# TAURANGA MODEL AIRCRAFT CLUB INC.

## FLYING SAFETY RULES & GUIDELINES
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# Introduction

We ask that you take the time thoroughly to read these rules and guidelines and understand the contents. If there is any part of this document that you wish to have clarified, please ask one of our Committee Members.

At TMAC we take great pride in our responsible attitude to safety. Our rules have been instigated for the safety of our members, visitors, observers and their families, as well as to increase the expectation of members taking home their models in one piece. We have not appointed a safety officer because we believe that **it is the duty of each and every member to take responsibility for his or her own health and safety and that of others**. If you see something that is of concern, or that is outside our safety rules, or a near miss that could have been serious, please do NOT ignore it. Make a note of the circumstances and report it to a member of the Committee.
In particular members of the Committee will enforce safety rules. You must obey any safety instruction given by a Committee member. If you disagree with the instruction, you may take your alternative view to the Committee for consideration. Please also see the later paragraph headed **"Declaration of Liability".**

We recognize that safety does not have a single solution and that safety systems must evolve over time to suit changing circumstances. If at any time you feel the rules need to be amended, please bring this to a Committee member's attention.

All members must actively seek at all times to identify any aero-modelling hazards and reduce or eliminate them.

If you are requested to act on any point of safety, please do so immediately.

No modeler is to do or say anything that would make another modeler perform any unsafe act.

All visiting flyers must be advised of the TMAC Flying Safety Rules and abide by them.

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**Model Flying New Zealand (MFNZ) Affiliation**

In order to fly model aircraft at any TMAC flying site in the Bay of Plenty you must be a current financial member of MFNZ. MFNZ membership provides public liability insurance, while you are flying on an MFNZ approved site, and operating within the appropriate rules. If you are not a MFNZ member and wish to fly with us on a regular basis, you must provide proof of alternative insurance to the satisfaction of the Committee.

Intending members are welcome to use the facilities provided they are under the supervision of a suitably qualified member or club tutor when flying.

**MFNZ Rules**
MFNZ has issued rules relevant to the safe operation of model aircraft in New Zealand. A copy of these rules is available to you on application to MFNZ or may be downloaded from the official MFNZ website (ref MFNZ/Clubs/Safety Manual/Section 6 of the Clubs Manual~~).~~ It is YOUR RESPONSIBILITY to be conversant with these rules and to operate in accordance with them whilst using any TMAC model flying facility.

**ACCIDENT REPORTING**
In the unfortunate event of an accident, or a potential injury incident, a Report Form is to be completed in accordance with the MFNZ rules. Copies of this document are available from the club house, Club Secretary or may be downloaded from the MFNZ website.

**MFNZ Proficiency Test**
TMAC requires all members to undertake the MFNZ Proficiency Test and attain the appropriate "Wings" Badge , for the type of flying undertaken, before flying without the direct supervision of a suitably qualified model pilot. This is a CAA requirement.

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**Declaration of Liability**

Every member taking part in club activities, either organized or casual, does so at his/her own risk and no member shall make any claim against the Club or any officer, member, servant or authorized agent thereof for any injury or loss suffered by any such member through the activities of the Club, notwithstanding that such injury or loss may have been caused by the negligence of the Club or any officer, member, servant or authorized agent thereof.

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# TMAC Rules

1. The following rules are specific to the Hutson Field flying site, and are in addition to the general MFNZ rules, or those promulgated by the respective MFNZ SIG.,

2. The entrance gates to TECT Park are opened at dawn and closed at dusk. Models may be flown at the flying site on any day of the week during the hours of daylight.

3. The unsupervised flying of any model R/C aircraft is forbidden at our field, unless the flyer has passed his MFNZ proficiency test ('Wings Badge') appropriate to the aircraft type, or is supervised by a suitably qualified observer.

4. The Wings Test
   This comprises three main elements
   - an understanding of Civil Aviation rules and local club rules concerning model aviation safety
   - an understanding of how the model works, pre-flight checks, safe starting and stopping of engines, safe ground handling
   - basic flight proficiency test
   TMAC will hold on file the signed test sheets, of all wings tests, as a record of the member's training,

5. TECT Park is a fully functional and operating forest park and there is the risk of creating a forest fire. Flying may only take place if you have your key and are able to access the club's fire extinguishers which are prominently mounted inside each of the Club Houses. ~~In addition, Jet flyers are required to carry their own extinguisher in accordance with NZJMA rules.~~ (ref cl 34a)

6. Our site is regularly checked by the Park Ranger and all pilots must present their current MFNZ membership card on request. Pilots who are unable to produce a current membership card may be instructed to leave the flying field.

