

# Leica SurvCE Training

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## 1.0 Introduction

### Objectives

In this exercise you will learn how to store 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.

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

- Store points inside Leica SurvCE.
- Collect topographic survey points with a code list in Leica SurvCE.
- Create a surface inside Leica SurvCE using the collected points.

### 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.

## 2.0 Storing Points

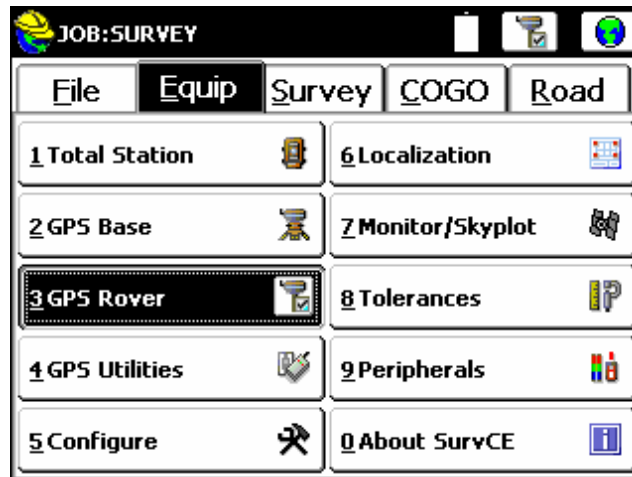
### Objective

#### Getting started

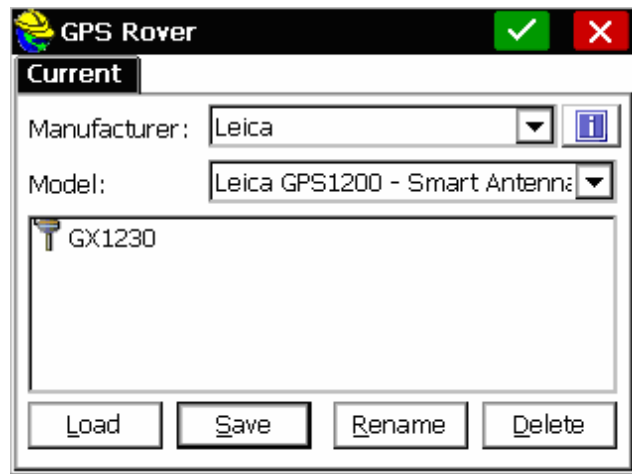
We need to configure Leica SurvCE to communicate with the ATX1230 SmartRover

- Insert a battery into the ATX1230 antenna
- Attach the ATX1230 Antenna to the range pole.
- Attach the RX1250 Controller to the GHT56 holder
- Attach the Intuicom Radio modem into the GHT56 holder
- Attach the radio antenna to the Intuicom radio modem
- Insert a battery into the back of the GHT56 holder
- Attach the GHT56 holder the range pole
- Extend the range pole to it's full height of 2 meters
- Press the ON/OFF button on the ATX1230 antenna

## Configuring the Rover antenna



On the **Equip** menu tab tap **GPS Rover** or press **3** on the keyboard.



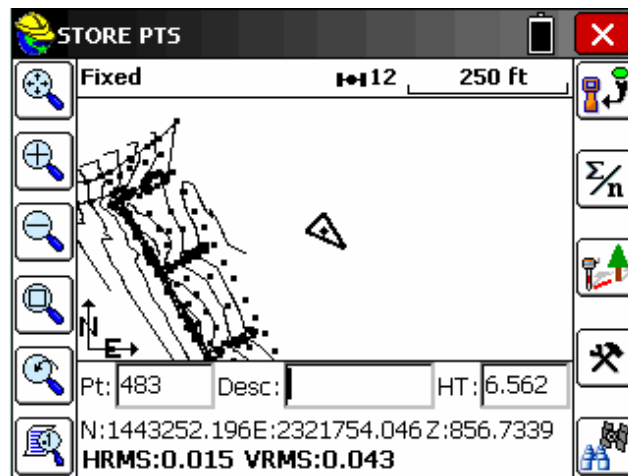
Select the GX1230 configuration that you stored in Exercise 15 and tap **Load**.

Tap the  button to continue.

## Configuring the Setup



Go to the **Survey** menu and tap the **Store Points** button or press the **1** key on the keyboard.



Look for the **Fixed** status indicator in the upper left corner of the screen.

## Icon Associations



Exit

Store Point

Average multiple samples

Store Offset Point

Configure reading

Monitor/Skyplot

## Collecting Topo

Now collect 20 points. Remember that we will use the points collected to create a topographic surface. Use the codes EP, BC GS and PP. Line work will automatically be created for the EP and BC coded points.

