



**BOLIVARIAN REPUBLIC OF VENEZUELA**  
**MINISTRY OF THE POPULAR POWER FOR TRANSPORT AND PUBLIC**  
**WORKS**

**NATIONAL INSTITUTE OF CIVIL AERONAUTICS**

**ADMINISTRATIVE RULING No. PRE-CJU-1652-16**

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THE PRESIDENT OF THE NATIONAL INSTITUTE OF CIVIL AERONAUTICS, BY VIRTUE OF THE POWERS VESTED IN HIM BY ARTICLES 5 AND 9 OF THE LAW OF CIVIL AERONAUTICS, PUBLISHED IN THE OFFICIAL GAZETTE OF THE BOLIVARIAN REPUBLIC OF VENEZUELA N° 39.140, OF MARCH 17TH, 2009, ACCORDING TO NUMERALS 1 AND 5 OF ARTICLE 7 AND NUMERALS 1, 3 AND 15 (C ) OF ARTICLE 13 OF THE LAW FOR THE NATIONAL INSTITUTE OF CIVIL AERONAUTICS, PUBLISHED IN THE OFFICIAL GAZETTE OF THE BOLIVARIAN REPUBLIC OF VENEZUELA N° 38.333, OF DECEMBER 12TH, 2005,

DOES HEREBY ISSUE

THE FOLLOWING

**VENEZUELAN AERONAUTICAL REGULATION No. 130 (RAV 130)**

**AERIAL WORK**

**CHAPTER A**

**GENERALITIES**

**SECTION 130.1 – PURPOSE**

The purpose of this Regulation is the establishment of principles to obtain an operator certificate for aerial work services as well as the control of its operations with remotely piloted aircrafts (RPA).

**SECTION 130.2 – APPLICABILITY**



- (a) This Regulation shall be applicable to every manned aircraft holding whether a Venezuelan or a foreign registry, which operates aerial work services within the national territory.
- (b) This shall also be applicable to manned aircrafts registered in the Bolivarian Republic of Venezuela, which operate aerial work services out of the Venezuelan State, in so far as they are not incompatible with the pertinent regulation of the States where the service is performed.
- (c) Rules and exceptions herein established are exclusively applicable, for each case, when manned aircrafts operate the corresponding aerial work. When performing whether total or part of a flight operation that is not included within such activity, the provisions established under RAV 91 “General operation of aircrafts“ shall be fulfilled.
- (d) Likewise this Regulation shall be applicable to Remotely Piloted Aircrafts (RPA) used in remunerate or non-remunerated activities, whether tourist, special aerial work or any other activity approved by the Aeronautical Authority under this Regulation, provided that their weight is among classes 1, 2, 3 and 4, according to the charter specified under Appendix (sic) H.

## SECTION 108.2 – DEFINITIONS

For the purposes of this Regulation:

(...)

The term “**Remotely Piloted Aircraft**” means an unmanned aircraft that is piloted from a remote pilot station. Its use may be recreational, private or commercial according to the granted authorizations and permits.

(...)

The term “**Aerial Work**” means every specialized service different from commercial air transport, performed by the usage of a manned or unmanned aircraft, whether remunerate or non-remunerated, which requires a certificate issued according to technical rules.



(...)

The term “**RPA operator certificate (ROC)**” means a certificate granted to a RPA operator issued by the Aeronautical Authority, through which a person is authorized to perform operations as a RPA operator for aerial work services.

(...)

The term “**operator for aerial work services**” means a legal person holder of an administrative authorization for the performance, whether remunerate or non-remunerated, of aerial work services, prior compliance with the certification process and the issuance of its corresponding operating specifications.

(...)

The term “**RPAS Operations Manual** ” means a manual, acceptable for the State of operator, which contains normal, abnormal and emergency procedures, verification lists, limitations, performance information, RPA details and each RPA related model, as well as other texts that may be pertinent to the RPAS operation.

NOTE: the RPAS operations manual is part of the MANOPS.

The term “**Remote crew member**” means a crew member in charge of essential activities for the operation of a RPA during a flight service period.

The term “**Remote flight crew member**” means a crew member, holder of the corresponding license, who is responsible for essential activities for the operation of a RPA during a flight service period.

The term “**Remote pilot**” means a person assigned by the operator who performs essential functions for a RPA operation and who operates flight controls, as applicable, during flight.

The term “**Remote pilot in-command**” means a remote pilot assigned by the operator, in order to be in the commander and be in charge of the safe conduct of the flight.

(...)

The term “**RPA observer**” means a trained and authorized remote crew member assigned by the operator who, by visual observation of the remotely piloted aircraft (RPA), assists the remote pilot in the safe conduct of the flight.



(...)

