

Windhoek Radio Flyers (WRF)



Manual of Procedures

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DEFINITIONS

WRF	Windhoek Radio Flyers
Member	Paid-up member of the WRF
SIG	Special Interest Group
Mobile Phone	Portable, or cell phone
WAD	A World Anti-doping Agency
Approved Area	An area, flying field or club field registered by WRF and approved by the DCA.
Bona Fide Visitors	Visitor to club, not necessarily signed into the visitors book, who are present in small numbers on a casual basis.
Competition	A competition run by a Club or by WRF Members but not promoted to the general public. Large competitions, such as world championships, where it would be reasonably expected that members of the public will attend shall be treated as a Display
Display	An organised and advertised Display of any number and types of model aircraft where flying is conducted in front of spectators and non-members of WRF (Including Control Line model aircraft and indoor flying).
Display Director	The person responsible for the running of, and safety at a Display.
Organiser	The Person, Club or Association organising the Display.
Qualification to Fly	A Proficiency level, issued by the WRF
DCA	Department of Civil Aviation
C.A.S.A./C.A.A.	Civil Aviation Safety Authority
ATNS	The Air Traffic Control Department of the nearest aerodrome
WRF Committee	The Committee of WRF
Incident	An occurrence with potentially serious consequences which occurs at a model flying field
CAR	Civil Aviation Regulations
Club	A group of members who have formed an aeromodelling club

POLICY ON CODE OF ETHICS FOR MODEL FLYERS

1. Purpose

This Procedure is to ensure the WRF members conform to an acceptable Code of Ethics in their participation of the sport of Model Aviation.

2. Code of Ethics

The WRF is an anti-discriminatory and harassment-free organisation and abides by the following Code as set out herein.

The purpose of this Code is to protect the health, safety and well-being of all WRF members and those who participate in the activities of WRF and the activities of its members. WRF also seeks to provide a safe environment for those participating in the activities of WRF and its members. This Code confirms that WRF and its members will not tolerate harassment, discrimination or abuse of those involved in its or its members' activities. This code also records WRF commitment to strong ethical principles of requiring that all people participating in its activities must comply with principles of responsible and professional behaviour.

WRF believes everyone who participates in its and its members' activities has the right to be treated with respect and dignity and they have the right to have any complaints dealt with in a fair, confidential and sensitive manner. This Code also recognises that certain types of harassment and discrimination are unlawful and that the notification of abuse to the relevant Government authority, in certain cases, is a legal requirement.

It is the responsibility of all WRF members to ensure that their activities conform to the Code of Ethics and that they respect the rights of other modelers.

3. Field Etiquette

Field etiquette is intended to outline those matters which are expected of all WRF flyers and pilots as common courtesy and, in some instances, for safety.

- a) All R/C pilots will respect and abide by the Safety Code
- b) The Safety Code is designed to protect Club members, visitors and spectators.
- c) It is the responsibility of every member of WRF to obey the rules at all times as well as to see that these rules are followed by others.
- d) R/C pilots will restrict their use of the operating frequency to twenty (20) minutes when others are waiting.
- e) R/C pilots will ensure that the operation of their model does not interfere with the enjoyment of the hobby/sport by others. These would include, but not be limited to, loud aircraft, unnecessary running of model engines in pilot areas, prop washing other aircraft in the pits etc.
- f) R/C pilots will be considerate when sharing the sky with other R/C pilots by operating their aircraft in such a way so as not to interfere with others.

DEFINITION AND SPECIFICATION OF MODEL AIRCRAFT

1. Purpose

The purpose of this policy is to define the general characteristics of a “model aircraft” as set out by the FAI (Federation Aeronautique Internationale). These characteristics and specifications with minor deviations as agreed in Namibia are as stated below.

