



HOW TO BE A BETTER PILOT

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

NO 2. THE REVERSE LAUNCH

Fig 1: The perfect wall - foundation of a great launch

There are many different variations of the reverse launch technique, far too many to cover in one small article. If you are newly out of school then you would have been taught one technique and probably have been sticking to this.

If your technique is working for you and you have confidence in it, then stick with it. However if you are finding it all a bit of a struggle, regardless of the amount of practice you have been putting in, you may want to try another method that could suit you a whole lot better.

All reverse launch techniques require huge amounts of practice to master. As with learning any skill, it is so important to practice it. This may sound a little obvious, but I frequently observe pilots reverse launching and the same errors occur over and over again as a result of incorrect technique.

These are mainly due to some sort of asymmetry in the launch technique, such as a twisted upper body or badly-routed brake lines, or simply being too aggressive and bullish with the control inputs.

From the beginning

The pressure that arises from having to perform a reverse launch on a windy and busy take-off can be immense. Often, for the novice pilot, being in the air is the easy bit, but getting there can fill you with dread. It doesn't have to be this way. With some dedicated practice launching will become a

pleasure, allowing you to concentrate on other aspects of your flight.

Yes, reverse launching can be difficult to begin with. But, just like any other skill, the technique can be learned and become second nature. Just think how much better you would feel if you could rock up to take-off on a strong day and know that launching really wasn't going to be a problem.

Nevertheless, even for experience pilots who have performed thousands of launches, it is still necessary to manage stress when on a really challenging, windy launch site. We need to reinforce confidence by eliminating any negative thoughts, and instead focus on our goal. I draw on previous similar positive experiences, and mentally rehearse what I am about to perform in a very positive fashion. Mental rehearsal is an important part of performing and learning a new skill - you will be amazed at the effect that it can have.

Be careful though. It's also important to realise when your skills are not up to the task in hand and more practice is required. Do not let overconfidence override your skill level.

The crossed-hands technique

In this article I'm going to describe the 'crossed-hands' method. In future articles I will cover a couple of other techniques. If you haven't been using a crossed-hands method before, having your hands crossed over will feel a little strange at first, but persevere - there are some fundamental advantages.

In any launch technique it is vital to have the brake handles in the correct hands throughout the launch. Having to let go of the brakes and then find them again once you have turned can get you into all sorts of trouble. A continuous, fluid cross-hands technique ensures that we can remain in control of the glider, even if we become airborne before we have made our turn.

If you are in a school and working towards your CP qualification, get yourself a suitable glider now, if funds permit, so that you can start practicing your inflations on a flat, open safe area. You'll progress through your course far quicker and at a higher standard. Your ground-handling skills will carry through to all other aspects of flying: you'll be more in touch with your wing and, later, even skills such as thermalling will seem easier and more natural because you are developing a feel for the wing.

Preparation

Choose an appropriate area of the launch. If the launch is a small and restricted area there is really only one place to inflate from. However if the launch is large various options will be open to you. Watch other pilots launching and see the effects of their launches. If it's windy you may choose to launch from the front of the take-off to avoid venturi or other hazards at the back of the launch area. Or you may choose to launch to one side to avoid rotor or a rowdy thermal trigger. Think carefully about your position relative to all possible hazards.

Establish the direction you want to turn. I turn the same way every time, so I never make the mistake of turning the wrong way on launch. Now is the time to think positively and be committed - too many paragliding disasters are caused by a lack of commitment and poor technique on launch.

The foundation of a great launch is a perfect wall (see last month). I can not stress this enough! When your wall is balanced (Fig. 1) and you have made a visual pre-flight check of your lines, transfer your hands to the appropriate brake handles and risers as shown in Fig. 2. Note that the top hand clasps the handle with the thumb. This is important, since it ensures that the brake line is totally detensioned; this eliminates the brake being applied slightly if it were having to route around your hand.

If your glider has split A risers, take hold of the risers which accommodate the centre lines. This will help to inflate the glider from the centre first, keeping the inflation symmetrical.

