

Tips from Competition Pilots

Strategy

◇ From Mark Hayman and Adrian Thomas: The race only really starts 15-20km from goal. Up to this point the lead gaggle is working as a team - spreading out to find lift on glide, searching for better cores, and letting searchers back into the thermal if they don't find anything. They're still flying fast, but it's as a group, not as individuals. As soon as someone is confident that they'll get to goal on their own they break from the pack and it's a dog-eat-dog race to the line. As Adrian said elsewhere recently, you want to be top of the gaggle in the final climb before goal.

◇ It takes something like 15 to 20 seconds to swing a turn in a thermal.

If you're striking out at say 50km/h between thermals, then approximately 3 more turns in a thermal puts you a kilometer behind!!

◇ One that I like to tell newcomers is that they should know with whom they are sharing the skies, i.e. they should learn to recognize the good pilots in the comp so they know whom to be influenced by. In my view you cannot follow anyone on a paraglider (at least not if the person being followed is trying to lose you) but you can be inspired by their decision-making. And it is important to be inspired by the good and not by the bad pilots. Newcomers often equate glider class with experience, and follow anyone flying a hot looking wing. **THAT DOESN'T WORK.** There are scores of hopeless losers flying superhot looking wings. So you gotta identify who is who, and try to keep the interesting ones in focus. Quite often you'll find that someone is making an unusual move, and if it is one of the good pilots you better try to work out what she has seen that you haven't.

On the subject of seeing there just is no substitute for good eyesight in this game. Spotting leaves, butterflies, birds, cobwebs, gliders at unlikely distances is the best secret trick there is.

◇ Mads is spot on, the difference between the top pilots and the good ones is how much they see.

Bruce often comes up to me after a task and comments on where I got stuck, or where I got a good climb, and I often have absolutely no idea where he was at the time.... Russell does the same. Bruce claims he likes to know where every pilot within sight is all the time- in front and behind - and keeps tabs on how they are doing. That way he knows well in advance where climbs are coming from, which lines are working, and whether conditions are deteriorating from one side of the course or the other. It is amazing how much difference really watching what is going on can make.

◇ When you're gliding on bar and you expect to find a thermal soon (e.g. your flying towards a climbing gaggle or a good trigger point) then *stay on the bar all the way into the core of the thermal*. The temptation is, when you think there's lift ahead, to come off the bar early, get your hands on the brakes, and go into a sort-of search/thermallng mode, ready to find the centre on the thermal and deal with the associated turbulence. This is a waste of time! If you can see where the core is (e.g. there are climbing gliders) then fly straight at it at full speed (respecting other pilots already in the thermal, of

course) and only come off the bar when you feel the lift increase and then just start to diminish, indicating that you've found the core. Come off the bar to convert your speed into height and immediately start coring! You've just gained maybe 5-10m in the conversion and are turning in the heart of the thermal while your slow friend is still timidly flying into the edge of the lift at trim speed. You'll be tens of meters above him by the time he finds the core. If you don't know where the core is then you can still search faster on full bar. I first heard about this technique when someone was describing Russ Ogden's flying at the Ozone Chabre Open a couple of years ago.

Secondly, to be able to select climbs while flying on bar you need to know the sink rate of your glider at speed. You should have a good idea of the sink rate at both half and full bar so you can judge the strength of the thermals you fly through without slowing down.

Finally, the book "Secrets of Champions" by Denis Pagen, although about hang gliding, has lots of amazing insight that is also equally applicable to paragliders. Recommended.

◆ 1. Launch early - there are few things worse than being stuck on launch behind some cluster-f#@% while the A-team is climbing out and the start is in 15 minutes. So don't put yourself in a hole before you even get in the air. Shit happens fast so get your shit together early.

2. The speed bar is no substitute for your brain and anyone with half a brain can mash the bar. This is a thinking sport. Find the top lift, lemme say it again...FIND THE TOP OF THE LIFT! Then go on big glides to logical points, and don't just look for a good line, look for a good angle, and DON'T get sucked into chucking worthless circles with anyone along the way. Fast is not fast, efficient is fast.

3. Know the pivotal moment (AKA-last chance). This is the moment where you make a stand verses gliding on. These moments are hard to identify when you are not obviously low, but you'll know when the moment was after you've dirted. Learn to see it coming earlier.