2. Fixed Wing Model Aircraft

Unless otherwise stated, fixed wing model aircraft shall not exceed the following general specification:

- a) Maximum flying weight without fuel 25kg
- b) Maximum wingspan (powered) 5000mm
- c) Maximum wingspan (unpowered) 6000mm
- d) Maximum wing load 15,00kg/m²
- e) Electric motors, maximum no load voltage 42 volts

3. Model Helicopters

Unless otherwise stated model helicopters shall not exceed the following general specifications.

- a) Maximum weight without fuel 6 kgs
- b) Maximum swept area of lifting rotor(s) counting only once any superimposed areas 250dm² (Provided that in the case of co-axial model helicopters whose rotors are further than one rotor diameter apart, the area of both rotors is counted)
- c) Piston motor swept volume maximum
 - 2 stroke 15 cm²
 - 4 stroke 20 cm²
 - petrol 25 cm²
- d) Electric motors, maximum no load voltage 42 volts.

4. Free Flight Models

Other free flying model aircraft which are neither radio nor line controlled, shall not have a mass exceeding 5 kg

5. Heavy Models

Model aircraft exceeding the maximum flying weight specifications of 25kgs will be subject to inspections during construction, and will be required to obtain a certificate of inspection and exemption from the DCA and WRF before being allowed to fly at any WRF field, club or display.

6. Noise Limits

a) Fixed Wing Models

All powered model aircraft categories shall be limited to a maximum of 96db at 3 meters, over a hard surface, unless the class or category of model has specified lower limits. Specific noise measuring procedures are to be developed by the national body controlling model aircraft to ensure that the above limits are achieved.

b) Helicopters

Noise limitation for helicopters in hovering mode shall be as follows:

- Over hard surface 89 dbca at 3 metres.
- Over soft surface 87 dbca at 3 metres.

7. Other Models

- Model Aircraft which have not been specifically addressed in this specification must be queried with WRF who together with the SIG, DCA and Inspectors will give a ruling.
- All Competition Model Aircraft must conform to the safety rules and Sporting Code for their particular SIG.

8. Guidelines for Radio Equipment

The following general recommendations are included in this section to offer basic suggestions for enhanced safety. We suggest you contact the WRF office for names of specialist members to handle your queries.

- Models up to 7kgs
Any standard commercial equipment with servos rated at 3,6kg/cm or more may be used in model aircraft up to the FAI limit of 7 kg. For the larger aircraft in this category at least one servo per control surface should be used.
- Models between 7kg and 25kg
Model aircraft which exceed the FAI limit of 7kg must be fitted with heavy duty servos which have the capability of handling the loads that the control surfaces impose on the servos. Standard servos with a rating of 3.6 kg/cm are not suitable for these sizes of aircraft and larger servos suited to the model size should be used with at least one servo being used for each aileron and one servo for each stabiliser half being recommended. Use of dual receives is also recommended on a larger model aircraft.
- Battery Pack
The battery sizes used on larger aircraft is depended on the number, size and type of servo loads on the control surfaces. Batteries should be able to sustain power to the onboard radio components for a minimum of one hour total flying time before recharging. Dependable redundant and fail safe battery systems are recommended as is the use of dual receiver units and split control for the larger and more expensive models.
- Other recommendations for larger aircraft are:
 - Servo arms and control hands should be rated heavy duty
 - With (pull-pull) cable systems a separate tension bar is recommended
 - Hinges should be rated heavy duty and be manufactured primarily for larger aircraft
 - Clevises and attachment hardware should be heavy duty 4/40 thread and rod type or be as specified by equipment manufacturers for larger models.
 - Long servo leads may required to be fitted with Anti glitch devices
 - All motors or turbines on larger models shall have a remote switch on the transmitter to remotely shut down the motor / turbine.

9. Prohibitions:

- The use of metal bladed propellers is prohibited
- The use of metal rotor blades is prohibited
- The use of Pyrotechnics or explosives in or from model aircraft is prohibited

POLICY ON REGISTERED FREQUENCIES

1. Arrival at Field

Any person bringing radio control equipment to a flying field will be expected to ensure that such equipment is in a “switched-off” condition, that the aerial is collapsed or down and the transmitter is placed in the transmitter control area or pound.

