

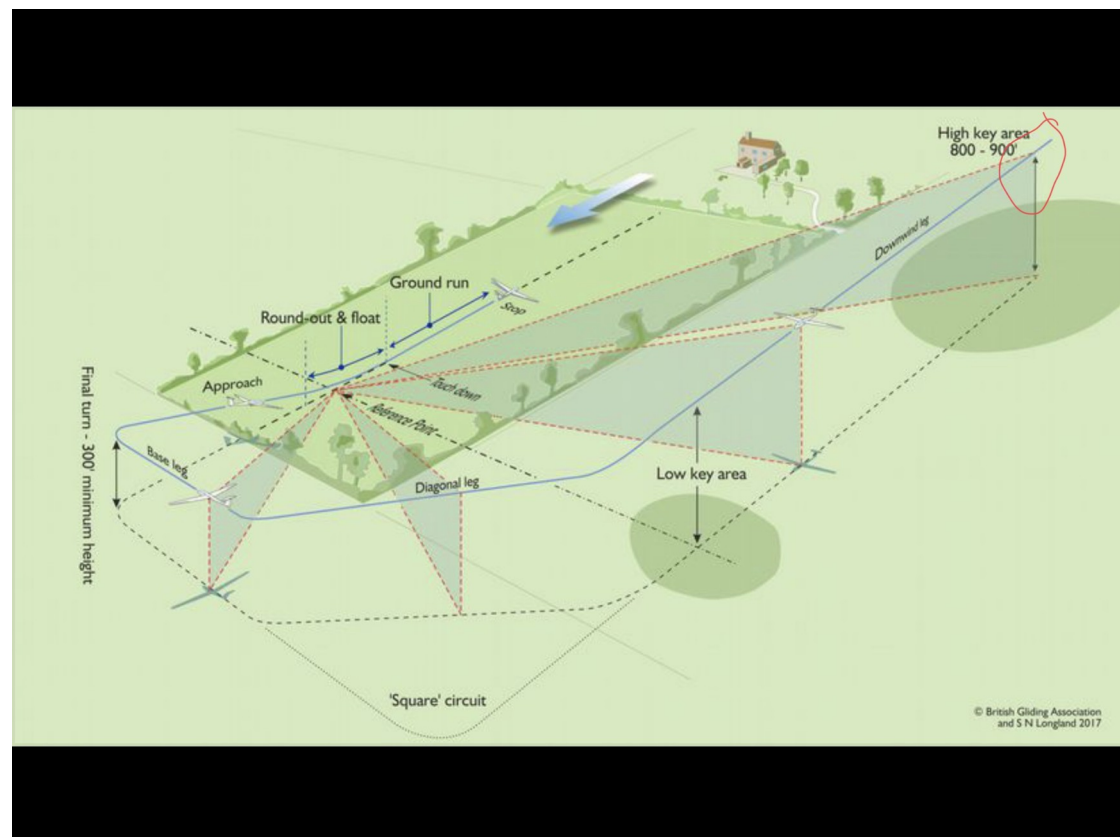
Introduction to Circuits

Why do we fly a circuit? After all airliners usually don't.

Two main reasons:

- a) We do not benefit from air traffic control so when we return to the airfield without information we need an opportunity to assess the situation with regard to wind strength and direction and with regard to busyness both on the ground and in the air.
- b) The second reason is that a glider pilot must get it right first time, every time. There's no chance to rev the engine and go around for a second attempt. The circuit enables the pilot to place the glider in the correct position so that, having completed the final turn, the glider can be landed accurately in the desired location on the airfield.

This diagram shows a standardised circuit above a standardised airfield.



After deciding to land the procedure is as follows:

1. Select landing area - the most important consideration is the strength and direction of the wind which may be assessed by observing the sock, it being usual to land into wind. Other considerations are the area you were briefed to use earlier, the area that you can see other gliders using, space on the airfield. If the first choice area is already crowded most airfields are large enough to allow for the selection of a safe second choice area, perhaps at the cost of being slightly less convenient.
2. Decide upon circuit direction - as can be seen in the diagram it is usually possible to fly either a left or a right handed circuit. Considerations include the direction you might have been briefed to fly, what you can see other gliders doing, the wind as it is generally preferable to circuit on the downwind side of the airfield if the wind is off centre as this makes it less likely that the circuit will become cramped. Some airfields entail local considerations in relation to circuit planning due to the terrain and these should have been made clear to you at briefing.
3. Fly to the High Key Area located upwind and to the side of the landing area at a height of about 700' - 800'. The position and height of this area are matters of experience and judgment and cannot be measured accurately nor do they need to be as the circuit incorporates plenty of latitude. You should develop the skill of estimating your height by observing ground features such as the house in the diagram rather than using the altimeter. At all times keep a particularly good look out as other gliders may join the circuit at the same time as yourself but from a different direction.
4. Fly the downwind leg - you should monitor the following factors:
 - i) Your distance from the landing area and the angle down to landing area, also a matter of experience and judgment

- ii) Fly at approximately min sink speed for your glider, say 50 knots in glass or slightly slower in wood
 - iii) Observe the variometer which will warn that you may be about lose or gain height which might necessitate moving closer to or further from the airfield so as to maintain correct angle
 - iv) Continue to keep a good lookout, particularly outside the circuit as other gliders might join the circuit in front of you. Do not allow yourself to become fixated on the landing area.
5. At the Low Key Area, roughly abreast of the landing area, turn onto the diagonal leg which enables you to keep the airfield in view and maintain correct angle down to the landing area.
 6. Turn on to the base leg which should be roughly at right angles to your intended final approach. While on base leg, accelerate to your nominated approach speed. Continue to keep good lookout, there is a possibility that another glider could be flying a circuit of the opposite hand to your own which could result in an opposite base leg.
 7. Make the final turn - normally at a height of 300-500 feet. While making this turn keep your eyes on the horizon instead of staring down at the landing area otherwise the nose of the glider will follow your line of vision and your speed will increase excessively. The airbrakes should not be deployed until the wings are level.

What to do when you perceive a problem

1. You are too high on the downwind leg, possibly as a result of starting too high or possibly as a result of flying through lift. Answer: widen the circuit and extend the downwind leg a little by delaying the turn on to the diagonal leg.
2. You are too low on the downwind leg. Answer: do not fly in excessively close to the airfield as this would result in a

cramped circuit, rather turn onto the diagonal leg early. Remember this action will mean that you land further down the field than you intended.

3. Another glider joins the circuit in front of you and at the same height, the pilot might not have seen you. If you follow it, it might land where you'd intended to land leaving you with few options so the best action is to turn in early and then land very long thus leaving plenty of space on the airfield for the other glider.