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*(REMOTELY PILOTED AERIAL VEHICLES)
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Regulation

REMOTELY PILOTED AERIAL VEHICLES

Issue 2

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SECTION I

General

Art. 1

Foreword

1. Article 743 of the Italian Navigation Code, titled "Concept of aircraft", introduces in the definition of aircraft, the notion of remotely piloted aerial vehicle:

"Aircraft shall mean any machine designed for the transportation by air of persons or property. Remotely piloted aerial vehicles are also considered aircraft, as defined by special laws, ENAC regulations and, for the military, by decrees of the Ministry of Defence. The distinctions of the aircraft, according to their technical specifications and use shall be established by ENAC with its regulations and, in any case, by special legislation in this field".

2. This Regulation, as implementing art. 743 of the Italian Navigation Code, splits remotely piloted aerial vehicles in Remotely Piloted Aircraft Systems and Model Aircraft for the purpose of applying the provisions of the Code.
3. *Remotely piloted aerial vehicles* operated or intended to be operated for specialised operations or for experimental, scientific or research activities, are established to be Remotely Piloted Aircraft Systems (RPAS) and the provisions of the Italian Navigation Code apply, in accordance with this Regulation.
4. *Model aircraft* shall not be regarded as aircraft for the applicability of the provisions of the Italian Navigation Code and can be used for recreational and sporting activities only. Nevertheless, this Regulation sets out specific provisions and limitations applicable to the use of the model aircraft to ensure the safety of persons and property on the ground and of other airspace users.

Art. 2

Scope

1. This Regulation applies to the operations of RPAS under ENAC competence and to the activities of model aircraft, inside the Italian National Air Space.

2. Pursuant to the Regulation of the European Parliament and of the Council (EC) No 216/2008, RPAS of operating take-off mass not exceeding 150 kg and those designed or modified for research, experimental or scientific purposes pertain to ENAC competence.
3. The following RPAS are not subject to the provisions of this Regulation:
 - a) State RPAS as referred to in articles 744, 746 e 748 of the Italian Navigation Code;
 - b) RPAS operating inside indoor space, unless what arranged in art. 10, point 7 of this Regulation;
 - c) Balloons used for scientific observations or tethered balloons.

[Rev. 1 dated 21/12/2015]

Art. 3

Purpose

1. This Regulation provides safety levels for different RPAS kind of operations. In sections II and III this Regulation defines provisions for operating different classes of RPAS depending on the take-off operating mass.
2. Section IV defines provisions for piloting RPAS, Section V defines provisions regarding procedures in air navigation and airspace use applicable to RPAS in the national airspace and Section VI defines general provisions for RPAS.
3. Section VII provides provisions and limitations to be complied with for the use of model aircraft in the National airspace.

[Rev. 1 dated 21/12/2015]

Art.4

References

- Italian Navigation Code;
- Regulation (EC) No 216/2008 of the European Parliament and of the Council - otherwise called "Basic Regulation";

- Regulation (EC) No 785/2004 of the European Parliament and of the Council – otherwise called "Insurance Requirements"
- Regulation (UE) n. 923/2012 Standardised European Rules of the Air – SERA;
- ENAC Regulation "Regole dell'Aria Italia";
- ENAC Regulation "Regolamento Tecnico dell'ENAC";
- ENAC Regulation "Servizi di Traffico Aereo";
- ENAC Regulation "Organizzazione sanitaria e certificazioni mediche d'idoneità per il conseguimento delle licenze e degli attestati aeronautici".;

Art. 5*Glossary and acronyms*

1. Definitions

Model aircraft operator: the person who flies the model aircraft

Model aircraft: remotely piloted aerial vehicle, used exclusively for recreational and sports purposes, without people on board, without equipment on board that might enable its autonomous flight, and it is used under the direct and continuous visual control of the model aircraft operator, without visual aids.

Remotely piloted aircraft (RPA): remotely piloted aerial vehicle without persons on board, not used for recreation and sports.

Congested areas: residential, industrial, commercial, sporting areas or settlements, and, in general, areas where gatherings, even temporary, of people are possible.

Buffer Area: the area surrounding the area of intended operations, established to guarantee the safety levels applicable to the type of operations. The buffer area has characteristics equivalent to the area of intended operations, its dimensions are evaluated as adequate with respect to RPA possible behavior in case of malfunctions.

Research and development activity: it is intended to carry out activities for basic research or for research aimed to verify design criteria of RPAS or of its newly developed equipment, newly developed installations, or of innovative modes of operations.

Beyond Visual Line Of Sight (BVLOS): operations at a distance that does not allow the remote pilot to continuously remain in direct visual contact with the RPA, that does not allow to manage the flight, to maintain separation and avoid collisions.

Detect and Avoid (D&A) or Sense and Avoid (S&A) : the ability of the pilot, through technical systems, to avoid collisions on ground with vehicles and aircraft and collision in air with other airspace users, to comply with the rules of the air, to avoid terrain impacts, to avoid adverse Weather conditions, to comply with visual signs and to maintain the applicable visibility and distance from clouds distances in a manner equivalent to the “see and avoid” ability expected for aircraft with a pilot on board.

Extended Visual Line Of Sight (EVLOS): operations at a distance exceeding the limits of the VLOS operations, for which the VLOS conditions are complied with by the use of alternative means.

Take-off operating Mass: RPA take-off mass when in operating condition, including its *payloads* (equipment and installations necessary to carry out the intended operations).

