



TINGALPA TRANSMITTER

TINGALPA MODEL AERO CLUB NEWSLETTER

August 2021

Scale Day – Sunday 13th June

Each year, TMAC runs an event designed to encourage aero modelers to participate in a relaxed Scale competition. The event provides an opportunity to compete in a scale event that is relaxed and informal and does not require any documentation. Pilots are required to show off models in both static and flight operations, flying manoeuvres that the full-scale aircraft may have typically executed.

This year we did not run the Cpl Peter Cutler trophy, which is for the hard-core TMAC scale enthusiasts, but it will return bigger and better in 2022.

The day dawned with some scattered cloud and light winds. We are very pleased with the participation by members and visitors, with almost thirty entries on the day.

A very special thank you to those who travelled from other MAAA clubs, it was great to have your support, and see you included in the winner's circle this year!

Many flights were completed during the morning, with very few mishaps reported.



Competition ceased at 11:30am, and the votes counted. Winners were presented with trophies as follows:

- | | | | |
|---------------------------|--------------------------------|-------------------------------|----------------------|
| First. | Phil Crandon. | Aircraft. F4F Wildcat. | Club. LMFC. |
| Second. | Shane Wickin. | Aircraft. FW-190A. | Club. SAAMBR. |
| Third. | Will Sipma. | Aircraft. Sopwith Pup. | Club. TMAC. |
| Best Junior Pilot. | Not awarded due to no entries. | | |



Congratulations also to our club Treasurer, who managed to be in every presentation photo. Well done, Phil!

Also, a very special thanks to Pat and Lyn Wilson, and Russel Cardrow who kept everyone well fed throughout the day. Feedback and ideas would be greatly appreciated so we can start planning the next Scale Day.

Thanks again to all who helped and attended.

Phil Gartshore
Event Coordinator.



More photos can be found on our website, using the following link:
<http://www.tmac.asn.au/peter-cutler-scale-day-2021/>

MANAGEMENT COMMITTEE

President – Phil Gartshore

T: 0407 070 263

E: president@tmac.asn.au

Secretary – Noel Stewart

T: 0412 525 127

E; secretary@tmac.asn.au

Treasurer – Phil Collings

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Editor – Mark Kruse

E: Editor@tmac.asn.au

Committee Members:

Will Sipma

Pat Wilson

Lyn Wilson

TMAC LIFE MEMBERS

Kevin Dodd

Noel Wilson

Will Sipma

**TMAC LIFE MEMBERS TROPHY HOLDER
2020**

Noel Stewart

BUSTER DANVERS TROPHY HOLDER

Brett Hosking

HEAVY MODEL INSPECTORS (FW25)

Ian Howard

Andrew Tisdall

Gary McCoy

Chris Paterson

**HEAVY & GIANT MODEL
INSPECTORS (FW25/FW50)**

Kevin Dodd

Noel Stewart

Phil Collings

Tyson Dodd

Richard Symes

George Atkinson

MAAA INSTRUCTORS

Commercial Flight Instructors

Noel Stewart 0412 525 127

Will Sipma 0409 852 694

George Atkinson 0414 972 118

Rotary and Fixed Wing

Dennis Greenfield 0424 005 820

George Atkinson 0414 972 118

Fixed Wing

Nicholas Leahy

Peter Spink

Dave Morrison

Randall Mowlam

Aaron O'Neil

PRESIDENT'S REPORT

Transmitter August 2021

Hobby Expo Postponed to a Date to be Advised

The Committee would like to advise members and followers that at a meeting held on Friday 23rd July, the Committee decided that the Hobby Expo scheduled for Sunday 15th August will be postponed to a date to be decided owing to COVID-19 restrictions that the management committee feels that we could not comply with. The Committee apologises for the late notice; however, the day will be a fly-in for those who would like to visit TMAC.

Committee Nominations close Tuesday 17th August

As advised by the Secretary, Wednesday 4th September is the Annual General Meeting. At the AGM, all Committee positions are declared vacant and new office holders elected.

Committee Positions are as follows:

- President.
- Secretary.
- Treasurer.
- Registrar.
- Editor.
- Public Relations Officer.
- Committee members.

If you would like to nominate for a position, please return a completed nomination form to the Secretary by Tuesday 17th August.

TMAC Master Plan Projects

THE Committee is finalising the Master Plan document for the period to June 2026. The following prioritised projects are included in the plan.

