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Legal basis:

Aviation Act (864/2014), Sections 5, 9 and 57

Act on Transport Services (320/2017), Part II Chapter 12 Section 8

Implemented EU legislation:

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Modification details:

This regulation replaces the earlier aviation regulation OPS M1-32 on the use of remotely piloted aircraft and model aircraft (TRAFI/90924/03.04.00.00/2016), issued by the Finnish Transport Safety Agency on 23 December 2016, and aviation regulation OPS M1-32 on the use of remotely piloted aircraft and model aircraft in aviation (TRAFI/334638/03.04.00.00/2017), issued by the Finnish Transport Safety Agency on 26 November 2018.

USE OF REMOTELY PILOTED AIRCRAFT AND MODEL AIRCRAFT IN AVIATION

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1 SCOPE OF APPLICATION

This Regulation governs the use of remotely piloted aircraft, and of model aircraft weighing more than 250 g, in Finland. The regulation is not applicable to the use of such aircraft indoors or to military aviation.

2 DEFINITIONS

For the purposes of this Regulation,

aerial work means the use of an aircraft for specialised services;

airport means an aerodrome where flight information service, alerting service, air traffic advisory service and air traffic control service is permanently provided;

beyond visual line-of-sight (BVLOS) operation means an operation in which the remote pilot maintains, without the help of an RPA observer, contact with the remotely piloted aircraft with the help of instrumentation;

commander of a remotely piloted aircraft means a remote pilot appointed by the operator or owner of a remotely piloted aircraft, or an individual who is in charge of a remotely piloted flight and who is in command and has responsibility for safety during the flight;

densely populated area means an area with 800 or more residents or workplaces per square kilometre;

extended visual line-of-sight (E-VLOS) operation means an operation in which the RPA observer observes the airspace surrounding the remotely piloted aircraft without the help of instrumentation and assists the remote pilot in the safe conduct of the flight;

free-flight model aircraft means a model aircraft in which there is no command link between the model aircraft and the pilot, with the exception of the irreversible command functions used to end the flight. A free-flight model aircraft does not have a command system based on positioning systems or other sensors. The maximum mass of a free-flight model aircraft is 1 kg;

holder of a remotely piloted aircraft means a natural or legal person to whom an aircraft has been entrusted;

model aircraft means a device designed for flight that does not carry a pilot and that is used for recreational or sporting purposes, excluding toy aircraft designed or intended for use, whether or not exclusively, in play by children under 14 years of age;

model aircraft flying area means a predetermined area published in the aeronautical information system, where it is allowed to deviate from the maximum flying height;

Occurrence Regulation means Regulation (EU) No 376/2014 of the European Parliament and of the Council on the reporting, analysis and follow-up of occurrences in civil aviation, amending Regulation (EU) No 996/2010 of the European Parliament and of the Council and repealing Directive 2003/42/EC of the European Parliament and of the Council and Commission Regulations (EC) No 1321/2007 and (EC) No 1330/2007;

operator of a remotely piloted aircraft means a natural or legal person to whom the owner or holder of an aircraft has given the aircraft to use;

owner of a remotely piloted aircraft means a natural or legal person who owns a remotely piloted aircraft;

pilot means a person in charge of flying a model aircraft;

remote pilot means an individual who is familiar with the use of a remotely piloted aircraft and who manipulates the flight controls during flight time;

remote pilot station (RPS) means a component of a remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft;

remotely piloted aircraft (RPA) means an unmanned aircraft that is piloted from a remote pilot station and used for aerial work;

remotely piloted aircraft system (RPAS) means a remotely piloted aircraft, its associated remote pilot stations, the required command and control links and any other specified system components that are required for the use of remotely piloted aircraft;

RPA observer means an individual authorised by a remote pilot to maintain a continuous awareness of the location of the remotely piloted aircraft, observe the airspace surrounding the remotely piloted aircraft without the help of instrumentation, and to assist the remote pilot in the safe conduct of the flight;

take-off mass means the total mass of a remotely piloted aircraft or model aircraft when the take-off is commenced, including all equipment on board;

unmanned aircraft (UA) means an aircraft that is designed to fly without a pilot on board; this does not include model aircraft;

vicinity of an obstacle means aviation closer than at a horizontal distance of 30 metres to an obstacle or at a distance which is half of the height of the obstacle; the distance which is greater of these distances is regarded as flying in the vicinity of an obstacle;

visual line-of-sight (VLOS) operation means an operation in which the remote pilot maintains direct unaided visual contact with the remotely piloted aircraft or model aircraft. First Person View (FPV) operations are not regarded as VLOS operations.

