

# PROP TORQUE

Official Newsletter of the  
**LAUNCESTON MODEL AERO CLUB Inc.**

[www.lmacrc.com](http://www.lmacrc.com)

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F111 seconds before executing a perfect wheels-up emergency landing at an Australian Air Force base. The skills of the flight crew were widely praised.

Volume 21

# JULY 2006

## **EDITORIAL:**

Welcome to the July issue of Prop Torque.

The Editors are pleased with the response to the on-going request for material for publication; we are still not exactly swamped with contributions, but are grateful for the steady response coming in – thank you to those who are contributing.

This month we have two feature articles for your ‘edification and enjoyment’. Jacques Wakae has submitted another technical article, this time it is about a Low Cell Detect Circuit for lithium polymer (Li-poly) batteries. The other article is a light-hearted look at an aspect of aeromodelling and was submitted by Dave Jacobs.

As usual, we have managed to find a variety of small snippets to fill in the gaps.

The article about Peter Kidson’s and model helicopters has been held over to next issue, but I’m sure it will be worth the wait.

Please enjoy this issue of Prop Torque!

Gerry and Virginia de Groot.

Editors

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### **Basic Flying Rules:**

1. Try to stay in the middle of the air. 2. Do not go near the edges of it. 3. The edges of the air can be recognized by the appearance of ground, buildings, trees, the sea and interstellar space. It is much more difficult to fly there. (Anon.)

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### **LMAC Office-bearers:**

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# CAPTAIN'S REPORT

**Gerry de Groot**

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Hello Everyone

First up, some feedback about the matter of the orientation of the flying field.

The Committee was very gratified by the good attendance at the meeting held at the LMAC field on 8 July. Many thanks to all who took the trouble to attend and aired their views.

At that meeting all the members who were present agreed that the strip should be returned to the same direction as it was previously. Based on the strong direction shown by the membership, the Committee voted unanimously to apply to the TMAA / MAAA to approve the necessary changes. A submission was then put together. We were on a tight time frame, but the submission was sent off in time to make the agenda for the next MAAA executive meeting, scheduled for 5 August.

At this stage a reminder might be in order regarding what happens from here on. The Committee previously agreed with the MAAA that there would be no changes to the present layout until two things happened:

- the application must be approved; and
- the new arrangements must be inspected and 'signed off' for the changes to take effect.

*This means that until these two things happen, it must be "business as usual"; that is we continue to fly on the present (angled) strip.*

On an entirely different note, it is great to see the number of members attending the field to fly regularly. Although the weather has been a little indifferent lately, there have been some remarkably good days (like the day of the Free Flight and Old Timer Competition, when you could not have asked for better weather!). There is also quite a bit of flying activity on weekdays and this is good to see.

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

Gerry

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## **REMINDER:**

To anyone who has not yet renewed his or her subscription – please do so quickly. It only adds to the club's administrative burden to have to process stragglers.



# SECRETARY'S REPORT

**Geoff Hays**

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Hi Everyone

July is the middle month of winter and it sure does feel like it. Well, last month I seemed to have quite a bit to report on, but this month is quite the opposite. Like most years, in winter things seem to go quiet, and the club scene is about the same.

There have not been any contests and the flying conditions while sometimes quite magic have not really encouraged many to come out to the field. Saturday July the 8<sup>th</sup> saw a good number at the field to discuss the flying field and related items, unanimously agreeing that the club should make a submission to the MAAA to revert our flying strip back to the parallel arrangement. All would seem to agree that what we now have is something of a problem and is unsafe for both fliers and models alike.

The committee has been given a clear mandate from the membership to make the submission, but until we have this agreed to by the MAAA things will have to remain as is.

I would like to thank the members generally for their prompt return of their subscriptions for this new club year; at the present our paid up membership stands at 38 out of a total of 50 (including new members) if all at the end of June renew.

We expect that some will not be renewing for a variety of reasons like going away and being out of the State, for example.

But there are just a few who will be renewing in the near future, I feel sure.

We do continue to get new members, and I would like to welcome Graeme Jones (Senior Member) and John Silczack from PFL (Associate Member). Please make them welcome when you see them on the field so they in turn can enjoy their flying experience with us.

Well that about wraps it up from me for this month until the middle of September, as I will be away interstate to (hopefully) enjoy warmer climes.

So, as always:

Happy landings all,

Geoff.



# CONTEST DIRECTOR'S REPORT

## Andrew McEntyre

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Hello Everyone

Well it's great to be back in the CD's chair for another year and I hope everyone is looking forward to the new year of competition. As there is only one event scheduled for each month this will suit many of us, as it will give us more time to enjoy the hobby we love.

Our first competition for the new year was the Free Flight and Old Timer Day held on the 22<sup>nd</sup> July. The Free Flight competition was an outstanding success with two making the trip from Hobart and 6 flyers competing.

