
Status: Point in time view as at 24/05/2019.

Changes to legislation: There are currently no known outstanding effects for the Commission Implementing Regulation (EU) 2019/947, PART A. (See end of Document for details)

ANNEX

UAS OPERATIONS IN THE ‘OPEN’ AND ‘SPECIFIC’ CATEGORIES

PART A

UAS OPERATIONS IN THE ‘OPEN’ CATEGORY

UAS.OPEN.010 General provisions

- (1) The category of UAS ‘open’ operations is divided into three subcategories A1, A2 and A3, on the basis of operational limitations, requirements for the remote pilot and technical requirements for UAS.
- (2) Where the UAS operation involves the flight of the unmanned aircraft starting from a natural elevation in the terrain or over terrain with natural elevations, the unmanned aircraft shall be maintained within 120 metres from the closest point of the surface of the earth. The measurement of distances shall be adapted accordingly to the geographical characteristics of the terrain, such as plains, hills, mountains.
- (3) When flying an unmanned aircraft within a horizontal distance of 50 metres from an artificial obstacle taller than 105 metres, the maximum height of the UAS operation may be increased up to 15 metres above the height of the obstacle at the request of the entity responsible for the obstacle.
- (4) By way of derogation from point (2), unmanned sailplanes with a MTOM, including payload, of less than 10 kg, may be flown at a distance in excess of 120 metres from the closest point of the surface of the earth, provided that the unmanned sailplane is not flown at a height greater than 120 metres above the remote pilot at any time.

UAS.OPEN.020 UAS operations in subcategory A1

UAS operations in subcategory A1 shall comply with all of the following conditions:

- (1) for unmanned aircraft referred to in point (5)(d), be conducted in such a way that a remote pilot of the unmanned aircraft does not overfly assemblies of people and reasonably expects that no uninvolved person will be overflowed. In the event of unexpected overflight of uninvolved persons, the remote pilot shall reduce as much as possible the time during which the unmanned aircraft overflies those persons;
- (2) in the case of an unmanned aircraft referred to in points (5)(a), (5)(b) and (5)(c), be conducted in such a way that the remote pilot of the unmanned aircraft may overfly uninvolved persons but shall never overfly assemblies of people;
- (3) by way of derogation from point (d) of paragraph 1 of Article 4, be conducted, when the follow-me mode is active, up to a distance of 50 metres from the remote pilot;
- (4) be performed by a remote pilot:
 - (a) familiarised with the user's manual provided by the manufacturer of the UAS;
 - (b) in the case of an unmanned aircraft class C1, as defined in Part 2 of the Annex to Delegated Regulation (EU) 2019/945, who has completed an online training course followed by completing successfully an online theoretical knowledge examination provided by the competent authority or by an entity recognised by the competent authority of the Member State of registration

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of the UAS operator. The examination shall comprise 40 multiple-choice questions distributed appropriately across the following subjects:

- i. air safety;
- ii. airspace restrictions;
- iii. aviation regulation;
- iv. human performance limitations;
- v. operational procedures;
- vi. UAS general knowledge;
- vii. privacy and data protection;
- viii. insurance;
- ix. security.

(5) be performed with an unmanned aircraft that:

- (a) has an MTOM, including payload, of less than 250 g and a maximum operating speed of less than 19 m/s, in the case of a privately built UAS; or
- (b) meets the requirements defined in point (a) of Article 20;
- (c) is marked as class C0 and complies with the requirements of that class, as defined in Part 1 of the Annex to Delegated Regulation (EU) 2019/945; or
- (d) is marked as class C1 and complies with the requirements of that class, as defined in Part 2 of the Annex to Delegated Regulation (EU) 2019/945 and is operated with active and updated direct remote identification and geo-awareness systems.

