23 - SOLO SUPERVISION

Gliding's culture of supervision is unique in aviation, and it is important that instructors carry it out in a very positive way, with the aim, in all cases, of safe, fun flying. This chapter aims to advise on the supervision of all solo flying at clubs.

Supervision is about being organised; knowing who needs what kind of help, and when, and also being the eyes and ears for all pilots operating from the airfield. Early solo, and even quite experienced pilots, will often be focussing on the mechanics of flying and fail to notice other issues that may be gradually creeping up on them. These issues may include things like personal fatigue, worsening weather, dehydration, trying to take off with the tail dolly still on, or even getting closer and closer to the fence on each approach. It is your job, as the supervising instructor, to take these pilots out of their 'bubble' and point out the unseen problems

Who needs it?

Early solo pilots need the most supervision, but it isn't just about them. Even experienced pilots and instructors can need occasional collaborative supervision, and the more experienced the pilot the more tactful the feedback from the supervising instructor should be.

The first stage of supervision is dealing with pilots in transit from solo to 'off checks'; a phrase which means that a trainee no longer needs a dual check before each solo flight, and can brief himself for the day or flight. In effect, the trainee begins to supervise his own flying - a goal that has, or should have been, the aim of all your previous instruction. That is not to say, however, that even when 'off checks' our solo pilot should not be watched and given feedback at the end of a flight.

Instructing cannot teach experience, but it can and ought to show trainees how to go about acquiring it as painlessly as possible. During the transition period from first solo to 'off checks' and beyond, lack of experience is a trainee's principal source of risk. It is up to you to monitor how well they are negotiating this slightly tricky phase, and to give advice and guidance if required. Later on your trainees will be more at risk from the belief that they have all the experience they'll ever need - an attitude which explains adequately some of the odd little troughs and peaks in the accident statistics.

When trainees reach the 'off-checks' stage this doesn't mean that your interest in their progress should cease abruptly. Their conduct will still need monitoring. Even pilots with thousands of hours occasionally do blindingly silly things, and need a 'bit of a chat' - not that most are ever likely to think they do. 'Off checks' or not, your trainees should never feel they don't ever need to fly with an instructor again, nor stop seeking advice and guidance, even if they become instructors themselves. They are more likely to want and enjoy flying dual with instructors if the relationship between instructor and trainee has not been one of master/slave; usually revealing itself as *I'll talk, you just listen!*

During the transition period your aims as 'monitoring' instructor are to:

- help maintain and improve trainees' existing skills
- to build their confidence or reduce it to an acceptable level if it seems to be getting a bit overheated
- introduce further training
- develop self-briefing and supervisory skills
- develop a culture of striving to continually improve their own flying standards.

Dual flying carried out in this period will be for one of the following purposes:

- a specific check flight for the purpose of progression, i.e., a particular weather condition, a new runway direction, or an aircraft type with which they are unfamiliar
- a specific training flight where exercises that haven't been included or covered by the training syllabus are practised and demonstrated, i.e., soaring, cross-country flights or field landing practice
- opportunities to improve the trainee's handling, i.e., stalling and spinning exercises, side-slipping etc
- as the result of not flying for a particular period
- just for fun.

Solo flying should have equally important and clear cut objectives.

Goals defined before the flight prevent dispiriting and aimless wandering about, and help ensure that progress continues. There are the more obvious aims such as soaring, the Bronze leg requirements, Silver C 5hr attempts - and all the rest - but other useful and realistic goals are spot landings and solo spins. Solo handling exercises are also useful and can be watched from the ground. Trainees should be encouraged to take-off with the intention of doing something positive to improve their skills.

It is really a question of the instructor deciding what the trainee is ready for and tasking them with attempting it. There is, of course, much less advantage in the trainee trying anything solo if the instructor is not observing, and without a brief and de-brief the training is incomplete. Remember the safety aspect of supervision. Don't deliberately suggest that a trainee do something for which they haven't been trained. Solo spinning, for example; great if you are confident the trainee can enter and recover safely. If in any doubt, check by flying with them first.

The transition period often ends with the trainee completing the Bronze 'C ' with the cross country endorsement. However, it should not be assumed from this milestone that a trainee who is able to pass the Bronze and cross-country endorsement checks, has thereby gained all the knowledge needed to carry him through the rest of his gliding career. On the contrary, instructors still play a large role on the well-being of the pilot, especially when it comes to heading off on the first solo cross country flights.