2. Transmitter Control Area / Pound

A transmitter control area, when needed, will be used for the impounding all transmitters not currently in use at the flying field. All transmitters (when not in use) shall be placed in the pound. This also means and includes the impounding of transmitters in carrying cases and transmitters connected by buddy cords, and will be applicable irrespectively of the number of members at the field.

3. Frequency Control System

- a) The frequency control system presently in use in Namibia is by means of a FREQUENCY CONTROL BOARD displayed at or near the transmitter pound or near the flight line. This frequency control board will display all the frequencies which may be used at the flying field and will have hooks or similar devices set so as to allow a marker or card to be attached by the pilot to uniquely reserve a frequency/spot.
- b) The “PEG OFF – CARD ON” system will be used at all WRF registered flying sites where the frequency peg will be in the possession of the pilot and the WRF membership card on the frequency spot when the transmitter is in use.
- c) Any frequency not displayed on this Frequency Control Board may not be used at the flying field concerned.
- d) Frequencies other than those listed in this WRF policy document “FREQUENCIES” are not legal frequencies and may not be used at a WRF registered flying field.
- e) “Line of Sight” between you and your model at all times is a definite requirement.
- f) Only transmitters and receivers manufactured by the accepted and reputed Brand names and designed for 10 KHz band width spacing may be used.

4. Radio/transmitter frequencies

The following radio frequencies are the only legal frequencies in Namibia.

NB The 35MHz Band is specifically reserved for model Aircraft use only. The 27MHz or 53MHz are for general model use.

THE PRESENTLY APPROVED WRF FREQUENCIES ARE:

FREQUENCY	SPOT	STEAMER
27 MHz		
26.995	04	BROWN
27.045	09	
27.095	14	
27.145	19	
27.195	24	

FREQUENCY	SPOT	STEAMER
35.120	72	ORANGE
35.130	73	
35.140	74	
35.150	75	
35.160	76	
35.170	77	
35.180	78	
35.190	79	

53 MHz		
53.300	31	RED
53.350	32	
53.400	33	
53.450	34	
53.500	35	
53.550	36	
53.600	37	
53.650	38	
53.700	39	
53.750	40	
53.800	41	
53.850	42	
53.900	43	
54 MHz		
54.450	46	YELLOW
54.500	47	
54.550	48	
35 MHz		
35.000	60	ORANGE
35.010	61	
35.020	62	
35.030	63	
35.040	64	
35.050	65	
35.060	66	
35.070	67	
35.080	68	
35.090	69	
35.100	70	
35.110	71	

35.200	80	ORANGE
35.210	81	
35.220	82	
35.230	83	
35.240	84	
35.250	85	
35.270	86	
35.260	87	
35.280	88	
35.290	89	
35.300	90	
35.310	91	
35.320	92	
35.330	93	
35.340	94	
35.350	95	
35.360	96	
35.370	97	
35.380	98	
35.390	99	
35.400	100	
35.410	101	
35.420	102	
35.430	103	
35.440	104	
35.450	105	
35.460	106	
35.470	107	
35.480	108	
35.490	109	
35.500	110	

The frequencies marked with an asterix (*) should be avoided or used with caution. If the lower frequencies of 35.000 to 35.040 are in use as they may interfere with each other. It is advisable that clubs rule that there sets of frequencies shall not be used simultaneously at any flying field.

- 35.000 and 35.450 / 35.460
- 35.010 and 35.460 / 35.470
- 35.020 and 35.470 / 35.480
- 35.030 and 35.480 / 35.490
- 35.040 and 35.490 / 35.500

The 2.4 GHz frequency band has been approved by WRF, but only ICASA type approved equipment is legal for use. The streamer colour selected is dark green.

