Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 1- INTRODUCTION

The new MAAC Safety Code consists of 22 separate safety documents that contain the safety rules applicable to each specific category of aero-modeling. By using the Document Retrieval Key presented in MSD 2 – Document Retrieval Key, members can determine, select and print those documents and only those documents which are applicable to the category or categories of aero-modeling in which they participate.

To use the Document Retrieval Key select the category from the left hand column. The individual document numbers are listed across the top of the Key. Read across the line for your category. The letter X indicates the documents applicable to your category.

Approved by the BOD March 24, 2013

Revised by the BOD May 30, 2013

MAAC SAFETY CODE DOCUMENT RETRIEVAL KEY

	APPLICABLE DOCUMENTS																																
CATEGORY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
FREE FLIGHT	X	X	X	X																													
CONTROL LINE	X	X	X		X																												
RC GENERAL	X	X	X			X	X										X																
FPV	X	X	X			X	X	X									X																
GIANT SCALE	X	X	X			X	X		X								X																
RC JET	X	X	X				X			X							X																
RC NIGHT FLYING	X	X	X			X					X						X																
RC 3D AIRPLANES	X	X	X			X	X					X					X																
RC HELICOPTER	X	X	X			X	X						X				X																
RC INDOOR	X	X	X			X								X			X																
RC CLIMB & GLIDE	X	X	X				X								X		X																
SPACE MODELING	X	X														X																	
RC FLOATPLANE	X	X	X			X	X										X	X															
PARK FLYER	X	X	X			X	X										X		X														
PRECISION. AEROBATICS	X	X	X			X	X										X			X													
FAI	X	X	X																														
RC PYLON	X	X	X			X	X										X				X												
RC SAILPLANE	X	X	X				X								X		X			X													
RC SCALE	X	X	X			X	X										X																
RC SCL AEROBAT	X	X	X			X	X										X					X											
RC SCALE COMBAT	X	X	X			X	X													X													
SAM	X	X	X				X																										
YOUTH & BEGINNER	X	X	X																														

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document #MSD 3- ALL MODEL AIRCRAFT

The operation of a model aircraft in Canada is subject to rules contained in the Canadian Aviation Regulations (CARs) administered by Transport Canada. CAR 101.01 provides the legal definition of a model aircraft as follows. " Model aircraft means an aircraft the total weight of which does not exceed 35 kg (77.2 pounds), that is mechanically driven or launched into flight for recreational purposes and that is not designed to carry persons or other living creatures".

In addition, (CAR) 602.45 states, "No person shall fly a model aircraft or a kite or launch a rocket or a rocket of a type used in a fireworks display into cloud or in a manner that is or is likely to be hazardous to aviation safety".

All members operating a model aircraft either for sport or in competition shall adhere to the following basic requirements. Because these are basic requirements and because the safe operation of a model aircraft can be influenced by many factors such as local field conditions, weather, size of gathering, mix of model types etc. local club officials, event organizers or other assigned responsible persons shall provide interpretation, clarification and enhancements as necessary to ensure safe flight.

1. All members shall review and comply with the MAAC Safety Code, the specific rules of any special interest category and any rules established for the specific flying site and/or event.

2. The Safety Code and its attachments may be amended from time to time. All members shall review these documents for any such changes. Notification of all changes approved by the Board of Directors will be posted on the MAAC Web site as well as recorded in Model Aviation Canada in a prominent location so identified and will include the effective date of the changes.

3. No member shall operate a model aircraft in a careless, reckless or otherwise dangerous manner that may pose a hazard to persons or property.

4. No member shall operate a model aircraft while under the influence of alcohol or judgement impairing drugs.

Continued on next page.

5. No member shall operate a model aircraft in Canada weighing more than 35 kilograms (77.2 pounds) including fuel and payload unless he or she has a Special Flight Operations Certificate (SFOC) from Transport Canada and has arranged for his or her own insurance coverage. Members are further cautioned that any model weighing more than the above limit is considered by Transport Canada to be an Unmanned Air Vehicle (UAV) and may be subject to Air Regulations not normally applicable to model aircraft as defined.

6. No member shall operate a model aircraft at a location where it is prohibited by law.

7. No member shall create a hazard by carrying in or dropping from a model aircraft any object that may endanger persons or property.

8. No member shall allow projectiles to be launched from the ground with the intent of damaging or destroying a model aircraft.

9. No member shall fly a model aircraft at a location or in a manner that is or is likely to be hazardous to full-scale aircraft. For further information contact the MAAC Safety Committee.

Approved by the BOD March 24, 2013.

Revised by the BOD May 30, 2013

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 4 - FREE FLIGHT MODEL AIRCRAFT

The free flight categories (Free Flight and Indoor Free Flight) comprise many different types and classes of models and methods of power. In addition to general safety rules listed below, members shall abide by any additional safety considerations specific to an event, venue and/or class of model flown, as imposed by the club, event officials or class specifications.

All members flying Free Flight models outdoors shall adhere to the following.

1. All members shall launch their models at least 45 meters downwind of all spectators, vehicles or structures.

2. All members shall ensure that the launching area is clear of all obstructions and persons except for mechanics and/or officials.

3. All free flight models using a burning fuse to time the deployment of a de-thermalizing device shall have an effective means to automatically extinguish the fuse after it has completed its function.

4. No member shall launch a free flight model aircraft if a full scale human carrying aircraft is in the immediate vicinity of the launch site.

All members flying free flight models indoors (Indoor Free Flight) shall adhere to the following.

5. Models with a flying weight in excess of one ounce (28.35 grams) shall not be flown indoors without special attention to the safety of other modellers and their aircraft.

6. All members shall abide by any rules established by the building's owner.

7. No member shall climb ladders or other structures, or otherwise attempt to access elevated areas of the building to retrieve a model, without the permission and guidance of the custodian.

8. All members shall ensure that all damaged model parts containing materials of a hazardous nature such as boron, carbon fibers or lithium are removed from the building and properly disposed of.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 5 - CONTROL LINE MODEL AIRCRAFT

A control line model aircraft is one that flies in a circle on a set of control lines and is controlled by a pilot at the centre of the circle. It may be powered by various methods and the power source may also be controlled by various methods.

There are many different special interest categories of control line models each with their own specific set of rules. The following general requirements are applicable to most categories.

All members flying a control line model shall adhere to the following.

1. All members shall use a safety thong , except when flying 1/2A Control Line models (engines from .010 to .10 Cu. Inch displacement or an equivalent size electric motor), or when instructing, or unless noted otherwise for a specific purpose or category.

2. All wire sizes and terminations shall conform to MAAC Control Line Competition Rules for the specific category.

3. All control line models including the complete control line system (handle, lines, model and thong) shall be inspected and pull tested prior to flight. Pull test specifications shall comply with the regulations for the specific category of model.

4. Control line models not fitting a specific category shall be tested to the specifications for Precision Aerobatics.

5. The flying area must be clear of all obstructions and not closer than 20 metres from all utility wires.

6. All spectators shall be positioned well outside the flight circle prior to engine start.

7. No member other than the pilot or a student pilot and his instructor shall be inside the flight circle during the flight. The only exceptions to this will be when multiple models are being flown in the same circle at one time, or when a “caller” or “circle marshal” is required in competition, or when practicing for a competition.