BRIEFING

Unless you already know the trainee well, ie., you have been involved with their training over, say, the last 3 months, you will need to find out what they've been doing previously before you suggest what they ought to be doing next! Logbooks and progress/training cards come in handy here [see chapter 3], but a Question and Answer session can tell you quite a lot. Always insist that the trainee presents his log book to you before flying. If the cat has eaten it, be wary and make sure you are certain of facts before allowing the pilot to fly solo, or even attempt a complicated exercise near the ground with you on board. There are not many people out there, in the wild, who blatantly lie, but there are a few.

In any case, find out the following:

- how long since the pilot's first solo?
- how long since the last solo and the last dual?
- how much dual and solo flying since first solo?
- how long since last launch by the method now being considered, and in the case of wire launching, how long since last launch failure checks?
- was the last dual flight followed by a solo. If not, why not?
- are the-prevailing weather conditions and/or runway in use different from the ones they are used to?
- what post-solo dual training, if any, has been covered?
- has the trainee practised any exercises solo?
- what does the trainee need to do now? This will depend largely upon the answers to the previous points, and whether the flight is going to be dual or solo. You have to decide what's practical on the particular day.

Briefing for a dual flight

The nature of the briefing will depend entirely on the purpose of the flight. In any event, Question and Answer sessions are quite important here because you are trying to encourage the trainee to think about, and work out:

- the purpose of the flight
- the kind of problems that might arise and what to do about them if they do.

The trainee has to do all this when solo, so make sure they are able to work their way through the options in a sensible fashion. Phrase your questions carefully so that you neither prompt, nor 'lead' - unless the trainee is getting in a complete tangle - and don't make the mistake of confusing 'not very talkative' with 'not knowing'.

For a dual flight, are you going to engineer a difficult situation such as running out of height in the circuit? If so, how will you do it, and where? Most early, and indeed some not so early solo pilots can engineer at least one inadvertent 'situation' for themselves during their flying career, without any help at all. Just watch out if they keep doing it! Whatever you set up, it should gradually 'creep up on them', rather than be something very dramatic and potentially dangerous, like an inadvertent spin at 700'. If trainees have been taught properly they won't oblige you by doing an accidental one anyway.

New exercises should be discussed with a view to finding out how much the trainee already knows and/or has thought about them. Explain the purpose of the exercise and exactly what it is you are going to do. On a good soaring day, for example, the exercise might be to refine one's centring techniques by, say, climbing to 2,000', leaving the thermal completely and then coming back to see how quickly one can re-centre. The purpose of the exercise might be described along the lines of 'Higher cross country speeds if you climb well, so you can go further during the day - less likelihood of landing out', and so on. Below are a few suggestions for exercises that could also be covered, though obviously not all in one flight. Choose to suit the circumstances. The following list is certainly not exhaustive:

- basic aerobatics
- cloud selection
- compass appreciation
- understanding and learning how to use flaps
- high speed flying
- mini cross-countries
- spiral dives
- stall and spin reinforcement
- stalling and spinning
- steep turns
- thermal centring
- turning and coordination
- two seater conversion
- wave/ridge soaring.

Before take-off decide who is going to have responsibility for the different phases of the flight. Will the trainee be doing it all, or are you going to demonstrate something. If so, what will it be, and when - or why, come to that? Clearly dividing the responsibility for the flight (even though it is ultimately yours) helps reassure the trainee that he is not going to be asked to do anything with which he is not familiar, and avoids possible later confusion about who is supposed to be doing what.

If the flight is definitely a check flight of some sort, then you must decide how much of it is going to be devoted to testing, and how much to training. The table below gives an approximate balance between testing and training for several different types of check flight for a Bronze C pilot. Obviously the weightings can alter, depending on the circumstances.

TYPE OF CHECK (for pilot with Bronze C)	Training %	Testing %
Aerobatics	95	5
Aerotow/Winch	90	10
Bronze (unless faults occur)	0	100
Conversion	80	20
Difficult Weather	65	35
Early Solo	50	50
Field Landing	90	10
Periodic (Annual)	30	70
Recency (unless faults occur)	5	95
Remedial	Variable	
Site	70	30

As well as deciding the ratio of training to checking, you also need to consider the pass/fail criteria for the test section of any flight. What must the trainee be able to do to satisfy you that he has learned and understood what he's been taught?

