



# Australian Government

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## Civil Aviation Safety Authority

Instrument number CASA EX133/13

I, GERARD JOHN CAMPBELL, Executive Manager, Operations Division, a delegate of CASA, make this instrument under regulation 11.160 of the *Civil Aviation Safety Regulations 1998 (CASR 1998)*.

**[Signed G.J. Campbell]**

Gerard J. Campbell  
Executive Manager  
Operations Division

19 December 2013

### Exemption — operation of UAV

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#### 1 Application

This instrument applies to the operation of a remotely-piloted multi-copter (the *UAV*) operated by Altitude Imaging Pty Ltd, Aviation Reference Number (*ARN*) 817988 (the *operator*), when used for aerial photography or video capture.

#### 2 Definitions

In this instrument:

*AGL* means above ground level.

*event* means a gathering or activity, or a series of gatherings or activities, during which the UAV is operated at night or within 30 metres of a person who is not one of the operator's personnel.

*operator's personnel* means:

- (a) the operator; and
- (b) a person employed or engaged by the operator to assist in the operation of the UAV.

#### 3 Exemptions

- (1) The operator is exempt from the requirements of paragraph 101.095 (1) (b) of CASR 1998 when operating the UAV.
- (2) The operator is exempt from the requirements of regulation 101.245 of CASR 1998 when operating the UAV.
- (3) The operator is exempt from the requirements of regulation 101.280 of CASR 1998 when operating the UAV.

#### **4 Conditions**

- (1) The UAV must only be flown by Andrew Muller, ARN 809910, or Jason Glatzer, ARN 601301 (the *UAV Controller*), as the operator's personnel.
- (2) The operator must provide CASA with a clearly documented written procedure of its UAV operations for each different type of event, for example, cricket, rugby league, Australian rules football or music concert, over a populous area and this written procedure must be accepted by CASA in writing.
- (3) The exemption in subsection 3 (1) is subject to the conditions mentioned in Schedule 1.
- (4) The exemptions in subsections 3 (2) and (3) are subject to the conditions mentioned in Schedule 2.
- (5) Details of the exemptions must be included in the operator's operations manual.

#### **5 Expiry**

This instrument expires at the end of 31 May 2014, as if it had been repealed by another instrument.

#### **Schedule 1 Conditions of exemption — operation of UAV at night**

- 1 Take-off, flight and landing areas must be illuminated, for example by stadium event lighting or street lighting, so that the position and orientation of the UAV can be established and maintained by the UAV Controller by visual reference.
- 2 The average ambient light must be a minimum of 3 lux at 2 metres AGL.
- 3 The UAV must have orientation lighting, such as LED lights on the front and rear arms of the UAV.
- 4 The 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; and
  - (c) the UAV remains below the level of any lighting associated with the UAV operation.

#### **Schedule 2 Conditions of exemption — operation of UAV near people or over populous area**

- 1 The UAV must be an octocopter operated by the operator and fitted with all of the following equipment:
  - (a) a Mikrokopter flight control system;
  - (b) dual parallel redundant battery system with duplicated battery mountings;
  - (c) GPS lock with a minimum of 6 GPS satellites.
- 2 The wind speed, including gusts, at a height of 2 metres AGL at the location of the operation, must not exceed 15 knots.
- 3 The operator must not operate the UAV outdoors in rain or if thunderstorms are observed or reported within 5 kilometres of the location of the operation.
- 4 The operator and the UAV Controller 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 the exclusion zones at all times during an event.

- 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, measured from the person to a point on the ground vertically below the UAV.
  - 6 The operator may operate the UAV within 15 metres, but no closer than 5 metres, of a person who is not one of the operator's personnel, provided the UAV is operating no higher than 2 metres AGL and is in transit during its launch and recovery phase.
  - 7 The operator must ensure that the UAV Controller is positioned so that he is either:
    - (a) directly behind the UAV and can observe the entire forward flight path; or
    - (b) close enough to the subject of the photography or video capture to ensure adequate depth perception.
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