UAS.OPEN.030 UAS operations in subcategory A2

UAS operations in subcategory A2 shall comply with all of the following conditions:

- (1) be conducted in such a way that the unmanned aircraft does not overfly uninvolved persons and the UAS operations take place at a safe horizontal distance of at least 30 metres from them; the remote pilot may reduce the horizontal safety distance down to a minimum of 5 metres from uninvolved persons when operating an unmanned aircraft with an active low speed mode function and after evaluation of the situation regarding:
 - (a) weather conditions,
 - (b) performance of the unmanned aircraft,
 - (c) segregation of the overflowed area.
- (2) be performed by a remote pilot who is familiar with the user's manual provided by the manufacturer of the UAS and holds a certificate of remote pilot competency issued by the competent authority or by an entity recognised by the competent authority of the Member State of registration of the UAS operator. This certificate shall be obtained after complying with all of the following conditions and in the order indicated:
 - (a) completing an online training course and passed the online theoretical knowledge examination as referred to in point (4)(b) of point UAS.OPEN.020;

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Changes to legislation: *There are currently no known outstanding effects for the Commission Implementing Regulation (EU) 2019/947, PART A. (See end of Document for details)*

- (b) completing a self-practical training in the operating conditions of the subcategory A3 set out in points (1) and (2) of point UAS.OPEN.040;
 - (c) declaring the completion of the self-practical training defined in point (b) and passing an additional theoretical knowledge examination provided by the competent authority or by an entity recognised by the competent authority of the Member State of registration of the UAS operator. The examination shall comprise at least 30 multiple-choice questions aimed at assessing the remote pilot's knowledge of the technical and operational mitigations for ground risk, distributed appropriately across the following subjects:
 - i. meteorology;
 - ii. UAS flight performance;
 - iii. technical and operational mitigations for ground risk.
- (3) be performed with an unmanned aircraft which is marked as class C2 and complies with the requirements of that class, as defined in Part 3 of the Annex to Delegated Regulation (EU) 2019/945, and is operated with active and updated direct remote identification and geo-awareness systems.

UAS.OPEN.040 UAS operations in subcategory A3

UAS operations in subcategory A3 shall comply with all of the following conditions:

- (1) be conducted in an area where the remote pilot reasonably expects that no uninvolved person will be endangered within the range where the unmanned aircraft is flown during the entire time of the UAS operation;
- (2) be conducted at a safe horizontal distance of at least 150 metres from residential, commercial, industrial or recreational areas;
- (3) be performed by a remote pilot who has completed an online training course and passed an online theoretical knowledge examination as defined in point (4)(b) of point UAS.OPEN.020;
- (4) be performed with an unmanned aircraft that:
 - (a) has an MTOM, including payload, of less than 25 kg, in the case of a privately built UAS, or
 - (b) meets the requirements defined in point (b) of Article 20;
 - (c) is marked as class C2 and complies with the requirements of that class, as defined in Part 3 of the Annex to Delegated Regulation (EU) 2019/945 and is operated with active and updated direct remote identification and geo-awareness systems or;
 - (d) is marked as class C3 and complies with the requirements of that class, as defined in Part 4 of the Annex to Delegated Regulation (EU) 2019/945 and is operated with active and updated direct remote identification and geo-awareness systems; or
 - (e) is marked as class C4 and complies with the requirements of that class, as defined in Part 5 of the Annex to Delegated Regulation (EU) 2019/945.

UAS.OPEN.050 Responsibilities of the UAS operator

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Changes to legislation: There are currently no known outstanding effects for the Commission Implementing Regulation (EU) 2019/947, PART A. (See end of Document for details)

The UAS operator shall comply with all of the following:

