

# OPERATIONAL PROCEDURES 1

GROUND SCHOOL



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## LECTURE ONE: ALTIMETERS, AERODROMES

GROUND SCHOOL

1. Altimeter Setting Procedures
2. Aerodromes: Approach and Definitions
3. Aerodromes: Signals and Markings



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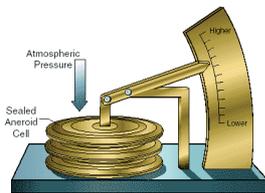
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## ALTIMETER SETTING PROCEDURES: BASICS

GROUND SCHOOL



As an aircraft gains altitude the atmospheric pressure it is subjected to **DECREASES**

The altimeter senses pressure and converts it to a scale displayed as feet



An altimeter is only as accurate as the setting that has been selected

A subscale knob allows the pilot to select a datum above which a vertical displacement is shown



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## ALTIMETER SETTING PROCEDURES

GROUND SCHOOL

The UK has 20 altimeter setting regions

"Regional Pressure Setting" (RPS) is used rather than airfield pressure settings

Leads to better conformity of aircraft altimeter settings and reduces pilot workload

The actual QNH will always make the aircraft indicate higher than it is – this is on the safe side

The RPS is updated every hour




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## ALTIMETER SETTING REGIONS

GROUND SCHOOL



The chart of the UK Regional Pressure Setting Regions can be found in the UK AIP En-route Section

If things are going really badly and you are really lost there is one final option – the colour code option




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## ALTIMETER SETTING REGIONS

GROUND SCHOOL

TERRAIN CLEARANCE TABLE

ASRs	WESSEX	Scillies	Coleridge	Portland	Chatham	Yorkmouth	TYNE	Beaufort
Highest Obstacle	2907ft	1378ft	2908ft	1908ft	1310ft	1380ft	2008ft	2908ft
Minimum Altitude	4300ft	2400ft	4000ft	3000ft	2400ft	2400ft	4300ft	4300ft
REGIONAL QNH	GREEN						BLUE	
1032 or Above	FL40	FL20	FL35	FL25	FL30	FL20	FL40	FL40
1034-1031	FL45	FL25	FL40	FL30	FL25	FL20	FL45	FL45
906-1013	FL50	FL30	FL45	FL35	FL30	FL30	FL50	FL50
977-994	FL55	FL35	FL50	FL40	FL35	FL35	FL55	FL55
900-976	FL60	FL40	FL55	FL45	FL40	FL40	FL60	FL60
943-969	FL65	FL45	FL60	FL50	FL45	FL45	FL65	FL65
927-942	FL70	FL50	FL65	FL55	FL50	FL50	FL70	FL70
<b>IMPORTANT - SET 1033mb ON THE ALTIMETER SUB-SCALE TO FLY AT A FLIGHT LEVEL</b>								
ASRs	PORTREE	Orkney	Skerry	Sheffield	HOLYHEAD	Barnsley	Humber	
Highest Obstacle	440ft	379ft	142ft	147ft	392ft	316ft	473ft	
Minimum Altitude	580ft	510ft	280ft	380ft	490ft	490ft	190ft	
REGIONAL QNH	RED				YELLOW			
1032 or Above	FL55	FL60	FL35	FL25	FL45	FL40	FL15	
1034-1031	FL60	FL65	FL40	FL30	FL50	FL40	FL20	
906-1013	FL65	FL60	FL35	FL25	FL55	FL50	FL25	
977-994	FL70	FL65	FL40	FL40	FL60	FL55	FL30	
900-976	FL75	FL70	FL45	FL40	FL65	FL60	FL35	
943-969	FL80	FL75	FL50	FL50	FL70	FL65	FL40	
927-942	FL85	FL80	FL55	FL55	FL75	FL70	FL45	

1. REMEMBER: Although you use the Regional QNH to obtain the Terrain Clearance Flight Level you must set WESSEX on the altimeter sub-scale to fly at that Flight Level.  
 2. Obstacles that have not been adjusted to QNH to allow for uncharted obstacles.  
 3. IMPORTANT: When lost or uncertain of your position always call the District and Division cell on 121.5MHz at the earliest opportunity.  
 4. For information on how to use this table refer to AICD.