The term “**Remotely Piloted Aircraft System (RPAS)**” means a remotely piloted aircraft, its remote pilot station or related ones, the required command and control data links and any other part or component as specified in the type design.

(...)

### **SECTION 130.5 - CLASSIFICATION OF RPA OPERATIONS OF AERIAL WORK**

(a) **remunerated aerial work:** work performed by an operator in exchange of a remuneration, by using manned aircrafts or RPAs, certified for such purposes and which requires a permit granted by the Aeronautical Authority. Such work are performed by Venezuelan companies, unless there are not companies in that field in the country.

(b) **non-remunerated aerial work:** work perform for nonprofit purposes by any natural or legal person, by using manned aircrafts or RPAs duly certified through the procedures established by the Aeronautical Authority for such purposes.

### **SECTION 130.6 - AUTHORIZATION FOR FOREIGN COMPANIES USING MANNED AIRCRAFTS OR RPAS WITH NATIONAL OR FOREIGN REGISTRY**

The Aeronautical Authority shall exceptionally grant an authorization or permit to foreign companies, which use aircrafts with foreign or national registry to perform aerial work in the country when there are not national companies to operate these activities within the national territory or when the Aeronautical Authority deems pertinent.

### **SECTION 130.7 - REQUIRED OPERATOR CERTIFICATE**

(a) With exception to the provisions established under paragraph (b) in this Section, no person may operate aerial work without a certificate for such activity issued under this regulation.

(b) The certificate of operator for aerial work services shall be valid for five (05) years and the RPA operator certificate (ROC) shall be valid for three (03) years.

(c) The Aeronautical Authority shall initiate an administrative procedure to revoke or suspend a certificate of operator for aerial work services, a ROC, specifications related to operations and licenses granted to operators of the aircrafts in concern, when it has



been determined, according to the provisions established in the Law for Civil Aeronautics and other applicable rules, that operators have attempted against security of the State or operational safety, security of airdromes airports and air navigation services, against security of persons and property, moral, good order, discipline or due to bother to other users.

## **CHAPTER C GENERAL RULES**

(...)

### **SECTION 130.13 - REQUISITES FOR MANNED AIRCRAFTS AND RPA**

(a) no person may operate an aircraft in aerial work services, unless such will be used according to the terms of its airworthiness certificate and its type certificate rendered valid. In the case of a RPA, it shall be required only when applicable according to its characteristics.

(b) Without prejudice of paragraph (a) of this section, it shall be observed the compliance with the applicable sections under RAV 91 (Rules of the Air) and RAV 43 (Maintenance) for the purposes of other requirements related to airworthiness.

(c) in the case of a RPA, the Aeronautical Authority may establish and require special requisites on airworthiness regarding one of the aircrafts that will be used in a particular aerial work, in case it considers pertinent for operational safety.

(d) Rules established under Appendix H of this Regulation shall be applicable to RPA.

### **SECTION 130.14 - MAINTENANCE PERFORMANCE**

When the operator has the intension to perform maintenance whether on aircrafts of third persons or those of his-her own, he-she shall be certified according to the provisions established under RAV 145 (Air Maintenance Organizations). Operator shall be responsible to guarantee that:

(...)

(d) For RPA, when applicable, maintenance shall be performed in a Maintenance Centre or Service, authorized or acknowledged by the manufacturer or by the Aeronautical Authority.

(...)

## **APPENDIX H**



# **REQUIREMENTS FOR THE OPERATION AND CERTIFICATION OF AERIAL WORK OPERATIONS WITH REMOTELY PILOTED AIRCRAFTS (RPA)**

## **1 – APPLICABILITY**

Requisites under this Appendix shall be applicable to:

- (a) Aerial work operations performed within the national territory, whether commercial or not, with remotely piloted aircrafts (RPA), as per classification established under the provision of RAV 21, as follows:
  - (1) RPA classes 1 and 2 shall be adjusted to the requirements of this Chapter.
  - (2) RPA classes 3 and 4, for commercial purposes, shall be adjusted to the operating rules established under this Chapter, as well as to the requirements that may be applicable according to this Regulation and RAV number 91, with the deviations that may be pertinent, prior request of the RPA operator and the Aeronautical Authority.
  
- (b) All staff of the operator and the members of the RPA crew who will perform operations under the authorization of the RPA Operator Certificate (ROC) shall hold the required licenses and qualifications for each Class or Type of RPA, as well as for each kind of planned operation, as appropriate.

## **2. DIVISION AND CLASSIFICATION OF AERIAL WORK WITH RPA**

For the purposes of this chapter and other possible considerations to take into account, the divisions and classifications of aerial work established under sections 130.4 and 130.5 of this Regulation are applicable, but not limited to, the operation of aerial work with RPA.