It was good to see a new member compete or should I say old member, as Peter Daniels was a member of the club some years back.

Something I think I may consider for the next Free Flight comp is giving Tony Gray some type of handicap system as Tony once again won the day; well done Tony - that's a hat trick.

The day was such a perfect one for Free Flight with no breeze and with the sun shining most of the day. I find it a little hard to put into words all the fun and games that can happen at a F/F event. Some of the runners were totally out of breath after having to run long distances to recover models. A number of models had altercations with pine trees and others kept going up in thermals, which seemed to go forever. I hope the next Free Flight event, which is in September, will be supported as well as this one.

Thanks to the time keepers and helpers Cliff and Daniel Walters and Craig Homan, who started out as a timekeeper but by the end of the day said he felt like a pro runner.

The Old Timer event was due to start just before lunch but this was deferred till after lunch because only Gerry and myself had brought Old Timers to fly. As no one else turned up I had no option but to cancel the event; this was very disappointing, to say the least. As in the past there have always been several flyers keen to compete in this event I hope more will make the effort in September for the second round.

I suppose I could say that Gerry and I where equal first - what do you think?

## Free Flight Results Round 1 2006

Place	Pilot	Number Flights	Score
1 <sup>st</sup>	Tony Gray	30	1905
2 <sup>nd</sup>	John de Groot	24	1812
3 <sup>rd</sup>	Peter Daniels	25	1758
4 <sup>th</sup>	Anthony Gray	20	1559
5 <sup>th</sup>	Tim Sydes	21	947
6 <sup>th</sup>	Gerry de Groot	12	696

I look forward to catching up with everyone at the field

Andrew

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### **Photo Corner**

Interesting landing approach.....



And, what to do with the remains of crashed models.....





# FFOT (Free Flight & Old Timer) Day - held on 22 July 2006



.....  
: Above: Free Flight competitors (L to R): Tony W Gray, Peter Daniel, John de Groot, Gerry  
: de Groot, Tony R Gray, Tim Sydes.  
: Below: Entrants in Old Timer: Gerry de Groot (left) with 30FS 'Debby' and Andrew  
: McEntyre (right) with 'Red Zephyr'. (With only two starters, no competition was held.)  
: .....



## **LCDC, Do You Have One?**

**By Jacques Wakae**

For the very few of you who don't know (grin), LCDC stands for Low Cell Detect Circuit. So what is it and do you need one?

The advent of lithium polymer ("lipo") batteries has required some heavy experimenting and conjecturing with regard to how far a lipo can be discharged in safety. It is now generally recognised that a lipo should NEVER go below 2.4V and that any excursion below 3V is detrimental to the life and safety of the battery. With Nicads, speed controllers were quite complacent about the low voltage cut-off point. Most tripped at 5.5V or even less, regardless of how many cells were in a pack!

Now, new controllers allow you to select the cut-off point and even the number of cells in a pack.

A preset trip point is all well and good, but it is only monitored as a sum (total) voltage for the whole of the pack. This will not prevent a single cell, which could be defective or of lower capacity, from discharging below 3V whilst the total voltage is still above the trip point.

Here comes the LCDC to the rescue. The LCDC fits between the receiver and the controller and is also connected to all the individual Lipoly cells. It monitors the voltage of each cell and as long as each individual cell is above a preset voltage (e.g., 3V), it allows the signal from the receiver to pass unhindered to the controller. However, as soon as a single cell aims to become an individual and do its own thing (like a trip down under), the LCDC will start to retard the throttle, which will have the effect of raising the depressed voltage of the pack back up. Whatever the signal pulse length was at the time of the last excursion, now becomes the maximum signal that will be allowed through the LCDC to the controller. The maximum allowed signal will keep on decreasing as long as one of the cells stays below the trip point, all the way down to motor off point, if that is what is required.

A bonus can be an LED pinpointing the cell that dipped. If this is repeatedly the same cell, flight after flight, then you know that you have a problem cell in need of special care.

Note that using an LCDC supercedes the need for a lipo-compatible controller, so getting an LCDC can bring those old controllers back into play.

Where do you get one? The firm Schulze will release some in the near future, some for BEC and some for non-BEC. They call it a 'Lipo Discharge Monitoring And Throttle Interaction', Wow! It will sell as a 'Lipodimatic'.

Unfortunately, they seem to stick to their own plug & socket system which is not widely used outside of Europe.





Yours truly is currently experimenting with making one for 3 lipos with BEC.

If you have packs in parallel, then you would use one LCDC on each pack and daisy-chain the signal path from receiver to LCDC-1, to LCDC-2, to controller.

