PANS-OPS Flight Procedure Design Training for CAAs

23 August – 03 September 2021

12 – MOC and OCH adjustments

(Doc. 8168, Vol. 2, Part I, Section 4, Chap. 5, § 5.4.5)

Outlines

1. Obstacle Clearance Altitude/Height
2. MOC and OCA/H adjustments

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Obstacle Clearance Altitude/Height

- For Non-Precision Approaches:
  - OCA/H : The lowest altitude/ height above aerodrome elevation, or the elevation of the relevant runway threshold, if the threshold elevation is more than 2m (7ft) below the aerodrome elevation, below which the aircraft cannot descend without infringing the appropriate obstacle clearance criteria.
- OCA/H is rounded up to next 5 m or next 10 ft.

$$OCA_{procedure} = \max(OCA_{final}, OCA_{missed\ app})$$

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MOC and OCA/H adjustments

- MOC and OCA/H must be adjusted in certain cases:
  - MOC increase in mountainous areas;
  - Percentage increase in OCA/H;
  - Lower limit to OCA/H.
- Applies only to NPA and circling.

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MOC and OCA/H adjustments

MOC increase in mountainous areas

- Mountainous area: Section 1, Chap.1
  - ☞MOC increased in mountainous areas up to 100% (Section 1, Chap. 1, §1.7).
  - ☞Decided by the flight procedure designer in coordination with the State.
  - ☞Anly applic

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MOC and OCA/H adjustments

Remote Altimeter Setting (RAS)

- Source of altimeter setting at more than 9 km (5 NM) from the THR:
  - ☞OCA/H increased at the rate of:
    - 0.8 m for each km above 9 km;
    - (5 ft for each NM above 5 NM).
    - or a value determined by local authority
  - ☞Cautionary note on IAC

- Mountainous area : specific case
- (see page I-4-5-6 § 5.4.5.3.2)

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MOC and OCA/H adjustments

Lower limit of OCA/H

- Forecast altimeter setting :
  - ☞ OCA/H increased by a value ⟺ forecasting tolerance for the location
- Non-aligned straight-in approach :
  - ☞ see table I-4-5-3;
  - ☞ Specific case with descent gradient > 5.2%.
- Descent gradient > 6,5% :
  - ☞ see appendix B chapter 5;
  - ☞ addition to OCA/H as a function of descent gradient.
    - Ex : 17 ft (Cat. A,B) / 25 ft (cat C,D,E) for each % above max slope.
- Circling :
  - ☞ see table I-4-7-3.
- Minimum OCH allowed for each type of approach operation type (Annex 6, Part 1, Chap. 4, § 4.2.8.3).

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Lower limit of OCA/H

Check minimum OCA/H values

Table I-4-5-3

	Lowest OCH (m(ft)	
Cat.	5°<α ≤ 15°	15°<α ≤ 30°
A	105(340)	115(380)
B	115(380)	125(410)
C	125(410)	
D	130(430)	

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Summary

- Obstacle Clearance Altitude/Height
- MOC and OCA/H adjustments:
  - Mountainous areas;
  - Non-aligned straight-in approach;
  - Remote Altimeter setting;
  - Lower limit of OCA.

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Questions:

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