Notice of Proposed Rule Making
NPRM 16-23
1 December 2016

Part 101
Gyro~~planes~~gliders and Parasails and Unmanned Aircraft (including Balloons), Kites, and Rockets ~~and Model Aircraft~~ – Operating Rules.

Docket CAR/16/101/01
2016-2017 Rules Review

Background to the Civil Aviation Rules

The Civil Aviation Rules establish the minimum regulatory safety boundary for participants to gain entry into, operate within, and exit the Papua New Guinea civil aviation system. The Rules as structured in a manner similar to the Civil Aviation Rules of New Zealand and the Federal Aviation Regulations of the USA. Where practicable the Rules also align with the regulatory code of the Civil Aviation Safety Authority of Australia.

Rules are divided into Parts and each Part contains a series of individual rules which relate to a particular aviation activity.

Advisory Circulars accompany many rule Parts and contain information about standards, practices and procedures that the Director has established to be an Acceptable Means of Compliance (AMC) with the associated rule. An Advisory Circular may also contain guidance material (GM) to facilitate compliance with rule requirements.

The objective of the Civil Aviation Rules system is to strike a balance of responsibility between, on the one hand, the State and regulatory authority, the Civil Aviation Safety Authority of PNG (CASA PNG) and, on the other hand those who provide services and exercise privileges in the civil aviation system. This balance must enable the State and regulatory authority to set standards for, and monitor performance of aviation participants whilst providing the maximum flexibility for the participants to develop their own means of compliance within the safety boundary.

Section 45 of the Civil Aviation Act 2000 prescribes general requirements for participants in the civil aviation system and requires, amongst other things, participants to carry out their activities safely and in accordance with the relevant prescribed safety standards and practices.

Section 69 of the Act allows the Minister to make ordinary rules for any of the following purposes:

- The implementation of Papua New Guinea's obligations under the Convention
- To provide for safe, sustainable, effective and efficient aviation services
- To provision of aviation metrological services, search and rescue services and civil aviation security programs and services
- Assisting aviation safety and security, including but not limited to personal security
- Assisting economic development
- Ensuring environmental sustainability

1. Purpose of this NPRM

The purpose of this Notice of Proposed Rulemaking (NPRM) is to put forward for consideration the proposed amendments to Part 101 of the Civil Aviation Rules (CAR).

2. Background to the Proposal

The civilian use of remotely piloted aircraft systems (RPAS) has increased markedly in recent years. Research and developments into the civilian application of RPAS is a dynamic and rapidly evolving area. Growth of RPAS use is currently concentrated in smaller aircraft, similar to model aircraft in size (though not necessarily in performance).

RPAS operations will be conducted either under Part 101 or Part 102.

Part 101 operators are not required to seek authorisation from CASA PNG. As a result, there are no direct controls over the skills and qualifications of the operator, or the airworthiness of the aircraft itself.

Part 101 applies to both recreational and commercial users. This means that a wide range of commercial activities can be conducted without any interaction with CASA PNG. This is in contrast with the approach taken by other national regulators where all commercial operators are required to obtain a certificate or seek permission from the regulatory authority, regardless of the risk of operation. The CASA PNG approach allows lower-risk commercial operations to take place without burdensome certification requirements, as long as the operators remain compliant with the restrictions set out in Part 101.

A wide range of terms are used to describe RPAS and include unmanned aerial vehicle (UAV), unmanned aerial system (UAS), drones or model aircraft. Part 101 and Part 102 use different terms which are defined in different parts of the rules.

For Part 102 operations the key term is 'unmanned aircraft'. An unmanned aircraft is *'an aircraft designed to operate with no pilot on board and includes unmanned balloons, kites, control line model aircraft, free flight model aircraft and remotely piloted aircraft'*. The rules also refer to an unmanned aircraft *system* which is *'an aircraft and its associated elements which are operated with no pilot on board'*.

Part 102 applies to *all* unmanned aircraft that do not operate under Part 101 including fully autonomous aircraft, and programmable RPAS that operate automatically or on an automatic basis where the operator may still intervene.

Part 101 uses the term 'remotely piloted aircraft', defined as a subclass of unmanned aircraft and includes its associated remote pilot station or stations, the required command and control links, and any other components required to operate the system.

While Part 101 still refers to subcategories of 'model aircraft', such as free flight model aircraft and control line model aircraft, the more general term 'model aircraft' no longer exists. Model aircraft are now referred to as 'remotely piloted aircraft' (RPA) under Part 101, and 'unmanned aircraft' for the purposes of Part 102.

3. Costs associated with this NPRM

Costs associated with implementation of this Rule amendment has not been assessed.