8. Any member assisting with the launch of the model shall move well outside the flight circle immediately after release.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 6 - General Category R/C Model Aircraft

A radio control model aircraft is one controlled by a control system utilizing a ground based radio transmitter and an air-borne radio receiver.

This document covers outdoor R/C flying activities at R/C clubs or other venues involving many different types of R/C model aircraft flying at relatively low altitude in close proximity to a flying field similar to the one described in the MAAC Policy and Procedures Document MPPD 8 – R/C Flying Field Specifications.

There are other Special Interest Categories of R/C model aircraft whose flight regimes, field requirements and/or special safety precautions may differ from those contained in this document. These are addressed in Safety Documents located elsewhere in the Safety Code.

All members flying General Category R/C Model Aircraft shall adhere to the following.

1. No member shall operate a R/C model at a MAAC registered flying site until he or she has demonstrated that he or she can control the model in a safe and competent manner or is under the direct supervision of a qualified instructor.

2. No member shall fly a R/C model aircraft in competition or at an event to which the general public has been invited until the model has successfully completed a test flight or series of test flights to prove that it is airworthy and that the pilot is familiar and comfortable with its flight characteristics.

3. No member shall fly a R/C model aircraft designated as a special interest category type or participate in any competition involving that category until he or she has read, understands and intends to comply with all rules specific to that category.

4. All members shall prior to the first flight of the day conduct a thorough preflight inspection of all control linkages and control surfaces for correct direction of movement and secure installation and conduct a proper range check of the radio system.

5. All members shall use an appropriate method of restraining their model during starting and ground running of the model or during a range check when it is conducted with the motor running or where there is any danger of the motor starting as in the case of electric powered models.

Continued on next page.

6. No member shall fly directly over pit or spectator areas, vessels, vehicles, structures or any other areas where there are people.

7. All members shall make the initial turn after take off away from the pit, spectators and parking areas.

8. All takeoffs, flying and landings must be carried out on the side of the flight line opposite the pilot stations.

9. All members shall yield the right of way to all other types of aircraft including full scale human carrying aircraft, UAVs and unmanned balloons.

10. All members shall utilize the assistance of a Spotter and/or a Helper when deemed necessary.

11. A maximum of five aircraft are allowed in the air at any one time for General Category RC flying.

12. All members shall maintain direct unaided visual contact with their model at all times during the flight.

13. All RC flying shall be conducted in an area of the sky and at an appropriate altitude where the consequences of any mishap will not endanger persons or property.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 7 – NEED FOR AND DUTIES OF SPOTTERS AND HELPERS.

Although the terms Spotter and Helper are often used interchangeably and the associated duties of each are often combined, the need for and duties of each are quite different.

A Spotter is a person assigned to assist the pilot of a R/C model aircraft during all phases of flight.

1. All members shall utilize the assistance of a Spotter while flying an RC model when,-

   a) The rules of a special interest category require it.
   b) It is determined by club or other event officials to be necessary.
   c) The pilot is flying using a First Person View Device.

A Helper is a person assigned to assist the pilot of a R/C model aircraft during start up, ground running and ground handling of the model from the pit area to the flight line.

2. All members shall utilize the assistance of a Helper when,-

   a) The model is too large or too powerful to be safely ground handled by the pilot alone.
   b) There is no other suitable means available for restraining the model during start up and ground running.
   c) The model requires hand launching and cannot be hand launched safely by the pilot.

3. The specific duties of both Spotters and Helpers may vary depending on many factors. Some of the possible duties are covered in MAAC Policy and Procedures Documents MPPD 4 – Duties of a Spotter and MPPD 5 – Duties of a Helper.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document # MSD 8 - USE OF FIRST PERSON VIEW DEVICES

Definition: First Person View or FPV is a video system consisting of a video camera and video transmitter installed in a radio control model aircraft which transmits wirelessly to a ground station display or monitor a streaming video image generated by the camera. The camera is positioned near the front of the model and facing forward so that the FPV pilot views an image which provides him or her with the illusion of actually flying an aircraft from an on board pilot's perspective.

All members flying a radio control model aircraft by means of an FPV device shall adhere to all of the Safety Guidelines pertaining to the class of model he or she is flying in the same manner as if the model were being controlled by conventional R/C line of sight control.

In addition all members flying any R/C model aircraft using an FPV device shall adhere to the following.

1) All members flying FPV shall appoint a dedicated Spotter/Helper who must remain next to the pilot throughout the entire flight.

Continued on next page.

2) The spotter/helper shall, unaided by any optical device other than corrective lenses, maintain direct visual contact with the model aircraft at all times and must advise the FPV pilot of the model's position and altitude in relation to the field and other models. This rule is necessary to satisfy Canadian Air Regulations requiring continuous visual line of sight control of a R/C model aircraft and must never be broken.

3) The spotter/helper must be a qualified R/C pilot capable of taking control of the model in any emergency and flying it by conventional R/C line of sight control until such time as the emergency is resolved or if necessary safely landing it.

4) The spotter/helper does not have to be FPV qualified.

5) All Members learning FPV flight must do so utilizing the Buddy-Box system where the spotter/helper holds the master transmitter and the FPV pilot holds the secondary or trainer box.

6) If and when the FPV pilot reaches a stage where he or she feels competent enough to eliminate the Buddy-Box he or she must pass a qualifying FPV flight test with a designated examiner (or committee) before doing so.

7) The designated flight test examiner (or Committee) does not have to be FPV qualified.

8) Once having passed the FPV test a member may fly the model using FPV from the master transmitter and without a Buddy-Box connected but the spotter/helper must still be present at all times to satisfy Air Regulations.

9) All models to be flown using an FPV must first be proven airworthy by a test flight or series of test flights using conventional R/C line of sight control. In the event of a crash resulting in damage to the model it must be re-tested by conventional R/C line of sight control before further FPV flight.

10) All members are advised to consult the FPV Committee on the choice of a satisfactory trainer model and a compatible FPV system.

Continued on next page.

11)All members wishing to pursue FPV flight with more sophisticated models such as helicopters or higher performance fixed wing craft shall consult with the FPV Committee before doing so. FPV technology is advancing rapidly but current systems do have some limitations that may result in them not providing sufficient visual imagery to control the model in all flight regimes. For this reason it is important to consider all factors when contemplating installation in a different model to insure that the member has the best up to date information on system capability and its compatibility with the type of model being considered.

12) Further to Paragraph 11, when FPV is installed in the model for the first time at least the first take off and climb to a safe altitude shall be conducted by the spotter/helper using conventional R/C line of sight control before handing the transmitter to the FPV pilot.

13) Once qualified as an FPV pilot a member may fly FPV at any venue which permits operation of the category of model he is flying, providing that the spotter/helper rule is met and providing there are no local venue rules prohibiting FPV.

14) All members flying FPV should be licensed according to Industry Canada regulations for use of these frequencies or be flying only when another MAAC Member, who is licensed is present at the same location and assumes responsibility over the operation of the FPV transmitter. All members should consult the FPV Committee for the latest information on licensing requirements.

15) All members contemplating FPV shall consult the FPV Committee on issues concerning frequency and radio spectrum, particularly as they apply to frequency selection for the FPV system. Certain combinations of frequencies are not recommended as they may result in interference with other FPV equipped models. Present technology is limited in this regard and 2.4 GHz is not currently recommended for the video signal. It is also important that two FPV Models be verified for compatibility before flying them together.

