



Issue 1 – January 2002
Issue 2 – June 2011

SAMAA NATIONAL MODEL AIRCRAFT SAFETY CODE

THE NATIONAL SAFETY CODE CONSISTS OF THE FOLLOWING SECTIONS:

SECTIONS AS POSTED SEPERATELY IN OPERATIONS MANUAL

- 1.1 FIXED WING SAFETY CODE (Abridged)
- 1.2 SAFETY CODE FOR R/C FIELD OPERATIONS (Abridged)
- 1.3 HELICOPTER SAFETY RULES (Abridged)
- 1.4 GLIDER SAFETY RULES (Abridged)
- 1.5 SIG SAFETY RULES (Abridged)

SECTIONS IN THIS BOOKLET

- 2.1 INTRODUCTION
- 2.2 DEFINITIONS
- 2.3 GENERAL SAFETY RULES
- 2.4 LAYOUT OF A FLYING FIELD
- 2.5 ANNEXURE; (a)How to establish your own club or flying field

SAFETY CODE 2011

2.1 INTRODUCTION TO THE NATIONAL SAFETY CODE

The National Safety Code has been divided into two main parts A and B. Part A is contained in the SAMAA Operating Manual under Section 6, Part B which is contained in this booklet. There will inevitable will be some duplication, but as one great teacher said, "Repetition helps human learning and understanding".

PART B Index

The sub-division of this safety code is as follows:-

- 2.1 Introduction
- 2.2 Definitions
- 2.3 Safety rules
 - 2.3.1 General safety rules
 - 2.3.2 Safety recommendations
 - 2.3.3 Duties and authority of the safety officer
 - 2.3.4 Ground controls
 - 2.3.5 Pre-flight and flying control
 - 2.3.6 After landing – post flight control
 - 2.3.7 Safety code for events or airshows
 - 2.3.8 Safety code for competitions
- 2.4 Flying field requirements
- 2.5 **ANNEXURE** How to establish your own Club or flying field

2.1 Introduction

The SAFETY CODE set out in this booklet is based on International Rules which are in use at model Flying clubs throughout the world. These rules are well tried and tested and are designed to protect the club members, pilots, visitors and spectators from injury, and their property from damage when model aircraft flying is in progress.

This SAMAA Safety Code together with the SAMAA Operating Policies and Procedures for Model Aircraft and radio controlled Model Aircraft have been compiled specifically to comply with the Law, and the flying field practices in use both Internationally and in South Africa in 2011.

The Safety Code sets out the safety rules, the safety recommendations and the safety procedures which must be used when model aircraft are being flown, and which are to be enforced in South Africa.

Do remember the safety code has been formulated primarily to make thr sport of model aircraft flying legal and safer, but it should be remembered that if an individual, does not comply or knowingly ignores, this Safety Code and the SAMAA operating Manual, he will be solely liable and responsible for his actions.

To enforce the SAFETY Code, each club must appoint or elect Safety officers whose duty shall be to ensure that the stated safe flying practices are followed. These officers must be given the authority (and be fully supported by the club committee) to ground any pilot for a breach, or for disobeying the laid down Safety Rules.

Copies of the safety rules should be issued to each member, and a signature obtained from the member acknowledging receipt of his copy of the safety rules.

The club Field safety rules must be based on the SAMAA safety Code, but where site layouts differ, rules may be amended to cover the special circumstance at that club. The amended rule shall in no way change the original intent of the safety rule.

Note: Model aircraft flying must be done in accordance with this code in order to ensure that SAMAA insurance and liability cover apply.

CURRENT, UPDATING AND AMENDMENT TO RULES

These safety rules will be altered, amended, updated or deleted, to comply with the latest changes and developments in the sport.

Changes will only be made on the instruction of the SAMAA Committee, and in accordance with the relevant procedure.

2.2 **DEFINITIONS**

Below, to give the pilot or pupil pilot a better understanding of the words and expressions most commonly used at the model flying field, below are listed many of the words, with definitions used.

- *SAMAA* - is the South African Model Aircraft Association which is the controlling and co-ordinating body for model aircraft flying in South Africa. All the SAMAA Operating Procedures, Rules and Regulations must be enforced at all SAMAA registered clubs.
The SAMAA carries a public liability insurance cover which indemnifies members and gives them cover of up to R15 million in case of an accident, caused by a model.
- *SAMAA member* - is a fully paid-up member of the SAMAA who is in good standing with the SAMAA and shall be in possession of a valid membership card.
- *Club member* - is a fully paid-up member of a SAMAA registered club, who is in good standing with his club and is also a paid-up member of the SAMAA. The club member shall be in possession of valid membership cards from both bodies.

- *Visitor* - is a person who is visiting a club. If he wishes to fly, and is qualified and competent, he must find a member of the club to host him, and be responsible for his compliance with club and SAMAA Rules. while he is flying at the club.
If the visitor is neither a SAMAA Member or a club member, an wishes to attempt to fly, a qualified Club instructor may let him have one flight, preferably on a buddy box, under his control and insurance cover, remembering that the club member will then be liable for any claim, and for the insurance excess, should an accident occur. The club member will also be responsible for the visitors compliance with the SAMAA and club regulations.
- *Spectator* - is a person present at the flying field who is not a member and has come to look at the model aircraft and observe the flying. A spectator shall only be allowed into the pit area if accompanied by a club member.
- *Safety officer* - is the duly elected and appointed club member who assumes the official post and responsibility of safety officer. He will be responsible for enforcing and ensuring that flying members comply with the safety code when flying model aircraft.
- *Duty officer* - shall be the duly appointed and authorised member in charge of club flying for a defined period. When on duty he represents the safety officer and assumes all his responsibilities and powers.
- *Pupil pilot* - shall mean a member who has not obtained his "solo" rating and who may only fly with a club instructor in attendance, when on the flightline.
- *Pilot* - shall mean the member in charge of a model aircraft. When the member starts a flight, he automatically becomes the pilot.
- *SAMAA instructor* - shall mean a member who has obtained his SAMAA instructor's merit qualification and who with a second instructor may now test other members up to a Gold Proficiency rating.
- *Club instructor* - is a member who in the views of his club is competent to teach pupil pilots to fly. It is recommended that he will also have achieved his SAMAA Silver Merit. (for further details see SAMAA proficiency testing).
- *Model aircraft* - shall mean the small flying item which will be committed to the airspace by the Pilot.
A model aircraft can in terms of these rules be a fixed wing aeroplane, a helicopter, a glider, an

- *Frequency control board* - autogiro or any other device which is intended to fly but needs to be controlled. is the display board or device for keeping control of the radio transmitter frequencies in use on the field. The system identifies which frequencies are in use at any time on the flying field.
- *Frequency marker* - is a marker, usually a clip with a Club and SAMAA card which, when put on the board or removed (dependent on the system), indicates which frequencies are in use at that time.
Note: The Frequency control system will remain at clubs as long as 27, 35 and 53 Mhz are used.
- *Transmitter control Pound* - this is the area in which all transmitters are impounded when not in use. All transmitters in this area shall have their aerials collapsed and shall be switched off. No transmitter shall be taken out of the transmitter control area and turned on unless the frequency is clear (2,4 the exception) and the relevant members frequency marker has been attached to the control board.
- *Transmitter* - shall be a purpose-made, commercially manufactured unit which shall have been designed and manufactured to work within the stated tolerances of the frequency band tuning without interfering with any adjacent frequencies, special exemption for Homebuilts must be obtained from the SAMAA.
- *Pit area* - shall mean the area between the clubhouse and the nearest runway, and shall include the pilot boxes for that runway.
- *Pilot boxes* - shall mean the designated area from which pilots fly their model aircraft. If more than one runway exists, there will be pilot boxes designated for each runway.
- *Run-up area* - shall be an area, off to the side of the taxiways in which engines may be checked and tested without interfering with the model aircraft in the pit area or with the communication among the pilots flying.
- *Taxiways* - shall be the link runways, connecting the pit areas to the main runways.
- *Rules and regulations* - these shall mean the club rules and regulations, the club bylaws, the club and the SAMAA safety code and any other special club rules that are applicable.
- *Contest Director (CD)* - is a person who is appointed to run a competition, demonstration, event or airshow. He will be responsible for all matters of safety and organisation related to the flying activities prior to, and during the event. He will be expected to

- *Large model aircraft inspector* -

enforce the rules and adhere to the SAMAA regulations and is authorised to do so. this inspector is appointed to ensure that large model aircraft are constructed and built in such a manner that they are airworthy and will not constitute a threat to members, pilots, property or spectators at a flying site. The inspector will be authorised to issue exemption certificates on behalf of the CAA in cases of deviation from the regulations. Copies of all the inspectors' reports, must be submitted to the SAMAA management committee for ratification and record purposes.