Specialised Operations: for the scope of this Regulation, Specialised operations are RPAS operations carried out either in return of a payment or not, as, for example: aerial photography flights, news media / television / movie flights, surveillance operations (including surveillance of plants and installations), environmental monitoring flights, agricultural operations, aerial mapping operations, advertising flights, training.

RPAS observer: a person designated by the operator who assists the remote pilot in the conduct of the RPA flight by various means, including visual observation of the RPA.

Remote Pilot: the person charged by the operator as responsible for the conduct of the flight, who commands the RPAS by manipulating the remote ground pilot station.

Airspace reservation: a defined volume of airspace temporarily reserved for exclusive or specific use by categories of users;

Airspace restriction: means a defined volume of airspace within which, variously, activities dangerous to the flight of aircraft may be conducted at specified times (a ‘danger area’); or such airspace situated above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions (a ‘restricted area’); or airspace situated above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited (a ‘prohibited area’);

See and avoid: the ability of the pilot, through visual contact, to avoid collisions on ground with vehicles and aircraft and collisions in the air with other airspace users, to comply with the rules of the air, to avoid adverse Weather conditions, to acknowledge visual signs and to maintain the requested distance from clouds.

Remotely Piloted Aircraft System (RPAS): a system consisting of an aerial vehicle (remotely piloted aircraft) without persons on board, not used for recreation and sports, and the related components necessary for the command and control (remote ground pilot station) by a remote pilot.

Autonomous System: RPAS that does not allow the pilot intervention in the management of its RPA flight on a real time basis.

Indoor space: space confined within closed environments.

To be seen: the characteristic of a RPA to be able to be seen thanks to its dimensions and features with analogy to the one of an aircraft with the pilot onboard as far as the compliance with the rules of the air.

Visual Line of Sight (VLOS): operations at distances, both horizontal and vertical, in which the remot pilot maintains continuous visual contact with the aerial vehicle, without the aid of tools to enhance the view, so to be able to directly control it with the aim to conduct the flight and to meet separation and collision avoidance responsibilities.¹

2. Acronyms

AGL	Above Ground Level
ANS	Air Navigation Services
ARP	Aerodrome Reference Point
ATS	Air Traffic Services
ATZ	Aerodrome Traffic Zone
BVLOS	Beyond Visual Line of Sight
CTR	Controlled Traffic Region

¹ Distances by which operations can be considered VLOS are subject to the capability of the pilot to be aware of the actual RPA conditions in terms of position, attitude and speed as well as of obstacles and other aircraft. The remote pilot has the final responsibility to define the VLOS conditions, that might be affected by the weather condition, by the sunlight, and by the presence of obstructions.

EASA European Aviation Safety Agency
EVLOS Extended Visual Line Of Sight
RPA Remotely Piloted Aircraft
RPAS Remotely Piloted Aircraft System

TMA Terminal Control Area
VFR Visual Flight Rules

VLOS Visual Line of Sight
VMC Visual Meteorological Conditions

[Rev. 1 dated 21/12/2015]

Art. 6

RPAS classification

1. RPAS in the scope of this Regulation are classified according to the operating take-off mass of the RPA, as follows:
 - a) RPAS with RPA having operating take-off mass of less than 25 kg
 - b) RPAS with RPA having operating take-off mass equal to or more than 25 kg and less than 150 kg.

Art. 7

RPAS operations

1. RPAS operations shall comply with all the applicable sections of this Regulation.
2. RPAS are allowed to be operated for the following purposes:
 - a) specialized operations or
 - b) research and development activities.

RPAS operation for advertising activities during air shows is regulated by dedicated applicable ENAC provisions.
3. In case RPAS operations are carried out on behalf of third parties, a contract between the RPAS operator and the client shall be in force, where the sharing of responsibilities for such



specific operations is defined with the relevant limitations and conditions, including provisions relevant to data protection as per Art. 34 of this Regulation.

4. RPAS operations are: VLOS, EVLOS or BVLOS.
5. Dangerous goods transportation is subject to ENAC authorization.

SECTION II**Remotely Piloted Aircraft System with aircraft with operating take-off mass
of less than 25 kg****Art. 8***General provisions for operating RPAS*

1. The RPAS shall be identified by a plate installed on the RPA showing the identification of the system and of the operator. An identical plate shall be installed also on the remote ground pilot station.
2. As of the 1st of July 2016, in addition to plates required by the Art 8.1, any RPAS shall be equipped with an Electronic Identification Device, that allows the transmission of RPA real time data, its owner/operator and basic flight parameters, as well as the recording of these data. Electronic Identification Device performances and characteristics are defined by ENAC.
3. RPAS shall be supplied with a Flight Manual or equivalent manual.
4. Specialised Operations shall comply with the provisions regarding procedures in air navigation and airspace use, laid down in Section V.
5. RPAS shall be equipped with systems/equipment necessary to carry out intended operations in compliance with the applicable rules of the air and according to the airspace class engagement. They shall be equipped with systems/equipment intended to indicate the RPA height above ground so to enable a positive check during flight.
6. For VLOS operations within un-controlled airspace, ENAC reserves the right to require the installation of lights or other means to augment the RPA conspicuity by the remote pilot or by other airspace users.
7. RPAS shall be piloted by a pilot with recognized competences and skills as per Section IV.
8. During VLOS operations, pilot shall be clearly visible and immediately identifiable by proper means. Pursuant to this Regulation, the pilot shall wear a high visibility vest with the sign "pilota di RPA" (RPA pilot).

