

The Tingalpa

July—August 2008

TRANSMITTER



*40 years at Porter's Field
1968—2008*



Tingalpa Model Aero Club – www.tmac.asn.au

MANAGEMENT COMMITTEE

President.

Peter Stevenson 0401 700 675 President@tmac.asn.au

Secretary.

Phil Gartshore 0407 070 263 TMAC Secretary PO Box 2108
Tingalpa QLD 4173

Treasurer

Jim Viles 0413 876 531 jmv_bao@fairpricetelecom.com.au

Registrar

Phil Gartshore 0407 070 263 registrar@tmac.asn.au

Committee Members.

Committee member (Liaison Officer).	Will Sipma	3901 2208
Committee member (Editor)	Peter Biddle	0402 403 469, tmaceditor@bigpond.com
Committee member (Web Master)	Randall Mowlam	WebAdmin@tmac.asn.au
Committee member	Glenn Crossley	
Committee member (Field maintenance)	Gregor Kruberg	3397 5697
Committee member	Allen Danvers	
Committee member	Michael Hobson	
Plan Library.	Ted Hacker	3355 4714

TMAC Life Members

Doug Kent, Will Sipma

TMAC Life Member's Trophy.

Gregor Kruberg

Flight instructors.

Tony Gliddon (07) 3899 0885
0408 648 379

Noel Wilson (07) 3890 2520

Heavy model inspectors.

Chris Howarth, Richard Symes,
Ian Howard, **Heavy & giant models**
Kevin Dodd, Doug McLlraith

Turbine model inspectors

Kevin Dodd, Phil Collins.

On The Cover
Noel Stewart and his Piper
Cub, seen at the recent Pe-
ter Cutler Day.

From the Editor.

Since the last edition we have had a couple of successful events at the field. Firstly we had the Fun Fly day organised by Ron Dobbie. If you weren't there you missed a great day. I have never seen so many pilots throwing aircraft around the sky to vigorously before. Ron reports on this event on page five.

Secondly we had the annual Peter Cutler and scale day. This was a very successful day thanks to all involved. See Peter's report on page six.

With help from a range of internet and textbook sources I've put my technical hat on again for this issue and written a short article on centre of gravity and balancing models. This article also shows how to find where the centre of gravity should be on your model. I hope this is of some use.

While I may currently be the editor this does not mean I can write everything for this newsletter, and I appreciate the contributions made by others in previous issues. But if you feel like putting pen to paper, or finger(s) to keyboard to help fill the pages please do so. It would be great to get something from the chopper guys (Perhaps along the lines of 'why do helicopters fly')

Peter Biddle

All pictures in the Transmitter are taken by the editor unless otherwise noted.





Presidents Report

From the Secretary.

Motor Tuning Area

Dave Sipos and Jim Viles raised the issue of having a separate area for tuning motors, or running in a new motor.

The members gave the go ahead in the June meeting, and thanks to the planning and hard work of Dave Sipos, the concrete slab was poured on Saturday 28th June. (See page 7 for details)

Safety Fence behind the Pilots Position

At the last meeting, the idea of having a safety fence behind the pilots position, to protect the legs of pilot's from a wandering plane, was raised as one of the items the safety committee was looking at.

With some prompting by a senior member, [well done Noel], the member's agreed to go ahead with the plan.

Michael Hobson has agreed to action over the next month, so watch out for this.

Winter Sun

Please make sure you are aware of the winter sun in the morning, as it is low over the horizon and can blind you temporarily at the wrong time.

I ask the more senior members to help out with the newer members on this issue.

Instructors

There is a need for more experienced members to help out with the newer members in terms of helping them improve their flying skills.

Volunteer Flight Instructors need to have good communication skills, good flying skills, a patient temperament and a willingness to help others.

I will be calling for volunteers at the July and August club meetings.

[There will be flight and written tests to become an instructor.]

Bikeway

At the June club meeting, a map of the proposed bikeway was shown to the members. The bikeway should not interfere with the clubs activities as it is well away from the field.

The Brisbane City Council have advised us that construction would not commence until late this year, and more probably in early 2009.

A copy of the map will be put up on the notice board.

Good Flying
Peter Stevenson

Membership Renewals

Membership renewals are well underway. Thank you to those who have already sent in their renewals. Please remember, you are not covered under MAAA insurance after 30th June unless you hold current membership. This means you need to hold a club receipt for your 2008-2009 membership dues. You will also receive the requested number of frequency stickers with your receipt. Remember that all radios must be operated using the frequency key boards and keys. This is required for the following reasons:

- To show that your membership is current
- To assist with the 20 minute flight rule
- To limit the number of 2.4GHz radios operating to 10 simultaneously.