4. Fly your own flight. It's really easy to get sucked into some bad decisions because everyone around you is doing it. Pilots often say "I fly better by myself than I do in competitions". This means they're flying someone else's flight and not their own. You know how to fly, go with your gut.

5. Never, never, never give up

◆ Cooperate with the pilots in the same gaggle as you. If you only follow you might learn some things but you won't have the respect of your fellow pilots nor will you learn about self-confidence and making your own decisions.

Who dares wins. If you never make bold decisions, you might be among the first ten but you will never be first.

◆ "Being in front and low does not mean you're in the lead. It took me 5 years to work that one out."

Rob Whittall

◇ Tying in with Bill's tip that you should never, ever give up, it's worth recognizing that as the level of competition goes up, the number of mistakes that you can make and still do well goes down. The positive interpretation of this is that in introductory competitions you can make a couple of mistakes and still do well overall. If you get stuck soaring a bowl for 15 minutes waiting for the next cycle in a friendly comp like the Ozone Chabre Open, BPCup or Rat Race then you can still finish in the top ten, so don't stress too much if this happens. Focus on staying in the air, get back up high and back on course. Take it as a great opportunity to learn and build experience. Of course, at PWC level, three minutes is the difference between top 10 and 60th.

Other people get stuck too, and it's a lot easier to catch up than to lead out. If you're behind then watch the pilots in front of you to see what works the best so you can go directly by the best route. If you do fall behind then you do need to fly fast (i.e. make good, fast decisions) to catch up. Don't be tempted to stick with your gaggle if there are pilots ahead on the course. By their very nature, later gaggles fly more slowly so don't let yourself be dragged down to their level. This means that you'll end up leading out from your gaggle, but you've been paying attention to the pilots in front so you should know exactly where you're going.

Personally, if I can stay up then I like to launch as soon as the window opens (quote from Hayman at St André: "Ah, Tom's launched. Window must be open.") Many pilots hang around on launch because they're worried about bombing out. But you've practiced in weak conditions, you've watched the wind dummies find thermals and even the school gliders are floating around above launch. By taking off early you get clear airspace to make the best use of the thermals, you get to check out the air mass and maybe the first part of the course and you get plenty of time to settle into flying mode and observe the best pilots. Mark Hayman always seems to be one of the last to take off: when I launch he usually hasn't even unpacked, but he times it right: he's on the start line when the gun goes. Mark can do this because he flies 20+ comps per year and is very experienced. I've still got lots to learn!

On starts, the best start position is not on the edge of the start cylinder closest to launch. The best starting position is on the edge of the start cylinder at base upwind of the first turnpoint. Sometimes this means that you have to fly through the start cylinder, past the turnpoint and out the other side. You might need to take off as soon as the window opens to have time to do this. Even if there's not time to fly to the far side of the start cylinder, just flying part way round it so your first leg is crosswind rather than into wind can give you a significant advantage.

Don't worry too much about hitting the start cylinder exactly on the gun. A few seconds at the finish line will only cost you a few points, but being over the line can score you zero for the entire task. Early on it's easy to catch up with the leaders so don't worry if you're ten seconds behind. You do have to fly fast immediately after the start to make sure that you're in the lead gaggle, but once you're established with the leaders you can relax a bit and let the gaggle make the decisions.

In the flats gaggles are king. Without obvious triggers you need to work as a team to find the next thermal. This means you should stick with the gaggle unless you're feeling exceptionally stupid (see Eduardo's tips above). In the mountains thermal triggers are more predictable and you can fly more as

an individual. I've made the mistake of going off on my own in the plains too many times, I still haven't learned this.

Another one from Mark Hayman. Don't be afraid to push on poor days. It's very rare that the lead gaggle bombs out and a slower pilot makes it to goal (but it does happen sometimes). If the lead gaggle does bomb out then it's probably a very poor day and won't be worth many points overall so it's better to land with them most of the way around the course. Flying conservatively (slowly) can cost you a lot of points if the lead gaggle does make it to goal.

GAP leading out points aren't worth it. Think through the scoring system for the competition. If they're using GAP then it's very rare for anyone to score 1000 points for the task. It's much easier to get a good score by taking a later start and flying through the gaggles than it is by trying to lead out. Leading out is fun but won't win you the day. If there are no leading out points at all then don't lead out!