16) At venues where several FPV models may be present an FPV frequency control board or impound similar to those used for 72 MHz R/C radios shall be used .

Continued on next page.

17) Clubs and Event organizers wishing to promote FPV at their venues shall first make themselves familiar with FPV systems, the above guidelines and the current capabilities and limitations of FPV systems and make the necessary adjustments to their venue to accommodate their special needs.

18) For additional information on FPV contact the FPV Committee or go to the FPV Committee documents on the MAAC Web site.

19) For additional information on radio licensing and allotted frequencies for video transmission contact the Frequency Spectrum Committee or go to the Frequency Committee documents on the MAAC Web site.

Approved by the BOD July 28, 2012

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document #MSD 9 - GIANT SCALE MODEL AIRCRAFT

1) The Giant Scale Model Category follows the IMAA (International Miniature Aircraft Association) Safety Code in all matters except the maximum weight limit allowed by MAAC's insurance policy. The MAAC Giant Scale Committee endorses the IMAA Safety Code and acknowledges the permission of the IMAA Board of Directors for its use by MAAC.

2) A Giant Scale Model Aircraft as defined by IMAA is a model aircraft with a minimum wingspan of 80 inches (60 inches for Biplanes) or 140 inches total length plus wingspan for jets and all true scale models of ¼ scale or larger.

3) All Members operating a Giant Scale Model Aircraft in IMAA sanctioned events shall adhere to the rules contained in the IMAA Safety Code.

4) All Members operating a Giant Scale Model Aircraft for sport flying at venues other than IMAA sanctioned events shall adhere to the rules in MAAC Safety Code Document MSD 6 – R/C General Category R/C Aircraft.

5) For additional information on the safe operation of Giant Scale Model Aircraft consult Giant Scale Committee Documents on the MAAC website or contact the Giant Scale Committee directly.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 10 – JET TURBINE POWERED MODEL AIRCRAFT

This Special Interest Category covers all model aircraft powered by fuel burning turbine engine(s). Reference is made to the numerous documents posted by the R/C Jet Committee on the MAAC website which address the safe operation of turbine engines, pilot certification and flight safety. All members operating turbine powered models shall adhere to the rules contained in those documents.

RC Jet Committee documents can be found under Committees, R/C, Jet, View Documents.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada
Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document # MSD 11- R/C NIGHT FLYING

Night is defined as the time between ½ hour after sunset and ½ hour before sunrise. When operating a radio control model aircraft at night all members shall adhere to the Safety Code rules specific to the same category of aircraft for daytime flight plus the following.

1. All R/C Model aircraft operating at night shall be equipped with a lighting system that clearly defines the model's attitude and orientation.

2. The pilot shall test the lighting system prior to every flight.

Approved by the BOD March 24, 2013

Model Aeronautics Association of Canada

Safety Code (Proposal)

This document contains mandatory safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document #MSD 12 – R/C 3D AEROBATICS (airplanes)

3D Flight is defined as any deliberate maneuver where the aircraft's flying surfaces are stalled and the airplane remains stationary or near stationary suspended only by the thrust of the propeller and doesn't move in a normal flight path.

When operating any radio control model airplane performing 3D aerobatics all
Members shall adhere to the Safety Code rules for General Category RC Aircraft plus the following.

THIS DOCUMENT IS ON HOLD PENDING INPUT FROM THE SCALE AEROBATICS COMMITTEE.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document #MSD 13 – ALL R/C HELICOPTER

1. All members flying R/C Helicopters outdoors shall abide by the Safety Code rules for General Category R/C Aircraft in so far as they may be applicable. All members flying R/C Helicopters indoors shall abide by the Safety Code rules for R/C Indoor Flying.

2. Operational differences of Helicopters may require some amendment of these rules by club officials and/or event organizers and where both helicopters and fixed wing aircraft are being operated concurrently helicopter pilots are expected to conform to the same rules as the fixed wing pilots plus any amendments. For example when a separate landing and/or hovering area for helicopters is provided.

3. For additional information and suggested best practices for the operation of helicopters see MPPD 9 – Flying R/C Helicopters or view R/C Helicopter Committee Document titled the Helicopter Blades Program on the MAAC Web site under committees, R/C Helicopter, View Documents or contact the R/C Helicopter Committee.

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 14 – R/C INDOOR

All members operating R/C models indoors shall adhere to the following rules.

1. For all indoor R/C venues the available space shall be defined to the extent possible by the establishment of a flight line, a pilot line, a pit area and spectator area.

2. All members shall fly only R/C models of a size, weight, speed and other flight characteristics compatible with the space available.

3. When models of significantly different types and flight characteristics such as micro planes, slow flyers, 3D aircraft, helicopters etc. are to be flown at the same venue, the organizers shall set up a system to ensure that the flight paths of the different types do not conflict.

4. All members shall abide by any rules established for the flying site and/or event and by any additional rules established by the owner or operator of the building.

5. No member shall climb ladders or other structures, or otherwise attempt to access elevated areas of the building to retrieve a model without the permission and guidance of the custodian.

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6. All members shall comply with the recommendations of manufacturers and suppliers of batteries in regard to their safe usage, charging, storage and transport. In addition members shall ensure the safe handling, prompt removal from the building, safe storage and proper disposal of damaged batteries.

7. Since almost all RC models flown indoors are electric powered all members shall review MAAC Operational Policy Guideline MPPD 6 – Electric Power for additional information on electric power systems.

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 15 – R/C Climb and Glide Categories.

The Climb-and Glide R/C categories include such disciplines as powered sailplanes, Old Timer and Antique (SAM) aircraft, thermal duration sailplanes (winch or rubber launched, hand towed and hand launched), slope-flown sailplanes, aero-towed sailplanes, etc. Normally climb-and-glide aircraft are launched and flown immediately to high altitude, then soared with view to prolonging the flight using thermal activity in the atmosphere. The aircraft usually are incapable of taxiing to a runway area, and normally are both prepared for flight and launched into wind from one point on a field (chosen on the basis of field geometry, wind direction, etc.). The position of the pilot often changes during the course of the flight. (The usual concepts of a "runway", "flight-line", and "fixed pilot stations" are not applicable. There may or may not be a designated "pit" area.)

1. "No-fly zones" shall be established as appropriate to each specific field where the aircraft are being flown for sport or competition. No low flying shall be allowed above these zones. The no-fly zones shall always include the pit and parking areas, but can also include a launch or takeoff area, neighbouring buildings, private homes or properties, or any other sensitive areas specific to the field and its environs.

2. Designated takeoff and landing areas shall be established at least 30 metres away from parked vehicles.

3. Launch Line: Where multiple aircraft are being launched simultaneously or at close time intervals, aircraft are launched directly into wind from a launching line ("starting" line) perpendicular to the wind direction and wide enough to accommodate the number of aircraft being prepared for launch. During or immediately after climb-out, the pilot shall move back or away from the line of takeoff to continue the flight.

Continued on next page.

4. Takeoff Area: Where single sequential takeoffs and landings share the same area, common in flight operations such as aero-tow of sailplanes and in many types and situations of powered sailplanes and Old Timer (SAM) types, the pilot and helper(s) shall remain at the launching position only long enough to climb to a safe altitude, then move to a position clear of the takeoff/landing area for the remainder of the flight.

5. When using the same area for takeoffs and landing, unless specific rules for a contest or discipline dictate otherwise, the landing aircraft shall be given right-of-way.

