

# Wingsuit Proximity Guidelines

By Jokke Sommer

Received a few questions and since high season for wingsuit flying is coming up, I figured it would be good to write down some basic guidelines that might make your flights a bit better and safer. More and more jumpers are getting into proximity flying these days and instead of being like most others, telling you what you shouldn't do and all that, I rather tell you what I do and what works for me :)

The last year there has been quite a few fatalities because of proximity flying. Fatalities that could easily be avoided by just following some simple rules.

**“Keep in mind that this just my point of view and guidelines that works good for me. I'm not saying I am the one you should listen to, or that this is the correct way of doing it.”**

**First of all, you should NOT fly proximity if you don't have good flying skills and manage to fly your suit 100%!**

**The exit:** When flying proximity, it is important to have a good start. A nice steep exit is the best way if you want to get as much speed as you can from the start. A lot of jumpers have their arms fully spread out and look up at the horizon, kind of like a student exit. While doing that, you increase the chance of starting to fly flat and simply ending up slow. If you sometimes notice the wobble after exit, that is most likely the reason.



First step to a good flight lies in the exit, so if you usually start flat, try some steep exits and you might be surprised how it will affect the rest of your flight :)

“When I exit I find a spot 45 degrees down, keep my arms down and relaxed. I continue to look at the spot not to over rotate, spread my leg wing while I have my arm wings half way out. Then after 2 sec I go into my normal, steep flying position. With this exit I normally fly 100% with good speed within 3 sec.” (Keep in mind that I weigh 58 kg, which does help for a quick start)

**Use your time and know the area:** A simple rule is to jump a cliff multiple times before you go close. Its kind of common sense, but not everyone is doing that. A good tip is to spend a few hours on Google Earth the night before you go to a new cliff. Measure heights, distances and create a line you want to fly, suitable for your experience level. Doing easy homework like that makes you a bit more ready for the jump. It also gives you a better feeling on the exit, in case you wonder if you can make it to the landing area etc.

Fly the line you planned, but with a good safe margin. On the first jump is very important to see what's coming up far ahead of your flight. If the line is not straight forward, keep good distance from the terrain so you avoid any surprises when you come around the corner. It might look clean on Google Earth, but a tree or a ledge is usually not so easy to see on the computer screen :)

On the second flight, you can start to put in your reference points.

**Reference points:** Or checkpoints like I like to call them, is something I use a lot when I fly. They are important and give`s you feedback of where you are at all times. They tell you everything you need to know, your height, your speed, when to start/stop your turn and if you are still in a safe zone. The more times you jump a cliff, the more checkpoints you put up. They can also be good when you have one of those shitty flights and you don`t make it to a checkpoint. Then you know that you have to go straight to plan B.

Anyway, an example. I probably did the High Nose flight to the left 30 times, on the first jumps I had no checkpoints and had to focus on my height, the wall and multiple things at the same time. So of course I couldn't go close. Now, with all my checkpoints I can feel comfortable 2m next to the wall.

"2 sec after exit, dive to the black spot to gain speed, flare a bit out, fly tight on the wall, buzz the ledge that sticks a bit more out, do a slight turn back into the wall, buzz the next corner, fly into the waterfall and disconnect from the wall."

So, with all those checkpoints, I don`t need to focus on my height and can concentrate only on the line.

I`m a bit more conservative when it comes to checkpoints I put up while flying over stuff. Flying over and between stuff is my favorite, but they are a lot more dangerous than flying proximity on a straight wall.

The Jungfrau heli jump, for example, has 4 main checkpoints. First one, on the top corner of the cliff edge to the right, second one, between the trees on the first saddle, third one on some random tree I need to dive for to build up more energy, then use that energy to put my 4th checkpoint on the small bush on the last wall before disconnecting. It might not look conservative on the video, but conservative for me is to fly with a lot of energy and reserve in my suit.

"I exited the helicopter very high and a bit far back of my first checkpoint. I had about 30 sec of setting up and building up massive amount of speed and reserve. I flattened a bit out when I came down to the first checkpoint and used my speed to generate a nice glide ratio and a comfortable speed for the proximity on the wall. When I came around the corner I still had a nice glide and had to make a decision where I was going to put my second checkpoint. With the glide and the speed I had, I could have made it over the higher area up to the right, but I don`t like to fly flat, slow and with less reserve. So I decided to put the point of attack further down, between the trees. By doing



that, I went back into a steeper flight where I now build up more of the energy I already used. So, in case I find myself in a dangerous situation, I now have more reserve to go over to a plan B. (If I would have gone for the higher spot and miscalculated, I would have no reserve, and in worst case, impacted the cliff). After passing through the trees, same story again. Fly steep, build up energy and turn it into a nice glide for

the proximity on the next wall :)"

So, the more checkpoints you put up in your line, the more fun it will be :) And the best part about it, is that those flights feels a lot more comfortable and is a lot safer than most other ones!