3 USE OF REMOTELY PILOTED AIRCRAFT IN AVIATION

3.1 GENERAL REQUIREMENTS

- 3.1.1 No aerial work certificate is required for the use of remotely piloted aircraft for aviation purposes as defined in this Regulation, and the use of remotely piloted aircraft for aviation purposes is excluded from the scope of other provisions on aerial work.
- 3.1.2 Operators of remotely piloted aircraft must provide the Finnish Transport Safety Agency with the following information:
- a) Details of the operator;
 - b) Basic technical information concerning the aircraft;
 - c) Nature and scope of the operations;
 - d) Information about whether operations are to take place over densely populated areas;
 - e) Information about whether operations are to take place over an open-air assembly of persons.
- 3.1.3 The notification must be submitted before a remotely piloted aircraft is used for aviation purposes for the first time. Operators of remotely piloted aircraft must notify the Finnish Transport Safety Agency without delay of any changes to the information provided.
- 3.1.4 All flights must be arranged so as to minimise risks to third persons and their property as well as noise pollution.
- 3.1.5 Flights must not endanger, inconvenience or prevent the operations of any unit or authority that arrives to the site for an emergency, accident, rescue operation or other similar exceptional situation.

- 3.1.6 Remote pilots must be able to operate aircraft safely and be familiar with emergency procedures. The person responsible for a remotely piloted flight shall be at least 18 years of age.
- 3.1.7 All remotely piloted aircraft must be equipped with a system, or alternatively the remote pilot must have a procedure in place, for dealing with a breakdown in communications relating to the control or monitoring of the aircraft or a fault in the aircraft that results in loss of control. The system or procedure must ensure that the risk to third persons and their property is minimised.
- 3.1.8 All remotely piloted aircraft must carry the name and contact details of the operator.
- 3.1.9 The following details must be logged for all remotely piloted flights:
- a) Date of the flight;
 - b) Location of take-off and landing;
 - c) Commander of the aircraft;
 - d) Manufacturer and model of the aircraft;
 - e) The start and end time of the flight or series of flights;
 - f) Whether the flight is
 - a. a visual line-of-sight (VLOS) operation, or
 - b. a beyond visual line-of-sight (BVLOS) operation; and
 - g) The nature of the flight operation and, where applicable, the presence of an RPA observer.
- 3.1.10 Details of the flights must be stored for a period of two years.
- 3.1.11 When a remotely piloted aircraft is used in an area where other aviation operations are not prohibited or that has not been specifically designated for flying remotely piloted aircraft, the following conditions must be satisfied unless the Finnish Transport Safety Agency has granted an exemption pursuant to paragraph 5 of this regulation:
- a) The take-off mass of the aircraft must not exceed 25 kilograms. Any rescue device attached to the aircraft is not counted in the take-off mass.
 - b) The operation must be based on visual line-of-sight or extended visual line-of-sight. The aircraft must be controllable at all times, and the aircraft must fly close enough to the remote pilot or RPA observer to enable other air traffic and any persons not involved in the operations to be detected and the need to take evasive action to be assessed reliably, taking account of the prevailing weather conditions and the amount of daylight;
 - c) If an RPA observer is present, the remote pilot and RPA observer must be able to communicate with each other using a reliable means of communication in the event that direct voice communication is not possible; and

- d) The flight must take place at an altitude of less than 150 metres from the surface of the ground or water. The altitude restriction does not apply to operations that involve flying in the vicinity of a fixed obstacle with the permission of the owner of the object. The altitude restriction is also not applicable to flights in areas designated for flying model aircraft and published in the aeronautical information system, or to operations separately agreed in accordance with paragraph 3.1.12 e).