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### ALTIMETER SETTING PROCEDURES: DEFINITIONS

GROUND SCHOOL

QNH  
"Nautical Height"  
Mean Sea Level Pressure  
Altimeter reads Altitude

QFE  
"Field Elevation"  
Aerodrome Surface Pressure  
Altimeter reads Height (above that particular airfield)

Standard Pressure  
1013.2 hPa Pressure Level  
Used when terrain clearance is no longer an issue  
Altimeter reads Flight Level (FL)



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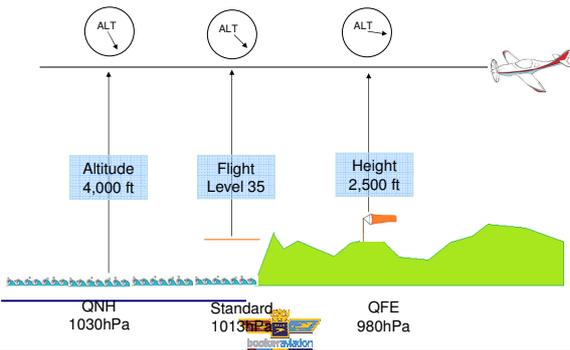
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### ALTIMETER SETTING PROCEDURES: EXAMPLE

GROUND SCHOOL

Different altimeter settings / readings but consistent level



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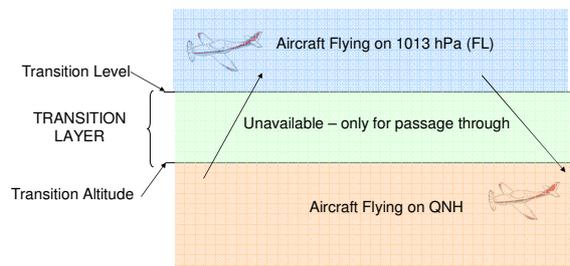
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### ALTIMETER SETTING PROCEDURES: TRANSITION ALTITUDE

GROUND SCHOOL



Transition Altitude is variable across the UK and is published in the UK AIP (AD Section)



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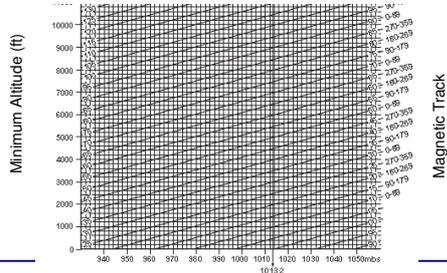
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### ALTIMETER SETTING PROCEDURES: FLIGHT LEVEL GRAPH

GROUND SCHOOL

- Step 1 – Draw a vertical line up from the QNH until it meets a slanted FL line
- Step 2 – Read horizontally across to the equivalent altitude




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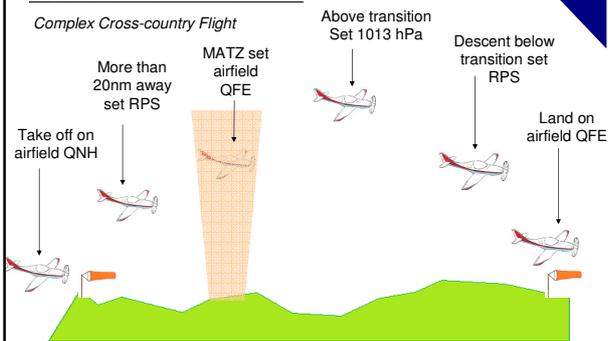
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### ALTIMETER SETTING REGIONS

GROUND SCHOOL

Complex Cross-country Flight




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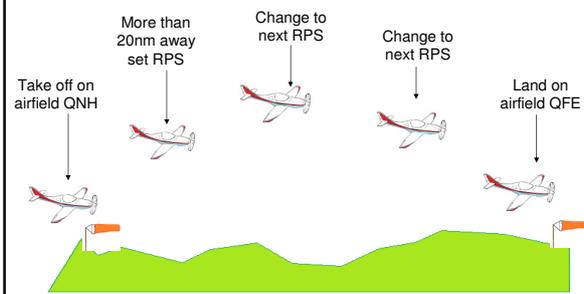
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### ALTIMETER SETTING REGIONS

GROUND SCHOOL

Simple Cross-country Flight




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GROUND SCHOOL

PRACTICE QUESTION!

*"In the vicinity of an airfield, what pressure setting should be on the altimeter"*

Airfield QNH

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GROUND SCHOOL

**FLIGHT IN THE VICINITY OF AN AERODROME**  
*(Rules of the Air Regulations 2007, regulations 12, 13)*

An aircraft shall conform to, or keep clear of, the circuit pattern

All turns to the left unless otherwise indicated

ATC nominated landing order shall be followed

An aircraft on final approach has right of way over other airborne or ground-based aircraft

Emergency traffic always has right of way and any previous clearances are cancelled

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GROUND SCHOOL

**AERODROME APPROACH**



When arriving at an airfield you should make RT contact and comply with instructions given

The normal method of joining a circuit is the "standard overhead join" – more of which later

Other methods of joining are:  
 downwind join, base leg join, long final approach

