Landing: Keep your eyes on the Goal!

By: Richard Carlson - SSF Chairman

"My that experienced pilot looks low! What's he doing now? Why is he heading in that direction? He should know better than that!" How often have you heard these questions at your gliderport? How many times have you been the pilot? Did you ever think that some pilots may have been inadvertently trained to do this?

The Soaring Safety Foundation has been analyzing accident statistics for over 20 years and in that time a single theme has been repeated over and over again. The majority of soaring accidents, over 70%, occur in the approach and landing phase of flight no matter what the pilot's experience level is. The SSF has come to the conclusion that comments/questions like those in the lead-in paragraph are indicative of a problem with flight training in the United States. The SSF advocates a "Goal Orientated Approach" to pattern planning, with the goal being a safe arrival at your intended touchdown point.

The preferred method of teaching any complex task is to break that task down into several simple steps. Each step can be mastered and when combined the complex task is easily performed. The trick it to develop these simple steps in such a manner that they teach the fundamental idea needed to perform the complex task. These steps must work well in both normal and abnormal circumstances, such as when you are low getting back to the gliderport. The accident statistics show that, regardless of instruction, some pilots fail to follow the proper series of simple steps needed to safely land a glider in abnormal circumstances.

To examine this further, let's contrast the procedures and skills demanded of the pilot in the take-off and landing phases of flight.

The traditional take-off instruction focuses on developing the skills needed to handle emergency procedures, primarily low altitude rope break events. Everything from the pre-takeoff check list (E – Emergencies), through classroom discussions and practical demonstrations reinforce this concept.

The traditional approach and landing instruction many experienced pilots have received, and new pilots are receiving, focuses on developing the skills needed to land the glider on a pre-determined spot on the runway. The training may emphasize reaching an Initial Point (IP) with enough altitude to plan and execute a normal landing. The pilot is taught to adjust the downwind, base, and final legs of the traffic pattern to compensate for external factors (i.e., altitude, wind, traffic). In the pilot's mind the task becomes one of reaching the IP before detailed pattern planning can occur. This subtle shift in focus helps us understand why pilots fall into the trap of continuing to fly toward the IP even when it is obvious, to us on the ground anyway, that they will be too low to execute a normal pattern. **This is what they thought they were taught to do!**

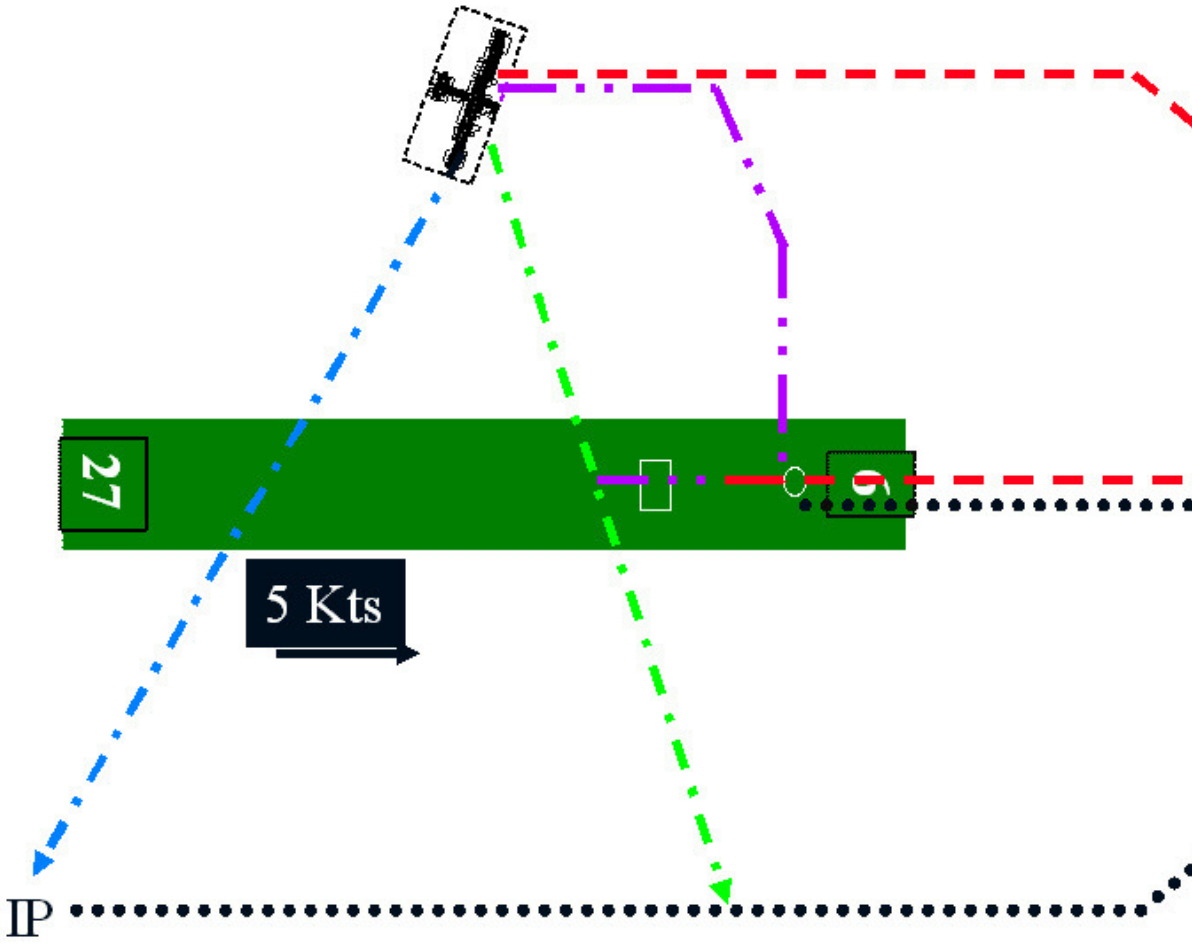

Figure 1 - *Several approaches are possible; depending on wind, altitude, traffic, lift/sink, and other factors, some approaches will be better than others – which one will you choose?*

The SSF's "Goal Orientated Approach" refocuses the pilot's attention back to the primary objective, that of reaching the desired landing spot. Pilots are taught that they need to compensate for those external factors the moment they decide to head back to the gliderport. Classroom discussions are designed to evaluate the pilot's decision making skills allowing the instructor to determine if the pilot understands what the "Goal" is. This is followed up by practical flight experience where the instructor puts the pilot in a position from which it

will be impossible to reach the IP with enough altitude to perform a normal pattern. The pilot's performance is then evaluated and errors are corrected.

Every glider pilot, from student to Airline Transport Pilot, needs to learn, or re-learn, that landing a glider requires a unique mind set. Just ask yourself this simple question, "can I complete a safe landing at my intended touchdown point, if I keep heading in this direction?" If the answer isn't an emphatic YES, then change your flight path!

Instructors are encouraged to adopt this training procedure, with an emphasis on matching the level of training received in the takeoff phase of flight. All glider pilots should practice this procedure during initial and recurrent flight training. Ask an instructor today how you can learn this "Goal Orientated Approach".