3.1.12 Flying remotely piloted aircraft within a Control Zone (CTR), Flight Information Zone (FIZ) or Radio Mandatory Zone (RMZ), is permitted:

- a) in the vicinity of a fixed obstacle, when the horizontal distance to the runway edges of an airport is more than 1 kilometre but less than 3 kilometres. Flying closer than at a distance of 1 kilometre to the runway edges of an airport or above a fixed obstacle is not allowed; and
- b) at altitudes of not more than 50 metres from the surface of the ground or water, provided that the horizontal distance to the runway edges of an airport is more than 3 kilometres.
- c) However, arrangements must always be made separately with the air traffic service provider when flying aircraft within the control zones of Jyväskylä (EFJY) and Utti (EFUT) airports.
- d) The altitude limits referred to in paragraphs a) and b) may be exceeded with 15 metres in the immediate vicinity of an obstacle if the flight is performed with the permission of the owner of the obstacle.
- e) If the flight is to be conducted in a way different from that described in paragraphs a), b) or c), the flight arrangements must be agreed upon separately with the air traffic service provider.

3.1.13 When flying remotely piloted aircraft, special attention must be given to air traffic in the vicinity of uncontrolled aerodromes and to aviation activities in areas designated for flying model aircraft. Any local instructions must be followed where applicable. Flying closer than at a horizontal distance of 1 kilometre to the runway edges of an uncontrolled aerodrome is forbidden, unless:

- a) instructions for flying in the area have been published, allowing flights provided that the instructions are followed, or
- b) the flight arrangements have been agreed upon separately with the operator of the uncontrolled aerodrome.

3.1.14 Flying remotely piloted aircraft closer than at a horizontal distance of 600 meters to a heliport is forbidden, unless the flight arrangements have been agreed upon separately with the heliport operator.

3.1.15 Remotely piloted aircraft must give way to other aircraft.

3.1.16 Flying remotely piloted aircraft closer than at a horizontal distance of 50 metres to an open-air assembly of persons or over an assembly of persons is permitted if the following requirements are met:

- a) The maximum take-off mass of the aircraft must not exceed 7 kilograms. Any rescue device attached to the aircraft is not counted in the take-off mass;
- b) The aircraft must be flown in direct visual contact;
- c) The aircraft must be flown at an altitude that, in the case of an emergency, allows the aircraft to be landed in a manner that minimises risks to third persons or their property, or the aircraft must be so equipped or have such characteristics that the risk to third persons and their property is minimal;
- d) The operator of the remotely piloted aircraft shall have drawn up a written description of the operations, including information on the operating area and operating time as well as the flight altitudes and aircraft used;
- e) The operator of the remotely piloted aircraft shall have drawn up a written safety assessment in which the hazards are identified and the risks assessed and mitigated;
- f) The operator of the remotely piloted aircraft shall have drawn up written operational instructions that include a description of both normal operations and emergency/malfunction procedures; and
- g) The documents referred to in paragraphs d), e) and f) above shall be submitted to the Finnish Transport Safety Agency before the flights are commenced.

3.1.17 Flying remotely piloted aircraft over a densely populated area is permitted if the following requirements are met:

- a) The maximum take-off mass of the aircraft does not exceed 3 kilograms. The remote pilot must be familiar with the area, and must have ensured that the device is technically sound and assessed that the flight can be performed safely. Any rescue device attached to the aircraft is not counted in the take-off mass;
- b) The aircraft must be flown in direct visual contact;
- c) The aircraft must be flown at an altitude that, in the case of an emergency, allows the aircraft to be landed in a manner that minimises risks to third persons or their property, or the aircraft must be so equipped or have such characteristics that the risk to third persons and their property is minimal;
- d) The maximum take-off mass of the aircraft is more than 3 kilograms but does not exceed 7 kilograms. The aircraft operator must have drawn up a written description of the operations that includes information on the operating area and operating time as well as the flight altitudes and aircraft used, a safety assessment in which the hazards are identified and the risks assessed and mitigated, and written operational instructions that include a description of both normal operations and emergency/malfunction procedures. The description of operations, safety assessment and operational instructions must be retained for a period of at least three months after the operations have ceased, and presented to the Finnish Transport Safety Agency upon request.