In the USA joining procedures are very different – make sure you understand the procedures for the country you are flying in and for the airfield you are approaching

Information is available direct from each airfield, or use an airfield guide such as Pooleys

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### AERODROME APPROACH

**The Standard Overhead Join**  
Notes A Situated 2000 feet above pattern height

**JOINING PHASES**  
 Downwind Leg  
 Crosswind Leg  
 Final

**beobachter aviation**

GROUND SCHOOL

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### NOTIFICATION OF ARRIVAL OR DEPARTURE

*(Rules of the Air Regulations 2007, regulation 17)*

If an aerodrome knows you are on your way and you change your mind or are going to be more than 45 minutes late you **MUST** inform them of this – whatever the reason

You must tell your departure airfield where you intend landing

If you are exiting UK airspace you must file a flight plan

**beobachter aviation**

GROUND SCHOOL

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### RUNWAY SURFACE CONDITIONS

**DAMP**  
Change in colour due to moisture

**WET**  
Surface soaked but no standing water

**WATER PATCHES**  
Significant standing water visible  
Runway is considered **"contaminated"**

**FLOODED**  
Extensive standing water visible  
Runway is considered **"contaminated"**

**beobachter aviation**

GROUND SCHOOL

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## RUNWAY SURFACE CONDITIONS

GROUND SCHOOL



Operations from contaminated runways should be **avoided** wherever possible for all types of aircraft



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## PRACTICE QUESTION!

GROUND SCHOOL

*"What does 'WET' mean when applied to a runway's condition?"*

The surface is soaked but there is no standing water



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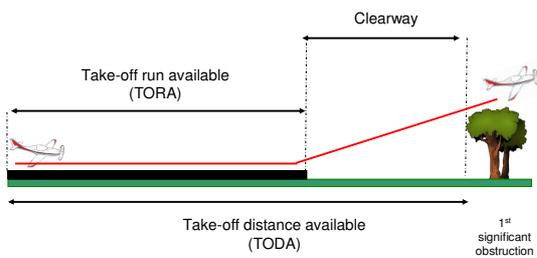
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## AERODROMES – ICAO TERMINOLOGY

GROUND SCHOOL

TORA, TODA, Clearway



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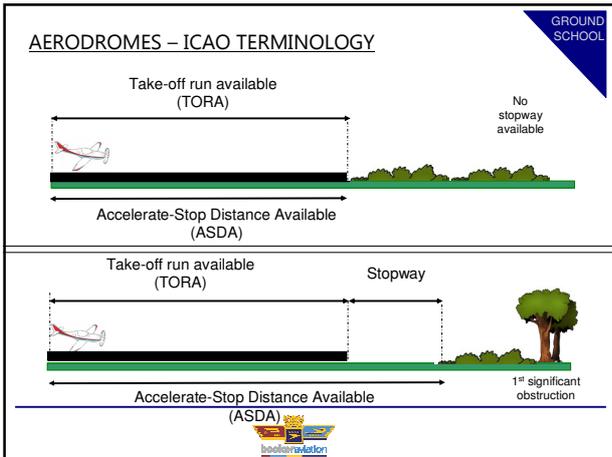
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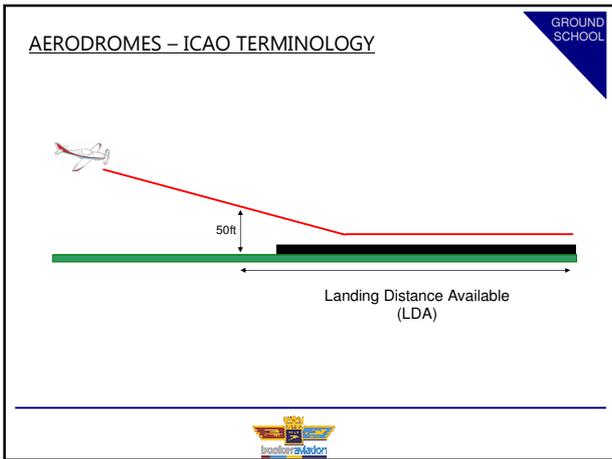
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**AERODROMES – ICAO TERMINOLOGY**

GROUND SCHOOL

**PRACTICE QUESTION!**

*"What is the take-off run available plus the clearway also known as?"*

Take-off distance available

bookofaviation

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## SIGNALS SQUARE

GROUND SCHOOL

These are becoming rarer each year but this is what you are looking for!