- (1) develop operational procedures adapted to the type of operation and the risk involved;
- (2) ensure that all operations effectively use and support the efficient use of radio spectrum in order to avoid harmful interference;
- (3) designate a remote pilot for each UAS operation;
- (4) ensure that the remote pilots and all other personnel performing a task in support of the operations are familiar with the user's manual provided by the manufacturer of the UAS, and:
 - (a) have appropriate competency in the subcategory of the intended UAS operations in accordance with points UAS.OPEN.020, UAS.OPEN.030 or UAS.OPEN.040 to perform their tasks or, for personnel other than the remote pilot, have completed an on-the-job-training course developed by the operator;
 - (b) are fully familiar with the UAS operator's procedures;
 - (c) are provided with the information relevant to the intended UAS operation concerning any geographical zones published by the Member State of operation in accordance with Article 15;
- (5) update the information into the geo-awareness system when applicable according to the intended location of operation;
- (6) in the case of an operation with an unmanned aircraft of one of the classes defined in Parts 1 to 5 of Delegated Regulation (EU) 2019/945, ensure that the UAS is:
 - (a) accompanied by the corresponding EU declaration of conformity, including the reference to the appropriate class; and
 - (b) the related class identification label is affixed to the unmanned aircraft.
- (7) Ensure in the case of an UAS operation in subcategory A2 or A3, that all involved persons present in the area of the operation have been informed of the risks and have explicitly agreed to participate.

UAS.OPEN.060 Responsibilities of the remote pilot

- (1) Before starting an UAS operation, the remote pilot shall:
 - (a) have the appropriate competency in the subcategory of the intended UAS operations in accordance with points UAS.OPEN.020, UAS.OPEN.030 or UAS.OPEN.040 to perform its task and carry a proof of competency while operating the UAS, except when operating an unmanned aircraft referred to in points (5)(a), (5)(b) or (5)(c) of point UAS.OPEN.020;
 - (b) obtain updated information relevant to the intended UAS operation about any geographical zones published by the Member State of operation in accordance with Article 15;
 - (c) observe the operating environment, check the presence of obstacles and, unless operating in subcategory A1 with an unmanned aircraft referred to in points (5)(a), (5)(b) or (5)(c) of point UAS.OPEN.020, check the presence of any uninvolved person;

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- (d) ensure that the UAS is in a condition to safely complete the intended flight, and if applicable, check if the direct remote identification works properly;
 - (e) if the UAS is fitted with an additional payload, verify that its mass does not exceed the MTOM defined by the manufacturer or the MTOM limit of its class.
- (2) During the flight, the remote pilot shall:
- (a) not perform duties under the influence of psychoactive substances or alcohol or when it is unfit to perform its tasks due to injury, fatigue, medication, sickness or other causes;
 - (b) keep the unmanned aircraft in VLOS and maintain a thorough visual scan of the airspace surrounding the unmanned aircraft in order to avoid any risk of collision with any manned aircraft. The remote pilot shall discontinue the flight if the operation poses a risk to other aircraft, people, animals, environment or property;
 - (c) comply with the operational limitations in geographical zones defined in accordance with Article 15;
 - (d) have the ability to maintain control of the unmanned aircraft, except in the case of a lost link or when operating a free-flight unmanned aircraft;
 - (e) operate the UAS in accordance with the user's manual provided by the manufacturer, including any applicable limitations;
 - (f) comply with the operator's procedures when available.
- (3) During the flight, remote pilots and UAS operators shall not fly close to or inside areas where an emergency response effort is ongoing unless they have permission to do so from the responsible emergency response services.
- (4) For the purposes of point (2)(b), remote pilots may be assisted by an unmanned aircraft observer, situated alongside them, who, by unaided visual observation of the unmanned aircraft, assists the remote pilot in safely conducting the flight. Clear and effective communication shall be established between the remote pilot and the unmanned aircraft observer.

UAS.OPEN.070 Duration and validity of the remote pilot online theoretical competency and certificates of remote pilot competency

- (1) The remote pilot online theoretical competency, required by points (4)(b) of point UAS.OPEN.020 and point (3) of point UAS.OPEN.040, and the certificate of remote pilot competency, required by point (2) of point UAS.OPEN.030, shall be valid for five years.
- (2) The renewal of the remote pilot online theoretical competency and of the certificate of remote pilot competency is subject to the demonstration of competencies in accordance with point (2) of point UAS.OPEN.030 or point (4)(b) of point UAS.OPEN.020.

Status:

Point in time view as at 24/05/2019.

Changes to legislation:

There are currently no known outstanding effects for the Commission Implementing Regulation (EU) 2019/947, PART A.