

POST SOLO SELF TEACHING

So you have gone solo, well done. You now need to develop your skills so you are able to:-

- Deal with a wider range of weather conditions
- Soar competently in less than perfect soaring conditions.
- Land accurately.
- Fly safely
- Fly Cross Country.....and so on

Being self critical and challenging your own flying is a very effective way of developing your skills.

The lists below are designed to provoke some ideas, always discuss your ideas with your instructor before setting off so he knows what you plan to do.

A purpose for every Flight Some ideas for post solo self teaching courtesy of Cambridge Gliding Club

Ideally, every flight you undertake should have a specific purpose. This could be anything from a simple handling exercise like doing steep turns, to a more general exercise like learning to use the barograph and analyse the trace obtained from it.

Using this structured approach to post-solo flying, rather than bumbling about the sky aimlessly, should help you to develop your skills more rapidly and identify any weak areas you may have. It may be useful to compare notes with someone who is at the same stage as you are, or even plan to go through the exercises together.

The purpose of the flight should be decided well before you get into the glider, and should be discussed with an instructor.

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| 1. Use of Barograph | Learn how to use a barograph as soon as possible. Take a barograph on every flight. Learn to compare your impressions of, say, how rapidly you were climbing, with the merciless evidence of the barograph. There is much to be learned from its trace. |
| 2. Lookout | Keep a count all the aircraft you see while you are in the air. Try and spot as many as possible. You may even want to keep a note of the total and see if you can beat it on a later flight. Sounds childish, but it is a way of forcing you to do what too many people forget about - looking out. |
| 3. Straight-and-Level Flight | Something that the average pilot often does quite badly. Pick a landmark and fly straight at it, keeping the speed constant. Will help train you to detect small changes in angle of bank. |
| 4. Slow Flying | Find out how good your speed-control is by flying as slowly as possible without hitting the pre-stall buffet. Note that the controls will not be as responsive at low speeds. And don't do it near the ground ... |
| 5. Stalling | If you are nervous about this, as many people are, then start off gradually. Do a HASSLL check. Very slowly bring the glider back to the buffet, then relax the stick pressure. Keep on doing this over a number of flights until you build up the confidence to do fairly steep stalls. Note the precise speed at which the glider stalls with your weight in it. |
| 6. Stalling Speeds in the Turn | Most pilots get nowhere near stalling speed when they are thermalling, but a few find themselves in a spin for reasons they don't immediately understand. You can extend the previous exercise by investigating the well-known fact that the glider will stall at a higher speed when it has a higher g-loading. It is obviously useful to know the speed at which the glider will stall when it is at a certain angle of bank. Establish this by doing a HASSLL check, then simply rolling to the desired angle of bank, and progressively moving the stick back until you reach the buffet. Recover by relaxing the back pressure on the stick. |
| 7. Wing-drop Stalls | Many pilots are anxious about spinning on their own, and sometimes never spin between one annual check and the next. A way to ease yourself into a more confident mood is by the same sort of gradual approach used for straight stalls. Ask to be shown how to induce a wing-drop stall and recover from it before it develops into a spin. Bear in mind that most low-level unintentional spins start out in the same progressive insidious way. Go and practise it by yourself. |
| 8. Spinning | Most people do not practise solo spinning for one simple reason. They are not confident of their ability to sort things out if something unexpected happens. Of course, the accidental spin is always "unexpected" ... The only real answer to this lack of confidence is to build it up by going through the various stalling exercises, particularly wing-drop stalls, until you are happy with solo spinning. It teaches you a lot about yourself and improves your handling skills no end. |

9. Timed Turns Bring some consistency to your flying by doing some turns at a constant angle of bank, and timing them to see how long it takes to do a full 360°. Experiment with different angles and see how much longer or shorter the time is for a whole circle.
10. Steep Turns You can test your speed control and co-ordination by doing much steeper turns than normal. Aim to pull about 2 g.
11. Figures of Eight (Turn Reversals) It is surprisingly difficult to roll the glider from a well-banked turn in one direction to a well-banked turn in the other while keeping the string in the middle. Try it. But make sure you take a good look before you reverse the turn. There is a large blind-spot behind the upper wing.
12. Rolling on a Heading. Pick a landmark, or perhaps a cloud, and point straight towards it. Now practise rolling from side to side while keeping the nose pointing directly at the landmark. Needless to say, you will have to keep the string in the middle, and try and keep the speed constant. It is not as easy as you think.
13. Rate of Roll Do a HASSLL check. Stall the glider to find out the precise stalling speed. Trim to fly at 1.4 times this speed. Make a turn at 45° angle of bank. Apply full aileron and rudder in the opposite direction. Count how long it takes to reach a 45° angle of bank on the other side. Now you know your rate of roll.
14. Side slipping This is a technique that is not much used nowadays, but it is worth at least experimenting with it. Ask for a demonstration and then try it on your own.
15. Spot Landings It is essential to do these before you go cross-country. But get a good briefing before you try them, and find out what the real object of the exercise is. In other words, depositing a pile of shattered fibreglass as close to the airfield boundary as you can is not really what we are looking for.
16. Soaring Most people try and do this all the time, of course - but not many of them try and do timed climbs to see just how long it is taking them to reach a certain height, nor do they compare this evidence with what the averager on the vario is telling them. It is worth doing. Simply look at your watch and see how long it takes you to climb 1,000 ft. It is particularly instructive to find out how long you spend trying to wring the last 200 ft out of the top of a thermal.
17. Circuit without Altimeter You have done it in the two-seater, why not in a single-seater?
18. Re-setting Altimeter to QNH/QFE Simple enough. Find out how to do it, then try it in the air.
19. Use of Radio PROPER use of the radio is all too rare among glider pilots. Learn how to use it correctly.
20. Indicators of Wind Direction When you fly cross-country you may lose any sense of which way the wind is blowing. Try looking around to see if there is any smoke, rippling of the crops, or some other sign that will give you a clue.
21. Field Appraisal Pick nearby a field and note all the characteristics that might be important if you were considering landing in it. These will include: its size, slope, surface, whether or not it has any stock (animals) in it, any obstacles on the approaches to it (wires, trees, etc). Go and look at the field from the ground when you land. It is surprising how different it will seem ...