MODEL AERONAUTICAL ASSOCIATION OF AUSTRALIA

SLOPE SOARING GUIDELINES

MOP016

APPROVED: MAAA PRESIDENT Date: 10/09/2019

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SLOPE SOARING OPERATIONAL PROCEDURE

1. PURPOSE

1.1 The purpose of this MOP is to provide all affiliate members of the MAAA a ready reference for suitable Slope Soaring Operations for Model Aircraft to ensure compliance under CAR101 and associated CASA Directives.

1.2 Specific trigger document relevant to the preparation of MOP016 is the CASA Instrument 96/17 limiting the height of Model Aircraft to NOT ABOVE 400-feet AGL. https://www.maaa.asn.au/images/pdfs/mops/Direction-operation-of-certain--unmanned--aircraft.pdf

2. DEFINITIONS

All definitions given in the CAR (1998) Part 101 apply equally throughout this manual.

AAAO ……. Approved Aviation Administration Organisation
An organisation approved by CASA to administer a particular aspect of sport aviation.

MAAA Member ……. A fully paid member of a MAAA Club.

AGL …….. Above Ground Level

Approved Area ……. An area approved by CASA as an area for the operation of model aircraft.
See the Application to Register an Approved Flying Area Procedure, MOP005, in the MAAA Manual of Procedures.

CASA …… Civil Aviation Safety Authority.

Club …… A Club properly affiliated with a State Association.

Club Member …… A financial member of a Club.

Commercial Activity …… A model aircraft flight is considered to be commercial if it is conducted for, or with the intent of, any purpose other than the sport of flying the model or learning or teaching the sport. It is commercial is it is used as a tool for conducting any other commercial purpose such as aerial photography etc.

Giant Model Aircraft ……. Any model aircraft with a dry mass, (excluding fuel, but including all batteries if electric powered) of more than 25Kgs but less than 150 Kgs.

Heavy Model Aircraft ……. Any model aircraft with a dry mass (excluding fuel, but including all batteries if electric powered) of 7Kgs or more, to a maximum of 25Kgs.

Inspector ……..	A financial Affiliate Member of the MAAA who has met the requirements for this appointment and has been given written authority to carry out inspections on behalf of the MAAA in connection with the issue of a Permit to Fly.
MAAA …….	Model Aeronautical Association of Australia Inc.
MAAA Ordinary Member ……	A State Association properly affiliated with the MAAA Inc.
Permit to Fly ……..	A document issued by an MAAA Inspector following inspection carried out in accordance with MAAA guidelines/ MOP.
Radio Controlled Model Aircraft ..	See MAAA “Internal Navigation and Stabilisation Policy”, MOP044.
State Association ……	See MAAA Ordinary Member.
Slope……	A hill or raised topographical feature facilitating the upward flow of air/wind providing lift for model aircraft.

3. RELEVANT REGULATIONS AND EXISTING MANUALS OF PROCEDURES

- Any model aircraft in flight (excepting as noted in Paragraph 3.3) is subject to the regulations imposed by the Civil Aviation Safety Authority. The CIVIL AVIATION SAFETY REGULATIONS – CAR (1998) Part 101 cover all unmanned aircraft, including all model aircraft, except as detailed hereunder.

- This document is intended to give an overview of CAR (1998) Part 101 but it is strongly recommended that affiliated members obtain and read the actual CAR (1998) Part 101.

- Models Exempt from CAR (1998) Part 101 requirements, but not from MAAA Rules or the requirements of the MAAA Manual of Procedures:
  (a) Models weighing less than 100 grams (3.5oz).
  (b) Control Line models and
  (c) Any model flown indoors (contained in four walls and roof)

- CASA recognises the Model Aircraft Association of Australia (MAAA) as an Approved Aviation Administration Organisation to administer and regulate the operation of Model aircraft under Part 101. CASA expects the level of flying operation to be regulated by the MAAA so as to maintain a high standard of safety as outlined in the current Deed of Agreement between CASA and the MAAA.

- A model aircraft operated by an affiliate member of the MAAA is subject to the requirements of the MAAA Manual of Procedures as well as CAR (1998) Part 101.

- The regulations and requirements contained in this document are not applicable to Unmanned Aerial Vehicles (UAVs) as they are not considered model aircraft. UAVs are subject to specific sections of CAR (1998) Part 101, when operation of a model aircraft for intended, financial reward for any purpose other than the sport of flying the model or learning or teaching the sport

- This and other MAAA MOPs' are for MAAA Members undertaking recreational use of Model Aircraft only.

- Insert Link to CAR101 -

4. RESPONSIBILITIES

4.1 The individual operator of a model aircraft is responsible for their compliance, and their model's compliance, with CAR (1998) Part 101 and also with all MAAA rules as required by the MAAA Manual of Procedures.

5. CAR (1998) Part 101 RULES FOR THE OPERATION OF ALL SLOPE SOARING MODEL AIRCRAFT

This section identifies the major requirements of CAR (1998) Part 101. Affiliate members are requested to read the relevant sections of Part 101 document that is available on the CASA or MAAA web sites, www.casa.gov.au and www.maaa.asn.au.