2.3 SAFETY RULES

Many of these Rules will be included in the Abridged Safety rules set out in the Operations Manual 6.A.1 and 6.A.2 but this section also contains additional rules, guidelines and information needed by the pilot to have a thorough knowledge of Model Aircraft flying.

2.3.1 General safety rules

1. Any pilot who wishes to operate a model aircraft must be a fully paid up member of two groups:
 - (a) The SAMAA
 - (b) A local SAMAA Registered club.
2. **N.B.** The word "will" has been used in these safety rules and safety codes, but if these rules and regulations are applied in a legal situation, the word "will" must be replaced with "shall".
3. All pilots will abide by the Club and Safety Rules, as well as the SAMAA Operations Manual when flying model aircraft. They will not wilfully or deliberately fly their model aircraft in a careless, reckless and/or dangerous manner.
4. Only pilots with a recognised "SOLO" rating (i.e. SAMAA solo) will fly a model aircraft at the flying field and in the presence of other pilots or spectators.
5. All unqualified or pupil pilots will be accompanied by a suitably qualified instructor or pilot when flying, until such time as they have obtained their "solo" test qualification.
6. No pilot may fly a model aircraft in an airshow unless he has the appropriate qualification (see safety rules for Events, Displays and Airshows).
7. Pilots of model aircraft will **keep their model aircraft clear of full size aircraft in flight at all times**, irrespective of whether they believe the full size aircraft is in at fault or not.

8. Power model aircraft will at all times keep below 400ft (gliders to only fly to a height approved at their Club field).
9. A model aircraft which does not comply with the CAA (Civil Aviation Authority) specifications for a Model Aircraft will not be allowed to fly at a SAMAA Registered field.
10. Only ICASA Approved radio transmitting equipment, on ICASA approved frequencies, for model flying, will be used at a model flying field. The responsibility for Radio Transmission equipment compliance lies with the user of the equipment.
11. All transmitters when not in use will be placed in the transmitter control area and the relevant cards or markers removed from the frequency control board.
12. No transmitter must be switched on until the pilot/member has reserved his frequency spot on the frequency board, by pacing his marker on the frequency spot to be used.
13. No pilot should hog or occupy the frequency spot for more than 20 minutes for testing or flying, unless arrangements have been made with other pilots waiting for that frequency spot.
14. Only one runway at a time is to be used, this runway will be the one most directly into wind and will be selected by the pilots or safety officer on the day. All takeoffs will be into the wind and the turnout at the end of the takeoff run will be away from the pits or clubhouse, this turnout will also define the direction of the circuits to be flown. A change in wind direction may require the selection of another runway, all pilots present will agree to the change, and change to the runway selected.
15. All pilots will fly from the designated pilot boxes for the runway in use. Pilots may move nearer the runway for takeoffs and landings. It is not recommended that pilots stand on the runway during takeoffs, but in all cases of take offs and landings should stand between their model and other pilots on the field, and should announce their intended action.
16. All aircraft should be given a pre-flight check, and the transmitter a range check, (see SAMAA proficiency booklet) before the first flight of the day to check the proper functions of the various parts, with special reference to the radio, engines, propellers, control linkages, control surface slack, and direction of stick and control surface movements. Models being range checked, should be restrained, if the engine is running or electric motor power is connected.
17. All pilots will make themselves familiar with all the **Flying Field Rules and Regulations, the Safety Rules** and any other special rules. **They will abide by these Rules.** Failure to obey the Rules and Regulations will lead to disciplinary action by the club, and possible reporting to the SAMAA.
18. Take offs from the taxiways is prohibited.
19. Practicing take offs and landings may be done with the agreement of other pilots flying, and only after announcing their intentions. Shoot-ups or over flying the runway, may only be done into the wind, any downwind pass will be done at least 10 meters on the far side of the runway, and again only after the pilot announcing his intentions.
20. Crossing the runway in use, to retrieve a model aircraft will only be done after informing all the pilots flying at the time of the intention.

Even after the pilots have been informed, crossing the flight line is done solely at the downed pilot's or his assistant's risk. The pilots flying will not be held responsible or liable should an accident or injury occur to a person or persons who are on the flying side of field.

21. It is recommended that a maximum of six model aircraft be in the air at any one time. Even with this number of model aircraft it is advisable that the pilots agree on their circuits, flight lines or the area of sky in which they intend to fly.
22. Smoking
 - (a) smoking is not recommended in the pit area.
 - (b) smoking while flying a model aircraft is not permitted.
23. Alcohol or other intoxicating substances
 - (a) Consuming alcoholic beverages, before (recommended 6 hours) or during a pilot participating in any model aircraft flying is strictly prohibited.
 - (b) In the interest of public safety, pilots may not partake of alcoholic beverages or performance affecting substances until after their flying session has ended.
 - (c) Pilots suspected of having recently consuming alcohol, performance affecting medication or intoxicating substances will not be allowed to fly.
 - (d) The consumption of alcohol or intoxicating substances may invalidate a claim against the SAMAA insurance policy.
 - (e) Members using drugs or medication which affects their judgement will not fly.
24. Silencers
 - (a) Efficient silencers must be fitted to all engines 1.0cc (0.061 cu ins) and upwards.
25. Noise

Model aircraft clubs around the world are losing their flying fields because of noise. We in South Africa are fortunate to still have large open spaces. Although the main generator of noise in model aircraft is the engine exhaust, any excessive noises can offend.

The production of noise is addressed as follows. No member may create a noise which exceeds 96 decibels at 3 metres. This applies to any device, a radio, a loudspeaker, or a model aircraft which exceeds this noise level. Should a member when requested not take the appropriate action to reduce the noise, a written warning will be issued by the duty officer.

 - (a) Model aircraft engines shall not be tuned or run excessively in the pit area, as this will block out verbal communication between pilots on the flight line and other users of the field. If you have a engine problem move to an approved "run up" area.
 - (b) Pilots running excessively noisy engines in the pit area will, depending on the circumstances, be requested to "switch off" by the duty officer.
 - (c) Many clubs have agreed that, if a model has an excessively noisy engines may, and if at least 3 Members present agree, that the of that pilot be given a written warning, stating the actions he must take, by the duty officer, this could include grounding. Should a

pilot dispute the warning, the warning may be rescinded on his producing (at his own cost) a certificate from the CSIR or other similar approved body confirming that his engine or aircraft conforms with the permitted noise limitations.

26. Conservation

- (a) The intentional chasing of birds and wild animal life is forbidden.
- (b) Members and persons, including visitors, wilfully abusing or contravening the Nature Conservation act of 1983, can be charged by the government, or Local Authority accordingly but, irrespective of the above, club members will in terms of the club constitution, club rules and regulations and appendices be subjected to disciplinary action.