4. Summary of changes

Amendment 01 (01 Apr 2017)	101.1	Title change. Part 101 applicability subject to 102.21. Addition of remotely piloted, control line and free flight model aircraft. Change of the term gyroplane to gyrogliders.
	101.3	Added definition for 'remotely piloted aircraft'; deletion of 'model aircraft', 'radio controlled model aircraft'; and amendments to 'gyroglider', 'rocket', and 'shielded operation'.
	101.5	Inclusion of unmanned aircraft and other changes
	101.7	Inclusion of unmanned aircraft and other changes.
	101.9	Title Change. Amendments to include unmanned aircraft and other changes.
	101.11	Inclusion of unmanned aircraft and other changes regarding ATC prior authorisation and shielded operations.
	101.12	New rule subpart regarding airspace knowledge requirements.
	101.13	Title change. Inclusion of unmanned aircraft and other changes
	101.15	Inclusion of unmanned aircraft and other changes.
	101.51	Title change
	101.57	Reference to Part 71, and 4 km horizontal visibility
	101.101	Title change.
	101.111	Change minimum visible distance to 5nm.
	101.151	Title change.
	Subpart E	Title Change to include remotely piloted aircraft, control line and free flight model aircraft.
	101.201	Title change. Subpart 101.201 applicability subject to 102.21. Addition of remotely piloted, control line and free flight model aircraft.
	101.202	New rule subpart regarding approved person or organisation
	101.203	Wording changes.
	101.205	New subparts to incorporate remotely piloted aircraft operations
	101.207	New subparts to incorporate remotely piloted aircraft operations
	101.209	Title change. New subparts to incorporate remotely piloted aircraft operations
	101.211	Inclusion of remotely piloted aircraft operations
	101.213	Inclusion of remotely piloted aircraft and other changes.
	101.215	New rule subpart regarding aircraft mass limits
	101.251	Title change.
	101.253	New subparts to apply to gyrogliders and parasails
	101.255	Changes for gyrogliders
	101.257	Changes for gyrogliders
	101.259	Changes for gyrogliders

101.261	Changes for gyrogliders
101.263	Changes for gyrogliders and new subpart for parasails.
101.265	New subpart for gyrogliders and parasails.
101.267	Changes for gyrogliders
101.269	Changes for gyrogliders
101.271	New rule subpart regarding wind speed
101.273	New rule subpart regarding passenger age limitation

5. Legislative Analysis

The Minister may make ordinary rules under Sections 69, 70, 71 and 72 of the Civil Aviation Act 2000, for various purposes including implementing Papua New Guinea's obligations under the Convention on International Civil Aviation, assisting aviation safety and security, and any matter contemplated under the Act.

These proposed rules are made pursuant to:

(a) Section 69(1)(a) which provides for the Minister to make rules for the implementation of Papua New Guinea's obligations under the Convention;

(b) Section 72(a) which provides for the Minister to make rule for the designation, classification and certification of-

(1) Air services:

(2) Aerodrome operators:

(3) Aviation security providers:

(4) Aviation training organizations"

(5) Aircraft design, manufacture, maintenance and supply organizations:

(6) Air traffic services;

(7) Aviation meteorological services:

(8) Aeronautical communication services:

(9) Aeronautical procedures.

The proposed amendment of Part 101 complies with the requirements of the Civil Aviation Act 2000 (as amended) and does not contravene the Constitution, the Aerodrome (Business Concession) Act, Civil Aviation (Aircraft Operator Liability) Act, Civil Aviation (Aircraft Charges) Act, Airport Departure Tax Act, the Explosive Act, Firearms Act, Customs Act, Plant and Disease Control Act and the Environmental Act.

The proposed Rule has been checked for language and compliance with the legal conventions of Papua New Guinea.

6. Submissions on the NPRM

6.1 Submissions are invited

Interested persons are invited to participate in the making of the proposed rule amendment by submitting written data, views, or comments. All submissions will be considered before final action on the proposed rule amendment is taken. If there is a need to make any significant change to the rule requirements in the proposal as a result of the submissions received, then interested persons may be invited to make further submissions.

6.2 Examination of submissions

All submissions will be available in the rules docket for examination by interested persons both before and after the closing date for submissions. A consultation summary will be published with the final rule.

Submissions may be examined by application to the Docket Clerk at the Civil Aviation Safety Authority between 8:30 am and 3:30 pm, on weekdays, except statutory holidays.

6.3 Disclosure

Submitters should note that any information attached to submissions will become part of the docket file and will be available to the public for examination at the Civil Aviation Safety Authority offices.

Submitters should state clearly if there is any information in their submission that is commercially sensitive or for some other reason the submitter does not want the information to be released to other interested parties.

