



BRAZILIAN CIVIL AVIATION SPECIAL REGULATION

RBAC-E No. 94

Title: GENERAL REQUIREMENTS FOR UNMANNED AIRCRAFT OF CIVILIAN USE

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UNOFFICIAL TRANSLATION

PREAMBLE

This Brazilian Civil Aviation Special Regulation - RBAC-E addresses the general competence requirements of ANAC for unmanned aircraft. By its nature, an RBAC-E is intended to exclusively regulate technical matter that may affect the safety of civil aviation, with a limited duration in time and restricted to a reasonable number of requirements and persons, until the requirements contained therein are incorporated in an appropriate RBAC or definitively repealed. This Special Regulation establishes the conditions for the operation of remotely piloted aircraft in Brazil considering the current stage of development of this technology. The objective is to promote sustainable and safe development for the sector, and thus some operational restrictions - notably on areas distant from third parties - were deemed necessary at this time. We hope that the experience gained in practice over the next few years will result in greater knowledge and overcoming the challenges for a comprehensive integration of this class of aircraft into the civil aviation system. In addition, the regulations of other entities of the direct and indirect public administration, such as the National Telecommunications Agency (ANATEL), the Department of Airspace Control (DECEA) and the Ministry of Defense, must be followed as well as responsibilities in the civil, administrative and criminal spheres that may affect the use of unmanned aircraft, with special emphasis on those provisions concerning the inviolability of privacy, privacy, honor and the image of persons.

SUBPART A

GENERAL

E94.1 Applicability

(a) This Special Regulation applies to unmanned civil aircraft (hereinafter referred to only as unmanned aircraft) capable of being sustained and/or circulating in the airspace by means of aerodynamic reactions under the following conditions:

- (1) if they have a certificate of inscription, a Brazilian registration certificate or certificate of experimental marks, issued by ANAC; or
- (2) if they operate over Brazilian territory.

(b) The rules set forth in RBHA 91, or RBAC replacing it, and in RBACs 21, 43, 45, 61 and Resolution 293/2013, do not apply to unmanned aircraft, unless when expressly stated in this Special Regulation.

E94.3 Definitions

(a) For the purposes of these Special Regulations, the following definitions apply:

- (1) *model aircraft* means any unmanned aircraft for recreation purposes;
- (2) *Remotely-Piloted Aircraft (RPA)* means unmanned aircraft piloted from a remote pilot station for any purpose other than recreational;
- (3) *area distant from third-parties* means an area determined by the operator from a certain horizontal distance from the unmanned aircraft while in operation in which uninvolved and unaccompanied personnel are not subject to unacceptable safety risk. Under no circumstances the distance of the unmanned aircraft may be less than 30 horizontal meters of persons not involved and not consenting to the operation. The 30-meter limit does not need to be observed if there is a mechanical barrier strong enough to isolate and protect uninvolved and non-consenting persons in the event of an accident;

Note: The 30m limit, in this case, is a criterion for the application of ANAC rules. Access to airspace is the responsibility of DECEA, which may establish lower boundaries of greater magnitude.

- (4) *Remote Pilot Station (RPS)* means the RPAS component containing the necessary equipment for piloting the RPA;
- (5) *RPA observer* means a person who, without the aid of equipment or lenses (other than corrective lenses), assists the remote pilot in the safe conduct of the flight, maintaining direct visual contact with the RPA;
- (6) *Beyond Visual Line of Sight (BVLOS) operation* means operation that does not meet VLOS or EVLOS conditions;

(7) *Autonomous operation* means the normal operation of an unmanned aircraft during which it is not possible for the remote pilot to intervene in the flight or part thereof;

(8) *Visual Line of Sight (VLOS) operation* means operation under visual meteorological conditions (VMC), in which the pilot, without aid of RPA observers, maintains direct visual contact (without aid of lenses or other equipment) with the remotely piloted aircraft in order to conduct the

flight with the responsibilities of maintaining planned separations with other aircraft and to avoid collisions with aircraft and obstacles;

(9) *Extended Visual Line of Sight (EVLOS) operation* means operation in VMC, in which the remote pilot, without the aid of lenses or other equipment, is not able to maintain direct visual contact with The RPA, thus requiring the aid of RPA observers to conduct the flight with the responsibilities of maintaining planned separations with other aircraft, as well as avoiding collisions with aircraft and obstacles, following the same rules of a VLOS operation;

(10) *remotely piloted operation* means the normal operation of an unmanned aircraft during which it is possible for the remote pilot to intervene at any stage of the flight, allowing the possibility of autonomous flight only in cases of command and control link failure, being obligatory the constant presence of the remote pilot, even in case of said failure of the command and control link;

(11) *consenting person* means a person whose presence is not indispensable for a successful unmanned aircraft operation to occur but at his/her own will and at his own risk expressly agrees that an unmanned aircraft operates close to him or their legal guardians without observing the criteria of areas distant from third parties;

Note: Considering the principle of autonomy and that any citizen has the right to assume and manage his own risk when only he or his legal guardians (in the case of minors) will be exposed, ANAC allows the operation of unmanned aircraft near persons without observing the criteria of areas distant from third parties, **provided that such persons have expressly given their consent, thus manifesting their will.** However, ANAC makes clear to those who freely choose to give this consent that it is not possible to guarantee an acceptable level of safety risk and that the control of exposure to this risk is entirely their responsibility.

