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GPS considerations

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- Gear reviews and tests -



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Description :

The famous Global Navigation System

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GPS considerations

The GPS or Global Navigation System has definitely changed the life of outdoors men for navigation and road finding.

Mine is a Garmin GPS II plus. it has a very good user interface, and adjustable antenna.

Garmin GPS II plus, in horizontal position



Garmin GPS II plus, in vertical position



Whether on sea, land or air, the GPS provides accurate positioning (now in a range of a few meters accuracy), as well as:

- Real-time bearing.
- Accurate altitude, if the receptor can catch 4 or more simultaneous satellites.
- Speed.
- Trip distances and time.
- day and night times.
- accurate time.
- Tracking of the travel
- Navigation on a pre-recorded road (or reversed tracking.
- on some models the tracking appears directly on a map., so the GPS is also a map.
- nowadays, some systems also include electronic compasses, altimeter/barometer, etc...

They have the following inconvenients:

The Battery time is imitated, 24 to 48 hours for the best systems, generally, the less functions are available, the longer is the battery time.

Due to the previous consideration, one person cannot safely rely only on the GPS stored data, as like on any computer, they will disappear with the battery power. Maps, and compass are still needed as backup, should the GPS fail.

A friend of mine went on a motorbike trip in Madagascar, he had a GPS, water, and gas, he had an accident, and

GPS considerations

broke the GPS, he quickly lost himself, and went out of water, and gas (a gas leak did not help him). He was lucky to be found alive 3 days later, severely dehydrated.

Morale: The compass, and map are still useful. Report your route on the map regularly, the map cannot be broken.

The GPS while not a compass, as it does not give a bearing when stopped, can act as a compass, as soon as you get in movement, it will give you your real-time bearing, the direction you are following. This makes it perfect on a boat or while hiking in a wild area without land marks.

Garmin GPS II plus while moving, sorry about the reflects, but the bearing is right, and it shows some speed



I found the GPS so useful, that nowadays I use it to record my average speed, total trip, and other data, when I go mountain biking. I drop it in the back pack, giving the right vertical orientation to the antenna, and only pick it back when needed, or at the end of the trip. It replaces easily the kilometer counter. Having an adjustable or multi-directional antenna is necessary to allow this, as built-in antenna are generally set up for the GPS flat in the hand, which forces you to hold the GPS in the right position if you want to record any trip. This is a point to check when buying one!

One of the things the GPS needs is a wide access to the sky. It cannot work in a building, or a cavern, and it may show reception problems in deep river gorges, canyons, or when surrounded by high buildings, or mountains, but this depends of the relative position of the obstacle with the satellites and shadows of reception that are created. This said, it works in my car, when in front of the steering wheel.

A GPS needs 3 satellites to give the longitude and latitude, and 4 are needed to give the altitude in addition.

GPS considerations

The boot times are various, and may take from 10 minutes to 10 seconds depending on the system's sensitivity, cold or warm start [1]. Check if the GPS you want to buy is quick or slow to acquire. I once owned a slow one, it was near useless (5 minutes time), as shutting down the power is a good way to overcome the very limited battery time. Another point to check when buying one.

I have decided personally not to have one with a map, but to carry paper maps.

A discussion on related navigation tools is [here](#).

Conclusion

A very useful tool. It provides safety, can replace a kilometric counter, or a speed counter, or even an altimeter. I could not live on a boat without one anymore, and it has proved having unsuspected applications for me. This said, like for all electronic devices, I would not totally bet my life on it.

[1] A cold start is when the GPS has to know in which part of the world it is, to determine which satellites to use. This is generally accelerated by asking for a country. After, the satellite data is stored, and the warm start is much quicker, provided the GPS is started in an area of some 50 km maximum from the last shutdown place.