6.4 How to make submission

Submissions may be sent by the following methods:

By Mail:
Docket Clerk (NPRM 16-23)
Civil Aviation Safety Authority
PO Box 1941
BOROKO
National Capital District

Delivered:
Docket Clerk (NPRM 16-23)
Civil Aviation Safety Authority
Morea-Tobo Road
Six Mile, Jacksons Airport
Port Moresby NCD

By Fax:
Docket Clerk (NPRM 16-23)
3251789 / 325 1919

By Email:
Docket Clerk (NPRM 16-xx)
rules@casapng.gov.pg

6.5 Final date for submissions

Comments must be received before **4:00pm, Friday 31st of March 2017.**

6.6. Further information

For further information contact:

Amanda Nambau
Manager Legal Services
CASA PNG
anambau@casapng.gov.pg

Ph: 325 7320 **Mob: 76900173**

Subpart A — General

101.1 ~~Purpose~~Applicability

Subject to rule 102.21, t~~T~~his ~~P~~part prescribes rules governing the operation of—

(1) moored balloons and kites:

(2) free balloons:

(3) rockets:

(4) remotely piloted aircraft, control line model aircraft, and free flight model aircraft:

(5) gyrogliders~~planes~~ and parasails.

101.3 Definitions

In this Part:

Aerodrome means an aerodrome that is promulgated in the current PNGAIP:

Controlled aerodrome means an aerodrome at which air traffic control service is being provided:

Control line model aircraft means a model aircraft primarily controlled in flight by a single or multiple wire system operated by the person flying the aircraft and restricted to circular flight about a central point:

Free Balloon means a pilotless balloon without propulsion in free flight, having a gas capacity greater than 1.5 m^3:

Free flight model aircraft means a model aircraft with a maximum wing loading of 62 g/dm2 (20 oz/ft2), with a flight path that, once launched, is uncontrollable:

Gyroglider~~plane~~ means a ground or water towed non-power-driven heavier-than-air aircraft supported in flight by the reaction of the air on one or more rotors which rotate freely on substantially vertical axes, capable of carrying a person or persons:

Heavy free balloon means a free balloon, that—

(1) carries a payload with—

(i) a combined mass of 6 kg or more; or

(ii) a payload package of 3 kg or more; or

(iii) a payload package of 2 kg or more with an area density of more than 13 g/cm2; and

(2) uses a rope or other device for suspension of the payload that requires an impact force of 230 N or more to separate the suspended payload from the balloon:

Kite means a pilotless kite without propulsion that is tethered to a fixed point, or is hand held, and is sustained by the wind:

Medium free balloon means a free balloon, that—

(1) carries a payload of ~~two~~ 2 or more payload packages with a combined mass of—

(i) more than 4 kg; and

(ii) less than 6 kg; and

(2) does not meet any of the criteria specified in the definition of the term heavy balloon:

~~**Model aircraft** means a pilotless aircraft with a gross mass of between 100 g to 25 kg and includes—~~

~~(1) control line model aircraft:~~

~~(2) free flight model aircraft:~~

~~(3) radio controlled model aircraft:~~

Moored balloon means a pilotless balloon that is moored to the surface of the earth, or to an object on the surface of the earth, that has a maximum diameter of more than 1.5 m or a gas capacity of more than 3 m^3:

Parasail means an aerodyne, having the general form of an open, circular parachute carrying a person or persons towed behind a vehicle or motorboat to sustain flight:

Remotely piloted aircraft means an unmanned aircraft that is piloted from a remote station and-

(1) includes a radio controlled model aircraft; but

(2) does not include a control line model aircraft or a free flight model aircraft:

~~**Radio controlled model aircraft** means a model aircraft that is primarily controlled by radio signals from a remote transmitter being operated by a person:~~

Rocket means a pilotless vehicle propelled by a system that contains all the ingredients needed to form its own jet other than-

(1) an aerial firework; or

(2) a rocket propelled by a model rocket motor of size A-D which achieves no more than 20 Newton-seconds of total impulse:

Shielded operation means an operation within 100 m of, and ~~a structure and~~ below the top of, a natural or man-made object. ~~the structure.~~

Unmanned Aircraft definition to go in part 1.

101.5 Registration

The requirements in Part 47 do~~shall~~ not apply to unmanned aircraft, ~~moored balloons, free balloons,~~ rockets, kites, ~~model aircraft,~~ parasails, and ~~gyroplanes~~ gliders.

101.7 Restricted and danger areas

(a) A~~No~~ person must~~shall~~ not operate an unmanned aircraft, ~~moored balloon~~, kite, ~~free balloon~~, rocket, ~~model aircraft,~~ gyroglider ~~gyroplane~~, or parasail within a restricted area designated under

Part 713 unless that person has the approval of the controlling authority specified for the area to do so.

(b) ANo person must not shall operate an unmanned aircraft, kite, rocket, gyroglider gyroplane or parasail within a danger area designated under Part 713 unless that person has established that flight in the area will not adversely affect the safety of other airspace users.

101.9 Low flying zones Flight training areas

A person must shall not operate any of the following within a low flying zone designated under Part 71:

(1) an unmanned aircraft:

(2) a a moored balloon, kite:

(3) a, free balloon, rocket:

(4) a gyroglider:

(5) a model aircraft, gyroplane, or parasail. within a danger area for flight training or a low flying area designated under Part 73.

