



SAFETY

is No Accident

by RyanVOIGHT

Let's be real for a minute.

All aircraft have limitations. Hang gliders, paragliders, sailplanes, airplanes, F-16's. Everything has its limitations. Paragliders have an obvious airspeed limit. Even with full speed bar, there is a limit to how fast a PG will go. Although the same is true for hang gliders, the speed limit is a bit higher. But just because my hang glider could exceed 80 mph in steady-state level flight, doesn't mean I should fly in 70 mph winds! There are other limitations, like turbulence. How turbulent will it be if it's blowing 70 mph?!

But the biggest limitation of all is the pilot. Humans are, hands down, the weakest link in our aircraft, and just about every accident report confirms it. While some accidents occur from honest mistakes or lack of skill, the biggest issue that plagues us is POOR JUDGMENT. It is absolutely crucial that we recognize and respect the limits of our aircraft, and

nowhere is this more important than the conditions in which we choose to fly.

On many days, launching is the first error in a series of events that lead up to a poor landing. More often than not we walk away with little more than bruised pride and a belittled ego, but, sadly, that's not always the case. Aviation is unforgiving of mistakes, and every less-than-perfect landing is an accident waiting to happen. Whoever came up with the saying "any landing you walk away from is a good one" probably didn't have a long and prosperous flying career.

So how do we stay safe when deciding to fly? First, we need to know the limitations of our aircraft. When flying hang gliders and paragliders, we need to recognize we have limited control. In a hang glider, there is a limit to how much roll we can achieve. In turbulent air, it is very possible that rising air on one side or sinking air on the other (or both) can

be stronger than how much roll we can create. If you're near terrain, this can be a HUGE problem! The hang glider's limited control can result in collision with the terrain.

In paragliders, the major limit is in pitch. In strong conditions, there is only so much we can do to keep our wing overhead. If your wing surges forward or gets back behind you, there's a limit to what can be done. A paraglider's limited control can result in collapse, which is most dangerous near the ground.

So really, both aircraft are most limited in the conditions in which they can be safely and reliably LANDED. This is important to remember, because as the cliché goes: Launching is optional, landing is mandatory.

Next, we need to evaluate the flying conditions and decide if they are within the limitations of our aircraft. Getting good at this takes longer and far more dedication than learning to fly! It's not something that can be picked up



overnight. Because of this, it's important to always leave yourself plenty of margin for error. The goal? To be able to walk up to launch and know with a fair level of certainty what the air will FEEL like before you launch. Know how windy it is, both on launch and aloft. Know if it's steady or gusty wind. Know if it's thermic or smooth. Know if the thermals will be big or small, strong or weak. Will they have smooth or sharp edges? Believe it or not, these are all things you can learn to diagnose BEFORE you launch! Not to sound arrogant, but it's very rare that I am surprised by the conditions when I'm in the air. 99% of the time I know pretty well what I'm signing on for when I launch (and I'd like to thank my father for teaching me this skill). It's only taken 27 years and counting! And since no one's perfect, I do leave a margin for error, and, occasionally, I'm very glad I did!

For an example of the information I use to determine what a day will be like (or for all the weather data

you'd ever need for flying Point of the Mountain in Utah), check out www.WingsOverWasatch.com/weather.

I use NOAA forecasts for surface winds, as they seem to be most accurate around here. Back in Ellenville, I find weather.com's forecast for Pine Bush to be most accurate. I would bet every site has its own most-accurate forecast source, so ask around. Look for pilots who are there on all the good days, but are rarely sitting around on the bad ones. They obviously know something!

Being near Salt Lake City International airport, we are fortunate to have a winds aloft and thermal index reading taken every day. This information

[opposite] These cotton-ball-cumies are a pilot's dream come true. I photo by Paul Voight. **[above]** These wispy high-cirrus clouds, sometimes called "mares' tails" usually mean there will be precipitation in the next 48 hrs which implies a low pressure system moving in. The air is going to become more unstable as the low approaches.

is available at most major airports, but if you're not near a data source, you may have to pick two—in opposite directions from your site—and take a guess by averaging the data collected from each. The data in Salt Lake is always taken as a guide rather than a rule, because it's done first thing in the morning, in the valley, not in the mountains where we fly. But learning how to read a thermal index is a great way to know how strong or weak

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thermals will be.