Take each day separately. Unless you're battling for the top spots, paragliding competitions are a series of single races with every day counting an equal amount. Don't let a good or bad position "psych" you out into taking more or less risk. In the final days the competition leaders will mark the pilots directly behind them in an attempt to maintain their positions. If you're not leading then don't bother to do this: the extra mental stress will reduce your performance and you'll do better by just ignoring your current position and focusing on flying as well as possible on the day.

Finally, from Adrian Thomas. You don't need to win tasks to win competitions. The glory of the day does go to the task winner, typically a brilliant but inconsistent pilot who got lucky. However, it's the consistent pilots who win the weeks and the titles. If you define your goal to be not win the task but rather just finish in the top ten each day then you might have less fun but you will get to take home the trophies.

◆ Final glide is different - suppose you are with 5 others, whoever goes first and makes it is the one who wins. So what generally happens is you all climb to close to the glide-slope and then the thermalling gets a bit hectic because everyone is trying to maximize climb while also watching the numbers decrease on their glide-required display. Someone will decide they can make it and go, and as soon as they do everyone else goes.

Usually, you start looking for final glide about 1/2 to 2/3rds of the way round the course. I've often made 20k final glides, many times made 30k and a few times made 40k finals. If you are still in XC mode when others have gone on to final glides you are nowhere. The trouble is, of course, final glides of that sort of length often involve long sections in lift (maybe ridge running), might involve transitions and changes of direction, and often involve flying round one or more turnpoints. Very few instruments are good at calculating final glide round turnpoints.

A lot of the top pilots calculate the height required at various spots along the course before taking off.

◇ One thing that hasn't been mentioned much here before is the importance of the mental part of things - the head, if you will.

A long time ago I began suspecting that in any given high-level comp there would be XX pilots with the objective flying skills to win overall. Among them, only a handful or so would have the confidence to actually acknowledge this - in other words, to actively believe that they would win the comp, or at least SHOULD win the comp.

I still think this is the case, and what's more I think the one out of that handful who believes it most earnestly will actually usually win.

This is the reason why supreme confidence in the wing you fly makes such a difference - because you cannot persuade your subconscious that you'll win unless you know you're flying a competitive wing. Take the case of Chrigel Maurer: He got a prototype back in 2005 that was simply WAY better than anything else out there. It gave him, on top of his numerous other qualities, a supreme confidence that rubbed off on his flying style, his decision making, everything. Today, even if the other brands have caught up with his wing, he still feels at the core of his soul that he should win, that he has THE RIGHT to win - so he possibly doesn't need the extra performance of a superior wing any more.

There are other cases similar to this one, Hausi Bollinger in the mid-nineties springs to mind.

Same with the Valic's today really - everyone is saying how they fly much faster/better than anyone else, so it slowly becomes reasonable for them to earnestly THINK that they deserve to win. So they do.

I believe that a good coach and /or some study of mental training techniques is very worthwhile in this respect. The coach, if she is worth her salt, can help you BELIEVE that you have what it takes, and the reading can help you build up psychological practices that will help you REMEMBER this even when you are low.

And BTW - this is what makes sport, and competitive sport, so fascinating to partake in. If it was solely about pushing more bar it wouldn't be worth doing now would it?

◇ Getting the start right is important - for psychological reasons. You'll feel you're there, one of the Dudes, a SkyGod etc, and all this matters immensely for your well-being during the rest of the task. The few seconds gained have zero impact on your end results of the day.

And for the second part - so how do you propose to make up any time by being faster around the course? In that scenario you're flying Elapsed Time surely, because if you have a Race, shaking, or even loosing, the gaggle is going to be mother.. hard.

In lower level comps where you may get away from the gaggle OK, it may work, but at higher levels there's usually NO getting away from the gaggle no matter how fast you go.

Tomas Brauner told me not long ago that he's never too bothered about the beginning of the race because he knows it'll be "easy" to catch up - now that is a winning mentality, because it doesn't shake you if you mistimed that start (happens to us all once in a while).

◇ I believe several pilots have commented that in the early stages of a task competitions are all about teamwork. In most competitions the only time the gaggles get really big is at the start of the task. The most important thing is to keep the gaggle circulating nicely. There is rarely any need to dive into every bubble that comes your way. You tend to just fly around in the gaggle and follow areas of greater lift and allow the whole gaggle to drift with you, and of course keep tabs on the better pilots.