## **3. REQUIRED CERTIFICATIONS**

- (a) No natural or legal person may perform aerial work operations with RPA, unless he/she/it is the holder of a valid RPA Operator Certificate (ROC), issued by the Aeronautical Authority according to the provisions established under this Chapter and only when this regulation is applicable.
  
- (b) The ROC authorizes its holder to perform operations with a remotely piloted aircraft according to the conditions and limitations detailed under the specifications



related to the operations annexed to the ROC.

(c) the Aeronautical Authority shall issue a ROC once the operator has demonstrated that owns an adequate organization, a control and supervision method for flight operations, a training program and a guaranteed maintenance according to the character and scope of the specified operations and consistent with the size, structure and complexity of the organization. The Aeronautical Authority shall be able to grant shorter periods.

(d) the Aeronautical Authority shall acknowledge as valid an operator's ROC that has been issued by another ICAO Contracting State, provided that the requisites under which it was granted be at least equal to those required by the Aeronautical Authority under this Regulation and be applied according to the reciprocity principle in a real and effective manner.

(e) The Aeronautical Authority shall establish procedures for certification and continuous surveillance, in order to permanently supervise the holders of the RPA Operator Certificates (ROC).

#### **4. EMERGENCY OPERATIONS**

In a public emergency, the holder of a certificate of aerial work with a RPA (ROC), who performs under the provisions of this regulation, may adopt the necessary deviation of the operative rules to assist and help, with the express authorization of the Aeronautical Authority.

#### **5. REQUEST OF THE RPA OPERATOR CERTIFICATE (ROC)**

(a) A RPA Operator Certificate shall be issued prior request of the interested party before the Aeronautical Authority, who shall assess such request paying attention to the security and risks involved in the planned operation. The applicant shall comply with the following phases:

(1) Request:

(i) Submit before the Aeronautical Authority the request form established for such purposes thirty (30) days prior to the performance of the aerial work operations with RPA classes 1 and 2, and ninety (90) days prior to the beginning of the operations for RPA classes 3 and 4, unless otherwise stated.

(ii) Pay the corresponding aeronautical fees.

(2) Documentary: applicant shall submit before the Aeronautical Authority the following documents for its assessment and acceptance:

(i) Articles of incorporation and most recent minutes of Assembly, duly registered in



the corresponding mercantile registry, as applicable.

(ii) Registration statement of the RPA before the National Aeronautical Registry or copy of the registry certificates of the RPA according to RAV 47, when applicable, or the documentation that the Aeronautical Authority considers that satisfy such requirement.

(iii) (SIC)

(iv) Copy of the airworthiness or conformity certificate of the RPA to be operated, issued according to RAV 21, as applicable.

(v) Documentation that proves qualification and abilities of the managing, technical and flight personnel that is directly engaged in the operation, medical certificates and required authorizations in each case according to the provisions under RAV 60 “Licenses to aeronautical personnel” and RAV 67 “Rules for the issuance of aviation medical certificates”.

(vi) Copies of the insurance policies that cover risks produced by dangers to thirds on the ground and any other risk that may arise from the activity to be performed.

(vii) Document proving that the operator owns at least one (01) RPA or that it is at his/her disposal according to a leasing contract duly registered in the National Aeronautical Registry.

(viii) Document or contract that proves the organization that shall perform the required maintenance for the RPA and its parts, as follows:

(a) In case of RPA classes 1 and 2, it may be a Maintenance Service Centre acknowledge or authorized by the RPA manufacturer or by the Aeronautical Authority, when applicable.

(b) In case of RPA classes 3 and 4, through a maintenance contract with a Maintenance Organization certified and authorized under the requirements of RAV 145, when applicable.

(ix) Risk assessment report: for every kind of aerial work with a RPA, the applicant shall have an assessment about the identified risks, mitigation actions and risks management. Such assessment shall contain each kind of proposed operations and shall be dated and signed by the operator or the responsible person assigned by the operator.

(x) Submit the assessment and acceptance of the required technical-operational documentation.

(xi) Submit a written request to the Aeronautical Authority explaining the details and specifications on the kind of aerial work to be performed.



(xiv) Submit the documentation that demonstrates the compliance with the applicable customs system.

(xv) Submit the technical and operational documents in particular related to the aerial work to be performed.

(xvi) Any other document that the Aeronautical Authority considers necessary after assessment of the submitted request.

