

This manoeuvre is an absolute staple of aerobatic flying and is required for the qualification round of competitions. If the pilot flies a careless Wing Over in the qualification, then he is not allowed to participate in the competition.

Professional acro pilots use Wing Overs to build up momentum for entering other manoeuvres, such as Dynamic Full Stalls, Misty Flips, Asymmetric Sats or Tumbings. A series of beautiful Wing Overs not only looks amazing and harmonious for spectators, but also gives the pilot an awesome feeling when performed correctly.

#### REQUIREMENTS

In order to start doing Wing Overs the pilot should be *au fait* with the behaviour of his glider in collapses, and be able to deal with the level of G-forces that arise from a true Spiral Dive.

#### EQUIPMENT

You don't need a special acro glider to fly a beautiful series of Wing Overs. In fact, as with the Asymmetric Spiral, you will learn the best technique using a completely normal serial wing. Whilst small acro gliders accommodate the inexperienced beginner, as the dynamic canopy is quick to dive under the pilot, it reacts accordingly with aggression to mistakes. In fact, some acro gliders make it harder to fly beautiful, rhythmic Wing Overs because they have to be actively stopped or reined in to prevent them from looping after the second turn!

You also don't need a special harness, as long as the applied one does not have diagonal bracing.

#### HOW DOES A WING OVER WORK?

Each Wing Over should cover exactly a 180° turn. In order to acquire the correct technique from the beginning, you first need to orientate yourself in the flight area. Fix your eye on a prominent point on the ground (building, valley, road) in the distance and draw an imaginary straight line to it. You should aim to fly your Wing Overs exactly 90° transverse to this line.

At the beginning fly straight on this line.

The first Wing Over is flown with a 90° turn. It is induced by using maximum weight shift and strong brake inputs. After the 90° turn the glider starts to dive, in our example with a tendency to the left.

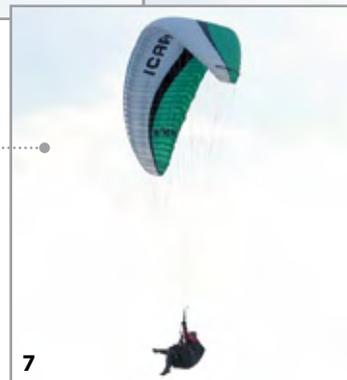
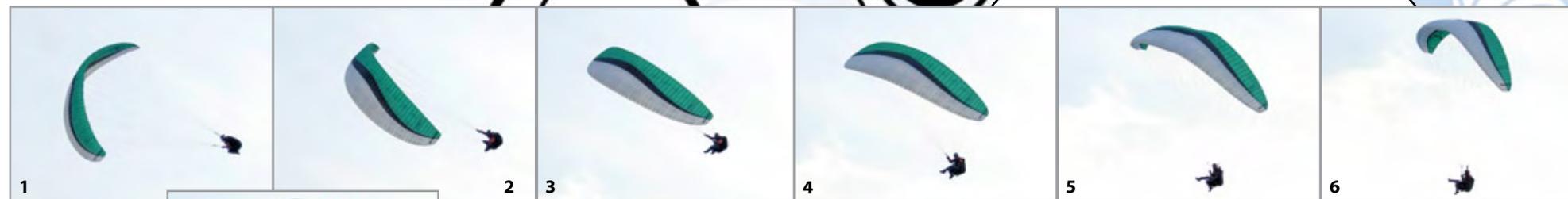
With uncompromising weight shift on the opposite side (in the example to the right, photo 6+7) you must now straighten the glider up from its momentary flight path before reaching the bottom of the pendulum (with your body). In other words: put the glider at 90° to the imaginary line.

Only thereafter comes the application of the brake: as you swing back under the glider (your body is at the bottom of the pendulum), pull the right brake sensitively, but consistently, in order to describe a 180° turn. Keep applying

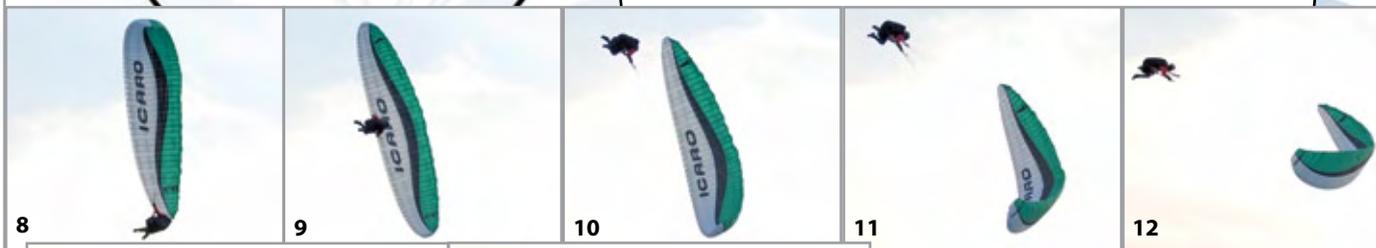
# WING OVER<sup>2</sup>

Pilot: Gudrun Öchsl

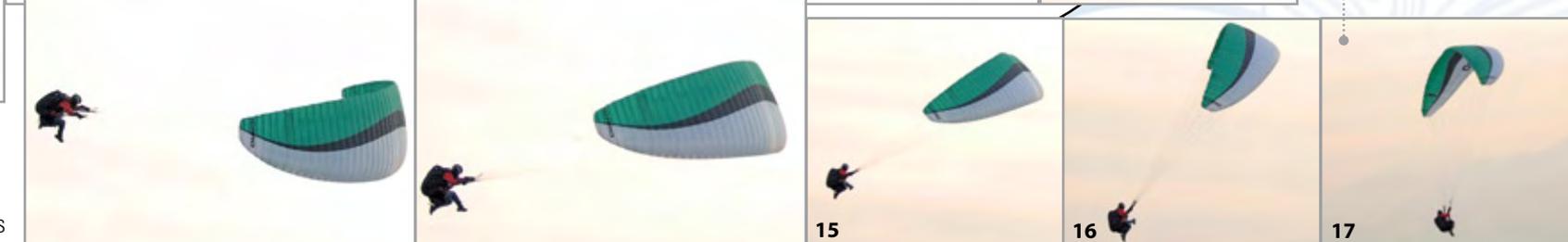
Imagination:  
Dance Walz ... 1-2-3 ... 1-2-3!



7) Weight fully to the right, glider straight, pilot at the deepest point, start brake application to the right.



17) again: deepest point of pendulum, glider straight, left brake to support the turn, now gently apply the right brake to hold the canopy under pressure.



13) When diving down, the pilot lets the glider go without brake application to gain momentum.

14) Then weight shift starts on the opposite side (left).



the brake until the second shift in direction has clearly commenced or has already been terminated (photo 11+12).

If the Wing Over gets very high but has little energy, you can stop the canopy from collapsing by applying a short brake impulse on both sides, in particular to support the outer wing. This will also stop the rotation precisely (photo 9+10).

#### NOW FOR A REALLY IMPORTANT PHASE: ACCELERATION!

Let both brakes go and let the glider really gain energy when diving down (photo 13+14).

From here on, the rhythm repeats itself: again maximum weight shift on the opposite side (in the example to the left), in order to set up the third turn at the deepest point of pendulum (photo 17), this time with much more dynamism.