To assist members (and the Registrar), the membership form now contains fields so that the information can be typed in and printed. To do this, open the document as normal using Adobe Reader or by double clicking on the document. You will see an extra coloured bar under the Adobe Reader toolbars at the top saying that you can fill out the form but cannot save it. There should also be a button on the right side of the coloured bar which highlights the fields on the form when clicked. Fields will appear as a rectangle when you mouse over them. You can click on the field you want to complete, or tab from one to the next. Tick boxes toggle on and off when you click them with the mouse, or press the space bar. Once complete, simply print the form out. You can also print out the blank form and complete it by hand if you prefer, and your handwriting is readable. (For those members without web access I have included a membership application form on page 11. Ed)

We have been advised by MAAQ that licenses for 2008-2009 will be processed until after 1st July, due to work to finish off membership processing for 2007-2008. Yes, there are some desperados out there so keen to fly that they are still joining in June. Such enthusiasm!

TMAC Web Site

The committee is aware that the web site has been having some issues over the past months. We believe that we are now making progress to tidy things up and will reflect the activity of the club.

Keep an eye on the site as we make improvements including:

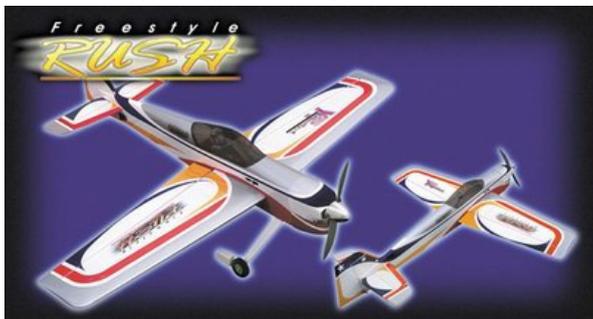
- Posting photos from field activities, and clean up of the old ones.
- Re-establishment of the Swap and Sell page. In order to assist with this, a note

with the access code will be included with your MAAA license.

- Removal of the Members only area. The Transmitter will still be down loadable for the site.

ARF Instructions

I lost an old friend the other day. Due to pilot error, the last flying ESM Rush in the club has been lost to history. I have to say that I got my money's worth over three-plus years of operation.



It was a model that was easy and fun to fly, even though it was somewhat overpowered with an OS 61 engine with a pipe. Goodbye old friend.

The new project is another ARF. A Nitro models Extra 330. The instruction manual is interesting, and obviously not written by native English speakers. Here are some slightly puzzling examples:

- *For can correct assemble this model, enable this model the design to obtain the full display, should assemble in under the experienced public figure's correct instruction.*
- *Please does not trace the child the place assembles this airplane*
- *Initial flight this model should from the experienced flight that collection related flight and the adjustment news.*

I'm on the hunt for an experienced public figure...

(Editors interpretation, turn picture on left into picture on right)



Wings Testing Day

We did not see much interest in the coaching day in April, so we will not be conducting a Wings Testing day in July this year. If you have been practicing your Gold Wings manoeuvres frantically, you can simply contact one of the club instructors and arrange a test.

Happy flying!
Phil Gartshore.

Late News from the secretary

We have been advised that Ian Gillespie the MAAQ treasurer has resigned and Robin Klau the MAAQ secretary has temporarily taken over the duties of treasurer. As a result processing of memberships and issue of licenses may take longer than usual this year.

2.4GHz Equipment—The final word

Taken from the MAAA newsletter 3/2008

The 2.4 GHz band is used throughout the world. However, the specifications for the equipment vary from country to country. Because of this, it is impossible to be certain just by looking at a product that it meets the Australian regulations, which in many cases are more stringent than that applying in other countries, including the USA.

The MAAA requires that all equipment used under its procedures complies with Commonwealth legislation as administered by the Australian Communications and Media Authority (ACMA).



The best way of assuring this, is that the equipment has a C Tick compliance mark applied by either the manufacturer or the importer, otherwise it is the user's liability.

If a radio has a C Tick, the manufacturer or importer is taking the responsibility that the equipment complies with the Australian regulations and they are legally required to hold documentation to prove it. This has to be available for audit by the ACMA.

If the equipment does not have a C Tick, then it is the individual responsibility of the user to have documentation to satisfy the requirements.