6. Aircraft must not be launched unless the area directly ahead of and to either side of the launch path is clear of people, equipment and other obstructions.

7. Engine-powered aircraft when being started must be restrained until launched. Motor-powered aircraft must be restrained at all times that they are in an armed and ready state, up to the point of launch

8. Flight at high altitude may take place in any clear and safe area of the sky. Landing must be done in a designated landing area.

9. The maximum number of aircraft in the air at any one time shall be determined, and modified as required, based on the characteristics of the Climb-and-Glide disciplines being flown, the skill of the pilots, and the prevailing atmospheric conditions.

10. When Climb-and-Glide aircraft are being flown for sport at low altitude and in conjunction with General Category aircraft, they shall conform as best they can to the rules for the venue and for that type of aircraft

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains mandatory safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document # MSD 16- SPACE MODELING

MAAC defines a Space Model or Model Rocket as any model powered by a rocket motor. The operation of a Model Rocket in Canada is regulated by rules contained in the Canadian Aviation Regulations (CARs). CAR 101.01 defines a model rocket as follows. "Model Rocket means a rocket that

a) is equipped with model rocket motors that will not generate a total impulse exceeding 160 N.s,
b) has a gross weight, including motors, not exceeding 1500 g (3.3 pounds), and
c) is equipped with a parachute or other device capable of retarding its descent."

Exceptions to the above definition are rocket powered model aircraft usually launched from other models acting as a "mother ship" or rocket assist motors attached to models powered by other means. Such examples are generally created to replicate specific scale effects such as the Bell X1 launched from its B-29 Mother Ship and JATO assist take off of other scale models. Rocket motors used for these purposes are required to meet the same specifications as those defined in a) above.

All Members operating space models or model rockets shall adhere to the following.

1. All space models shall be constructed from lightweight materials such as paper, wood, plastic or rubber. No metal airframe components shall be used.

2. All space models shall employ aerodynamic surfaces or some other mechanical system to assure stable flight.

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3. Only commercially-available approved model rocket motors shall be used as specified by the Explosives Regulatory Division of Natural Resources Canada.

4. All members shall follow the manufacturer's recommendations for the safe handling and ignition of the motors. Special care shall be exercised to avoid extreme shock or temperature.

5. No member shall attempt to modify or refill any motor.

6. Igniters shall be installed only immediately prior to launch.

7. Multistage and cluster rockets employing an on-board electrical system to ignite additional motors shall have removable keys or pins provided to disable this system until immediately prior to launch. Such pins or keys shall have a streamer affixed with the words " REMOVE BEFORE FLIGHT" clearly printed on them.

8. On recovery or after an aborted launch all pins or keys shall be reinserted until all remaining motors are removed from the model and all firing systems are discharged.

9. All models shall employ a recovery system to insure its safe return to the ground. Special care shall be taken to insure that the recovery system always deploys properly.

10. All space models shall weigh no more than 1500 grams at lift-off and the rocket motor(s) shall contain no more than 125 grams of propellant and produce no more than 160 N-s combined total impulse.

11. All space models shall be ignited using a remote electrical system. All such systems shall utilize a firing switch that returns to the off position when released and a safety interlock to prevent an accidental firing. The safety interlock key shall be removed from the ignition system immediately after launch and must never be left in the firing system between launches.

12. All launches shall be conducted from a stable launch platform having a device to initially guide the model and a blast deflector to deflect the exhaust away from the ground. All wire guide devices shall be positioned above eye level to prevent eye injury, or guarded between launches.

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13. Space models shall never be launched near buildings, power lines or if there is any possibility of conflict with human-carrying aircraft. All persons shall remain at least 5 metres away from any model about to be launched.

14. In any direction from the launch position, the launch area shall be a minimum of ¼ of the highest altitude to be flown. The area immediately around the launch system shall be clear of any flammable materials.

15. Permission must always be obtained from the property owner(s) before using a launch site.

16. No models shall be launched in winds greater than 35 km/h or in conditions of low visibility or low cloud, which might impair the observation of the entire flight.

17. No model shall be launched in a direction below 30 degrees to the vertical.

18. All launches shall be announced with a countdown of at least five seconds.

19. In the event of a misfire, the safety interlock key shall be removed immediately and no person shall approach the model for a period of time sufficient to determine that no ignition will occur.

20. The payload shall never include a live animal.

21. The payload shall never include explosives or incendiaries nor shall the rocket be directed at any target in the air or on the ground.

22. No attempt shall be made to recover a model from a dangerous location such as power lines, high places or prohibited areas.

23. New and untested models shall be tested to the extent possible for stability and reliability of the design and shall be launched only in complete isolation from other persons.

24. All members shall abide by the above and conduct themselves in a responsible manner. They shall further abide by any decisions and follow instructions of all designated Range Safety Officer (RSO) or Launch Control Officer (LCO).

Approved by the BOD, March 24, 2013

Model Aeronautics Association of Canada
Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 17 – RADIO SPECTRUM

1. Canadian law requires that all commercially available radio control systems used in Canada on the license-free bands must be approved by Industry Canada (IC). MAAC acknowledges that there are some brands commercially available in Canada or through mail order houses that are not approved by IC. In some cases such manufacturers and/or suppliers even affix fake FCC or IC approval stickers to their equipment. All members must realize that use of unapproved equipment while it may not be a safety concern , could result in prosecution under Canadian laws.

2. Some radio control systems used by qualified and licensed HAM radio operators on approved amateur radio bands may or may not have approval stickers but are also acceptable in Canada. Only members licensed by Industry Canada may operate radios using the Amateur Band frequencies.

3. Radio Systems shall be used in accordance with Manufacturers' recommendations.

4. All members shall utilize only frequencies approved by Industry Canada.

5. No frequency control is required for 2.4 GHz spread spectrum radios. For equipment on all other authorized frequencies, members must observe strict frequency control measures. These may include use of a MAAC Frequency Board, Transmitter Impound or other similar system.

6. All members shall range check their radios before the first use of the day and after any crash requiring repairs.

7. No member shall knowingly operate a radio control system other than a 2.4 GHz spread spectrum radio within 4 kilometers of an established R/C flying location without an adequate method of frequency control. Where two RC clubs have flying facilities within 4 kilometers of each other, a frequency sharing agreement must be established if any equipment other than 2.4 GHz spread spectrum is to be used.

8. The commonly used frequencies for R/C models in Canada are shown in the following chart. For additional information on other permitted frequencies contact the Radio Spectrum Committee.