9. RPAS in the scope of this section are operated for specialized operations either “non critical” or “critical”, pursuant to articles 9 and 10.
10. RPAS operations with purpose “research and development” are subject to ENAC authorisation.

Art. 9*Non-critical Operations*

1. “Non-critical” specialized operations are VLOS operations which do not overfly, even in case of malfunctions and/or failures:
 - Congested area, gathering of persons, urban areas;
 - Critical infrastructures
2. Before commencing “non-critical” operations, RPAS operator shall provide ENAC with the declaration of compliance to the applicable sections of this Regulation, where limitations and conditions for the intended flights are defined, including the necessary segregations of airspace when applicable. The above declaration is made by the operator by using the ENAC web site compulsorily (www.enac.gov.it), providing all information and data required by the procedure, including data of the RPAS identification plates.
3. The operator is responsible for the assessment of the risk posed by the operations and of the continued validity of the “non-critical” conditions.
4. The operator shall hold all the documents pursuant to Art. 11.8 as applicable and shall keep it updated.

[Rev. 1 dated 21/12/2015]

Art. 10*Critical Operations*

1. Critical operations are operations that do not respect, even partially, conditions of Art.9.1.

2. Before commencing critical operations the operator shall apply for and obtain the authorization by ENAC unless the critical specialized operation does not fall into standard scenarios published by ENAC. In the latter case shall submit the declaration as required by article 9.
3. Critical specialized operations can be carried out when the safety level is adequate for the risk posed by those operations, having regard to the general aviation operations. The safety level is affected by contributions concerning the RPAS, the pilot, the operative and flight management procedures, the environmental conditions, and every different elements that are significant for the safety of RPAS operations, including the proper implementation of the maintenance programme. RPAS as a whole system shall have reliability performances that are consistent with the above scenario and that are appropriate to ensure safety levels adequate to the kind of operations. In the case of standard scenarios the technical requirements and operational limitations established by ENAC are adequate to the increasing level of risk associated to the operating take-off mass and the operational scenario and ensure the safety levels required by this Regulation.
4. RPAS shall have a flight termination system, unless otherwise prescribed for standard scenarios, that functions independently from the primary command and control system in order to be eligible to carry out critical specialized operations. The minimum operative height is determined so that any flight termination system is effective.
5. For critical specialized operations in VLOS, including those carried out in accordance with the standard scenarios, the adequate level of safety can be demonstrated by using two independent and dissimilar systems of command and control and of flight termination, provided that such operations are conducted over urban areas with no people inside the overflowed area including the buffer, but people necessary to the RPAS operations and specifically trained.
6. Without prejudice to provisions of the Art 10.7-8 RPAS operated in VLOS are eligible to fly over urban area in case an acceptable level of safety is demonstrated. This requirement is considered complied with when RPAS is equipped with:
 - a) A primary command and control system with software components compliant with guidelines EUROCAE ED-12, at least to DAL-D applicable objectives; the use of

alternative guidance material can be accepted by ENAC, providing an equivalent assurance level is achieved:

- b) Systems able to maintain RPAS operation under control in case of data link loss or to mitigate the consequences, and
 - c) A flight termination system independent from and dissimilar to the primary command and control system and that allows to minimize possible consequences of a ground impact
7. To overfly gathering on persons during parades, sports events or different forms of entertainment or anyhow areas where there is an unusual concentration of people, is prohibited.
8. Without prejudice to the fact that indoor RPAS operations are out of the scope of this Regulation, as indoor airspace is not under the competence of ENAC, specialized operations inside indoor spaces shall comply with provisions laid down in paragraph 10.7.

Art. 11

Authorisation and declaration

1. For critical operations, the capability of the RPAS operator to comply with obligations laid down in this Regulation is recognized by ENAC authorization. For critical operations carried out in accordance with standard scenarios published by ENAC and non critical operations, the said capability is declared by the operator in a form and manner established by Art 9.
2. The authorisation or the declaration, as applicable, covers every aspects affecting the safety of RPAS operations (RPA, flight operations, pilot licensing). For specialized operations, the application for authorization or the declaration can be submitted only upon successful completion of the relevant experimental activity that is propaedeutic to operations as per the following Art.11.5.

3. Operator shall have technical and operating organisation adequate for the activity and shall hold the manual of operations defining procedures necessary to manage the flight activity and the maintenance of the systems. The manual specifies procedures to be used by the operator for the risk assessment and the management of applicable mitigations.
4. The propaedeutic experimental activity is carried out by the pilot the operator intends to designate and allows to establish that the pilot skills are adequate to control the RPA, by carrying out flights at the RPA flight envelop intended for the specialized operations and with specific attention to the emergency procedures. The propaedeutic experimental activity is aimed at defining limitations and conditions to be applied to carry out specialized operations in safety.
5. The propaedeutic experimental activity is carried out over unpopulated areas by pilots holding the Certificate according to art. 21, in accordance with provisions laid down in art. 24; this activities shall not be notified to ENAC. It is the pilot responsibility to ensure the continued respect of the conditions for this propaedeutic experimental activity.
6. The operator in addition to comply with provisions laid down in Section VI , shall record and retain data pertaining carried out operations, including the relevant risk assessment findings.
7. The operator, on request, shall report all data pertaining carried out operations, ~~on an annual basis~~, to ENAC, in a form and manner established by ENAC.
8. In order to obtain the authorization, the operator submit the relevant application to ENAC where he/she certifies the compliance with all the applicable sections of this Regulation and states limitations and conditions applicable to the proposed operations including the necessary segregation of airspace, when applicable. The following documentation shall be attached to the application:
 - a) Data written on the RPAS identification plates, the description and configuration of the system, as well as characteristics and performances to ensure safe operations or the declaration of conformity issued by the manufacturer, in case of RPAS holding a valid Certificate of Design (pursuant to Art. 13);
 - b) Results of tests performed during the initial experimental propaedeutic activities;

