

Leica SurvCE Training



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1.0 Introduction

Objectives

In this exercise you will learn how to stake points using Leica SurvCE and System 1200 GPS.

GPS measured points are always stored based on the global geocentric datum known as WGS 1984. Most surveys require coordinates in a local grid system, for example, based on a country's official mapping datum or an arbitrary grid system used in a particular area such as a construction site. To convert the WGS 1984 coordinates into local coordinates, a coordinate system is required. Part of the coordinate system is the transformation used to convert coordinates from the WGS 1984 datum to the local datum.

We do this inside the **Localization** function.

At the end of the exercise you should be able to perform the following on Leica SurvCE:

- Stake points inside Leica SurvCE.
- Use the Elevation Difference function to report a Cut/Fill at any point on the job.

Getting Started

We need to have set up the GX1230 over one of our control points and created a reference file. We also need to have connected to the ATX1230 and localized to the job. We can now stakeout selected points using Stake Points and verify elevations throughout the job using Elevation Difference.

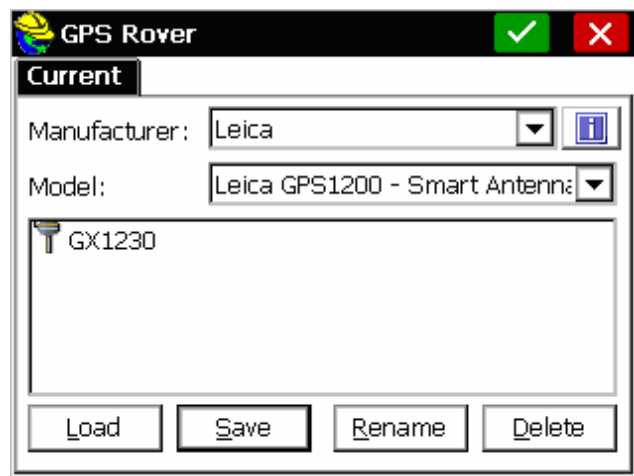
2.0 Staking in Leica SurvCE

Objective

Stake calculated points using Leica SurvCE

Getting started

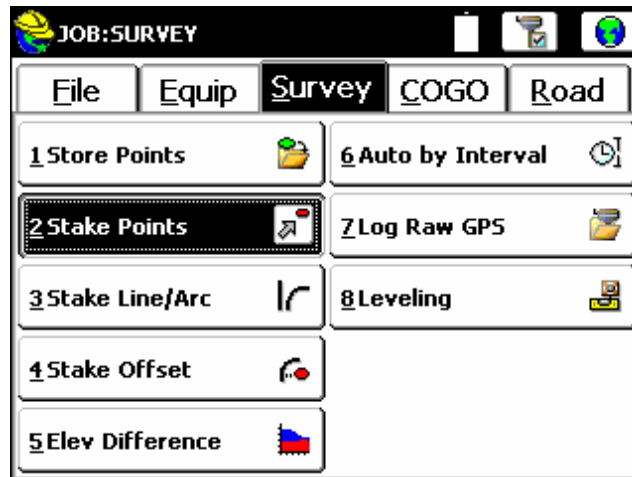
We need to use the Stake Points command in Leica SurvCE



Select the GX1230 configuration that you stored in Exercise 15 and tap **Load**.

Tap the  button to continue.

Staking points

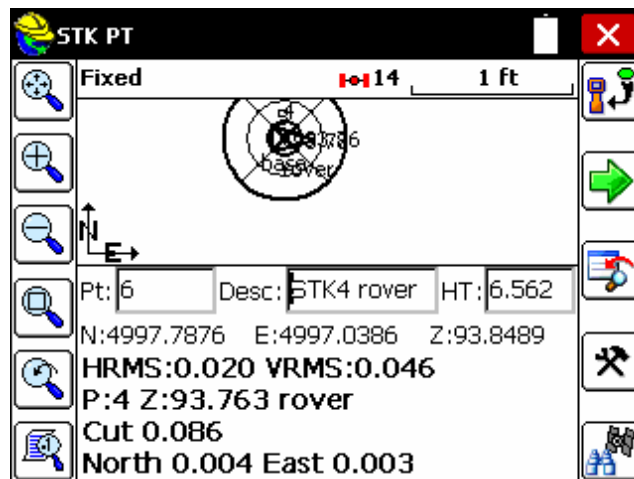


From the **Survey** menu tab tap **Stake Points** or press **2** on the keyboard.