7. Under MFNZ rules, Wings Badge holders are not obliged to fly with observers at TECT Park. However, in the unfortunate event of an accident resulting in damage or injury to a third party, the position of the pilot responsible will be much stronger if witnessed by an observer. The Club therefore encourages members to use an observer whenever possible.

8. Only radio frequencies approved by MFNZ and displayed on the official Frequency Peg Board are to be used. It is YOUR responsibility to know the exact frequency of your transmitter. With the exception of transmitters operating on 2.4 GHz, all transmitters must display an approved Frequency Tag.

9. With the exception of transmitters operating on 2.4 GHz no transmitter shall be turned on within the bounds of the flying site unless it displays the correct official MFNZ Frequency Tag. Should any model be "shot down" through failure to comply with this rule, the perpetrator will be responsible for the repair or replacement of the aggrieved pilot's model without argument.

10. **Inspections before first flight**. Any new aircraft not previously flown, or model repaired following a major accident, must be inspected by a suitably qualified member of the Club before its first flight. This inspection should include a radio range test.
    A pre-flight check list can be downloaded from the club website.

11. The pilot is responsible for the integrity of any model in his/her care and is to ensure that it remains in a safe flying condition while it remains on the flight-line. A student pilot is likewise responsible for the integrity of his own model even though it may be under the control of a club-appointed instructor. If you have any doubts as to the airworthiness of your model for any reason, please refer your concern to a suitably experienced Club member for his advice. A Club appointed instructor will be

responsible for the integrity of any club owned trainer while it is being operated under his supervision.

12. Any pilot not holding a wings badge must be accompanied by an observer who holds a wings badge for that class of model while flying an R/C model aircraft. Please refer to "Guidelines for Flight Observers" in the MFNZ member's handbook page 19. (ref MFNZ/Clubs/Safety Manual/p7)

13. Role of observer
    The observer's role is to assist the pilot in identifying any hazards which may be outside the pilots field of view. This can include:
    - low flying full size aircraft overflying the field
    - presence of pedestrians, dogs, horses etc who may intrude on the landing area.
    - intentions of other pilots eg low passes, landing, request to takeoff.

    For pilots without a wings badge, a tutor/observer is mandatory. The tutor must be able to take over control of the aircraft in the event of difficulty eg by use of a 'buddy' system linking 2 transmitters. If this is not possible the tutor/observer must fly with the same operating mode (eg Mode 1 or Mode 2) as the student pilot, so that the transmitter can be physically handed over if needed.

14. All pilots and their observers, where applicable, are to stand at the official flying station (pilot box) while flying their model. At informal flying sessions, in other words during normal club flying operations and not during an organized event or competition, all pilots and their observers are to stand in the designated pilots' boxes. either:-
    (A) to the Western side of the North-South runway or
    (B) to the North of the East-West runway.
    The choice of which runway is to be used on the day is to be mutually agreed by the group of pilots present at that time. Note that if the wind changes to the extent that it is agreed that a move to the other runway is desirable all those present must adopt the same flying station. One important benefit of this arrangement is that pilots will be flying with their backs to the sun. The flight line is defined as the edge of the runway in front of the flying station.

15. No model may be flown behind the flight line unless in an emergency. Absolutely no models are to be flown over the pits, clubhouse or car park areas.

16. No spectators are to proceed beyond the Pits Area without the permission of a senior officer of the Club.

17. All model aircraft must be flown in accordance with CAA rules (part 101). If you cause an accident whilst in breach of CAA rules, you may be deemed to be criminally negligent.

18. (a) All model aircraft weighing in excess of 15kg require a Permit to Fly achieved through an approved scheme operated by the Large Model SIG. This permit is to be available for inspection by any member of the Committee.

    (b) All large models are to be started by using the starting gate at the entrances to the taxiways (see below).

19. No modeler may operate a model at TECT Park at a height greater than 1000ft above ground level or in cloud.

**In the Pits**

20. On arrival at our flying site please park your vehicle adjacent to the bund (normally facing in towards the bund). Larger vehicles may need to park parallel with the bund. Vehicles with trailers should angle park in the area to the south of the main club house. Most members prefer to assemble their models at the back of their vehicles. PLEASE LEAVE ADEQUATE SPACE FOR OTHER

VEHICLES TO PASS between your vehicle and models parked in the pits area. Once assembled, the model should be parked in the run-up area on the side of the pits nearest the airstrip with the propeller pointing out into the long grass (the safety zone). The purpose of this rule is to ensure that should a propeller or spinner part company with the airframe during an engine start attempt, these should not cause injury to any nearby persons or property.

21. If you are the first to arrive you should determine the direction of the wind and make a decision which runway is to be used and park accordingly (along either the North or West boundary).

22. All models should be adequately restrained on the ground prior to engine start. Ideally the model should be mechanically restrained on the ground or restrained in a specialised jig which is also restrained. Alternatively the model may be physically restrained by another member. Larger models (greater than 50cc) must be restrained by use of the starting gates positioned near the entrance to the taxi ways.

