



Application Note

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Product: ProMark3 Receiver

Subject: Surveying, Mapping, & GIS with the PM3

Who needs a ProMark3?

- Surveying and mapping professionals use the ProMark3 for precise survey measurements as well as rough mapping and full featured GIS data capture. With choices for real time and post processed solutions ProMark3 provides flexibility to use the most appropriate application for the job.

What does the ProMark3 offer?

- Asset management is less complicated with a ProMark3 that offers a choice of Surveying, Mobile Mapping, and FAST Survey application software. The ProMark3 is a complement of tools in a compact GPS receiver.
- Each of the software applications can take advantage of real time corrections using SBAS, a radio data link, or a cell phone connection to Direct IP or NTRIP reference stations.
- Compact and light weight, the ProMark3 used with the internal antenna provides a mapping tool with a choice of Mobile Mapping or FAST Survey. Both applications offer GIS data capture with menu driven attribute entry. FAST Survey offers the additional benefit of more traditional survey data collection and stake out.
- Add a Tripod mounted external antenna to the ProMark3 for improved accuracy for the mapping and GIS data capture. With the external antenna attached the Surveying application provides the opportunity to record survey data for post processing. Add a real time data link to make RTK solutions part of all three applications on the ProMark3.
- Replaceable batteries, a dual bay charger, and an external battery pack make it possible to keep the ProMark3 on the job all day and all night.

Mobile Mapping with the ProMark3

- This is GIS data capture made easy. User created feature libraries make it possible to customize the menu driven attribute entry to fit the project. Go stationary while mapping a line or area feature and the ProMark3 automatically starts averaging the position to improve the accuracy of any stop made along the line. Adjust the line feature logging interval by time or distance to control the interval of points along the line. Pause a line feature to take a circuitous route between corner points or to nest a point feature. Point features can be averaged for ten seconds or several minutes while attribute entry is done at the same time. Load an existing map as a background for today's field work. Use the navigation tools in the ProMark3 to get to a feature on the background map or to return to a feature in the current job.

Surveying with the ProMark3

- Traditional static surveying leaps forward by pushing the single frequency envelope when it comes to session length and vector length. ProMark3 field work moves quickly. The results meet accuracy expectations for many survey projects where some might once have said that dual frequency data is needed to get these results.
- Stop-and-Go surveying reaches a new level of performance with minimal requirements for initialization and solutions on the fly. It is elementary point identification and description data entry for each stop along the survey project. This is survey data collection in its simplest form.
- Kinematic trajectory mapping can be done without initialization just by going stationary for a few minutes to let the solution fix. The initialization bar is an option but not essential to this task. With point identifiers and descriptions attached to each coordinate this is a great way to map profiles with a backpack or ATV mounted antenna.

FAST Survey with the ProMark3

- Almost everyone thinks in terms of traditional RTK data collection when it comes to FAST Survey but it goes way beyond that for FAST Survey in the ProMark3.
- Choices include traditional RTK data collection and stakeout using a real time data link. Using the SBAS to aid the RTK solution minimizes the need for the initialization bar. Static on the fly solutions come quickly. Point numbers and descriptions are entered on a large, easy to use, virtual keyboard that makes data collection easy.
- Use SBAS corrections without the data link for rough data collection and stakeout for times when close is close enough. A difficult hike to find ancient corner evidence benefits from the accuracy of SBAS combined with a localization to best fit official local coordinates.
- GIS data capture with FAST Survey is very smooth with user defined, menu driven, feature code libraries and the export tools in FAST Survey. Imagine RTK survey accuracy using a real time data link or SBAS, combined with a localization, for excellent results while liberated from the data link.
- FAST Survey makes the connection between data collector and COGO or GIS software easy to manage with import and export tools that make shape and ASCII files.
- Whether the objective is survey precision and simple survey data collection, rough mapping and recon, or menu driven, attribute laden, GIS data capture FAST Survey moves from SBAS to RTK with a data link accuracy with a few software settings.