(12) *person involved* means a person whose presence is indispensable for a successful unmanned aircraft operation to occur;

(13) *remote pilot* is the person handling the flight controls of an unmanned aircraft; and

(14) *Remotely-Piloted Aircraft System (RPAS)* means the RPA, its RPS (s), the C2 link and any other components as specified in its design.

E94.5 Classification of RPAS and RPA

(a) RPAS and RPA are classified according to the maximum take-off weight (MTOW) of the RPA as follows:

- (1) Class 1: RPA with maximum take-off weight greater than 150 kg;
- (2) Class 2: RPA with maximum take-off weight greater than 25 kg and less than or equal to 150 kg; and
- (3) Class 3: RPA with maximum take-off weight of 25 kg or less.

Note: The unit of measure considered for the label "maximum takeoff weight" is that of mass (kg), due to the use already established by the aeronautical community, which labels "weight" what technically refers to "mass".

E94.7 Responsibility and authority of the remote pilot in command

The remote pilot in command of an unmanned aircraft is directly responsible for the safe conduct of the aircraft, due to its consequences, and has final authority over its operation.

E94.9 Requirements for remote pilot and observer

- (a) All remote pilots and RPA observers must be at least 18 years of age.
- (b) All Class 1 or 2 RPA remote pilots must hold a valid 1st, 2nd, or 5th Class Aeronautical Medical Certificate (CMA) in accordance with paragraph 67.13 (g) of the RBAC # 67 or a valid 3rd Class CMA issued by the Brazilian Air Force Command according to ICA 63-15.
- (c) All remote pilots engaged in operations above 400 feet above ground level or operating in Class 1 or 2 RPAS operations must have a license and rating issued or validated by ANAC. ANAC will determine, for each type of operation, the acceptable criteria for issuing the appropriate license and rating.

E94.11 Civil airworthiness

- (a) It is only permitted to operate an unmanned aircraft that is in an airworthy condition.
- (b) The remote pilot in command of an unmanned aircraft is responsible for verifying its flight safety conditions. He must discontinue flight as soon as possible when mechanical, electrical, or structural problems occur that compromise the safety of the operation.

E94.13 [Reserved]

E94.15 Use of psychoactive substances

The remote pilot in command and observers (if applicable) of an unmanned aircraft must comply with the applicable requirements of Section 91.17 of RBHA 91, or corresponding provisions replacing them.

E94.17 Non-compliance with established rules

- (a) Failure to comply with the requirements set forth in these Special Regulations must be determined and violators must be subject to the penalties provided for in Law No. 7,565 / 86 (CBA).
- (b) By means of a precautionary measure, ANAC may temporarily suspend operations when there is suspicion or evidence of noncompliance with the requirements of these Special Regulations that significantly affect the level of risk of the operation.

E94.19 Possession of documents

It is only allowed to operate a RPA with a maximum take-off weight above 250 grams if, throughout the operation, the following documents are available in the RPS:

- (a) the Certificate of Inscription, the Certificate of Registration or the Certificate of Experimental Marks, as applicable, all valid;

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- (b) the valid certificate of airworthiness, if applicable;
- (c) the flight manual;
- (d) the insurance policy or the certificate of insurance with proof of payment, within the validity, if applicable;
- (e) document containing the risk assessment referred to in paragraphs E94.103 (f) (2) and E94.103 (g) (2) of this Special Regulations; and
- (f) remote pilot license, rating and extract of the CMA, valid and as applicable under this Special Regulations.

Note: The documents listed above only cover those that are required by ANAC. Other documents may be required by DECEA, ANATEL, or other competent bodies.

UNOFFICIAL TRANSLATION

SUBPART B FLIGHT RULES

E94.101 Applicability

This subpart establishes requirements for unmanned aircraft operations.

E94.103 General rules for the operation of unmanned aircraft

(a) It is prohibited the transport on unmanned aircraft of persons, animals, dangerous goods referred to in RBAC No. 175 or cargo prohibited by competent authority.

(1) This prohibition must not apply to dangerous articles carried by an unmanned aircraft, where such articles:

(i) are intended for launches related to agriculture, horticulture, forestry, avalanche control, ice block and landslide control or pollution control;

(ii) are electronic equipment containing lithium batteries necessary for its operation, provided they are intended for use in flight, such as cameras, camcorders, computers, etc. This item does not exempt compliance with the certification requirements required by other ANAC regulations;

(iii) are transported by unmanned aircraft belonging to entities controlled by the State, under the full responsibility of said entities, provided they comply with the applicable provisions of RBAC 175; or

(iv) are required on board the unmanned aircraft in accordance with the relevant airworthiness and / or operations requirements.

(b) It is forbidden to operate an unmanned aircraft, even if it is not for the purpose of flying, carelessly or negligently, endangering the lives or property of others.

