





## **NAVIGATION**

« Navigational know-how » is one of the essential elements which allows you to loop to Petite Trotte à Léon without losing time due to hesitations, or even worse, errors with the itinerary.

If certain privileged persons can make recce trips to facilitate their lives, the great majority of you will be going to discover it (we are thinking here of those who have no experience of the Alps and who often come from afar, often very far away). It is therefore at them that this is aimed.

Different tools available to you:

- GPS
- Maps
- Compass and altimeter
- The guide
- The beacon

#### **GPS**

It is part of the obligatory equipment and must be capable of accepting at least 20 tracks of at least 5000 points each

It should have an efficient solar powered charger (but will the sun shine?) or several spare large capacity batteries, avoid devices with rechargeable batteries.

We recommend Garmin GPSs: : Montana, Oregon, GPSMAP , all having a barometric altimeter and 3D compass. (see www.garmin.com).

Even if they are often more reassuring, maps in direct vision on the screen of the GPS can be very misleading by only showing a reduced vision of the topography. They can in no way replace the paper maps supplied by the organisation in A4 format (those who so wish can buy the IGN (Institut Géographique National) maps for France, the Office Fédéral de Topographie maps for Switzerland and the Escursionista maps for Italy.

Today numerous smartphones integrate GPS functions into their systems, those who wish to use this type of material must study the problems which are linked to the integration of GPX files in to this type of device really well. In any case, the PTL® requires the use of a device specifically designed for hiking and strongly advises against the use of a smartphone.

To navigate with a GPS, the most simple is to use the function "go to" (on the Garmin devices) which allows you to use your GPS in a similar manner to the GPS in a car.

It necessitates, that beforehand, you load the tracks supplied by the organisation (.gpx files)into your device, into the directory defined by the manufacturer (see the instructions which come with the device).

By accessing the function "go to", the device asks you to select the desired track, which is then showed on your screen... on the condition that are are positioned in immediate proximity to your track. If the track does not appear, use the zoom « - » to enlarge the zone until the track is shown. The scale indicated on your screen allows you to judge a what distance you will find your track.

Stationary it is not always easy to know where to go. But once you have advanced a few metres, the cursor indicating your position moves on the GPS screen and you will be able to locate yourself in relation to your track and therefore know in which direction you must go to approach or follow it.

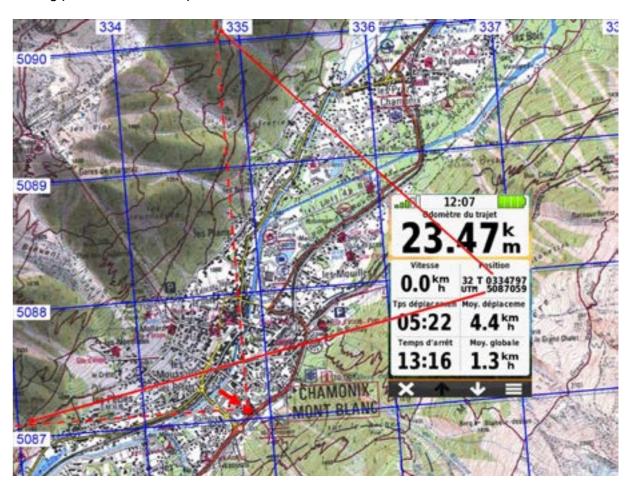
Your GPS is equally an essential tool for positioning yourself on the ground in relation with the help of your map. Alone, the map gives you a global position allowing you understand where you are and where you must go, but it is not always easy to know your exact position on the map. It is for this that the GPS is extremely useful.

Before the start, you must configure your GPS:

- in the way that indicates your position according to the format of position UTM UPS / WGS84
- in the way that your position appears easily on your device. On the Garmin devices, you can for example programme one of the fields on the screen "calculate the journey" by selecting, for this field, the value « Position (selected)».

The norm UTM WGS84, greatly used in the mountains, corresponds to the kilometric grid printed on your maps.

The following plan shows how to proceed.



Except if you wish to save the totality of your route track in the form of a new track, it is not necessary to keep your device permanently switched on. Actually, you will not need it for certain sections of the route where navigation is easier and that will allow you to save on batteries. Do not hesitate to switch it on to identify your position if you have the slightest doubt.

If however you wish to register the totality of your track, you must have the necessary energy for the totality of the PTL® (a set of alkaline batteries only last around 8 hours) and understand that numerous GPS devices do not record tracks of more than a hundred kilometres (it is possible to recuperate them in the "archive" file of the Garmin devices, check for other brands), one can thus continue to systematically recording one's track as before having reached the fateful bar of hundred kilometres.

