

GROUND SCHOOL

AIR LAW 2

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LECTURE TWO: AIR LAW

1. Visual and Instrument Meteorological Conditions
2. Visual and Instrument Flight Rules
3. Airspace Classification
4. Runways and Taxiways
5. Light Signals

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VISUAL METEOROLOGICAL CONDITIONS

Inside Controlled Airspace (Class C, D & E)

Visibility minimum:
 5km below FL100
 8km above FL100

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VISUAL METEOROLOGICAL CONDITIONS

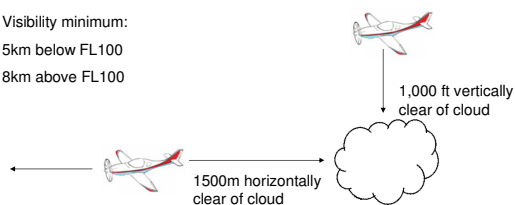
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Outside Controlled Airspace (Class F & G)
Above 3,000 ft AMSL

Visibility minimum:

5km below FL100

8km above FL100

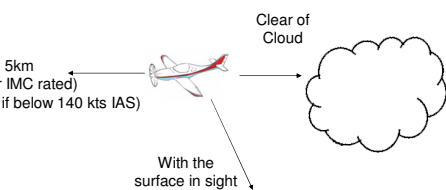


VISUAL METEOROLOGICAL CONDITIONS

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Outside Controlled Airspace (Class F & G)
Below 3,000 feet AMSL

Visibility 5km
(3km for IMC rated)
(1500m if below 140 kts IAS)



VISUAL METEOROLOGICAL CONDITIONS

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Visual Meteorological Conditions (VMC) are weather conditions which allow flight under the Visual Flight Rules (VFR)

Bear in mind that these minima may be less restrictive than your licence privileges

In this case – the more restrictive condition applies



EASA PPL WEATHER MINIMA

UK Air Navigation Order Schedule 9

- (3) The holder may not:
- (a) unless the licence includes an instrument rating (aeroplane) or an instrument meteorological conditions rating (aeroplane), fly as pilot in command of such an aeroplane;
 - (b) on a flight outside controlled airspace when the flight visibility is less than three km;
 - (c) on a special VFR flight in a control zone in a flight visibility of less than 10km except on a route or in an aerodrome traffic zone notified for the purpose of this sub-paragraph; or
 - (d) out of sight of the surface;
- (4) unless the licence includes an instrument meteorological conditions rating (aeroplane), fly as pilot in command or co-pilot of such an aeroplane flying in Class D or E airspace in circumstances which require compliance with the Instrument Flight Rules.

A PPL(A) holder must, therefore, always be in sight of the surface

You must have at least 3km visibility

The VMC minima of 1500m DOES NOT apply to you!

"Special VFR" allows flight in Class A airspace that would normally be unavailable to a VFR pilot. A PPL(A) holder needs 10km visibility to fly a Special VFR (SVFR) routeing.



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INSTRUMENT METEOROLOGICAL CONDITIONS

Instrument Meteorological Conditions (IMC) are weather conditions which require flight under the Instrument Flight Rules

An easy one! – if it's not VMC then it must be IMC!



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VISUAL FLIGHT RULES INSIDE CONTROLLED AIRSPACE

(Rules of the Air Regulations 2007, regulation 27)

CLASS A



No VFR flight is permitted inside Class A airspace

Special VFR may be available on certain routes within certain Class A CTRs



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VISUAL FLIGHT RULES INSIDE CONTROLLED AIRSPACE

CLASS C CLASS D CLASS E

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Separation			
Traffic Info.			
VMC Minima			
Speed Limit	218 KIAS	250 KIAS	250 KIAS
Radio required?	YES	YES	Not required
Clearance required?	YES	YES	NO

VISUAL FLIGHT RULES OUTSIDE CONTROLLED AIRSPACE

(Rules of the Air Regulations 2007, regulation 28)

CLASS F CLASS G

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Separation from other traffic not provided unless under a deconfliction service

If below 140kts - Clear of cloud, in sight of the surface with 5km visibility required if below 3000ft agl

Speed limit applies

Radio not required

ATC Clearance not Required

VISUAL FLIGHT RULES OUTSIDE CONTROLLED AIRSPACE

CLASS F & G AIRSPACE EXCEPTIONS

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VFR flight is still possible with in-flight visibility down to 1500m

However! Without a valid IMC rating or Instrument Rating, a pilot cannot fly in this because their licence does not allow flight in visibility this poor.

