

THE VMAA TROPHY

21st To 22nd April 2018

To be held at P&DARCS Flying Field
30 Fowler Road, Cardinia



The aim of this event is to encourage VMAA Affiliated Clubs to have a go as a team event over two days. The emphasis is on fair play, friendly competition and maximum fun!

For continuity, the Trophy Rules will be kept materially unchanged for a period of 3 years once the review has been completed (2018). Additional changes have been made for the 2018 events to refresh the competition. Further changes may be considered after the conclusion of the trophy weekend. Once rules/conditions are agreed to and approved, they will remain unchanged as detailed above. This is to ensure the events have continuity and allow participating Affiliated Clubs to prepare and practice in their chosen events. We also encourage continued improvement based on feedback received from competing Clubs. Any new events/conditions may be adjusted to ensure it coincides with the ethos of the event. Safety is always considered and not compromised.

Events are conducted to 'VMAA Trophy Rules' that makes it fair for the smaller Clubs to *have a go* with a good chance of doing well against the bigger Clubs. There are 10 events and your Club can enter all 10.

But only your best six of the ten events will count towards you final score.

A Club pilot can enter a maximum of two events, but can 'assist' other pilots/team members in other events. All Clubs are required to provide assistance in regards to judges or time-keepers for events held.

The Ring-In Pilot (New Condition- 2nd year held)

The VMAA CD is introducing a new condition by allowing a competing Club to have one pilot from another VMAA Club to join their team. The intent is to increase team size and allow those pilots that do not have a full team, to compete and be part of the trophy weekend. The conditions for the Ring-In are as follows:

1. Only one Ring-In for each team;
2. Can fly in two events only;
3. Can assist any other pilot in any event; and
4. Must be clearly recorded on the entry form as the Ring-In

The VMAA Composite Team (New Condition and will be trialled in the 2018 Trophy Weekend)

Over the past few years there have been a number of Club Members that would have participated in the Trophy weekend, however, for various reasons miss out due not been able to assemble a team. To assist Club/Members and to maximise involvement with the Trophy weekend, the VMAA is introducing the **Composite Team entry**.

Composite teams will compete for a separate trophy. The VMAA Trophy will be awarded to the winning "single club" team (including teams with a single "ring-in" pilot) as normal. This will allow pilots from various Club to participate and compete within the competition. A Composite Team Trophy will be presented at the conclusion of competition.

Rules and Conditions are as follows:

1. Pilots will compete in the same events currently set by the VMAA Trophy weekend;
2. Scoring will be the same and awarded accordingly;
3. Each Pilots can only compete in a maximum of 2 events;
4. Juniors can participate as per the VMAA Trophy; and
5. Medallions will be awarded to pilots that achieve 1st, 2nd or 3rd places for individuals' events.

Changes/review to the above conditions may take place to ensure the best outcome is achieved for the team/competition.

Radio Frequencies

Time restrictions may make it necessary to **have no frequency clashes** where two events may be conducted at the same time, or in events where aircraft fly at the same time, or there are multiple heats within rounds. These events are identified below. Frequencies will be '**locked-in**' on a **first-to-enter basis**. *Enter early to avoid frequency change!*

Conduct of Events

More events will be conducted on the Saturday (**six events**) with Sunday completing the final events (**four events**). All events will be attempted if possible so a result can be achieved for each. This may be reduced based on weather conditions and the suitability of an event. Pilots for each event must be available when the event has been scheduled. No pilot will be allowed to take part in the event if they are not present at the event CD's pilot brief.

SATURDAY'S EVENTS, (Not necessarily in this order as it depends on weather conditions).

Combat The task is to be airborne for three minutes of actual "Combat Time" with the intent to cut a competitors' streamer as many times as possible.

Rules and conditions are as follows:

1. Each round will be of a 3 minute duration;
2. One point will be awarded for each second of flight;
3. One hundred points will be awarded for each streamer-cut the model makes to another competitor during the Combat Time;
4. **Models involved in a mid-air collision receive 50 points each and are to disengage and land immediately. There are to be assessed on the ground and cleared to continue in that round;**
5. Models shall be of flying wing design, preferably delta, up to 48 inch wingspan, however training type models can be used. Twelve inch maximum propeller diameter;
6. **Up to .50 size engines or equivalent electric;**
7. The models will be flown in a 'cube' of sky in front of the pilots, with a 'disqualification line' (**no closer or zero points will be allocated with the pilot ordered to land**) that is at a safe distance away. At its' closest **expect 40 to 60 metres;**
8. In each round, the aim is for everyone to go up together. If there are too many entries, heats will be run to complete a round;
9. We will fit as many rounds as we can within one hour;
10. A sound signal will indicate the **start and finish** of Combat Time.