During a long event like the PTL® the energy supply for the GPS in therefore crucial. We favour the use of lithium batteries which are now more common (including in supermarkets). They are both lighter and have a capacity superior to that of the alkaline batteries, however their end to life is abrupt and without warning, unlike the alkaline batteries. Take care to never abandon used batteries by using the containers specially planned for the purpose.





Warning: the GPSs intended for running or hiking are not totally reliable and always leave an indistinct margin of error which tends to increase in particular in undergrowth and enclosed areas. They are not exempt from breakdowns and in this case the use of the compass and altimeter associated with the map will become the only tools which will allow you to get out of trouble and to avoid superfluous kilometres.

#### MAPS

Experience of previous PTL®s revealed the dangers of relying totally on a GPS and the necessity of always being able to follow one's progression on a map.

The GPS track is marked on the 1/25.000 maps which are supplied by the organisation in A4 format.

If these maps supplied are sufficient for accurately following the route, they would not satisfy those who wish to study the terrain in depth before diving head-first in to the adventure. They must therefore buy the paper maps for the entirety of the route.

For use on your computer, we advise you to use the site tracedetrail.com. Digital French and Swiss maps for PC and Mac are also available at www.bayo.com and www.swisstopo.com.

#### COMPASS AND ALTIMETER

In the case of a GPS malfunction, the altimeter and compass are the only tools which will help allow you to find your way on the ground. Today numerous watches or GPSs offer these functions and for those concerned about weight are a substitute for carrying the two additional devices.

#### Altimeter:

The altimeter is a tool which is useful for progression (how high have I climbed? is it still far to the summit?) but also essential for locating ones position on the ground. For example, reading a « 2D » paper map does not always help you to see where you are or which way you must go. Your altimeter gives you a precise indication, because it lets you look for the spot on the map (by following the contours, looking for altitude references) where the altitude is identical (within several metres) to that of your actual position.

#### Compass:

**Definition**: we call the bearing the horizontal angle, expressed in degrees, between the direction of a characteristic point and the North. It thus indicates the direction to be followed.

Warning: an electronic compass (such as that incorporated in a watch or on a GPS) must be calibrated. This action, made by you at the outset, is very easy, yet indispensable.

The simplest and most usual use for a compass is for following a direction, that's to say a bearing.

For this, it is necessary to find the bearing, then follow it.

#### Finding a bearing: 1)

Lay your compass on the map and hold the two horizontally. Match the North of the map and the North of the compass. Then without moving the map, pivot the compass to align it with the required direction on the map. The compass then indicates the bearing to follow.

#### Following a bearing

If possible, aim at a point indicated by the compass, then head for that point. If you are on a path, check your compass regularly to see that you are following the bearing. In the case of bad visibility (night-time, fog), walk permanently following the bearing on your compass.

Comment: certain devices allow you to "fix" the bearing. After doing so, you just follow the compass' direction arrow.

#### **GPS TRACK**

The PTL® track is supplied in the form of GPX "track" files. The track is available in several files each containing a section of the route or one of the alternative routes.

It is associated to a GPX file containing the waypoints mentioned in the guide supplied by the organisation (that which identifies the characteristic points like passes, localities and junctions implying a change of direction).

#### GUIDE

The guide supplied by the organisation follows the route by specifying the height of each way-point as well as the distances between each of them and the accumulation of the distances. Indications are systematically given concerning changes in direction, difficulties to overcome and the measures to be taken concerning security. It is published in 5 languages (French, English, Spanish, Italian and German).

#### BEACON

Each team will be equipped with a GPS beacon supplied by the organisation. This latter transmits the position of each team via the existing GSM network. The beacons are supplied at the moment of race-bib distribution, they need no handling by participants but it must be positioned in the top of a backpack or on the shoulder, facing the sky. Beware these beacons in no way replace the GPS which is a part of your obligatory equipment.



# **SECURITY**

## **EQUIPMENT AND CLOTHING**

We are referring to the list of obligatory equipment listed in the event's regulations.

It is rare to find, at the end of August, a full week of good weather conditions, it is therefore necessary, physically and mentally, to be ready to confront sequences of bad weather. In 2012 the depth of snow at 2,500 metres reached 60 centimetres on certain sectors. This is then, an invitation to favour quality clothing, warm, lightweight and quick drying (during the summer it is much better to wear layers rather than one item of warm clothing). Particular attention should be made to the choice of socks. It is important plan clothing of the same type in your spare's sack.

