my tuppence worth in anyway

David Glossop, Buildings Officer

FIELD MANAGER

No report for this month

Norm Morrish Field Manager

FOR SALE

Five brand new WW11 1/6 scale pilots

3 x Pearl Harbour and two P-40 pilots (see photo)

These pilots are full bodied and articulated.

They also come with full accessories i.e.: Parachute, Life Vest, Gloves,

Helmet, Goggles etc. etc.

They were bought for a commercial project and never used.

They are "Dragon" brand and are no longer available.

\$30-00 ea. or I will do a deal if you take the lot.

Thommo' 0408 33 55 23



WORKSHOP HINT

For those that occasionally get some epoxy on your hands, I have found a very neat, safe and easy way to clean it off.

Look in the personal cleaning products line at your local super market. Buy a hand pump bottle of any of the hand sanitisers that are used to kill germs. I use Tricare but any of the alcohol based products should do. Be careful as the liquid is flammable.

Wipe your hands first with a clean dry cloth. Apply 2 pumps of the sanitiser and one to 2 pumps of liquid soap. Rub in well and rinse before it dries with warm to hot water. Then dry your hands immediately with a dry clean cloth.

You may have to do it twice if the epoxy is heavy.

Obviously it won't work if the epoxy has already gone off.

Mark Smith

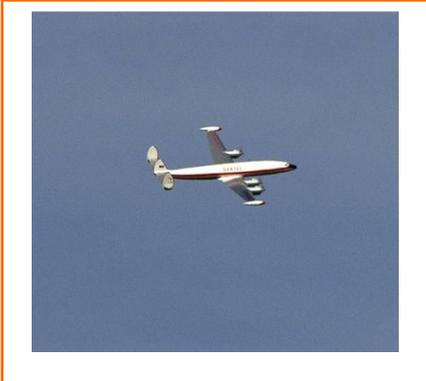
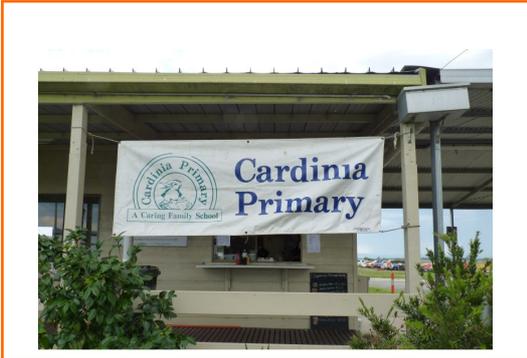
P&DARCS CALENDAR FOR 2013

Date	Day	Confirmed ?	Location	Details	Comments
April					
6 th	Sat	Yes	Burley Field	Club Meeting	
7 th	Sun	Yes	Burley Field	OS Day	
10 th	Wed	Yes	Model Engines	Model Engines Open Evening	
13-14 th	Sat-Sun	Yes	State Field	VMAA Trophy	
18 th	Thu	Yes	Burley Field	Committee Meeting	
21 st	Sun	Yes	Burley Field	VFSAA Scale Competition	
27 th	Sat	Yes	Burley Field	Bi-Monthly Twi-Fly	
May					
5 th	Sun	Yes	Burley Field	Club Meeting	
23 rd	Thu	Yes	Dingley	Committee Meeting (Winter)	
June					
1 st	Sat	Yes	Burley Field	Club Meeting	
20 th	Thu	Yes	Dingley	Committee Meeting	
23 rd	Sun	Yes	Burley Field	IMAC 50cc Competition	
29 th	Sat	Yes	Burley Field	Bi-Monthly Twi-Fly	
July					
6 th	Sat	Yes	Dingley	Annual Club Auction	
18 th	Thu	Yes	Dingley	Committee Meeting	
August					
3 rd	Sat	Yes	Burley Field	Club Meeting & AGM	
22 nd	Thu	Yes	Dingley	Committee Meeting	
31 st	Sat	Yes	Burley Field	Bi-Monthly Twi-Fly	
September					
1 st	Sun	Yes	Burley Field	Club Meeting & Co-Op AGM	
19 th	Thu	Yes	Dingley	Committee Meeting	
October					
5 th	Sat	Yes	Burley Field	Club Meeting	
24 th	Thu	Yes	Dingley	Committee Meeting	
26 th	Sat	Yes	Burley Field	Bi-Monthly Twi-Fly	
November					
3 rd	Sun	Yes	Burley Field	Club Meeting	
21 st	Thu	Yes	Burley Field	Committee Meeting (Summer)	
December					
1 st	Sun	Yes	Burley Field	APA Pattern	
7 th	Sat	Yes	Burley Field	Club Meeting	
11 th	Wed	Yes	Burley Field	Annual Dinner & Twi-Fly	

