



# **NAMIBIA CIVIL AVIATION AUTHORITY**

ADVISORY Pamphlet (AP)

1/1/2/4/3-4 Rev 1

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**RPAS OPERATIONS MANUAL GUIDELINES**

10/2021



**Namibia Civil Aviation Authority -  
Safety Division**

**ADVISORY PAMPHLET**  
**RPAS Operations Manual**  
**Guidelines**

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## Advisory (AP) system

1. The Namibian Civil Aviation Authority (NCAA) issues advisory pamphlets in accordance with NAMCAR'S 2001, Part 3, regulation 3.04.4 to inform the aviation public in a systematic way of non-regulatory material. Unless incorporated into a regulation by reference, the contents of an advisory circular are not binding on the public. Advisory pamphlets are issued in a numbered-subject system corresponding to the subject areas of the Namibia Civil Aviation Regulations (NAMCARs).
2. Advisory Pamphlets are intended to provide information and guidance to illustrate a means but not necessarily the means of complying with the regulations, or to explain certain regulatory requirements by providing interpretative and explanatory material. Where a AP is referred to in a 'note' below the regulation, the AP remains as guidance material
3. APs should always be read in conjunction with the referenced regulations and directives (NAMCAR Part 101 and Directive 1/2/3-6).
4. RPAS Operations Manuals Guidelines is set out in the Schedule attached hereto.
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## Schedule

### 1. Introduction

This advisory pamphlet provides guidance material to RPAS Operators and Organisation for the development of a RPAS operations manual.

### 2. Background

In the complex commercial RPAS operations such as BVLOS and cargo, operators require an operations manual for approval of their operations, this advisory pamphlet is developed to give guidance into the contents therein.

### 3. Contents of a Remote Pilot Aircraft System (RPAS) Operations Manual

#### 3.1 Definitions:

**Beyond Visual line-of-sight (VLOS) operation.** An operation in which the remote pilot or RPA observer does not maintain direct unaided visual contact with the remotely piloted aircraft.

**Model Aircraft.** Remotely piloted aircraft intended for recreational purposes only.

**Remotely piloted aircraft (RPA).** An unmanned aircraft which is piloted from a remote pilot station.

**Remotely piloted aircraft system (RPAS).** A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

**Unmanned aircraft.** An aircraft which is intended to operate with no pilot on board.

**Unmanned aircraft system.** An aircraft and its associated elements which are operated with no pilot on board.

**Visual line-of-sight (VLOS) operation.** An operation in which the remote pilot or RPA observer maintains direct unaided visual contact with the remotely piloted aircraft.



### 3.2 Content of the RPAS Operations Manual

The following outlines the content and structure requirements, and shall be used as a basis for the RPAS Operations Manual submitted for approval of complex commercial RPAS operations.

3.2.1 The structure of the RPAS Operations Manual shall be as follows:

- Part A – Administration and General Operating Requirements
- Part B – RPAS Operating Matters
- Part C – Route Guide
- Part D – Training

3.2.2 The contents of the operations manual shall be as included in the table below.

<b>MANUAL CONTROL AND REFERENCING</b>
Exterior of binder clearly indicates manual content (Title etc.)?
Copies numbered for controlled issuance?
Table of contents easy to find and use?
Page number in chronological sequence (by chapter or single document)?
Last revision number/date appears on each page?
Company name (and logo) appears on each page
Paragraphs and sub-paragraphs numbered or alphabetized for ease of reference?
Tables, Figures and Appendices referenced for ease of use?
Manual Excerpts, Annexes, and Attachments e.g. checklists, company forms, compared and current.

#### **PART A ADMINISTRATION AND GENERAL OPERATING REQUIREMENTS**

##### **ADMINISTRATION AND CONTROL OF OPERATIONS MANUAL**

A statement that the manual complies with all applicable regulations and with the terms and conditions of the applicable RPAS Operator.



A statement that the manual contains operational instructions that are to be complied with by the relevant personnel.

A list and brief description of the various parts, their contents, applicability and use.

A list of all the applicable content forming the operations manual, including user guides and checklists

Explanations and definitions of terms and abbreviations used in the manual.

**SYSTEM OF AMENDMENT AND REVISION**

Details of the person(s) responsible for the issuance and insertion of amendments and revisions.

A record of amendments and revisions with insertion dates and effective dates.

A list of effective pages provided and correct.

Annotation of revision changes (on text pages and, as far as practicable, on charts and diagrams).

A description of the distribution system for the manuals, amendments and revisions.

**ORGANISATION AND RESPONSIBILITIES**

*Organizational structure.* A description of the organizational structure including the general company organogram and operations department organogram.

*Nominated postholders.* The name of each nominated postholder including description of their functions and responsibilities.

*Responsibilities and duties of operations management personnel.* A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and the compliance with the applicable regulations.

*Authority, duties and responsibilities of the RPAS pilot.* A statement defining the duties and responsibilities of the person controlling the RPAS.

Duties and responsibilities of crew members other than the pilot, for example the observer.

**QUALITY SYSTEM**

A description of the quality system adopted including the organization of the Quality System (reference may be made to specific the manual)

Quality system forms, including audit checklists and audit finding and corrective action forms



**CREW HEALTH**

***Incapacitation of crew members.*** Procedures to be followed in the event of incapacitation of crew members. Examples of the types of incapacitation and the means for recognising them must be included.