27. Firearms

The displaying of, or discharging of firearms, unless in the case of emergency, is prohibited, and any member doing so will be subject to disciplinary action.

28. Cellular telephones

Due to the possibility of radio interference Cellular telephones shall not be used within five (5) metres of a pilot flying a model aircraft.

29. Accidents and incidents

It is a requirement that all model aircraft involved in incidents, and non insurance related accidents be reported to the duty officer or his delegate present. The Pilot involved in the accident will complete the required forms and submit a written report on the circumstances of the incident to the safety officer or a Committee Member.

The following information is required;

- (a) the names of the member or members involved, their club numbers and their SAMAA card numbers.
- (b) a brief report on the type of accident or incident and the reasons for its occurrence.
- (c) an estimate of the cost of the damage.
- (d) if the accident involves a third party or the SAMAA insurance, the procedure covered under insurance in the SAMAA operations Manual ,Procedure PR 01 and PR 14 will be used.

30. Grievances and disputes

This is a Club matter, but in the interest of the hobby, it is expected that the members of the association are well-adjusted adults, and that any difference of opinion or unhappiness can be sorted out in a mature manner. Should a dispute or grievance arise, which cannot be resolved between the members, it is then the responsibility of the club duty officer or his delegate to try and settle the grievance or dispute to the satisfaction of both members before they leave the flying field.

If no agreement can be reached, either of the members involved may submit a written complaint to their Club Chairperson. Dependant on their Constitution, a nominated club committee will then investigate the problem, meet with the members concerned and, if possible, resolve the problem to the members' mutual satisfaction.

the final decision for grievances will rest with

(a) the nominated safety committee where flying matters are concerned; and

(b) the main committee where club matters are concerned.

The matter should be attended to within 14 days of the incident and the decision of the above committees shall be regarded as final.

31. Buddy box and teaching.

A buddy box should be used as a teaching tool, whenever possible.

A competent flyer (preferably with a minimum of a club instructor rating) will be in charge of the master box during the instruction period. Teaching the pupil to fly, by other methods is not recommended.

The instructor is to ensure that the pupil pilots' transmitter frequency has been reserved in the normal manner and that all the SAMAA and club rules and regulations are obeyed.

The Instructor will have no liability, should the pupil pilots model crash, during the teaching session. (the above statement may not apply, if the pupil is paying for lessons)

The pupil pilot, a SAMAA Member, the owner of the model, will be the responsible person, and will be using his SAMAA insurance cover, should there be an accident.

32. Visitors on arrival

It is a requirement that visitors, on arrival at the club will introduce themselves to the duty officer. If they wish to fly they must arrange this with the duty officer, who will, once he is satisfied with their flying ability and SAMAA membership status, delegate a suitably qualified club member to stay with them while they are flying.

33. Visitors

(a) It is recommended that clubs ensure that visitors shall not, under any circumstances, be on the flight line by themselves. They must be accompanied by a suitably qualified club member or a club instructor, and be briefed on Club Rules and Regulations.

(b) Visitors, as do club members, when flying, will operate from the specified pilot box and will perform the initial turn, after take-off, away from the clubhouse, pit area, spectators and parking areas. Thereafter, no flying will be performed over the clubhouse, pit area, pilot box, spectators or parking areas.

(c) Most clubs will only allow visitors to fly on say 3 (three) occasions before they must declare their intentions of joining the club.

(d) Many Clubs charge landing fees, for visitors.

34. Overseas visitors

Overseas visitors (casual) will generally be treated in the same way as local visitors. They will be accompanied by a local club flyer when flying and the local club flyers SAMAA insurance will cover their activities.

In cases, for say visiting competition flyers, the SAMAA Committee will grant them honorary membership during their stay, but their insurance cover while they are visiting and flying in South Africa, will be covered by their own overseas insurance. SAMAA will issue a letter to the visitor, clearly setting out the agreement, and conditions of his temporary membership.

35. Fail-safe settings on PCM receivers

Following a number of fatal accident overseas, the SAMAA ruling is:

All PCM and 2,4 Ghz receivers will be programmed to reduce the engine speed to slow idle, when interference or other problems cause the receiver to go into a "fail-safe" condition. The rest of the channels will be left in a "fail-safe" hold.

36. Use of R/C equipment

No member will knowingly operate a R/C system within 5 km radius of a pre-existing model flying club site without a frequency sharing agreement with that club.

37. Mid air collisions

These will occur on odd occasions, and to date (last 30 years or so) the agreement has been that as long as both aircraft are flying in the approved flying area, neither party will be responsible for collision, and each pilot will carry his own costs should a collision occur.

2.3.2 Safety recommendations

Most of the following pointers have been taken from the FAI sporting code, which is the International Rule book, which makes these recommendations applicable world-wide.

It should be noted that all the Safety Rules and Regulations are formulated to help and encourage safe flying. Any accident involving model aircraft may result in property damage, injury and possibly even death. Apart from the direct damage, a less obvious result is the poor image that is generated by the media coverage of such accidents, which in turn can lead to public antagonism and the loss of flying facilities. It is therefore important that all model aircraft flyers observe Safety Rules. Any accident caused by carelessness, laziness or recklessness is a hindrance to the future of model aviation.

Safety rules are not an obstacle to the enjoyment of model flying; they help prove that model aircraft flyers are the responsible people they proclaim to be.

1. The following statements constitute good general safety practices and are certainly safety recommendations which should be enforced by clubs:

- Never attempt to retrieve a model from electric power lines. Contact the local authority.
- Do not use repaired, nicked or cracked propellers or rotor blades.
- While starting or running any engine arrange for someone to hold your model aircraft.
- Do not wear loose clothing when starting or running an engine and keep clear of the propeller.
- Do not stop an engine by throwing rags or other objects into the propeller.
- Refrain from using a pointed spinner, sharply-pointed propeller fasteners or knife-edge wing leading edges.
- Paint tips of propellers a brighter colour to better define the area of the rotating propeller.
- Check the propeller and spinner for tightness before each flight.
- Exercise extreme caution in adjusting needle valve settings on engines. Adjustments should be performed from behind the model aircraft, thus avoiding reaching around the propeller.
- Ensure that ballast or heavy parts are properly fixed.

- Carefully read the manufacturer's recommendations for their products particularly for engines and propellers.
- Ensure that helpers and spectators are kept clear of the "failure" arc of the propeller (i.e. the area where a propeller blade would fly if it fails when the engine is at high revs).
- Ensure that hospital and doctor phone numbers and addresses are displayed on the notice board and that a first aid kit is available.

A few more recommendations of particular importance in South Africa are:

- Wear a hat when flying.
- Wear sunglasses if required.
- Use sunburn cream.
- Do not fly into the sun.
- Do wear long trousers and long sleeved shirts.
- Do put your name, address and phone number onto your model aircraft, transmitter, transmitter case and equipment taken onto the field.
 - Put your transmitter frequency on the outside of your transmitter case, and on the face of your transmitter.
 - Wrap a cloth or paper towel around the engine to keep out dust when the model aircraft is in the pit area or being transported.
 - Wipe off the excessive oil and grime from your model aircraft. A dirty model aircraft is a bad advert for the hobby.
 - Try to shade your model aircraft, especially the radio receiver area in hot, sunny weather.

2. Radio equipment failure

Radio equipment failure may happen at any time, to anybody, even to the experts. Never be complacent about it.

