



Australian Government
Civil Aviation Safety Authority

Instrument number CASA EX152/14

I, PETER WILLIAM BOYD, Acting Deputy Director of Aviation Safety, a delegate of CASA, make this instrument under regulation 11.160 of the *Civil Aviation Safety Regulations 1998 (CASR 1998)*.

[Signed P. Boyd]

Peter Boyd
 Acting Deputy Director of Aviation Safety

17 November 2014

Exemption – operation of UAV near people and at night – Volito Pty Ltd, trading as Hoverscape

1 Application

This instrument applies to the operation of a remotely piloted multi-rotor (the **UAV**) by Volito Pty Ltd, trading as Hoverscape (the **operator**), Aviation Reference Number (**ARN**) 829748, when used for aerial photography, aerial spotting or aerial surveying.

2 Definitions

- (1) In this instrument:
AGL means above ground level.
operator’s personnel means a person employed or engaged by the operator to assist in the operation of the UAV.
- (2) In this instrument, the distance from the UAV is measured from a point on the ground vertically below the UAV.

3 Exemption

- (1) The operator is exempt from subregulation 101.095 (1) of CASR 1998, in relation to operations at night, when operating the UAV.
- (2) The operator is exempt from regulation 101.245 of CASR 1998 when operating the UAV.

4 Conditions

- (1) The UAV must only be flown by Fiona Coralie Church, ARN 570346, the operator’s Chief UAV Controller.
- (2) The exemption in subsection 3 (1) is subject to the conditions mentioned in Schedule 1.

- (3) The exemption in subsection 3 (2) is subject to the conditions mentioned in Schedule 2.
- (4) The exemptions are subject to the general conditions mentioned in Schedule 3.

5 Expiry

This instrument expires at the end of May 2015, as if it had been revoked by another instrument.

Schedule 1 Conditions of exemption — operation of UAV at night

- 1 Ground station software must be used to assist in assessing the UAV's position.
- 2 The take-off and landing areas must be illuminated, for example by street lighting, so that the position and orientation of the UAV can be established and maintained by the Chief UAV Controller by visual reference.
- 3 The UAV must have orientation lighting, such as LED lights on the front and rear arms of the UAV.
- 4 The Chief UAV Controller must ensure that:
 - (a) visual line of sight contact with the UAV is maintained at all times; and
 - (b) the UAV is flown in visual meteorological conditions.

Schedule 2 Conditions of exemption — operation of UAV near people

- 1 The wind speed, including gusts, at a height of 2 metres AGL at the location of the operation, must not exceed 15 knots.
- 2 The operator must establish exclusion zones appropriate for the safe operation of the UAV and ensure adequate measures have been taken to prevent members of the public encroaching on the exclusion zones at all times.
- 3 The operator must ensure that the Chief UAV Controller is positioned so that they are:
 - (a) directly behind the UAV and can observe the entire forward flight path; or
 - (b) close enough to the subject of the photography to ensure adequate depth perception.
- 4 Before operating the UAV within 30 metres of a person who is not one of the operator's personnel, the operator must ensure that the person:
 - (a) is briefed in accordance with the operator's operations manual; and
 - (b) is informed of the responses required in an emergency during the event; and
 - (c) after he or she has been briefed and informed, as mentioned in paragraphs (a) and (b), has provided consent in writing to the operator operating the UAV between 15 and 30 metres of the person.
- 5 Subject to clause 6, the operator must not operate the UAV within 15 metres of a person who is not one of the operator's personnel.
- 6 If:
 - (a) the UAV is in transit during its launch or recovery phase; and
 - (b) the UAV is not higher than 2 metres AGL; and
 - (c) a person who is not one of the operator's personnel, after he or she has been briefed and informed as mentioned in paragraphs 4 (a) and (b), has

provided consent in writing to the operator operating the UAV between 5 and 15 metres of the person;

the operator may operate the UAV within 15 metres, but not within 5 metres, of the person.

Schedule 3 General conditions

- 1 A risk assessment must be carried out by the operator's Chief UAV Controller before any operation under this exemption.
 - 2 Subject to clause 3, the operator must conduct operations in accordance with its operations manual.
 - 3 If it is impossible for the operator to comply with a provision in the operator's operations manual and a condition in the Schedules, the operator must comply with the condition in the Schedules.
 - 4 The UAV must be a multi-rotor UAV operated by the operator and fitted with all of the following equipment:
 - (a) a GPS hold and return to home function and equipment for the reception of at least 7 GNSS satellites;
 - (b) a dual parallel redundant battery system with duplicated battery mountings.
 - 5 The UAV must have demonstrated the ability to fly safely with 1 motor inoperative at the maximum take-off weight for the operation.
 - 6 Details of the exemptions and conditions must be included in the operator's operations manual.
 - 7 The operator must not operate the UAV outdoors:
 - (a) in rain; or
 - (b) if thunderstorms are observed or reported within 5 kilometres of the location of the proposed operation.
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