We focus so much on micro-meteorology that we sometimes forget the bigger picture. Knowing if you are in a high or low pressure system can tell you a lot about the day. Low pressure tends to be unstable, so there will generally be more or stronger lift. Low pressure also means overdevelopment, rain, or gusty winds are very possible. High pressure tends to be very stable, and thermals don't usually form well. There can still be lift, but count on its being broken thermals with very sharp edges.

Learning to read the clouds can be huge as well. Cumulus clouds that look like cotton balls are great indicators of lift, but, if they get too tall, they are signs of major instability. Overdevelopment is defined as occurring when a cloud gets taller than it is wide. Be very wary if you see this happening! Lenticular clouds, on the other hand, generally indicate very high winds aloft. I generally won't fly on days with lenticular clouds. I've missed a few




good days, but, more often than not, that rule has served me well. A great reference that everyone should own (and read, obviously) is Dennis Pagen's *Understanding the Sky*. It's a book about, oddly enough, understanding the sky—written from the perspective of a soaring pilot. I keep a copy in my flight bag, and any time I

can't interpret the air quality of a cloud, I pull out the book and start flipping pages. After years of this, I don't have to pull it out very often, but I'm always glad I have it when I need it.

Another crucial but often overlooked factor is the time of day. Many sites are perfectly benign early in the morning or later in the evening—but a very different story mid-day. I tend to have good landings (knock on wood!). I tend to avoid flying/landing in mid-day conditions. I'm pretty sure those two things are related and are my biggest secret to good landings!

Everywhere I go, I see pilots launching around 1 p.m. It's not that uncommon to find newer pilots doing this, too. And sometimes, the trifecta: a newish pilot, on a new glider, launching at 1 p.m. This is hardly setting oneself up for success. I often hear people defend launching mid-day because "they'll be able to fly around for a few hours before landing." First of all, that still puts their landing in afternoon thermic conditions. Second, and more important, unless they've got a rocket hidden in their pocket, they fly GLIDERS. Sled rides have been known to happen even on the best of days. I know, because I've done more than my fair share! Fact is, we can't guarantee staying up for hours. So why launch at the peak of the day, when landing would be most dangerous?




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[left] While prepping your gear, there can be lots of distractions. Remember to keep re-evaluating the flying conditions. Are they getting safer, or more risky? [right] Based on the sky, did this pilot make a "safe" decision to fly today or did he get away with this one?

The only answer to that which seems semi-valid is because some people want to go XC, and they're not going to go very far if they launch at 4 or 5:00. It's a valid point. BUT: Conditions often ramp up later in the day. If at 1 p.m. it's ON with rip-the-snot-out-of-your-nose thermals, it was probably soarable at 11 or 12. Obviously, this depends on your flying site, what direction it faces, prevailing winds, and so on.

My point is: launch EARLIER than 1 p.m., even though the lift might be lighter then. If you DO end up in the LZ, you have much better chances of a safe landing. And if you get up, you have that much more time to go far! If you're not skilled at working light lift, you're not going to go far as an XC pilot anyway,

so launching earlier shouldn't hinder you too badly. It might even make you a better and safer pilot!

Hang gliding and paragliding is a game of risk management. We win the game by staying safe for years and years, and the only way to do that is to be smart about the conditions in which we fly. We need to recognize that our aircraft, and the amount of control we have over them, is limited. We need to respect that the forces of nature out there are far greater than we are, and some days we should just stay grounded. We need to recognize that we might repeatedly get away with flying in conditions that push the limits, but sooner or later the odds will catch up with us. The more we can learn about flying conditions, and the better we can predict what it will "feel" like before we launch, the more we stack the deck in our favor. And I think you'll agree: Risk management is a game we can't afford to lose.

If you have a question you'd like answered or a topic you'd like to see

discussed, you can email Ryan at Ryan@WingsOverWasatch.com and you just might get to see your answer in print here in Hang Gliding and Paragliding magazine! In the mean time, remember... Safety is No Accident! 🇺🇸



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