JLW

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## **The Good Wife's Guide To Dealing With a Worn Out Modeller After a Hard Day at the Flying Field.**

By Dave Jacobs

*(The opinions expressed in the following item are those of the author. The editors take no responsibility whatsoever for the information contained in this article, since compliance with sexual harassment, gender equality and equal opportunity legislation cannot be guaranteed! – Ed. ☺)*

1. Have dinner ready. Plan ahead, even the night before, to have a delicious meal ready on time for his return. (This is to let him know that you have been thinking about him and are concerned for his needs.) Most men are hungry when they arrive home from flying and the prospect of a good meal is part of the warm welcome needed after a hard day on the field.
2. Prepare yourself. Take 15mins to rest so you will look refreshed when he arrives. Touch up your make-up, put a ribbon in your hair and be fresh-looking. Remember, he has been with a lot of work-weary people.
3. Be a little gay (in the proper meaning of the word) and make sure you are interesting for him. His hectic day may need a lift and one of your duties is to provide it.
4. Clear away the clutter. Make one last trip through the main part of the house just before your man arrives.
5. Over the cooler months of the year you should prepare and light a fire for him to unwind by. Your man will feel he has reached a haven of rest and it will give you a lift too. After all, catering for his comfort will provide you with immense satisfaction. At the time of his arrival eliminate all noise of the washer, dryer or vacuum cleaner. Try to encourage the children to be quiet.

6. Be happy to see him. Greet him with a warm smile and show sincerity in your desire to please him.
7. Listen to him. You may have a dozen important things to tell him, but the moment of his arrival is not the time. Let him talk first; remember, his topic of conversation (flying) is more important than yours.
8. Your goal. Try to make your house a place of peace, order and tranquillity where your husband can renew himself in body and spirit so he can devote his attention to the next project in his workshop.
9. Make him comfortable. Have him lean back in a comfortable chair. Have a cool drink ready for him. Take off his shoes and speak to him in a low, soothing and pleasant voice about the day's flying.
10. Don't ask him anything that questions his actions, judgements or integrity. Remember, he is the master of the house and you have no right to question him. A good wife knows her place.

**!!!!!!!!!!!!!!!!!!!!**

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## **News from the MAAA Scale Sub-committee – by Clive Butler**

There has been limited movement within the scale fraternity over recent months. Matters to report include:

1. CIAM Plenary Meeting rule changes affecting scale relate to the "choice of options" rule. 6C.3.6.11 Realism in flight - Replace paragraph (page 71) starting with: *Judges should award.....* with the following paragraph: *Judges should take into account the presentation of the chosen options, awarding higher marks in this section for more ambitious manoeuvres, but taking into account the capabilities of the prototype. It is expected that most competitors should score quite highly in this section, provided appropriate flying options are chosen. A default mark of "8" is recommended leaving a possible additional "2" marks for manoeuvres that fully demonstrates all aspects of the prototype's performance envelope.*
2. Quite a lot of interest in next year's (return) match in the Trans Tasman. For those who might be interested, the team selection trial will be the F4C contest at the Albury Nats. The rules for TT are F4C but without the 15Kg weight limit. If anyone wishes to enter a heavier model, they can still enter F4C but of course the score will only count towards team selection - not the F4C champs.

3. The Scale Sub-committee has been asked to "look after" Large Scale Racing including maintenance of rules etc. by liaising with the Pylon Subcommittee. Indications are that the scale subcommittee will not accede to this request; however if anyone has a point of view that they wish to put, please contact me before the 11th August (my reporting deadline).

Clive Butler  
Tasmanian Delegate  
MAAA Scale Sub-committee

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## **Odds and Ends**

### *Club building project*

Update on the Club building project:

We know of only one Pink Raven actually under construction at the time of writing.  
*(A bit disappointing -Ed)*

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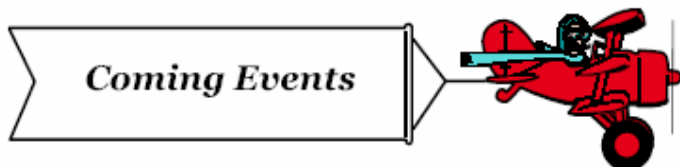
### *Associate Membership and Insurance Cover*

If you have joined LMAC as an Associate member, it is important to realise that you cannot automatically start flying at LMAC unless you have:

- a) renewed your affiliation (MAAA fee) at the club where you are a full member;
- b) Provided proof of affiliation to a member of the LMAC Committee. This need not be your FAI Card (which can take a while to process) but can be your receipt for (full member) fees paid to your primary club.

This is necessary to protect all members against the possibility of uninsured members flying. It is possible for someone to renew their Associate membership with LMAC while having inadvertently overlooked renewal of affiliation at their primary club. *In this case the Associate is not insured and must not fly.*

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### 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	9.00am
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 5 August	LMAC Club Day	Symmons Plains
Sat 19 August	LMAC Scale Day 1	Symmons Plains