101.11 Controlled airspace

A person must shall not operate any of the following a moored balloon, kite, free balloon, rocket, model aircraft, gyroplane, or parasail in controlled airspace without prior authorisation from the ATC unit responsible for that airspace unless the operation is a shielded operation:

(1) an unmanned aircraft:

(2) a kite:

(3) a rocket:

(4) a gyroglider:

(5) a parasail.

101.12 Airspace knowledge

(a) This rule applies to a person who operates any of the following:

(1) an unmanned aircraft:

(2) a kite:

(3) a rocket:

(4) a gyroglider:

(5) a parasail.

(b) A person to whom this rule applies must-

(1) ensure that before each flight, the person is aware of the airspace designation under Part 71 and any applicable airspace restrictions in place in the area of intended operation; or

(2) conduct the operation under the direct supervision of a person who is aware of the airspace designation under Part 71 and any applicable airspace restrictions in place in the area of intended

operation.

101.13 Hazard~~ous~~ and risk minimisation ~~operations~~

A person operating any of the following must take all practicable steps to minimise ~~shall not operate a moored balloon, kite, free balloon, rocket, model aircraft, gyroplane, or parasail in a manner that creates a~~ hazards ~~to aircraft or~~ to persons, ~~or~~ property and other aircraft:

(1) an unmanned aircraft:

(2) a kite:

(3) a rocket:

(4) a gyroglider:

(5) a parasail.

101.15 Dropping of articles

A person operating any of the following must ~~a moored balloon, kite, free balloon, rocket, model aircraft, gyroplane, or parasail shall~~ not allow any object to be dropped in flight if such action creates a hazard to other persons or property:

(1) an unmanned aircraft:

(2) a kite:

(3) a rocket:

(4) a gyroglider:

(5) a parasail.

Subpart B — Moored Balloons and Kites

101.51 Applicability ~~Purpose~~

This Subpart prescribes rules governing the operation of moored balloons and kites.

101.53 Aerodrome area

A person shall not operate a moored balloon or kite—

(1) on or over any active aircraft movement area of an aerodrome; or

(2) on or over any runway or runway strip area.

101.55 Aerodrome boundary

Except for a shielded operation, a person shall not operate a moored balloon or kite within 4 km of an aerodrome boundary unless—

(1) the balloon or kite does not exceed 400 feet AGL; and

(2) the balloon or kite remains at least 400 feet vertically below cloud; and

(3) the horizontal visibility is not less than 4~~8~~ km; and

(4) if the aerodrome is a controlled aerodrome, they have an ATC authorisation; and

(5) if the aerodrome is an uncontrolled aerodrome, the operation is performed in accordance with an agreement established with the aerodrome operator.

101.57 Airspace

(a) Except for a shielded operation, a person operating a moored balloon or kite at a height of more than 400 feet AGL shall—

(1) operate in a danger area designated for that purpose under Part 71~~3~~; or

(2) operate in accordance with the restrictions specified in paragraph (b).

(b) Each person operating a moored balloon or kite at a height of more than 400 feet AGL outside of a danger area shall ensure that—

(1) the balloon or kite remains more than 4 km from any aerodrome boundary; and

(2) the balloon or kite remains within Class F airspace; and

(3) the weight of the kite does not exceed 15 kg; and

(4) the balloon or kite remains at least 400 feet vertically below cloud; and

(5) the horizontal visibility is not less than 4~~8~~ km; and

(6) they provide the following information to the Papua New Guinea NOTAM office at least 24 hours before the operation:

(i) their name, address and telephone numbers:

(ii) the date, time and duration of the operation:

(iii) a brief description of the moored balloon or kite, including size and predominant colour:

(iv) the weight of the moored balloon or kite:

(v) the height to which the moored balloon or kite will be operated.

101.59 Night operation

A person shall not operate a moored balloon or kite at night.

101.61 Balloon mooring line marking

A person shall not operate a moored balloon by day unless the mooring lines have coloured streamers or pennants attached at intervals of not more than 15 m commencing no more than 150 feet above ground level and visible for at least 1 nm.

101.63 Balloon rapid deflation device

A person shall not operate a moored balloon unless it contains a device that will automatically and rapidly deflate the balloon if it escapes from its moorings.

101.65 Balloon escape

Each person operating a moored balloon that escapes from its mooring without the deflation device functioning properly shall immediately notify the nearest ATS unit of—

(1) the original location of the balloon; and

(2) the time the balloon broke free; and

(3) the estimated flight path of the balloon.

Subpart C — Free Balloons

101.101 ~~Purpose~~ Applicability

This Subpart prescribes rules governing the operation of free balloons.

