

# Flying together – paragliders and hanggliders

Looking out for one another and observing a few simple rules are essential for safe flying when paraglider and hangglider pilots meet together.

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**H**anglider vs. paraglider – I hardly ever notice feuds of this sort at the start – it's usually quite the opposite. Everyone helps each other: hanggliders are held up for hang-checks, and paragliders are helped up to aid inflation. In the air things often change in the battle for the first thermal, and this can make flying together turn quickly into a dangerous pastime.

Why is this? Do we just no longer want to accommodate the others in the air, or do we not know enough about the particulars of the other aircraft? This article tries to illustrate the differences so pilots can appreciate them in the air, predict better what might happen and fly safer together.

## Launching

Many popular sites now have separate launching areas for paragliders and hanggliders. Paraglider pilots need space, even if they have already checked their lines for tangles and clipped in away from the launch. Particularly in weak winds, a paraglider needs to be fully layed out and its lines extended to start. Hangglider pilots prepare, pull on their harnesses, make a hang check and then walk over to the launch and fly away with little delay. On sites where there are no separate starting areas, with a little communication no great delays are to be expected when starting together.

Real differences exist in the launch itself: whereas a paraglider pilot can

decide to abort the launch if things don't look good on inflation, a hangglider pilot is committed once the first step is taken. Here paraglider pilots need to allow the necessary time and space required by their hanggliding friends to ensure that they make no mistakes before the point of no return. Starting in parallel is particularly distracting and dangerous!

Take off speeds are much higher and maneuverability is worse at low speeds on hanggliders. Hanggliders need large, obstacle free, open spaces to launch from. Paraglider pilots flying close to the relief near to the launch often underestimate how much space a hangglider really needs. Hanggliders need space to accelerate and attain stable flight after taking off, plenty of space.

## In Flight

It is clear for all to see that hanggliders fly faster than paragliders. It is not difficult to account for this during normal flight, but does become more challenging in thermal or turbulent conditions. For more flight stability and better steering characteristics hanggliders fly faster than usual in turbulence. This results in higher sink rates, but the safety bonus is well worth this. Paraglider pilots do the opposite, by applying different amounts of brake the angle of attack is regulated (active flying). If the glider dives forward, the pilot blocks this with the brakes. If the glider falls back behind the pilot,



This might look harmless for the paraglider pilot, but the hangglider won't be able to start until the airspace all around is clear.

Simon Winkler, DHV SIV Trainer and paraglider testpilot recommends:

Only look at your canopy for a short control check

Airline pilots have to use an artificial horizon, we have a real one, but it is often neglected. Constantly looking up at the canopy and praying that it won't collapse can be very dangerous. It is only through the reference to the horizon, that we can judge what the glider is doing - relative to the pilot the canopy is always more-or-less directly over you. You can not prevent a collapse by merely looking at the canopy. During a flight, the times a pilot should look at the canopy are directly during the launch phase, and after (!) a collapse has been brought under control. The biggest danger of pilots continually looking at their canopies, is them forgetting their surroundings. Similar to driving a car, you need to be looking where you are going, or over your shoulder quickly when changing course. If you blow a tyre, then you first concentrate on driving before winding down the window to see what's happened.



Near miss - if this had happened a few meters higher it could have turned out really nasty. The collision occurred after the paraglider pilot flew sudden S curves on final approach, and the hangglider couldn't avoid him.



Hangglider pilots need plenty of room on final approach. Corrections to the flight path close to the ground are particularly dangerous. Paraglider pilots should not groundhandle their gliders on the landing field during mixed flying.

then opening up the brakes allows it to accelerate and return over him, reducing the angle of attack back to normal.

Differences in speed become more apparent, the more turbulent the air becomes. Further to this, the reaction-time on a paraglider remains more or less constant, independent of the speed at which it is flying. In a couple of seconds, a paraglider pilot can turn markedly.

On a hangglider things are different. The higher the speed, the greater the distances covered when a pilot induces a turn. Abrupt paraglider course changes make life very difficult for hangglider pilots. It is most important to carefully observe what all pilots are doing in the airspace around you, and not make any abrupt, unpredictable moves to aid collision avoidance.

Flying in thermals together is somewhat easier as long as a few rules are observed. Firstly the turning direction – if pilots are already flying a thermal then join them in the same direction. Observe the turning radius of the other pilots and fit your flight path to it. Make no sudden course changes or changes of bank angle. Observe the other pilots constantly. With regard to observation: hanggliders have a restricted field of view due to their lying position. Paraglider pilots worried about canopy deformations must re-

member not only to continuously stare up at their gliders, this makes hangglider pilots worry if they have been seen or not. If in doubt, call out loud!

Other blind spots in pilots fields of vision mean that hangglider pilots cannot look up or behind them, and paraglider pilots find it difficult to see behind and below. A hangglider following below a paraglider is flying in both pilots blind spots, further to this, speed differences mean that flight paths may cross and collisions may occur. This is particularly dangerous during final approach before a landing.

Collision avoidance rules during ridge soaring should be observed at all times, but it often comes to differences in judgment from para- and hangglider pilots to how much space is required by the other. Generally, hanggliders will fly further away from the ridge than paragliders do, but the degree depends on weather, wind and relief.

### Landing

Landings are the second critical phase in a flight after the start. Once again, there are large differences between how hang- and paragliders land, mostly due to the speeds at which they fly.

During landings, hanggliders have only a small margin for error, to reach the desired landing point, speed and height must be monitored carefully. A correctly performed landing circuit is an enormous aid to successful landing: excess height can be reduced by turning until the correct height for a final approach has been reached. Performing the approach over two legs allows for fine corrections in height before the last turn. From here on the hangglider is stabilized, the pilot opens his harness, takes on an upright position and concentrates on the landing point. Then it's a matter of reducing speed to a minimum before pushing out to land the glider. Plenty of room is needed for all these manoeuvres. Nothing should restrict the hangglider pilot during any of these last phases. Course changes close to the ground are generally very dangerous, touching a wingtip is disastrous and generally results in a high speed crash with all its nasty consequences.

Paragliders trying to burn off excess height by flying S curves when on final approach (forbidden!) are a severe hazard for an approaching hangglider. Groundhandling a paraglider when a hangglider approaches is similarly dangerous.

When both hang- and paragliders share the same landing field, it is sen-

sible to set them different landing circuits, so that they only meet on final approach. If this is not possible due to site relief or obstacles, then it is best to allow paraglider pilots to fly a smaller circuit while hanggliders fly their circuit outside them. Here both pilots can observe each other well and the hanggliders have the required space they need to land safely. Careful observation and discipline is required from all pilots, and in particular no unpredictable course changes during final approach.

### Conclusions

Accidents are repeatedly reported from hot-spots where mixed flying of hang- and paragliders occurs. At such sites discipline must have priority, and conservative flying must prevail. Take care of the other pilots in the air, and they'll take care of you. ☞