

PROP TORQUE

Official Newsletter of the
LAUNCESTON MODEL AERO CLUB Inc.
www.lmacrc.com

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IMPORTANT ANNOUNCEMENT!

THE LMAC COMMITTEE INVITES ALL MEMBERS TO COME TO THE FLYING FIELD ON SATURDAY 8 JULY TO PARTICIPATE IN A REVIEW OF THE FLIGHT AREA LAYOUT.

COME AND HAVE YOUR SAY!

TIME: 11:00AM

EDITORIAL:

Welcome to the June issue of Prop Torque, the first newsletter for the new Club year of 2006 - 2007.

Your co-editors were again elected to the position of newsletter editors at the last Committee meeting, and we look forward to serving LMAC in the coming year.

This month we have two articles that we are sure you will enjoy. The first is about a new development in batteries and was submitted by Jacques Wakae, whom we welcome back to writing for Prop Torque after a long absence. The other article was submitted by Max Wiggins and is about the new Boeing 797 airliner – you are sure to be surprised by what you see!

As we heard at the AGM, the newsletter will only be as good as the contributions that are submitted, so we will continue to ask you for your support. It could be a technical article, or it might be as simple as sending in an aero-modelling web site that you enjoy visiting; just keep 'em coming in!

Next month we hope to bring you something of Peter Kidson's personal history with model helicopters. We hope that you enjoy this issue.

Gerry and Virginia de Groot.

Editors

From the Aviation Dictionary:

Engine Failure: A condition that occurs when the fuel tank mysteriously becomes filled with air.

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CAPTAIN'S REPORT

Gerry de Groot

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Hello Everyone

Welcome to another Captain's report, the first for the new club year.

First of all, my thanks to all those who supported me at the AGM. My aim is to lead the club over the next two years in a way that will make everyone feel that they are part of a large (and happy) family, sharing a common interest in aero-modelling.

To start with, the Committee has decided to seek comments and suggestions from members regarding the layout of the flying field. We will do this through an informal meeting of the Committee, to be held at the field on Saturday 8 July at 11:00am, to which all members are invited. The purpose of this meeting will be to review the layout of the flying areas. No matter whether your interest is in fixed wings or in helicopters, IC or electric, power models or gliders; if you have a view on the field layout and flying operations at the field, come along and have your say. The aim will be to reach agreement on the layout and then for the Committee to take this forward for approval.

You may remember that the Committee decided to cut back the number of competitions this coming year to about half of what we ran last year. This was in response to members' views that competitions reduced the time available for general flying. While this is true, I would not like to see LMAC fall into the way of some clubs where little competitive flying is done. Competition sharpens your flying skills and also promotes good club spirit. So I encourage everyone to go in one or more competitions. Pick something that appeals and do a bit of practice; then turn up on the day and enjoy yourself!

I look forward to seeing you all at the flying field.

Gerry

REMINDER: CAFÉ SYMMONS IS IN WINTER RECESS UNTIL CLUB DAY IN SEPTEMBER. SO, PLEASE BRING YOUR OWN LUNCH. (DRINKS ARE STILL AVAILABLE.)



SECRETARY'S REPORT

Geoff Hays

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Hi Everyone

Well here we are again, another month has rolled away and we are now well and truly in the grip of the winter days. We have had some really good flying weather lately but surely it must break soon.

We have now had our Annual General Meeting and I must say that it was perhaps the best attended AGM that we have had for many years, 31 persons present. Maybe there was a particular reason that we had so many, but having said that I do feel that it was a productive meeting in many ways. Whilst all may not agree of the outcome of some of the discussion and decisions, we did have the opportunity to voice what we as individuals felt and the outcomes were of the majority's wishes.

The Election of office bearers remains as before, Gerry de Groot President, Kevin Hay and Andrew McEntyre as committee members.

At our last Committee meeting the other positions were attended to with Andrew resuming the position of Contest Director, Gerry and Virginia de Groot again joint editors of Prop Torque.

The other position, that of Safety Officer, the whole committee and not one individual have assumed office for the time being. It was discussed that this position could possibly be filled by a sub committee of say 3 persons interested in safety issues and are present at the field on a regular basis. This sub committee if established would report to the general committee of any items of safety that may arise from time to time.

If any member feels that they may like to be a part of this then you are invited to speak to one of the committee or even draft a written response so that it may be discussed at our next committee meeting. The committee as a whole feels that we as a club of many members need to be pro active on this issue in the light of developments in the recent past.

You have all received your subscription renewal forms by now and are reminded that you need to return them to me by the end of the month, appropriately filled in, whether you are renewing your membership or not. There is a place for all this on the form and just because I may not have your form by the end of the month I will not know if you still intend to renew or not, so please return them promptly.

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I would also mention that seeing that quite a few are now receiving their Newsletter electronically, I will be posting your new membership cards out to those that I do not see personally week by week.

But I will wait until I have received your new FAI licence cards as well to save on postage, so don't worry that you have not received your cards and receipts promptly as that is the reason.