The only time you would want to aggressively core a thermal is if you are off by yourself, either out on course or outside the main gaggle.

I guess you could use aggressive thermalling to psych out the opposition but you would also need the skills to back that up or you just end up looking like a dick.

◇ BTW, I made a couple of elementary mistakes in a recent comp.

I took off on task and did not have a clear idea of the order of turn points and goal and assumed I would just follow GPS. Some of the legs of the task were so close together I could not clearly see the task on the screen and my poor brain was confused by the turnpoint sequence and the codes used to identify the turnpoints. As a result I wasted a heap of time (and had a very nice time while doing it)

Also, I passed through the goal cylinder faster than the recording interval on my GPS so there was some hassle for the scoring system because I did not have a track point in goal. You need to make sure your GPS is recording frequently enough to record the task properly and make sure you stay in each cylinder long enough to record a point.

Flying skills

◇ OK, here's the first part of the mistakes I made in competition last year. It was my first season of proper competition. Previously I'd done a couple of the excellent Ozone Chabre Opens and just one round of the British Championships. I list my mistakes here so that I and maybe others can learn from them. All my decisions were my own responsibility,

Ozone Chabre Open, practice task ([tracklog](#))

It was an elapsed time task so I took a late start to get a fast time. I was pretty quick around the course until I bombed on final glide. There was a headwind from the final turnpoint to goal, meaning that you needed an extra climb between the turnpoint and goal. Lots of gliders had landed short in front of me but I thought I could just speed bar through and make it. This didn't work and I realized too late, groveled for a low save for a while, and eventually sank out.

Lesson: You might think you're on final glide but realistically monitor your progress: you might need another climb. Look for clues (like headwinds and pilots landing short) and make the decision early, while you're still high, as to whether to push on or find a climb. Avoid "tunnel vision" on the goal -- just because you can see it doesn't mean that you'll make it!

Ozone Chabre Open, task 2 ([tracklog](#))

I'd got stuck earlier, but had taken a direct line that got me back to the lead gaggle. However, I was low. Leaving a reasonable climb to connect with the final ridge before goal, I arrived too low and landed at the bottom of the ridge to watch tens of pilots fly over my head and into goal as I packed up.

Lesson: I raced myself into the ground. The first priority should be "get to goal", and only secondly should it be "get to goal *fast*". Possibly getting stuck earlier had made me impatient. Take each part of the course separately and don't try to rush because you made a bad decision earlier.

Ozone Chabre Open, task 3 ([tracklog](#))

It was an elapsed time task, but I went early (with Russ, Rudd and Mark) because conditions were weak and I thought that they'd get worse. In fact they got better and the later pilots had much faster times, but that's not the mistake. Enjoying being with the "lead gaggle", I left the last climb as soon as my glide computer said I could make it. It wasn't a particularly buoyant glide and I had to stop in some very weak lift until I thought I could make it again. I left too early and landed short, inside the 1km time cylinder but outside the 400m goal cylinder. Once again, on the score sheet I was the first pilot not in goal.

Lesson: Give yourself a reasonable margin on final glide. Ulric Jessop (the task winner on that day) explained to me later that leaving with zero margin is stupid. A sinky final glide can require an extra 400m of altitude, so if you're below 400m when you hit that sink then you'll land short. If you're going to give yourself zero margin then make sure that there's guaranteed lift on the way that's as strong as your final climb and be prepared to divert to use it before it's too late!

Technique

◇ There's already been a lot of advice published on the web, for example:

From Kelly Farina:

<http://www.austrianarena.com/blog/?p=149>

<http://www.austrianarena.com/blog/?p=109>

Collected by Jerome:

http://www.expandingknowledge.com/Jerome/PG/Main.htm#Technique_FlyingSkills

(unfortunately the skynomad site which hosts some of the articles seems to be down at the moment)

There was also a very good article about getting into comp flying in Cross Country magazine a couple of years back, I'll dig out the reference when I get home.

◇ Using speedbar to avoid collapses on glide is efficient - you glide better if you use active pitch control on the bar, speeding up when you hit updrafts, to avoid pitching back and slowing when you hit downdrafts to avoid pitching forwards. It's hard work, but beneficial.