(c) The autonomous operation of unmanned aircraft is prohibited.

(d) All operations of unmanned aircraft of non-recreational use above 250 grams maximum take-off weight must be insured against damage to third parties except for operation of aircraft belonging to entities controlled by the State.

(e) The operation of model aircraft with a maximum take-off weight of more than 250 grams is only permitted by ANAC in areas distant from third parties, under the full responsibility of its operator and as allowed by DECEA's use of airspace.

(f) The RPA operation of maximum take-off weight above 250 grams is only allowed by ANAC in areas distant from third parties and as allowed by DECEA's use of airspace, under the full responsibility of its operator, under the following conditions:

(1) if the other requirements of these Special Regulations are met; and

(2) if there is an operational risk assessment in an acceptable format, contemplating each operational scenario, which must be updated within the last 12 calendar months prior to the operation.

(g) The operation of RPA with a maximum take-off weight above 250 grams of a public institution engaged in security, police, tax and customs inspection, to fight vectors of disease transmission, civil defense and/or firefighting or an operator in the service of one of these, is only allowed by ANAC,

and as allowed by the use of air space by DECEA, under full responsibility of the agency or operator, in any areas, under the following conditions:

(1) if the other requirements of these Special Regulations are met; and

(2) if there is an operational risk assessment, contemplating each type of operation, under the terms of Specific Supplementary Instruction, which must be updated within the last 12 calendar months prior to the operation.

(h) Other state controlled entities not mentioned in paragraph (g) of this section may only operate under the conditions of said paragraph (g) with express authorization from ANAC, being required to demonstrate:

(1) the public interest of the operation; and

(2) that there would be a greater risk to life if the operation was performed by alternative means.

(i) Operation of unmanned aircraft up to 250 grams maximum take-off weight is permitted by ANAC, under the full responsibility of its operator, and as permitted by DECEA's use of airspace, if the other requirements of these Special Regulations are met.

Note: Users should always be aware that it is not enough to comply with ANAC rules in order to operate, but it is also necessary to comply with the rules of DECEA, ANATEL and, if applicable, other competent authorities, which may create restrictions or operational prohibitions beyond ANAC rules.

(j) Operations of unmanned aircraft outside the criteria set forth in paragraphs (e), (f), (g), (h) and (i) of this section are prohibited.

(k) The operator must keep records of all flights carried out in Classes 1 and 2 RPA in an acceptable format by ANAC.

E94.105 Pre-flight assignments

Before commencing a flight, the remote pilot in command of an unmanned aircraft must be aware of all the information necessary for the flight planning.

E94.107 Remote pilot work station

(a) The presence of a remote pilot necessary for operation in the RPS is required during all phases of the flight and the replacement of the remote pilot in command during operation is permitted.

(b) A remote pilot can only operate a single RPAS at a time.

E94.109 Autonomy requirements

(A) It is only permitted to commence an unmanned aircraft operation if, considering wind and other known meteorological conditions, there is sufficient autonomy to perform the flight and to land safely at the intended location.

(B) Class 1 RPA must comply with the provisions of sections 91.151 and 91.167 of RBHA 91, or corresponding provisions replacing them.

E94.111 Unmanned aircraft landing and take-off areas

(a) The operation of unmanned aircraft at aerodromes must be authorized by the respective airport operator, and ANAC may establish restrictions or specific conditions for such operation.

(b) RPA landings and take-offs may be performed under the full responsibility of the remote pilot in command and/or the operator, as applicable, provided that:

(1) the landing or take-off is made in areas distant from third parties, with the exception of operators referred to in paragraphs E94.103 (g), (h) or (i), who may land and take off under their full responsibility; and

(2) there is no prohibition of operation at the place chosen.

(c) In the event of any special situation, not foreseen by this Special Regulation, which causes disruption to public order, ANAC may prohibit operations in a particular area, even if this area meets the other criteria in paragraph (b) of this Section.

(d) If the RPAS is provided with one or more areas for emergency landing (crash site), these areas must meet the requirements of this Section.

E94.113 Operational limitations for RPA with CAVE

(a) It is only allowed to operate a civil RPA with CAVE, and as allowed by the use of airspace by DECEA:

(1) for the purposes for which the certificate was issued;

(2) non-profit making; and

(3) on areas distant from third parties.

(b) ANAC may establish any additional limitations it deems necessary to ensure safety.

E94.115 International operations

An unmanned aircraft may only cross national borders to access Brazilian territory while in flight after issuance of express authorization from ANAC, subject to specific regulations on airspace control and other relevant bodies.

SUBPART C**[RESERVED]****SUBPART D****REGISTRATION AND MARKS****E94.301 Registration and inscription**

(a) All RPAs that are of an authorized design or of a certified type must be registered in compliance with the provisions of Resolution No. 293 of November 9, 2013, which provides for the Brazilian Aeronautical Registry. These aircraft are entitled to a Certificate of Experimental Mark or a Certificate of Registration, as applicable.

