

GPS GLOSSARY

Waypoint: A specific location, entered in a GPS receiver or on a map. A waypoint is typically identified by horizontal (x-y) and sometimes altitudinal (z) coordinates, plus an alphanumeric name and a symbol, both selectable. [Also known as a "**point**", "**marker**" or "**landmark**", depending on manufacturer].

Track: Path of travel automatically logged in a GPS receiver, a "breadcrumb trail" of sorts. The track is viewable on the screen, can be saved and followed (see TracBack®), and is often used to log the distance traveled. Many models calculate the enclosed acreage within the track loop, as well as the perimeter distance.

Route: A sequence of waypoints that you create in a GPS receiver (or on a digital map). Components of a route include waypoints and distances & directions between the waypoints. Routes are used to automatically navigate through the sequence. In a few models, routes can be used to estimate enclosed acreage

GoTo: The activation of direct GPS travel to a destination ('as the crow flies').

TracBack® : The proprietary Garmin feature which takes a track log and converts it into a route to guide you along the track to a starting or ending position.

Bearing: Direction from your *current* location to a selected destination. A bearing will only be displayed in a GPS receiver if you have selected a destination (i.e. *GoTo*, *TracBack*, *Route*, etc.).

Course: Direction from your *starting* location to a selected destination. A course will only be displayed in a GPS receiver if you have selected a destination (i.e. *GoTo*, *TracBack*, *Route*, etc.).

Heading: Direction that you are *currently moving*. In a GPS receiver, the heading is displayed whether or not you have selected a destination (i.e. *GoTo*, *TracBack*, *Route*, etc.).

Velocity Made Good: *Closing speed* towards a selected destination.

ETA: *Estimated Time of Arrival* at a selected destination (next or final).

ETE: *Estimated Time En route* to a selected destination (next or final).

EPE: *Estimated Position Error* - GPS estimate of current position accuracy.
In some models this is simply displayed as **ACCURACY**.

North Up: Sets the GPS receiver's map display so north is always at the top of the screen.

Track Up: Sets the receiver's map display so that your current track heading is at the top of the screen. The screen display rotates as you change direction.

GPS Receiver (*a.k.a. GPSr, GPS unit, and "my GPS"*): Any of a variety of electronic devices that receive data from the Navstar satellites in order to determine positions on the earth's surface. Most models do far more than this and are actually small computers that handle a variety of tasks.

Position Format: In a GPS receiver, this is the selectable coordinate grid system used to identify a position. The default setting in most GPS models is **hddd°mm.mmm'** (a.k.a. decimal minutes). Two additional latitude-longitude options are **hddd.dddd°** (a.k.a. decimal degrees) and **hddd°mm'ss.s'** (a.k.a. decimal seconds). Another commonly used setting is **UTM/UPS**, the Universal Transverse Mercator/Universal Polar Stereographic systems. When you need to switch from one system to another, the receiver automatically handles the conversion.

Map Datum: A mathematical model that describes the earth's surface, necessary to manage the inherent distortion created when making a flat map from a globular world. Hundreds of datums are in use around the world. In GPS receivers, the default datum setting is **WGS 84** (World Geodetic System of 1984). Other commonly used datums include **NAD 27** (1927 North American Datum) and **NAD 83** (1983 North American Datum). When you need to switch datums to match maps or other users, the receiver automatically handles the conversion.

UTM: The Universal Transverse Mercator coordinate grid system is particularly useful when using GPS with paper maps. Connecting the blue tick marks along the margins of USGS 7.5' topographic maps will produce a grid of squares, 1000-meters on a side. When set to UTM, a GPS receiver displays coordinate precision to one meter within these squares, allowing you to easily pinpoint precise locations on the map. Note that precision exceeds accuracy in this case.

WAAS: The Wide Area Augmentation System is a Federal Aviation Administration system of geostationary satellites (over the equator) and ground stations which provides free differential correction to GPS receiver in range. With a clear view of the southern sky, accuracy improvement to three meters can be expected. Most new GPS receiver models have WAAS capability.