Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

What is VMC?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Weather conditions at or better than the minima for visibility, distance from cloud and ceiling.

Article 2(142)

PPL Knowledge

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Can a VFR flight continue in weather below VMC?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

No. A VFR flight stays in VMC at all times. Only a special VFR flight in a CTR, with an ATC clearance, can operate below VMC.

SERA.5005(a); Article 2(140), 2(142); SERA.5005(a); GM3 SERA.8005(b)(b); SERA.5010 (chapeau)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Flight visibility and ground visibility. What is the difference?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Flight visibility is what the pilot sees forward from the cockpit in flight. Ground visibility is the visibility at an aerodrome, reported by an observer or an automatic system.

Article 2(80); Article 2(82)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Which cloud layers count for the ceiling?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

The lowest layer below 20 000 ft (6 000 m) that covers more than half the sky. The ceiling is the height of its base above the ground or water.

SERA Article 2(50); Article 2(50)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

When does night start and end?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Night is from the end of evening civil twilight to the start of morning civil twilight. Civil twilight ends or starts when the centre of the sun is 6° below the horizon.

SERA Article 2(97); Article 2(97); GM1 Article 2(97)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VMC minima at and above 10 000 ft AMSL?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Flight visibility 8 km. Distance from cloud 1 500 m horizontally and 1 000 ft vertically.

SERA.5001, Table S5-1; SERA.5001, Table S5-1, row 1

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VMC minima below 10 000 ft AMSL, above the low band?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Flight visibility 5 km. Distance from cloud 1 500 m horizontally and 1 000 ft vertically.

SERA.5001, Table S5-1; SERA.5001, Table S5-1, row 2

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Where is the top of the low band?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

At 3 000 ft AMSL or 1 000 ft above the terrain, whichever is higher.

SERA.5001, Table S5-1

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VMC minima in Classes F and G in the low band?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Flight visibility 5 km, clear of cloud, surface in sight.

SERA.5001, Table S5-1; SERA.5001, Table S5-1, row 3

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

When can the flight visibility in Classes F and G in the low band be 1 500 m?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Only where the competent authority prescribes it, at 140 kt IAS or less (or where other traffic is unlikely). Never at night.

SERA.5001, Table S5-1 note (***)(a); SERA.5005(c)(3)(ii); SERA.5001, Table S5-1 note (***)(a)(1); SERA.5001, note (***)(a)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

When does FL 100 replace 10 000 ft as the upper band boundary?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

When the transition altitude is lower than 10 000 ft.

SERA.5001, Table S5-1 and note (*); SERA.5001, Table S5-1 note (*)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VFR without an ATC clearance at an aerodrome in a CTR, or into any ATZ or circuit. Weather minima?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Reported ceiling 1 500 ft (450 m) and ground visibility 5 km at that aerodrome.

SERA.5005(b)(1); SERA.5005(b)(2); SERA.5005(b)(1), (2)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Night VFR. What is needed?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Permission of the State, a flight plan if you leave the vicinity of the aerodrome, two-way radio where available, an aerodrome ceiling of 1 500 ft (450 m), no reduced visibility, and the surface in sight in the low band.

SERA.5005(c)(3)(i); SERA.5005(c); GM1 Article 8.2(a); SERA.5005(c)(1); SERA.4001(b)(6)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Night VFR minimum level, with no published minimum flight altitude?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

1 000 ft above the highest obstacle within 8 km of your estimated position. Over high terrain or mountainous areas, 2 000 ft.

SERA.5005(c)(5)(i); SERA.5005(c)(5)(ii); SERA.5005(c)(5)(i), (ii)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Highest level for VFR?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

FL 195. Exceptions up to FL 285 with an ATS authorisation, or in an airspace reservation. No VFR above FL 285 where 1 000 ft separation is applied above FL 290.

SERA.5005(d)(2); SERA.5005(d)(2)(ii); SERA.5005(e)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VFR speed limit below 10 000 ft AMSL?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

250 kt IAS, in Classes C to G.

SERA.6001; Appendix 4; SERA.6001(a)(3)–(7); Appendix 4 note 1; GM1 SERA.6001(b)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VFR minimum height over a congested area or an open-air assembly of persons?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

1 000 ft (300 m) above the highest obstacle within 600 m of the aircraft.

SERA.5005(f)(1)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VFR minimum height elsewhere?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules

010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

500 ft (150 m) above the ground or water, or above the highest obstacle within 150 m of the aircraft.

SERA.5005(f)(2)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

When can you fly below the VFR minimum heights?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

When needed for take-off or landing, or with permission of the competent authority.

SERA.5005(f); AMC1 SERA.5005(f); GM1 SERA.5005(f)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

When do the VFR cruising levels apply?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

In level cruise more than 3 000 ft (900 m) above the ground or water, unless ATC or the competent authority says otherwise.

SERA.5005(g)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VFR cruising levels by magnetic track (SERA)?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

000°–179° → odd thousands + 500 ft (FL 35, 55, 75). 180°–359° → even thousands + 500 ft (FL 45, 65, 85).

SERA Appendix 3; SERA Appendix 3, 1.1; SERA Appendix 3, footnote 1

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

VFR cruising levels in Portugal?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Magnetic track 270°–089° → even thousands + 500 ft (FL 45, 65, 85). 090°–269° → odd thousands + 500 ft (FL 35, 55, 75). Check the AIP in force.

AIP Portugal ENR 1.7.5; AIP Portugal ENR 1.7.5 (ENR 1.7-3); VFR Manual ENR 1.7-3; legal hook SERA.5005(g) ("unless otherwise specified … by the competent authority"); competent authority: ANAC; AIP Portugal GEN 1.7; SERA.5005(g)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Special VFR. Where, and who decides?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules

010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Only in a CTR, with an ATC clearance. You ask; ATC authorises. By day only, unless the competent authority permits it at night.

SERA.5010 (chapeau); SERA.5010(a)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Special VFR pilot conditions (aeroplanes)?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Clear of cloud, surface in sight, flight visibility 1 500 m, 140 kt IAS or less.

SERA.5010(b)(2); SERA.5010(b)(3); SERA.5010(b)(1)–(3)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Below which reported weather does ATC give no special VFR clearance to take off, land or join the circuit?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Ground visibility 1 500 m, or ceiling 600 ft (180 m).

SERA.5010(c)(1); SERA.5010(c)(2); SERA.5010(c)(1), (2)

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

In which airspace classes does a VFR flight need an ATC clearance?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

Classes B, C and D. VFR is not permitted in Class A.

SERA.5005(h)(1)–(3); SERA.8001(b)–(d); SERA.6001(a)(1)–(7); Appendix 4

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

QUESTION

Night VFR. What must your licence hold?

© rpvfalmeida · CC BY-NC-ND 4.0

Visual flight rules
010 Air Law and ATC Procedures › 05 Rules of the air

ANSWER

A night rating.

© rpvfalmeida · CC BY-NC-ND 4.0