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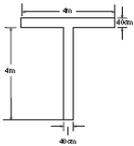
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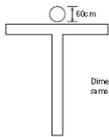
## AERODROME SIGNALS AND MARKINGS – SIGNALS SQUARES

GROUND SCHOOL

(Rules of the Air Regulations 2007, regulations 56-60)



White Signals "T"  
Signifies landing direction – land towards the cross arm parallel to the long section



Dimensions of "T" same as figure 1

White Signals "T" with white ball  
Take-off and Landing directions are not necessarily the same



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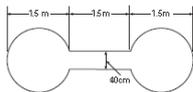
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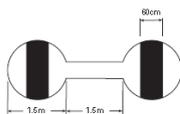
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## AERODROME SIGNALS AND MARKINGS

GROUND SCHOOL



WHITE DUMBELL  
Movement of aircraft shall be confined to paved, metallised or hard surfaced areas



WHITE DUMBELL WITH BLACK STRIPES  
Landing on a runway but other movement of aircraft shall NOT be confined to paved, metallised or hard surfaced areas



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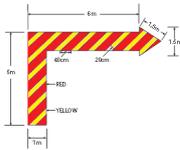
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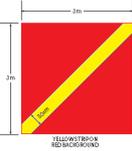
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**AERODROME SIGNALS AND MARKINGS**

GROUND SCHOOL



**RED AND YELLOW ARROW**  
Signifies a right hand circuit is in force



**RED SQUARE, YELLOW DIAGONAL**  
Signifies the state of the manoeuvring area is poor and pilots should take precautions



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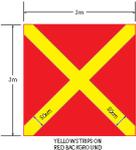
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**AERODROME SIGNALS AND MARKINGS**

GROUND SCHOOL



**RED SQUARE, YELLOW CROSS**  
Signifies aerodrome is unsafe. Landing prohibited.



**WHITE "H"**  
Helicopters must only land within the area specified



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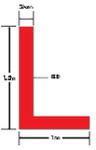
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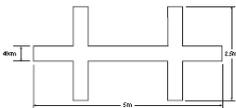
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**AERODROME SIGNALS AND MARKINGS**

GROUND SCHOOL



**RED "L"**  
Light aircraft may land on the runway or on another (specified) area



**WHITE DOUBLE-CROSS**  
Gliding is in progress



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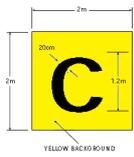
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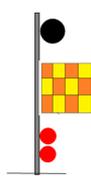
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## AERODROME SIGNALS AND MARKINGS

GROUND SCHOOL



**BLACK "C" ON YELLOW BACKGROUND**  
Indicates where the person in charge of the aerodrome and/or ATC can be found. This is where you go to book in/out of an airfield and to pay landing fees



**BLACK BALL ON MAST**  
Direction of Landing and take off may not coincide

**RED / YELLOW CHEQUERED FLAG**  
Traffic may only move with permission of ATC

**DOUBLE RED BALL**  
Glider flying is in progress




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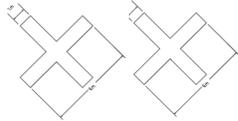
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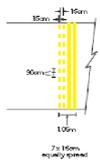
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## AERODROME SIGNALS AND MARKINGS – TAXIWAY

GROUND SCHOOL



**DOUBLE WHITE CROSSES (or more)**  
Section of runway or taxiway marked is unavailable



**DOUBLE YELLOW SOLID, DOUBLE YELLOW BROKEN LINES**  
Signify a runway entrance / exit. Do not cross the solid lines without permission. Can cross broken line to exit runway without permission.




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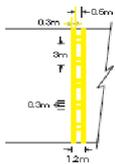
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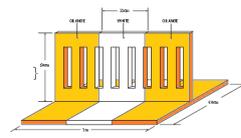
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## AERODROME SIGNALS AND MARKINGS – TAXIWAY

GROUND SCHOOL



**YELLOW "LADDER"**  
A holding point that requires permission from ATC to cross



**ORANGE AND WHITE FENCES**  
Signifies the edge of the usable area. Beyond this area is unfit for the movement of aircraft




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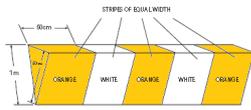
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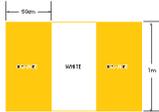
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## AERODROME SIGNALS AND MARKINGS – TAXIWAY

GROUND SCHOOL



**ORANGE AND WHITE MARKERS**  
Signifies the edge of the usable area. Beyond this area is unfit for the movement of aircraft. Used on unpaved areas.



