

## GPS Tracking

GPS stands for Global Positioning System. This system was originally developed by the Department of Defense with the help of a man named Ivan Getting. The current GPS system was initiated in 1978 and consists of 24 man made satellites that orbit 11,000 miles above the earth's surface. These satellites can work in unison with ground stations to transmit and receive information to a GPS receiver. GPS receivers can range from very simple devices that can track position, height, speed and other characteristics to within a 30 ft margin of error; more sophisticated devices can track within a couple of centimeters.

GPS receivers are becoming so mainstream that they can be found in cell phones, cars, recreational vehicles, and even wristwatches. Why does someone need a GPS receiver you may ask? Obviously, GPS receivers can help you find your position, however, with the help of mapping services they can also give directions to where you are going with supporting information, such as road construction, gas station locations, places to eat, and even local attractions. The more sophisticated units can even use your blue tooth enabled phone to dial phone numbers to get reservations and speak directions such as "In 400 feet turn right onto Smith Rd."

In researching this article I decided to purchase an inexpensive GPS receiver to see how the technology works. After getting a few recommendations I decided on the Garmin 12XL. I found this unit after a Google search for about \$119 factory refurbished. This model is very basic: if you put in a set of coordinates, it will give you a compass reading showing you the direction to go and how far away you are. You can also mark your starting location and go for a hike. If you get lost, simply press the backtrack button and it will show you the direction and distance back to your starting point.

During my search for finding a GPS receiver I continually saw references about a site named [www.geocaching.com](http://www.geocaching.com). Geocaching is a sport of sorts that requires a participant to hide a cache, (could be anything you want to give away), and a log book in an obscure location and then note the coordinates on the website. On the website, users are able to see nearby caches by entering any zip code. Once you choose a cache you would like to search for, simply enter the coordinates into your GPS receiver and follow the compass or map it gives you.

Once you find the cache, simply sign the logbook and take a prize from the cache box, just be sure leave a treasure for the next hunter. During my first experience I choose two caches that were near by. After entering the coordinates we set off in the direction the compass pointed us. I found the GPS unit amazingly accurate and was able to walk directly to both caches. The site categorizes the caches according to difficulty levels and offers clues on how to locate harder to find caches. My family found the experience very fun and I recommend it as an alternative to the boring walk in the park.

Next week I want to talk about mapping services and how they work with the more sophisticated GPS units. If you need computer technical support call the only computer repair shop in Knoxville that offers a completely FREE, no strings attached diagnostic service. Call Thomas, Roger, or Aaron at 947-0749 or e-mail your questions to me at [ComputerDepotOnline@att.net](mailto:ComputerDepotOnline@att.net).