Our membership continues to grow with another past member rejoining after a long absence Peter Daniel, We welcome him back to the club, along with new junior member Daniel Tantemsapya, and associate member Chris Keeling from PFL. Some may be aware that some of our full members have also become associate members with other clubs as well, and this is healthy intermingling of people of like-minded interest joining together in doing what they like best.

The topic of our Annual Dinner was discussed and whilst it *will* happen a date has yet to be fixed, but it maybe a bit later than usual.

I would like to mention, especially to those newer members, the fact that I have LMAC club stickers available for your models \$1.00 per sheet of 4 of different sizes; LMAC cloth badges are \$10.00 each.

Clubhouse keys and Frequency Keys are \$3.00 each. Please see me if you require any of the above.

Well that about wraps it up for me for another month, so as always,

Happy Landings To all

Geoff.

“Bad designs we have known” (with apologies to Gary Larson)



All Models Day - 17 June 2006

This was not a competition as such, but we had a lot of fun. Tickets awarded for each flight were later drawn for a box of choccies! (They were very nice. Ed)



← Earnest discussion on deep technical issues in Electric Corner

Cliff after another successful flight with his Cub. ASP60 4-stroke power →



← Caught on Candid Camera! Kerry and Alice enjoying the proceedings.

More from All Models Day.....



Two old timers: Editor's "Deacon" on left and John de Groot's "Sportster" on right. Both powered by PAW 09RC diesels, to the great amusement of onlookers! →



George's nicely finished electric model after some minor technical adjustments

Repent, for the end of ICs is Nigh!

Well, maybe not, but for the last decade or so, manufacturers have strived to improve the Lithium-Ion battery as it showed the best of possibilities.

The firm 'A123Systems' has released batteries in 2005 to Black & Decker to power their next generation of 36V power tools by DEWALT.

Major company shareholders in the firm are; Motorola, Qualcomm, Sequoia Equity, North Bridge, YankeeTeK, The Massachusetts Institute of Technology and OnPoint Technologies (a strategic private equity, funded by the US Army)


In February of 2006, a further investment of USD 30 Million was made to increase production and also the battery product portfolio.

What makes this battery so interesting? Here are a few salient points;

- At end of charge, the Lithium is totally converted and no danger of fire exists.
- The discharge capabilities are over 100C (C = the battery capacity)
- The charge time is down to 5 minutes (12C)
- The battery handles full depth of discharge without problems.
- The envelope is sturdy , probably a metal can in the sub-C format.
- Charge/discharge cycles are in excess of 1000.
- Only Li-Pos have a slightly better capacity/mass ratio.

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Technology Comparison



Best combination of Power, Safety, and Life

	Power Density (<3Ah cy cells)	Weight to discharge @1500W	Safety	Life at 100% DoD	Environmental friendliness
A123 M1	>3000 W/Kg	0.9 lbs	✓	>1000	✓
High Power Li ion	1350 W/kg	2.75 lbs	✗	500	✗
NiMH	750 W/kg	4.4 lbs	✓	<1000	✓
NiCd	600W/kg	5.5 lbs	✓	<1000	✗

Based on: Novel nanoscale highly active materials (patent pending)
Low impedance cell design and electrolyte (patent pending)

Applications: Lawn and Garden, Power tools, Hybrid Vehicles, Medical Devices, Military...

Further cell parameters are unavailable (trying to stay ahead of the competition)
When will they be available? What will they cost? Who knows. Black & Decker and the US Military will probably absorb the first 2-3 years of production and pay a premium for it.

Now who has a charger available for say a 4A Lithium-Ion battery that one wishes to fully charge in 5 minutes? It only needs to be able to pump out 48 Amps!

JLW

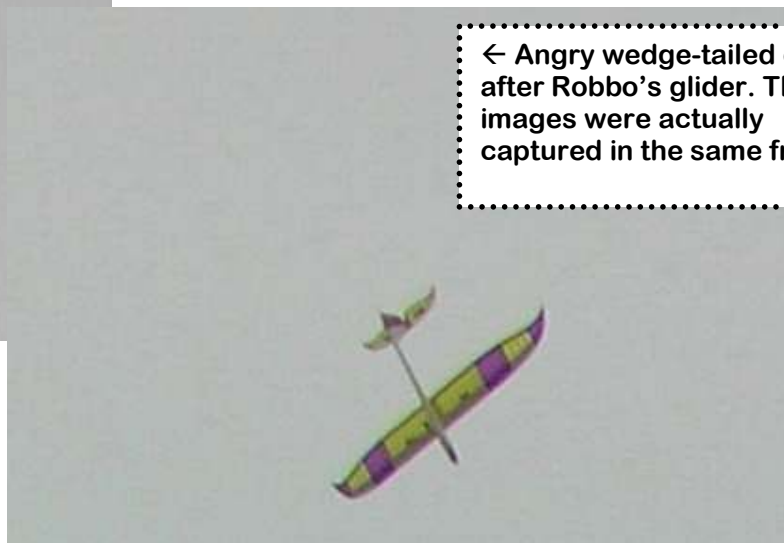
Photo-snippets – 27 May 2006



Not a good day for some.
Chris' Zero after a flame-out
at low altitude (left).
Walters family after hunting
for downed model. (below)