**ORANGE AND WHITE MARKINGS ON STRUCTURES**  
Signifies boundary of aerodrome



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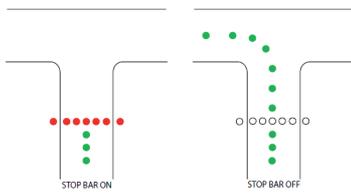
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## AERODROME SIGNALS AND MARKINGS – TAXIWAY

GROUND SCHOOL

**STOP BARS** are lights across a taxi-way and used at aerodromes which are licensed for low visibility operations

NEVER taxi past a red stop bar which is lit



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## AERODROMES - BEACONS

GROUND SCHOOL

Civil Aerodrome beacons are **GREEN**

Military Aerodrome beacons are **RED**

They both flash in Morse code a 2-letter identifier for the airfield

For example, at Wycombe Air Park the green beacon flashes "WP"



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### AERODROME GROUND LIGHTS & MARKINGS

GROUND SCHOOL

Surface markings are WHITE for runways and YELLOW for taxi-ways and aprons

Taxi-way edge lighting is BLUE



Runway end lights are unidirectional and RED

Runway start lights are unidirectional and GREEN

Runway side lights are WHITE

At large airfields they colour code to indicate approaching the end



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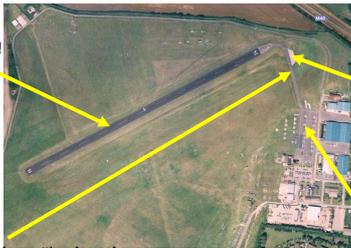
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### AERODROMES – WHAT IS EACH BIT FOR?

GROUND SCHOOL

RUNWAY – for landing on!



HOLDING POINT– for aircraft pre-take off checks, awaiting clearances, engine runs by maintenance

TAXIWAYS– for getting from A to B (note that taxiways will not always ensure wingtip clearances)

APRON – for loading and unloading passengers and cargo, fuelling, parking and maintenance



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### PRACTICE QUESTION!

GROUND SCHOOL

“What colour are taxi-way markings and what colour are runway markings?”

Yellow for taxi-ways and white for runways



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PRACTICE QUESTION!

"If you are taxiing your aircraft and you are unsure as to whether you have wingtip clearance, have got slightly lost (in doubt of your position) or are unsure if the surface is suitable, what should you do?"

Unless you're on a runway – stop, tell ATS that you have stopped and ask them for help



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AERODROME SIGNALS – LIGHT SIGNALS

(Rules of the Air Regulations 2007, regulation 61)

Signal

Steady red light to aircraft or vehicle as indicated. Red flare from tower or aircraft.



Meaning

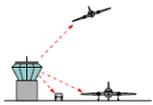
Do not land. Give way continue circling.

Immediate assistance required.

Stop.

Signal

Flashing red light to aircraft or vehicle.



Meaning

Do not land; aerodrome closed.

Move clear of landing area.



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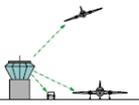
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AERODROME SIGNALS – LIGHT SIGNALS

Signal

Flashing green light to aircraft or vehicle.



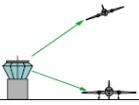
Meaning

Return to aerodrome await landing clearance

Cleared to taxi/move on the manoeuvring area.

Signal

Steady green light to aircraft



Meaning

Cleared to land.

Cleared to take-off.



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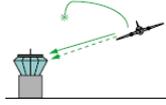
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## AERODROME SIGNALS – LIGHT SIGNALS

GROUND SCHOOL

**Signal**

Steady or flashing green or green flare from aircraft.



**Meaning**

By night - may I land.  
By day - may I land in a direction different from that indicated.




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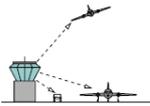
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## AERODROME SIGNALS – LIGHT SIGNALS

GROUND SCHOOL

**Signal**

White flashes to aircraft or vehicle.



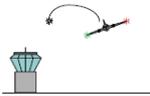
**Meaning**

Land here on receipt of steady green and await further instructions.

Return to starting point on the aerodrome.

**Signal**

White flare from aircraft or irregular switching of navigation or landing lights.



**Meaning**

I am compelled to land.




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## AERODROME SIGNALS – MARSHALLING

GROUND SCHOOL

There are many marshalling signals used – here are the main ones...



Straight ahead



Turn Left



Turn Right



Stop



Emergency Stop



Brakes on / release




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# OPERATIONAL PROCEDURES 2

GROUND SCHOOL



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## LECTURE TWO: HAZARDS, EMERGENCIES, LICENCES

GROUND SCHOOL

1. Aerodrome Hazards: Windshear
2. Aerodrome Hazards: Microbursts
3. Aerodrome Hazards: Wake Turbulence
4. Emergencies: Engine Failures over Land and Sea
5. Licensing



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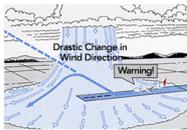
## REPORTING HAZARDOUS CONDITIONS

GROUND SCHOOL

(Rules of the Air Regulations 2007, regulation 4)

Any aircraft encountering "hazardous conditions" shall notify the nearest air traffic control unit as soon as possible

That unit is then responsible for giving the information to any other traffic that may be affected



Examples of hazardous conditions – windshear, clear air icing, un-forecasted electrical storms, etc.



