

Ground Control in Strong Winds

Course devised and taught by Mark Leavesley

Good ground control technique is essential for launching and landing in strong winds. It can save you from being dragged, 'hoovered' up, or dumped. A few minutes ground handling with your wing flying but your feet safely on the ground can give you a feel for the air. How strong is the wind? How gusty? Does it feel smooth or turbulent and 'gnarly'? Are you convinced that you will be comfortable and safe flying your wing in these conditions?

Using the rear risers, rather than the brakes, to control the canopy on the ground in strong winds, has two major advantages:

- Using the brakes has the effect of causing lift before stalling and this is what can pull you off your feet. Pulling on the rear risers immediately induces a stall so prevents your being lifted off.
- If you are holding the rear risers while ground handling in the reverse position, then you can resist the force that will otherwise try to untwist the risers. Being lifted up and twisted around at the same time can lead to lack of control as you are jerked around.

Setting Up

To avoid having the wing blown about while setting up, you need to minimise the time taken checking the wing and clipping in.

- Carry out major canopy and line checks before packing your glider at the end of the day. Pack the glider neatly, especially the lines, so that you recheck quickly as you open the glider.
- Put on your helmet and gloves, check your radio and generally make sure you are ready to go.
- If you have unclipped your harness, then put the harness on and make sure it is fastened correctly. If the harness is already clipped in, lay the harness on its back by the centre of the wing.
- Lay out the glider across the wind and unroll the downwind side first. Check the glider and lines on that side.
- Unroll and check the upwind side of the glider, then roll back the upwind tip to stop the air getting into it. Then you can check the lines on that side.
- Lay the lines out and check they are not tangled or twisted and that the risers are aligned with the A's on top.
- If the harness is already clipped in, then stand close to the wing and put the harness on as quickly as you can whilst still making sure it is fastened correctly.
- If you are not already clipped in, then face towards the canopy, pick up the risers, checking that they are not twisted and are still correctly aligned with the A risers on top. Hold the riser loops together. If you normally turn to the right on a reverse launch, then turn the

risers over to the right and clip them in. Turn them to the left if you are going to turn left. Facing towards the wing will allow you to see, and react to, if the wind picks it up or it starts to inflate. Don't forget to clip in the speed bar lines as well.

Building the 'Wall'

- Stand opposite the centre of the wing. Hold both A risers in one hand keeping them level. You may need to turn your body slightly to one side or the other to get them to come level. Hold the rear risers in the other hand, leaving the brake handles attached.
- Lean back and lift the front risers gently to start inflating the glider. Hold the rear risers down to prevent the glider coming right up. Once the wing is inflated right across, move both hands to the rear risers.
- The wall is the right height when you can comfortably hold it with your weight slightly back to keep the tension on and the rear risers held down by your sides. Even in strong winds this should not take a great physical effort.
- If you have to pull hard to keep the wing from dragging you back, then the wall is too high. Pull the rear risers slightly to bring it down until it is more comfortable.
- If the trailing edge of the wing starts to lift, then the wall is too low. Lean back to increase pressure on the A's or else lift them slightly.
- If the tips of the wing start to lift then bring the rear risers in more towards your body.

Controlling the Glider Overhead

- Bring the canopy up by lifting the A risers, one in each hand, making sure they start off parallel. The stronger the wind, the less effort you need to put in.
- As the wing starts to come up, the drag on you will increase. Lean right back to counter this. Once the wing starts to come overhead, the drag will stop.
- As the wing starts to come overhead, transfer your hands to the rear risers and use these to steer. Keep leaning back. Only gentle movements are needed.
- If the glider moves to your right, then move right and pull your left hand down a little to slow down that side of the wing. (You are doing the same thing as if you were holding the brakes in cross hands, but with the opposite hand because the rear risers are not crossed.) Vice versa if it moves left.
- If the glider starts to overfly you, then pull both rear risers.
- If the glider starts to drop back, then lean/move back to apply more pressure to the A's. You could also transfer your hands back to the A's to steer them up again.
- If the glider appears about to lift you off your feet, then apply gentle pressure to the rear risers to stall it slightly and bring it back under control.
- If you are actually lifted off your feet, then apply gentle pressure to the rear risers to reduce the lift until you are safely back down. The fact that you are holding the rear risers will enable you to resist the pressure of the lines trying to untwist so that you remain in control of the glider the whole time.

Moving about on the Ground

- To move to your right, pull the right rear riser briefly to drop the wing to 45° on your right. Don't pull too hard or it will go all the way to the ground. Run right using your left hand to control the speed of the glider and bring it to a halt when you are in position.
- Vice versa to move to the left.
- To move back up the hill, pull both rear risers enough to bring the wing to 45° in front of you. The wing will immediately start to pull you back up the hill. Only use enough pressure on the rear risers to allow you to move at a comfortable speed.

Bring the Wing Safely Down

This applies whether you have been ground handling or have landed in strong wind.

- If you are coming in to land, make sure your feet are firmly on the ground. Control the canopy using the brakes. When it is under control turn quickly, check the wing is still under control, then transfer your hands to the rear risers.
- When the glider is fully under control, pull the rear risers while bracing yourself to lean back and counter any drag.
- As the canopy approaches the ground, ease up on the risers so that it lands gently rather than banging in.
- Move round to the side of the canopy to place it sideways on to the wind.
- Hold the rear risers in one hand and pull them towards your body. Take all the lines in your other hand. This allows you to make a 'posy' of the wing with extra tension on the rear risers reducing the tendency to reinflate.
- Pull in as much line as possible. Give a little tug to the lines on the upwind side to fold them over and prevent the air getting in. You will now be able to hold the 'posy' over your arm with the wind tending to hold it closed.

Slop / Top Landing in Strong Winds

The traditional method of top landing is to fly in high and approach the top landing from behind, gradually losing height. However, if the wind is really strong, there is a chance this will result in your being blown back in the venturi effect. Or you may overfly the top landing area and get back into ridge lift.

The following method avoids those dangers.

- Approach the front of the hill on a diagonal line. If the wind is slightly off the hill, then approach on the slower, more upwind angle. Select a point on the hill and aim for it.
- As you reach your spot, apply a little more brake on the side away from the hill to straighten up the wing.

- Apply gentle brake to slow the wing, allowing it to be gradually blown back as it comes down. Adjust the amount of brake to control the descent. Don't brake hard or you will stall the wing. Use the brakes to steer left or right to keep in a good position.
- Don't worry if you find yourself hovering above the ground, just stay in position and gradually work your way down.
- Once close to the ground adjust the amount of brake to permit a soft touch down. Keep in control of the wing until your feet are firmly on the ground, then follow the steps described above to bring the wing down.