101.103 Meteorological limitations

Except where authorised by the appropriate ATS, a person shall not operate a heavy free balloon at or through any altitude below 60 000 feet pressure-altitude at which—

(1) there are clouds or obscuring phenomena of more than four-eighths coverage; and

(2) the horizontal visibility is less than 8 km; and

(3) unauthorised entry into airspace of another State's territory is imminent.

101.105 Operating limitation

A person shall not release a heavy or medium free balloon in a manner that will cause it to fly—

(1) below 1000 feet over a congested area of a city, town, or settlement; or

(2) over an open-air assembly of persons.

101.107 Equipment

A person shall not operate a heavy free balloon unless—

(1) it is equipped with—

(i) at least two payload flight-termination devices or systems, whether automatic or by telemetry, that operate independently of each other; and

(ii) in an area where ground-based SSR equipment is in use, a secondary surveillance radar transponder, with an altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station; and

(2) for polyethylene zero pressure balloons, at least two methods, systems, devices, or combinations thereof, that function independently of each other and are employed for terminating the flight of the balloon envelope; and

(3) the balloon envelope is equipped with—

(i) at least one radar reflective device; or

(ii) radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2,700 MHz frequency range.

101.109 Termination

Each person operating a heavy free balloon shall activate the respective termination devices required by 101.107(1)(i) and (2) to terminate the flight where—

(1) meteorological conditions are less than those prescribed in 101.103; or

(2) further operation is hazardous to other air traffic or to persons and property on the surface; or

(3) unauthorised entry into airspace of another State's territory is imminent.

101.111 Night operations

A person shall not operate a heavy free balloon below 60 000 feet pressure-altitude at night unless the balloon and its attachments and payload, whether or not they become separated during the operation, are each equipped with lights that—

(1) are visible at a distance of at least 5 nm ~~8 km~~; and

(2) have a flash frequency of between 40 and 100 cycles per minute; and

(3) each have their own power supply.

101.113 Trailing antenna

A person shall not operate a free balloon that is equipped with a trailing antenna that requires a force of more than 230 N to break it at any point unless the antenna has coloured pennants or streamers that—

(1) are attached at not more than 15 m intervals; and

(2) are visible at a distance of at least 1 nm.

101.115 Suspension device

A person shall not operate a heavy free balloon that is equipped with a suspension device more than 15 m long, other than a highly coloured open parachute, by day below 60 000 feet pressure-altitude unless the suspension device—

(1) is coloured in alternate bands of high visibility colours; or

(2) has coloured pennants or streamers attached which are visible for at least 1 nm.

101.117 Pre-launch notice

(a) Except as provided in paragraph (b), a person shall not launch a medium or heavy free balloon unless they provide the following information to the Papua New Guinea NOTAM office at least 24 hours prior to the estimated launch time:

(1) their name and telephone number:

(2) the balloon identification or project code name:

(3) the balloon classification and description including—

(i) the length and diameter of the balloon; and

(ii) the length of the suspension device; and

(iii) the weight of the payload; and

(iv) the length of the trailing antenna:

(4) the SSR code as applicable:

(5) the location of the launch site:

(6) the estimated time of launch, or time of commencement and completion of multiple launches:

(7) the number of balloons to be launched or, for multiple launches, the scheduled interval between launches:

(8) the expected direction of ascent:

(9) the estimated time to reach cruising level or to pass 60 000 feet pressure-altitude, whichever is lower:

(10) the planned cruising levels (pressure-altitude):

(11) the planned duration of the flight:

(12) the estimated time and location of impact with the surface of the earth.

(b) A person operating a medium or heavy free balloon for solar or cosmic disturbance investigations involving a critical time element may supply the information in paragraph (a) not less than 30 minutes prior to the estimated time of commencement.

(c) Where there are changes to the information supplied under paragraph (a), the operator shall forward the changes to the Papua New Guinea NOTAM office, at least 6 hours prior to the projected launch time.

101.119 Launch notice

Each person operating a medium or heavy free balloon shall notify the nearest ATS unit of the following information immediately after the balloon is launched:

(1) the balloon flight identification:

(2) the launch site:

(3) the actual time of launch:

(4) the estimated time at which 60 000 feet pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 60 000 feet, and the estimated location:

(5) any changes to the information provided under 101.117(a)(7) or (8).

101.121 Cancellation notice

Each person who has provided a pre-launch notice in accordance with 101.117 who subsequently cancels the operation shall immediately notify the ATS unit of the cancellation.

101.123 Balloon position reports

Each person operating a medium or heavy free balloon shall—

(1) unless otherwise required by the ATS unit, monitor the course of the balloon and record its position at least every 2 hours; and

(2) forward any balloon position reports requested by the ATS; and

(3) immediately notify the nearest ATS unit when a balloon position report is not recorded for any 2 hour period of flight. This notification shall include—

(i) the last recorded position; and

(ii) any revision of the forecast trajectory; and

(4) immediately notify ATS when tracking of the balloon is re-established.