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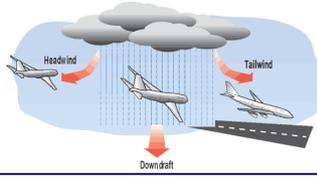
### HAZARDOUS CONDITIONS: WINDSHEAR

GROUND SCHOOL

Windshear is a sudden change of wind speed and/or direction within a fairly small distance

It is vital that if you encounter windshear that it should be reported over the radio so that other aircraft have been warned.

At Wycombe Air Park the most likely place for windshear to be encountered is at about 200-300 feet on approach to runway 24



After take off windshear giving the aircraft a tailwind will cause the rate of climb to decrease and the indicated airspeed to decrease – both are dangerous situations



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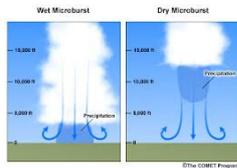
### HAZARDOUS CONDITIONS: MICROBURSTS

GROUND SCHOOL

A microburst is a rapidly sinking column of air which may last for only a couple of seconds but can last up to a few minutes.

Generally linked in the UK to thunderstorms (although it doesn't have to be raining)

After hitting the ground, the microburst extends in all directions



If on approach with a CONSTANT pitch and power you notice an increase in airspeed and a reduced rate of descent you may be approaching a microburst.

You may also receive a warning from an Air Traffic Unit (ATS) or from other pilots



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### HAZARDOUS CONDITIONS: WAKE TURBULENCE

GROUND SCHOOL

Wake turbulence is caused by the induced drag and/or jetwash of an aircraft



Airflow from the lower to the upper surface of the wing causes vortices which remain for up to three minutes

Jetwash tends to dissipate much more rapidly

AIC Pink 001/2015 has a great deal of information and should be read!

*(important stuff coming up...)*



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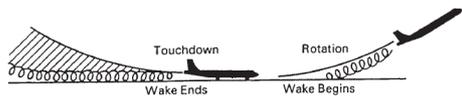
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### HAZARDOUS CONDITIONS: WAKE TURBULENCE

GROUND SCHOOL



The heavier the aircraft, the bigger the wake turbulence produced



Wake turbulence is only produced when the aircraft is airborne



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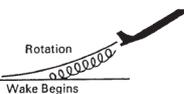
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### HAZARDOUS CONDITIONS: WAKE TURBULENCE

GROUND SCHOOL



Wake turbulence is produced by both helicopters and aeroplanes



The harder an aircraft wing is working, the more the wake turbulence.

An aircraft flying slowly with flaps up produces its maximum wake  
'Heavy, Slow, Clean'



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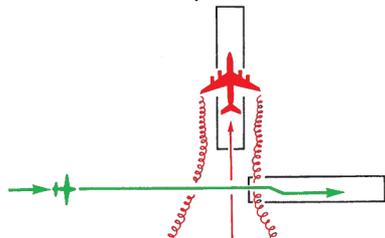
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### HAZARDOUS CONDITIONS: WAKE TURBULENCE

GROUND SCHOOL

Even if you're not on the same runway it can still be an issue in a light aircraft



In this case the departing red heavy aircraft got airborne prior to the intersection of the two runways - the green light aircraft will experience wake vortex



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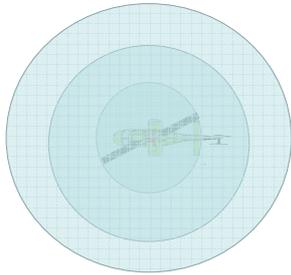
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### HAZARDOUS CONDITIONS: WAKE TURBULENCE

GROUND SCHOOL



Expect wake from hovering helicopters up to three rotor-diameters away

For a light aircraft this can be hazardous

(NOTE – larger helicopters hovering at November when you are trying to land on runway 24!)



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### EMERGENCY CONDITIONS: ENGINE FAILURE

GROUND SCHOOL

You will be taught specific drills to undertake in the event of an engine failure at various phases of flight

In the cruise the general order of events is:

1. Fly the aircraft (establish a safe glide speed)
2. Select a landing area
3. Cause checks / restart checks
4. Mayday call
5. Shut down checks
6. Passenger Briefing

Is the fuel on / sufficient?  
Select carb heat hot  
Check switches  
Attempt a restart - ignition

Fuel off  
Mixture lean  
Throttle closed  
Switches off (caution C152 flaps)  
Ignition off



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### EMERGENCY CONDITIONS: ENGINE FAILURE

GROUND SCHOOL

Once the aircraft has landed, all occupants should evacuate as soon as possible to a safe location away from the aircraft

Remember – a SAFE forced landing is one where the aircraft has completed an unplanned landing which has been unavoidable but one where there is a reasonable expectation of NO injuries to people (either on the ground or in the aircraft)



Safe



Safe (?)