POLICY ON MOBILE PHONES AT FLYING FIELD

1. Introduction

It has been confirmed that there is sufficiently well recorded instances of mobile phones affecting model radio control transmitters by corrupting the radiated signals and also modifying the stored memory in computer radios, to make their unrestricted use at model flying sites an unacceptable risk. It is also understood that the close proximity signal strength from a mobile phone exceeds the designed Electro Magnetic Interference (EMI) specifications of at least one radio manufacturer and is identified by the radio manufacturer as a significant risk.

2. Policy

The WRF strongly recommends that: -

- All mobile phones be banned at radio controlled model flying fields at the following locations and in areas between them:
 - The transmitter pound
 - The pit area
 - The flight line

- High power phones with an add-on amplifier are not to be used within 30 meters of operating aircraft at transmitter

3. Guidance

- a) With the widespread use of mobile phones and the benefits that they bring for general use and also for emergencies, it is not the intention to unreasonably restrict their use at model flying sites.
- b) It is anticipated that the layout of most flying fields will allow convenient areas to be available, such as public viewing areas or the car park, where mobile phones can be operated safely and in accordance with this Policy.
- c) Consistent with the intent of this recommendation, a buffer zone should exist between where mobile phones are allowed and the location of any radio control transmitters in the transmitter pound or pit area. It is recommended that distance should be a minimum of two (2) meters.
- d) As each field layout is different, it is up to the local club management to decide how this policy should be actually and clearly, implemented to ensure that it complies with these recommendations in a practical manner.
- e) Mobile phones that are switched on radiate at regular intervals to maintain identification with the base station, not just when a call is in progress.
- f) Due to the difficulty in identifying whether a mobile phone is switched on or not, it is recommended that the ban apply to all mobile phones being carried in or near the locations specified in Item 4 of this policy, and not just those that are switched on.

POLICY ON ALCOHOL, DRUGS AND ILLNESS

1. Introduction

The WRF wishes to provide a safe environment for their members to participate and enjoy the sport of model flying. An important aspect of this is that those flying model aircraft do not have their ability to do so safely inhibited by the use of alcohol, drugs (whether for medical or other purposes), or illness. This policy defines the standards that members are expected to follow to conform to these requirements.

The WRF condemns the use by competitors of substances banned by the World Anti-Doping Agency for the purpose of attempting to improve performance.

2. Policy

2.1 Alcohol & Illegal Drugs

When operating a model aircraft the pilot must not be under the influence of alcohol or illegal drugs. In applying this, it is not possible in a normal model flying environment to specify, and measure a specific level at which the increasing effect of, for example, alcohol impairs performance sufficiently for any given individual. For this reason, alcohol or illegal drugs should not be consumed or used prior to, or during, participation in any model flying operations.

2.2 Drugs in Sport

The WRF requires that all members abide by the FAI Anti Doping Rules and Procedures as referred to in the General Section of the FAI Sporting Code. WRF members must abide by the Policies on Drugs in Sport that covers the application of the FAI code in the Namibian environment.

2.3 Illness

WRF members are expected to use their own judgement if they feel that either a short or long term condition would impair their ability to the point where there is an increased safety risk to themselves, fellow fliers or to the general public. However, as a minimum, a person must not operate a model aircraft without competent supervision, taking into account the type of aircraft being flown, if their medical condition is such that it would contravene the requirements to be legally able to hold a motor vehicle driver license or to operate a motor vehicle in their Province of residence. In this context, depending on the physical condition and type of model being flown, competent supervision could range anywhere between being connected to an operating transmitter via a buddy cord capable of recovering the model from a potential or unsafe condition, to just being able to see, or be fit enough, to recover a free flight model from a field.

POLICY ON CREATING NEW PROCEDURES OR ALTERING CURRENT PROCEDURES

1. Purpose

This procedure is to ensure that the process to be followed for the production and the amendment of WRF procedures is documented and Procedures are numbered and dated to enable the latest version to be identified.

