

Mountain Leader Training

GPS technology awareness...



Technical Information

What is GPS ?

A network of satellites constantly transmitting coded information, making it possible to identify locations on earth by measuring distance from the satellites.

Put simply ... a navigational tool !

How Does It Work?

A GPS receiver must know **where** and **how far** the satellites are from it's location.

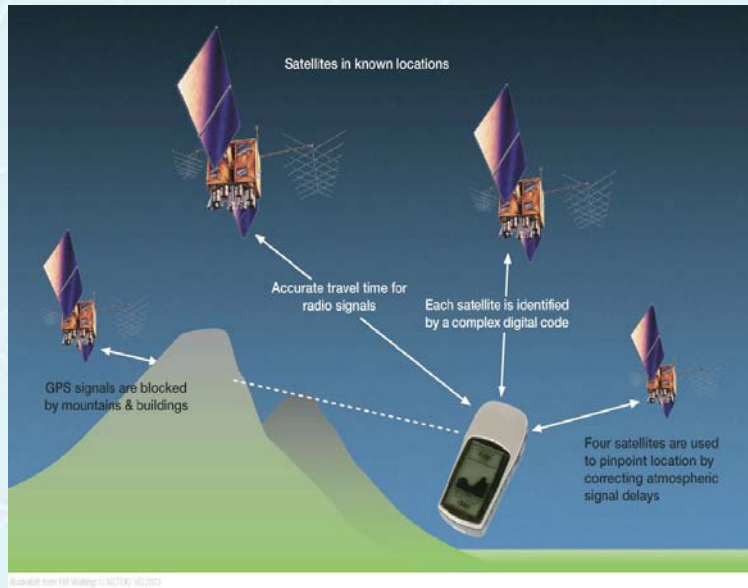


Almanac Data

Data transmitted by satellites & stored on receiver.

Ephemeris Data

Data corrected by monitor stations and sent to receiver via satellites.



How Far ?

Speed x Time of Travel = Distance

Speed of Light signal transmitted at 186,000 mps.

Time of Travel

Receiver tries to match signal and calculates the time delay.

Who Uses GPS?

- MOD
- General & Commercial Aircraft
- Sailors & Fishing Enthusiasts
- Surveyors & Cartographers
- Outdoor Enthusiasts
- Emergency services
- Anyone who requires an exact location !

Pros & Cons



PROS

- Accurate grid ref - minimum 15 metres
- Return to spot in poor visibility
- **Insert grid ref for specific location**
- Inserting waypoints / planning route prior to journey
- Providing crucial locations in the event of an emergency

Con's

Time consuming when point to point navigating
Cold / Stormy weather.

- Gloves / Mitts
- Clarity of screen in blizzard conditions
- Batteries

Must have line of sight with satellites.

Deflection of signal.

Poor satellite coverage in remote areas.

Atmospheric conditions.

Distracts from traditional navigation technique...

Map reading skills are essential to avoid hazards!