If the circumstances arose to test whether the documentation held by the individual is adequate, this would ultimately be tested by a Court of Law. The MAAA cannot operate as a legal practice and so unfortunately cannot give individual legal advice on whether any particular situation complies with the Australian Federal Laws.

Quick Tip

Ever had the prop nut, washer and propeller fly off either while airborne or when starting. Instead of spending time looking for the bits in the grass try this tip, courtesy of the AMA Insider .

Put an 'O' ring on the end of the crankshaft after securing the propeller. This may prevent the prop nut from spinning all the way off next time.

Did'nt we have fun !



Oh what a day with a difference, the weather was kind to us and it was fantastic to see a very large turn out for the FUN FLY day. (I counted over 50 aircraft on the field at one stage. Ed) Whether you actually had a go or just watched the entertainment it was hard not to have a laugh at some of our pilots antics.

The Bullseye target on the runway got the day off to a very active start, the object was to land "first touch" closest to the centre of the target, even the small electrics found it challenging. Balloons, what balloons even with light winds the helium filled balloons were moving around a bit but it was impressive to see such a large number of planes attempt to burst a balloon. You may be amazed to know that every balloon or the streamer holding them were HIT! To those who chased the balloons after they were cut and floated away – great effort.

The highlight of the day was a demonstration of world standard speed racing, to see a racer fly at over 300 kms/hour at Tingalpa is very impressive, my thanks to Chris Graham for a wonderful exhibition, not just once but twice.

The radar speed gun proved very popular, did you guess your speed correctly, it was interesting to note just how many people were more than 25kms out with their guess versus actual speed. Only two or three pilots actually got within 2 kms of their nominated speed – a guess or was it skill? well done regardless.

With the Limbo competition finishing the day, and the fact that there was little model carnage, (only one that I know about) we could say the day was pretty good fun and a lot of laughs, my thanks to Graeme Lowe for running a great barbeque, Dave who as always did a fantastic job with the field, Mike Ross and Kevin for controlling the flight line which ran like clockwork and without incident and Ross Dobbie for providing and operating the speed gun

Congratulations to Dave Sipos for winning the overall fun fly competition, and to our sponsors BUDGET HOBBIES, DESERT AIRCRAFT and MORETON BAY AIRCONDITIONING for their excellent sponsorship and support.

Ron Dobbie



Peter Cutler and Scale Day

Sunday the 15th June was a beautiful day, the sky was a perfect blue, however the wind gods were not so kind. The weather report said moderate to fresh winds, and on the day it certainly was blowing strongly straight down the strip.

The turnout was good given the weather forecast, unfortunately not many braved the windy conditions.

One certain member did, and after one nervous go around landed safely after a successful sortie.

This member was flying a large P51 Mustang, and is the deserved winner of the 2008 Corporal Peter Cutler Memorial Trophy.

Congratulations to Richard Symes for winning TMACs premier scale competition for 2008.



Thanks To;

If it was not for the volunteers helping on the day, there would not be any events.

I would like to thank Dave Walker for preparing the field for the day. As usual it the field was picture perfect.

Glenn Crossley and Mick Pawelski manned the BBQ all day. Thank you guys.

Noel Stewart and Gregor Kruberg organized the sound system and technical systems.

John Wyatt for manning the Registration Table.

And lastly our expert Judges for casting their eyes of the planes. Thanks Adrian Hellwig, Noel Stewart, Jim Viles and Dave Sipos.

Peter Stevenson



For those interested in the scores, they were;

- Richard Symes P51 Mustang 91 points
- Peter Smith P51 Mustang 78 points
- Chris Howarth Sea Fury 77 points
- Peter Stevenson FW TA152H 68 points

Scale Competition

This year the scale competition was Pilot's Choice. Generally, this is judged on flying in a scale like manner and stand off scale. Due to the blustery wind conditions, not all the planes flew, and hence most were judged on stand off scale alone.

The winners this year were.

ARF Scale;

- Gregor Kruberg Cessna 1st
- Noel Stewart AT6 Texan 2nd
- Tiz Quagliatini P47D 3rd

Non ARF [Kit or Scratch]

- Chis Howarth Sea Fury 1st
- Lionel Weeks Stearman 2nd
- Peter Stevenson FW152H 3rd



New Engine Run-in / Testing Area

As mentioned by Peter Stevenson earlier we now have a dedicated engine test area thanks to the efforts of Jim Viles and Dave Sipos. This area is located to the south east of the pits area adjacent to where the old helicopter hovering area was and consists of a concrete slab with suitable aircraft restraints in place to suit large and small models along with a low wooden fence to act as a sound barrier. Dave has arranged the completion of this facility at minimal cost to the club and work was completed a couple of weeks ago. Thank you Dave.