101.125 Pre-descent position report

Each person operating a medium or heavy free balloon shall provide the following information to the nearest ATS unit not less than one hour before the beginning of the planned descent:

(1) the current geographical position:

(2) the current altitude:

(3) where applicable, the forecast time of penetration of 60 000 feet pressure-altitude:

(4) the forecast descent trajectory:

(5) the forecast time and location of the impact with the surface of the earth.

101.127 Completion of operation

Each person operating a medium or heavy free balloon shall notify the nearest ATS unit when the operation has ended.

Subpart D — Rockets

101.151 ~~Purpose~~ Applicability

This Subpart prescribes rules governing the operation of rockets.

101.153 Aerodromes

(a) Except as provided in paragraph (b), a person shall not operate a rocket on or within 4 km of an aerodrome boundary.

(b) A person may operate a rocket within 4 km of an aerodrome boundary providing—

(1) the rocket does not fly above 400 feet AGL; and

(2) at uncontrolled aerodromes, it is operated in accordance with an agreement with the aerodrome operator; and

(3) at controlled aerodromes, it is operated in accordance with an authorisation from ATC; and

(4) it is not operated on or over any active aircraft movement area of an aerodrome; and

(5) it is not operated on or over any active runway strip area.

(c) A person shall not operate a rocket between 4 and 8 km of an aerodrome boundary above 400 feet AGL.

101.155 Meteorological limitations

(a) A person shall not operate a rocket at any altitude where—

(1) there are clouds or obscuring phenomena of more than four-eighths coverage; and

(2) the horizontal visibility is less than 8 km.

(b) A person shall not operate a rocket into cloud.

101.157 Night operations

A person shall not operate a rocket at night.

101.159 Pre-launch notice

A person shall not launch a rocket unless they provide the following information to the Papua New Guinea NOTAM office at least 24 hours prior to launch:

(1) their name, address, and telephone number or, where there are multiple participants at a single event, the name, address, and telephone number of the person whose duties include co-ordination of the launch data estimates required by paragraphs (2), (3), and (4) of this rule and co-ordinating the launch event:

(2) the estimated number of rockets to be operated:

(3) the estimated size and the estimated weight of each rocket:

(4) the estimated highest altitude or flight level to which each rocket will be operated:

(5) the location of the operation:

(6) the date, time, and duration of the operation:

(7) any other relevant information requested by the person to whom notification is given.

Subpart E — Remotely Piloted Aircraft, Control Line Model Aircraft and Free Flight Model Aircraft

101.201 Applicability ~~Purpose~~

Subject to rule 102.21, t~~T~~his Subpart applies to-

(1) remotely piloted aircraft; and

(2) control line model aircraft; and

(3) free flight model aircraft. ~~prescribes rules governing the operation of model aircraft~~.

101.202 Approved person or organisation

In this Subpart**,** an approved person or organisation means a person or organisation having appropriate expertise in the design, construction or operation of remotely piloted aircraft, or appropriate knowledge of airspace designations and restrictions, and who has been approved by the Director to perform one or more of the following specified functions:

(1) issuing a pilot qualification for operating remotely piloted aircraft; or

(2) appointing persons to give instruction to operators of remotely piloted aircraft; or

(3) authorising a person to notify the aeronautical information service provider, for the issue of a NOTAM, of remotely piloted aircraft operations; or

(4) authorising the construction or modification of remotely piloted aircraft greater than 10kg; or

(5) inspecting and approving the construction or modification of remotely piloted aircraft greater than 10kg; or

(6) authorising the operation of a remotely piloted aircraft greater than 15kg.

101.203 Control line model aircraft

A ~~No~~ person must not ~~shall~~ operate a control line model aircraft with a single or multiple wire system longer than 30 m.

101.205 Aerodromes

(a) ~~With the exception of a control line model aircraft, no~~ A person must not ~~shall~~ operate a remotely piloted ~~model~~ aircraft on or within 4 km of—

(1) an uncontrolled aerodrome, unless—

(i) the operation ~~it~~ is undertaken in accordance with an agreement with the aerodrome operator; and

(ii) in the case of a free flight model aircraft, it is launched downwind of an active runway; and

(iii) in the case of a remotely piloted ~~radio controlled model~~ aircraft-

(A) ~~it is operated at a height not exceeding 400 feet AGL, and~~ each pilot has an observer in attendance while the ~~model~~ aircraft is in flight ~~active in the air~~; and

(B) the aircraft is not operated at a height of more than 400 feet above ground level unless the operator has been approved by the Director to operate the aircraft above 400 feet above ground level; and

(2) a controlled aerodrome, unless it is operated in accordance with an authorisation from the relevant ATC unit; and

(3) any aerodrome, unless-

(i) the person-

(A) is the holder of, or is under the direct supervision of the holder of, a pilot qualification issued by an approved person or organisation; or

(B) is under the direct supervision of a person appointed to give instruction in the operation of remotely piloted aircraft by an approved person organisation;

(C) is the holder of a pilot licence or certificate issued under Part 61.