Engine Start and Repair Time:

There will be an up-to two minute 'window' to start engines and get airborne before the signal for Combat Time. **Up to five minutes will be allowed to retrieve/repair etc before the start of the next round.** The CD can bring this forward if all are ready. Spare models may be used after any heat, providing there is no frequency clash and meet the criteria above.

Teams shall use the streamers supplied (approx. five metres of crêpe-paper tape at the end of an approximately three metre string). Teams shall provide a pilot, a caller, and a launcher. 'VMAA' observers will record each team's air-time and streamer-cuts. **Other observers/officials will control the no-closer line.**

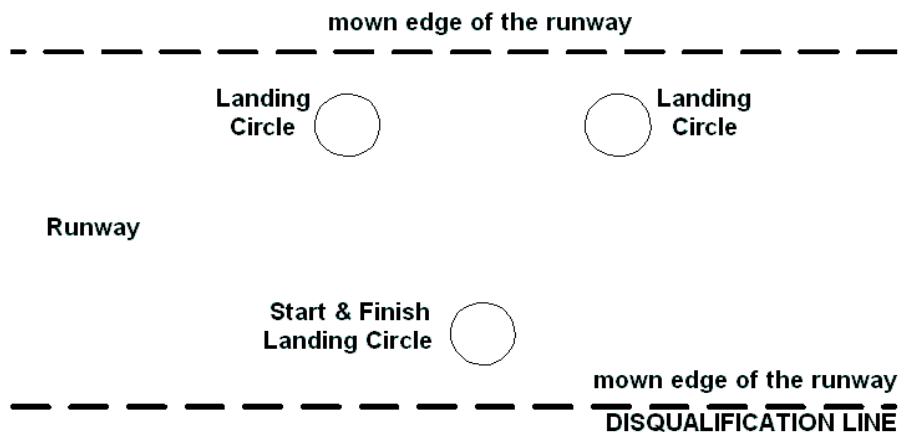
Helicopter (2.4 GHz radios if available.) VMAA Trophy Rules apply.

This not a speed event! This event will be conducted in conjunction while other events are underway, so 2.4 radios would help greatly.

Rules and conditions are as follows:

1. Models will be timed while flying around a triangular course (**left or right hand, pilot's choice**);
2. This includes landing and taking off at each of two Landing Circles;
3. If desired, pilots may move with/follow the model around the course at **NINE metres minimum distance**;
4. Each of the three Landing Circles will be two metres in diameter and positioned 25 metres apart;
5. The object of this event is to achieve a target flight time that is closest to 180 seconds (three minutes). One second equals one point. One point will be deducted for each second under or over the target time;
6. **The pilot's mental capability shall be the sole means of timing, meaning no external assistance of any kind otherwise a zero score will be recorded;**
7. Timing starts when the model first lifts off from within the Start & Finish Landing Circle, and stops when the helicopter first touches down within the Start & Finish Landing Circle after completing the required course. **Thirty points will be deducted if any landing gear is not entirely within each of the three landing circles at touchdown;**

8. At each of the two distant Landing Circles, models must land and remain stationary for a minimum of five seconds and a maximum of ten seconds. Thirty points will be **added/deducted** at each of the two distant circles where the model is not stationary for the required time;
9. Thirty points will be **added/deducted** for every landing/touch between the circles.



Scale Aerobatics. VMAA Trophy Rules apply.

This event is open to any model that is based on full-size, single engine aerobatic aircraft.

This will include many models that are regularly flown at most Clubs, such as the Giles 202, Staudacher, Cap 232, Extra 300, Ultimate Biplane, Citabria, Sukhoi, Pitts Special Biplane etc. **Maximum engine capacity shall be 120 cc / 7.3 cu in (or equivalent if electric powered).**

Rules and conditions are as follows:

1. There will be two flights as detailed below;
2. One flight of each to be flown, with both flights scored;
3. Clubs may be asked to provide a judge, and we expect the person 'offered' has at least a basic knowledge of judging aerobatics.
 - a. **Flight One** will be a 'Known' schedule of nine manoeuvres, which are intended to be quite 'do-able'...;
 - b. Judging criteria for the 'known' flight only will be as per F3A judging guidelines, in this order of importance:
 - i. Precision of the maneuver;
 - ii. Smoothness and gracefulness;
 - iii. Positioning;
 - iv. Size of the maneuver, (relative to the maneuvering area and other maneuvers in the flight).
 - c. **Flight Two** will be a 'Freestyle' flight of manoeuvres of your choice.
 - i. A maximum of three minutes will be judged, plus take-off and landing time if required;
 - ii. In the freestyle, pilots are encouraged to use the full capability of the model, such as smoke, snap rolls, torque roll, etc.;
 - iii. Judging criteria for the freestyle only will be for originality, accuracy (precision of the manoeuvres), degree of difficulty, versatility (few repetitions of the same thing), positioning of the manoeuvres for judging; and
 - iv. Entertainment Value.

