

System 1200 Newsletter – No. 21

v2.00 Applications – What's New

MORE FUNCTIONALITY THAN EVER BEFORE

The last newsletter described the new features of the "main" firmware within the new System1200 v2.00 firmware.

This newsletter focuses on the new loadable application programs which are now available and also the new features added to existing programs such as Stakeout and Reference line. Remember these application programs are loadable and must first be loaded onto the instrument before they can be used.

It is important to note that the existing, previously available loadable application programs (v1.52 or earlier) will not run with the v2.00 firmware. So if you load the new v2.00 firmware and wish to use COGO, Stakeout, RoadRunner or any other loadable application program then you must also load the new application program. These loadable applications are available from your local Leica representative or can be downloaded from the Leica download website:

<http://downloads.leica-geosystems.com/downloads/index.htm>

Remember also that some application programs are available free of charge and others must be purchased. Purchasable application programs can however be used free of charge for a 30 day period.

NEW APPLICATION PROGRAMS

The following new application programs are now available.

GPS SURVEY

The new GPS Survey application program can only be used on SmartStation instruments and allows GPS points to be easily measured with a SmartStation instrument. But why did we create this application program when it is anyway possible to measure GPS points within the Setup application program?

Imagine your survey company is located in a medium sized town where perhaps over 50% of your work is within or close to the town. You normally use a total station for your survey work since when working in the town it is unlikely that enough satellites are visible such that all points which need to be surveyed can be measured. The problem of course with using only a total

station is to find the local control points, or when you do find the control points, they are not in the most ideal location.

But with the use of SmartStation the time taken to setup the total station would be greatly reduced. However, since you have not used GPS in this area before, you do not know or cannot find out the coordinate system parameters needed to convert GPS measured points to the local grid coordinate system.

Using the new GPS Survey application on-board the SmartStation instrument it is now possible to visit a sufficient number of local control points around the town and measure these points quickly and easily with GPS. It is then a simple task to match the common points and compute the coordinate system for the town and surrounding area. It is now possible to use SmartStation with this coordinate system to obtain local grid coordinates for the position of the total station.

MONITORING

The existing **Sets of Angles** application has been extended with the addition of a timer to allow repeated and automated measurements to specific points at defined intervals.

Field	Value
Begin Date	23.03.05
Begin Time	12:00:00
End Date	24.03.05
End Time	12:00:00
Interval	001:00:00
Stop For	All Messages
Time Out	No Time Out

It is also possible to configure if the monitoring functionality should stop or temporarily pause for message panels which may be shown or if all message panels should be ignored.

IMPROVEMENTS TO EXISTING APPLICATION PROGRAMS

Improvements have been made to the following existing application programs.

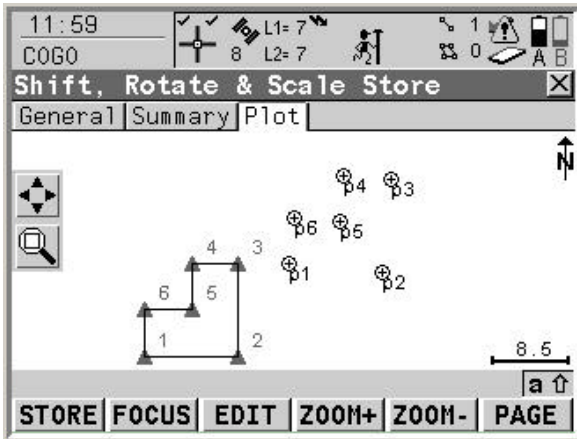
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COGO

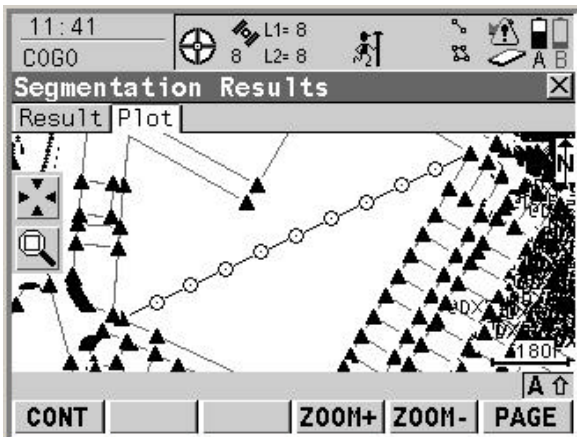
Shifting, Rotation and Scaling of Points: It is now possible to select a group of points and then shift (dx and dy translation and a height shift), rotate and scale these points by a defined amount. The shift, rotate and scale values can either be manually entered, or computed in a variety of ways. Multiple points can be selected as a group, or can be selected individually.

The shifted points can either be copied into the same job or they can be copied into a different job. It is also possible to add a prefix or suffix to the IDs of the points such that it is possible to later easily identify these points.



It is also possible to graphically view the effect of the shift, rotation and scale on the selected points, before the points are stored.