← Angry wedge-tailed eagle
after Robbo's glider. These
images were actually
captured in the same frame



New Boeing 797 in competition with Airbus A380

(Contributed by Max Wiggins, with acknowledgement to Kevin Swiggs)

Boeing is set to take on Airbus with a giant (1000 seat) 797 Blended Wing aircraft. Boeing is preparing a 1000 passenger jet that could reshape the Air travel industry for the next 100 years. The radical Blended Wing design has been developed by Boeing in cooperation with the NASA Langley Research Centre. The mammoth plane will have a wing span of 265 feet compared to the 747's 211 feet, and is designed to fit within the newly created terminals used for the 555 seat Airbus A380, which is 262 feet wide.

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The new 797 is in direct response to the Airbus A380 that has racked up 159 orders, but has not yet flown any passengers.

Boeing decide to kill its 747X stretched super jumbo in 2003 after little interest was shown by airline companies, but has continued to develop the ultimate Airbus crusher 797 for years at its Phantom Works research facility in Long Beach, Calif.

The Airbus A380 has been in the works since 1999 and has accumulated \$13 billion in development costs, which gives Boeing a huge advantage now that Airbus

has committed to the older style tubular aircraft for decades to come. There are several big advantages to the blended wing design, the most important being the lift to drag ratio which is expected to increase by an amazing 50%, with overall weight reduced by 25%, making it an estimated 33% more efficient than the A380, and making Airbus's \$13 billion dollar investment look pretty shaky.

High body rigidity is another key factor in blended wing aircraft, It reduces turbulence and creates less stress on the air frame which adds to efficiency, giving the 797 a tremendous 8800 nautical mile range with its 1000 passengers flying comfortably at mach .88 or 654 mph (+-1046km/h) cruising speed, another advantage over the Airbus tube-and-wing designed A380's 570 mph (912 km/h).

The exact date for introduction is unclear, yet the battle lines are clearly drawn in the high-stakes war for civilian air supremacy.

(Blended wing aircraft are an extension of the flying wing concept. Read more on this site: <http://www.twitt.org/bldwing.htm> Ed.)

Odds and Ends

Club building project

We have been asked – whatever happened to the Club building project? We know five or six sets of plans were sold, but is anyone actually *building* a Pink Raven?

The Missing Kettle

Some folk were concerned recently that there might have been a break-in at the clubhouse when they found the smaller of our two kettles missing a few Sundays ago. Could it have been stolen? Perhaps, but who in their right mind would steal a solitary kettle? *(yes, and leave all the other valuables. Ed)*

Well, we can shed some light on this mystery. We know that a certain person (who shall remain nameless) decided to make a cup of afternoon tea for himself and so he filled the kettle, lit the gas and then WENT OUT TO FLY!

He came back much later, having forgotten all about the poor kettle. What he did see was a puddle of molten aluminium under the kettle, having come from the bottom, thus rendering the kettle useless. The same person has since replaced the kettle with a shiny new stainless steel one.

All's well that ends well, that's what I always say.



LMAC Contest Calendar 2006 - 2007

Date	Event	Club	Location	Time
Sat 17 June	All Models Day	LMAC	Symmons Plains	9.30am
Sat 22 July	Free Flight & Old Timer Day 1	LMAC	Symmons Plains	8.00am
Sat 19 Aug	Scale Day 1	LMAC	Symmons Plains	9.30am
Sat 16 Sept	Free Flight & Old Timer Day 2	LMAC	Symmons Plains	8.00am
Sat 21 Oct	7 Cell Electric Glider 1	LMAC	Symmons Plains	9.30am
Sat 11 Nov	Pattern Day 1	LMAC	Symmons Plains	9.30am
Sat 20 Jan	Pattern Day 2	LMAC	Symmons Plains	9.30am
Sat 17 Feb	7 Cell Electric Glider 2	LMAC	Symmons Plains	9.30am
Sat 24 Mar	Event TBA	LMAC	Symmons Plains	9.30am
Sat 21 April	Scale Day 2	LMAC	Symmons Plains	9.30am
Sat 19 May	Event TBA	LMAC	Symmons Plains	9.30am
Sat 23 June	Fun Fly Event	LMAC	Symmons Plains	9.30am

Note LMAC Contests to be on the day specified, if the weather is not suitable then the next day Sunday. If that too is not suitable then it is cancelled and moved to the next event scheduled.
N.B. The committee may re-schedule the event for another time to be advised.

LMAC Club Day is held on the first Saturday of each month
 (HMAC first Sunday of each month)

“Café Symmons” Operates each Contest Day and Club Day

LMAC invites flyers from affiliated clubs to come along and participate

*Does not apply during winter months: June, July and August

COMING EVENTS for your Diary!

Sat July 1	LMAC Club Day	Symmons Plains
Sat July 8 11:00am	LMAC Committee Meeting at Field	Symmons Plains