It should be noted that in some cases MAAA Rules are more stringent than those contained in CAR (1998) Part 101.

5.1 General prohibition on unsafe operation. (101.005)

A person must not operate an unmanned aircraft (Model aircraft) in a way that creates a hazard to another aircraft, another person, or property.

5.2 Visibility for operation of model aircraft. (101.385)

A person may operate a model aircraft only if the visibility is sufficient to maintain visual contact of the Model Aircraft at all times.

5.3 Operating a Model Aircraft at Night (101.390)

A person may operate a model aircraft at night only in accordance with the written procedures of an Approved Aviation Administration Organisation. For operations from a slope, night operations are not to be undertaken unless the location is dedicated ONLY to Model Aircraft use by MAAA Affiliate Members. See MAAA Procedure – Night Flying, MOP018.

5.4 Keeping model aircraft away from people (101.395)

A person must not operate a model aircraft over a populous area at a height less than the height from which, if any of its components fails, it would be able to clear the area.

Someone who is operating a powered model aircraft must ensure that, while the model aircraft is IN FLIGHT, or is LANDING or LAUNCHING, it stays at least 30 metres away from anyone not directly associated with the operation of model aircraft.

This regulation is not contravened if somebody stands with or behind the model aircraft while it is being launched. This regulation is not contravened if the model aircraft is flown in a competition within 30 metres of someone who is judging the slope competition.

5.5 Height Limits for Model Aircraft.

5.5.1 Operation within an instrument of Approval.

The height limit contained within a current Instrument of Approval is not to be exceeded for the relevant location. Flight envelope and distance is to not exceed the distances from the launch location detailed in the instrument.

5.5.2 Operation of model aircraft at slopes NOT under a MAAA CASA Instrument of Approval

Operation of model aircraft at a slope with no Instrument of Approval is to not exceed 400 feet AGL. AGL in reference to slope soaring is the actual ground level below the model aircraft while flying. It is the sole responsibility of the pilot of the model aircraft to NOT exceed the CASA Direction 96/17.

5.6 Safe Flying Code

See the Safe Flying Code (MOP056) in the MAAA Manual of Procedures.

6.0 GENERATION SLOPE SOARING GUIDE TO MEMBERS

6.1 Before heading to the slope:

- Check the weather first for wind direction, speed and cloud cover.
- Some flying sites cannot be reached by transports directly. It is recommended that remote locations are not utilised by individuals consider taking a companion.
- Prior check of your model should be conducted to ensure that:
  - the airframe is free of damage;
  - the batteries are in good condition and fully charged;

- the electrical connections are good and tight;
- the transmitter, receiver and servos are operating correctly.

- If you haven't flown at a slope before ask an experienced pilot to assist you.

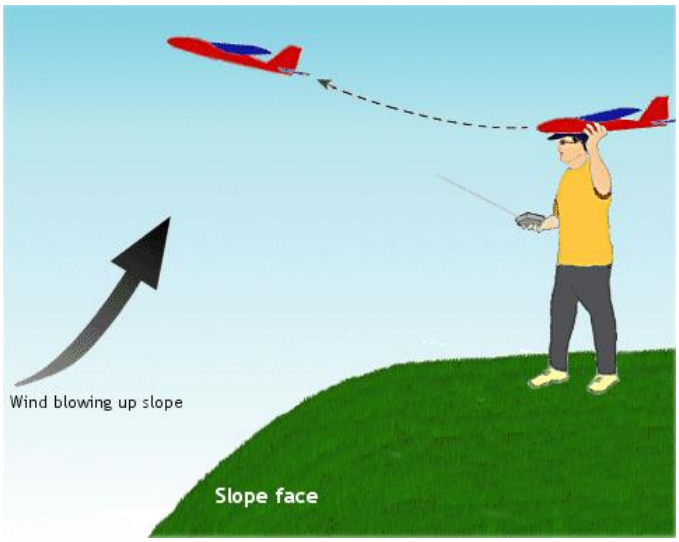
6.2 When arriving at the slope site:

- If flying at the site for the first time, inspect the slope flying site to ensure it is free of obstacles, structures or other hazards.
- If you have flown at the site before it is still essential to inspect the flying location
- Perform suitable range checks, even when your model has been successfully flown before
- If the site is new, check/inspect the launching location and the landing approach first and ask for help from experienced pilots if needed.

6.3 Before launching at the slope:

- Check the wind condition and strength to be able to maintain a successful flight and return to the landing approach.
- Turn on both the transmitter and receiver. Make sure all the settings on the transmitter are correct. Check if the transmitter and receiver batteries are sufficiently charged. Check all the servos and control surfaces are operating correctly.
- Check the airframe. Are the wings, tails and canopy, etc. fixed properly? Are all control surfaces operating correctly?
- Make sure the air space in the launching area of the glider is clear before you launch. Announce to the others that you are about to launch. Others pilots should free from the launching area.
- When the wind is strong, or the model is large, it will be difficult to launch a model with one hand and the transmitter on the other hand. Request someone with launching experience to assist.