23. Models may be started in the club heavy wooden stands, but they must first be positioned in the pits area. Caution when lifting a model with a running engine!

24. Under no circumstances may an engine be started on the rear tray of a motor vehicle.

25. **Test runs** If a modeler requires to static run an engine for reasons other than immediate flight, that test-running is to be carried out at either end of the pits and well away from other members and their aircraft.

26. With the exception of transmitters operating on 2.4 GHz, you must not switch on your radio transmitter unless the official MFNZ frequency peg is attached.

27. All transmitters/models must be subject to a periodic range-check, and always for a new or repaired model. Ideally this should be carried out with the engine running and the model restrained.

28. No models are to be taxied in the Pit area. After starting all models are to be carried or wheeled to the taxiway. After completion of a flight, motors must be cut outboard of the Pits area.

29. Taxiways – the taxiways at the back of the pits area are to be used for departing aircraft only. After landing the model can be taxied down the main taxiway, but the motor must be cut 5m before reaching the Pits end of the central taxiway and then wheeled or carried to their position in the pits. The intention of this rule is that in the event of a run-away, the model will be pointed away from the pits area.

**On the Flight-line**

30. A maximum of three (3) models are permitted to be in the air at any one time.

31. After taxiing your model to the edge of the strip, you must stop if others are flying, and request clearance from all active pilots in the Pilot Box, to continue onto the strip. You must receive their verbal confirmation before proceeding any further.

32. **Pilot boxes** There are two pilot's boxes on the main runway. In general, the Northern box will be used in a Northerly wind and the South box in a Southern wind. The intention is to position the pilot closer to the landing threshold.

33. All active pilots and their observers are to stand in the agreed pilot box for the duration of the flight. Each pilot together with his/her observer should stand approximately two meters apart from other personnel in the box and remain within earshot of each other. A pilot may stand adjacent to or behind his model for the initial takeoff and then be guided into the designated pilot box and remain there for the duration of the flight.

34. Hand launched models not using the main runway should be launched from a position which does not endanger other flyers or spectators.

35. If others are in the air at the same time as you, ALL low passes, touch and goes, and other maneuvers over the strip, landings etc., must be called so that others can hear. All other pilots must give an oral acknowledgement to this request before you proceed with your intentions.

36. In the event of a “dead stick” the pilot should call “DEADSTICK” loudly. All other flyers should clear the runway and allow priority for a deadstick landing.

37. If you are the only one flying, the sky is all yours (within the accepted flying zone). If there is more than one model flying, common direction circuits are to be flown to suit wind direction at the time

38. At the completion of a flight where you are required to retrieve a model from, or beyond, the active strip, you must request permission to do so from the other active flyers in the pilot box. You must receive their permission before proceeding onto the active runway.
    Flyers must clear the runway immediately on landing. The runway must not be used for model assembly, engine tuning, gossip, etc, while other models are in the air.

39. **Glider Provisions**
    Gliders may land on the long grass infield areas.
    Once a glider has been launched the pilot is to stand within earshot of the pilots in the Pilot’s box so they may communicate.
    Airspace for gliders is to the West of the main runway so as not to interfere with powered models flying to the East of the runway.

40. **Landing**
    All pilots will call their intention to land
    Powered models to use the runways
    Large aerotow gliders to use the runways
    Hand launched gliders (powered and non-powered will be landed in a controlled manner on the outer part of the long grass infield ie away from the central taxiway and the pilot’s box.

41. **Control Line provisions**
    When the control line circle is in use, it must be clearly delineated with marker cones, to avoid entry by pedestrians and vehicles.
    All control lines to be pull tested to a suitable safety margin.
    Control line handles to have a safety wrist strap.
    Pilots to remain within control line centre circle when flying.
    When the control line circle is in use, RC flyers should refrain from takeoff to the North, landing, or low fly activities while control line models are airborne.

42. **“Echine”** – miniature models below 250 grams.
    These are restricted to fly within the Southern infield.

**43. Gas Turbine Powered Model Aircraft**

~~Gas turbine powered models may be flown at TMAC’s TECT All Terrain Park site subject to the pilot: -~~
~~(a) Being a financial member of MFNZ and holding the appropriate MFNZ "Wings" badge for flying gas turbine models.~~
~~(b) Being a financial member of New Zealand Jet Modellers Association (NZJMA).~~
~~(c) When flying gas turbine powered models at TMAC’s TECT All Terrain Park site the pilot is bound by NZJMA’s “Code of Practice for the safe operation of gas turbine powered model aircraft”.~~

~~(d) Obtaining prior approval from TMAC's committee before flying any gas turbine model at our site. Approval may be withheld for a number of reasons including the aircraft being considered unsuitable for flying in a forest park environment. Approval will be granted to individuals on an individual application basis.~~

~~(e) Being accompanied by an observer when flying a gas turbine model.~~

~~(f) notifying a committee member in advance of each flying session.~~

~~JETS MAY ONLY BE FLOWN WHEN THE FOREST FIRE RISK AS DEPICTED ON THE TECT PARK FIRE RISK BOARD IS "MODERATE" OR "LOW".~~

43a Committee decision March 2020 – no flying of gas turbine models permitted.
Electric and glow powered ducted fan models are acceptable.