Just remember that speed is the main key. The faster the better, but find a nice balance and your own comfort zone.

**Plan A and Plan B:** The difference between your main plan and your escape plan can in some cases be the difference between life and death. ALWAYS have an escape plan! If flying close to a wall, be ready for a quick disconnect. A wall is usually not shaved, so if you are playing as close as a few meters, a ledge can surprise you! Then it's important to use your checkpoints and actually respecting them by going over to plan B if you have the slightest doubt.

Plan B when it comes to flying over stuff is a bit different. In some cases you might not have the opportunity to do a turn into safety. So, therefore I don't recommend to fly over stuff in a flat glide with slow speed. The only way you can pull yourself out of a dangerous situation while being over stuff is to use the speed reserve you got left in your suit. Use it to change your glide ratio and make it over the critical part.

Anyway, if you are not 100% comfortable flying your suit steep and fast, you should NOT fly over stuff.

"Jumped a place where there is a bit of strong winds in the middle of the day, kind of like Brento. Because of the winds, I was flying with a plan B in my mind when I came to the area where the winds had more affect on the flying. I was in a steep flight with a good angle of attack on a nice, green bush. Plan A was to fly over it by 1-2m. In case I had to go over to plan B, I decided to set my target on the very left corner, so the difference between my plan A and B where about a meter. About 4-5 sec before I would have passed, I felt a small gust slowing me down a bit. Went instantly over to plan B, but of curiosity of my calculations I kept the same flight angle, only changed my point of attack to the side instead of the top corner. When I passed the bush I was slightly below it, so if I would have continued with my plan A, I would have impacted. No doubt about it.."

Enough said, ALWAYS jump with a plan B, ready to rock! It makes your flights a lot safer and it might save your life :)

**Setup:** To start a line with a nice setup is important. On most cliffs you might not have the altitude for long setups, but if you some day do helicopter flights, it can be a good idea to start a bit higher up and more back to gain extra setup time. When I start a proximity line with a long setup, I use that time to build up all the energy and speed I need, but also feel my suit, tune my body position, feel the wind, lift and other weather conditions. In some cases I have up to 30 seconds of setup time, with all that time I can start my proximity line with 100% confidence and be ready for it.

While flying proximity in the alps, it's a bit more important to have some start setup. Because of the altitude, the air is a lot thinner and it might not be as much lift you are usually used to have. It can be good the first day, and totally dead air the next day.

If you do choose to do a long setup, fly relaxed! It's not a good idea to be tired in your arms when

you start a 1 min long proximity line. If you get tired, abort your flight. Tired = Shitty flight.

“An example, on the Tabasco line, the setup was the most important factor of the flight. Did five jumps where I tried different setups. The easiest way would be to exit high and far back, then aim and fly through the crack, but I wanted it to be a line with proximity before and after flying through.

After two flights I got a bit skeptic and had to change the setup. I skipped some of the first proximity, mostly because I had to do a hard turn towards the crack after flying over the ridge. Also, the angle of attack was way too steep.

Two more flights, but still no crack attack. Since it's hidden around the corner, the setup is a bit hard to figure out, but two more flights meant two more checkpoints. So, on the final flight a few weeks later I didn't care so much about the proximity, only had focus on the setup for the checkpoints.

With a 40 second long setup, I had time to find my sweet spot and get comfortable with the flight conditions, which was very good that day. Since I couldn't see the crack, I was flying towards my checkpoints. If my calculations were right, the crack should be straight up front and slightly below with a nice angle of attack.

After passing the checkpoints, the crack was at the spot I had imagined. Then I had 3 sec to make up my mind if I was going for plan A or B. Conditions were good, I had a comfortable glide and perfect speed. It looked pretty tight, but I had already done my homework when it came to whether I would fit through or not. Still had a good feeling, so decided to fly through the widest part at the top of the crack.. And yeah, it was scary!

So, using time on your setup can be a good thing at places you don't have any room for error.



**Reserve:** Same stuff I mentioned before, but can never be mentioned enough! ALWAYS fly with reserve, the more the better! And do as much training as you can in beforehand so you know

when to use it, and how to get the most out of it when you need it!