So if you are starting to get those sort of looks from fellow pilots in the pit area when doing engine testing, perhaps it's time to take advantage of this new facility.



TMAC 40th Anniversary Shirts

As you are all now aware this year is the 40th anniversary of the Tingalpa Model Aero Club. To celebrate this event it was decided to produce a special edition TMAC shirt, something reflecting the history of the club and the field we fly from. Refer to the March—April edition of the Transmitter for details, The opportunity was also taken to revamp the existing club logo while still retaining the original elements.



These shirts are a high quality podium polo shirt in white with grey piping and have the TMAC 40th anniversary commemorative logo on the back and the new TMAC club logo on the front left pocket area as ably modeled by Gregor in the photos below. Also available are white or black tee shirts with the TMAC 40th anniversary commemorative logo on the front only.



Thanks to the efforts of Gregor Kruberg these new shirts are now available. However you must pre-order one as they will not be available 'off the rack' so to speak. An order form was supplied with your recent membership application but a copy of the form is available on page 10 of this newsletter. You will need to get your order in within the next few days.



Centre of Gravity and Balance—by Peter Biddle

In the March—April edition of the Transmitter I described some of the basic concepts of aircraft stability and how stability is designed into an aircraft. That article concluded with a brief discussion on the importance of having the aircraft's centre of gravity (CG) in the correct location. In fact the way your model performs will often depend on its balance. I once saw it written that 'unlike a helicopter which beats the air into submission an aeroplane is balanced on the air'.

In this article I will continue the discussion about CG by showing firstly how to locate where the CG of an aircraft should be and then how to correctly balance a model.

Firstly a bit of revision. The CG is the point where the weight of the aircraft is balanced, while the neutral point is the point where the aerodynamic forces generated by the wing and tail are balanced. If an aircraft is nose heavy, that is the CG is too far in front of the neutral point then a higher take off and landing speed are required (you are likely to stall when landing). Although tracking on the ground is straighter there is less sensitivity to rudder and elevator inputs making it more difficult to rotate the aircraft off the ground. If your aircraft is tail heavy, where the CG is behind the neutral point then the aircraft becomes very sensitive to elevator and rudder inputs to the extent the aircraft may be uncontrollable.

So, where should the CG be? Firstly for ARF's most construction manuals (even those in Chinese-English) specify where the CG should be, usually with reference to the leading edge of the wing. Similarly if building from plans the CG is normally marked on the plans. However what if you have lost the construction manual or don't have the plans available.

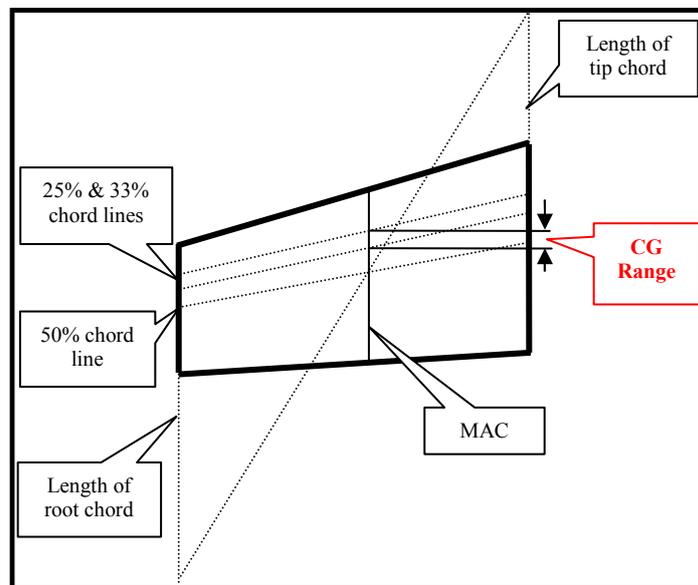
As a general rule of thumb model aircraft are balanced between 25% to 33% of the mean aerodynamic chord (MAC) as measured from the leading edge of the wing. So the problem now becomes how to determine the MAC. (remember the chord is the distance from the leading edge to the trailing edge of a wing). On an aeroplane with a straight or constant chord wing, such as most trainers this is easy just measure back 25% - 33% of the chord from the leading edge. This is your CG. If the chord is 200mm then the CG will be between 50—66mm from the leading edge.