Item	Priority	Description
1.	1	Boundary Fence – Fencing of the south boundary of Rotary Wing Area. I know we already have a grant.
2.	3	Rotary Wing Area - Levelling to accommodate Control line operations.
3.	1	Power System – Battery bank replacement.
4.	3	Pits – Centre Finger. Dependent on membership levels, but worth considering.
5.	2	Grounds Keeping Equipment. Replace one of the Hustler mowers.
6.	2	Weather Station. It's been around for a long time, but let's see.
7.	1	Canteen. Resealing of floor to meet food service requirements.
8.	3	Canteen. Drink/Snacks Fridge with tap and go purchasing.
9.	2	Web Site. Video feed of the Pilot's Position.
11.	1	Camping Power. Provide more 240-volt GPO's to accommodate visiting pilots camping on event days.
12.	1	Toilet Block. Second shower in toilet block.
13.	1	Western End of Runway Drainage. Improvements to reduce the wet areas.
14.	2	Eastern Boundary Fence. Complete concreting of posts.
15.	2	Eastern Pits Finger. Hard Roof to replace shade Cloth.
16.	2	Western Pits Finger. Hard Roof to replace shade Cloth.

A copy of the Master Plan is available from the Secretary on request.

Event Calendar 2021

Upcoming events for 2021 are as follows:

1. **August.** Nil.
2. **September.** Nil.
3. **October.** Allan Danvers' Challenge.

MONTH	DATE	EVENT TYPE	EVENT DETAILS	CO-ORDINATOR
August 2021	Wed 4	Meeting	General Meeting (7.30pm, Carina Leagues Club)	Secretary m: 0412 525 127
	Sat 14	Non-Flying Event	BRISBANE ASTRONOMICAL SOCIETY (Porter Field 6.30pm - 9.00pm)	Gregor Kruberg p: 3847 7797
	Sun 15	Event	HOBBY EXPO [Postponed] (Porter Field 8.00am - 2.00pm)	Pat Wilson m: 0417 493 785
	Tue 24	MAAQ	MAAQ Annual General Meeting (Conference Call 7:00pm)	MAAQ Secretary. e: secretary@maaq.org
September 2021	Wed 1	Meeting	Annual General Meeting (7.30pm, Carina Leagues Club)	Secretary m: 0412 525 127
	Sat 11	Non-Flying Event	BRISBANE ASTRONOMICAL SOCIETY (Porter Field 6.30pm - 9.00pm)	Gregor Kruberg p: 3847 7797
	Sun 12	Event	[TBA] (Porter Field 8:00am - 2:00pm)	[TBA] m: [TBA]
	Thu 30	Newsletter	October Newsletter Published (NOTE: Contributions close one week prior)	Mark Kruse e: editor@tmac.asn.au
October 2021	Wed 6	Meeting	General Meeting (7.30pm, Carina Leagues Club)	Secretary m: 0412 525 127
	Sat 9	Non-Flying Event	BRISBANE ASTRONOMICAL SOCIETY (Porter Field 6.30pm - 9.00pm)	Gregor Kruberg p: 3847 7797
	Sat 23	Overseas Event	Allan Danvers' Challenge [23rd Oct - 30th Oct] (Norfolk Island)	Will Sipma m: 0409 852 694

MAAQ Meeting

The next MAAQ meeting for 2021 will be held at 7:00pm on Tuesday 24th August.

This will be a Microsoft Teams Meeting, so contact the MAAQ Secretary for an invitation, if you want to attend.

Obligations under Porter Field Area Approval

Just reminder about your obligations under the Porter Field Area Approval. Please assume that non-members may be around at any time. Just like making threats to aviation at airports, **do not make jokes about these requirements at any time:**

- **Radio Range Check.** Pilots shall successfully complete a range check as per the manufacturer's recommendation prior to the first flight of the day.
- **Fail-safe Check.** Pilots shall test the radio fail-safe function (where fitted) for correct operation prior to the first flight of the day.
- **Pre-flight Air-worthiness Check.** Pilots shall conduct a pre-flight check of aircraft prior to every flight to ensure airworthiness. All control surfaces are to be checked to ensure they are not binding and are operating correctly.
- **Height Limit.** The maximum height limit is 400ft AGL at Porter Field.

TMAC General Meetings

General meetings are held on the first Wednesday of each month at the Carina Leagues Club.

General Meetings upcoming will be held as follows:

- **August.** 7:30pm Wednesday 4th August.
- **September** 7:30pm Wednesday 1st September.
- **October.** 7:30pm Wednesday 6th October.



Please refer to the 2021 Events Calendar for further General Meeting dates.