Canadian Frequencies for Radio Control

2.4 GHz Spread Spectrum (Shared usage)

Amateur Radio 6 meter band

Ch.#	MHz
B1	53.100*
B2	53.200*
B3	53.300*
B4	53.400*
B5	53.500*
B6	53.600*
B7	53.700*
B8	53.800*
00	50.800*
01	50.820*
02	50.840*
03	50.860*
04	50.880*
05	50.900*
06	50.920*
07	50.940*
08	50.960*
09	50.980 *

* An Amateur Radio Operator License is required to operate on these frequencies

27 MHz Frequencies
(Shared Use - Surface and Aircraft)

Ch.#	MHz
A1	26.995
A2	27.045
A3	27.095
A4	27.145
A5	27.195
A6	27.255

72 MHz Frequencies (Aircraft Use Only)

Ch.#	MHz	Ch.#	MHz	Ch.#	MHz
11	72.010	28	72.350	45	72.690
12	72.030	29	72.370	46	72.710
13	72.050	30	72.390	47	72.730
14	72.070	31	72.410	48	72.750
15	72.090	32	72.430	49	72.770
16	72.110	33	72.450	50	72.790
17	72.130	34	72.470	51	72.810
18	72.150	35	72.490	52	72.830
19	72.170	36	72.510	53	72.850
20	72.190	37	72.530	54	72.870
21	72.210	38	72.550	55	72.890
22	72.230	39	72.570	56	72.910
23	72.250	40	72.590	57	72.930
24	72.270	41	72.610	58	72.950
25	72.290	42	72.630	59	72.970
26	72.310	43	72.650	60	72.990
27	72.330	44	72.670		

75 MHz Frequencies (Surface Use Only)

Ch.#	MHz	Ch.#	MHz	Ch.#	MHz
61	75.410	71	75.610	81	75.810
62	75.430	72	75.630	82	75.830
63	75.450	73	75.650	83	75.850
64	75.470	74	75.670	84	75.870
65	75.490	75	75.690	85	75.890
66	75.510	76	75.710	86	75.910
67	75.530	77	75.730	87	75.930
68	75.550	78	75.750	88	75.950
69	75.570	79	75.770	89	75.970
70	75.590	80	75.790	90	75.990

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document # MSD 18 - R/C FLOAT PLANE

R/C Floatplane activities include the operation of all radio control model aircraft from the surface of a body of water. All members operating R/C Floatplanes shall to the extent possible follow the rules in MSD 6 - General Category R/C Model Aircraft plus the following.

1. The available area shall be defined in regard to fly and no-fly zones and a flight line established. Generally, the fly zone shall be entirely over a clear area of water. Any buildings or structures, docked boats, populated beach and swimming areas, etc. shall be considered no-fly zones.

2. All flying including take-off and landings shall be conducted in the fly zone. Hand-launching of smaller models from the shoreline is permitted.

3. All members shall ensure that all water craft other than the recovery boat remain clear of the fly zone while aircraft are flying or taxiing for take-off.

4. All pilots must yield right of way to the retrieval boat and its crew when they are in motion. Spotters are recommended to ensure that all pilots are kept advised of its position and remain clear.

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described here in.

MAAC Safety Document MSD 19 - Small Park Flyers/Park Flying

A "Park Flyer" can be any type of model aircraft flown in a public park. This document covers only small, light-weight, slow moving Park Flyers. They can be fixed-wing or rotary, electric or rubber powered or an un-powered glider. They can be free flight or radio controlled. This document does not cover piston or fuel-burning turbine powered models, rockets or models flown by control lines.

1. Considerable discretion must be exercised in the choice of aircraft for park flying. Only models of a size, weight and performance level compatible with the clear flying space available shall be flown.

2. Members shall comply with any by-laws, air regulations or other ordinances in place that restrict or prohibit flying of model aircraft in the proposed space or in the community. Members must be aware that all parks are not public and all public spaces are not parks. School yards shall be of particular concern. They are controlled by authorities other than municipalities that may have different rules not covered by local by-laws. Similarly, if park flyers are to be operated from private property, the above conditions must also be met along with securing the landowner's permission.

3. The available area shall be defined in regard to fly and no-fly zones. The pilots working area, any buildings or major structures, parked cars, sports fields in use, inhabited picnic and play or similar populated areas shall be no-fly zones.

Continued on next page.

4. An effective means of spectator control shall be implemented. Particular attention shall be given to unsupervised children. All Spectators and other people not directly involved with flying the model shall be kept well back from the fly zone. In addition a spotter shall be used where a need exists to keep the pilot advised on the comings and goings of people using the park.

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 20 – R/C PRECISION AEROBATICS

All members flying R/C Precision Aerobatics in competition or for sport shall follow the rules in MSD 6 - General Category R/C Model Aircraft unless amended by rules specific to the class being flown, special site rules or event rules established by the organizers.

For further information contact the R/C Precision Aerobatics Committee or view their rule book on the MAAC web site under Committees, R/C, Precision Aerobatics, view Documents.

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada

Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described herein.

MAAC Safety Document MSD 21 – R/C PYLON RACING

Reference is made to the R/C Pylon Racing Rule Book, which contains many rules applicable to the safe conduct of an R/C Pylon Racing Event. All Members Flying in an R/C Pylon Racing Event shall comply with these rules. Consideration for the safety of spectators, contest personnel, and other contestants is of the utmost importance during any R/C pylon competition.

The R/C Pylon Racing Rule Book can be found on the MAAC Web site under Committees, RC Pylon Racing, Documents.

Approved by the BOD March 24, 2013.

Model Aeronautics Association of Canada
Safety Code

This document contains safety rules and forms part of the MAAC Safety Code for all activities described here in.

MAAC Safety Document MSD-22 - R/C SCALE AEROBATICS

This document covers model aircraft flown in aerobatic competition governed by rules developed and maintained by the International Miniature Aerobatic Club (IMAC) and is open to scale aerobatic model aircraft which are replicas of types known to have competed in International Aerobatic Club (IAC) competition, (Sportsman to Unlimited Classes) or any fixed wing, single engine/motor aircraft (Basic class). Events are hosted by both the Academy of Model Aeronautics (AMA) in the United States and the Model Aeronautics Association of Canada (MAAC). The rules of competition including safety rules specific to the category are contained in the IMAC Competition Rule Book which is found on the MAAC Website under the R/C Scale Aerobatics Committee Documents.

All members competing in this category shall comply with the safety rules contained in IMAC Competition Rule Book. In addition for events held in Canada, members shall comply with the following rules.

1) All members shall comply with the safety rules contained in MAAC Safety Documents MSD 3 – All Model Aircraft, MSD 6 – General Category R/C Model Aircraft, MSD 7 – Need for and Duties of Spotters and Helpers, MSD 17 – Radio Spectrum, and MSD 23 – Flight Precautions for Model Aircraft Flying near Airports.

2) Materials and workmanship must be of satisfactory standards as determined by the Contest Director whose decision shall be final.

3) For further information contact the R/C Scale Aerobatics Committee or check the MAAC Web site, Committees, R/C Scale Aerobatics, Committee Documents.

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document MPPD 0 – INTRODUCTION

MAAC Policy and Procedures Documents (MPPDs) are a collection of rules, information and recommendations on a wide variety of topics related to the operation of model aircraft. All members are encouraged to read, understand and comply with those recommendations that are applicable and appropriate to their flying activities.

The responsibility for the maintenance of each document is stated in the document.

MAAC Policy and Procedures Document MPPD 1 – Insurance Coverage

Reference is made to the most recent Insurance Advisory Committee Documents summarizing the MAAC Insurance Policy. All members should read and understand these documents. They can be found on the MAAC web site under Insurance Advisory Committee Documents. Below is a brief summary of the main points.

1) All members are insured through MAAC while flying at a flying site of any Club registered with MAAC and at other locations in Canada where permission has been granted by the property owner or controlling authority.

2) Members are also insured while flying in the continental United States and worldwide, subject to policy conditions.

3) Members are not covered by MAAC Insurance at events in Canada to which the general public has been specifically invited unless a MAAC Sanction has been issued for that event.

4) MAAC insurance does not cover the flying of models weighing more than 35 kg including fuel and payload.