(b) The RPA Operator Certificate (ROC) for aerial work shall be written in the English and Spanish languages and contain the following information:

- (1) State of the operator and issuing Authority.
- (2) Number of ROC and expiration date.
- (3) Name of the operator, registered name (in case it differs from the first) and address of its main office.
- (4) Date of issuance and name, signature and title of the representative of the issuing Authority.
- (5) Contact information of the persons responsible for the safety management system.
- (6) Description of the kinds of authorized operations.
- (7) Types or models of authorized RPA and responsibilities of its operator.
- (8) models and location of the authorized RPA.
- (9) Operation zones.

## **6. DEMONSTRATION**

The Aeronautical Authority may require, when necessary, demonstrations by the RPAS operator through inspections in situ and during flight, as well as facilities, technical-operational personnel and manuals submitted by applicants, in order to verify that those have the technical abilities, operational configurations and additionally equipment, necessary and approved, to guarantee the performance of a safe, orderly and efficient aerial work, for which the ROC is required.

## **7. ISSUANCE OF ROC**

Once verified and demonstrated the technical, legal and economical ability of the applicant, the Aeronautical Authority shall issue the ROC with its respective specifications related to the operations.

## **8. CONTENT OF THE SPECIFICATIONS RELATED TO THE OPERATIONS**



(a) Specifications related to the operations shall be issued to RPA operators, holders of a ROC for aerial work, which shall contain at least the following limitations or authorizations:

- (1) Specific location of the ROC operation station.
- (2) Other names under which the ROC may operate.
- (3) Kind of aircrafts, registries and serial numbers authorized for use, as applicable.
- (4) Description of the kind of operation of aerial work and authorized areas of operation.
- (5) Authorizations, conditions and limitations in the contracts of aircrafts use.
- (6) Any deviation and exclusion authorized for the total or partial fulfillment of any requirement provided under RAV 91 or under this Regulation, including authorized limitations for the operation according to the RPA performance characteristics, as follows:
  - (i) Utilization speed;
  - (ii) Maximum climbing speed;
  - (iii) Maximum turn speed;
  - (iv) Other pertaining data corresponding to performance (e.g. limitations related to wind, frizzing, rainfalls)
  - (v) RPA maximum range;
  - (vi) Maximum authorized height;
  - (vii) Characteristics of security and failure mitigation systems required for the operation (e.g. return to home, laser anti-collision system, fail-safe, geo-fencing, GPS, etc.);
  - (viii) Requirements of sensors and equipment based on the operation (e.g. inertial units, magnetometers and accelerometer, altimeter, pitot systems, temperature and ice probe, air data sensors, electro-optical visible systems, infrared and ultraviolet lights, multi and hyper spectral systems, embarked systems for data acquisition and register, as well as data link and telemetry, etc.);
  - (ix) Requirements of functions to detect and avoid and localize-transponder (SIC)
  - (x) Any other authorization, privilege or limitation that the Aeronautical Authority may set up to the applicant.
- (c) No ROC holder for aerial work shall perform operations using aircrafts that are not incorporated in the operational specifications.

## **9. MODIFICATION OF AN OPERATOR, CERTIFICATE OR**



## **SPECIFICATIONS RELATED TO OPERATIONS**

(a) the National Aeronautical Authority may modified a RPA Operator Certificate (ROC) for aerial work or its specifications related to the operations according to the provisions established under this Regulation, if:

1) it is determined that the required modification is done for the safety and security of the operation and due to public interest.

2) It is requested by the carrier or operator who is holder of the certificate. The National Aeronautical Authority determines that such modification guarantee safety and security of the operation and public interest.

3) By request of the operator, it is determined that security and safety of operations and interest of users are not negatively affected by the proposed modification.

b) The operator of aerial work services who needs a modification of his/her certificate or the specifications related to operations shall submit a request of modification before the National Aeronautical Authority, at least twenty (20) working days prior to the proposed date for its entry into force.

## **10. MAIN OPERATIONS BASE AND MAIN MAINTENANCE BASE**

### **CHANGE OF ADDRESS**

(a) Every holder of a ROC for aerial work shall establish a main operations and maintenance base, when applicable, which can be localized in the same place or in separate locations.

(b) Every holder of a ROC for aerial work shall maintain his/her main operations base.

(c) The holder of a ROC for aerial work shall notify in written, at least thirty (30) days, before the Aeronautical Authority the change of address of his/her main operations or maintenance base.

## **11. TECHNICAL-OPERATIONAL DOCUMENTATION**

Aerial work companies that perform its services with RPA, according to the application of this regulation, shall have and submit before the Aeronautical Authority, prior to the beginning of its activities, the following technical-operational documentation:

(1) RPA Operations Manual that establishes operational procedures.



- (2) RPA flight manual or equivalent documents that specify configuration, characteristics, maintenance and RPA performance.
- (3) Any other document necessary to describe and control, which may be additionally required, for the appropriate operation of the aerial work. The documentation described under this section shall be approved and accepted by the Aeronautical Authority.