General crew health precautions and fitness to operate requirements (refer Part 67 as applicable)

**DANGEROUS GOODS AND WEAPONS (Operators transporting cargo)**

Information, instructions and general guidance on the transport of dangerous goods including:

Operator’s policy on the transport of dangerous goods;

Guidance on the requirements for acceptance, labelling, handling, stowage and segregation of dangerous goods;

Procedures for responding to emergency situations involving dangerous goods;

Duties of all personnel; and

The conditions under which weapons, munitions of war and sporting weapons may be carried.

For dangerous goods carriers a reference to the dangerous goods manual or appendix which complies with FSS-OPS-FORM 162

**SECURITY**

Security policies, instructions and guidance of a non-confidential nature which must include the authority and responsibilities of operations personnel as well as handling and reporting of security breaches

**SAFETY MANAGEMENT SYSTEM**

***Procedures for the handling, notifying and reporting of accidents and occurrences.*** This section must include:

A description of the safety management system;

Reporting forms, including internal forms and confidential forms, and the procedure for submitting them to the Authority where applicable;

Investigation policies



Incident and hazard analysis and risk management
Emergency Response Plan
<b><u>RULES OF THE AIR</u></b>
Rules of the Air including:
Visual and instrument flight rules;
Right of Way Rules (remaining clear of manned traffic);
The circumstances in which a radio listening watch is to be maintained;
Time system used in operation;
ATC clearances, adherence to flight plan and position reports;
<b><u>DOCUMENTATION</u></b>
Documents required in the RPAS operation (e.g., Operational flight plan, ATC flight plan, mass and balance, flight logs, NOTAMs, weather, flight and duty records, training records)
Document retention periods
<b><u>RPAS OPERATING MATTERS – TYPE RELATED (Part B)</u></b>
General Information (e.g., RPAS dimensions and operating data)
<b><u>LIMITATIONS</u></b>
A description of the applicable operational limitations including:
Types of operation approved (e.g., VFR/IFR, VLOS/BVLOS, night, flights in known icing conditions etc.);
Operating limitations
Crew composition and qualifications;
<b><u>NORMAL PROCEDURES</u></b>
Requirements for the use of standard operating procedures and duties assigned to the rpas operating team, the use of appropriate check-lists, and a statement covering the necessary coordination procedures between pilot and observer (where applicable) including:.
Sterile environment for RPAS operator (when the operations area must be sterile and policy on use of mobile phone)



Pre-flight;
Pre-departure including departure briefings;
Ground manoeuvres, Take-Off, and Climb;
Cruise and descent;
Approach and Landing preparation
Instrument approach;
Visual Approach and circling;
Missed Approach;
Normal Landing;
Post Landing and shutdown;
<b><u>WEATHER</u></b>
<b><i>All Weather Operations.</i></b> A description of the operational procedures associated with All Weather Operations (for IFR applications only)
<b><i>Adverse and potentially hazardous atmospheric conditions.</i></b> Procedures for operating in, and/or avoiding, adverse and potentially hazardous atmospheric conditions (e.g., thunderstorms, dust storms, wake turbulence):
<b><u>ABNORMAL AND EMERGENCY PROCEDURES</u></b>
The abnormal and emergency procedures and duties assigned to the crew, appropriate checklists, the system for use of the checklists. The following abnormal and emergency procedures and duties must be included (as applicable):
Fire and Smoke Drills;
C2 Failure;
GPS failure;
Fly away;
Loss of control;
Engine and system failures;



Emergency Landing.
Detect and avoid actions
<b><u>FLIGHT PLANNING</u></b>
Data and instructions necessary for pre-flight and in-flight planning where applicable including in flight log.
The method for calculating fuel and oil or battery life needed for the various stages of flight including diversion if required for weather or other circumstances.
Submission of ATC flight plan
<b><u>MASS AND BALANCE (Cargo only)</u></b>
Instructions and system used for the calculation of the mass and balance including:
Information and instructions for completion of mass and balance documentation, including manual and computer generated types as applicable;
Limiting masses and centre of gravity for the types, variants, or individual RPAS used by the operator; and
Dry Operating mass and corresponding centre of gravity or index.
<b><u>LOADING</u></b>
Procedures and provisions for loading and securing the load in the RPAS.
<i>Comments</i>
<b><u>RPAS SYSTEMS</u></b>
A description of the RPAS systems, related controls and indications and operating instructions. (May refer to user manual)
<b><u>ROUTE AND LANDING SITE INSTRUCTIONS AND INFORMATION (Part C)</u></b>
Instructions and information (route guide) relating to communications, navigation and landing sites for each route to be flown including:
Maximum flight level/altitude;
Operating minima for departure, destination, and alternate landing sites;



Communication facilities and navigation aids for route to be flown;
Departure and Landing site facilities;
Communication procedures including communication failure procedures (loss of COM);
Availability of aeronautical information (eg NOTAMs and IAIP) and MET services;
<b>TRAINING (Part D)</b>
Training policies and directives;
Details of pilot training programmes
Details of observer training programmes (as applicable)
Details of flight operations staff training programmes (as applicable)
List of designated instructors and examiners (annexed if applicable)
Comprehensive training syllabi and checking programmes for approved training pilots, observer, and operations personnel
Procedures for the conduct of examinations (operator proficiency or certificate of competency form should be annexed);
Procedures to require that pilots are properly trained and examined on abnormal and emergency conditions (may be part of syllabus above);
Procedures for familiarisation with areas, routes and landing sites
Procedures for remedial training and subsequent examination of pilots unable to achieve or maintain required standards