For a tapered wing the problem of finding the MAC is slightly more difficult, but can be done with paper and a ruler. With reference to the diagram on the right.

1. Firstly trace an outline of the wing on a piece of paper.
2. Draw a line from the middle of the tip chord to

the middle of the root chord. The 50% chord line.

3. Draw a line extending the root chord forward by the length of the tip chord
4. Draw a line extending the tip chord backwards by the length of the root chord
5. Join the ends of these two lines and where this line crosses the line 50% chord line is the MAC
6. From where the 25% & 33% chord lines intersect the MAC project these across to the wing root and this represents the allowable CG range.



However if this is too difficult and you have access to the internet there are various calculators available which will do the calculation for you. One good example is available at :

http://www.geistware.com/rcmodeling/cg_calc.htm

Now we have found where the CG should be you need to balance the model at this point. Balancing should be done with an empty fuel tank and wheels retracted (for retractable undercarriages).

There are several ways of checking the balance. The simplest is to lift the model with your finger tips on the CG on each side of the fuselage, but there are numerous balancing tools on the market to make things much easier, especially for the larger models. Also for low wing aircraft it is easier to balance them upside down.

When balancing you want to minimize the amount of weight you add. You may be able to achieve balance simply by moving the battery pack or any other moveable items around. If your model is tail heavy try moving the battery further forward if possible. Similarly if nose heavy move the battery further back. If you do need to add weight make sure you add it as far from the CG as possible to reduce the amount of weight required. If need you weight in the nose it is possible to get spinners in different weights.

Don't be tempted to get near enough. The allowable

CG range is generally small (10—20mm) so having a model balance just outside the CG range, especially to the rear may result in an unstable model. Always err on the nose heavy side to ensure good stability, especially for the first flight. You can always adjust the balance rearward, in small increments later if necessary.

Once you have achieved for/aft balance you also need to check the lateral balance. A model with one wing heavier than the other will not fly straight. The easiest

way to do this is to loop a piece of string under the propeller shaft and lift the model with the tail or tail wheel resting on the ground. The wing tips should remain level. If not add some weight to the offending wing until the model is balanced.

The message here is always balance your model before you fly it. This will lead to much easier handling and a more enjoyable flight. Remember the old saying, a nose heavy aircraft flies badly while a tail heavy aircraft flies once.



Recent TMAC Activity

**Order Form for TMAC 40th Anniversary Shirts.
Must be completed before 14th July 2008**



Podium Men's or Ladies Polyester Piping Polo Shirt, white with grey trim and printed color TMAC logo on front breast and full size commemorative contrast logo on back.
UV Rating (20UPF). **\$35.00 each**

Tee shirt 100% Cotton. Available in all white or all black with contrast white or black full size TMAC commemorative print on the front only. **\$20.00 each**

Note: Shirts are only available by ordering in advance.

To place an order for one or more limited production polos or Tee shirts please complete the details below and enclose cash or cheques to TMAC.

Please Print your name and order requirements below.

Surname _____ First name _____

Telephone No (Optional) _____

<i>Garment</i>	<i>What size</i>	<i>Quantity</i>	<i>\$ Price</i>	<i>Money</i>		<i>TOTAL</i>
<i>Podium</i>			<i>\$35</i>			<i>\$</i>
<i>White</i>			<i>\$20</i>			<i>\$</i>
<i>Black</i>			<i>\$20</i>			<i>\$</i>

Ladies Polo sizes 8 through to 20 are available on request.

Hand this completed form to Gregor Kruberg or a committee member.

TINGALPA MODEL AERO CLUB INC.

(ABN 13 571 491 107)



Member Application Form - 2008/2009

APPLICANT INFORMATION

Surname: Given Names: Preferred Name:
For Name Badge, Correspondence, etc
 Address: Post Code:
 Date of Birth: / / Email Address:
 Phone (H): Phone (W): Phone(M):

MAAA INFORMATION

AUS Number¹¹: Last Club & Year MAAA License held:
New members will be issued an AUS number with their MAAA license. If you have previously held a MAAA license, enter your AUS number, Club, and year, if known.