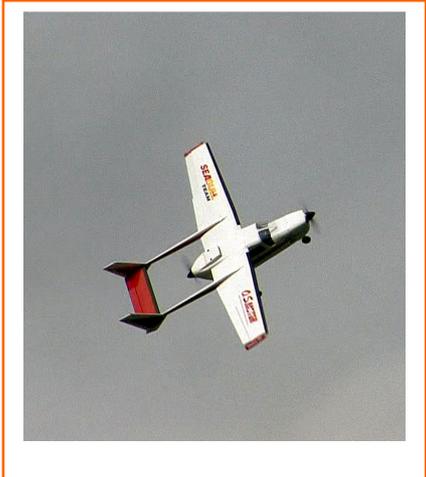
THE O.S DAY 7TH APRIL



The hard working ladies from Cardinia Primary School



Addies Hobbies set-up



Tony Farnham of Model Engines addressing the crowd

VMAA TROPHY AT THE STATE FLYING FIELD

Anon



THE OCTANE RATING OF GASOLENE

You have seen it at the petrol pump or bowser, but have you ever wondered what the Octane rating of gasoline means, and where and how it was derived ? well, read on



Typical Fuel bowser and the advertised octane ratings for each mix

During the 1920s the growing role of aviation relied on the increasing power of engines which relied on the development of better grades of gasoline

This brought major improvements in horsepower, fuel economy, and lightness of weight.

For comparison, the Liberty engine of **World War I** had 1,650 cubic inches in cylinder displacement

Using the gasoline of the day, it developed 400 horsepower.



Liberty Engine Of WW1

The Rolls-Royce Merlin engine of **World War II** had the same displacement as the WW1 liberty but produced up to 2,200 horsepower, using vastly better grades of gasoline



Merlin Engine of WW2

In the 1930s, Samuel Heron, a longtime leader in this field, stated that "about half the gain in engine power was due to improvements in the fuel "

High compression and “ Knock “

The focus of fuel development was the struggle to boost engine compression ratio, piston motors produced more power and gained better fuel economy by achieving high compression ratio.

But the compression values were limited by a motor's ability to resist knock.

Knock is a detonation of the fuel-air mix that occurs prior to the correct ignition timing, (often called pre – ignition) one early researcher described it as "the noise that could be heard across a ten-acre lot."

During **World War I**, all that anyone knew about the subject, was that kerosene made motors knock badly while gasoline often did not. The gasoline of the day was distilled directly from crude oil and had octane numbers as low as 50.

But, at this stage, the octane rating lay well in the future, and a principal measure of fuel quality was its volatility, or ease of evaporation. Volatile fuels had a reputation for avoiding knock.

Sir Harry Ricardo a British researcher, later recalled that "the discriminating motorist never bought a drop of gasoline without first dipping his finger in the can and blowing on it to test its volatility."



Testing fuel for volatility in the 1920s

Tetraethyl Lead

Concern for this property led to the main advance in this area: the knock-suppressing qualities of tetraethyl lead.

Two research chemists, Thomas Midgely and T. A. Boyd, began by noticing that substances similar to aniline proved effective but produced a smelly exhaust.

Tellurium was even better but was also smellier, stinking like "a mixture of garlic and onions:"

Midgely and Boyd then proceeded systematically testing additives by using the chemical periodic table, and by 1921 they learned of the usefulness of tetraethyl lead.

It had a rich, bitter odor, and had been known during the war. Used as a fuel additive, it gave resistance to knock when mixed with gasoline in quantities as small as a few cubic centimeters per gallon.

Californian Crude

For some time, people had been aware that gasoline distilled from California crude had particularly good antiknock properties.

Investigation now showed that they had octane ratings as high as 73. The American Army responded in 1930 by issuing a specification that called for aviation gasoline of 87 octane, which was made by adding tetraethyl to this California fuel.