The most robust trail-running shoes, capable of withstanding periods in stony zones, are recommended. One can substitute them with "approach" shoes which are now sold by most brands. Somewhat inappropriate for running on flat ground they are extremely efficient on difficult terrain. For those who are tempted by shoes with a Gore Tex membrane you must understand that although efficient in light rain, they reserve unpleasant surprises, by turning in to mobile reservoirs, when crossing streams or in heavy rain.

The tent which is compulsory for each team has to act as a temporary bivouac or as a shelter in the case of an accident while awaiting assistance. Above all we favour lightweight models. By tapping the key words "bivouac shelter" in to the Google search engine one can find numerous satisfactory models which are both light-weight and good value for money.

In the appendix to the event's regulations there is an exhaustive list of medications and plasters. Obviously it is not necessary to take the totality, but along with a few analgesics and anti diarrheic, the necessities for treating small wounds (blisters, grazes....) should be included.

## **FOOD**

The refreshment posts are detailed in the road-book which is supplied to you for the event. They can be separated by thirty or forty kilometres which means that teams must have provisions which are both energising and easily absorbed. It is preferable to use products to which one is accustomed rather than trying new ones and risking digestive problems. Particular attention should be taken with the water supply: the majority of springs and streams encountered along the route can be drunk quite safely, it is not necessary to add a disinfectant or filter (« micropure »tablets or « Katadyn » filters). Nevertheless it is necessary to be wary of mountain streams running off pastures occupied by sheep or cattle. Note that each time it is necessary the Guide states «last water point before....».

## **STRATEGY**

It is important to adopt a rhythm of progression which is adapted to the distance and difficulties without forgetting to integrate into the walking programme the stops ensuing from the need to eat, drink or rest. Ideally it is thus advisable to establish a provisional race programme by making a detailed study of the profile and difficulties which come to light on the map or guide which are available. Progression at night, over sections which are deemed difficult, should be avoided.

Lastly so as to avoid errors to the itinerary and too many halts to verify position, the best progressional tactic is to have a team member open the route with a GPS, immediately followed by the second following the indications marked in the guide and ideally the third member following the progression on a map and if possible checking the distances travelled on a second GPS, if they have one (for teams of two this last function is carried out by the second team member).

Even if everybody knows, for sure, that zero risk does not exist, the only aim of this short memo, is to try and get closer to it by mastering, as well as possible, all aspects of safety.

The PTL® is a long and arduous event for autonomous teams, and it takes place in an environment and conditions which are at times very difficult.

We are going then, successively, to broach all the principles and prescriptions concerning the safety inherent to this type of event, under its three inseparable aspects:

- personal security
- security assumed by the organisation
- -security liked to the environment and natural conditions

#### PERSONAL SECURITY

In all circumstances, the team is inseparable and must respect the spirit of "climbing partners" in their progression.

- Never abandon a team member: in the case of a problem, they must be accompanied to the nearest control or refreshment point, if that is not possible, call, in priority, the race HQ (PC course) and follow their questions and directives to the letter.

Protocol for contact with race HQ; give your GPS position, race-bib number, reason for your call, qualification of the call, then answer the questions put to you.

In the case emergency, and only in extreme emergency, or if having difficulty contacting race HQ, call 112 in France, 118 in Italy or 144 in Switzerland directly.

- Avoid additional accidents by remaining calm at all times.
- It is imperative that you assist another team in trouble or direct them to contact race HQ if necessary.
- Know and understand how to practice basic first aid (recovery position, CPR, mouth to mouth, tourniquets etc.), if not in the possession of a SNB or equivalent diploma.
- Use the team's obligatory first-aid kit to give first aid (its contents are suggested in the list of obligatory equipment).
- Always have one telephone, per team, turned on.
- Have spare batteries for the telephone, GPS and head-torches.
- Respect the obligatory equipment required by the organisation which has the sole aim of contributing to individual security. In particular you must be equipped with crampons for use in certain sectors.
- Have a supply of water with you at all times.
- Know how to navigate using the following instruments: compass, map and altimeter in the case of GPS
- Be ready to affront difficult climatic conditions: strong winds, rain, storms, snow...
- Know how to assess your own physical capacities, vigilance and technical aptitude
- Know when it is necessary to give-up.
- Obtain agreement from race HQ before taking any initiative.
- Double, then redouble, your vigilance on paths at night.
- Do not hesitate, on a technical sector, to use your walking poles or the hand-rails/grips positioned for the purpose.
- Obey any of the organisation's orders to stop.
- In the case of doubting the chosen path, stop and verify your position. Never continue if uncertain. If necessary retrace your steps to the previous way-point.
- Respect the highway code and signal at night, when crossing or walking along a road.