Bomb Drop. VMAA Trophy Rules apply (*2nd year. Final review*)

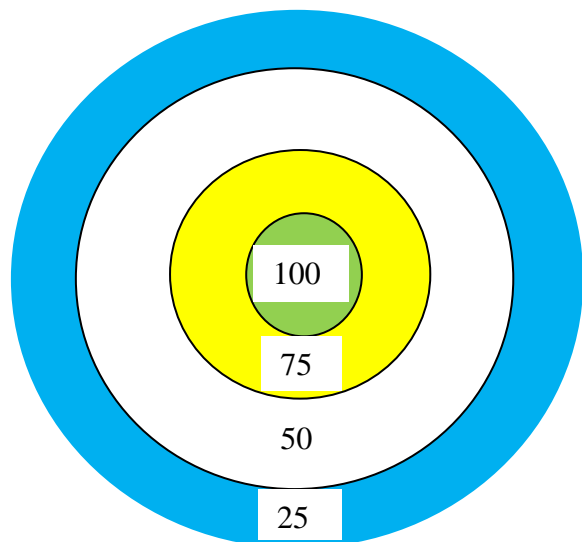
The intent of the event is to have the pilot to drop a bomb (Golf Ball) onto the scoring circles on the ground. The manner on how the bomb is secured and released from the model is up to the team. This can be executed via a bomb door under the model or a foam cup attached to the top wing. The pilot's assistant will be required to reload their model once it has landed and come to a stop (*may be reviewed*).

Rules and conditions are as follows:

1. No drones, helicopters or GPS type of equipment is to be used;
2. High or low wing .46 size model is acceptable;
3. **Power** - IC or Electric is acceptable;
4. Bomb bay to carry one bomb only;

5. The bomb will be a coloured golf ball, supplied by the VMAA;
6. **Target** – will be 4 circles on the ground with nominated values (*see diagram*)
7. A minimum height will be nominated for the bomb drop and monitored by an official selected by the CD;
8. All pilots will ROG and will be called in by the CD to drop their bomb on the target;
9. Once their bomb is away, they are to gain height and remain airborne until called in to land;
10. Each pilot will have a caller to assist, reload and retrieve the bomb from the target area;
11. CD will record each score on the target with the highest score winning the event.

Bomb Target Size and Values



Size of bomb circles from centre:
 100 points = 1 meter;
 75 points = 2 meters
 50 points = 3 meters
 25 points = 4 meters
 *Circle sizes maybe reviewed.

Thermal Glider. VMAA Trophy Rules apply.

Any kind of glider, any type of controls, as long as the *primary* strength of the wings is from wood. For example, balsa-skinned foam is OK (or any other wood skin). Carbon-strengthened wooden spars are OK.

Winch or hand-tow: The event will be run from one of the two runways, so the distance from winch to turnaround will be 150 metres, or 'what fits the runway'. While clubs should provide their own launching equipment, the VMAA's winch will be available to share with Clubs, if needed. Each Club will need four people; a pilot, a timekeeper with a reliable stop-watch, a launcher and a parachute retriever.

Rules and conditions are as follows:

1. This is a *'thirty minute total'* thermal glider contest. The object is to log a total of six flights that are as close to
 - a. 2-minute, 3-minute, 4-minute, 5 minute, 6 minute and 10-minute flights as possible, **in that order.**
 - b. ***Total time allowed for the event is approximately one hour.***
2. Scoring is at the rate of one point per second, so the highest total score wins. If you fly under or over-time, your score is reduced by the amount of seconds from the target time.
3. ***There is a 20-point bonus in each segment for the model landing within 15 metres of the 'landing spot'.***
4. A **working-time 'window'** will be specified for each time-segment. All models are to fly together in each segment, in each respective time-window.
5. ***Models that have been released/launched as the window ends may still complete that segment.***

Fun Scale. VMAA Trophy Rules apply.