## **12. REQUIREMENT OF MANUALS**

### **(a) Operations manual of a RPA operator**

- (1) A ROC holder shall provide, for use and guidance of the staff of his/her organization, an Operations Manual according to the requirements established by the Aeronautical Authority under this regulation.
- (2) The Operations Manual shall be revised and modified, if necessary, in order to guarantee that the information it contains is permanently valid. All modifications or revisions of the Operations Manual shall be notified to the personnel who uses it.
- (3) The ROC holder shall submit a copy of such manual and its modifications to the Aeronautical Authority for its corresponding revision and acceptance.

### **(b) RPA Operations Manual**

- (1) A ROC holder shall make available the RPA operations manual to his/her operations personnel and crew members of the remote flight, regarding each type of aircraft to be operated. Such manual shall contain normal, abnormal and emergency procedures related to the operation that is going to be performed.
- (2) This manual shall include details of the aircrafts system and lists of verification that shall be used. Such manual shall be available to the crew of the remote flight during flight operations.

## **13. DEVELOPMENT AND CONTENT OF THE OPERATIONS MANUAL OF THE RPA OPERATOR**

- (a) Development of the operations manual of the RPA operator shall include all RPS model combinations indicated by the manufacturer or in the type certificate approved for the RPA, as applicable.



(b) When elaborating the operations manual of the RPA operator, it shall be specifically considered all aspects regarding human performance including crew communication, i.e. from remote pilot to remote pilot, from remote pilot to RPA observer and other support personnel, and remote pilot to ATC. It shall also contain all necessary information for the RPA operation.

(c) in order to facilitate the development of the operations manual of the RPA operator, this literal summarizes the sections and basic details that a RPA operator shall consider to include in the content of his/her manual, regarding for example the necessary information and instructions that shall be known by his/her personnel to perform safe and efficiently their functions. The list is as follows:

## **PART A. INTRODUCTION**

### **(a) CONTENT**

(1) Brief list detailing the content of the operations manual for a RPA operator.

### **(b) DECLARATION OF COMPLIANCE AND INTRODUCTION THAT INCLUDES THE DEFINED PRINCIPLES FOR THE OPERATION.**

(1) Inclusion of a declaration of compliance regarding the requirements of this Regulation and with any other applicable requisite.

(2) Inclusion of an introductory declaration signed by the responsible manager, who confirms that such manual fulfills every applicable regulation and that its content shall be respected and complied with by the whole staff engaged in the operation.

(3) The manual shall be issued by the authorization of the responsible manager, who may assigned a person in charge of its elaboration, revision and processing before the Aeronautical Authority for its consequently acceptance or approval, as the case may be.

### **(c) DEFINITIONS**

(1) Explanations and definitions of terms and words necessary to use the manual.

### **(d) MANUAL CONTROL SYSTEM AND REVISION PROCESSES**

(1) It shall indicate the person responsible for the publication and insertion of



modifications and revisions.

- (2) It shall contain a registry of modifications and revisions, detailing insertion dates as well as dates on which they come into force.
- (3) A declaration that it is not allowed handwritten modifications and revisions, except on those situations where an immediate modification or revision is necessary for the benefit of safety and security.
- (4) A system description for annotation of pages and dates of entry into force.
- (5) A list of valid pages.
- (6) Annotation of changes (on the text pages and, if possible, on tables and figures).
- (7) Temporary revisions, if applicable.
- (8) A description of the distribution system regarding manuals, modifications and revisions.

**(e) ORGANIZATION AND RESPONSIBILITIES**

- (1) Organizational structure and command line
  - (i) Organization chart and brief description
- (2) Personnel engaged in the RPAS operation
  - (i) As appropriate, for example Manager, Remote Pilot, Technician, RPA Observer, among others.
- (3) Responsibilities and duties of the RPA operator
  - (i) The operator shall assign a Manager, acceptable by the Authority, who has enough corporate powers and is responsible to guarantee that all operations and maintenance activities can be financed and performed according to the rules and standards established by the Authority. It shall also be specified that such manager is the utmost responsible for the operation of the approved aerial work, as well as the person in charge to designate primarily responsible staff and their substitutes.
- (4) Responsibilities and functions of remote pilot and support staff during the RPAS operation
  - (i) Operator may use the support personnel that considers are pertinent for the aircraft operation. A brief description of the titles shall be presented.



**(f) RPA TECHNICAL DESCRIPTION**

- (1) Such description or characterization shall coincide with the requirements established under RAV 21, according to the RPA class.
- (2) A complete description may be included in the technical manuals for RPA maintenance and operation (it may be added as an appendix to the manual).

