



Parachute Deployment.

The following article was written by Pete Williams in ASA-Newsletter.

Pete Williams has flown DG sailplanes since March 1982 including the DG-202, DG-400 and DG-808B. He has 2,800 sailplane hours, 1,100 of which are in the DG-400/800B models.

Several weeks ago, I attended a very thorough briefing on emergency bailout procedures conducted by Allen Silver, a Master Rigger from Hayward, California.

Over the years, Allen has packed a lot of parachutes for sailplane pilots. No one likes to think about leaving his sailplane in flight.

Many pilots feel as long as the chute has a current repack and is worn properly, they can manage somehow should this unwanted event occur. Since a parachute costs as much as a high quality variometer, it behooves us to know as much as we can about this life saving device. Here are some of the highlights of Allen's presentation.

A Positive Attitude:

Know that you can and will bailout if necessary by believing your parachute can save your life. In the bailout process, do not give up. Keep trying to exit the glider and once clear of the glider, keep trying to pull the rip cord. Once the rip cord is successfully pulled, remember that the canopy will deploy fully in about 2-3 seconds.

Know Your Parachute:

Have it packed and serviced by a qualified rigger. Provide the rigger with the packing instructions that came with the parachute. The rigger must have an FAA license and experience packing your type of parachute. Packing methods vary according to the container. Ask your rigger.

Store your parachute by laying it flat in its carry bag in a cool dry place. Never leave it in the cockpit, in direct sunlight or near liquids. If the container gets wet for whatever reason, have the parachute repacked. Make sure the speed and descent ratings of the canopy fit your weight. If unsure, ask your rigger.

(Editor's Note: When a parachute manufacturer was asked about the correct size of parachute, his reply was, "It depends on how hard you want to land. If you are young, then you can land harder than if you are older. A young pilot in good shape who has never had broken vertebrae or broken legs can choose a smaller parachute than a pilot who is not so young or is not so fit, or who has bone or joint problems"



Know how to wear the parachute.

Stand erect and secure the chest strap first, then bend over and secure leg straps. If you have quick disconnect fittings, make sure they are locked (snapped) down and the spring is not missing or broken. Know how to adjust the shoulder straps so they are of equal length. If unsure, ask your rigger.

Check also if your canopy has a steering system and learn how to use it. To more adequately learn all you can about your parachute, it is a good idea to be present while your rigger repacks it and ask questions during the process. You will be surprised at how much you will learn.

Pre-flight Inspection:

Open the flap to expose the rip cord cables. The cable ends should extend well through the grommet openings and be safetied. Check the rip cord handle. It should be securely fitted all the way into its pocket. Some pilots put a piece of colored tape on the handle for rapid visual identification. Check for general integrity of the container. The canopy should not be visible. If a round external spring loaded pilot chute is installed, make sure it is secure around its circumference.

Have a Plan:

There are many reasons for leaving a sailplane such as structural failure, mid-air collision, severe control problems, fire (motor gliders), loss of control, etc. **Know and practice the exit procedures for your sailplane every time you fly.** Do not remove the parachute to exit your sailplane after a flight. Leave it on and practice a simulated bailout exit.

(Editor's note: Our parachute manufacturer says: "Every time you take off, and as soon as you are stabilised after take-off and have time to spare, practice your deployment sequence. Make sure you know where the canopy release is. With your eyes closed. Look at the ripcord handle. Move your hand to the ripcord handle. Remember that in many cases you may be spinning or tumbling and it will be difficult to move your hands towards the ripcord handle without considerable effort. Difficult or maybe impossible."

Executing the Plan:

DO NOT DELAY YOUR DEPARTURE ONCE YOU DECIDE TO BAILOUT.

The basic exit procedure is CANOPY, BELTS and BUM. In that order! Once the glider canopy is clear of the sailplane (shield your face if possible when using the emergency canopy opening system), unfasten your seat belt/shoulder harness, to do this-LOOK at the release. Then go over the side by whatever means possible by crawling, clawing and pushing clear of the cockpit.



Once clear of the cockpit LOOK at the rip cord handle and pull it straight out from your body by grasping it firmly with BOTH HANDS. If only one hand is used, pull using a fully extended arm with an outward and circular motion. High altitude bailouts will consume more distance for full canopy deployment but the 2-3 seconds elapsed time for full canopy deployment will remain the same. Be prepared for a swift but welcome jolt as the canopy opens.

Under an Open Canopy:

Once the canopy is fully deployed, take a deep breath and survey the situation by noting your height and drift. If you are still grasping the rip cord handle, drop it.

Many canopies have a steering system consisting of handles attached to the rear risers. Pull the steering handle on your right to turn right and vice versa. Remember to release the pull to stop the turn. Remember also that descent velocity increases when the steering handle is pulled. Under a full canopy it may appear you are suspended and not coming down at all.

A closer look at objects on the ground will confirm you are indeed descending and the closer you get to the ground, the faster your descent will appear to be. In calm air, you are moving forward at about 5 mph.

(Editor's note: Our parachute manufacturer was asked about when you should bail out. He held his hand up to the level of his forehead and said "when the sheet is up to here." So then he was asked how was it going to be when the parachute had opened. His reply was "maybe the sheet is here..." holding his hand now a little lower, but just above his nose... "Or maybe it is here," holding his hand just below his nose. In many cases, once the parachute has opened, the fun has only just begun since in many parachutes you are now a passenger, completely out of control."

Preparing for Landing:

Look down to determine if you are drifting forward or backward. Try to land facing the wind. Your landing spot will be somewhere between a 45' to 60' angle as you look forward and down. The landing spot should appear to remain stationary as you descend. If electric power lines, trees or other obstacles are in the line of landing, steer the parachute and select a new landing spot. Do this early to avoid steering turns at a low altitude.

The Landing:

Extend your arms and grasp the risers above you. Keep your eyes on the horizon! Place your feet and knees firmly together with knees slightly bent. Do not raise your legs as you touch down. As your feet touch, turn your head to one side, tuck in chin and elbows and roll in the direction you are moving.



If you land in a high wind, roll onto your back and collapse the canopy by reaching over your head and pulling as many lines as you can get your hands on over your head, hand over hand into your lap. Keep pulling until the canopy collapses. Remove harness and place over canopy to keep it from reinflating. If landing in water, face downwind and, after landing, detach chest and leg straps and swim away from the canopy.

Safely Back on Earth:

Use the canopy to help others locate you and carry a small signal mirror and whistle if possible. A metal signal mirror can fit into the packing record pocket of the container. Some parachutes have an emergency kit. A cell phone is a smart addition. If you wear glasses, they will most likely be lost unless tightly secured with a headband like "Croakies".

Good luck and may you never have to step out of your beautiful sailplane!

(Editor's note: If you buy a parachute, make sure it is really bright colours. The last thing you need is a camouflage parachute! Also, there are some sailplanes which you will mind stepping out of less than others.)