When you look down at your hands, you should notice that your wrists are completely crossed and your forearms and chest form a perfect triangle (Fig. 3). This is very important - it means that you are symmetrical. You should aim to keep this triangle throughout the inflation until you need to apply the brakes or turn around.

We are now ready to inflate the wing. The following stages should flow together into one graceful, relaxed, but committed manoeuvre. It is vital that your chest stays parallel to the wing. Twist one shoulder then the other towards the wing and see the effect this has on the wing. You are shortening one riser, inducing asymmetry and consequently a turn of the wing.

Inflating the wing is a balance of forces. Your inputs on the various controls should be governed by the wind speed, how lifty the air is on take-off and the glider's known behaviour.

Fig. 4 shows the ideal position just prior to launch. The pilot is well balanced and in a position of command. Notice how my centre of gravity is lowered by bending my knees, and I have one foot in front of the other so I can rock back and stay balanced. The windier it is the lower I get. To initiate the inflation, exert some tension on the risers by rocking onto the back foot, simultaneously flexing your wrists upwards and raising the forearms only slightly.

At this moment the wing begins to inflate and arcs upwards. You must now exert some resistance to the horizontal pull of the wing, whilst also moving underneath the rising wing. Too much and the wing will rise rapidly above you. It may lift you and then dump you on your back as it continues to accelerate over you! Too little and you will be pulled towards the wing and cover too much ground downwind before the glider peaks above your head - if it does so at all.

You will only know how much to resist and move by practising and experience. But don't forget, the amount you need to resist will change with the wind speed and the type of air. You will find that you can steer the glider when it's on its way up by tweaking one wrist or the other upwards very slightly - just a centimetre or two - to accelerate that side. If you have prepared the perfect wall and remained symmetrical this should not be necessary, but with experience you can counter slight asymmetries or wind shifts with this

technique. Eventually you will make these minor adjustments subconsciously.

Just before the wing reaches its zenith overhead, you may need to apply some brake to avoid it overflying you. Apply the brakes by moving your hands downwards and outwards towards their appropriate sides. This is a good time to make another visual check of the wing prior to taking off.

If the wing has come up badly, drop it back down and start again. It's safer and easier than struggling with a turning glider.

The turn to face forward should be made with a slight forward movement into wind. At the same time, begin to load some of your weight through the harness onto the carabiners. This will ensure that the lines stay tensioned throughout the manoeuvre, so that the wing does not unload and collapse. Squeeze on a little brake at this point, just enough to keep the wing above you and so that you can feel the wing.

You may need to move slightly to one side or the other to centre yourself under the wing. Don't try and force the wing back to the centre, but drive it back above your head by moving slightly towards the lower wing and slightly forwards at the same time.

You can now take a final pause to check your airspace. Then either continue and take off or, if the wind and lift are not too strong, pause further and kite the wing above you until ready.

The take-off run

Make sure that when you make your take-off run you are flying the glider directly into wind at the maximum trim speed, whilst still keeping positive pressure on the wing by leaning low and forward through the risers, loading the wing through the carabiners. Many pilots try to take off too slowly, unaware that they have some brake applied. This results in a series of hops rather than a slick, fluid take-off at max trim (hands up) speed. Speed is crucial whether you are taking off in windy or still conditions.

Key points of a good launch

- Brake handles must be in the correct hands from start to finish
- Symmetry of controls - risers, brakes and body
- Keep the wing tensioned
- Be smooth throughout.

Recommended further education

A few Instructors and Club Coaches offer ground-handling courses or masterclasses. These can be extremely worthwhile. Any problems can easily be identified, and techniques can be learnt very quickly that could take you years to discover! DVDs such as *Paragliding - Ground Handling Techniques* are excellent instructional aids

Next month: Righting the wing from the inverted position

Tim King is CFI of Sky Paragliding (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.

Fig 2: The correct grip is all-important



Fig 3: The perfect triangle



Fig. 4: The ideal position before launch - well balanced and in a position of command