**(g) LOCATIONS PROPOSED FOR THE OPERATION**

- (1) A reference to the geographical location of the company (city, county), probable areas of operation, e.g. building works, open fields, highways, ducts, etc.

**(h) LIMITATIONS AND CONDITIONS FOR OPERATION**

- (1) Functioning conditions for the compliance with the provisions established under the applicable regulations, authorizations and conditions, and limitations inherent to the operation.
- (2) Operational control.

**(i) SUPERVISION OF RPA OPERATIONS (INTERNAL AND THOSE PERFORMED BY THE AERONAUTICAL AUTHORITY)**

- (1) A description of any internal system in charge of the operator to supervise operations.
- (2) The Aeronautical Authority reserves its rights to verify the appropriate use of the certificate, issued for RPAS operations. Therefore, it may perform inspections on facilities, aircraft and personnel, as well as suspend and revoke any permission if it does not fulfill with the conditions established on the operational approval.

**(j) ACCIDENT PREVENTION AND FLIGHT SAFETY PROGRAM**

- (1) Inclusion of evaluations of its own operations, concepts of the engaged personnel, failures of aircrafts, incidents. It must be even added all requirements of detected security reports for the configuration of the flight security program.



**(k) FLIGHT CREW FORMATION**

- (1) It must be detailed the selection process in order to define the flight crew, according to the kind of operation, complexity, RPA type, etc.

**(l) QUALIFICATION REQUISITES**

- (1) Details of any qualification, experience or training necessary for the pilot and support team, according to the RPAS type and the functions to be used by the operator.

**(m) PHYSICAL STATE OF CREW MEMBERS AND ABILITIES TO OPERATE**

- (1) A declaration or any guidance to assure that “crew” is adequately adjusted prior to performance of any operation.
- (2) Compliance with the provisions of RAV 91 referring to the prohibition that every remote pilot has to operate RPA controls if he/she is under the effects of psychoactive substances, alcohol beverages or any drugs that may affect his/her faculties to operate controls in a safe manner.

**(n) REGISTRIES**

- (1) Operator shall establish a way to manage his/her registries, including RPAS flights, granted authorizations, aircraft documentations, personnel training, basic registries regarding RPA maintenance, etc.

**PART B. OPERATIONAL PROCEDURES**

**(a) PLANNING / FLIGHT PREPARATION**

- (1) Determine the foreseen tasks and viability
- (2) Location where operation will be performed and assessment
  - (i) Kind of provisions regarding airspace (e.g. adjacent controlled airspace)
  - (ii) Other aircraft operations (local airdromes or operation place)
  - (iii) Dangers related to industrial zones or activities, high intensity radio transmission areas, etc.
  - (iv) Laws and local regulations established to rule over the operation location.

- (v) Obstructions (wiring, posts, antennas, buildings in the surroundings, etc.)
  - (vi) Extraordinary restrictions like segregated airspace in the surroundings of government or air force base buildings.
  - (vii) Public access to the area or required authorizations.
  - (viii) Authorization from the landowners.
  - (ix) Meteorological conditions for the planned event.
- (3) Risk management
- (i) Definition of a methodology to perform risks analysis during operation, identification of dangers, risk evaluation, mitigation procedures (Risk Management System).
  - (ii) Take into consideration the requirements provided under RAV 5, as applicable.
- (4) Communications
- (i) Definition of protocols, establishment of contact numbers by other operations of local aircraft.
  - (ii) Equipment used in the operations
  - (iii) Technical manuals of equipments, maintenance, required tests prior to flight.
  - (iv) Reference to work frequencies.
  - (v) It is important to mention that the operator shall guarantee that used frequencies during operation do not produce any interference and are in the portions of the radio electric spectrum to be freely used by general public, except otherwise required by the Aeronautical Authority or any other competent institution.
- (5) Pre-notification
- (i) If flight is going to be performed within a zone near airdrome transit, or near any other place of the airdrome or operative aircraft, then its contact data shall be obtained (control tower, ground movement control, etc.) and notification of the planned operation shall be communicated before taking-off according to the established procedures.
  - (ii) If the case so merits, it may be necessary to advice national police or the pertaining local authorities.



- (6) Location authorization
  - (i) Reference to document confirming authorization from landowner.
  - (ii) It is important to refer that there is no possibility to affect the privacy neither of any person nor to over flight State or private property without prior authorization of its inhabitant.
- (7) Meteorological conditions
  - (i) Methods to obtain weather forecasts. Considerations of RPAS limitations.
  - (ii) Interpretation of the meteorological information, if applicable.
- (8) Preparation and condition of equipment and RPAS
  - (i) Pre-flight checks and RPA maintenance necessary prior to flight start.