Wings (Tick highest held)	Bronze	Gold	Instructor	Inspector (Tick all held)
Glider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Heavy Model <input type="checkbox"/>
Helicopter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Giant Model <input type="checkbox"/>
Plane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Gas Turbine <input type="checkbox"/>

CLUB INFORMATION

Membership Type <small>(Tick one. Refer to the back of this form for a full membership fee table)</small>	Continuing Member ³	New Member ² (Full Year)	New Member ² (Half Year)
Senior	<input type="checkbox"/> \$190.00	<input type="checkbox"/> \$235.00	<input type="checkbox"/> \$140.00
Junior (under 18 at 1st January)	<input type="checkbox"/> \$107.00	<input type="checkbox"/> \$132.00	<input type="checkbox"/> \$78.50
Pensioner/Full Time Student ⁴ (Card #:)	<input type="checkbox"/> \$143.00	<input type="checkbox"/> \$168.00	<input type="checkbox"/> \$96.50
Non-Flying	<input type="checkbox"/> \$47.00	<input type="checkbox"/> \$72.00	<input type="checkbox"/> \$48.50
Life Member ⁵	<input type="checkbox"/> \$96.00		
Temporary Resignation ⁶	<input type="checkbox"/> \$0.00		
Senior Associate ⁵ (Parent Club:)	<input type="checkbox"/> \$94.00	<input type="checkbox"/> \$139.00	<input type="checkbox"/> \$92.00
Junior Associate ⁵ (Parent Club:)	<input type="checkbox"/> \$47.00	<input type="checkbox"/> \$72.00	<input type="checkbox"/> \$48.50
Pensioner Associate ⁵ (Parent Club:)	<input type="checkbox"/> \$47.00	<input type="checkbox"/> \$72.00	<input type="checkbox"/> \$48.50
Other (See back of this form) (Please Specify:)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Newsletter

The club newsletter¹, *The Tingalpa Transmitter*, is available on the club website (www.tmac.asn.au) for download. If you do not have Internet access, please tick the box below to receive a posted copy.
 Posted Copy required:

Radio Frequency Usage

Number of Frequency Key Labels Required:
 Radio Frequencies used:

Continuing Membership Fees must be paid to the Club Registrar by 30th June 2008.

Payment may be made by returning this application with a cheque or money order (do not send cash) to:
The Registrar TMAC Or, by presenting your application with cash, cheque, or money order at a club meeting.
PO Box 2108, Tingalpa, QLD 4173

DECLARATION

I agree to comply with the rules and by-laws, and subsequent variations thereto, of the Tingalpa Model Aero Club Inc. and its Insurers.

Applicant's Signature: Date:/...../.....

Proposer⁷: AUS: Signature: Date:/...../.....

New members require a proposer who is a current TMAC member. Proposer must print Name, License Number, & sign.

OFFICE USE ONLY

Cash Cheque # Receipt # Date Received/...../..... MR1# 09-

Date license issued/...../..... Name Badge Membership Updated/Entered/...../.....

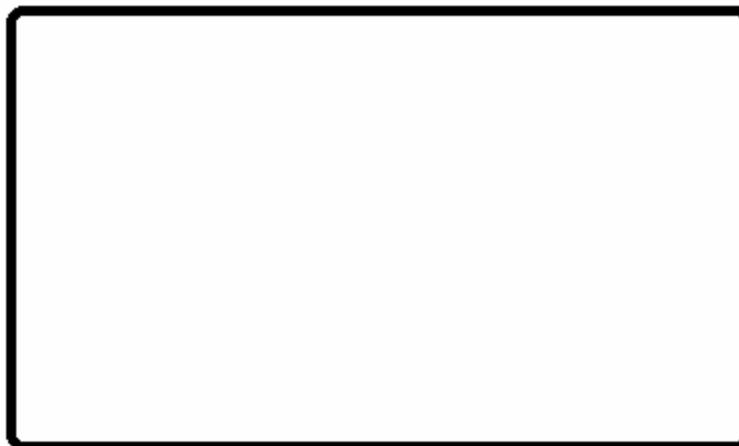
If undeliverable, please return to:

The Secretary,
Tingalpa Model Aero Club Inc
PO Box 2108
Tingalpa QLD 4173

**PRINT
POST**

PP 424022/00093

**POSTAGE
PAID
AUSTRALIA**



Upcoming Events at TMAC

Monday 7th July	Meeting	Club General Meeting
Monday 4th August	Meeting	Club General Meeting
Sunday 17th August	Event	Electric Day
Monday 1st September	Meeting	AGM / Club General Meeting
Sunday 14th September	Event	Helicopter Day
Monday 6th October	Meeting	Club General Meeting
Sunday 19th October	Event	TMAC 40th Anniversary Celebration

Note: For events the field may be closed to general flying