Rules and conditions are as follows:

1. **Flying only** will be judged over two flights. While there is no static judging at all, aircraft should be of reasonably scale appearance (*so ARF's are quite OK, but no profile models, or sticks with Maltese crosses please!*).
 - a. Flight schedule is:
 1. Take Off,
 2. Flight in a Straight Line at constant height at max 6 metres,
 3. Plus four manoeuvres of your choice from the provided list of manoeuvres, and
 4. Landing (final manoeuvre).

2. Each Team must provide a list of the four additional manoeuvres (for both flights) at the morning's pilot briefing at 8.45 am.
3. Clubs may be asked to provide a judge, and it is expected the Club Member 'offered' has at least a basic knowledge of what to look for, regarding what manoeuvres (and their shapes, speed, etc) are applicable to the aircraft type.
4. *Realism in Flight' is the aim, and will be given a substantially higher 'weighting' in the scores.*

SUNDAY'S EVENTS, but not necessarily in this order (depends on weather):

Electric Glider. (2.4 GHz radios if available for a 'no frequency clashes' event). VMAA Trophy Rules apply

Models like the multitude of electric gliders seen at typical Club days are encouraged to be used (not the highly specialised, expensive models seen at "Formula 1 level")

Batter Types to be used:

NiCd and NiMh packs may be up to 7 cells of any capacity.

LiPo packs: See the table below. The result of multiplying the Milliamp Hour (mah) rating of the cells by the number of cells in the battery pack shall not **exceed the number 6,600**. Another way of expressing this is to divide the number 6,600 by the number of cells in the battery pack to give the maximum capacity in Milliamp Hours.

- e.g. If you want to use a 3S (3 cell) pack: $6,600 \div 3 = 2,200$. You can have up to a 2,200 mah pack.
 If you want to use a 2S (2 cell) pack: $6,600 \div 2 = 3,300$. You can have up to a 3,300 mah pack.
 If you want to use a 5S (5 cell) pack: $6,600 \div 5 = 1,320$. You can have up to a 1,320 mah pack.

Rules and conditions are as follows:

1. Any kind of electric motor, with or without gearbox;
2. Any kind of electric glider up to 2 metres wingspan with no operable airbrake, spoiler, flaps or 'crow' capability (ailerons are OK);
3. Each Team will need two reliable stop-watches; one for the flight time, and one for motor run time;
4. ***Batteries shall be made available for inspection by the CD before the event starts, and at any later time;***
5. The aim is for an exact **300 second (five-minute)** flight, plus landing bonus. From 300, deduct the seconds of flight time ***either side*** of 5 min. Then deduct the motor run time in seconds to get the net flight time. All heat scores will be normalised using 1000 points.
6. As many rounds as can be flown in the time available;
7. The worst round will be discarded for each competitor.

Fun Fly. (Loop & rolls – Reintroduced)

VMAA Trophy Rules apply. Rounds will alternate between **Task A and Task B**. The same model is to be used for all flights. ***For each team, the best two out of three rounds to count (or 3 out of 4 if time permits).***

Rules and Conditions are as follows:

1. The CD/Official will announce "**Permission To Start**" your engine;
2. Up to two minutes will be allowed for the model to ROG and attain '**working**' altitude;
3. **Timing commences** when the **PILOT** clearly announces "**NOW!**" to the event's CD during the two minutes.
4. **Timing stops** when the aircraft stops moving after landing, or five minutes after "**Permission to Start**", whichever is first.
5. Ten seconds will be added to the flight time if the pilot does not commence from level flight; any loop or roll not completed;
6. Ten seconds will be added on touchdown and/or coming to rest with any wheel not on the mown runway.
7. To discourage crashing, if a model is considered suspect after a flight (propeller excepted), up to five minutes will be allowed for the team to work on the model and then demonstrate that it still flies safely (after the last flier in the round has finished) or two-minutes will be added to that round's flight time, and it will be a counted round.

Tasks to be completed

- **Task A flights:** ROG, climb to a ‘**working altitude**’ of the pilot’s choice, and then *beginning from level flight*:
 - do a roll;
 - then a loop;
 - then a roll;
 - Then a *sequence of* two rolls, two loops, two rolls, followed by a sequence of three loops, three rolls, and three loops.
 - Then land on the runway, in the shortest possible time.
- **Task B flights:** ROG, climb to a ‘**working altitude**’ of the pilot’s choice, and then *beginning from level flight*:
 - do a roll;
 - then a Cuban Eight with half-rolls;
 - then a roll;
 - Then a *sequence of* two rolls, two loops, two rolls, followed by a sequence of three loops, three rolls, and three loops.
 - Then land on the runway, in the shortest possible time.

