Understanding the Alps

Part 4: Route planning

Route planning is essential to find an easier way through the mountains. PHOTO: KELLY FARINA

Kelly Farina helps you get the best from Alpine flying

The following guidelines are general rules or tips for planning an XC route anywhere in the Alps. This assumes that there is a light enough wind at altitude so that pilots can fly in all directions. This also means that the dynamic turbulence created by wind will be minimal and, more importantly, manageable.

You've checked the forecast and it's looking excellent. The wind is light, there are wispy cumuli building from 10 o'clock onwards at over 3,000m, with no noticeable drift. The forecast gives a low chance of thunderstorms even in the bigger mountains.

All the elements are in place for a big day out. This however probably means that lower down, later in the day, the valley flow will be strong. Remember that the heat low will be drawing in vast amounts of air throughout the day.

You are now on launch and there is only one thing left to do if - you haven't already planned your route in advance.

- Preparation. Start the night before: obvious things like not getting drunk, getting an early night and waking early so you are relaxed on launch with all business taken care of.

Others less obvious things are not eating too much salty or sugary stuff the night before or in the morning. This is asking to land early with a full bladder at around 50km just as the day becomes easy.

- Set a realistic target. If you are not experienced at flying for eight hours plus, how long do you think you can comfortable fly for? 4 - 5 hours is usually the limit in strong conditions. Training for a few weeks in stronger conditions will build up your mental and physical stamina.

- Average speed. As the day is forecast to be strong you can probably set an average speed of between 15 - 20km/h (faster if you're more experienced). This should take into account a few times getting stuck and some easy fast-paced glides at base later in the day. Let's assume that you have endurance for a 4-hour flight - roughly 80 - 100km.

- Choosing the launch site. It should have a good reputation for getting away easily, and be at a good altitude so that an early mistake can be rectified and won't punish pilots with a bomb should they miss the first cycle. It ideally should have a big easterly-facing slope so that it starts to warm straight off the bat.

- When to start. So you're at launch and the wind is good. As we are only going to attempt an 80km flight we don't need to start so early that there might be a chance of going down. Wait until you see pilots with similar ability to yourself climbing. There's no point in following the hot crack on a comp wing, just to find that you're sinking out.

- Flow of the day. Scouring the map, we're looking for a route that fits the following criteria. You'll want to take advantage of the light winds at altitude so an out-and-return or triangle would be better, as you'll be back home at the end of the flight. Some are super-obvious and some less so. Look for a rough route along some kind of infra structure and with landing options. Keep it simple. Also check for airspace heights, as this could be important on where crossings have to be undertaken.

You'll need to incorporate as many sunny mountains along the route. Generally speaking, from 1030 - 1230 you're good on the east and south-east slopes; from 1145 - 1430 you're good on pure south; 1400 - 1630 you're good on south-west slopes; and from 1600 to the end of the day it's wise to stay on west. If you stick to this rule you'll be staying with the flow of lift for the day.

Work out rough distances between turnpoints and calculate the time needed. Then you can work out which faces to glide to at all times and, more importantly, where to cross if you expect one side of a valley to stop working after a certain time.

- Crux points. Although staying high the whole way round is always the best option, knowing when to be high and when you can just glide on when if it gets weak can mean the difference between making it and landing short if the day ends.

Try to work out where the crux places could be: where it's essential to be high. When attempting long valley crossings it's important to take climbs to as high as possible.

Long crossings should only be attempted if you are sure you can easily get out from lower down. An example of what not to do is a long glide that gets you into a sinky lee area low down.

When crossing a large valley look for somewhere the valley flow is going to be pushing the thermals up; you'll have more chance of waiting for a thermal if it's possible to maintain in a weak valley flow.

Also look out for any leg that will cross passes with a strong active valley flow running over them. This could drag down large amounts of air and reduce your glide to 2:1 if you are unlucky enough to hit the sink.

- Closed ridges are motorways. Closed ridges are the best way to eat kilometres, and this is where cloud streets are most likely to form. You can easily push on over these types of ridges, especially later in the day when the sun has warmed the ground. When joining a cloud street it's normally worth investing the time to get close to base - the lift can be tracked more easily than when low.

Try to pick a route that it could be possible to stay high on, but can incorporate the use of the valley winds if you're low down. Trying to push upwind in a strong valley flow is futile and will put you on the ground almost as quick as a spiral dive. Go with the day's energy late in the day. If you find yourself in a buoyant valley wind, in light lift but drifting, you can use this to just drift back home. Every turn will be 50m closer with slight gain in altitude. Try and plan so that if you do get low you'll eventually drift onto a large enough ridge across the valley flow. As thermals are pushed along the valley floor they'll trigger on the ridge and allow you to get out of the lower wind and continue on your way.

Next month I'll explain a little about lee side thermals in the Alps.

If you'd like to know more about flying XC in the Alps, check out www.austrianarena.com. These articles and more are available at www.austrianarena.com/blog.