(b) Except as provided in paragraph (d) of this section, every model aircraft, or Class 3 RPA which operates only in VLOS up to 400 ft AGL, and which is not of an authorized design or a certified type, must be inscribed with ANAC and linked to a person (physical or legal, with CPF or CNPJ in Brazil), who will be legally responsible for the aircraft.

(c) Except as provided in (d), any model aircraft, or Class 3 RPA which operates only in VLOS up to 400 ft. AGL, and which is not of an authorized design or a certified type, must be identified with its number of inscription.

(1) The identification must be kept in a readable condition for a near visual inspection and be located:

(i) on the outside of the aircraft fuselage; or

(ii) in an internal compartment of the aircraft that can be easily accessed without the use of any tool.

(d) Unmanned aircraft of maximum take-off weight of up to 250 grams do not need to be registered or inscribed with ANAC or identified.

(e) The inscription made under this section will be valid for 24 months. The inscription not revalidated until 6 months after expiration will be inactivated and can no longer be revalidated.

E94.303 Identification, nationality and registration marks

(a) A registered RPAS can only be operated if:

(1) the RPA complies with the provisions of paragraphs 45.11(a)(1) and (a)(2); 45.12-I(b), (d) and (e); 45.13; 45.14; 45.15 (if applicable); 45.16 (if applicable); 45.21; 45.22; 45.23-I; 45.25; 45.27(a)-I and (b)-I; 45.29-I (where practicable); 45.30-I; 45.31; and 45.33 of the RBAC 45, as applicable;

(2) the RPA identification plate required by paragraph 45.11(a) of RBAC 45 is attached:

(i) on the outer side of the fuselage of the RPA, legibly; or

(ii) in an RPA internal compartment that can be easily inspected; and

(3) the RPS has a fireproof nameplate which:

(i) includes the information specified in paragraph (a) of section 45.13 of the RBAC 45, using an approved fireproof marking method; and

(ii) is placed so as to be unlikely to be damaged or removed during normal service, or lost or destroyed in the event of an accident;

(b) Except as provided in paragraph (d) (1) of this section, no one may remove, change or place the information required by paragraph 45.13 (a) of the RBAC 45 in any RPA or RPS without ANAC's approval.

(c) Except as provided in paragraph (d) (2) of this section, no person may remove or install an identification plate required by section 45.11 of RBAC 45 or paragraph (a) (3) of this section without ANAC's approval.

(d) Persons performing maintenance work, provided that according to methods, techniques and practices acceptable to the ANAC, may:

(1) remove, replace, or affix the identification data required by paragraph 45.13 (a) of RBAC 45 in any RPA or RPS; or

(2) remove an identification plate required by section 45.11 of RBAC 45 or paragraph (a)(3) of this section, if necessary for maintenance operations.

(e) No person may install a plate removed pursuant to paragraph (d)(2) of this section on any RPA or RPS other than the one from which the plate was removed.

(f) Certified engines and propellers must comply with the applicable provisions of RBAC 45.

(g) If it is impossible to place the required information in accordance with that prescribed for the configuration or dimensions of an aircraft, the information must be placed as large as possible and on the largest of the authorized surfaces.

SUBPART E

RPAS DESIGN AUTHORIZATION

E94.401 RPAS design authorization

(a) It is only allowed to operate a civil RPAS in Brazil if the design of the RPAS is authorized by the ANAC taking into account the RPAS class and the type of operation (VLOS or BVLOS), except in the following cases:

- (1) Class 3 RPAS intended exclusively for VLOS operations up to 400 ft AGL;
- (2) the RPA holds a type certificate; or
- (3) the RPA is used in accordance with section E94.503 of this regulation.

(b) An applicant for a RPAS design authorization must:

(1) demonstrate, in a manner acceptable to ANAC, that the RPAS meets the applicable requirements of this Subpart in force on the date the application was filed, unless:

(i) is otherwise determined by ANAC; or

(ii) compliance with amendments that will be in force at a future date is chosen by the applicant or required by ANAC;

(2) demonstrate, in a manner acceptable to ANAC, that the RPAS meets any additional requirements established by ANAC in order to ensure an acceptable level of risk; and

(3) provide a statement that the applicant has complied with the applicable requirements.

(c) Notwithstanding the provisions of this Subpart, any interested party may request a type certificate for a remotely piloted aircraft project of any class based on RBAC 21.

E94.403 Determination of the applicable requirements for the RPAS design authorization

(a) Class 2 RPAS intended exclusively for VLOS operations must demonstrate compliance with the requirements of sections E94.405 and E94.409 of this Special Regulation.

(b) Class 2 RPAS intended for BVLOS operations must demonstrate compliance with the requirements of sections E94.405, E94.407 and E94.409 of this Special Regulation.

(c) Class 3 RPAS intended for BVLOS operations must demonstrate compliance with the requirements of sections E94.405 and E94.407 of this Special Regulation.

(d) Class 3 RPAS intended for VLOS operations above 400 ft AGL must demonstrate compliance with the requirements of section E94.405 and paragraphs (a), (c) and (d) of section E94.407 of this Regulation Special.