Porter Field Operations during Coronavirus Restrictions

The Committee would like to thank Members for their compliance with the COVID Safe plan, and with CHO Orders. As a result, Members have been able to continue operations as Porter Field with minimal impact.

Even though there has been some relaxation by the Queensland Chief Health Officer, TMAC will continue with its COVID Safe plan to ensure members can continue flying with minimal inconvenience. The requirements are:

- All attendees to sign in on arrival, either using the **Check In QLD** App or the sign in sheets provided.
- One pilot per bay in the Pits. Pilots can also set up on the grass at the ends of the pits if required.
- Maximum Five pilots at the Pilot's position.
- Maximum of two persons in the Canteen at any one time.

Please continue to always observe social distancing. This is especially important given our membership demographic, with roughly half of our members are 60 or older and male, which puts many members in the high-risk category.

Just a reminder of the requirement to stay home and get tested if you have:

- fever,
- cough,
- sore throat, or
- shortness of breath.

Also to:

- wash hands regularly,
- cover coughs and sneezes, and
- maintain social distancing.

Reminder to Wear a Mask in compliance CHO Order

Mask Wearing outside your home and Social Distancing has been extended until at least Friday 6th August for the specified SEQ LGA's, including Brisbane City.

Please ensure you continue to be compliant whilst at Porter Field as follows:

1. **Mask Wearing.** The CHO directive requires mask wearing is required outside your home until 6:00am Friday 6th August. Mask Wearing is mandatory at Porter Field unless seated and eating or drinking.
2. **Social Distancing.** Please maintain 1.5m distance from others where possible.

3. **Flight Operations.** Maximum of five pilots at the pilot's position continues. For safety reasons, pilot's may adjust their mask to prevent fogging of glasses while flying at the Pilot's Position, but must reposition their mask correctly when leaving the Pilot's Position once it is safe to do so.

Also, remember to take it in good humour and thank someone if you are reminded to put your mask on. We need to all do this to keep TMAC operating.

Don't commit a fashion no-no

Your mask needs to cover your mouth and nose to keep you and others safe.



THE EARRING



THE NECK WARMER



THE HEADBAND



THE LOWRIDER



THE FASHIONISTA

Treat the side that faces out as if it contains virus droplets – because it might.

Obligations under Porter Field Area Approval

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- **Radio Range Check.** Pilots shall successfully complete a range check as per the manufacturer's recommendation prior to the first flight of the day.
- **Fail-safe Check.** Pilots shall test the radio fail-safe function (where fitted) for correct operation prior to the first flight of the day.
- **Pre-flight Air-worthiness Check.** Pilots shall conduct a pre-flight check of aircraft prior to every flight to ensure airworthiness. All control surfaces are to be checked to ensure they are not binding and are operating correctly.
- **Height Limit.** The maximum height limit is 400ft AGL at Porter Field.

Reporting Crashes outside Porter Field Boundary

Finally, a reminder that you must provide a written report to the Secretary if you crash an aircraft outside the Porter Field boundary, if anyone is injured, or if property is damaged. Remember, never admit liability; leave it to our insurers.

Providing a report is not a reflection on the pilot but provides a record in case the club is served with a claim against the MAAA insurance policy.

For Safety – Restrain your aircraft!

If you have any questions or issues, please contact me (president@tmac.asn.au).

Regards,

[Phil Gartshore](#)

President.

TINGALPA MODEL AERO CLUB



MANAGEMENT COMMITTEE NOMINATION FORM 2021

I being a financial member of the Association, and
 Name AUS Number
 eligible to hold office in accordance with Associations Incorporation Act 1981 (QLD), and TMAC Inc.
 Rules and By-Laws, hereby accept nomination for the position of , and am
 willing to act in that office if elected.

..... (Nominee) ³
Name	AUS Number	Signature
..... (Proposer) ¹
Name	AUS Number	Signature
..... (Seconder) ¹
Name	AUS Number	Signature

Notes:

1. Nominees must be proposed and seconded by two members eligible to vote in accordance with the rules.
2. All nomination forms shall be submitted to the Secretary no later than 5:00pm on Wednesday, 17th August 2021.
3. Please consider the following extract from the Act, when nominating for the committee.

ASSOCIATIONS INCORPORATION ACT 1981 - SECT 61A

61A Eligibility for election to a management committee

(1) A person is not eligible to be elected as a member of an incorporated association’s management committee if—

- (a) the person has been convicted—
 - (i) on indictment; or
 - (ii) summarily and sentenced to imprisonment, other than in default of payment of a fine; and
- (b) the rehabilitation period in relation to the conviction has not expired.