Sports Limbo: VMAA Trophy Rules apply.

The idea is for each pilot to pass under the streamer of the Limbo obstacle as many times as possible within a set time limit and without hitting the supports or streamer. The limbo obstacle will be made up of two vertical poles tethered to the ground 20 m apart. A streamer will be anchored to the height adjusters on the poles and set initially to a pre defined height and reduced each round. If the model touches the ground while executing each pass, the pilot will be disqualified from the round. Successful passes will be recorded.

Rules and conditions are as follows:

1. Pilots will have sufficient time to prepare and take-off.
2. There will be only 1 model in the air at any one time unless specified otherwise.
3. Pilot’s position will be on the side of the Limbo obstacle (refer to diagram).
4. Pilot may have a caller to assist him during his flight.
5. Once the pilot is in the air, the CD will signal to start and the stopwatch started.
6. The pilot will then attempt to pass under the streamer.
7. At the completion of the round, the streamer will be lowered by 50cm intervals.
8. If the pilot hits any part of the structure or cuts the streamer, the pilot is disqualified to the next round.
9. If the model is damaged, the pilot has until the next round to repair and be ready.
10. ***Each pilot will have 2 minutes in duration from the CD’s signal, to pass under the top streamer without touching the ground.***

Scoring:

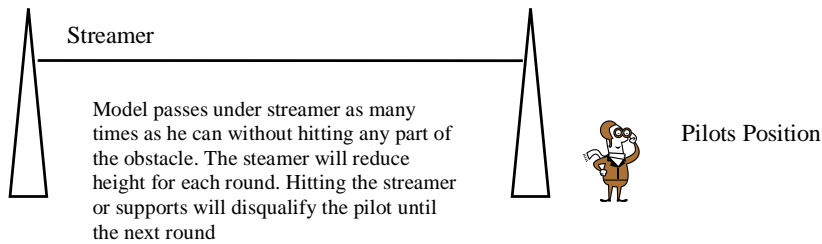
1. Pilots will be awarded 20 points for each successful pass under the streamer;
2. Total Score will be number of successful passes x 20 points;
3. Pilot with the most points wins;
4. In the case of a tie, another round between the pilots will be conducted, if time permits; and
5. ***Successful inverted passes under the streamer will be awarded double points.***

Aircraft Type

To ensure all competitors have similar aircraft, all models will be of fixed wing type with the following conditions:

1. Aircraft size – **Minimum .46 type trainer.** (Cannot be electric);
2. No flying wing, helicopter, ducted fan or quad copters to be used;
3. No GPS type of equipment is to be used.
4. A low or high wing trainer is acceptable.

Limbo Obstacle:



Musical Landings. (2.4 GHz radios if available for a ‘no frequency clashes’ event). VMAA Trophy Rules apply. Fairness to all competitors and safety will be high priorities in this event.

This is an ‘**elimination**’ event. Upon a clear signal, the music will start. The models “**Rise Off Ground**” (ROG) and fly in the required circuit at the required altitude until the music stops playing. The models are then landed in the required area and from the required direction in the shortest time possible.

Models **shall have** a minimum wingspan of **forty-eight inches**, and **minimum flying weight of four pounds**. Any type of fixed-wing model; any type of power (that complies with MAAA safety rules!)

The circuit and landing direction will be made known before each heat. **Pilots attempting to circuit or land ‘against the flow’ will earn for their team an equal-last place for that round (1 point)**. In each heat, one warning only will be given for models being flown too low in the circuit or hugging the favoured end etc. before being ‘**grounded**’ and banished to equal-last place for that round.

All flyers competing in a heat must land their model within a total designated landing zone (Runway). Pilots landing outside the designated area will score equal-last and not fly again in that round.