Erm....



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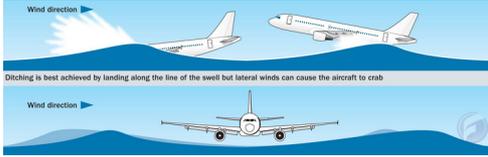
### EMERGENCY CONDITIONS: ENGINE FAILURE OVER WATER

GROUND SCHOOL

There are extra considerations if the engine failure occurs over water...

A general order of events is:

1. Mayday call and squawk 7700
2. Head towards land (or shipping lanes if no land visible)
3. Cause checks / Restart Checks
4. Plan to land parallel to the swell (not necessarily directly into wind)



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### EMERGENCY CONDITIONS: ENGINE FAILURE OVER WATER

GROUND SCHOOL

For flights over water, life jackets should be worn and a dinghy should be carried if at all possible



Do NOT inflate the life jacket in the aircraft (it will seriously slow down your exit!)

Inflate the life jacket before you enter the water and definitely before you get into the dinghy

PS – how are you supposed to get out of a Cessna without entering the water first?



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### EMERGENCY CONDITIONS: FIRE ON ENGINE START

GROUND SCHOOL

The most likely time an engine can catch fire is on start-up



It is VITAL that you know how to respond so that this does not happen!

1. Continue to "crank" the engine
2. Mixture fully lean
3. Fuel Off
4. Throttle fully open

*This should work... if not, turn the master switch off and get out (preferably with the fire extinguisher!)*

The most common cause is over-priming which causes fire in the carburettor



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GROUND SCHOOL

**PRACTICE QUESTION!**

"What does a red square with a yellow diagonal cross in a signals area signify to an overflying aircraft?"

Use caution on the manoeuvring area

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GROUND SCHOOL

**STUDENT PILOTS!**

EASA states that each nation's authority should "ensure that the privileges granted would not permit student pilots to constitute a hazard to aviation"!



- Students must be at least 16 years of age to fly solo
- Student solo flights must have been authorised by a qualified flight instructor
- Students must hold a valid Class 1 or Class 2 medical in order to fly solo

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GROUND SCHOOL

**PRIVATE PILOT LICENCE**



From driving licence to flying licence you need:

- 9 theoretical knowledge exams passed
- 45 hours total time
  - 10 hours solo
  - RT practical exam passed
  - Flying Skill test passed
  - 5 hours cross-country solo
  - 150nm cross-country solo flight with 2 away landings

Previous flight time in any aircraft or other type of aircraft licence may adjust these requirements with some form of credit  
*You don't have to have a driving licence!*

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## PRIVATE PILOT LICENCE

GROUND SCHOOL



You must be at least 17 years of age and hold a Class 1 or Class 2 medical

A PPL allows the holder to act as Pilot in Command or Co-pilot of any aircraft engaged on a non-revenue flight

You will also need a Class or Type Rating that relates to the aircraft being flown

There are also currency and weather requirements – more of these later!



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## PRACTICE QUESTION!

GROUND SCHOOL

*"Who has ultimate responsibility for anything that occurs on a flight"*

The pilot in command



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## GOT YOUR LICENCE – HOW DO YOU KEEP IT LEGAL?

GROUND SCHOOL



EASA licences are valid for life

You will get your licence issued with a Single Engine Piston (Land) Rating which is valid for 2 years.

To carry passengers you must have completed 3 take-offs and 3 landings in the preceding 90 days

You need to keep this rating valid to fly single engine aircraft on your licence

There are a few ways of doing this:



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**GOT YOUR LICENCE – HOW DO YOU KEEP IT LEGAL?**

GROUND SCHOOL

You must also keep your medical current

A Class 2 medical is valid for:  
60 months if you are under 40  
24 months age 40-49  
12 months age 50 and over

A Class 1 medical is valid for 12 months

Details are on the CAA website



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**GOT YOUR LICENCE – HOW DO YOU KEEP IT LEGAL?**

GROUND SCHOOL

So your medical is current but....



Do you need to tell the CAA?