The same is not true of brake action. Using the brakes to stop the wing moving around and catch collapses before they happen hurts performance a lot.

That is why comp pilots fly hands off on transitions even in strong conditions.

That is also why pilots trying to maximize performance will tolerate collapses even if they might have

avoided them.

This is, of course, all rather more advanced than is relevant to 40% asymmetrics ridge soaring at Dunstable on a DHV1.

FWIW I regularly get asymmetrics, usually on the outside tip in thermals. They are trivial and pop out as I shift inwards towards the core (they tell you are at the edge of the thermal). I also get occasional asymmetrics, and rare frontals on bar. My theory is that if I don't take occasional hits I am not gliding fast enough.

From Russ Ogden: Work on your climbing skills. People like Russ and Mads are amazing climbers: they always seem to climb to the top of the stack and stay there. The golden rule here is never be satisfied with the lift that you're in. If you see someone climbing faster than you then full speedbar to their core immediately. If you do even one turn just to see if they are really doing better then they'll overtake you. The decision should be automatic and instantaneous. And I'm really serious about using full speedbar to move between cores in thermals.

Personally I always have in mind a minimum acceptable climb rate which depends on what I've experienced so far that day, what I expect and how low (desperate) I am. As a rough rule this should be no less than 1m/s less than the strongest climb you have experienced so far that day, unless you're really low. Then, immediately reject (fly straight through) any lift weaker than that. If you find a good core then leave it as soon as it drops below your threshold, don't mill around hoping for it to get stronger. One of the traits that you see in the very top pilots is that they are very selective about their climbs: as soon it starts to weaken they leave. Mark Hayman tells a funny story from the PWC in Italy last year. He's thermalling in the lead gaggle in a decent climb but Chrigel Maurer is out ahead, has bagged the turnpoint, and is flying back towards the gaggle. "Oh, cool," thinks Mark, "I'll get to see how the world's best pilot thermals." Chrigel flies straight at the gaggle and then straight through it without even bothering to turn! Chrigel then dives into the lee of the mountain (where no-one else dares to fly), connects with some screamer and disappears into orbit. "Oh, that'll be why he's number 1," grumbles Mark.

It's hard to over-emphasize how important confidence is when it comes to fast decision making. Confidence that you can climb as well as anyone else so if someone else can stay up then so can you. Confidence that you'll find lift on glide or at your next thermal trigger. Confidence allows you to make a decision and act upon it with total commitment, with an assumption of success. Less experienced pilots take every climb as high as they can then fly at best glide and try to hedge their bets by flying over as many thermal triggers as possible. This floating about the sky is the way to start your XC flying career but it is not the way to win competitions.

Confidence comes from experience, practice and good equipment. Experience of XC flying gives you the ability to make the right decision, to identify your next climb so you fly in the right direction. Practice means that you keep your skills sharp. One of the best things you can do is fly on weak days and try to get to and stay at the top of the stack. If you can reliably do this then you'll know that you'll be able climb out if a decision ever goes wrong. Equipment means having a glider that you can thermal well and

that you trust so you can fly it at 100% of its potential. Practice pulling asymmetrics, frontals, spiral dives, wingovers, SATs, helis, full stalls, spins everything when you get the chance. Trusting yourself on your glider means that you can fully commit to your decisions.

◆ Flying fast has little to do with flying on full bar on every transition. Speed is in your decision making, and importantly in not making mistakes. As pilots improve the average speed that they can fly at around a course without bombing out goes up. An average XC pilot manages about 20km/h average (in zero wind) and a good XC pilot might do 25km/h. PWC gaggles do about 35km/h and the top pilots average over 38km/h.

So, here are some games to play to help your speed:

- on weak days, get to and stay at the top of the stack
- in thermals monitor other pilots and full bar to any pilot climbing faster than you
- decide where your next climb will be and fly straight to it without turning
- practice turning your wing inside out in the air
- try the two methods of gliding described in Kelly's blog above to find out which works best for you

Equipment

Sooner or later you WILL have a problem with your GPS ... and you will thank the day you decided to fly with a backup, have it with good batteries, track log on and a small enough interval recording period ! Better, you can use the two GPS actively by using different screens and different info on each I have a Competino and a Garmin 76 and while termalling I occasionally look more at the Garmin (map page with big zoom), on glide I have different data fields on each ... There are many good instruments out there ... but always use a backup !