It is therefore important that a pilot who takes safety seriously avoids and notes the following situations, for which radio equipment failure is Often blamed, these are:

- Chancing a last flight, after a long day's flying, with run down batteries.
- Low flying far out ,over areas, obstructions or behind the pit area.
- Flying through or near the sun and losing sight of your aircraft.
- Flying directly above yourself.
- Flying when the visibility is poor.
- Flying beyond your clear vision and losing orientation.
- Stunting or performing manoeuvres without sufficient altitude or which are beyond your flying capability.
- Flying with a group of "helter-skelter" or undisciplined pilots.
- Flying beyond the range of the radio.
- Flying without switching on your models receiver.
- Flying without connecting a control rod or servo.
- Flying without switching on your transmitter, or extending your transmitter aerial (if applicable).
- Checking and cycling your transmitter (if applicable) receiver battery and checking its capacity periodically (suggest monthly). Replace marginal or suspect batteries. The Americans claim that

over 90% of "radio failures" can be attributed to transmitter or receiver battery problems.

- Continuing to fly when "glitches" or erratic servo operation is present.

2.3.3 **Duties and authority of the Safety officer at the flying field**

This item sets out the SAMAA recommendation for clubs.

Since the dangers of a flying accident are ever-present at a flying field, all members and pilots are considered as safety officers, and are authorised to Warn or speak to any pilot who is flying or behaving irresponsibly.

The safety officer appointed by the club must have assistants. These assistants, often called duty officers, when in control at the field, automatically assume both the responsibility and authority of the safety officer.

The safety officer must have the power and authority to stop any pilot from flying if:

- The pilot is not a club or SAMAA member
- If in his views the pilot is not fit or qualified to fly
- If the model aircraft he intends to fly does not comply with CAA requirements or the SAMAA Operations Manual.
- If in his views the model aircraft is not airworthy.

These powers must be vested in him by the club, and the club Committee shall support him in any decision he makes.

The duties of the safety officer or his duly appointed duty officer are as follows:

- (1) Check the wind direction, and nominate and mark on the frequency control board the most suitable runway. This runway may be changed if the wind changes, but all pilots are to be informed of the change (see clause 2.3.4.9).
- (2) Ensure that all transmitters not in use are in the transmitter pound area.
- (3) Ensure all persons flying on the field are paid-up club and SAMAA members and if non-members, inform them pointedly that they are not permitted to use the club facilities except as a visitor and with a host who is a SAMAA member. A report giving their names and addresses, date, time and circumstances should be passed onto the safety sub committee.
- (4) Ensure that the pilot boxes are used. The duty officer may relax these rules at his discretion on a once-off basis, under special circumstances such as, sun, wind and runway direction and clear line-of-sight problems.
- (5) Ensure that all pilots flying at the field adhere to the club rules and regulations and safety rules.
- (6) Advise, help and attend to visitors, and if required, settle minor disputes.
- (7) Hand over his responsibilities to the duty officer who relieves him.
- (8) Ensure that pilots flying at the field are fully informed of any special precautions being enforced on that day.
- (9) Ensure that any visitors that wish to fly are accompanied and attended to by a suitably qualified club pilot.

- (10) No visitors are allowed to fly unattended at a club field; a visitor who wishes to fly must introduce himself to the duty/safety officer. The duty/safety officer must ensure that the visitor:
 - (a) has a valid SAMAA membership
 - (b) that he know the club rules and regulations
 - (c) that he is a competent flyer
 - (d) that when flying he is attended by a qualified pilot
- (11) Ensure that occupying a spot on the frequency board is limited to no longer than approximately 20 minutes for testing and flying, unless no other member is waiting.
- (12) That the use of radios on illegal frequencies (i.e. frequencies not displayed on the frequency board) is prohibited without exception.
- (13) The safety or duty officer should have available copies of:
 - (a) the warning notices
 - (b) the incident reports
 - (c) the daily duty officer reportand there should be standing instructions on the club notice board as to how and when these forms are to be completed.

2.3.4 **Club or field controls**

1. Arrival at field

Park your car in the approved Parking area
Take your model and flying gear into the pits or assembly area
Place your transmitter in the transmitter Pound

2. Frequency control system

The system, recommended by the SAMAA is used in similar format world-wide, and has been found to be as near foolproof if used as intended. Unfortunately aeromodellers get very lazy and blasé about frequency control methods, and it seems as long as they have not lost a model aircraft they work on the "it can't happen to me" principle.

When it comes to effective and safe frequency control, all model aircraft pilots, all members of the club, irrespective as to whether they hold a position or not, must adhere to the standard SAMAA method of frequency identification before switching on their transmitters.

The SAMAA methods of frequency control for use in South Africa is the "Peg On" the frequency board system of control.

A description of these systems is included in the SAMAA Operations or Procedures Manual.

3. Transmitter control area or pound

The transmitter control area will be used for the impounding all transmitters not currently in use. This also means and includes transmitters in carrying cases, or connected by buddy cord, and is applicable irrespective of the number of members at the field, or the frequency in use.

4. Radio/transmitter frequencies

A list of the Legal Transmitter Frequencies (those approved by the department of communications ICASA for model aircraft flying)are set out in the SAMAA operating or procedures Manual under PR 08.

THE USE OF RADIOS/TRANSMITTERS ON ILLEGAL FREQUENCIES (I.E. FREQUENCIES NOT DISPLAYED ON THE FREQUENCY CONTROL SYSTEM) IS PROHIBITED WITHOUT EXCEPTION.

Using a transmitter at the field

- (a) Before engaging in the act of flying or of switching on his/her transmitter, the pilot shall reserve the appropriate frequency on the frequency control system, by attaching his marker or card to his transmitter frequency and thereafter collect his/her transmitter from the transmitter pound area.(this procedure has been modified for **users** of the 2,4 Ghz radio equipment, as this equipment safely allows 8 or more, 2,4 GHZ transmitters or radio sets to be used simultaneously. A pilot using 2,4 Ghz will add his card to the spot reserved for 2,4 frequency, and does not have to wait for that spot to clear.) But note the users of 2,4 Ghz equipment are **not exempt** from the control procedure.
 - (b) Should a member who wishes to fly find that the spot or frequency is occupied or in use, he shall not substitute his peg or marker for that of the occupier, nor remove his transmitter from the control area. The regulation marker on the frequency control board will carry information on the occupier, and the member wishing to fly must negotiate use of the spot with the occupier.
 - (c) Occupying a spot on the frequency board should be limited to no longer than approximately 18 minutes for both testing and flying, unless no other member is waiting for the frequency spot.
 - (d) After a flight first the the receiver and then the Transmitter must be switched off and the marker or peg removed from the board, and the transmitter returned to the pound.
 - (e) The use of radios on illegal frequencies (i.e. Frequencies not displayed on the frequency board) is prohibited.
 - (f) Most clubs affirm that any member shooting another member down (i.e. Switching on his transmitter without first obtaining exclusive use of the frequency or spot on the frequency board) shall, through his negligence, reimburse the member shot down for damages suffered.In the case of a member hosting a visitor, the member in charge shall be responsible and reimburse the member shot down for damage suffered
5. Special transmitter control requirements
If the flying field permits the flying of helicopters and gliders, it is usual that these model aircraft are flown at a location remote from the standard power model aircraft. This being the case it is essential that the pegs or markers for helicopters or gliders be clearly marked (with say H or G on the marker) so that neither a pilot nor the duty officer inadvertently removes the peg or marker from the frequency control board, believing that the frequency is available. A club may also decide to split the available frequencies between the disciplines to overcome this problem.

It should be noted that a glider will often remain aloft for a period exceeding the limit of 18 minutes.