5) This document is maintained by the Insurance Advisory Committee which is solely responsible for its content.

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document MPPD 2 - MAAC SANCTION/EVENTS

1) A MAAC Sanction is an official acknowledgement from MAAC requested by the organizers of a contest or event in Canada and approved by the Zone Director which ensures that MAAC endorses such a contest or event and that the organizers agree to run the event in full compliance with the conditions set out in the Sanction agreement.

2) Only a MAAC Registered Club may apply for a Sanction and the club's registration fee must be paid for the year in which the contest or event is to take place.

3) A Sanction will be issued upon request submitted to the Zone Director by the club for any competition or event that complies with the stated conditions.

4) It is recommended that application for Sanction should be submitted for publication in Model Aviation Canada at least three months prior to the date of the contest or event.

5) Application forms for MAAC Sanction are available on the MAAC Web site or upon request from the MAAC Office. Application can also be completed online.

6) A MAAC Sanction is mandatory :

a) for any contest in Canada where it is the desire of the organizers that the results of that contest are officially recorded and full recognition published on line and in the MAAC Magazine (Model Aviation Canada).

b) in order to set a Canadian or FAI record.

c) in order that MAAC insurance coverage be provided at any contest or event to which the general public is invited by public advertisement.

7) All other Sanction of Canadian contests or events is optional and voluntary at the discretion of the organizers and will be granted provided that such contests or events are conducted in full compliance with the MAAC Safety Code, the specific rules of the Special Interest Categories involved and any other site or event rules established by the organizers.

8) A MAAC sanction will not be issued for a model flying demonstration at a publicly advertised full-scale air show where the model flying demonstration would be conducted in close proximity to human-carrying full scale aircraft on display or flying.

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9) This document is maintained jointly by the Insurance Advisory Committee, the Constitution Committee and the Safety Committee who are responsible for its content.

Approved by the BOD March 24, 2013.

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MAAC Policy and Procedures Document MPPD 3 - R/C General Category.

This document contains information and suggestions that while not mandatory are never-the-less important advice to all members operating R/C General Category Model Aircraft.

1) Generally speaking it is a good idea to avoid flying alone if at all possible. Though the risk of injury might be quite low for smaller models the possibility of serious injury increases as the size and speed of the model grows. Even ground handling of larger models by one's self can be dangerous and the location and remoteness of some flying sites might make it difficult to summon help. Carrying a cell phone is a good practice as well.

2) All R/C models equipped with a radio system with a fail safe function should be programmed to move the throttle to idle or shut down in the event of loss of signal..

3) Although local club rules may vary, as a general rule no spectators should be allowed in the pit area unless accompanied by a member at all times.

4) During ground handling of a R/C model it is a good idea to hold the transmitter in your hands and never let it dangle from a neck strap lest the throttle control be accidentally moved.

5) All R/C pilots should concentrate on their flying at all times and avoid distractions as much as possible.

6) There are many different methods of restraining models during preflight, start up and ground running of R/C model aircraft. The appropriateness of each method depends on many factors including but not limited to size, weight and power of the model. Starting tables, U brackets, Tethers of various designs, the assistance of a Helper and even the Pilot him/her self in the case of very small models are all possible depending on conditions. All members should use good judgement in selecting an appropriate method of restraint.

7) This document is maintained by the Safety Committee which is solely responsible for its content.

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document 4- DUTIES OF A SPOTTER.

1) Pilots should make sure that a Spotter is properly briefed on the pilot's expectations during all phases of the flight.

2) It is preferable that the Spotter be qualified to fly the type of model being flown by the pilot so that he/she can take over from the pilot in case of an emergency.

3) The Spotter should remain close to the pilot during the entire flight and avoid all distractions.

4) The Spotter should avoid distracting the pilot unnecessarily.

5) The Spotter should perform the duties for which he has been briefed by the pilot. Such tasks would normally include things like advising the pilot of the position of other aircraft and any potential for collision or communicating the pilot's intentions to other pilots flying at the same time, taking off or landing.

6) A Spotter might also provide the pilot with useful assistance during a maiden flight by adjusting trim settings as instructed by the pilot.

7) During approach and landing it is usually helpful for the Spotter to advise the pilot of any obstacles on the approach.

8) A Spotter should also assist the pilot during any emergency such as a forced landing, pilot incapacitation or loss of visual contact with the model.

9)There are additional uses for Spotters during the operation of special interest categories such as Pylon Racing and Thermal Detection during soaring.

10) This document is maintained by the Safety Committee which is solely responsible for its content

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document 5 – DUTIES OF A HELPER.

1) Pilots should make sure that a Helper is properly briefed on the pilot's expectations during start up, ground running and ground handling of the model from the pit area to the flight line.

2) Helpers should perform only the tasks specifically agreed upon with the pilot and no more.

3) If the Helper is also going to act as Spotter he/she shall move to the pilot's side after releasing the model to taxi or hand launching the model.

4) If needed, the Helper may provide assistance in retrieving the model from the field after landing.

5) This document is maintained by the Safety Committee which is solely responsible for its content.

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document MPPD 6 – ELECTRIC POWER

Electric power systems have become widely used in many types of model aircraft including helicopters. They are used in free flight, control line and R/C models and range in power output from very low (micro indoor application) to outputs equal to very large piston engines used in giant scale models. They are also used to drive ducted fan units in jets. They are used both in indoor and outdoor flying.

1) As a general rule the operation of any electric powered model must comply with the MAAC Safety Code in all respects the same as any model powered by other means. That being said there are in addition however some other considerations that are unique to electric power systems of which members should be aware. These are covered in the following guidelines. Numerous references are made throughout this document to the safe handling, charging and disposal of Lithium Polymer (LiPo) batteries. Members are reminded however that all types of batteries can be hazardous under certain conditions and manufacturer's recommendations should always be followed.

2) Guidelines for operating Electric Power Systems very widely depending on size and application. Members operating them should be aware of the following recommendations and follow those that are applicable and appropriate to their flying activities.

3) All electric power equipment should be installed and used according to recommendations provided by the manufacturer or supplier.

4) It is a good idea to disconnect the batteries when the model is not in service.

5) The battery or batteries should not be connected or if provided with an arming switch the system should not be armed until the model has been properly restrained.

6) Before arming ensure that the throttle is set to the off position and/or the throttle hold applied.

7) During bench testing it is recommended that the propeller or rotor blades be removed.

8) Always use the proper charger that is specified for the type of batteries being charged and always verify that the charger is set to charge the correct type and number of series-connected cells.

9) Lithium polymer (LiPo) batteries should never be left unattended during charging.

10) When charging LiPo batteries it is important to verify that the charger is set to charge the proper number and capacity of the cells.

11) LiPo batteries should be removed from the model and transported and stored in a non-conductive fire proof container protected from contacting any conductive material that could cause a short circuit.

12) Any LiPo battery involved in a crash should be removed from the model and placed in a safe isolated area for fifteen minutes (or longer if recommended by the manufacturer) to insure that no delayed reaction occurs.

13) LiPo batteries should never be left in a location where high ambient temperatures can occur such as in a parked vehicle.

14) In the event of a crash or forced landing it is important that the throttle stick on the transmitter is immediately placed in the off position until the model is retrieved in case the propeller is being restrained from turning by long grass or other debris.