- c) Kinds of proposed specialised operations;
- d) Results of the risk assessment of the proposed operations, justifying the safety of the operations;
- e) The RPAS flight manual, or equivalent document;
- f) The RPAS maintenance programme;
- g) The operation manual, including the risk assessment and safety management procedures.

9. ENAC issues the authorisation upon successful completion of the review of the documentation issued by the operator to substantiate the capability of safe operations. ENAC reserves the right to ask for integration with analysis and/or tests and to make any inspections.

10. The authorization or the declaration remain valid subject the operations are carried out in compliance with the applicable limitations and conditions. The authorization or declaration is surrendered or revoked in case the system is modified or in case operations are carried out violating applicable limitations and conditions.

11. The operator shall report to ENAC updated data and information on operations authorized or declared, by applying when necessary for a change of the authorization or by changing the declaration for non critical operations. ENAC reserve the right to conduct audits or inspections on the carried out operations.

12. In order to fulfill above obligations the operator can ask for the support of organizations recognized by ENAC, including the fulfillment of the experimental propaedeutic activity and the preparing of the relevant documentation.

[Rev. 1 dated 21/12/2015]

Art. 12

Operations with RPA with operating take-off mass of less than or equal to 2 kg

1. RPAS specialised operations with RPA with operating take-off mass of less than or equal to 2 kg are to be considered non critical in any operative scenario, providing that the RPA

design criteria and manufacturing techniques result in harmless features, that shall be verified in advance by ENAC or by an organization recognized by ENAC.

2. Pursuant to Art. 10.7 of this Regulation to overfly gathering on persons during parades, sports events or different forms of entertainment or anyhow areas where there is an unusual concentration of people, is prohibited.
3. To carry out operations the RPAS shall be piloted by a person with a valid certificate as per Art. 21, according to the applicable Flight Manual or equivalent document.
4. For cases under the scope of Art 12.3, the pilot undertakes duties and responsibilities of the operator also, including registration and occurrence reporting. Provisions regarding the organization of the operator as per the previous articles are not applicable. Anyhow the pilot shall ensure the correct management of the RPA flight and the correct execution of the maintenance tasks.
5. Specialized operations with RPA with operating take-off mass of less than or equal to 0,3 kg with rotating parts safeguarded against impacts and having maximum speed less than or equal to 60 km/h are to be considered non critical for any operative scenario, without prejudice to provisions laid down in art 12.2. The pilot, who is not subject to the certificate provision laid down in Art 21, shall ensure the respect of the Provisions regarding procedures in air navigation and airspace use laid down in Section V.
6. To carry out operations with RPAS in the scope of this Article 12 the operator, or the pilot in cases of art 12.4 or 12.5, shall submit the declaration according to Art 9.2 of this Regulation to ENAC.

[Rev. 1 dated 21/12/2015]

Art. 13*Certification of the Design*

1. Manufacturers who intent to produce a series of RPAS in the scope of this section, can apply to ENAC for a certification of the design attesting the compliance to requirements laid down in art. 10.5 or 10.6 or in art. 12.1, as applicable.
2. Upon successful completion of activities by ENAC, The manufacturer is entitled to have a certification of design issued after:
 - a) holding an organization recognised by ENAC capable to issue the certificate of conformity according to the following point 4 and to manage occurrences;
 - b) having defined the RPAS configuration subject of the certificate;
 - c) having performed every analysis and tests necessary to establish conditions and limitations able to justify the safety of operations with relation to the proposed scenario.
 - d) issuing relevant flight manual and maintenance manual or equivalent documents.
3. The certificate of design issued by ENAC details the following information:
 - a) manufacturer identification;
 - b) RPAS identification and configuration;
 - c) operative scenario;
 - d) condition and/or limitation;
 - e) relevant technical documentation;
 - f) any other information, as considered by ENAC.
4. In order to be eligible to be operated for critical specialized operations any RPAS holding a certificate of design shall be accompanied by a certificate of conformity issued by the manufacturer attesting the RPAS conformity with the configuration identified in the Certificate of Design.

SECTION III

Remotely Piloted Aircraft System with aircraft having operating take-off mass of more than or equal to 25 kg

Art. 14

Registration and identification

1. RPAS with RPA with operating take-off mass more than or equal to 25 kg, flying inside the Italian airspace, shall be registered by ENAC in the RPAS register, by assigning dedicated registration marks; identical registration marks are to be shown on the remote ground pilot stations. Moreover the identification plates shall be installed on the RPA and on the remote ground pilot station.
2. The application for registration shall be made by the RPAS owner in a form and manner established by ENAC.