Figure 1: Launching your glider.



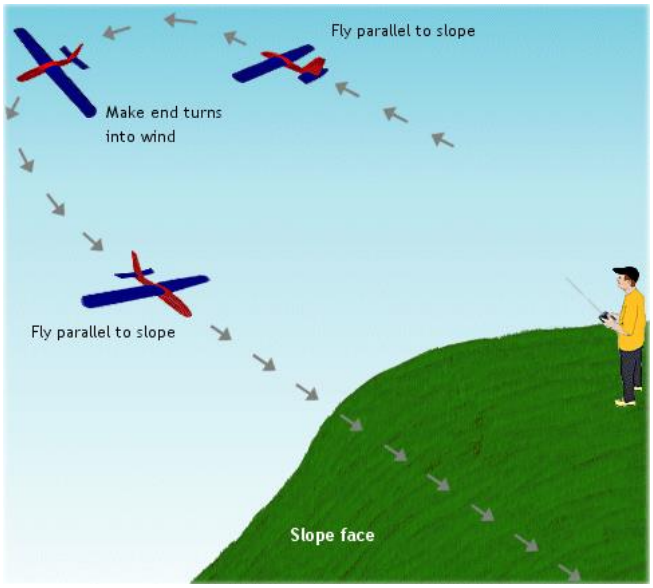
IMPORTANT AND MANDATORY for ALL slope operations:

- **Before launching model ensure that appropriate consideration of alternate landing site is identified. Slope soaring is reliant on up lift from wind flow up the slope, if changes in weather conditions occur during the flight (review first item in Section 5.6.3) lift may prevent the model from returning to the landing site.**
- **Consideration of alternate landing site and/or consideration of lowest possible height to achieve the landing zone is to maintained during the flight.**
- **Define the maximum flight area before launching to ensure that appropriate AGL height is maintained or not exceeded during the flight. CASA Instrument 96/17 directs no Model Aircraft to be operated above 400feet without appropriate CASA Instrument in place for the slope.**
- **Review appropriate max AGL for the location before every flight.**

6.4 While flying

- Never fly over people. Never fly towards people or properties. Aerobatics or highspeed approaching manoeuvres must not be performed near or over people. Don't fly beyond your capabilities. If you are in trouble, ask for help from experienced pilots immediately.
- Note the other gliders that are flying with you. If the air space is crowded, fly in a simple course and avoid doing aerobatics.
- All flights are to be maintained under Visual Line of Sight Rules unless being conducted in accordance with the MAAA MOP066 and MAAA Instrument (Instrument number: CASA.AreaApp.017) for MAAA member only.
- As slope soaring gliders can fly for extended periods of time in slope lift be aware of fatigue during operations.
- Consider flying times, weather and daylight to ensure visibility is maximised. If in doubt do not launch.

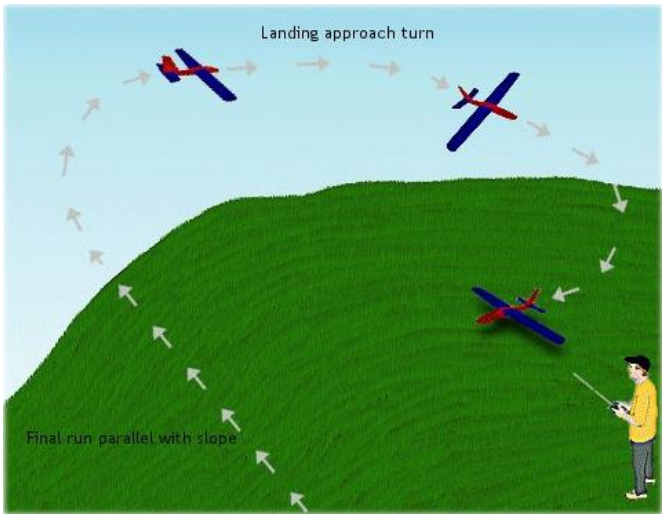
Figure 2 – Using the wind on the slope to highest potential.



6.5 Landing:

- Ensure the landing zone is inspected and suitable to use before flight.
- Announce to the other pilots of pending landing approach. If you are flying please give way to the landing aircraft and avoid flying into the landing area.
- Ensure landing area is obstacle free before landing. If there are people there, you should ask them to leave the area temporarily. Never attempt to land while people are in landing zone.
- If you have difficulties in landing, ask for help.
- IF IN DOUBT, DON'T FLY.

Figure 3 – Landing approach



7.0 Advice:

- older 27, 29 and 36MHz" radio systems are not recommended. They can be easily interfered by the others transmitters of similar/or frequency and should not be used at unrestricted sites. Only 2.4GHz and similar radios using spread spectrum modulation are recommended.
- Paragliders or ANY man-carrying aircraft IN ALL circumstances have priority over Model Aircraft. When there are paragliders flying, all pilots/members are to have an observer and operate in accordance with MOP046 – Sharing airspace with Hang & Paragliders.