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15) LiPo batteries should be disposed of when they have lost 20% of their rated full charge capacity or when there are visible signs of “puffing up” or other physical change or damage. Manufacturer’s instructions for disposal of all types of batteries should be followed and should always be conducted in accordance with local regulations.

16) This document is maintained jointly by the R/C Electric Aircraft Committee and the Safety Committee who are jointly responsible for its content.

Approved by the BOD March 24, 2013.

Revised and approved by the BOD August 2, 2013

MAAC Policy and Procedures Document MPPD 7 - CLUB RESPONSIBILITIES

This Document applies to all MAAC registered clubs and outlines the responsibilities of club officials in the operation of the club.

This document is maintained jointly by the Insurance Advisory and Safety Committees which are jointly responsible for its content.

The organizational structure of each club usually depends to some extent on the most common types of flying activity conducted by that club. Thus there are many different ways to organize and run a club. This document does not cover club organizational issues. It simply lists some important responsibilities that MAAC expects officials of a registered club to address in its operation.

1. Officials should ensure that all members read, understand and comply with the MAAC Safety Code.

2. Officials should develop a list of guidelines specific to the club's activities and its flying site and ensure that all members read, understand and comply with those rules.

3. Officials should have a procedure in place to verify that all members of the club are current members of MAAC, and that all guest flyers at the club's flying field(s) are current MAAC or AMA members.

4. Officials should determine the type, size and performance of models that can be safely flown at their site(s) and specify them in their club Field Rules.

5. Officials should determine the need for Spotters based on local conditions such as (but not limited to) the number of models in the air or intended to be launched, current weather conditions, pilot experience, proximity to other traffic, etc.

6. Officials should provide an appropriate method of frequency control for R/C venues.

7. In the planning of a flying site for General Category R/C Flying, officials should follow the suggested minimum guidelines to the extent permitted by the available space and field configuration. Field layout for other special interest categories of flying should follow guidelines established for those categories.

8. At clubs where flight training for the RC General Category is conducted, officials should implement and maintain a flight training program that meets the minimum standards of the MAAC Basic R/C Fixed Wing Flight Training program. (see MPPD 10). For clubs where flight training for R/C helicopter is conducted the R/C Helicopter Blades Program should be followed. (see MPPD 9) Officials should also appoint from among its members a designated instructor or instructors to provide the training. RC flight training for other special interest categories varies widely because of the many different types of models and their unique requirements. Such categories should follow whatever means of flight training provided for that category.

9. If an R/C club accepts only new members who already know how to fly, officials should establish a means to verify they can fly safely. Similarly, if an R/C club invites guest flyers to fly at their field officials should ensure that their flying will be performed in a safe and competent manner and that they abide by the MAAC Safety Code and Club rules in effect at the site for their regular members.

10. Officials of clubs that offer introductory flights to prospective new club members who are not yet members of MAAC should ensure that such flights are conducted by a designated flight instructor of the club, that the flights are conducted in accordance with the MAAC Safety Code and that a buddy box system is used. Non MAAC members participating in such flights under the above conditions are covered by the MAAC Insurance Policy.

11. Officials must obtain all necessary approvals and agreements from the owners or controlling authority of the property for permission to fly there, and ensure that any conditions or restrictions imposed by the owners or controlling authority, air regulations and/or local by-laws are observed.

Continued on next page.

12. Officials should post up-to-date copies of the club's Field Rules, and any other pertinent safety information from the MAAC Safety Code specific to the type of flying or special interest category in a conspicuous location accessible to all flyers.

13. Officials should ensure that no flying is permitted when field maintenance crews are working in areas where they might be over flown.

14. It is recommended that officials post a minimum of two MAAC warning signs at the site; one at or near the entrance to the property and one in a conspicuous location near the flying activities.

WARNING!

MAAC
MODEL AERONAUTICS ASSOCIATION of CANADA
MODÉLISTES AÉRONAUTIQUES ASSOCIÉS du CANADA

AEROMODELLING MAY CAUSE SERIOUS INJURY!

PROCEED AT YOUR OWN RISK!

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document MPPD 8 – R/C FLYING FIELD SPECIFICATIONS

This document outlines the general layout and minimum dimensions for a typical R/C General Category flying field. All clubs involved in the operation of R/C General Category Model Aircraft should follow these guidelines as closely as possible within the constraints imposed by the space available. If major deviations from these minimums are required they should be noted on the site plan and if it is considered necessary to impose any flight restrictions as a result of these deviations they should also be noted on the site plan. An up to date copy of the site plan should be attached to the club's yearly application for registration.

Flying site requirements for special interest categories vary widely from just an open field to complex layouts with barriers to protect persons and property. Clubs involved with special interest categories of modeling should follow the suggested layout plan for their special interest category.

1. All R/C General Category Flying Site Plans should begin with the establishment of a Flight Line. A flight line is defined as a line parallel to the centre line of any proposed runway. (see diagram) The Flight Line serves as the line of reference from which all dimensions are taken and effectively divides the airspace into two halves, Flying Side and No Flying Side. (see diagram)

2. Pilot stations should be located a minimum of 7 metres back (on the no flying side) from the Flight Line. (see diagram) A one metre high safety fence or barrier should be located between the Flight line and the Pilot stations. At flying sites where operation of only models weighing less than one kilogram is permitted, the fence may be omitted.

3.Pit area(s) should be located a minimum of 10 metres from the Flight line on the no flying side. (see diagram)

4.Parking, spectator areas and other non-flying activities should be located a minimum of 30 metres from the Flight line on the no flying side (see diagram) If space permits a fence between the pit area(s) and the parking/spectator area(s) is also recommended.

5.At locations where fences or barriers are not permitted such as at sod farms, parks or float flying sites the distance between the pilot stations and the flight line should be increased to 10 metres, the distance between the pit area(s) and the Flight line to 13 metres and the distance between Parking, Spectator and other non flying areas to 40 metres.

6) This document is maintained by the Safety Committee which is solely responsible for its content.