**(b) PROCEDURES IN THE WORK PLACE AND PRE-FLIGHT CHECKS**

- (1) In-place inspection
  - (i) Visual verification of operating area and identification of dangers for the RPAS operation and its related personnel.
- (2) Selection of operating area
  - (i) A reference on how to choose an area, size (extension), landform, surroundings, surface, gradient. Landing or recovery area for an automatic return shall be free and properly identified.
- (3) Crew briefing
  - (i) In order to inform tasks, responsibilities, duties, emergencies.
- (4) Cordon procedure
  - (i) Compliance with separation criteria
- (5) Communications
  - (i) With local or adjacent air operators, if applicable
- (6) Meteorological verifications
  - (i) Operating limitations and considerations
  - (ii) Refuel and recharge/refill
  - (iii) Change of fuel or charge of batteries
- (7) Equipment load
  - (i) Required security to perform such work
- (8) RPAS preparation and correct assembly



- (i) According to manufacturer instructions
- (9) Pre-flight checks on RPAS and its equipment

**(c) FLIGHT PROCEDURES**

These procedures shall be contained in the Operations Manual (issued by the manufacturer) or its equivalent, but it shall cover the whole content about flight procedures including safety matters.

- (1) RPA start
  - (i) Activity description
- (2) RPA launching or taking-off
  - (i) Activity description
- (3) RPA flight
  - (i) Activity description
- (4) RPA recovery or landing
  - (i) Activity description
- (5) RPA shutdown
  - (i) Activity description

**(d) EMERGENCY PROCEDURES**

- (1) Appropriate procedures according to RPA and control system
  - (i) It shall be considered all events that may cause that the RPA flight fails or that it is required to terminate flight
- (2) Fire
  - (i) Risks, relevant preventive measures, kind of RPA energy sources or fuel shall be considered.
- (3) Accidents
  - (i) Considerations, actions to take when an accident occurs, answers from the company towards damages to persons or property, etc.

**PART C. TRAINING**

**(a) DETAILS REGARDING THE OPERATOR'S TRAINING PROGRAM**

- (1) Training and verifying requirements to remote pilots, RPAS observers and support staff determined by the operator to cover the initial, recurrent and differences or conversion syllabus. Requirements under RAV 60 shall be



taken into consideration, as applicable.

#### **PART D. RPA OPERATOR'S MAINTENANCE DEVELOPMENT**

(a) RPA operator shall document before the Aeronautical Authority that he/she counts on an adequate structure, procedures and means to guarantee maintenance of his/her remotely piloted aircrafts and their airworthiness conditions, as required for the type of RPA to be operated and according to the complexity of the operator's organization. For that purpose, the operator shall propose for its acceptance in the Operations Manual for RPA Operator the following information:

- (1) Introduction. Activities.
- (2) Applicable regulation
- (3) Organizational structure, functions and responsibilities, definitions, when applicable.
- (4) RPAS identification and use.
- (5) Procedures to maintain weight and centre of gravity within approved limits.
- (6) Aircraft expected characteristics that shall be adequate to its operation practices.
- (7) Maintenance programs based on the manufacturer requirements.
- (8) List of maintenance tasks that shall be performed by the company as well as those to be hired with thirds.
- (9) Contracts and agreements with thirds for maintenance performance, in part or in whole, and aircrafts control.
- (10) If aircrafts maintenance is performed by the operator:
  - (i) Ordinary, extraordinary and preventive maintenance methods and modifications.
  - (ii) Indication of elements that shall be inspected before returning them to service.
  - (iii) Inspection methods.
  - (iv) Compliance with the Airworthiness Directives, in case they are applicable.
  - (v) Revision procedures to comply with inspections.
  - (vi) Other requirements that shall be applied upon request of the Aeronautical Authority.



- (11) Periodic revisions:
  - (i) Daily: before the first flight of the day
    - (A) Demonstration of its operability.
    - (B) Functioning of communication and navigation equipments.
  - (ii) OTHER REVISIONS:
    - (1) Once the period established by manufacturer has elapsed, e.g.:  
engines, propeller, control systems (communication/navigation).
    - (2) Bulletins issued by manufacturer.