E94.405 RPAS design – General

(a) The applicant must submit in a manner acceptable to ANAC the following documents:

(1) RPAS flight manual which establishes the conditions, limitations, and procedures for the safe operation of the RPAS;

(2) RPAS maintenance manual containing information necessary for the continued airworthiness of RPAS; and

(3) safety analysis report demonstrating that RPAS is safe when operated in the manner specified in the flight manual.

(b) The applicant must demonstrate that the operation of the command and control link is adequate to the maximum intended distance for the operation of the RPA.

(c) Flight and/or ground demonstrations may be required by ANAC.

E94.407 RPAS design for BVLOS operations

All RPAS that are intended for BVLOS operations must:

- (a) present relevant information and alerts on the condition of the aircraft to the remote pilot;
- (b) have a navigation system with sufficient performance and reliability to ensure operation safety;
- (c) have emergency recovery capability; and
- (d) have an adequate aircraft lighting system.

E94.409 Class RPAS design

Class 2 RPAS must meet the following additional requirements:

- (a) considering its operational flight envelope, the RPA must:
 - (1) be safe in control and maneuver during all phases of flight; and
 - (2) have adequate performance, taking into account the maximum operating weight, all loading conditions and operating altitudes;
- (b) the power generation, storage and distribution systems for any RPAS system must be capable of:
 - (1) providing the energy required for proper operation of connected loads during all the foreseen operating conditions; and
 - (2) feed the essential loads required for safe flight and landing even in the event of any simple failure or malfunction;
- (c) each RPA power system feed system must be designed, arranged and constructed to:
 - (1) ensure proper operation of the propulsion system under all operating conditions and intended maneuvers; and
 - (2) provide the minimum amount of fuel/energy required to ensure the powertrain operation at its maximum power/thrust, in addition to the operation of all systems using that power source;
- (d) the fuel/energy storage system that feed the RPA propulsion system must:
 - (1) withstand the expected loads in all phases of operation; and
 - (2) be constructed, arranged and installed in such a way as to minimize dangerous conditions to the aircraft;

- (e) the RPA propulsion system must be constructed, arranged and installed to ensure a safe landing. Proper operation of the propulsion system must be ensured when it is necessary for the proper functioning of the emergency recovery system;
- (f) the primary structures of the aircraft must withstand the loads expected at all stages of operation;
- (g) the primary structures of the aircraft must be designed and manufactured by means of acceptable design and production;
- (h) the design of command and control systems must minimize the possibility of jamming and inadvertent operation, including prevention of incorrect assembly and unintentional engagement of control surface locking devices;
- (i) the design of each command and control system must allow it to be able to operate with ease and precision appropriate to its functions;
- (j) there must be means for presenting to the remote pilot the flight and systems operating parameters necessary to operate the RPA safely;
- (k) information on the systems operating unsafe conditions must be provided in a timely manner to the remote pilot to enable him to take appropriate corrective action. The presentation of this information must minimize possible remote pilot errors that may create additional hazards;
- (l) all systems must be designed to minimize operating errors that may contribute to the creation of hazards;
- (m) each component of an system essential to the safety of the flight must:
- (1) be of a type and design suitable for its intended function; and
 - (2) be installed according to limitations specified for that component
- (n) the systems required for the safe operation of a RPAS must work properly;
- (o) the RPAS must be able to operate safely in all environmental and operating conditions possible and foreseen in its operating profile; and
- (p) each RPAS system, considered separately, or in relation to other systems must be designed and installed so that the operation or failure of this does not result in unacceptable risks to flight safety.

E94.411 Class 1 RPAS design

RPAS Class 1 must be of a type certificated in accordance with RBAC 21. The type certificate will be issued to the RPA, but must encompass the entire RPAS, including interdependencies between its components.

E94.413 Design modifications

- (a) Any modification in RPAS of a certificated type must be made as set forth in RBAC 21.
- (b) Any modification to a Class 2 or 3 RPAS whose design was authorized in accordance with this Subpart can only be performed after the holder of the authorization ensures that the modified design meets all applicable requirements.

SUBPART F

RPA AIWORTHINESS CERTIFICATES

E94.501 General provisions

(a) Except as provided in (c), no unmanned aircraft can fly without possessing a valid airworthiness certificate.

(b) The following types of airworthiness certificate may be issued for a RPA:

(1) Experimental Flight Authorization Certificate (*Certificado de Autorização de Voo Experimental – CAVE*);

(2) Special Flight Permit (*Autorização Especial de Voo – AEV*);

(3) Special airworthiness certificate for RPA (*Certificado de Aeronavegabilidade Especial para RPA – CAER*);

(4) Certificate of Airworthiness restricted category;; e

(5) standard Certificate of Airworthiness.

(c) Class 3 RPAs which are only intended to VLOS operations up to 400 feet AGL and model aircraft are not required to have any airworthiness certificate.