**Current:** Staying current is as important that actually wearing a wingsuit while wingsuit flying. If you are not current, then stay away from the terrain! Just because you had a sick flight last summer doesn't mean you will have the same flight experience almost a year later. And what about your checkpoints, do you remember where you left them on the last jump? Just give it 5-10 jumps and your back in business! :)

**What wingsuit:** Well, that's a topic that's never gonna die out, but since we are now talking about proximity flying, there is only one choice for me. The suits from Phoenix fly. Made by professional proximity flyers, with performance in mind. The Phantom 2 and the Vampire are suits that have amazing stability, tons of speed and a quick response when it comes to handling. All the important aspects you need while you fly proximity.

Which one of those you should choose is mostly up to you.

If I had less than 50 flights, I would go for the Phantom 2. Spend a season with it, then consider going over to a V3. Have seen some jumpers that were flying their Phantom 2 a lot faster and better than they are now with their V3's. But of course, everyone is different and what works for you might not work at all for me. The best would be to try them both while skydiving, at least 10 times each. So if you got that chance, go for it!

If you already bought a V3 and you can't find the sweet spot yet, just give it some time and more jumps and you will be happy. I didn't like mine the first 5-6 flights, but now I wouldn't change it for a million dollar contract and some other suit. Rather steal my car than my Vampire :)

"This is only my point of view. A Tony Suit might be a better choice if you are more interested in getting as long distance as possible on your jumps, but when it all comes to the flight, the pilot is the most important thing anyway!"

**Legpouch or BOC?:** Pros and Cons for both of them. I might not be the one talking about legpouch because I have never used it, but after five incidents almost ending up in a fatality in less than 2 years, it should be used wisely.

- Read the user manual properly! <http://phoenix-fly.com/articles.htm>
- If you do have the chance to skydive it, do it until you have the muscle memory in you!
- If you have to Base it for the first time, be smart and pull high. It's common sense, I know. But not everyone is doing it..
- Don't stuff the PC all the way in, leaving only the handle sticking out! But also, make sure it stays tight enough so you don't risk getting pre-mature deployment. That can be fatal while flying close to terrain.
- Buy a proper PC. The vented 36" PC with hat and handle from Morpheus is in my opinion, the best choice! <http://www.baserigs.com/>

- The hat and handle together makes it big and rock solid to grab, while the hat minimizes the risk of the PC going further into the legpouch. And simply minimizes the risk of the classic "No pull find" :)
- If you decide to go BOC with the V3, the hat and handle PC is a MUST!!
- Also, try the BOC multiple times from the plane before you use it in Base!

**Things you simply don't do:**

- Never catch your own shadow! And don't be too focused on it either. They are fun to hunt, but while flying close to the wall, they can be very distracting.
- NEVER bend your knees/legs to kill altitude or to get down to the point you want to fly close!!! If you do so, you should quit jumping for a while and sign up for a course in Aerodynamics. ASAP!
- When you fly a line, keep your focus on the point you need to clear. Don't focus on the stuff half way and then start looking at the ledge/ cliff you need to clear. Remember that you can't fly up! At least not yet :)
- Don't fly at spots where you risk to box yourself in!
- Don't fly over ledges or terrain covered in snow when overcast and in flat light. It's almost impossible to judge your height over snow in flat light conditions!
- Don't be ignorant and believe that you are invincible.
- Simply, don't rush it! :)



### **Some basic stuff and tips:**

- Make a list for yourself where you write down your own rules. Wind limits, distance from the terrain, when to go over to plan B, pull height etc. If you follow your own rules and respect them, you will be a safer jumper and might not ever end up in a dangerous situation.
- If you have a shitty exit and start your flight a bit too flat, ending up in wobbling. Or if you feel that you don't have the normal speed, simply go straight to plan B. Follow that rule as muscle memory. One day it might be the best choice you made : )
- Do it all step by step. The smaller the better. Don't push it too hard on spots where you don't know the terrain 100%
- Pull high! If proximity flying is what you like the most, there is pointless to smoke it down after your line is finished. Do your line, disconnect and pull. But clear the wall enough so you got time for a 180.
- Turning with a wingsuit is not like turning your car. It's a bit like sliding on the ice. So if you fly at a spot where you need to turn away from an object sooner or later, make sure you start the turn with enough space for the "slide"
- If an experienced flyer says that you fly a bit flat/slow and the jump might not suit your experience level, don't ignore it!
- Know your limits!
- If skydiving, don't do too much wingsuit flocking. At least, don't get too used to it. Flocking might be fun, but it is not wingsuit "flying". Spend more time hunting clouds and racing with other experienced flyers instead :)
- Attack your line with speed!
- Ask other experienced jumpers. No question is too stupid to ask.
- Be conservative. Proximity is fun but not worth dying for.

Read more about body position, wingsuit aerodynamics and wingsuit flying in general, written by the experts, here: <http://phoenix-fly.com/articles.htm>

Besides that, have a good season and have fun! :)

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Photo: Trond Teigen