(1A) Also, a person is not eligible to be elected as a member of an incorporated association’s management committee if—

- (a) under the *Bankruptcy Act 1966* (Cwlth) or the law of an external territory or another country, the person is an undischarged bankrupt; or
- (b) the person has executed a deed of arrangement under the *Bankruptcy Act 1966* (Cwlth), part X or a corresponding law of an external territory or another country and the terms of the deed have not been fully complied with; or
- (c) the person’s creditors have accepted a composition under the *Bankruptcy Act 1966* (Cwlth), part X or a corresponding law of an external territory or another country and a final payment has not been made under the composition.

(2) In this section— **rehabilitation period** has the meaning given in the *Criminal Law (Rehabilitation of Offenders) Act 1986*.

Excellence Award Nominations close Tuesday 10th August.

Origin of the Trophy

In February 1986, Life Member, Jack Richters donated twenty dollars to the Club for a trophy, without any conditions attaching as to its form or purpose. At a meeting held on 15 April 1986, the Management Committee decided to supplement the donation to create a perpetual trophy to be known as the "LIFE MEMBERS' TROPHY". At a meeting held on 5 May 2021, the Management Committee decided to rename the perpetual trophy to be known as the "EXCELLENCE AWARD TROPHY". The change was to remove confusion in the name whereby it may have been thought that receiving the award made the member a Life Member of the Club. At the meeting it was also agreed that a new perpetual Trophy would be struck and be called the Excellence Award trophy.

Conditions of Award

1. The trophy shall be an award for excellence. The field of achievement shall not be limited and may include:
 - a. success in a prestigious aeromodelling event.
 - b. overcoming a physical handicap to gain aeromodelling skills.
 - c. voluntary service to the Club; and/or,
 - d. any other endeavour which describes the recipient as "an excellent Club person".
2. The trophy shall be awarded annually, inscribed with the name of the recipient and year of award, and presented at the Club's annual general meeting.
3. The recipient shall be a member of the Club.
4. The recipient shall be selected from the nominations of other Club members.
5. There shall be no limit on the number of times any one member may win the award.

Nominations

Nominations Close on Tuesday 10th August.

<p>EXCELLENCE AWARD TROPHY</p> <p>NOMINATION</p>	
<p>I, AUS: being a financial member of the Association, hereby nominate the following Club member as a candidate for the 2021 Excellence Award Trophy:</p>	
<p>Nominee:</p>	
<p>Reason(s) for the nomination:</p>	
<p>1.</p>	
<p>2.</p>	
<p>3.</p>	
<p>4.</p>	

Buster Danvers Award Nominations close Tuesday 10th August

Origin of the Trophy

This trophy originated with Ken Hollingsworth – Veterinarian and ex. Member of the TMAC, and good friend of the late Allen Danvers. Allen had a dog named BUSTER who spent a considerable amount of time at the vets being treated for cane toad poisoning. Regardless of what Allen did, BUSTER could not be discouraged from this pursuit. Ken Hollingsworth & Allen decided to inaugurate an Annual Trophy dedicated to the tenacity of BUSTER.

This trophy is to be awarded to a TMAC member who regardless of how difficult their aeromodelling journey is, they never give up, just like the tenacity of BUSTER.

Conditions of Award

1. This trophy is to be awarded to a TMAC member who regardless of how difficult their aeromodelling journey is, they never give up.
2. The trophy shall be awarded annually, inscribed with the name of the recipient and year of award, and presented at the Club's annual general meeting.
3. The recipient shall be a member of the Club.
4. The recipient shall be selected from the nominations of other Club members.
5. There shall be no limit on the number of times any one member may win the award.

BUSTER DANVER'S TROPHY

NOMINATION



I, AUS: being a financial member of the Association, hereby nominate the following Club member as a candidate for the <<Year>> Buster Danver's Trophy:

Nominee:

Reason(s) for the nomination:

1.
2.
3.
4.

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Tingalpa Model Aero Club Inc.

Tingalpa Model Aero Club Inc.



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Thank you for supporting COVID-19 contact tracing efforts
and doing your bit to keep Queenslanders safe.

Questions? Call the **COVID-19 helpline 134 COVID (13 42 68)**



**Queensland
Government**

REDUCE YOUR RISK OF **COVID-19** INFECTION



WASH HANDS

Wash your hands with soap or use a hand sanitiser when you arrive at the field



COVER A COUGH OR SNEEZE

Cover your cough or sneeze with your sleeves or tissues. Dispose the tissue and wash hands afterwards



SOCIAL DISTANCING

Keep a distance of around 1.5 meters away from others in public



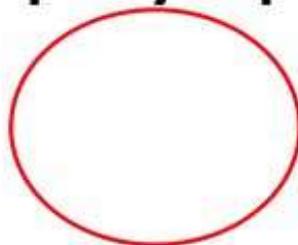
ATTENTION!