E94.503 Issuance of CAVE and AEV for RPA

(a) A CAVE may be issued for a RPA for the following purposes, subject to compliance with Section 21.193 of RBAC 21:

(1) research and development. Testing new aircraft design concepts, new aircraft equipment, new aircraft installations, new aircraft operating techniques, or new uses for aircraft;

(2) showing compliance with regulations. Conducting flight tests and other operations to show compliance with the airworthiness regulations including flights to show compliance for issuance of RPAS design authorization, flights to substantiate major design changes, and flights to show compliance with the function and reliability requirements of the regulations;

(3) remote pilot training. Training of the applicant's remote pilots; and

(4) market survey. Use of the aircraft for the purpose of conducting market survey, sales demonstrations and training of remote pilots of the aircraft buyer.

(b) The applicant for a CAVE for the purposes of remote pilot training and/or market survey is entitled to the certificate if, in addition to meeting the requirements of section 21.193 of RBAC 21:

(1) he has established a program of inspections and maintenance to ensure the continued airworthiness of the aircraft; and

(2) he demonstrates that the RPA flew at least fifty (50) hours.

(c) An AEV may be issued to a RPA for the following purposes, subject to compliance with Section 21.199 of RBAC 21:

(1) flying the aircraft to a base where repairs, modifications or maintenance services are carried out, or a base where the aircraft will be stored;

(2) delivering or exporting the aircraft to its buyer;

(3) production flight testing new production aircraft, including flight training of remote pilots from the manufacturers;

(4) evacuating aircraft from areas of impending danger;

(5) conducting customer demonstration flights, including flight training of remote pilots from the customer, in new production aircraft that have satisfactorily completed production flight tests.

E94.505 Issuance of special certificate of airworthiness for Class 2 or 3 RPA

(a) The applicant for a special airworthiness certificate for an class 2 or 3 RPA which is intended to non-experimental operations is entitled to this certificate by providing proof of the RPA registration and filing of a declaration issued by its manufacturer that it conforms to the design authorized by ANAC.

(b) ANAC may inspect the RPAS to verify that it conforms to the authorized design and is in safe operating conditions.

E94.507 Issuance of Certificate of Airworthiness for Class 1 RPA

A Class 1 RPA of a type certificated according to RBAC 21 is entitled to the corresponding airworthiness certificate defined in that regulation subject to compliance with Section 21.183 or 21.185 of the RBAC 21, as applicable.

E94.509 Validity

(a) Except if returned by the holder, suspended or revoked, an airworthiness certificate is only valid as follows:

(1) a standard Certificate of Airworthiness or a special certificate of airworthiness, restricted category is valid for the period of time specified by ANAC, provided that the aircraft is maintained as required in other subparts of this Regulation, as applicable, and as long as its registration certificate is valid;

(2) a special flight permit is valid for a period of time specified therein;

(3) a CAER is valid indefinitely and as long:

(i) the aircraft is in compliance with its authorized design, except for those modifications made in accordance with the provisions of paragraph E94.413(b);

(ii) the aircraft does not present an unsafe condition; and

(iii) the aircraft is registered in Brazil.

(4) a CAVE for the purposes of research and development, showing compliance with regulations, remote pilot training or market survey is valid for one (1) year after the date of issue or renewal, unless a shorter period is established by ANAC.

(b) The owner, operator or custodian of an aircraft airworthiness certificate must make it available to ANAC, when required, for inspections.

(c) The owner, operator or custodian of an aircraft whose airworthiness certificate has lost its validity for whatever reason, must return the certificate to ANAC, if so required.

SUBPART G

RPAS CONTINUING AIRWORTHINESS

E94.601 General provisions

(a) The operator or, in the lack of such, the owner, is responsible for the conservation of the RPAS in airworthy condition.

(b) Except for Class 2 or 3 RPAS, it is only allowed to operate a RPAS under this Special Regulation if it was performed an Annual Maintenance Inspection (*Inspecção Annual de Manutenção – IAM*) in this RPAS in the last 12 months. The owner or operator must submit to ANAC a Statement of Annual Maintenance Inspection (*Declaração de Inspecção Annual de Manutenção –DIAM*) for said RPAS attesting its airworthy condition.

E94.603 Continuing airworthiness for Class 1 RPAS

(a) It is only permitted to perform maintenance, preventive maintenance, repairs or alterations in Class 1 RPAS if executed as established in the applicable requirements of this Subpart and other applicable regulations, including RBAC 43.

(b) It is only permitted to operate a Class 1 RPAS having a manufacturer's maintenance manual or instructions for continuing airworthiness containing a section of airworthiness limitations if the period for replacing components, inspection intervals and specific procedures contained in that section are met.

(c) It is only allowed to modify a Class 1 RPAS based on a supplemental type certificate if the person performing such modification is the holder of the certificate or have written permission from the holder.

E94.605 Required maintenance for Class 1 RPAS

Each owner or operator must:

(a) have this RPAS inspected under this Subpart and, between mandatory inspections, must repair discrepancies that were eventually detected as provided in RBAC 43.

(b) ensure that the maintenance staff has made appropriate notes in RPAS maintenance records, indicating that it has been approved for return to service.