2. Introduction

The WRF Model of Procedures Handbook is a 'live' document that is continually being renewed, added to and improved. It is essential that a documented system is in place to ensure that changes/ updates and amendments to the Procedures can be made as an update.

3. Scope

This procedure applies to the WRF Committee members and Registered Club members who wish to create or update a procedure.

4. Responsibilities

- a) The WRF Chairman is responsible for maintaining the WRF Model of Procedures Handbook in an updated form.
- b) The WRF Chairman is responsible to ensure that any changes to any policy or procedure are ratified by the Committee before publishing the change and incorporating the change in the Handbook.
- c) The Chairman is responsible to ensure that all Committees, Sub-Committees, clubs and other groups are aware that they can propose changes to existing Procedures.
- d) The Chairman is responsible to advise the other Committees, Sub-Committees, the DCA and other groups of any changes, omissions and improvements to the WRF Operations Policies and Procedures Handbook.
- e) The Chairman is responsible to ensure that all changes, omissions, improvements and upgrades to the WRF Model of Procedures Handbook for the year are identified and copied to the Member Clubs and DCA annually.
- f) The Chairman is responsible to maintain an up-to-date "Table of Contents" for the WRF Model of Procedures Handbook, identifying the latest issue, revision number and revision date of the Policy or Procedure.

5. Processes

5.1 New Procedures

- a) Any WRF member, club member or other group member may propose a new procedure and submit their proposal to their committee.
- b) If the group committee considers that the procedure is a worthy addition to the Handbook, they shall send full details to the WRF Chairman. The details shall include reasons as to why the procedure is required and a draft of the procedure proposed.
- c) A new procedure identified by any member of the WRF Committee should be submitted to the Chairman.
- d) The Chairman shall, on receipt of the documentation identifying the procedure, place it on the agenda of the next Committee Meeting for consideration.
- e) The Committee will consider the suggestion/s and, if found to be a valid addition to the Procedures Handbook, appoint a sub-committee to draft the procedure.
- f) When the procedure has been drafted, it shall be returned to the Chairman who shall then circulate it to the relevant parties for comment.
- g) The Chairman is responsible for ensuring that the format of the procedure is compatible with the WRF Model of Procedures Handbook

- h) The interim procedure shall again be tabled before the Committee members for ratification.
- i) The procedure shall be released to the WRF MEMBERS after ratification. This procedure shall come into force as at the date of ratification by the Committee.

5.2 Changes to the Existing Procedures

- a) Any registered WRF member or club can identify and suggest changes to existing Procedures. They shall submit suggestions to their committee for consideration.
- b) If the club Committee members consider the additions, changes, omissions and improvements identified are considered applicable, they will send full details of the proposal to the WRF Chairman.
- c) The Chairman, on receipt of the documentation identifying the additions and/ or changes to the WRF Model of Procedures Handbook, places it on the agenda of the next Committee meeting for consideration.
- d) If the change is of a typographical nature that does not alter the meaning of the Procedure, the Chairman shall amend the Procedure and release it without the amendment being formally approved by the Management Committee.
- e) The WRF Committee will consider the suggestions and, if found to be applicable, will appoint a sub-committee to amend the procedure.
- f) When the Procedure has been updated, it shall be returned to the Chairman who shall then circulate it to the Committee for ratification.
- g) All Procedure amendments approved by the WRF Management Committee will come into force immediately after approval unless otherwise stated.

5.3 Identification and Recording of Amendments

- a) Any changes to the Procedures shall be recorded on the sheet provided for in this document.
- b) An up to date copy of this document shall be kept on file by the Secretary of WRF.
- c) All previous versions of this document shall be kept on file for a period of five years after that version is amended.
- d) Every year at the AGM of the WRF the members will reconfirm the contents of the WRF Model of Procedures Handbook