If you have experienced a fever, cough, sore throat, shortness of breath or travelled overseas in the past month, please do not enter this area

The maximum capacity of people in this area is:



www.maaa.asn.au



Australian Government

www.australia.gov.au

Secretaries Report

Newsletter August 2021

Hi and welcome to our August 2021 newsletter.

Grants:

I am pleased to announce that the Heli area fencing has now been completed thanks to the grants supplied from the MAAQ and MAAA. This really opens the area up to a more usable space. The earthworks for the control line circle will be the next item on the agenda. This should take place earlier now than later due to the cancelation of the Model Expo through threat of more Covid spread and potential for worsening restrictions closer to the date.

Fees:

Over the recent month I have been at a loss to understand the amount of emails from members (and potential members) wanting to give me paperwork and pay me their 2021 fees. Please remember all fees and paperwork should be sent direct to the club Registrar. Lois is the person who processes the paperwork and deals with the fees. Short circuiting the process can potentially lead to something going missing or at least delayed.

All inquiries regarding registration, licenses, late payment's, name badges etc should be directed to registrar@tmac.asn.au or phone 0439721881.

Don't forget, if you haven't paid yet you are currently unfinancial and should not be flying.

Lock up:

If you attend the club for flying purposes or just a social visit, the last person out the gate is required to ensure that the canteen and entry gate are both locked before leaving.

I have had two recent occasions where members of the public have rung me to advise that both canteen and gate have been left wide open with no one around to advise.

Please lock up after yourself!

Whist we have CCTV covering our site we would much rather not have to go searching for who ever has been forgetful.

Safety:

Remember check your failsafe regularly and range check before your first flight of the day. Thereafter, check your control surfaces movement before each flight. This is a condition of our Area Approval!

Taxiing into the pits: is not allowed!

Since the two little signs out on the taxi apron saying **Stop Engine Here** have disappeared some members seem to think that the rules have changed as well.

It both saddens and angers me that we have to repeat these same old safety warnings time and time again because some members and guests just don't get it.

Our National body fights hard each year to keep our Insurance costs affordable because of the sheer number of accident claims happening Australia wide.

Everyone is a safety officer!

Know the rules!

You never know who's watching!
Safety first!

The next General Meeting is scheduled for Wednesday 4th August 2021 at Carina Leagues Club Creek Rd Carina.

Notice of Annual General Meeting:

The 2021 Annual General Meeting of the Tingalpa Model Aero Club Inc is scheduled to take place at 7.30pm sharp Wednesday 1st of September 2021 in the meeting rooms Carina Leagues Club Creek Rd Carina.

On a personal note.

Sadly, after nearly fifteen years of service on the TMAC committee I have decided to take a break for a while due to family matters and won't be nominating for the 2021-22 year. This will be my last Secretaries report.

Thank you:
Noel Stewart
Secretary TMAC.

**HEIGHT LIMIT
400 FEET**

(Civil Aviation **Safety** Regulations 1998 – Part 101)

NO FLYING THIS SIDE OF THE FLIGHT STRIP

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.

EDITOR'S NOTE



Wanted

Would any member have the plans for the Top Flite DC3/Royal Marutaka C47-D Skytrain that they would be prepared to let me copy please? Contact Brian Fooks at TMAC

"F-86 Saber or BAE Hawk" both 90mm EDFs by FlyFly, new or second hand, preferably frame only to fit 12S, Stumax power unit with the large twin pack of 6S/5Ah set of lipos as my new project. Minor damage to the frame, ok. Please contact Frosty, 0403 116 491 or email frostjos@gmail.com

Fund Raising

Hey how about helping the club out with your recyclable cans and bottles, bring them into the club and place them in the bin in the canteen.

Flash Backs & Tips

Looking for old or new photos of planes, helicopters or members and aircraft tips for the newsletter. Please forward them to me at editor@tmac.asn.au

For Sale

Wanting to sell aircraft, parts or plans through the newsletter, send the details to editor@tmac.asn.au

MEMBERS' PRIDE & JOY



Job No. Company Name



**TINGALPA MODEL AERO CLUB
ORDER FORM
2021 CLUB POLO SHIRTS**

NAME.....