E94.607 Operation after maintenance, preventive maintenance, rebuilding or modification of Class 1 RPAS

(a) It is only permitted to operate a RPAS that has undergone maintenance, preventive maintenance, rebuilding or alterations if:

(1) it has been approved for return to service by a person authorized and qualified by ANAC and pursuant to Section 43.7 of RBAC 43; and

(2) the notes in the maintenance records required by sections 43.9 and 43.11 of RBAC 43, as applicable, have been made.

E94.609 Inspections of Class 1 RPAS

It is only permitted to operate a Class 1 RPAS if overhaul and inspection intervals and the specific procedures contained in the maintenance program recommended by the manufacturer are met.

E94.611 Test equipment and inspections in altimetry systems and automatic altitude reporting equipment (Mode C) of Class 1 RPAS

(a) It is only permitted to operate Class 1 RPAS if:

(1) within the preceding 24 months, each static pressure system, each altimeter and each automatic altitude reporting system (if required in the operating area) have been tested, inspected and found to comply with the Appendix E of RBAC 43 except for the opening of the drain system or alternate source of static pressure valves, followed by the opening and closing of any static pressure system; and

(2) after installation or maintenance of the automatic altitude reporting system or the transponder, when it is possible that errors in matching the altitude data are entered, the system as a whole has been tested, inspected and found to comply with paragraph (c) of Appendix E of RBAC 43.

(b) The tests required by paragraph (a) of this section must be conducted:

(1) by the manufacturer of the RPAS; or

(2) by a maintenance organization which holds appropriate , class and operative specifications and has:

(i) ANAC authorization maintain instruments;

(ii) ANAC authorization to repair the type and model of equipment to be tested;

(iii) ANAC authorization to perform the specific test; or

(iv) ANAC authorization to maintain the specific type of RPAS to be tested; or

(3) by a licensed aircraft mechanic with rating in airframe and/or avionics and qualified in instruments (only for tests and inspections of the static pressure system).

(c) The altimeters and automatic altitude reporting systems approved in accordance with a Technical Standard Order (TSO) are considered tested and inspected in the date of manufacture.

(d) It is prohibited to operate a RPAS above the maximum altitude at which all altimeters and automatic altitude reporting system (if required in the operation area) have been tested with satisfactory results.

E94.613 Tests and inspections in Class 1 RPAS transponder

(a) It is only allowed to use a transponder as specified in paragraph 91.215(a) of RBAC 91, or the corresponding provisions that may replace it, if, within the preceding 24 months, the transponder has been tested, inspected and found to comply with Appendix F of RBAC 43.

(b) After any installation or maintenance of the transponder, when the data matching errors can be introduced into the system, it must be tested, inspected and found to comply with paragraph (c) of Appendix E 43 RBAC

- (c) The tests and inspections required by this Section must be conducted:
- (1) by a maintenance organization certified by ANAC; or
 - (2) the manufacturer of the aircraft on which the transponder to be tested is installed, if it has been installed by the manufacturer.

E94.615 Maintenance records of Class 1 RPAS

(a) Except for work performed under the E94.611 and E94.613 sections of this Special Regulation, each owner or operator must keep for the periods set out in paragraph (b) of this section, the following records:

(1) records of maintenance, preventive maintenance and alterations and annual inspection and other required inspections, as appropriate, for each RPAS (including airframe, engine, propeller, ground stations and equipment). Records must contain:

- (i) a description (or reference to data acceptable to ANAC) of the work;
- (ii) the date of completion of the work; and
- (iii) the signature and license number of the person who approved its return to service; and

(2) the following information:

- (i) the total flight time of each airframe, engine and propeller;
- (ii) the present situation of parts with limited life time of each airframe, engine, propeller and equipment;
- (iii) the time since the last overhaul of items installed in RPAS requiring general review based on specific times;
- (iv) identification of the RPAS present situation regarding inspections, including the time since the last inspection required by mandatory inspection program whereby the RPAS and its components are maintained;
- (v) the current status, where applicable, airworthiness directives and security directives, including, for each, the method to do it, the airworthiness or security directive number and the review date. If the airworthiness or security directive require periodic actions, the time and date when the next action is required; and

(vi) copies of the forms required by paragraph 43.9 (a) of RBAC 43 for each major change or major repair of the airframe, engines, propellers, rotors and appliance currently installed in RPAS.

(b) The owner or operator must keep the following records for the periods below:

(1) the records required under paragraph (a)(1) of this Section must be kept until the work is repeated for the third consecutive time, even if he has been replaced by more detailed work, or for 2 years after completion of work, whichever is longer;

(2) the records required by paragraph (a) (2) of this Section must be kept permanently and must be transferred with the RPAS if it or any of its main components (RPA, RPS, etc.) is sold; and

(3) A defect list provided to an owner or operator pursuant to Section 43.11 of RBAC 43 must be kept until all defects have been repaired and the RPAS approved for return to service.

(c) Each owner or operator must make available all records required by this section to a ANAC inspector, whenever required.

