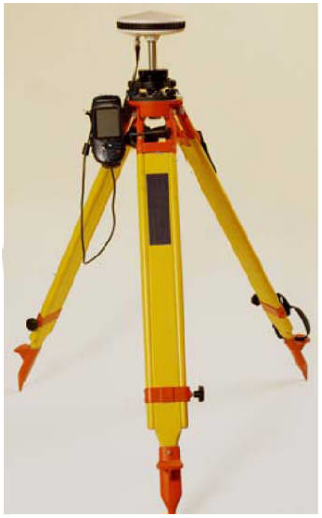
"Should I start using GPS?"

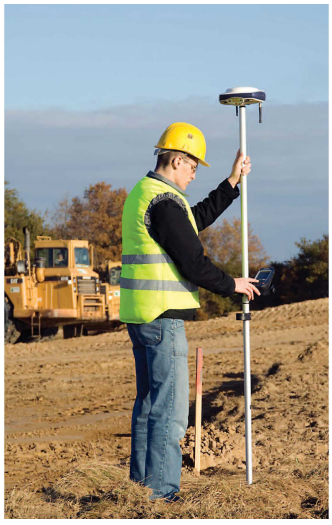
It's a very common question from surveyors and others seeking centimeter accuracy. The answer? It depends on the kind of work you are doing. Also, different types of GPS equipment are suited for certain types of centimeter accuracy work.



Start simple

It's hard to argue with the productivity of a pair of single frequency (GPS L1) survey units. These are the simplest to operate and the most inexpensive to purchase. Simply set one up on a known control point and set the other up on the point you want to locate. Occupation time is typically twenty minutes to an hour depending on how much sky blockage there is. With these units there is no quicker way to bring control to your project when the baseline is 1/2 mile or several miles. No line of sight is needed between the two units. Simply have the two receivers collect data at the same time, and then post process the data on your computer. In well under a half day, you can set several control points on your project from several miles away.

These receivers can also be used in "stop & go" mode to collect topography data on your project site. Just be aware there are other types of GPS equipment that are more efficient for this.



Another way to start simple is to abandon the idea of operating your own base station receiver and invest in a more powerful rover unit so you can use publicly available base station receivers or tie into an RTK Network. In order to utilize publicly available base stations such as OPUS or other local base stations, you'll need a dual frequency receiver (GPS L1/L2). Depending on the distance from the base station and the type of result you desire, you'll need to collect data for 15 minutes to a couple of hours in order to do post-processing.

The benefit of investing in dual frequency technology is that it buys you RTK (Real-Time Kinematic) capability, which is very productive for topo surveys and staking. If you are working in the Oregon or Washington Real Time Network coverage area, you are in good shape. You'll be able to use your GPS receiver for point/offset/slope staking as well as very efficient topo data collection. It's more expensive than a pair of single frequency receivers described above, but you gain the advantage of flexibility whereas with single frequency receivers, there is really no path to expand into staking or high-productivity topo surveying.

With GPS, it's very important to set realistic expectations. Yes, it can be incredibly productive and that's why 500,000+ survey receivers have been sold to professional users around the world. However, as with any surveying instrument, it has its limitations. Before your spend money on GPS equipment, you need to understand how GPS would improve your productivity based on the type of projects you work on now and in the future. If you aren't sure, it's best to try-before-you-buy. All reputable dealers will let you evaluate a piece of equipment before you commit to purchasing. They may also be able to do an on-site demonstration.

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