(b) A person must ~~shall~~ not operate a remotely piloted ~~model~~ aircraft—

(1) on or over any active aircraft movement area of an aerodrome; or

(2) on or over any active runway strip area.

(c) Paragraph (a) does not apply to a shielded operation that is conducted-

(1) outside the boundary of the aerodrome; and

(2) in airspace that is physically separated from the aerodrome by a barrier that is capable of arresting the flight of the aircraft.

(d) Paragraph(a)(3) does not apply to a free flight model aircraft.

101.207 Airspace

(a) A ~~Each~~ person operating a remotely piloted aircraft must-

(1) unless operating in a danger area under Part 71, avoid operating-

(i) in airspace above persons who have not given consen for the aircraft to operate in that airspace; and

(ii) above property unless prior consent has been obtained from any persons occupying that property or the property owner; and

(2) maintain observation of the surrounding airspace in which the aircraft is operating for other aircraft; and

(3) not operate the aircraft at any height ~~tradio controlled model aircraft more than 4 km from an aerodrome boundary and~~ above 400 feet above ground level except in accordance with paragraph (c). ~~AGL shall ensure the operation remains clear of Class C, D, or E airspace and~~

~~shall provide the following information to the Papua New Guinea NOTAM office, at least 24 hours before the operation:~~

(b) Nothing in paragraph (a) requires a person to obtain consent from any person if operating under the authority of an approved organisation.

(c) A person operating a remotely piloted aircraft more than 4 km from an aerodrome boundary and above 400 feet above ground level must ensure that the operation remains within Class F airspace and must-

(1) operate in a danger area designated for that purpose under Part 71; or

(2) ensure that at least 24 hours before the operation, a person authorised by an approved person or organisation, notifies the aeronautical information service provider, for the issue of a NOTAM, of the following information:

(1) the~~ir~~ name, address, and telephone number of the operator:

(2) the location of the proposed operation:

(3) the date and time and duration of the proposed operation:

(4) the type and number of aircraft:

(5) the maximum height above ground level ~~AGL~~ proposed for aircraft operation.

101.209 Visual line of sight operation ~~Meteorological limitations~~

(a) This rule applies to the following types of aircraft: ~~Except for control line model aircraft, a person shall not operate a model aircraft –~~

(1) a remotely piloted aircraft: ~~in any area where the ground visibility is less than 8 km; or~~

(2) a free flight model aircraft.~~in any area where the cloud base is at a level where a model aircraft is unable to be operated –~~

~~(i) in sight of the operator; and~~

~~(ii) beneath the cloud base at all times.~~

(b) A person must not operate an aircraft to which this rule applies in-

(1) any area in which the person's view of the surrounding airspace in which the aircraft will operate is obstructed; or

(2) meteorological conditions that obstruct the person's ability to maintain visual line of sight of the aircraft.

(c) A person who operates an aircraft to which this rule applies must at all times-

(1) maintain visual line of sight with the aircraft; and

(2) be able to see the surrounding airspace in which the aircraft is operating; and

(3) operate the aircraft below the cloud base.

(d) For the purpose of this rule visual line of sight means a straight line along which an observer has a clear view and which may be achieved with the use of-

(1) spectacles, contact lenses, or a similar device used to correct subnormal vision of the user to no better than normal vision but not the use of an electronic, mechanical, electromagnetic, optical, or electro-optical instrument; or

(2) a first person view system and a trained and competent observer who maintains-

(i) visual line of sight of the aircraft; and

(ii) sight of the surrounding airspace in which the aircraft is operating; and

(iii) direct communication with the person who is operating the aircraft.

101.211 Night operations

~~With the exception of control line model aircraft,~~ ~~a~~ A person ~~shall~~ must not operate a remotely piloted ~~model~~ aircraft at night unless the operation is—

(1) indoors; or

(2) a shielded operation.

101.213 Right of way

(a) A ~~Each~~ person who is operating a remotely piloted ~~model~~ aircraft or a control line model aircraft must ~~shall~~ ensure the aircraft that the person is operating gives way to, and remains clear of, all manned aircraft on the ground and in flight.

(b) A person who is operating a free flight model aircraft must before launching the aircraft ensure that during the operation the aircraft will remain clear of all manned aircraft on the ground and in flight.

101.215 Aircraft mass limits

(a) A person must not operate a remotely piloted aircraft, a control line model aircraft or a free flight model aircraft with a gross mass of more than 25 kg.

(b) A person must not operate a remotely piloted aircraft with a gross mass of between 7 kg and 25 kg unless the aircraft, and any modification made to it, is-

(1) constructed under the authority of, or inspected and approved by, an approved person or organisation defined in rule 101.202; and

(2) operated under the authority of an approved person or organisation defined in rule 101.202.