6. The pit area

- (a) Do not start your engine with the tail of the aircraft pointing towards people or model aircraft. You will be very unpopular when you oil and dust them and their model aircraft.
- (b) Do not step over aircraft in the pit area. Walk around them.
- (c) Testing of engines will be done away from the pit area in the run-up area.
- (d) No fuelling-up or running of engines will be done in the lean-to sheds or on the clubhouse veranda, if applicable.
- (e) Engines started in the pit area will not be throttled up, but left at low revolutions until clear of the pit area.
- (f) Taxiing of any model aircraft in the pit area is prohibited. This includes helicopters. Taxiing of model aircraft will only take place on the flying field side of the taxiways (i.e. beyond the painted white lines at each end of the pit area).
- (g) Assembly and maintenance benches in the lean-to sheds are not to be used as storage places.
- (h) Turbine jet aircraft may not be started in the pit area or near spectators. They will be started in an area designated by the club.

7. Spectators, children and pets

The above persons, animals and pets will remain outside the pit area and away from the frequency control board at all times unless accompanied by a member or official.

It is normally accepted that damage or interference caused by members' children or pets to model aircraft will be the responsibility of that member and he will be liable for all the costs of replacement or repair.

8. Runway to be used

Many clubs have more than one runway. If this is the case, the duty officer or his delegate should select a runway which is nearest to the wind direction and should indicate in (usually visual) the manner selected by the club the direction for "take-off" and "landing".

Instructions issued by the duty officer or his delegate for the direction of take-off, landing, and any other special precautions or directions SHALL BE FOLLOWED TO THE LETTER. It is each member's responsibility to check the frequency control board for this information (or if an alternative method is used by the club, check the alternate information) and abide by it.

9. Changing of runway

A flying member may request the duty officer or his delegate to change the runway in use.

No flying shall take place from two or more runways at the same time except for special events, during which period it will be closely monitored. It shall be the responsibility of the duty officer or his delegate to ensure that all flying members active on the flight line have been advised of the runway change before any flying member proceeds to the flight line of the new runway.

If any pilot on the flight line announces "LANDING" or "DEADSTICK", such action shall hold high priority and shall first be completed before anyone proceeds to "take-off" from the newly selected runway. All pilots will move to, and fly from, the pilot box for the newly selected runway.

10. Other Model aircraft users of the field

If your club caters for other types of model aircraft then provisions must be made for these. The following types of provision are common.

- a) Control line flying:
 - (i) Control line flying shall be done at a site agreed to by the safety committee.
 - (ii) Control line flying shall be done under the control of an ordinary member but with the agreement of the duty officer at the flying field on the day.
 - (iii) The members flying control line model aircraft will ensure that adequate spectator control is exercised by the member designated as safety or duty officer for the control line flying for the day.
 - b) Helicopter flying:
 - (i) Helicopter when being operated, will at all times conform with the Abridged Helicopter Safety Rules.
 - (ii) Helicopters may be started, but not run above ¼ throttle, in the pit area.
 - (iii) Subject to circumstances and until the number of helicopters in a club increases, and a separate Helicopter area is established, qualified helicopter pilots may fly on the runway with other fixed wing models. They will use the same frequency control board and transmitter control procedure as all other pilots at the field. The responsibility rests with the helicopter pilot to ensure that:
 - 1. He flies in the same circuit as the fixed wing aircraft, and does not hover over the runway, other than when landing and taking off.
 - 2. He is sure that the helicopter can be safely operated by him from the designated runway.
 - (iv) The members flying helicopters will ensure that all club rules and regulations are obeyed.
 - (v) Helicopter flying shall be done under the control of a club member, who shall be designated as duty officer, when two or more helicopters are flown at the same time.
 - (vi) If the helicopter pilot, in the views of the duty officer, is not adequately qualified, a flying area away from the runways will be designated and a qualified helicopter pilot will be assigned to assist him.
 - c) Gliders:
 - (i) Gliders may be flown at any Club field.
 - (ii) Gliders will be under the control of a member but at a site and time agreed to by the duty officer or his delegate at the flying field
 - d) Vintage models and power gliders:
 - (i) These may be flown at the field.
 - (ii) Take-offs or hand launches will be done into the wind, away from the clubhouse, pit area, pilot box, spectators, parking areas, and beyond the pilots presently flying.
 - (iii) Pilots of vintage models and power gliders are to observe the procedure set out in clause "Preparation for take-off" and ensure that the pilots presently flying power model aircraft are informed when the activity of take-off/launching is to take place and thereafter move to the pilot box area.
 - (iv) The landing will be made on the runway or on the far side of the runway in use, and away from the clubhouse, pit area, other pilots and parking area. Again, the procedure in "Preparation for take-off" must be observed before crossing the runway.
 - (v) Frequency control will be under the control of the frequency peg board and transmitter control procedure for the field.
 - (vi) Members or visitors flying vintage models or power gliders will obey all club rules and regulations.
 - e) Pylon racing:

Because of the speeds attained by pylon racing model aircraft a number of special regulations should be adhered to:

 - (i) Pylon model aircraft will take-off from, and be flown from, an area agreed by the safety committee. This area shall be located such that it faces away from the pit, clubhouse and spectators, and be at least 100 meters from any spectators.
 - (ii) At race meetings the course layout and safety distances from the pit area, clubhouse, and spectators shall be as recommended in the FAI sports codes Section 5 paragraph 5.2.10.
- on the day (this is due to the obstruction caused by the bungees and winch lines).
The member in charge is to ensure that the glider pilots are suitably experienced, and if not, assist as required.
- (iii) Gliders are limited in terms of the Civil Aviation Authority regulations, to maximum heights of 400 ft above ground level. (same as fixed wing models)
 - (iv) Landings will be on the far side of the runway in use and away from the club facilities, spectators and other pilots.
 - (v) Glider pilots will use the same frequency control board and transmitter control procedure as all other pilots at the field.
 - (vi) Glider pilots will not cross the runway in use to retrieve their gliders without the agreement of the pilots presently flying (see clause "Preparation for take-off").
 - (vii) The members or visitors flying gliders will obey all club rules and regulations.
 - (viii) Glider pilots, as with other model aircraft pilots, will **keep their gliders clear of full-size aircraft**, and at a level below any over-flying full-size aircraft at all times.