You must not exercise the privileges of your licence if you are aware of any decrease in your medical fitness which might render you unsafe. Your medical is deemed as **SUSPENDED** until you are better. Also:

You must tell the CAA (via your AME usually) if:  
you are admitted into hospital for more than 12 hours  
you have surgery or an invasive procedure  
you are regularly using medication  
you are newly needing corrective lenses  
you have any illness which means you are unfit to fly for more than 21 days  
it is confirmed that you are pregnant



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**GOT YOUR LICENCE – HOW DO YOU KEEP IT LEGAL?**

GROUND SCHOOL

Option 1

**Year 1:** do as much flying as you please but **NONE** of it will count towards revalidating your SEP rating

**Year 2:** 12 hours flight time of which 6 hours solo flight time, 12 take-offs and landings, a flight of 1 hour duration with a flight instructor

Option 2

No hour requirement – just do a Skill Test with an examiner in the second year.

This is also what you will need to do if your SEP rating expires.

*Remember to get your SEP revalidated in your licence!*



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**LOGBOOKS!**

GROUND SCHOOL

You also must ensure that your logbook has your name and address written in it

You must total each page but ask an instructor how to do this – many people do it the wrong way!

Each page should then be signed

You must surrender your logbook to the CAA if they request it. ALWAYS take a photocopy if you are going to send your logbook anywhere.



If you lose your logbook you will need to re-write it and get an affidavit from a solicitor confirming that it is correct. This can be expensive and time-consuming.

So – keep an independent copy of your logbook, e.g. a photocopy a spreadsheet




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**LOGBOOKS!**

GROUND SCHOOL

You must fill in your logbook "at the earliest opportunity" after a flight has taken place

Date	Aircraft		Captain	Holder's Operating Capacity	Journey or Nature of Flight		Chart (GMT)	Aerial (GMT)
	Type	Reg			From	To		
01.01.17	C152	GWACH	A. PILOT	PUT	EGTB	EGTB	1000	1042

Crew	LW	Fuel	Temperature	Speed	Altitude	Time	Remarks				
								01	02	03	04
	0.7						Ex 7(1), 8(1) RW 24R				



Durations of flights in decimals (where 0.1 = 6 minutes). Much easier to add up at the bottom of the page!

"Flight Time" is the total time from the moment that an aircraft first moves under its own power for the purpose of flight until it comes to rest at the end of the flight




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**LOGBOOKS!**

GROUND SCHOOL

Pilot's operating capacity:

**Pilot in Command (PIC)**

*The person who, for the time being, is in charge of piloting the aircraft without being under the direction of any other pilot in the aircraft*

**Pilot under Training (PUT)**

*A pilot undergoing training flying with a suitably qualified flying instructor*

**Pilot in Command under Supervision (PICUS)**

*Used by the CAA for denoting a test flight flown with an examiner which was successful and where the examiner took no part in the control of the aircraft*




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**LOGBOOKS!**

*Day or night?*

Night is considered to be:

30 minutes after sunset until 30 minutes before sunrise

Or

From the end of evening civil twilight until the beginning of morning civil twilight on the following day



And you thought it was just when it got dark!



GROUND SCHOOL

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**CLASS RATINGS**



Single Engine Piston (Land)



Touring Motor Glider



Single Engine Piston (Sea)



Multi Engine Piston (Land)



Single Engine Turboprop (Land)



Single Engine Turboprop (Sea)



Multi Engine Piston (Sea)



GROUND SCHOOL

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**TYPE RATINGS**

Type ratings are required for:

All multi-pilot aircraft

All single-pilot multi-engine turboprop / turbojet aircraft

All single-pilot single-engine turbojet aircraft

Any other aircraft considered necessary

Military, ex-military, experimental or vintage aircraft



GROUND SCHOOL

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## INSTRUMENT RATINGS

GROUND SCHOOL

EASA states that a pilot must not operate under IFR unless they hold an instrument rating (or a student flying with an instructor who holds an IR)

The UK disagrees!

In the UK on your PPL(A) you may fly under IFR outside controlled airspace as long as you are VMC

You may add an IMC rating to your licence which will allow IFR flight in IMC under certain conditions and in certain classes of airspace. This is called IR(R).

This is all subject to change under EASA



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## OPERATORS' MANUALS

GROUND SCHOOL

OPERATIONS MANUAL	procedures, instructions and guidance for use by operational personnel within an organisation
TRAINING MANUAL	details of all training courses and their content, records to be kept, standards
AIRCRAFT OPERATING MANUAL	normal, abnormal, emergency procedures, checklists, limitations, performance etc for an individual aircraft



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### PRACTICE QUESTION!

GROUND SCHOOL

*"What are the requirements for a PPL(A) holder to carry passengers?"*

3 take-offs and landings in the preceding 90 days



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Syllabus complete  
Any Questions?



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