**44. First Person View (FPV).** All models including multi-rotors flown under FPV must: -
have an observer.
at all times remain within view of that observer.

45 Multirotor and fixed wing aircraft capable of pre-programmed flight must remain within line of sight and be able to be overridden to manual flight if required.

46 **Dogs/Animals** . Dogs, (with the exception of support dogs), are not permitted on the TMAC flying site. In addition to the risk of a loose dog distracting a model pilot at a critical time there is a risk to all animals from the presence of poison baits laid on our site by TECT Park staff to control pests.

**GENERAL SAFETY GUIDELINES**

47 **Emergency First Aid.** There is a first aid kit in the Club House. Defibrillators are available at Adrenalin Forest and at the Ranger station. In the event of an accident or medical emergency, please use a cell phone to call 111 and ask for "Ambulance".
The closest Medical Centre to the TECT Park Model Flying Area is Tauranga Public Hospital in Cameron Rd.

48 **Transmitter Pound**
With the exception of 2.4 GHz transmitters, it is imperative that the first thing that should be done after you arrive at the field is put your transmitter (or transmitters) in the "pound" viz., on the table in the Container/Clubhouse. This relates to all flyers – fixed wing, helicopter, glider etc. You must then obtain the official MFNZ frequency peg (for that transmitter) before you can retrieve your transmitter from the pound. The only time the transmitter should be out of the pound is when you are flying. Once you have finished your flight you must return your transmitter to the pound and swap the frequency peg for your name peg

49 **Pre-Flight Check**
Everyone is reminded that we should all give our models a thorough check either at home or at the field before flying each day. This should include:-

a) checking fuselage and wings for soundness, that there are no holes or cuts in the covering, all control surfaces and hinging, linkages, horns, servos, clevis keepers, wing fixing bolts/bands, spinner, prop, motor mounts, muffler, needle valve plus any other obvious areas that should be checked.
b) Range check - Confirmation that engine cutoff (internal combustion motors) is functioning.
c) Transmitter - Model Selection, If you operate a transmitter that electronically stores the settings for a number of different models, always check before you taxi out that you have selected the correct model and that all control surfaces are operating correctly and in the right direction.
d) Transmitter and On-Board Batteries - Just because you charged your batteries the night before, do not presume that they are fully charged and ready for a day's flying. Always check the voltage of your transmitter and onboard batteries as part of your pre-flight check at the start of each day as well as at regular intervals during the day. If you do not have a way of

checking on-board batteries, ask if you may borrow a test meter until you purchase your own. Batteries should be checked under load – eg by stalling a servo, or using an appropriate tester unit

**50 Metal Frequency/Name Pegs**

Do not attach any metal peg to your transmitter aerial while flying. If they make contact with the metal handle of the transmitter, they can cause a direct short from your aerial causing models to crash.

**51 Electrically Powered Models**

Lithium based batteries (both LiPo and Li-on) are liable to burn fiercely if damaged. Users of such batteries are required to have their own fire extinguisher readily accessible at all times. Any lithium battery which has been subjected to a sharp impact should be quarantined in a fireproof container and safely disposed of at the earliest safe opportunity. Sand buckets are provided in the clubhouse to extinguish battery fires.

52. **Care Operating Machinery**

No person may operate powered machinery on site without the agreement of the Committee which will be responsible for ensuring that they are suitably trained. As far as possible no machinery should be operated unless there are at least two members on site. Any member necessarily operating alone should ensure that their whereabouts are known.

53 **Risks on Rough Terrain**

Access tracks have been formed in the outfields to facilitate access for the recovery of models which have landed out of our mown area. Great care should be taken when accessing these rough areas which may be uneven and strewn with lying timber.

54 **Supervision of Children**

Children are very welcome to visit our site but must at all times be under the supervision of a responsible adult. Particular care should be taken if young children are to be admitted to the pits or to the flying strip.

55. **Care** of Site

The last person to leave the site is to ensure the facilities are secure –
Chairs put in clubhouse
Portable windsock stored in day shelter,
Charging board in clubhouse
Clubhouse power turned off. (2 switches),
Clubhouse padlocked.
Gate padlocked

***REMEMBER: "SAFETY" means NO ACCIDENTS***