- (iii) All pilots racing pylon model aircraft will have been tested by a competent pylon pilot nominated by the South African miniature pylon racing association.
 - (iv) Any pilot who wishes to fly but does not have the required qualification must be accompanied by a suitably qualified pylon rated pilot when flying.
 - (v) Pylon model aircraft will only be raced when no other aircraft are in the air.
 - (vi) All pylon model pilots should be accompanied by a competent flyer when flying pylon model aircraft at a field where other pilots are present and flying.
- f) Scale model aircraft:
- (i) Scale model aircraft flying shall be done on the main flying field.
 - (ii) Should a problem exist with weather-cocking of the model due to crosswinds, arrangements must be made with the duty officer or his delegate who will arrange a suitable take-off direction and agree this with the other pilots operating on the field.
 - (iii) Special arrangements may be requested by the scale flyer (say with respect to a flying line,) if so, the duty officer or his delegate will attend to the request.
- g) Jets:
- Ducted fan or turbine jets will be allowed to fly at the field provided certain minimum requirements are met. These are:
- (i) Arrangements to be agreed with the duty officer or his delegate before flying.
 - (ii) While the model jet/s are flying, other pilot should try to keep out of the flight path of the jet.
 - (iii) All pilots flying jet aircraft, will have achieved a special jet rating, 'vlamgat' and have a SAMAA proficiency rating of at least silver before flying a turbine powered jet model aircraft.
 - (iv) All pilots who wish to fly a jet model aircraft, but do not have the required SAMAA rating must be accompanied by a suitably qualified jet rated pilot when flying.
 - (v) Turbine jet model aircraft may not be started in the pit area or near spectators.(see jet safety rules)
 - (vi) Suitable fire extinguishers and other safety personnel and equipment will be available when turbine jets are operated.
 - (vii) **All jets will fly at least 50 meters from spectators, but for take offs and landings this distance may be reduced to 30 meters from spectators.**
- h) Large model aircraft:
- (i) Large scale model aircraft will be allowed to operate from the field provided they conform with all the requirements of the CAA and SAMAA as set out in the "Manual of Procedure" published by SAMAA. (present maximum weight permitted is 25 Kgs)
- (ii) Valid exemption certificates issued by the CAA inspector (large scale inspector), will be required for any aircraft exceeding one or more of these requirements/limitations.
 - (iii) Special precautions may need to be enforced by the club when these aircraft are being operated, as they require longer runways for landing, and use up a huge amount of sky.
 - (iv) All pilots flying these model aircraft will have done a large conversion course (through the SIG) and will have achieved and be in possession of at least a SAMAA silver merit qualification.
 - (v) A pilot who wishes to fly, but does not have the required SAMAA rating must be accompanied by a suitably qualified SAMAA gold rated pilot when flying.
 - (vi) **Large scale aircraft will always fly at least 50 meters from spectators, but for take off and landing this distance may be reduced to 30 meters.**
- (i) Giant Model aircraft
- (i) Presently these models (50 to 100Lbs, or 25 to 45.6 Kgs) have not yet been authorised to fly at model field by the CAA, when they are authorised, special permission and conditions will be need to be complied with, some of these will be as follows.
 - (ii) Controls on origin, design and structural strength of models. Proof of compliance with design criteria during construction, pilot qualification and test flying, will be part of the requirements.
 - (iii) All large aircraft will be checked out by a large model aircraft "inspector" during construction and before its first flight. The "inspector" will be experienced in the construction, structural and radio requirements (i.e. Hinge size, servo size, battery size, push rod size, etc.) And limitations of such large model aircraft.
 - (vii) any large aircraft, which has been "grounded" by the "inspector" will be prohibited from flying from a SAMAA registered field until the defect has been rectified and a new certificate of conformance has been issued by the "inspector".
- i) Free flight:
- (i) Free flight model aircraft shall fly at a site agreed to by the duty officer.
 - (ii) Free flight shall be done under the control of an ordinary member but with the agreement of the duty officer.
 - (iii) The member in charge of the free flight model aircraft will ensure that adequate spectator control is exercised.
 - (iv) A powered free flight model aircraft should be launched at least 50 metres from the pit area.
- k) Fun Fly and Park flyers and 3D models;
- (i) These models will be accomodated
 - (ii) All flying, other than for take off and agreed touch and goes, will take place at least 20 meters away on the far side of the runway ie at least 25 meters from the flightline.

- (iii) The catching during flight of Powered models by the pilot or others is prohibited.
- (iv) Should a fun fly or foamie be flown irresponsibly, the Safety officer should first speak to the pilot, and if necessary ground him.

2.3.5 **Pre-flight and flying control**

This subsection lists the activities and safety rules which apply prior to and during the time that an airplane is in the air.

It covers:

- Pre-flight inspection
- Preparation for take-off
- Flying
- After landing

All the above checks are detailed in the Fixed wing Proficiency Booklet section 5,

The pilot should spend some time in acquainting himself with the guidelines set out in this booklet and prepare his own list of checks to be done before starting the days flying. Do remember that you the pilot, have a projectile in your hands which weighs many kilograms and is capable of obtaining speeds of 150 plus kilometres per hour. A model aircraft with a 40 (6.5 cc) size engine in level flight has approximately 10 times the energy of a .45 handgun bullet, and should it hit you could be lethal.

2.3.6 **After landing- post flight control**

- a.) Your first priority is to get your model off the runway and away from the pilots on the flightline., and announce "runway clear".
- b.) Then switch of the engine or disconnect the electric power to your models motor.
- c.) get the model back to the pits, turn of your transmitter and return it to the transmitter pound.

2.3.7 **Safety code for an Event or Airshows**

A permit must be obtained from SAMAA to hold any Event, airshow or Display. see SAMAA operating procedure PR02

- a) Only model aircraft which have recently been successfully flight tested and are airworthy, will be flown at an Event or an airshow. The pilots who fly these model aircraft will have recognised SAMAA qualifications as set down in the SAMAA proficiency booklet. No pilot with less than a SAMAA gold proficiency will fly at an away from their club airshow.
- b) Only model aircraft which comply with the CAA (Civil Aviation Authority) requirements will be allowed to fly:
 - (i) from any SAMAA registered field
 - (ii) at an airshow
- c) Only pilots with the required qualifications and proficiency certificates will fly at an airshow or flying demonstration. These qualifications are set out in (h) below.

- d) All flying at an airshow will be under the control of a suitably qualified safety Organiser who is responsible to the event/contest director.
- e) For any airshow, a line must be established in front of which all flying will take place. Only those persons authorised by the contest director or authorised official are permitted on the flying side of the line. Spectators and others will always remain on the non-flying side of this line.
- f) Special consideration and care must be exercised when jets are being flown. The event/contest director or authorised official will only permit the flying of jets or other large or potentially dangerous aircraft if he is satisfied that the model aircraft are airworthy and the pilots are adequately qualified.
- g) Visitors flying in an airshow will be competent flyers and have the correct qualifications. If doubt exists as to the visiting pilots competence, the authorised official may require a demonstration from him.
- h) Airshow specifications:
 - Pilots who fly displays at their own field shall hold a minimum rating of a Silver proficiency (current award).
 - Pilots who fly at a public display (i.e. At a non registered SAMAA field) shall hold a Gold proficiency or higher.
 - Pilots who fly at public displays regularly, (i.e. Fly in public places) shall hold a display pilots merit (this merit requires an annual re-check). (See proficiency booklet).
- (i) **Please remember Model and full size or manned Aircraft may not be in the air in the same proximity and at the same time, the model aircraft has no rights and must get out of that air space immediately.**

2.3.8 **Safety code for competitions**

- a) **SIG Organised Contests**
All competitions and contests, will be run by the respective SIG`s. This means that the activity is organised by the SIG and is run by a SIG appointed Contest Director (CD), All SIG events will be posted in the SAMAA news and on internet, and the dates, times and location of contest events to be held during the current year will be given. These events will be "official" events and will be insured by the SAMAA insurance policy provided that the conditions listed below are fulfilled.

The Contest will abide by the rules and regulations set down in the SIG Sporting code, and the Safety Code set down in the SAMAA Operating Manual, and are open to any SAMAA member in good standing with the Association.

OBEY THE RULES, THEY ARE THERE TO MAKE MODEL AIRCRAFT FLYING SAFER.

2.4 THE LAYOUT OF A MODEL FLYING FIELD. RECOMMENDATIONS AND REQUIREMENTS

It may seem strange at first, that the requirements of the model aircraft flying field should be included in the safety code. But after a little thought it is obvious that the field layout is all important, to safe flying, and with this in mind that SAMAA has set down the typically accepted requirements of a flying field to ensure that the safety aspects can be incorporated.

Although the paragraph refers to SAMAA requirements, in actual fact these are world wide standards which have been developed and modified over time, to provide for safe model aircraft flying, and still provide a safe facility for Members and spectators.

To obtain SAMAA Registration of a club's field, means that the field generally complies with the following requirements, and that the Club Committee has completed and submitted the forms PR05 "SAMAA Club and field Registration" to SAMAA, for Approval. SAMAA will pass these layouts and co-ordinates on to the CAA for acceptance.