Rules and conditions are as follows:

1. In each heat, models shall not be touched after landing until a clear signal is given to do so.
2. From that signal, up to three minutes of carefully monitored ‘**working time**’ will be allowed for refuelling, making running repairs, and ROG to the circuit as soon as desired.
3. In each heat, last model to stop moving forward is eliminated, and does not fly again in that round. The rest go on to the next heat, and so on until there is a winner for the round.
 - a. **NOTE:** If a team is last-down in a heat, but then the second-last team cannot ROG in the next heat, then the ‘last-down’ team is deemed ‘**not out**’ (saved!) and may ROG at the end of the three minutes. **Stay ready!**
4. In order to save some time during the event, if all the eligible models are already back in the air, the signal to start the music may be given before the three minutes is up.
5. A clear signal will be given when the three minutes is up, and the music is started again.
6. If a model has not ROG within ten seconds after the signal is given, it shall remain on the ground and be given equal last place for the round.
7. To discourage crashing, a team will score equal last for the round if their model is “**crashed on landing**” or cannot safely ROG within the three minutes repair time allowed; or for the winner of the last heat, cannot be flown within three minutes after that heat to demonstrate ‘**airworthiness**’.
8. Any model that is deemed unsafe to fly (by the CD or CD’s officials) by the end of the three minutes ‘**repair time**’ will not be permitted to ROG and the team will suffer their fate of scoring equal-last place (1 point).

Use of a Spare Model:

Teams may use one spare model with a non-clashing frequency in a subsequent round.

But within a round, a back-up model on the same frequency may only be used (and it must be ROG within the three minutes) where a team’s model has been damaged by another and cannot be repaired within the allowed three minutes.

There will be one continuous round until the top 3 places are identified. Each pilot will gain points based on their placing.

Scoring:

1. In each round, 1st place gets a number of points equal to the number of entries;
2. 2nd place gets one point less, etc.

3. Highest accumulated points wins; and
4. There will be a fly-off to break any ties for 1st and 2nd.

Simplified Musical Landings Rules...*To do well, models must ROG on time, not get damaged too much, land in the right place, and be no worse than second-last down every time!*

VMAA Trophy & Composite Team Scoring:

VMAA POINTS are awarded for placing in each event in the following way:

1 st = 6 points	2 nd = 5 points	3 rd = 4 points
4 th = 3 points	5 th = 2 points	6 th = 1 point
7 th onwards = 1 point		

JUNIORS will receive extra VMAA points (per attempted event) on the placing of the junior.
i.e. 1st place = 1.5 points, 2nd place = 1 point and 3rd place = 0.5 points.

These extra points **will only be added** to the overall team score. **Not added to the event score.**

Your six highest-scored events will be counted... you don't have to enter all ten events!

IMPORTANT INFORMATION ...

PLEASE QUOTE YOUR (non-2.4) FREQUENCY NUMBERS IN FULL

FOR EXAMPLE, write: **36.330 and not its' common abbreviation 633
(330 etc will not be accepted as an entry! Please ensure this detail is correct before submission)**

Frequencies:

Two-inch keys in a standard two-inch keyboard shall be used, and keys are to be clearly marked with the pilot's name and frequency number. 20 kHz frequency spacing will be used in all cases for 29, 36 & 40 MHz.

Team Managers are to forward their Club's entries, but it's up to the individual competitors to satisfy themselves that the VMAA Contest Director has received the correct frequencies from the Team Manager.

Frequency Clashes:

Some events must be run with all the competing models in an event being flown at the same time, or in rapidly-following heats.

These are... Thermal Glider, Electric Glider, Old-Timer Duration & Musical Landings.

Otherwise there simply wouldn't be enough time to run all the events. Teams will benefit by entering as early as possible, because in the event of a frequency clash, the last-received entry will be required to change to the CD's advised unused frequency. Late received entries have a much higher likelihood of having to change frequencies, along with possible re-certifying of your radio to the new frequency.

If, after the team's entry has been accepted, a team member subsequently wants to change a frequency in a no-frequency-clash event, it can only be to an unused frequency, to be advised by the CD.

It is in your own interests to get your entry in as early as possible, as any frequency clashes must be resolved by a first-in best-dressed basis.

ENTRIES CLOSE: midnight, Monday, 16 April 2018

CHANGES TO ENTRIES AFTER THIS DATE MAYBE CONSIDERED

THERE IS NO ENTRY FEE FOR THIS COMPETITION!

The venue will be the P&DARCS, 30 Fowler Street, Cardinia.

For map reference go to website: www.pdarcs.com.au

If you have a car navigation system input GPS coordinates, enter in -38.139122, 145.446335.
These coordinates will take you to the field. Entry to the field is via Wenn road which is a dirt road.
Make sure that traveling on unmade/dirt roads is enabled on your GPS.

Catering available both days and you can camp overnight on-site.

Motels and Caravan Parks are nearby if you want to stay overnight

If you need further information:

Please contact the VMAA Contest Director:

Joe Finocchiaro

Mobile: 0418 878 168

contestdirector@vmaa.com.au

Last Update 16-08-2017