Briefing for a solo flight

Again, a Question and Answer session along the lines of the dual brief, with the same general aim - 'is the trainee thinking for himself and getting the right answers?' If the answers are seriously or persistently wrong, then he should probably be flying dual. The concerns you have about the suitability of the weather etc are similar to those for a first solo [chapter 20].

You could perhaps specify exercises such as a particular spot on the airfield where the trainee should attempt to land, or stop, or touchdown; whichever seems the most useful. The landing

should be fully held off, and if the glider has a skid the trainee should not use it as a brake. These flights require carefully thinking through to avoid the kind of accident where the trainee thought you meant something quite different from your original intentions. For example, they may overshoot the marked spot and do something like whip the airbrakes open or try to force the glider onto the ground. Brief carefully.

As far as upper air exercises are concerned, you can provide positive guidance and help with soaring. Suggest when to launch - depending upon the launch method and the available soaring -, and which clouds to go for. Ask the tug pilot to take the glider towards a likely looking cloud. Bearing in mind the wind strength and its direction, indicate a particular area of the sky where the pilot should search for lift.

Set an attainable goal or duration. For example, *Have you got a Bronze leg yet*? Encourage the trainee to sample a number of thermals and work at attaining the highest consistent climb rate in each. Wiffling about at cloud base doesn't teach anything about how to find and use the strongest lift at the core of a thermal, nor does it encourage the inquisitiveness (*I must be able to do better than this! Where is it?*) that seems to mark out the good soaring pilot from the indifferent one.

If it is not soarable, encourage the trainee to undertake other tasks which will improve their ability and understanding. In addition to handling and coordination practice, the trainee can explore the various characteristics of the glider they are flying. Perhaps some solo stalling and spinning if they are current in this. These flights can help build confidence and increase awareness, as well as giving the trainee a yardstick by which to measure the performance and manoeuvrability of other types of glider.

A basic difference between solo and dual flying is that if something goes wrong during a solo flight, the instructor can't remind the trainee what they should be doing. Because of this, a pre-flight briefing should leave the trainee with any emergency actions at the forefront of his mind. For example, *What will you do if the cable breaks? What approach speed have you chosen?* and, *What will you do if you are running out of height in the circuit?* There aren't many such points to make, but repeat the key ones just before the launch.

It is important that on solo flights the instructor watches the trainee's attempts at whatever has been set. Without seeing what the trainee actually did, the instructor really isn't in any position to comment or advise one way or the other.

If the flight is to be dual, progress will only be made if the instructor encourages and expects a high standard - without becoming a nit-picking martinet. The trainee's confidence will improve, along with the wish to do so, if the instructor acknowledges well executed manoeuvres and good decisions and judgement, with praise. Progress will be slow or non-existent and confidence leak gradually away if the instructor ignores the trainee's best attempts and treats his failings with contempt.

DEBRIEFING

Whether the flight was dual or solo, the de-briefing will be similar. As mentioned previously, the aim is to encourage trainees' to objectively assess their own performance, and in effect, to debrief themselves. On most occasions trainees will be over-critical, which is quite normal but not very constructive. As well as recognising some of their failings, they should be encouraged to identify sound decisions that they made, and manoeuvres that were well executed. Doing so will help improve their overall ability.

No debriefing is complete without advice on what the trainee should do to correct what was incorrect, and what he should be aiming to do on the next flight. Guidance on subjects the trainee could consider and research, skills he could practice, as well as a standard to expect or strive for, should round off and complete your debrief.

ADVICE TO INSTRUCTORS

For any dual flight, be clear in your own mind exactly what it is that you are testing and/or training for. The trainee must understand what is expected of him, and you should have decided on the pass/fail criteria beforehand. If the trainee falls short of the pass standard then further training and practice will be required. This could mean more than one flight. If it seems likely, make this clear from the outset. More than one flight gives the opportunity for the instructor to test, train, and then test again on what has been learned. This process of test/train/test is efficient and thorough, and not only results in a generally higher standard of pilot, but usually encourages them to **want** to improve further. Along the way they are also more likely to fully enjoy the rewards of gliding.

The importance of observing your trainees even when they are flying solo, cannot be overstated. If they are aware that their performance is being monitored, then they will naturally strive towards a higher standard. Award improvement with praise. Without it there is little or no incentive to improve.