



RPA Altitude Devices or Pilot/crew Training Operation above 400'AGL

Transport Canada 922.04 standards for position determination requires additional mitigations for our operations above 400'AGL. Any of the below approaches are acceptable, provided all relevant requirements or restrictions are met in accordance with any SOC conditions.

On board Altitude Devices

A MAAC member may operate an RPAS above 400'AGL provided one of the following is onboard the RPA and operating correctly. Any of the following onboard devices may be used to the **maximum altitude of 1700'AGL**.

1. **Real-time Altitude Telemetry** – any commercially available or homemade real-time altitude telemetry devices are acceptable provided they provide altitude indications to the RPAS pilot **or spotter** while operating the RPA. The availability or use of preset alarms or warnings is desirable but not mandatory. **No testing or declaration is required for commercially available telemetry devices.** Any homemade device must be tested against commercially available real-time telemetry for accuracy +/- 50' **and declared as satisfactory.**
2. **Onboard Altitude warning devices** – any commercially available device on the RPA that gives a visual, aural or other warning of significant intensity to be easily noticed by the pilot **or spotter**, of the RPA approaching a preset maximum altitude value. Any homemade device must be tested against commercially available real-time telemetry for accuracy +/- 50' **and declared as satisfactory.**
3. **Onboard Altitude limiting devices** - any commercially available or homemade device on the RPA that limits the achievable altitude to a preset value. This may be done via reducing power/throttle settings, or control deflections that make flight above the preset altitude value improbable. Any homemade device must be tested against commercially available real-time telemetry for accuracy +/- 50' **and declared as satisfactory.**

Pilot/crew visual altitude determination training

Any MAAC member may make a MAAC approved written self-declaration they have undertaken training to visually determine the altitude of an RPAS as follows:

1. Visual altitude determination is limited to a **maximum altitude of:**
 - a) **700'AGL for sailplanes, gliders, or other prolonged flight**
 - b) **1200'AGL for short duration operations such as aerobatic maneuvers** (top of loops, turn arounds, zoom climb/turn etc.).
2. Any RPAS used for this training is of a similar size, shape, and performance capability as that intended to be subsequently flown above 400'AGL.

3. They have flown or observed a series of flights with an RPAS equipped with real-time altitude telemetry, and have observed the RPA at 100' increments up to the maximum permitted altitude, and
4. They have subsequently flown or observed a series of flights with an RPAS equipped with real-time altitude telemetry, where they have visually estimated the RPA altitude at the maximum intended altitude and were correct to within +/- 50' of the telemetry altitude value.
5. They keep and can produce this MAAC approved written self-declaration while operating or acting as crew for any RPA above 400'.

I hereby declare that the RPAS(s) listed below have been developed, constructed, and verified to meet the following technical requirement:

- The RPAS information and control interfaces are clearly and succinctly presented and do not confuse, cause unreasonable fatigue, or contribute to RPAS crew error that could adversely affect the safety of the operation.
- No single failure of the RPAS or any external system supporting the operation will lead to operation outside of the operational volume.
- Any failure of a system or subsystem whose operation is required to meet the above requirement is detectable by the operator.
- I have equipped the RPA with a suitable altitude determination device, or undertaken a series of testing, or training flights to determine or limit the altitude of the RPA and I can do so consistently to within +/- 50' of the maximum intended altitude.

Make	Model	Comments

Name of Responsible Person _____

Date

Signature

You are required to keep this declaration at the site while operating the RPAS.