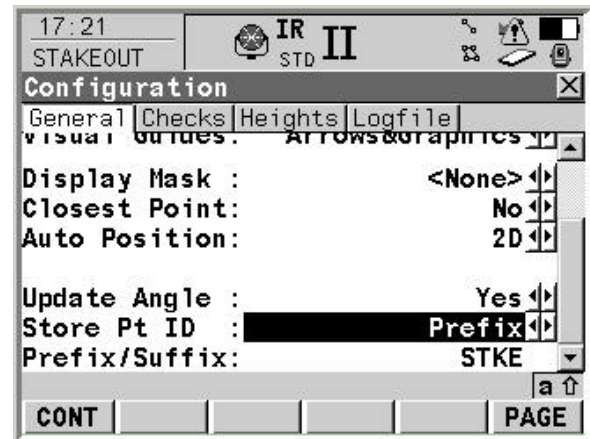
Segmentation of Lines and Arcs: It is now possible within the existing **COGO Line Calculations** and **COGO Arc Calculations** options, to define and then segment (divide) a line or arc in order to create new points at defined intervals.



The line or arc can be segmented by either a number of segments or by segment length - the results can then be graphically viewed before being stored.

STAKEOUT

Adding a prefix or suffix to the point ID of the point being staked out: A prefix or suffix can now be added to the point ID of the point being stored when staking out a point.



Previously, the point being stored was always stored with the same point ID of the point being stored.

Additional orientation options when staking out a point (TPS only): The options which are available to be used to help stakeout a point on the TPS instrument has been extended – the options are now very much more similar to the GPS instrument. The new options include:

- **To Arrow:** Very useful when EDM tracking is being used. As for GPS, the arrow simply points in the direction to be moved
- **To North (and From North):** Shows the direction to be moved relative to (or from) north
- **To Last Point:** Shows the direction to be moved relative to the last point which was stored
- **To Point (Stake) and To Point (Stake):** Shows the direction to be moved relative to a chosen point. This point can be selected either from the job from where points are being staked, or from the job where points are being stored
- **To Line (Store) and To Line (Store):** Shows the direction to be moved relative to a chosen reference line. This line can be selected either from the job from where points are being staked, or from the job where points are being stored

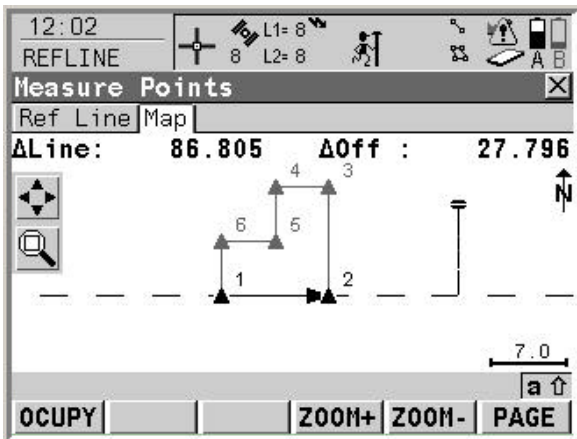
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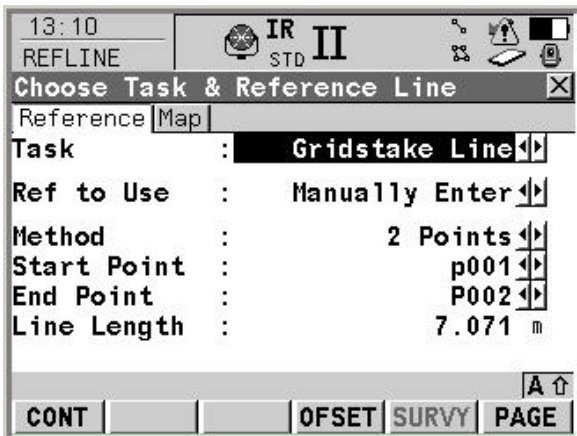
ther from the job from where points are being staked, or from the job where points are being stored.

REFERENCE LINE

Offset values shown when Measuring to Reference Line/Arc: When measuring to a reference line or arc then the distance along the line/arc and offset to the line/arc is now shown in the **Map** page.



Length of Reference Line/Arc shown: In various panels where a reference line or arc can be selected or created, the length of the reference line or arc is now shown.



SUMMARY

The new System1200 v2.00 firmware is now available. It is protected and therefore needs a valid maintenance contract to be used - it can be obtained from the Leica web download site.

Existing, previously available loadable application programs (v1.52 or earlier) will not run with the v2.00 firmware. So if you load the new v2.00 firmware and wish to use COGO, Stakeout, RoadRunner or any other loadable application program then you must also load the new application program.



Please contact your local Leica representative if there are specific topics you would like covered in these newsletters.

We welcome all suggestions for TPS1200, GPS1200, specific applications or LGO. We look forward to receive your ideas.