There are three ways to select the point from our file. We can tap the  icon to select the point from a list, tap the  icon to select the point graphically, or simply enter the point number in the **Point From File** box.

Select the point you wish to stake.

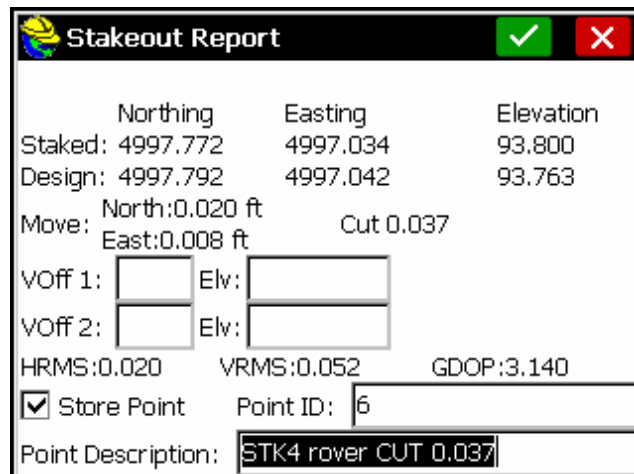
Tap the  on the screen to accept the point.



SurvCE will give you a graphic representation of your position relative to the point you are staking and will also guide you to the point via text at the bottom of the screen.



Tapping the icon will allow you to save the staked position

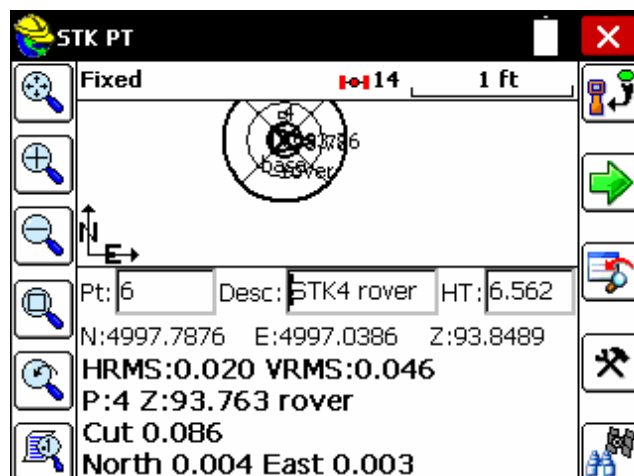


A Stakeout Report is displayed.



Press the key on the

RX1250 or tap the  on the screen to finish storing the point.



Exit Stake Point by tapping the  on the screen.

3.0 Comparing Elevations Staking in Leica SurvCE

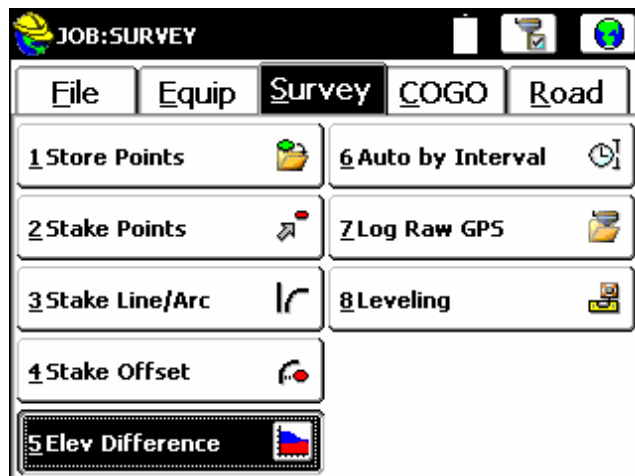
Objective

Compare our ground elevations to a stored surface

Getting started

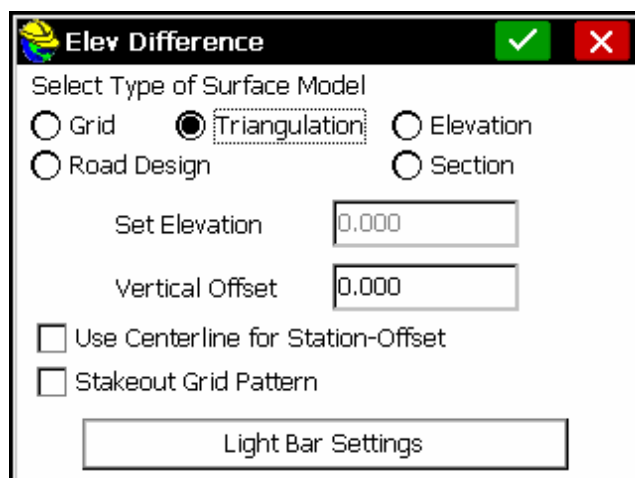
We need to use the Elev Difference command in Leica SurvCE

Elevation Difference



Let's go into Elevation Difference.

