



# HOW TO BE A BETTER PILOT

Tim King continues his new series of articles aimed at the beginner paraglider pilot

## NO 3. RECOVERING AN INVERTED WING

I've often seen, usually on windy days, pilots struggling on the ground with their wing upside down. This has either occurred from poor control whilst setting up for launch, or collapsing the wing asymmetrically on landing.

If the pilot then starts to get dragged or pulled about a bit, his or her natural instinct is to pull the brake lines to arrest the glider. We know that this is OK when the wing is in a normal configuration, but when the wing is upside down pulling the brakes starts to lift it higher, increasing lift and dragging the hapless pilot even further.

The brakes will have a similar effect on the wing as the front risers do when the wing is the correct way up. Therefore, by applying pressure to the front risers, the wing can be kept in check when it is this way round – having a similar effect that the rear risers have when the wing is the correct way up.

So, you've just landed and the wing has ended up upside down. The way to return the wing to its normal position is to initially work on just one brake line, on the side that has spun over. This will 'fly' the braked side up while the other side of the wing remains anchored so the braked side rotates back to its more familiar position.

Be careful not to pull too much brake - the braked side will just flog and will not be able to rotate as it will be stalled. You can also adjust the power within the wing using the tension

created by your body on the risers – the same as you do when building the wall. A combination of brake input and tensioning or de-tensioning of the risers with your body weight is required to keep the whole manoeuvre balanced.

Once the wing has rotated you must allow the other side to pressure up and slide under, back to the normal configuration. This is achieved by keeping some tension on the side that you've just rotated by loading your body against the wing. Walking slightly across to the inflated side, keeping some pressure on the brake control and tensioning the front riser of the same side very slightly with your hand, will help to push air through to the other side and start to inflate that side of the wing.

All that remains is for you to catch the brake on the newly-inflated side, de-tension by moving towards the wing slightly, then arrest both sides into the familiar 'wall' position as it flicks out. This manoeuvre takes a bit of practice and you do need to get your head around the control reversal, but it is a skill well worth having.

Once you have become proficient at turning your wing upside down and back again, you can learn to lift the wing off the ground upside down and 'fly' it above the ground to empty out all those annoying bits of grass, seeds and insects that collect in the cells.

Remember, when the wing is upside down the controls are in reverse. If the wing is shooting down towards the ground onto its leading edge,

don't release tension on the brakes as you normally would if it were the correct way up. Instead pull a little more brake to soften the fall of the wing. I found this the hardest instinct to 're-learn'.

Being familiar with ground handling your wing from different configurations will give you a greater understanding of all the controls available to you. It will also develop the necessary reflexes to be totally confident in many different and stressful launch scenarios.

It is important to practice, practice and practice ground handling as much as you can. The better you are at ground handling the easier you will find many other aspects of paragliding, such as kiting, slope landing, collapsing in strong winds and so on.

You will also develop a feel and an understanding that will stand you in good stead in uncomfortably rough air. The feel and inputs necessary for 'active' flying will develop quicker and more naturally, allowing you to transform unsettling air into a more manageable, playful experience. Rather than a dread of the unknown, you'll have a smile on your face.

Next month: The "Cobra" high-wind launch technique.

*Tim King is CFI of Sky Paragliding ([www.skyparagliding.co.uk](http://www.skyparagliding.co.uk)). An earlier version of this series of articles appeared in Skywings in 16 parts between October 2003 and June 2005. The present series has been substantially revised and updated.*