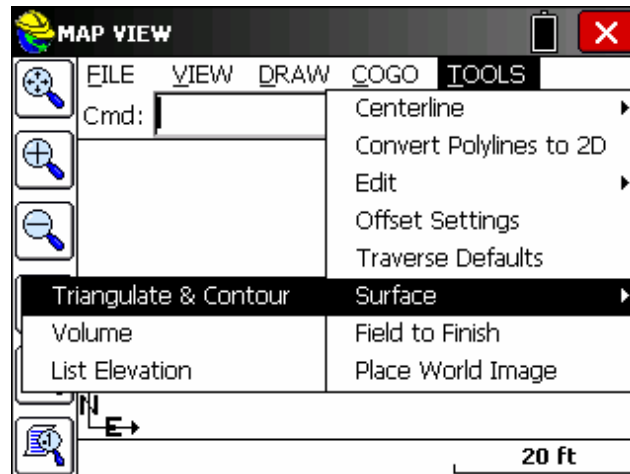
## Accessing the Map



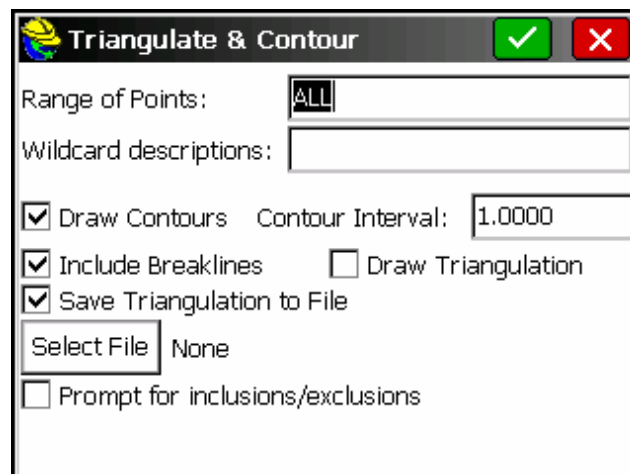
After collecting the measurements for our twenty points, let's return to the main SurvCE menu.

Tap the  icon in the upper right corner of the screen to access the map.

## Creating a Surface



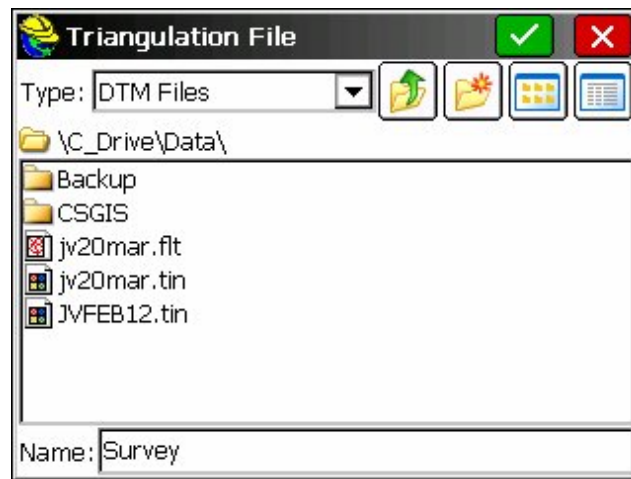
Go to **Tools>Surface>Triangulate & Contour**.



Let's apply the following:

- **All** Range of Points
- **Draw Contours** is enabled
- **1.0000** Contour Interval
- **Include Breaklines** is enabled
- **Save Triangulation to File** is enabled

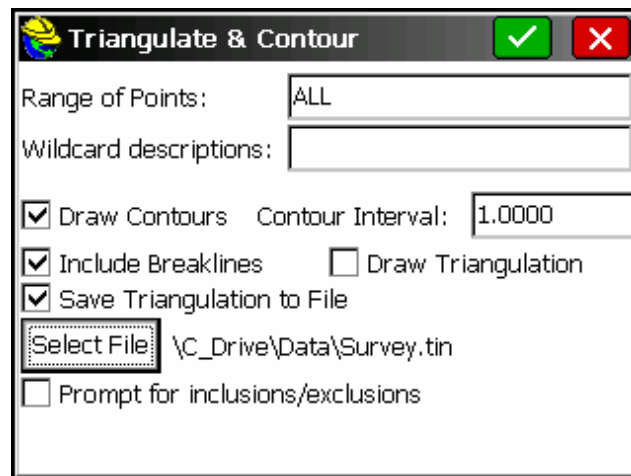
Tap the **Select File** button



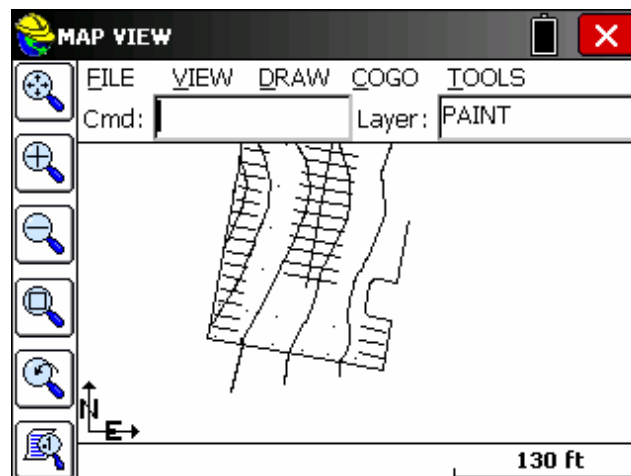
Name the file **Survey**. An extension of **TIN** will be applied by default.

Press the  key on the

RX1250 or tap the  on the screen to accept the file name.



Tap the  on the screen to create the surface.



Your map will now have topographic contour lines displayed.

You have successfully completed Exercise 11.

Tap the  on the screen to exit the map.