

Leica Geosystems Solution

Agripower: Smart Work for Leica SmartStation



A recent survey, by Leica Geosystems' customer Agripower, showed the benefit of integrating TPS1200 SmartStation with the GPS1200 Real-Time Kinematic (RTK) equipment. This was for the survey of an extensive recreation ground in Haringey. The Company ordinarily utilises the GPS1200 system for large area measurement, often in conjunction with a quad bike, for rapid data capture. The process of combining the GPS technology with the Total Station based SmartStation was found to be straightforward and a time saver, with easy handling and transfer of data.

Agripower Ltd (Sportsturf) was established approximately 40 years ago and specialises in sports field construction, drainage and maintenance. The Company's work predominantly revolves around earthworks and drainage and therefore accurate measurement of ground levels is important for calculation of volumes and for drainage design. Following Jerry Anderson joining the company earlier this year, the company invested in System1200 GPS for fast and efficient one-person terrain modelling. Jerry had used Leica total stations before, but GPS was a first.

■ The SmartStation is on Jerry's wish list. "I can remain a one man operation and save time without compromising quality".

- when it has to be **right**

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Leica TPS1200 : One man surveying with completely cableless solution

Recently Agripower were asked to carry out a detailed survey on behalf of Haringey Council at Lordship Recreation Ground in order to design a new drainage system. The majority of the park is well suited for survey with GPS. However, a request to map the rest of the park for a proposed environmental project required the use of optical equipment due to the large number of mature trees. The Broadwater Farm estate is next to the park and the name is derived from the area being once a natural flood plain of the River Moselle which currently lies underneath a huge culvert. It is hoped that in the future the culvert will be removed and the river opened up once more.

The right solution for the project

Jerry made a call to Lawrence Dixon at Leica Geosystems, a talk through the project ensued and a recommendation for the Leica TPS1200 SmartStation followed which would tie in nicely with their existing System1200 GPS. After just 60 minutes instruction at the office, the work could be started straight away. As Jerry commented, "I have to admit I am very impressed. First day on site and all I had to do to get the Leica SmartStation into the local co-ordinate system was to take the data card out of the GPS and copy it across into the Leica SmartStation's memory. From then on it was just a question of a whole series of baseline pair setups, 12 in all. It made life very easy and the time saving over a traditional closed loop traverse was approximately half. Once you've finished at one location, just pick up the machine and set up in another suitable position. The tracking system worked very well in one-

person mode and long distance reflectorless shots were no problem".

Jerry found the transfer of data on site onto the laptop and into LSS via GeoOffice was very efficient and simple to do. As Jerry further commented, "The main thing is that with this system I can remain a one man operation and save time without compromising quality".

"The Leica SmartStation is certainly on my wish list for next year. Obviously it can stand alone purely as an optical instrument at which it is excellent. I had the equipment for a week and used all its modes. I would imagine that for the dedicated surveying company that is already using GPS, this is an absolute must!"

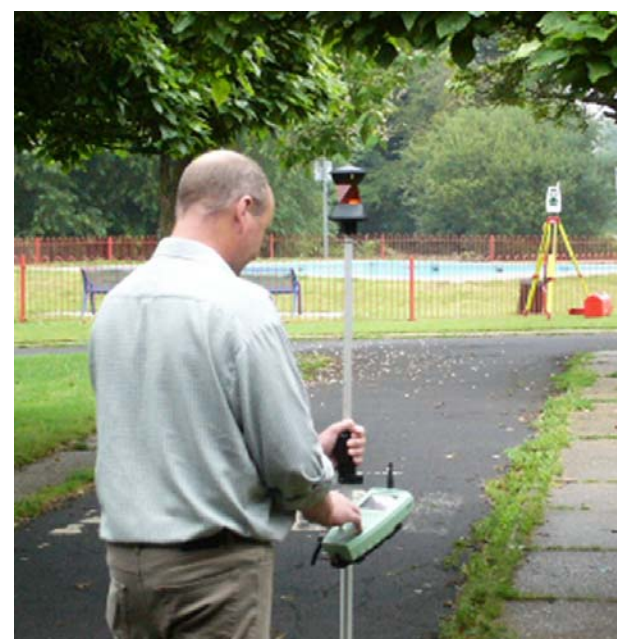
"An absolute must!"

In summary, the Leica SmartStation concept is to combine the best of both the Total Station and GPS survey systems. With a Reference Station or RTK Reference Network in place, GPS is hard to beat for accuracy, ease of use and speed of data acquisition. However, speed of acquisition becomes impaired when you try and use GPS for tasks more suited to Total Stations. The limitations with more traditional Total Station based techniques is the time spent establishing and verifying a control network. By utilising GPS RTK techniques to do this via the SmartStation, these times are greatly reduced. In addition, the unique, continuous recalculation of

the GPS RTK position, from Leica Geosystems' System1200, ensures that this instrument position is calculated, in real-time, with 99.99% reliability.

Furthermore, the instrument position is not constrained by having to be in a good location for the traverse, the location is chosen which is most suitable for the data to be collected, reducing the necessity for those irritating and time-consuming side shots.

As Jerry says: "Leica SmartStation is an absolute must!"



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When it has to be right.

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