CONTACT NUMBER.....

POLO SHIRT SIZE.....

QTY.....

SHORT SLEEVE (\$45.00EA) YES/NO

LONG SLEEVE (\$50.00EA) YES/NO

CROSS OUT WHICHEVER IS NOT APPLICABLE

(SHORT SLEEVE SHIRT/S WILL BE ORDERED IF NOT CROSSED OUT).

AMOUNT PAID \$.....

RECIPT NUMBER.....

DATE.....

LYN WILSON

WOBBLY WINGS



Information, tips and tricks on wings manoeuvres.

Crashless Flying

From the May 2010 edition of the AMA Insider

Fly RC long enough and you will experience a crash. However, some pilots seem to crash often—too often. Let's explore some of the causes of crashes and perhaps minimize crash opportunities.

Split Second Delay Crashes: High speed creates high loads on the plane's control surfaces and servos, causing a possible split second delay of control after a stick input. A split second delay is all that is needed when your plane is in some maneuver heading toward that ground at 100 mph (147 feet per second). Point the transmitter antenna at the airplane you can create a cone of science at your receiver, which can cause a control response delay.

Pilot Orientation Crashes: Another cause of crashes is a non-mechanical one: pilot orientation. If you are low and fast and lose orientation, expect a crash. Have your airplane flying level or in an up attitude while flying close to the ground.

Distraction Crashes: Another non-mechanical cause: distraction. If you allow yourself to be distracted, even for just a couple of seconds, you're likely to crash. If you were stung by a bee, step on what you think could be a snake, or have another critter eating your pant leg, put your plane in a series of tight loops with full up elevator, then take care of your business and your airplane will still be there when you can tend to it again, not two miles down the range. This may be overly simplistic, but you get the general idea. All pilots get distracted sooner or later. Think out in advance what you will do so your fingers will react when you do get distracted.

Aerobatic Crashes: Among the many maneuvers pilots enjoy, snap rolls are at the top of the list. Just be prepared for that fatal snap of a control surface during this maneuver. Pilots usually enter a snap full bore with full deflection on all control surfaces. This can load your airplane up to as much as 30 Gs, plus air drag loads. Inspect your airplane carefully after doing this violent maneuver.

Elevator Crashes: Let's spend some time with the elevator. This is the most important crash prevention control on your airplane. First, the elevator itself must be built from good material. Too hard and brittle is not good; too soft is not good either. In today's world, the high-quality ARFs take care of this. Use your best servo in the elevator. I don't like the standard servos on any function except the throttle.

Buy some good servos for your primary control surfaces. Next, use only strong, stiff rod linkages from servo to the control horn. Fiberglass rod systems are great for long runs. Strong, stiff wire works well for short runs. It's very important to keep the bends in the wire to a minimum. Lots of pilots use them, but I don't like the flexible Nyrod-type systems. Any movement of flex here could allow surface flutter, and also cause a split-second delay crash. The plastic clevises and control horns supplied in many kits leave a lot to be desired. Get these items from Du-Bro or Hangar 9.

Dirt and grit will weaken the plastic clevis pin very quickly, and generally they are too soft and flexible. Consider using metal or the super strong carbon fiber clevises and control horns. Metal-to-metal contact is taboo, but most metal systems have an insulator to prevent any metal-to-metal contact. Always install a rubber or nylon safety "keeper" on this and on all your clevises.

Crashes are extremely frustrating and expensive. With a better understanding of what causes crashes, we can more easily prevent them.

Servo Damage Crashes: Servos can be unknowingly damaged by a hard landing or by bumping a control surface while loading the airplane into a car. What happens is the servo's gears get cracked but it continues to operate until subjected to flying loads, then the gears break. After a hard landing or a bump, and from time to time, check your servos by applying slight hand pressure to the control surfaces while operating the servo. If it takes hand pressure, it will usually stand up to flying loads.

Take-off Stalls: The airplane will very likely turn to the left during take-off. One method to prevent this type of crash is a high-speed takeoff run and a shallow climb after liftoff until maximum climbing speed is reached. Use rudder to maintain direction with very careful use of ailerons to stay level. If the engine quits on takeoff, don't try to turn back to the runway. Keep the airplane heading into the wind and make your landing.

Landing Turn Stalls: A very common pilot error occurs while setting up a landing approach and performing too steep a turn from downwind to final. Airplanes stall at a much higher speed in a bank, and a steep bank into the wind will quickly slow the airplane and cause it to stall. Keeping turns shallow on your approach will help prevent this type of stall, and using rudder to turn will also help keep the turns shallow and reduce the additional drag of the ailerons. This becomes especially critical if landing dead stick.