1. Location
Three considerations that are very important to the usage and future of your field/Club are;
 - a.) That it is located at least 5 Nautical Miles from a traffic Controlled Aerodrome or Airport
 - b.) That it is at least 5 Kilometers from an existing Model Flying field.
 - c.) That it is not adjacent to a Highway. Or main road intersection.
 - d.) that it is not near a proposed Residential or Development Area
2. Orientation
As most of the RSA is south of the Tropic of Capricorn, it means that the sun is always to the north of us, and it is therefore logical that all our flying fields should be located so that the pilots flying are facing south, so as to provide the best flying conditions for the whole day.
There is one other factor to consider and that is the prevailing wind, direction and strength.
A compromise will probably need to be made, because of the orientation of the piece of land available, the wind and the sun, do bear in mind the sun is the most important item in the equation.
3. Flight line
At all model aircraft flying sites, a straight or curved line (flight line) shall be established in front of which all flying takes place.
Behind this line shall be the pit area, the parking, the access road, the club buildings and the spectator area. This line shall be not less than 30 metres away from any road, building or spectator area.
Only persons involved with flying the model aircraft are allowed on the flightline.
Flying over the clubhouse, pits, spectator or parking area is prohibited and the airspace over these areas is a no flying area.
4. Frequency control
All flying sites shall have an effective frequency control system. This will be the "peg/marker on frequency board" system, as set out in the SAMAA operations manual, Procedure PR 08 "Frequency Control"
5. Frequency
All frequencies in use at the club will be displayed on the frequency control board and only SAMAA approved frequencies shall be used.
6. Transmitter control area
A transmitter control area must be provided at each field where transmitters, when not in use, must be impounded.
7. Helicopter and glider areas
If a helicopter, glider, control line or free-flight area is to be established at the field, due care must be taken to ensure that these are located, with due consideration for each activity.
8. Runways
Once the decision has been made as to the type of runway, i.e. grass, concrete, compacted soil, or asphalt. The direction, position, and length of the runways should be established. In the ideal situation, the main runway should be in the direction of the prevailing wind on that field and the other two runways approximately 60° different, the final configuration being triangle shaped. (Annexure A at the end of this SAFETY RULE Booklet gives guidelines for different runway finishes.) Do remember to put the white X signs, on each side at the ends of your model runways
9. Taxiways
With the introduction of large model aircraft, taxiways connecting the pit area to the main runways are now a necessity. These should be designed into the field and a cut-off point established on these taxiways beyond which (on the pit side) the model aircraft may NOT BE TAXIED under it's own power.
10. Run-up area
A run-up area shall be provided, away from the pit area, and preferably on the outside of the taxi ways in which engines may be checked and tested without interfering with the pilots flying.
11. Pilot position
The pilot flying a model aircraft shall ALWAYS be between his model aircraft and other people in the pits at the field.
12. Pilot area
All pilots flying at a given time must stand adjacent to the designated runway, in a designated pilot area, and within communicating distance of one another. The airspace over the pilot area is always a **NO FLY ZONE**
13. Prohibited areas

The pilot area must be out of bounds to all but pilots and assistants. Children and spectators unless under flying instruction, must be kept out of the pit area. The pit area shall be clearly designated, and suitable notices erected. To this effect the airspace above the pits, the pilots, the clubhouse, the spectators, and the parking area is always a **NO FLY ZONE**

14 Windsock

This is probably one of the most important single items on the field for the pilot. A suitably-sized windsock should be placed, in the no fly zone, where it can be seen by the pilots flying, when they are at the pilot boxes, near the runways, and where it will give a good indication of both wind direction, wind strength and wind characteristics.

15 Spectators

Other than during take off and landing, where the model will be a minimum of 30 metres from spectators, the following model distances will be observed at all times;
 Models up to 7kgs --30 meters
 Models weighing between 7 and 25 Kgs -- 50 meters
 Turbine models – 50 meters
 Pylon Models – 100metres
 No model may turn towards the spectators, all turns will be away from spectators.

16 Approval

Anyone who wishes to establish a new flying field will submit all the required forms to SAMAA for SAMAA to obtain CAA approval before the field is built.

RECOMMENDED R/C FLYING SITE SPECIFICATION

A. INTRODUCTION:

The SAMAA has determined that most modellers and model clubs are careful in their selection of flying sites, site layout, and operational practices. The specification detailed below has been developed to promote improved field management and provide added margins of safety for the ever-increasing numbers of fliers, spectators, and larger model aircraft. Most clubs should be able, with reasonable effort, to comply with this suggested layout for general field arrangement and conditions for sport flying. The suggested specifications are not intended as mandatory requirements, and compliance with these suggestions does not, of course, guarantee that no accident will occur. The SAMAA recommends that individual clubs design their flying sites based not only on the suggested specifications below, but also upon the individual characteristics of the flying site and the type of R/C activity which is anticipated. The SAMAA should be contacted if there are any questions concerning site specifications and site layouts.

The SAMAA safety code remains the governing factor. All members and clubs must conduct their field operation in accordance with the SAMAA Manual of Operations, and Safety Code.

TAXI AREA: No landings or take-offs from this area.

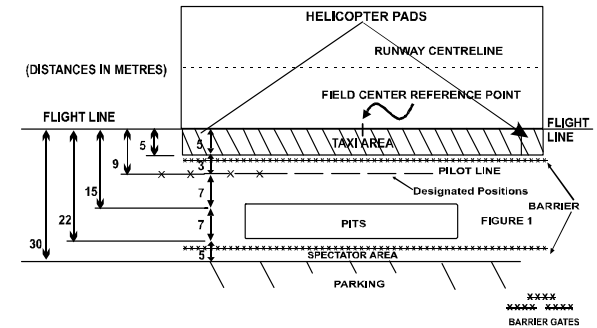
- Provides additional open space between pilots and aircraft during time when most out of control accidents happen.

- Allows taxi room in front of other pilots with less likely chance of other frequencies "swamping" taxiing aircraft.

BARRIER: Designed to stop taxiing models from veering into pilot's and/or spectator's positions (plastic or chain link fencing, hay bales, shrubbery, etc.).

PILOT LINE: Set back from runway edge to keep pilots away from aircraft.

—x— Designated pilot positions spaced about 6 metres apart.



B. PERSONNEL SIDE OF FLIGHT AREA:

LOCATIONS

Runway edge is the basic
 Pilot line a minimum of
 Pit line a minimum of
 Spectator line a minimum of
 Parking lot a minimum of

DISTANCE FACTOR*

Reference line or 0
 9 metres from reference
 15 metres from reference
 30 metres from reference
 30 metres from reference

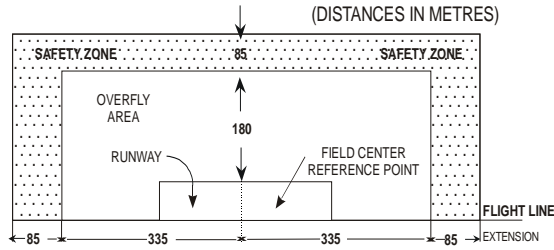
SAFETY ZONE An additional 85 metres safety zone, added to the OVERFLY AREA, is desirable if any major roads, buildings, or outdoor personnel activities are in the general area.

C. FLIGHT SECTOR:

(Covering a 180° sweep on the flying side of the reference line)
 Flight area clear of potential hazard** at least 335 meters left and right and 180 metres in front of pilot. Most flying is contained within 335 metres either end from field centre reference point and 180

metres in front of reference point. Field centre reference

point essentially is edge of runway at the centre of the field on flight line.



D. SIGNS—SUGGESTED MINIMUM POSTING REQUIREMENTS FOR PUBLIC NOTICE:

- Flying Site***
- Field Rules
- "No spectators beyond this point without escort"
- Flying site demarcation (signs at boundaries)
- Indemnity sign**

E. EQUIPMENT:

Frequency control board at R/C sites.

*Measured perpendicular from edge.