Subpart F — Gyrogliders and Parasails

101.251 ~~Purpose~~ Applicability

This Subpart prescribes rules governing the operation of gyrogliders ~~gyroplanes~~ and parasails.

101.253 Aerodromes

(a) A person ~~shall~~ must not operate a gyroglider~~plane~~ or parasail on an aerodrome or within 4 km of an aerodrome boundary unless—

(1) at an uncontrolled aerodrome, the gyroglider or parasail ~~it~~ is operated—

(i) in accordance with an agreement with the aerodrome operator; and

(ii) at a height not exceeding 400 feet AGL; or

(2) at a controlled aerodrome, the gyroglider or parasail ~~it~~ is operated in accordance with an authorisation from the aerodrome air traffic control service ~~ATC~~.

(b) A person must not operate a gyroglider or parasail-

(1) on or over any aircraft movement area of an aerodrome; or

(2) on or over any active runway or runway strip area of an aerodrome.

101.255 Airspace

A ~~Each~~ person operating a gyroglider ~~gyroplane~~ or parasail above 400 feet AGL must ~~shall~~ —

(1) ensure that the gyroglider ~~plane~~ or parasail remains more than 4 km from any aerodrome boundary; and

(2) operate in Class F airspace; and

(3) provide the following information to the Papua New Guinea NOTAM office at least 24 hours before the operation:

(i) the name, address, and telephone number of the operator:

(ii) the date, time, and duration of the operation:

(iii) a brief description of the gyroglider ~~gyroplane~~ or parasail (including size and predominant colour):

(iv) the height to which the gyroglider ~~gyroplane~~ or parasail will be operated.

101.257 Meteorological limitations

(a) Except as provided in paragraph (b), ~~each~~ a person operating a gyroglider ~~gyroplane~~ or parasail ~~shall~~ must —

(1) not operate closer than 400 feet below cloud; and

(2) limit operations to an area where the ground visibility is at least 5 ~~8~~ km.

(b) Paragraph (a) does ~~shall~~ not apply to the shielded operation of a ~~gyroplane~~ gyroglider or parasail.

101.259 Night operations

A ~~No~~ person must not ~~shall~~ operate a ~~gyroplane~~ gyroglider or parasail at night.

101.261 Airworthiness

A ~~Each~~ person who operates a gyroglider ~~gyroplane~~ or parasail must ~~shall~~ ensure that it is fit for the intended purpose and is maintained in an airworthy condition in accordance with the manufacturer's instruction.

101.263 Safety equipment

A ~~Each~~ person operating ~~carried in~~ a gyroglider ~~gyroplane~~ or parasail ~~shall~~ must ensure that each person carried by the gyroglider or parasail—

(1) when flying over water, or within gliding distance of water, wears a permanent positive buoyancy aid; and

(2) when flying over land, wears a rigid protective helmet; and

(3) ~~be~~ is secured to the gyroglider ~~gyroplane~~ or parasail by a harness; and

(4) for a parasail operation conducted with an extended towline length exceeding 600 feet, as measured from the winch drum to the parasail canopy yoke, is equipped with a positive means of communicating with the parasail operator if an emergency occurs.

101.265 Pre-flight briefing

A person operating a gyroglider ~~Each gyroplane~~ or parasail must ensure that each person carried by the gyroglider or parasail ~~passenger shall~~ receive a pre-flight briefing on—

(1) the nature of the flight; and

(2) the standard operating procedures; and

(3) the emergency procedures including:

(i) the location and use of emergency equipment;

(ii) the procedures to be followed in the event of a water landing, or towline separation; and

(iii) the method for communicating with the gyroglider or parasail operator if an emergency occurs.

101.267 Emergency towline release

A person must ~~shall~~ not release the towline of any gyroglider ~~gyroplane~~ or parasail in flight except in an emergency.

101.269 Operating procedures

A ~~Each~~ person operating a gyroglider ~~gyroplane~~ or parasail must ~~shall~~ do so in accordance with the operating procedures and limitations recommended by the manufacturer.

101.271 Wind Speed

A person operating a parasail must-

(1) use a method or device to accurately determine and monitor the wind speed at the location where the parasailing operating is being conducted; and

(2) not conduct a parasailing operation in conditions where the sustained wind speed exceeds 20 knots.

101.273 Passenger age limitation

A person operating a parasail must not-

(1) perform a parasailing operation with an extended towline length of more than 300 feet, as measured from the winch drum to the parasail canopy yoke, when carrying any solo passenger who is between 8 and 11 years old; and

(2) perform a parasailing operation with a passenger carried by a parasail who is less than 8 years old unless the passenger is accompanied by another passenger who is at least 18 years old, and is able to assist the younger passenger if any emergency occurs.