Centre of Gravity and Balance—by Peter Biddle

In the last 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.

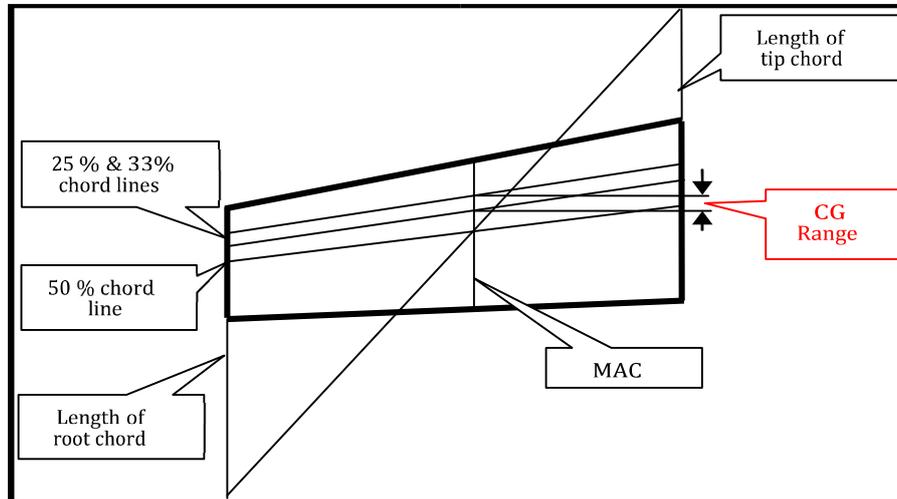
As a general rule of thumb model aircraft are balanced between 25% to 33% of the mean aerodynamic chord (MAC) as measured from the leading edge of the wing. So the problem now becomes how to determine the MAC. (remember the chord is the distance from the leading edge to the trailing edge of a wing). 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.

https://rcplanes.online/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.

One 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.

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- ✓ Meet&Greet at Norfolk Airport
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- ✓ Welcome Dinner
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- ✓ 'Fly-in' T-Shirt
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TINGALPA MODEL AERO CLUB INC.

(ABN 13 571 491 107)



MEMBER RENEWAL FORM – 2021/2022

APPLICANT INFORMATION

Surname: Given Names: Preferred Name:
For Name Badge, Correspondence, etc.
 Address: Suburb: Post Code:
 Date of Birth:/...../..... Email Address:
 Phone (H): Phone (W): Phone(M):
 AUS Number¹¹:

CONTINUING MEMBERSHIP FEES MUST BE PAID TO THE CLUB REGISTRAR BY 30TH JUNE 2021

MEMBERSHIP TYPE

(Tick one. Refer to the back of this form for a full membership fee table)

MEMBERSHIP TYPE	Continuing Membership ²
Senior	<input type="checkbox"/> \$299.00
Junior (under 18 on 1st January)	<input type="checkbox"/> \$82.00
Pensioner/Full Time Student ⁴ (Card #:	<input type="checkbox"/> \$215.00
Senior Associate ⁴ (Parent Club:	<input type="checkbox"/> \$169.00
Junior Associate ⁴ (Parent Club:	<input type="checkbox"/> \$17.00
Pensioner/FT Student Associate ⁴ (Parent Club:	<input type="checkbox"/> \$85.00
Norfolk Island	<input type="checkbox"/> \$164.00
Non-Flying	<input type="checkbox"/> \$85.00
Temporary Resignation ⁵	<input type="checkbox"/> \$0.00
Other (See back of this form) (Please Specify:	<input type="checkbox"/>

MEMBERSHIP LABELS:

Number of Membership Labels Required:

Payment Method. (✓)

- Electronic Funds Transfer
- Cash.
- Cheque.
- Credit Card.

Postal Address.

The Registrar, TMAC
 P.O. Box 2108,
 Tingalpa, QLD 4173

Email Address.

registrar@tmac.asn.au

Electronic Funds Transfer.

Attached a copy of the EFT transaction with your completed Application Form as proof of payment.

TMAC Account:

WESTPAC BSB: 034053 Acct#: 127078

Please include your Surname and MAAA AUS number (if applicable EFT transaction text).

Credit Card. I the undersigned authorise Tingalpa Model Aero Club Inc. to deduct my membership plus any surcharge from my credit card, details as follows:

Card: MasterCard/Visa. Number:

Name on Card: Expiry:/.....

