Altimeter setting procedures
010 Air Law and ATC Procedures › 06 Altimeter setting and transponder procedures

QUESTION

What does the transition altitude (TA) define?

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ANSWER

The altitude at or below which vertical position is controlled by reference to altitudes.

Article 2(134)

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QUESTION

What is the transition level (TL)?

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ANSWER

The lowest flight level available for use above the transition altitude.

Article 2(135)

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QUESTION

What is the transition layer?

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ANSWER

The airspace between the transition altitude and the transition level.

SERA.8015(eb)(1)

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QUESTION

In the transition layer, which level type do you use when climbing?

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ANSWER

Flight levels when climbing; altitudes when descending.

SERA.8015(eb)(1)

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QUESTION

Which altimeter setting makes the altimeter read altitude above mean sea level?

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ANSWER

QNH.

GM1 Article 2(39); GM1 Article 2(84); GM1 Article 2(78)

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QUESTION

Which altimeter setting makes the altimeter read height above the aerodrome?

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ANSWER

QFE.

GM1 Article 2(39); GM1 Article 2(84); GM1 Article 2(78)

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QUESTION

Which subscale setting makes the altimeter read flight levels?

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ANSWER

The standard setting, 1013.2 hPa.

SERA Article 2(78); GM1 Article 2(78); Article 2(78); GM1 Article 2(39); GM1 Article 2(84); GM1 Article 2(78)

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QUESTION

Why do aircraft above the transition altitude all use 1013.2 hPa?

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ANSWER

All aircraft on the same datum share the same pressure error, so their flight levels keep vertical separation.

SERA Article 2(78); GM1 Article 2(78)

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QUESTION

When is a cruising level expressed as a flight level?

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ANSWER

At or above the lowest usable flight level or, where applicable, above the transition altitude.

SERA.3110(a)

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Altimeter setting procedures
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QUESTION

When is a cruising level expressed as an altitude?

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ANSWER

Below the lowest usable flight level or, where applicable, at or below the transition altitude.

SERA.3110(b)

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QUESTION

When must ATC give the transition level during descent?

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ANSWER

In due time before the aircraft reaches the transition level.

SERA.8015(eb)(2); GM1 SERA.8015(f)(2) (EAR heading "Altimetry"; labelled (f)(2) in the EAR)

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QUESTION

Which clearances carry a QNH setting?

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ANSWER

The descent clearance below the transition level, the approach or circuit-entry clearance, and the departure taxi clearance, unless the aircraft already has it.

SERA.8015(eb)(3)(i)–(iii)

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QUESTION

Does ATC still give the altimeter setting after the ATIS is acknowledged?

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ANSWER

Yes. ATC gives the altimeter setting in a directed transmission, even after the ATIS acknowledgement.

SERA.9010(a)(2)(i)–(ii), (a)(3)

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QUESTION

Which ATIS items always include the transition level and the altimeter setting?

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ANSWER

ATIS for arriving and departing aircraft contains the transition level, if applicable, and the altimeter setting(s).

SERA.9010(b)(10), (b)(18); (c)(10), (c)(18); (d)(9), (d)(17)

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QUESTION

What must the flight crew read back?

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ANSWER

Altimeter settings and transition levels, whether ATC gives them or ATIS contains them.

SERA.8015(e)(1)(iii)–(iv)

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QUESTION

How is an altimeter setting transmitted?

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ANSWER

Digit by digit, except 1 000 hPa, which is said ONE THOUSAND.

SERA.14035(a)(1)(ii); SERA.14035(a)(1)(i)–(ii); GM2 SERA.14035(a)(1)(i); GM3 SERA.14035(a)(1)(ii)

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QUESTION

How is QNH 1009 spoken?

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ANSWER

QNH one zero zero nine.

SERA.14035(a)(1)(i)–(ii); GM2 SERA.14035(a)(1)(i); GM3 SERA.14035(a)(1)(ii)

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QUESTION

Which words start a flight level in a clearance?

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ANSWER

FLIGHT LEVEL, followed by the number.

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QUESTION

How is a VFR semicircular level flown below the transition altitude?

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ANSWER

As an altitude on QNH.

SERA Appendix 3, 1.1; SERA.3110; SERA.5005(g)

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QUESTION

How is a VFR semicircular level flown above the transition altitude?

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ANSWER

As a flight level on 1013.2 hPa.

SERA Article 2(78); GM1 Article 2(78); SERA Appendix 3, 1.1; SERA.3110; SERA.5005(g)

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QUESTION

When the transition altitude is lower than 10 000 ft, what replaces 10 000 ft as the VMC band boundary?

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ANSWER

FL 100, which replaces 10 000 ft (3 050 m) AMSL.

SERA.5001 Table S5-1 note (*); Appendix 4 note 1

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QUESTION

The subscale is 1013 hPa but the QNH is 982 hPa. Is the aircraft higher or lower than indicated?

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ANSWER

Lower. The altimeter over-reads with a setting higher than the QNH.

Concept; AAIB Bulletin 4/2007; AAIB Bulletin 4/2007, EW/G2006/11/10

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QUESTION

In the Birmingham case, how far below its displayed 2 500 ft was the aircraft?

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ANSWER

About 930 ft, by the AAIB estimate (about 1 570 ft actual).

AAIB Bulletin 4/2007, EW/G2006/11/10

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QUESTION

How is a pressure setting passed in met information or circuit instructions?

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ANSWER

QNH or QFE, followed by the number and its units.

Appendix 1 to AMC1 SERA.14001, 1.1.8 l)–m), 1.4.6 d), 1.4.13 b)–g)

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