3.1.18 Any occurrences involving remotely piloted aircraft, including accidents and serious incidents, must be reported to the Finnish Transport Safety Agency in accordance with the Occurrence Regulation and Advisory Circular GEN T1-4.

3.2 BEYOND VISUAL LINE-OF-SIGHT OPERATIONS

3.2.1 Beyond visual line-of-sight (BVLOS) operations without an RPA observer shall be performed in areas that are specifically reserved for that purpose. In addition, the aircraft operator shall draw up the following documents concerning the intended operations:

- a) a written description of the operations that includes information on the operating area and operating time as well as the flight altitudes and aircraft used;
- b) a written safety assessment in which the hazards are identified and the risks assessed and mitigated;
- c) operational instructions that include a description of both normal operations and emergency/malfunction procedures;

The documents referred to in paragraphs a), b) and c) above shall be submitted to the Finnish Transport Safety Agency before the flights are commenced.

3.2.2 The general requirements in paragraph 3.1 of this regulation must be complied with in BVLOS operations. However, exceptions to the requirements contained in paragraphs 3.1.11 b), 3.1.11 c) and 3.1.11 d) of this regulation as well as to the obligation to give way as referred to in paragraph 3.1.15 of this regulation can be made in BVLOS operations when necessary.

3.3 REQUIREMENTS FOR STATE AVIATION

3.3.1 The general requirements in paragraph 3.1 and the requirements on beyond visual line-of-sight operations in paragraph 3.2 of this regulation shall be complied with in state aviation.

3.3.2 In state aviation, exceptions to the requirements in paragraphs 3.1.8, 3.1.11 d), 3.1.12 d), 3.1.16 and 3.1.17 can, however, be made when the nature of statutory duties so requires. In addition, a statutory mission beyond visual line-of-sight can, in individual cases and for especially weighty reasons, be performed without segregating an area from other airspace or reserving it for the specific operations as referred to in paragraph 3.2.1, if the need for the operation could not have been anticipated because of its urgency. The airspace management cell shall be informed of initiation of the activities without delay.

Exceptions to the requirements also require that the aircraft operator has drawn up:

- a) a written description of the operations that includes information on the operating area and operating time as well as the flight altitudes and aircraft used;
- b) a written safety assessment in which the hazards are identified and the risks assessed and mitigated;
- c) written operational instructions that include a description of both normal operations and emergency/malfunction procedures.

- 3.3.3 Notifications as referred to in paragraphs 3.1.2 and 3.1.3 shall be agreed upon separately with the Finnish Transport Safety Agency.
- 3.3.4 For state aviation, long-term procedures of a permanent nature may be agreed for meeting the requirements in paragraph 3.1.12 of this regulation. The procedures must be coordinated with the air navigation service provider and the Defence Forces.
- 3.3.5 For state aviation, special arrangements may be agreed with the airport operator for meeting the requirements in paragraphs 3.1.13 and 3.1.14 of this regulation.