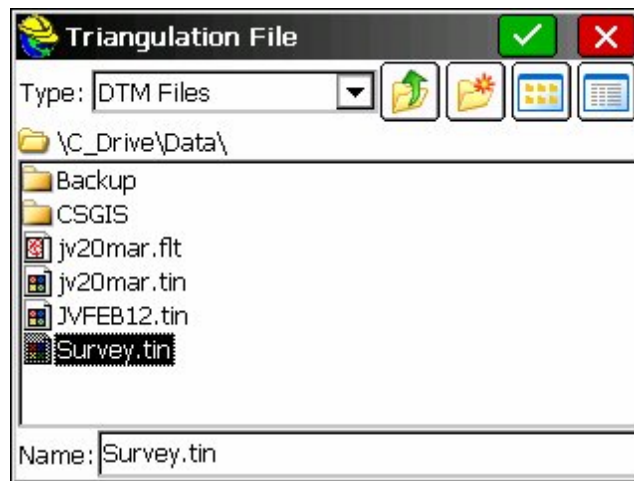
Tap the **Elev Difference** button on the screen or press **5** on the keyboard.



For this exercise we will use the triangulation file we created in Exercise 16.

Bullet Triangulation

Press the  key on the RX1250 or tap the  on the screen to continue.



The file we created was **Survey.tin**

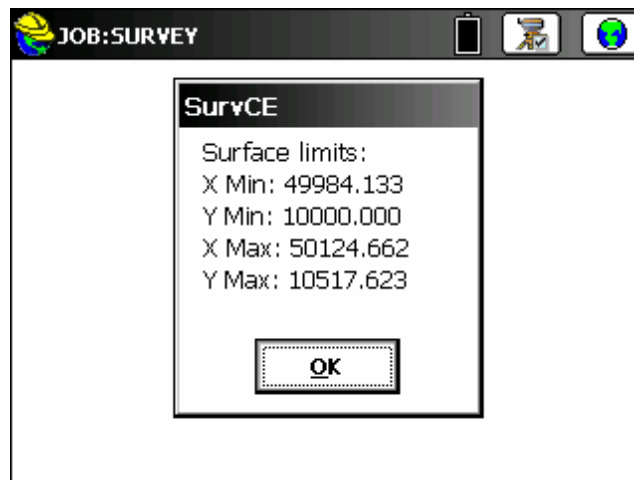
Highlight the file and press the



key on the RX1250 or tap

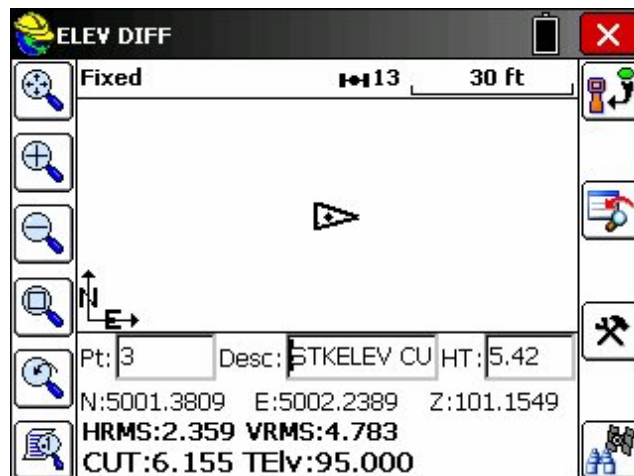


the icon on the screen to select the file.



The horizontal and vertical limits of the surface will be displayed.

Tap the **OK** button to continue.



As you move around the job you can see the deviations from the surface file we just loaded.



Tapping the icon will allow you to store a point at your current position.

Exit Elevation Difference by



tapping the icon on the screen.