"VFR on top" is used often to imply flight above a cloud layer whilst still following the visual flight rules. This is **ILLEGAL** in the UK and **ILLEGAL** by anyone with a UK licence

You must always adhere to the most restrictive regulation

INSTRUMENT FLIGHT RULES

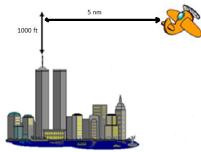
(Rules of the Air Regulations 2007, regulations 32-37)

FLIGHT PLAN

Before taking off from controlled airspace or flying into controlled airspace a flight plan must be filed

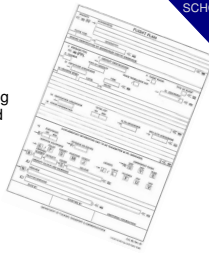
POSITION REPORTS

must be made where required, and all ATC clearances and notified procedures shall be complied with



MINIMUM HEIGHT RULE

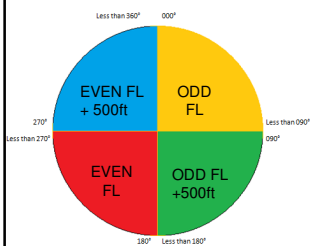
Must be at least 1000ft above the highest fixed obstacle within 5nm of the aircraft



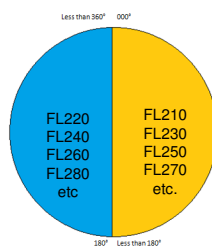
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INSTRUMENT FLIGHT RULES

QUADRANTAL HEIGHT RULE Below FL195



SEMI-CIRCULAR HEIGHT RULE Above FL195



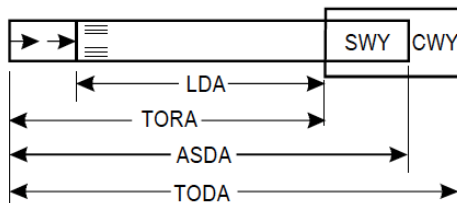
Note: Bearings are Magnetic Tracks!

(Above FL410 intervals are 4000 feet)



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RUNWAY DECLARED DISTANCES



TORA Take Off Run Available
TODA Take Off Distance Available
ASDA Accelerate/Stop Distance Available
LDA Landing Distance Available

SWY Stopway
CWY Clearway



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RUNWAY AND TAXIWAY MARKINGS

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Diagram illustrating Runway and Taxiway Markings. The diagram shows a runway with centerline, edge, and threshold markings, and a taxiway with edge and centerline markings. A legend identifies various lights and markings: In-Place Runway Guard Lights, Elevated Runway Guard Lights, Stop Bar, Centerline Lead-On Lights, Clearance Bar Lights, Position Marking, Stop Bar/LS Hold, Taxiway Edge Marking (Do Not Cross), Taxiway/Taxiway Hold Marking, and Vehicle Lanes (Upper Signs). The diagram also shows a 'Non-Movement Area' and a 'Taxiway'.

RUNWAY AND TAXIWAY MARKINGS

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Diagram illustrating Taxiway Lighting. The diagram shows a taxiway with centerline, edge, and intersection lights. A legend identifies various lights: Runway centre line light and runway edge light, Taxiway edge light, Taxiway centre line light, Exit taxiway centre line lights, Stop bar light, Stop bar light (unidirectional), and Taxiway intersection light (unidirectional). The diagram also shows a 'Taxiway intersection', a 'Straight taxiway', a 'Rapid exit taxiway', and an 'Other exit taxiway'.

LIGHT SIGNALS

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Light beam	To an aircraft in flight	To an aircraft on the ground
Red	Give way to other aircraft and continue circling	Stop
Red flashes	Do not land; aerodrome not available for landing	Move clear of landing area
Green	You may land	You may take off
Green flashes	Return to aerodrome; wait for permission to land	You may move on the manoeuvring area and apron
White flashes	Land at the aerodrome after receiving continuous green light, and then, after receiving green flashes, proceed to the apron	Return to starting point on the aerodrome

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PRACTICE QUESTION!

What is the colour of taxiway edge lights?

Blue




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PRACTICE QUESTION!

What are the VMC minima below 3000 feet in class D airspace?

Clear of cloud and with the surface in sight



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Lecture Complete
Any Questions?