#### SECURITY ASSUMED BY THE ORGANISATION

The security organisation chart and the assistance made available by the organisation is as follows:

- a race committee, responsible for decisive decisions without rights of appeal, concerning the running of the event, in particular for all which concerns security. It is alone in being able to interrupt the event.
- a race HQ charged with interacting on the ground between the competitors and the race committee.
- volunteers on the ground (with, at their head, their chief of post), responsible for the good running of local situations and with relaying the directives of the steering committee via the race HQ.
- mountain professionals and experienced volunteers are requested if necessary to guard technical sectors (and give a guiding hand and/or equip the site with cords at fixed points to make the path easier).

The organisation checks the future weather conditions daily, and informs the race HQ and the volunteers on the ground.

- before the start, during the briefing, the essential points to be remembered will be explained as well as the conditions, weather or other, envisaged on the near future: be attentive
- during the running of the event, in case of important difficulties, weather or other, alternative routes may be activated up on the race committee's orders.

Their application will be set up by groups of volunteers on the ground.

Each group is followed via a beacon. Their path is controlled by the race HQ.

In the case of a malfunction of the beacon or too much deviation from the track, the race HQ will contact the group directly by telephone and they must react to the instructions given.

### SECURITY DEPENDS UPON THE ENVIRONMENT AND NATURAL CONDITIONS

Accidents are proportionally more serious and frequent in the middle mountain due to lack of vigilance.

- be prepared to affront difficult and unexpected climatic conditions : storms, fog, cold, heat, wind...Possibly in these cases, be ready to conform to the directives of the organisation which can request progression in the form of a "convoy".
- be vigilant.
  - on steep slopes or stone fields, do not start rock falls
  - on steep grassy slopes, above all on the descent
  - on snowy slopes know how to use your crampons, be careful with the "pick" technique, (care needed on possibly fragile snow bridges on névés which cover streams or stone fields).
  - on a steep ridge, never trip on a rock or tree stump. All falls could have serious consequences.
  - when crossing a torrent, in flood or not : take care of slippery rocks and the current.
- be well practised in the reading of landscapes to recognise all mysteries and uncertainties linked to the area encountered.
- be respectful when crossing pastures (gates to be closed behind you), beware of certain animals, patous (big dogs which guard flocks of sheep), bulls.... do not disturb or provoke them).
- do not take any possible short-cuts. Besides the fact it damages the environment, doing so can be dangerous in bad weather.

## **ENVIRONMENT AND COMPORTMENT**

The PTL® is an adventure which takes place in open country. The key word for this adventure is respect!

- Respect for natural surroundings : leave the least possible trace of your passage
  - Use the paths, do not short-cut to avoid soil erosion, fragile environments and sometimes irreversible damage.
  - Leave nothing on the ground :
    - . no wrappers (plastic, gels, cans, batteries, etc..);
    - . use existing toilets, if not we supply you with plastic bags for soiled toilet paper and paper handkerchiefs which you must then place in the appropriate rubbish bins.
- Respect inhabitants, walkers and animals :
  - Farmers, mountain hut staff, locals and walkers: whether during reconnaissance or during the PTL®, politeness and civility is the rule. (e.g. : no noise around the huts at night, sleep is essential and necessary for everybody)
  - Animals : are in their dwelling place ! Disturb them as little as possible : noise, walking sticks, torches can all frighten them. Try to switch off your torches at night to cross fields and close the gates!
- Respect for the team : You form a team, stay together ! During the event your the strength of your friendships will be tested and your qualities will emerge.
- Respect for rivals : this is not a race, it is the PTL®! The other teams have the same goal as you : « finisher of the PTL® »! Know how to help others and you will be even more proud.
- Respect for oneself : to go to your limits, pass them without putting yourself in to danger. Your physical and moral health is our priority.
- Respect for the volunteers : everybody has one aim, to help you succeed, but also to avoid you being injured ... If a volunteer requires you to stop for medical, security or time limit reasons, they are following the rules which you have accepted. You must not hold them responsible.
- Respect your hosts: During reconnaissance, as during the PTL®, warn the mountain huts of your visit and outline your intentions. Upon your arrival, place your materiel in the areas designed for that purpose, remove your shoes..... slippers or clogs are provided for you, take advantage and rest your weary, aching feet!

To go even further, you can consult the pages dedicated to Eco-responsibility for the entirety of the event in www.utmbmontblanc.com.