[Rev. 1 dated 21/12/2015]

Art. 15

Airworthiness

1. RPAS are approved to fly by holding a Permit to Fly or a Restricted Certificate of Airworthiness for RPAS holding a Restricted Type Certificate.
2. The Permit to Fly is issued for the purpose of:
 - a) carrying out experimental activities for research and development or for compliance demonstration to the certification basis in case of application for a Restricted Type Certificate or;
 - b) carrying out specialized operations for RPAS without a series production and thus not holding any Restricted Type Certificate.
3. The Permit to Fly specifies conditions and/or limitations for the operations, these include applicable limitations concerning the nature and characteristics of the overflowed areas.
4. In order to be issued the Permit to Flight for experimental activity as per the above point 2.a), the owner of the RPAS shall apply to ENAC and provide documents justifying the system is capable of a safe experimental activity. The experimental activity shall be carried



out over areas with a limited population density, adequate for the risk posed by the operations.

The applicant shall submit the application for the segregation of airspace to ENAC, pursuant to ENAC provisions in force, when necessary.

5. ENAC shall issue the permit to fly for experimental activity upon successful review of the submitted documentation. The Permit to Fly is valid for the period of time necessary to carry out the activity.
6. The Permit to Fly for specialized operations referred to in 2b is obtained upon application of the RPAS's owner after successful completion of initial test flights performed under the Permit to Fly with purpose experimental activity.
7. The Permit to Fly for specialized operations shall be issued by ENAC upon successful completion of the review necessary to verify that the proposed operations can be carried out with an adequate level of safety. The Permit to Fly has a maximum validity period of three years. Upon dedicated application and when conditions are fulfilled, ENAC may renew or issue a new Permit to Fly as applicable for a RPAS, depending on the purpose of the Permit to Fly. The Permit to Fly is invalid when applicable conditions and limitations are violated, when the system is modified without ENAC approval, as well as in case of non-compliance with requirements referred to in articles 16 et seq.
8. For RPAS intended to be manufactured in series the manufacturer shall apply to ENAC for the restricted type certificate. The certificate attests the compliance with the certification basis as established by ENAC, determined taking into account the characteristics of the system and the kind and modes of operations. The associated Type Specification data sheet defines the conditions and/or limitations under which the system shall be used, including also the restrictions on the areas of operations and of the use of airspace.

In the case of RPAS which has been granted a Restricted Type Certificate, the associated Restricted Certificate of Airworthiness shall be issued when the RPA conforms to the type specification data sheet and it is shown to be in conditions for safe operations.

The organisation in charge of the design and the production of the RPAS shall be approved by ENAC.

9. The Restricted Certificate of Airworthiness and the Type Certification Data Sheet are issued upon successful completion of the demonstration of compliance with the certification basis and of the experimental activity.
10. The Restricted Certificate of Airworthiness is issued for the individual RPA upon submission by the owner of a statement by the manufacturer attesting that the RPA conforms to the Restricted Type Certificate. The restricted certificate of airworthiness has unlimited duration. The certificate of airworthiness is invalid in case of violation of applicable conditions and/or limitations, in case the system is modified without ENAC approval or in case of non-compliance with the provisions laid down in articles 18 and 19. ENAC reserves the right to perform spot checks to verify the continued validity of the Restricted Certificate of Airworthiness.

Art. 16*Noise Certificate*

1. The Noise Certificate is not required.

Art. 17*Operator's Approval*

1. In order to carry out specialised operations, the operator of the RPAS shall have ENAC authorization, by demonstrating to fulfill requirements laid down in Articles 18 and 19.
2. Investigations made by ENAC are proportionate with the level of risk posed by the proposed operations.

Art. 18*Operator's Organization*

1. The Operator is entitled to have the authorization after demonstration of:
 - a) having a technical and operational organisation adequate for the activities it intends to perform and for the type and size of the fleet. The pilots designated by the operator

shall have the qualifications required to conduct the planned activity;

- b) appointing a Technical Manager for the management of operations, airworthiness and training;
- c) operating RPAS granted with the necessary certificates/authorizations and in configuration required for the proposed specialized operations;
- d) designating pilots with certificates and licenses adequate to the RPAS to be piloted;
- e) having established the "Operation Manual", providing instructions or procedures as necessary for the management of operations, in normal and emergency conditions, of the airworthiness and of the training and making the manual available to all personnel involved in the activities;
- f) being able to carry out operations according to limitations and conditions set forth in the authorization.

Art. 19*RPAS maintenance*

1. The RPAS operator shall establish, on the basis of manufacturer instructions, adapted as necessary for the operations to be carried out, a proper maintenance programme to ensure the continued airworthiness of the system.
2. The operator shall be provided with a system aimed to record flight time data, significant safety occurrences, maintenance and replacement of parts and components.
3. Routine maintenance can be performed by the operator upon attendance of a proper adequate maintenance course held by the manufacturer or by other organisations authorised by the manufacturer.

4. the manufacturer or other organisations recognized by the manufacturer, are authorized to carry out maintenance of their RPAS.

SECTION IV
Provision for piloting RPAS

Art. 20

RPAS pilot

1. Without prejudice to provisions set forth in art. 12.5, RPAS shall be piloted by a pilot holding an appropriate valid recognition of competence. Pursuant to the Italian Navigation Code, the pilot is responsible for the safe management of the flight.
2. Whoever is at least 18 years old with medical fitness appropriate to the functions to be ensured, is entitled to have a recognition of competence after demonstrating a basic aeronautical knowledge and the ability to pilot the RPAS.
3. The recognition of competence is either in the form of a "RPAS Pilot Certificate" or of a "RPAS Pilot Licence". They are issued by ENAC or by recognized organization, pursuant to articles 21 and 22.
4. The pilot Certificate or Licence have a validity period of 5 years, unless otherwise specified by ENAC, and they can be renewed according to provisions of articles 21 and 22.
5. The pilot exercised privileges under the Certificate or the Licence according to the applicable qualifications and limitations.
6. The pilot shall record his/her flight activity and he/she is not authorized to carry out specialised operations when he/she has not carried out at least three different flights with the RPAS during the preceding 90 days.