Authorised Signature: CVV:

DECLARATION

I agree to comply with the Rules and By-Laws, and subsequent variations as may be promulgated from time to time, of the Tingalpa Model Aero Club Inc. and its Insurers.

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

OFFICE USE ONLY

Cash EFT Credit Cheque # Receipt # Date Received/...../.....
 Date license issued/...../..... Membership Updated/Entered/...../.....

Fee Structure - 2021/2022

Membership Type	Total Fees Due	Breakdown of Total Fees Due		
	Continuing Member	TMAC Full Year	MAAA Full Year	MAAQ Full Year
Senior (18 and over at 1 Jan)	\$299.00	\$169.00	\$90.00	\$40.00
Junior (under 18 at 1 Jan)	\$82.00	\$17.00	\$45.00	\$20.00
Pensioner/Full Time Student*	\$215.00	\$85.00	\$90.00	\$40.00
Country	\$215.00	\$85.00	\$90.00	\$40.00
Non-flying	\$85.00	\$85.00		
Life Member*	\$0.00		\$90.00	\$40.00
Senior Associate*	\$169.00	\$169.00		
Junior Associate*	\$17.00	\$17.00		
Pensioner/FT Student Associate**	\$85.00	\$85.00		
Norfolk Island	\$164.00	\$34.00	\$90.00	\$40.00
Temporary Resignation ⁵	\$0.00			

Notes:

- Newsletter.** Email is the preferred and cost effective delivery method for **TMAC's newsletter, the Transmitter**. Members will be notified by email when a new bi-monthly edition of the Transmitter is available on the web site (www.tmac.asn.au). If you do not have Internet access, a small number of hard copies will be placed in the Porter Field Canteen.
- Continuing Membership.** Membership period is for a full year only. Full year period is 1 July to 30 June.
- Student/Pensioner memberships.** Applicants shall include a copy of their current valid student/pensioner card with this application each year.
- Associate Memberships.** Associate members must hold a current MAAA license with another affiliated club. Please specify your parent club name and include a copy of your current MAAA license for the year you are applying for with this application.
- Temporary Resignation** may be granted for up to two years (July to June) without attracting a joining fee upon return. A Membership Application, with the Temporary Resignation category ticked, must be submitted each year to maintain membership.
- Life Members.** Life Membership is awarded by the club membership from time to time for meritorious service to the club. Life Members are required to submit a membership form each year with the appropriate category marked.
- Joint Applications (Applicant & Partner).** Please submit two forms at the same time and tick one *Membership Fee*.
- Joining Fee.** A joining fee is required only for new members. Joining Fees include a name badge for each applicant.
- Norfolk Island.** Permanent Residents of Norfolk Island only.
- Membership Flags.** It is a requirement of your membership (Operational By-Law 03) that you attach the supplied membership flag to each transmitter you use at TMAC.

If you require any assistance with this application, or further information, please contact the Registrar on the phone number shown on the TMAC Web site (www.tmac.asn.au) or email registrar@tmac.asn.au.

General Information

Applications for membership acceptance are proposed at the Club's monthly meeting. These are held on the first Wednesday of each month (except January) at the Carina Leagues Club 1290 Creek Road Carina 4152 at 7:30pm. New members are to attend the next club General Meeting where applications will be considered by the members, who will determine the admission or rejection of the applicant.

MAAA Insurance Cover – Your obligations as a Financial Member

As a financial member of the Tingalpa Model Aero Club Inc. (TMAC), which is affiliated with the Model Aeronautical Association of Queensland Inc. (MAAQ) and the Model Aeronautical Association of Australia Inc. (MAAA), you undertake to abide by the terms of the insurance policy and the general rules and by-laws for the flying and operation of your models.

Damage to Other People's Property

The current insurance policy has a \$5,000 excess payable for all claims. Should you have a legitimate claim you are required to complete the necessary forms, provided by the Club Secretary. In any claim you are required to pay \$250 only, as your part of the excess, MAAA will pay the balance. Please refer to www.maaa.asn.au for the full terms and coverage of the insurance.

Injury to Another Person

Injury to another person (regardless of how serious the injury may be) should immediately be reported to the club Secretary or a Committee member. This must then be followed up in writing using the Accident and Incident Report Form, available from the Club Secretary or MAAA web site.

Your membership constitutes an agreement by you to comply with the Rules and By-Laws of TMAC and its insurers. If you require any further information please contact the Club Secretary. Non-compliance with rules and or by-law's may affect components of the excess available for TMAC & MAAA and may also affect acceptance of the claim by the insurer.