

THE SOUTH AFRICAN MODEL AIRCRAFT ASSOCIATION



Operations Manual

SAMAA PROCEDURE ON NIGHT FLYING

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SAMAA PROCEDURE ON NIGHT FLYING

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This document forms part of the SAMAA Manual of Procedures. It is to be used by SAMAA Members and Registered Clubs in all activities associated with the flying of model aircraft in the RSA.

NIGHT FLYING PROCEDURE**1. Purpose**

This procedure sets out the minimum requirements for a model aircraft to be flown at night at a SAMAA Registered flying Club or site.

2. Regulation

The CAA Regulation CAR 94.05.1 states that “Except when stated otherwise on the authority to fly, a non-type certificated aircraft may not be flown at night”.

3. Policy

Any person, group or Club wishing to fly model aircraft at night, is required to submit an application in writing on Form F16 to SAMAA at least 30 days prior to the night flying event. All model to be flown must conform to the Rules and requirements set out in section 6 below.

4. Definitions

CAR	:	Civil Aviation Regulation
Non-type Certified	:	Refers to Unlicensed or in this case, Model Aircraft
SAMAA	:	South African Model Aircraft Association.

5. Procedure

This procedure has been produced to cover the additional measures, over and above those normally required for daylight flying, required for safe night flying. These safety measures take into account the low visibility, and difficulty in orienting the attitude of an airplane at night, as well as the reduced vision of the pilot and spectators. This procedure has been submitted to the Commissioner of the CAA for acceptance, and for him/her to give to SAMAA permission to control and administer, on his/her behalf, the controlled night flying of model aircraft.

5.1) General requirements applicable to all night flying.

As stated above for **night flying** of any model aircraft, additional safety measures are required, these must be observed and are as set out below;

1. The maximum distance that a model aircraft may be flown from the pilot at night is 100 metres horizontally and to a maximum height of 50 metres above the ground.
2. Generally for night flying, distances to hazards and to persons present on the field must be increased. Flying must be done closer to the pilot, and to assist

an observer is to be present to assist the pilot during the flight.

3. All lighting on the model must securely fixed to the model and must be such that the Pilot can easily determine the orientation of the model. (ie. Top, bottom, front, back) and so control it while in flight. The lighting must also be adequate for the model to be clearly seen by the pilot at the maximum distance and height to be flown.
4. Lighting should not be over bright so as to destroy “night vision” of pilots present.
5. No external or background lighting shall be present in a position that could dazzle the pilots while flying or otherwise inhibit the view of his/their aircraft.
6. The radio range shall be checked after fitting the lights, and with them operational, to ensure it the range is not degraded.
7. The pilot will not fly his model aircraft closer than 30 metres to spectators, or any person or visitor at the field, He will be accompanied by a spotter who will alert him of any pending problems.
8. The pilot is responsible for his aircraft and the safety of the spectators, and should he fly the responsibility for the safety those present is his.
9. All pilots and assistants shall stand together whenever flying is taking place, and no other person shall be allowed in the flying area.
10. Every pilot present on the flight line waiting to fly will have visited the flying site to be used during daylight, and noted the field/site layout and the obstructions and where spectators are to be positioned.

If night flying is to be done at public displays or airshows then:

11. The pilot must have at least a gold rating.
12. Every pilot present on the flight line waiting to fly, will have visited the flying site to be used in daylight and in the case of a display with public present the aircraft must have been flown in its night flying configuration within the last 24 hours.

13. In the event of a public display the pilots shall have practiced the maneuvers to be performed with the display aircraft prior to the event. This shall have been at night and with the aircraft lighting to be used during the display but not necessarily at the same venue.

14. The pilot of the aircraft must satisfy himself before flying that he is satisfied with his model, the lighting on the model, the field size and layout, the weather, and the positions of the persons or spectators present. The responsibility for the decision to fly, and the consequences of this decision should an accident occur are solely his.

5.2 Control Line

The aircraft to be flown must be suitable for night flying and it shall be lit in a manner that enables the pilot to easily identify its orientation and so adequately control it while in flight

Sufficient precautions shall be taken to ensure that spectators and anyone else not involved in flying of the aircraft cannot accidentally get into the path or likely path of the aircraft. This may be by physical barrier, increased safety distances or by ensuring that spectators cannot change their position during the flight.

Line pull tests and all other necessary safety precautions must be taken.

5.3 Helicopter

The aircraft shall be lit in a manner that enables all persons present to be aware of the location and flight path when within 30 metres of it.

A helicopter to be flown at night needs to be adequately lit so that the pilot can distinguish the orientation of the model at any time.

This means that the top, bottom, front and back must be distinguishable by the pilot, during flight.

It is a requirement that the main rotor blades have inbuilt led's that additionally the balance of the model is lit, and if used the string type led's are securely fastened to the tail boom.

Helicopters must not be flown at a distance of more than 100 metres from the pilot or at a height of more than 50 metres above the ground.

5.4 Fixed Wing

The aircraft shall be lit in a manner that enables the pilot to identify the orientation of the aircraft at the maximum range at which it is expected to fly. This range should not exceed 100 metres horizontally and 50 metres vertically.

The radio range shall be checked after fitting the lights, and with them operational, to ensure it the range is not degraded. The area over which the flight is to be conducted shall be surveyed during daylight to ensure it is clear of obstructions. Any obstructions present shall be adequately lit so that it may be identified by pilots.

All pilots and assistants shall stand together and no other person shall be allowed in the flying area.

To stay within the above prescribed distances / limits it is necessary that the model aircraft being used is of a 3D model or slow flying type of model.

The pilot of the aircraft must satisfy himself before flying that he is satisfied with his model, the lighting on the model, the field size and layout and the positions of the persons or spectators present.

The responsibility for the decision to fly, and the consequences of this decision should an accident occur are solely his.

6. Variations

No variations to this procedure are allowed without prior reference to, and the written approval of, the SAMAA General Manager and the SAMAA sub-committee.

7. Responsibility

The implementation of this procedure is the responsibility of the pilot in the case of individual flying, or the organizer in the case of either a private or public event or display.

8. Application Form.

The exemption /application Form to be used to apply for permission to fly at night is the "CAA request for exemption form" a part of MOP PR16 which is available on the Web or from the SAMAA Office.