**Potential Hazards:

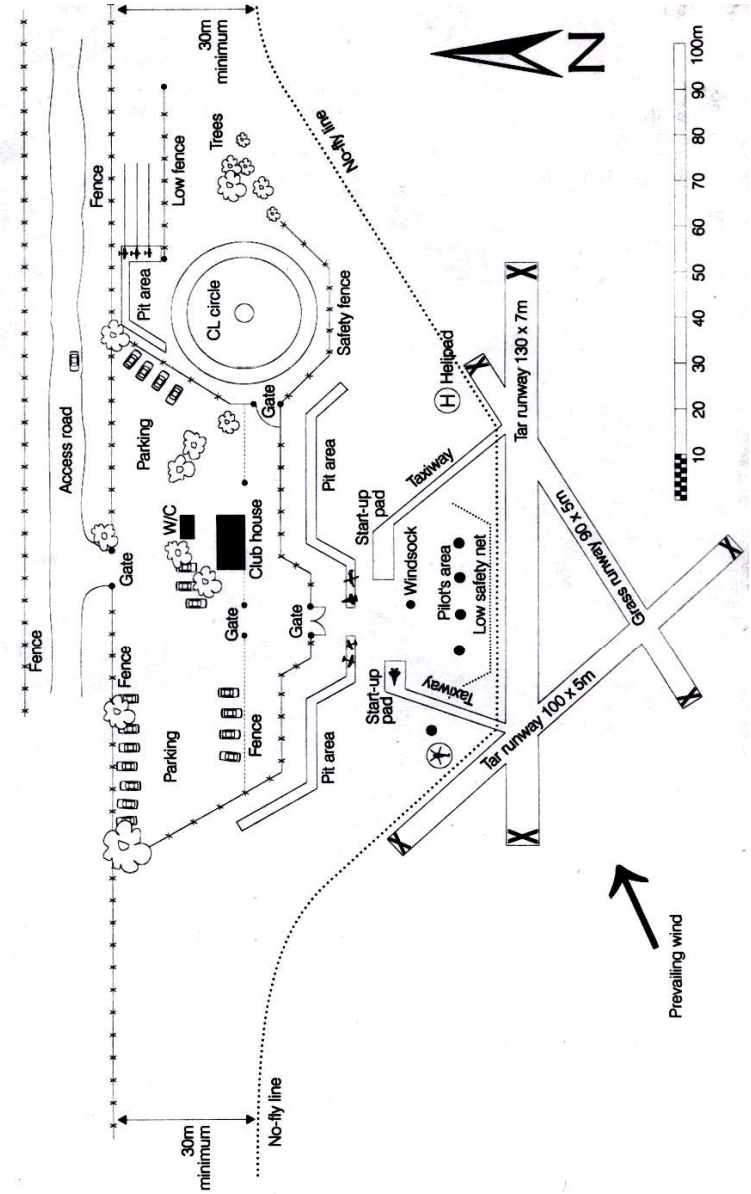
Personnel working, playing, travelling outdoors. Vehicle occupied or unoccupied such as – car, truck, boat, aircraft, bus, train, etc. Building having glass surfaces facing the flying area. Storage facility containing volatile products or compressed gasses.

***This sign may be incorporated with the field rules but should be the leading words in a larger letter size at the top of the sign. Placement of the sign should be situated so that spectators can easily read it.



Example of sketch/map of ideal flying field layout.

Show runways, obstacles, safety features, wind direction, out-of-bounds areas, parking, clubhouse, etc.



OBHEY THE RULES, THEY ARE THERE TO MAKE MODEL AIRCRAFT FLYING SAFER.

Keith Nicolls

2.5 ANNEXURE

HOW TO ESTABLISH YOUR OWN CLUB AND FLYING FIELD

Guidelines for a model flying field

1. Basic criteria for setting up a model flying club

Any group of aeromodellers who are thinking of forming a club should do some research and should investigate the following aspects before proceeding with the implementation.

- Find a piece of land, with a reasonable time period lease on it. This piece of land should be at least 1.0km x 0.50km, (i.e. 50 hectares) and should preferably be located at least 1 km from the nearest habitation. Ideally no potential development should be planned for the area. Remember your capital outlay on runways, buildings, and development will be a write-off when the lease is cancelled or expires.
- Contact the local municipality and check on the by-laws, find out what restrictions, if any, are applicable to the land.
- The runways should be a minimum of 6 metres wide (8 to 10 metres is ideal) and the length dependant on the type of model aircraft using the runways. A guideline being:

ARF Trainers	-	60m
Aerobatic model aircraft	-	70m
Jets	-	130m

Bear in mind that having runways makes flying more disciplined and is easier to control from the club side. Aerobatic model aircraft and jets with their small wheels are both unhappy to take-off or use a grass runway.

A brief guide on the construction of grass or asphalt runways is as follows:-

Grass runways

The cheapest runway is to leave the existing grass veld, by constant cutting, removal of the grass clumps, by top dressing and a bit of watering, a fairly acceptable runway can be produced within 2 to 3 years. The use of large wheels on model aircraft will be a necessity in the earlier years.

This grass runway is considerably cheaper than any constructed runway.

An alternative, quicker runway can be produced by removing the existing grass and laying a lawn of pre-grown sods. When considering this option, please do not overlook the cost of cutting the grass, or the labour and machine repair costs associated.

Hard runways

The cheapest, temporary hard runway that can be produced would require the removal and dumping of the existing grass and topsoil, the scarifying or ripping of the existing soil to a minimum depth of 150mm, the wetting and replacement of this soil in layers with the addition of cement or lime, wetting and properly compacting. Where soft spots are evident, import a load or two of a good gravel and roll this into the surface. Finally apply one or two coats of weedkiller, seal with two coats of bitumen spray or slurry (slurry is a mix of sand, cement and bitumen). The addition of the odd cut-off drain will complete this runway. At a guess this type of runway could last 3 years before the grass and weeds start to break through.

Road-type runways

This obviously is the ideal runway for any club. It's life is dependent on the thickness of the sub-base and layer work but it should have a life of 15 to 25 years (with maintenance) but it is expensive and uses road construction techniques with imported gravels, stone and stabilisation, and has an asphalt wearing surface.

Estimated costs and construction techniques are available and should be obtained from a local road contractor when the new club has decided what they want.

2. Layout of flying field

Included in this booklet is a recommended R/C flying site specification.

This layout will give a good idea of the latest thinking on the size of field and the layout of the pit area and should be useful for preparing a new field layout.

3. Feasibility study

For your final detailed club and runway layout, visit as many local clubs as possible and choose the best compromise.

- Do a layout of your proposed club, the runways, fences, pit areas, toilets, clubhouse, etc. But please do not forget to check the sun and prevailing wind directions. Lay out the club in such a way that the sun is at your back (ie runway on south of pilots) the prevailing wind direction could influence your final layout. Do look at say a 15 year development programme. At this stage you should decide on the phases of construction, your membership expectations and the annual subscriptions you intend to charge. Then do the financial sums.
- Discuss and consider, briefly at this stage, your constitution, by-laws, safety rules, insurance, frequencies, and any other special regulations which may be required.

On the above matters, SAMAA and its committee will be happy to advise, and if required, assist with the local municipalities and other problem areas.

- Check on the location of any other radio control users in the area, and note that no aeromodelling flying may be within 5 km of another R/C club or if

sense prevails, within 5 km of any radio controlled hobby group, or 9,27 kms of a full size aircraft field, unless permission has been obtained from the CAA.

4. Implementation

When all the above information has been assembled and the decision has been made by the group to proceed and establish a model aircraft flying club, it is then suggested that the field be registered with the SAMAA, who in turn will obtain clearance from the Civil Aviation Authority for the model aircraft flying site location.

5. Compromises

With the price of land, the priorities of government and the land uses laws it might be a plan to buy or hire say a 5 hectares (ie. 100m x 50m) piece of land for the runways and clubhouse and agree to overflying rights for the balance of the area required with the owner/farmer.

Hope the information contained in this booklet has been of help.

KFN