Art. 21*RPAS Pilot Certificate*

1. In order to pilot RPAS with RPA having operating take-off mass less than 25 kg , in VLOS operations it is necessary to hold the RPAS pilot certificate, issued by a recognized RPAS training Centre according to the following art. 23. The certificate is issued, based on different RPA class and category and defines operative limitations to exercise relevant privileges.
2. In order to obtain a certificate of medical fitness the pilot has to show a medical record released by a AME (aero medical examiner) according to the standards of the license LAPL, pursuant to the Reg. UE n. 1178/2011. Medical records of class II are considered as well valid to meet the health requirements..
3. In order to be eligible to hold a RPAS pilot certificate the applicant shall:
 - a) learn applicable rules of the air, basic aeronautical knowledge, safety aspects and relevant operational risks, by successfully attending a training course with an approved Training Centre. In case a valid civil pilot licence or a ultra/micro light sport aircraft licence pursuant to DPR n. 133/2010 are held, credit for the compliance with this requirement can be claimed;
 - b) successfully carry out a training programme on class and category of RPAS to be piloted;
 - c) pass an practical examination with an examiner of an approved Training Centre.
4. Certificates are renewed by the approved Training Centres on the basis of performed activities, of a practical test by an examiner and of a valid medical certificate referred to point 2. The renewal of the certificate is notified to ENAC according to provisions set forth in art. 23.

Art. 22*RPAS pilot Licence*

1. In order to pilot RPAS in BVLOS operations or RPAS with RPA having operating take-off mass more than or equal to 25 kg, it is necessary to hold the RPA pilot licence issued by ENAC.

2. Licences are issued pursuant to procedures applicable to the issuance of flight licence personnel.
3. In order to get a certificate of medical fitness, pilots shall have a valid medical certificate of third class, issued according to ENAC regulation "health organisation and medical certificate to get license and aero statements".
4. In order to get a RPAS Pilot license, candidates have to show adequate basic aero knowledge and being able to fly a RPAS, following the attendance of courses scheduled by ENAC held in approved RPA training centres, which have a specific license..
5. The programs and the training requirements for cases which are not directly planned in this set of Regulations, will be examined by ENAC on a case by case basis.
6. Pilot licenses CPL and IR qualification are evaluated as basic aero knowledge. Further credits can be given by reason of training programs (see provisions subsection 5) evaluating each case
7. ENAC renews the licenses, on the base of the carried out activity, of a practical test given by an ENAC qualified examiner and of a valid medical record. (See subsection 3).
8. Till the issuance of the license according to the provisions of this article, ENAC establish, case by case, the requirements that are applicable to the pilots in order to fly RPAS in BVLOS specialized operations, or RPAS with RPA having operating take-off mass more than or equal to 25 kg.

Art. 23

RPAS Training Centre

1. RPAS Training Centre are approved by ENAC and they can provide both theoretical and practical training. They shall have an adequate organization and hold appropriate procedures, training material and training tools, at least one instructor and at least one examiner, recognized by ENAC for practical tests needed for the issuance and renewal of the RPA pilot certificates.



2. ENAC approves the RPAS Training Centre upon investigations on the organization, on the capability to grant the entire training to the pilot, on the procedures, on the training material and on the qualification of the personnel, instructor and examiner.
3. The Training Centre approved by ENAC shall notify to ENAC the issuance of the RPA pilot certificate within 3 days. The notification shall be made electronically on the ENAC web (www.enac.gov.it) filling required data. The Training Centre shall use the same procedure for the notification of the renewal of the RPA pilot certificates.

[Rev. 1 dated 21/12/2015]

SEZIONE V

Rules of circulation and use of airspace

Art. 24

VLOS operations

1. In VLOS operations the pilot shall maintain the direct visual contact with the RPA to manage the flight with regard to other airspace users, persons, vessels, vehicles and infrastructures in order to avoid collisions.
2. VLOS operations are permitted in daylight, up to maximum height of 150 m AGL, within maximum horizontal distance of 500 m, and shall be carried out safely, without causing damages to third parties. Higher distances and heights may be evaluated and authorized by ENAC as appropriate, following submission of an appropriate risk assessment by the RPAS operator.
3. In case of lost of visual contact with the RPA, either horizontally or vertically, the pilot shall terminate the flight as soon as possible.
4. Except as required by point 6 below, RPAS operations shall not be conducted:
 - a) within ATZ and beneath take-off and landing paths or at a distance less than 5 km from the airport (ARP or published geographical coordinates) where ATZ is not established;
 - b) within CTR, without prejudice to point 5 below;
 - c) within active restricted areas and prohibited areas.
5. Operations within CTR are permitted only to RPA with operating take-off mass less than 25 kg, up to maximum height of 70 m AGL and within maximum horizontal distance of 200 m. Beneath take off and landing paths, beyond ATZ boundaries and up to 15 km from the airport, maximum height shall be 30 m AGL.
6. When operations do not meet the requirements set forth in points 4a), 4b) and 5 above, operations shall be carried out according to procedures published by ENAC. When it is required to operate within airspace as referred in point 4c) above, operations shall be subject to specific authorization according to procedures published by ENAC.