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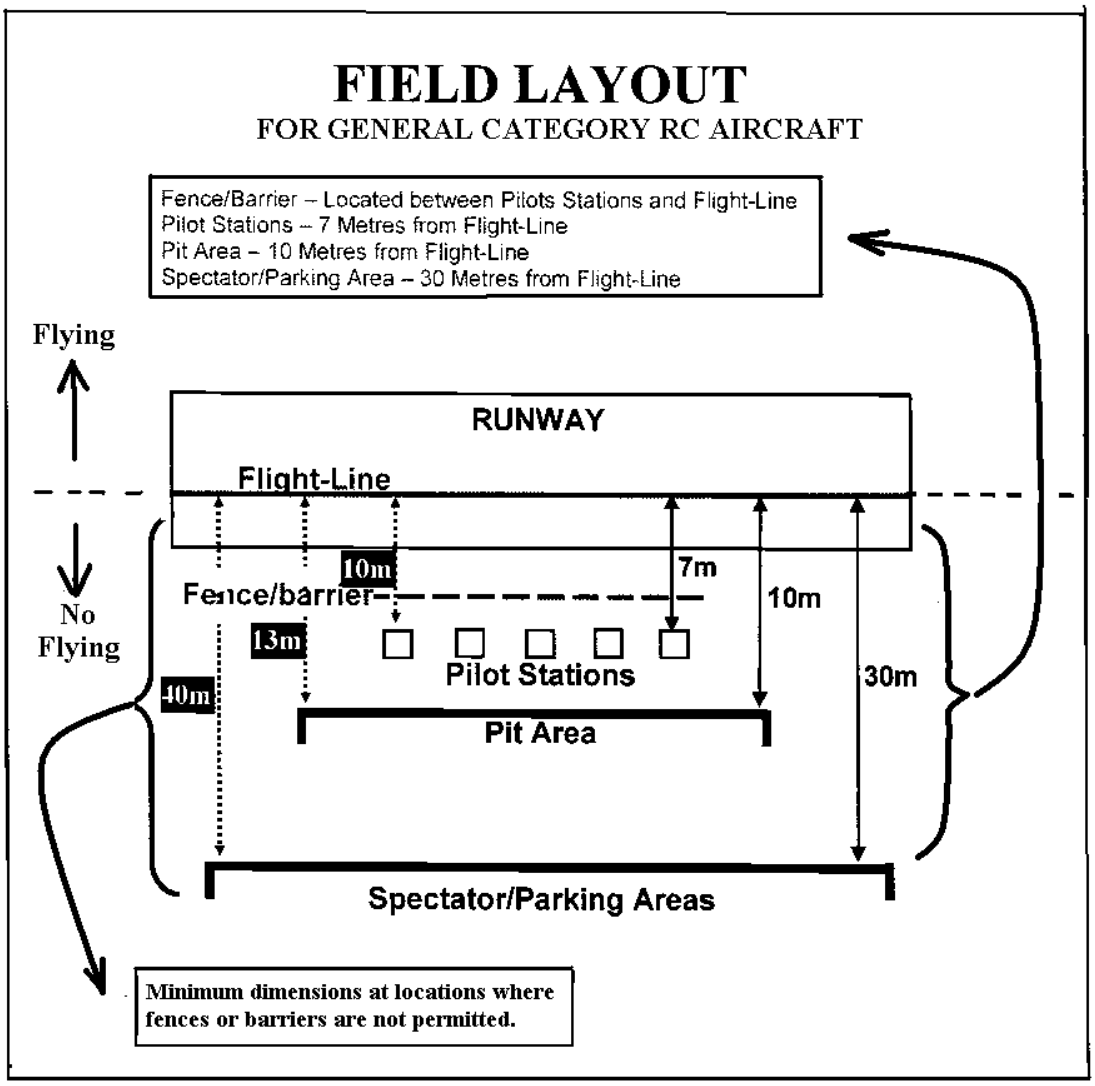
FIELD LAYOUT

FOR GENERAL CATEGORY RC AIRCRAFT



Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document MPPD 9 – FLYING R/C HELICOPTERS.

This document covers some of the main points included in the R/C Helicopter Blades Training Program. To view the entire Blades Program go to the MAAC web site, Committees, R/C Helicopter, view documents.

Part A: Piston Power

1) Prior to flight, all links should be checked and a proper preflight conducted before starting the motor. An easy way to do this is to clean it after the last flight of the day, then you know everything is alright and in its correct place.

2) All distractions should be avoided when conducting the start up sequence.

3) Pilots should ensure that both the transmitter and receiver are on before starting the engine.

4) Immediately after starting the engine, the throttle hold should be initiated.

5) It is recommended that no one should ever fly a R/C helicopter alone. Always have someone close in case of an accident.

6) No helicopter should be flown closer than 10 meters in front of the pilot.

7) It is recommended that R/C helicopters never be flown directly over head or behind the pilot as this may cause loss of orientation.

8) When trying something new, it is recommended that the helicopter always be flown two mistakes high to allow for the chance to recover.

9) Blades or frames that are cracked or not in perfect condition should never be used.

10) The transmitter should be carried in the pilot's hands and never be allowed to hang by the strap around the pilot's neck.

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11) Pilots should try to be aware of their surroundings at all times. There may be a child or animal coming up from behind.

Part B: Electric Power.

1) On an electric powered helicopter , immediately after initializing the transmitter, the throttle hold should be applied before plugging in the batteries.

2) It is recommended that eye protection be worn when flying inside a gym or other close quarters.

3) No one should ever fly alone even with a small 250 or 450 size helicopter.

4) It is recommended that no helicopter should be flown directly over head or behind the pilot as this may cause loss of orientation.

5) When trying something new, it is recommended that the helicopter always be flown two mistakes high to allow for the chance to recover.

6) When programming the ESC, the motor mounting screws should be loosened and the motor and pinion pulled back away from the main gear.

7) A timer should be used to alert the pilot to when 80% of battery capacity has been used.

8) Lipo batteries should never be left alone while charging and should be charged in a metal box or a specially designed flame-proof bag.

9) Batteries that have lost at 20% or more of there full charge rate should be discarded by cutting off the leads (one lead at a time to avoid a short) and putting them in a salt brine for 72 hours before putting them in the garbage.

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10) When flying inside a confined space, it is recommended that wooden or fiberglass blades be used instead of carbon fiber blades as these will shatter into small fragments and fly everywhere.

11) The biggest size helicopter that should be flown inside in most cases is a 450. At larger venues such as a golf dome flight of larger helicopters may be permitted at the discretion of the event organizers.

12) This document is maintained by the R/C Helicopter and Safety Committees which are jointly responsible for its content.

Approved by the BOD March 24, 2013.

MAAC Policy and Procedures Document MPPD 11 – RECOMMENDATIONS FOR SUPPORTING AND EDUCATING PARK FLYERS

This document is maintained jointly by the Youth and Beginner Committee and the Safety Committee who are jointly responsible for its content.

1) Be aware: Determine potential flying sites for park flyers within several kilometers of your club's flying site such as parks, parking lots, play-grounds, farm fields, ball fields, etc. Keep in mind that the greatest threat comes from those flying who have no prior experience with R/C models. Knowing this may help in identifying potential sites.

2) Be proactive: If possible, establish a committee of volunteer club members to keep track of activities at likely park flyer sites. Committee members should exhibit good people skills, be diplomatic, patient, non-confrontational, polite, courteous and understanding.
   On first contact show a sincere interest in what the park flyers are doing. Treat every contact as a possible new member for the club. Try to engage the contact in conversation about the hobby.

3) Be helpful: Your introduction of yourself should be followed with an offer of assistance but don't be pushy. Assistance can take many forms depending on your assessment of the contact's capabilities. Possible offers of assistance may include checking the model for airworthiness, getting the model airborne successfully, or simply providing advice and information pertinent to flying R/C models. Stress safety issues where ever possible but avoid being threatening. Encourage questions and be prepared to give clear, concise and easily understood answers. Treat the contact as an equal partner in the hobby.

4) Be an advocate: As the conversation progresses choose an appropriate time to offer information on your club and on MAAC. Carry extra copies of the club and the MAAC pamphlets with you that you can leave with the potential new member. Emphasize the benefits of membership. Be certain that the information you hand out contains up to date contact information for your club. Don't push to immediately close the deal . Give the contact time to think about it. If possible try to arrange another meeting either at the same location or better still at your club's flying site. Bring a plane yourself to fly.

5) Be a partner: Contact hobby shops and offer printed club and MAAC information to hand out with every park flyer purchased. Club information should contain clear directions and a map of the location of your flying site as well as an invitation to the purchaser to visit your club field and the offer of assistance in learning how to safely fly and enjoy their new purchase.

Approved by the BOD March 24, 2013.