E94.617 Transference of maintenance records of Class 1 RPAS

Any owner or operator who sells a RPAS or any of its main components (RPA, RPS, etc.) must transfer to the buyer at the time of sale, the following corresponding records, in plain language or in coded form, at the purchaser's discretion, provided that the coded information allows the retrieve of the information in a manner acceptable to ANAC:

- (a) the records specified in paragraph E94.615(a)(2) of this Special Regulation; and
- (b) the records specified in paragraph E94.615(a)(1) of this Special Regulations that are not included in the records required by paragraph (a) of this section, unless the buyer authorizes the seller to keep physical custody of such records . However, the physical custody does not relieve the buyer from liability established by paragraph E94.615(c) of this Special Regulation.

E94.619 Weight and balance of Class 1 RPA

- (a) Aircraft whose manufacturer's manuals define time intervals between weighings should be weighed according to these books.
- (b) Any aircraft must be weighed:
 - (1) whenever there are doubts about the accuracy of their weight and balance; and
 - (2) after being subjected to maintenance, repairs and changes that may have changed its weight, including general painting, major repairs, major changes, etc.
- (c) The weight and balance sheet of an aircraft must be recalculated whenever the aircraft is altered by removal, installation or change of position of equipment, accessories etc.
- (d) The weight of an aircraft must be performed by a company certified for the service.

E94.621 Continuing airworthiness for Class 2 RPAS

- (a) It is only permitted to operate a Class 2 RPAS if the specific procedures contained in RPAS maintenance program recommended by the manufacturer are met.
- (b) All maintenance actions must be properly recorded.
- (c) Maintenance, preventive maintenance, repairs or alterations and approval for return to service must be carried out:
 - (1) by the manufacturer; or
 - (2) maintenance organization accredited by the manufacturer; or
 - (3) by qualified person properly trained by the manufacturer or institution authorized by the manufacturer.

E94.623 Continuing airworthiness for BVLOS Class 3 RPAS

- (a) It is only permitted to operate a Class 3 RPAS intended for BVLOS operations if:
 - (1) the specific procedures contained in the maintenance program recommended by the manufacturer are met.

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- (2) the person performing maintenance is properly trained and qualified; and
 - (3) all maintenance actions are properly recorded.

UNOFFICIAL TRANSLATION

SUBPART H

FINAL DISPOSITIONS

E94.701 Misdemeanors

(a) For the purposes of art. 33 of Decree-Law No. 3,688, of October 3, 1941, an operator is understood to be properly licensed in accordance to the provisions of this Special Regulations if he has:

(1) in the case of model aircraft above 250 grams of maximum takeoff weight, the certificate of inscription issued by ANAC and its identification in the aircraft;

(2) in the case of RPA with a maximum takeoff weight greater than 250 grams and smaller or equal to 25kg, operating in VLOS or EVLOS up to 400 ft AGL:

(i) the certificate of inscription issued by ANAC and its identification in the aircraft;

(ii) insurance with third parties damage coverage except for aircraft belonging to entities controlled by the State;

(iii) document that contains the risk assessment referred to in paragraphs E94.103(f)(2) and E94.103(g)(2) of this special regulations; and

(iv) flight manual;

(3) in the case of RPA with a maximum takeoff weight greater than 250 grams and smaller or equal to 25kg, operating in BVLOS up to 400 ft AGL:

(i) insurance with third parties damage coverage except for aircraft belonging to entities controlled by the State;

(ii) certificate of registration or the certificate of experimental marks;

(iii) valid airworthiness certificate;

(iv) document that contains the risk assessment referred to in paragraphs E94.103(f)(2) and E94.103(g)(2) of this special regulations; and

(v) flight manual;

(4) in the case of other RPA with a maximum takeoff weight greater than 250 grams and smaller or equal to 25kg:

(i) insurance with third parties damage coverage except for aircraft belonging to entities controlled by the State;

(ii) remote pilot license and rating issued by ANAC;

(iii) certificate of registration or the certificate of experimental marks;

(iv) valid airworthiness certificate;

(v) document that contains the risk assessment referred to in paragraphs E94.103(f)(2) and E94.103(g)(2) of this special regulations; and

(vi) flight manual;

(5) in the case of RPA with a maximum takeoff weight greater than 25 kg:

- (i) insurance with third parties damage coverage except for aircraft belonging to entities controlled by the State;
- (ii) remote pilot license and rating issued by ANAC;
- (iii) First, Second or Fifth Class Aviation Medical Certificate issued under RBAC No. 67, or a Third Class Aviation Medical Certificate issued by the Brazilian Air Force Command under ICA 63-15;
- (iv) certificate of registration or the certificate of experimental marks;
- (v) valid airworthiness certificate;
- (vi) document that contains the risk assessment referred to in paragraphs E94.103(f)(2) and E94.103(g)(2) of this special regulations; and
- (vii) flight manual;

(b) All operators of model aircraft and RPA with a maximum takeoff weight smaller than 250 grams are considered as properly licensed for the purposes of Art. 33 of Decree-Law No. 3,688, of October 3, 1941, under this Special Regulation, without the need of having any document issued by ANAC.

Note: the above listed documents include only those which are required by ANAC. Other documents may be required by the DECEA, ANATEL, or other competent bodies.