## **PART E. APPENDIXES**

- (a) Copy of ROC and specifications related to granted operations
  - (1) This shall provide an immediate reference to the conditions under which operations shall be performed, when applicable.
- (b) Other documents
  - (1) Any other necessary documents after assessment by RPAS operator and according to the kind of operation to be performed.
- (c) Proves or demonstrations in flight
  - (1) The Aeronautical Authority, after assessment of requirement, may consider if necessary that operator have to reproduce the different kinds of operation that will perform, in which he/she shall simulate conditions of normal and emergency procedures, without compromising neither integrity of aircraft nor safety.
- (d) Aircraft requirements
  - (a) No person shall operate an aircraft on aerial work services, unless it is going to be used according to the terms of its certificate or in conformity with airworthiness or type certificate, granted under the requirements of RAV 21 for each RPA class, as applicable.
  - (b) Without prejudice of the provisions established under paragraph (a) of this section, it shall be observed the compliance with the applicable sections of RAV 91 “General Operation of Aircrafts” and RAV 43 “Maintenance”, for the purposes of other requirements related to airworthiness, as applicable.
  - (c) In case it is considered pertinent for operational safety, the Aeronautical Authority may establish and require some special requisites for the airworthiness of the RPA that will be used in a particular kind of aerial work.



#### **14. AUTHORITY TO INSPECT**

(a) Every RPA owner or operator who performs operations under this regulation shall allow the Aeronautical Authority, in any moment or place, to perform necessary inspections and verifications to determine the compliance with the aeronautical legislation in force.

(b) Upon request of the Aeronautical Authority, the RPA owner or operator shall have at his/her disposal enough satisfactory evidence that such flight equipment fulfills the requirements and authorized limitations in its ROC and specifications related to operations.

(c) Without prejudice of the corresponding legal action, a refusal of inspection or the non-compliance with any requirement or limitations established under this Part shall be a cause for the Aeronautical Authority to prohibit the performance of the RPA operation, since it represents a danger for operational safety. If it is necessary, local public authorities may be alerted about it, in order to avoid that the planned flight be a menace to operational safety and persons and property be under risk.

#### **15. REQUISITES RELATED TO AVIATION SECURITY**

Operator of aerial work services that uses remotely piloted aircraft systems (RPAS) shall be responsible, regarding Civil Aviation Security, for the application of enough procedural and physical security measures to guarantee a RPA operation protected against acts of unlawful interference, according to the provisions established under RAV 108 “Aircraft security in civil aviation”

#### **16. RISK MANAGEMENT AND ANALYSIS**

##### **Risk assessment in RPA operations:**

- (a) In a RPA operation, its operator shall perform an aeronautical study on security and risk management to estimate the security level of the planned activity to be performed, e.g. different risk levels (intolerable, tolerable or acceptable) and risk mitigation measures that shall adopt so that risk level be acceptable.
- (b) In the risk matrix, the planned activity to be performed shall be analyzed, assessed and have a scoring on the basis of the risks involved.
- (c) Applicable mitigation measures shall be described so that they allow developing an activity, within an acceptable risk level.



- (d) Assessment system shall consider the following aspects:
- (i) Means
  - (ii) Surroundings
  - (iii) Persons
  - (iv) Infrastructure within the flight zone
  - (v) Obstacles
  - (vi) Aircraft performance
  - (vii) Take-off flight path to avoid obstacles
  - (viii) Flight procedures
  - (ix) Communication and over flight zone
  - (x) Data transmission - command and control “C2 data link”
  - (xi) Documentation
  - (xii) Training
  - (xiii) Pilots
  - (xiv) Operational safety personnel on ground.

For risk assessment, the Aeronautical Authority shall consider acceptable that the operator uses the risk assessment matrix, which for such purposes this Aeronautical Authority may issue.

### **TRANSITORY PROVISIONS**

**FIRST:** Every mercantile society that develops activities by using RPA and expects to be certified as an operator of aerial work services shall be adjusted to the guidelines and technical requirements, whether formal or technical, established under this regulation.

**SECOND:** For the corresponding matters related to the activities developed by any mercantile society, the provisions established under Chapter B, section 130.8 (a) (7) regarding insurance policies, shall be fulfilled in every moment.

### **REPEALING PROVISION**

The Venezuelan Aeronautical Regulation number 130 (RAV 130) “Operators of aerial work services”, issued by the Venezuelan National Institute of Civil Aeronautics under



the Administrative Ruling number PRE-CJU-GDA-002-2013 dated January 09<sup>th</sup> 2013, published in the Extraordinary Official Gazette of the Bolivarian Republic of Venezuela number 6.099, dated May 23<sup>rd</sup> 2013, is repealed in its entirety.

### **FINAL PROVISIONS**

**FIRST:** all that has not been provided in this Venezuelan Aeronautical Regulation shall be resolved by the Aeronautical Authority.

**SECOND:** This Administrative Ruling shall enter into force on the date of its publication on the Official Gazette of the Bolivarian Republic of Venezuela.

Be this communicated and published,

(Illegible signature / wet official stamp)

**JORGE LUIS MONTENEGRO CARRILLO**

**President of the National Institute of Civil Aeronautics (INAC)**

Decree No. 1800, dated June 03rd 2015

Official Gazette No. 40.674, dated June 03rd 2015