Further- research showed that modest increases in octane could give dramatically disproportionate improvements in horsepower.

In 1932 a Wasp radial aero engine was under test at an Army laboratory, putting out 720 horsepower when using 91-octane gas. It nevertheless continued to knock at full throttle, and the investigators responded with a California grade that contained far more tetraethyl than usual. Heron later recalled that "to everyone's surprise, and particularly my own, this fuel permitted 900 horsepower." This particular blend was useless for operational squadrons, for much smaller amounts of tetraethyl were damaging engine exhaust valves. Still, these results spurred new interest in 100-octane fuel.

Iso-Octane

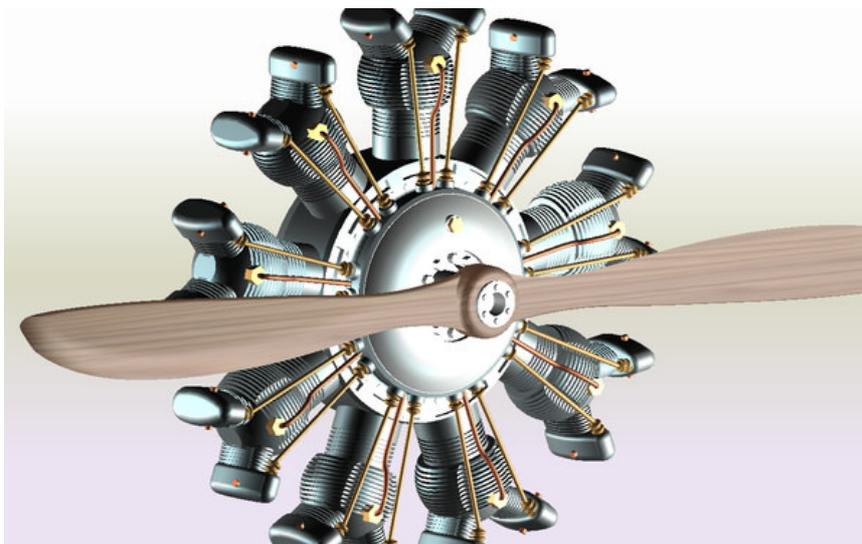
Iso-octane now drew renewed attention. Its high cost came about because it was available only from the American Rohm & Haas Corporation, which prepared it as a synthetic organic chemical by using an elaborate process, and in small quantities as a specialist chemical. It was out of the question to use iso-octane itself, for it cost up to £25 per gallon at a time when the wholesale price of gasoline was measured in pennies.

Shell Oil succeeded in providing a thousand gallons of this fuel, in a less pure grade, and the results were outstanding.

They showed that using **Iso - octane boosted the power of a Wasp or Cyclone aero engine by up to thirty percent.**

Shell and Standard Oil went on to build plants to produce iso-octane in quantity, at affordable prices.

In 1936 the U.S Army's chief of staff ordered that Iso - octane fuel was to serve as the standard aviation gasoline for its warplanes.



Wasp radial aero Engine of 1932

The Octane Rating

Chemist **Graham Edgar**, working for the firm of Ethyl Gasoline, defined the octane scale in 1927.

He found that iso-octane, a specialist chemical, which has a molecule with eight carbon atoms, gave far better knock protection than any available gasoline.

Edgar declared that if a fuel prevented knock as well as iso-octane, it would be rated at 100 octane, (100% effective as Iso-Octane)

In addition to drawing help from chemists, the more powerful engines of that era spurred a move toward flight at higher altitudes.

High-flying military aircraft were harder to shoot down. For airliners, flight at altitude took these aircraft above the clouds, while giving a measure of relief from heavy turbulence that often caused passengers to become severely nauseous.

For both types of craft, the reduced air pressure of the high altitude diminished the drag and gave higher flight speeds.

In turn, those higher speeds gave increased range for both bombers and the airlines.

The downside of the increased altitude, was the thinner air reduced the power available from the piston engines, solving that problem may be the subject of a second article



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 No Darrat on 0417 125 101 or raj@darrat.com

Next Club Meeting, Sunday May 5th
 At the Burley Field, 1-00 pm start

P&DARCS Newsletter

Pakenham & District Aircraft Radio Control Society

If undelivered return to
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