[Rev. 1 dated 21/12/2015]

Art. 25

EVLOS Operations

1. In EVLOS operations, carried out according to VLOS horizontal and vertical distances or beyond such limits when so authorized, the pilot shall retain responsibility to avoid collision by adopting alternative means to maintain the visual contact with the RPA. Such responsibility can be discharged by means of visual observation, through observer and/or additional remote ground pilot stations. EVLOS operations shall be authorized by ENAC.
2. EVLOS operations shall be permitted according to the limitations and conditions required for VLOS operations, in accordance to provisions set forth in art. 24 above.

Art. 26

BVLOS Operations

1. BVLOS operations are carried out beyond VLOS horizontal or vertical distances, at a distance where procedure to avoid collisions by visual observation cannot be applied. BVLOS operations require systems and procedures to maintain separations and avoid collision which shall be authorized by ENAC.
2. BVLOS operations may require airspace segregation (permanent or temporary), without prejudice to limitations and conditions established by ENAC, based on the kind of operation and the findings of the risk assessment performed by the RPAS operator.

[Rev. 1 dated 21/12/2015]

Art. 27

Specific procedures and provision of air navigation services

1. In case of interfering traffic, VLOS and EVLOS RPAS operations shall not have right of way. By using capability to “see and avoid”, the remote pilot shall immediately land or descend to a safe height of 25 m or below, such as not to interfere with other aircraft.



2. “Non critical” VLOS and EVLOS operations conducted with RPA having operating take-off mass less than 25 kg, shall be permitted at a safe horizontal distance of at least 150 m from congested areas and at least 50 m from persons that are not under the direct control of the RPAS operator. In all other cases, the RPAS operator shall submit an appropriate risk assessment to ENAC.

3. Unless specific provisions by ENAC for particular operations and subject to agreement with the competent Air Navigation Service provider, by derogation to provisions set forth in the Regulation (EU) n. 923/2012 (SERA) and to ENAC Regulation “Regole dell’Aria Italia” (RAIT), air traffic services are not provided to RPAS operations and use of the transponder within national airspace is not required.

[Rev. 1 dated 21/12/2015]

SECTION VI**General provisions for RPAS****Art. 28***Record keeping*

1. The operator, the manufacturer, the design organization, the pilot shall keep and make available to ENAC documents issued in order to demonstrate compliance with this Regulation, upon to their respective responsibilities.

Art. 29*Occurrence reporting*

1. The operator, the manufacturer, the design organization, the pilot of RPAS with RPA having operating take-off mass less than, more than or equal to 25 kg, upon their respective responsibilities, shall report to ENAC, within 72 hours from the occurrence and pursuant to Regulation (UE) n. 376/2014, occurrences as per Annex V of the Regulation (UE) n. 2015/1018, in a form and manner established by ENAC. Pursuant to Regulation (UE) n. 996/2010, in case of accident or serious incident it is made mandatory to inform the Agenzia Nazionale Sicurezza Volo (ANSV - Italian Flight Safety Agency) in a form and manner established by ANSV, within 60 min.
2. Notwithstanding any confidentiality obligations under the legal acts of the national law, ENAC, in order to carry out its checks, is entitled to have unrestricted access to the RPAS, the flight data recorder, if installed, and any relevant documentation issued or used by the persons referred to in paragraph 1.

[Rev. 3 dated 24/03/2017]

Art. 30*Penalties*

1. Pursuant to Law No 241/1990 and subsequent amendments and additions, ENAC may adopt either measures of total or partial suspension of issued authorisations/certificates or nullify the privileges obtained by means of a declaration, in case of non-compliance with the provisions of this Regulation or when an operator shows as unable to ensure compliance.

The authorisations, approvals and privileges obtained by means of a declaration, may also be suspended if the operator does not allow ENAC to carry out inspections.

The period of suspension shall not exceed 6 months. ENAC notifies the operator with the act of suspension, the relevant reasons and the time allowed to restore compliance with the concerned provisions.

The authorisation/certification or privileges obtained as a result of a declaration, are revoked in the event that the operator fails to restore compliance with the requirements within the time allowed.

2. Carrying out specialized operations with RPAS without the necessary authorization in case of critical operations or without the necessary declaration by the operator in case of non critical operations, as well as the violation of safety measures during operations impose the application of penalties provided for in the Italian Navigation Code Articles 1174, 1216, 1228, 1231 as applicable.
3. In case the RPA pilot fails to comply with provisions set forth by this Regulation, the validity of the Certificate or of the Licence is suspended for a period varying between 1 to 12 months proportionately with the exposed non compliances, up to the revocation for serious non compliances. Different penalties set forth in applicable ENAC Regulations or in the Navigation Code are applicable.

[Rev. 1 dated 21/12/2015]

Art. 31

Data Link

1. The RPAS data link shall ensure functions of *Command e Control* with reliability, availability appropriate to the area of operations.
2. The data link shall make use of frequencies authorised and suitably selected so as to minimize the possibility of unwanted and/or unlawful interferences that might jeopardize the safety of operations.

Art. 32*Insurance*

1. No RPAS shall be operated unless it has in place a third party insurance, adequate for the operations and not less than the minimum insurance coverage of the table in Art. 7 of Regulation (CE) 785/2004 is in place for the operations.