4 MODEL AIRCRAFT FLYING

- 4.1 All flights must be arranged so as to minimise risks to third persons and their property as well as noise pollution.
- 4.2 Flying model aircraft closer than at a horizontal distance of 50 metres to an open-air assembly of persons or over an assembly of persons is not allowed.
- 4.3 The take-off mass of a model aircraft must not exceed 25 kilograms. Any rescue device attached to the aircraft is not counted in the take-off mass.
- 4.4 Flying a model aircraft with a take-off mass not exceeding 3 kilograms over a densely populated area is permitted, provided that the pilot is familiar with the area and has ensured that the device is technically sound and assessed that the flight can be performed safely. Flying a model aircraft with a take-off mass in excess of 3 kilograms over a densely populated area is not permitted.
- 4.5 Flights must not endanger, inconvenience or prevent the operations of any unit or authority that arrives to the site for an emergency, accident, rescue operation or other similar exceptional situation.
- 4.6 All model aircraft must carry the name and contact details of the operator.
- 4.7 The operation must be based on visual line-of-sight. The model aircraft must be controllable at all times, and the aircraft must be flown close enough to the pilot to enable other air traffic and obstacles to be detected and the need to take evasive action to be assessed reliably, taking account of the prevailing weather conditions and the amount of daylight.
- 4.8 First Person View (FPV) flying is allowed using at least one assistant to ensure the safety of the operations. The assistant must be able to observe the surroundings and assess the need to take evasive action reliably. The assistant shall maintain a continuous awareness of the location of the model aircraft, observe the airspace surrounding the model aircraft without the help of instrumentation, and assist the pilot in the safe conduct of the flight. The assistant and the pilot shall have direct voice contact without communication devices.
- 4.9 The flight must take place at an altitude of less than 150 metres from the surface of the ground or water, except in areas that have been designated for flying model aircraft and published in the aeronautical information system. The altitude restriction does not apply to operations that involve flying in the vicinity of a fixed obstacle with the permission of the owner of the object.

- 4.10 Flying model aircraft within a Control Zone (CTR), Flight Information Zone (FIZ) or Radio Mandatory Zone (RMZ), is permitted:
- a) in the vicinity of a fixed obstacle, when the horizontal distance to the runway edges of an airport is more than 1 kilometre but less than 3 kilometres. Flying closer than at a distance of 1 kilometre to the runway edges of an airport or above a fixed obstacle is not allowed; and
 - b) at altitudes of not more than 50 metres from the surface of the ground or water, provided that the horizontal distance to the runway edges of an airport is more than 3 kilometres.
 - c) However, arrangements must always be made separately with the air traffic service provider when flying aircraft within the control zones of Jyväskylä (EFJY) and Utti (EFUT) airports.
 - d) The altitude limits referred to in paragraphs a) and b) may be exceeded with 15 metres in the vicinity of an obstacle if the flight is performed with the permission of the owner of the object.
 - e) If the flight is to be conducted in a way different from that described in paragraphs a), b) or c), the flight arrangements must be agreed upon separately with the air traffic service provider.
- 4.11 When flying model aircraft, special attention must be given to air traffic in the vicinity of uncontrolled aerodromes and to aviation activities in areas designated for flying model aircraft. Any local instructions must be followed where applicable. Flying closer than at a horizontal distance of 1 kilometre to the runway edges of an uncontrolled aerodrome is forbidden, unless:
- a) instructions for flying in the area have been published, allowing flights provided that the instructions are followed, or
 - b) the flight arrangements have been agreed upon separately with the operator of the uncontrolled aerodrome.
- 4.12 Flying model aircraft closer than at a horizontal distance of 600 meters to a heliport is forbidden, unless the flight arrangements have been agreed upon separately with the heliport operator.
- 4.13 Model aircraft must give way to all other aircraft.
- 4.14 Paragraphs 4.7, 4.9 and 4.13 do not apply to free-flight model aircraft.

5 EXEMPTIONS

- 5.1 The Finnish Transport Safety Agency may, upon application, grant exemptions from the conditions laid down in paragraphs 3.1.11 a), 3.1.11 d), 3.1.16 a), 3.1.17 a), 3.1.17 b), 3.1.17 d), 4.2, 4.3, 4.4 and 4.9 of this Regulation due to operational needs, provided that they do not compromise safety.

- 5.2 The Finnish Transport Safety Agency may, upon application, grant temporary exemptions from the conditions laid down in this Regulation for testing and research purposes, provided that the requested exemptions do not compromise safety.
- 5.3 When requesting an exemption, applicants must provide
- a) a written description of the operations that includes information on the operating area and operating time as well as the flight altitudes and aircraft used;
 - b) a written safety assessment in which the hazards are identified and the risks assessed and mitigated;
 - c) written operational instructions that include a description of both normal operations and emergency/malfunction procedures.

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