Art. 33*Security*

1. The operator shall put in place appropriate measures to protect the RPAS from unlawful acts during operations, including the prevention of unlawful interference of the radio link.
2. The operator shall establish procedures to prevent unauthorized access to the area of operations, with particular attention to the remote ground pilot station, and to the storage location of the RPAS.
3. Data notified to ENAC by RPAS Training Centres referred to in art. 23, point 3 are made available to the Public Security Authorities.
4. RPAS operators are responsible to verify if provisions issued by Public Security Authorities are in place for the areas of operations.

Art. 34*Data protection and privacy*

1. When operations carried out by a RPAS could lead to necessity of the treatment of personal data, this fact shall be referred to in the documentation submitted for the application of the authorization.
2. Personal data shall be processed pursuant to Decree 30 June 2013 No 196, as amended (Italian Data Protection Code), with regard to the use of modalities that allow the identification of a person only upon necessity, pursuant to Art. 3 of the referred Code, as well as in accordance with the measures and precautions to protect people concerned as prescribed by the Authority in charge of the protection of personal data.

SECTION VII

Model Aircraft

Art. 35

General provisions

1. Model aircraft operator is responsible for operating aerial vehicle such as not to endanger persons or property on the ground and other airspace users, to maintain separation from obstacles, to avoid collisions during flights and to give way to any other airspace users.
2. Model aircraft operator is responsible for obtaining any permissions concerning the electromagnetic spectrum for the frequency used by the radio-control and for the respect of any relevant obligations.
3. Airspace reservation is not required if:
 - a) Model aircraft have the following characteristics:
 - 1) Operating take-off mass less than 25 kg;
 - 2) Maximum wing area of 500 dm²
 - 3) Maximum wing loading of 250 g/dm²
 - 4) Maximum total displacement of piston engine of 250 cm³; or maximum total electric power of 15 kW or maximum total thrust of turbine engines of 25 kg (250 N) or maximum total power of turboprop engines of 15 kW;
 - 5) free flight or circular tethered flight;
 - 6) hot-air balloons with the total weight of the gas container for the burners not exceeding 5 kg; and
 - b) the activity meets the following requirements:
 - 1) is carried out in daylight and model aircraft operator maintains direct visual contact with the model aircraft, without aid of optical and/or electronic devices;
 - 2) is conducted within specific areas selected by model aircraft operator, up to maximum height of 70 m AGL, within maximum radius of 200 m, over unpopulated areas, far enough from buildings, sensitive infrastructures and facilities;
 - 3) outside ATZ or at a distance greater than 5 km from the airport (ARP or published geographic coordinates) where the ATZ is not established;

- 4) outside CTR;
- 5) outside active restricted areas and prohibited areas.

4. When operations do not meet the requirements set forth in points point 3 above, activities shall be carried out within areas established by ENAC for model aircraft activities or, alternatively, within segregated airspace. In case of operations above 70 m AGL, model aircraft operator shall hold a qualification for flying model aircraft issued by Aero Club of Italy.

When weight and power/thrust conditions do not meet requirements set forth in point 3.a) above, operator shall be at least 18 years old and shall hold the qualification for flying model aircraft issued by Aero Club of Italy.

- 5. In case of interfering traffic, model aircraft shall not have right of way and shall be kept at a safety height such as not to endanger other aircraft.
- 6. Model aircraft operator shall respect all the provisions issued by local administrative authority.
- 7. Model aircraft operating over public areas shall not have installed any device/system which enables it to be used for specialised operations.
- 8. Model aircraft air shows and operations of model aircraft during air shows shall be carried out according to Aero Club of Italy provisions.
- 9. Class FAI F1 free flight model aircraft with mass less than 1,5 kg, circular tethered model aircraft and model aircraft used indoor are outside the scope of this Regulation.

[Rev. 1 dated 21/12/2015]

SECTION VIII
Final Provisions

Art. 36

Fees and Charges

1. As regards the administrative aspects related to the fulfillment of the contents of this Regulation, the provisions of ENAC “Fees and Charge Regulation” in force shall apply.

Art. 37

Entry into force and transition period

1. Without prejudice to the entry into force of the Issue 2 of this Regulation, i.e. September 16th 2015, amendment and additions introduced by this Revision 2 shall entry into force by the date of the publication of this Regulation in the ENAC website, with the following exceptions:
 - a) The use of ENAC website (www.enac.gov.it) as repository for declarations referred to in art. 9.2 and for the notification of certificates as per art. 23.3, with effect from the 1st of January 2016;
 - b) The obligation regarding the certificate referred to in art. 21, with effect from the 1st of July 2016. Qualifications of pilots already issued are kept valid until the 30th of June 2017 and can be converted starting from the 1st of July 2016;
 - c) RPAS Training Centre authorisations issued pursuant to the Rev. 1 of the Regulation are kept valid until the 1st of July 2016. After that date, they shall be considered invalid.

[Rev. 2 dated 22/12/2016]

2. Authorisations issued by ENAC to RPAS operators and declarations issued by operators pursuant to Rev. 1 of this Regulation are to be considered invalid/revoked starting from the 1st of July 2016. Within that date the said authorizations and declarations shall be converted in accordance with new requirements. With effect from the 1st of January 2016, declarations shall be confirmed by inclusion in the ENAC database.

[Rev. 1 dated 21/12/2015]