

[Test] Hitechniques: Using surveying GPS near buildings and trees

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TLDR: Surveying GPS works like your iPhone/Satnav with addition of paid corrections from fixed bases around the country to give high accuracy

Special offer of one free days hire to first time users, value €50+VAT.

Skyplot

Many still think that the GPS rover can only be used in open fields away from buildings and trees. However there are a couple of functions in FieldGenius software that give it the edge when using the rover in these situations.

You need a minimum of 4 satellites to get a fixed position when surveying. When you move close to a building or overhang trees you can lose sight of half the sky and may find it difficult to get the instrument to record a fixed position. With GPS & Glonass satellite usage there are typically 12-18 satellites in the open sky on a normal day. Under trees or near buildings this may drop to 5-6 satellites – see the attached skyplot. Even with 5-6 satellites it can be difficult for the instrument to calculate a fixed position.

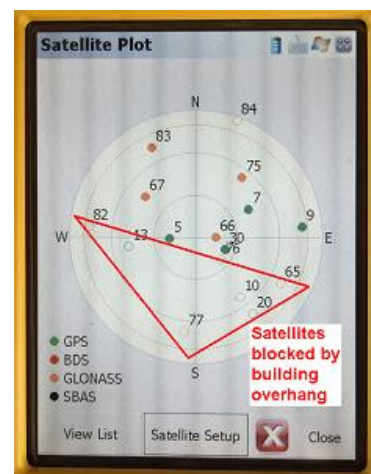


Fig. 1 - Satellite Skyplot

However there are two simple software functions that can be used to accurately survey these points

Line offset

Using a standard 2m Surveyor's Rod you can easily record a building line that is offset by 2m from the building corners. By simply tapping on the line in the Map View and setting the line offset to 2m the actual

building line is recorded. For completion you can delete the original offset line (tap on the line to select – choose delete from the Figure Edit menu) – see attached Fig. 2

Point offset

Where the point that you want to record is a tree, for example, or a distant point, you can select the Trilateration function. Survey two random points on the ground near the tree, measure the distance from each of these points to the tree – you can do this with the measure stick, tape, or disto . Enter the distance measured in the trilateration screen and the software creates a measured point at the offset point – see Fig. 3 attached

With the Disto D510 (see Fig. 4) with integral zoom camera on the GPS pole you can get the distance **and the height above your present location** of remote objects, building heights, eaves, chimneys.

These are some of the simple functions that can be used with a GPS rover to make life easy for the surveyor.

To see more details of the step-by-step quicksheets that we prepare for users of our equipment click here:

www.hitechniques.ie/downloads.aspx

SPECIAL OFFER - Value **€50+VAT**

If you are a new user to surveying GPS try it for free - we offer a free days hire (value €50+VAT) to new users wanting to try GPS.

We provide full screenshot step-by-step instructions from power up to .dxf survey output that you can open in Autocad.

Call us to today to book your free day 01-2572323

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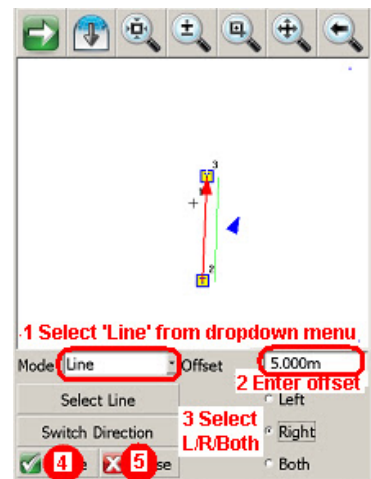


Fig. 2 - Line Offset

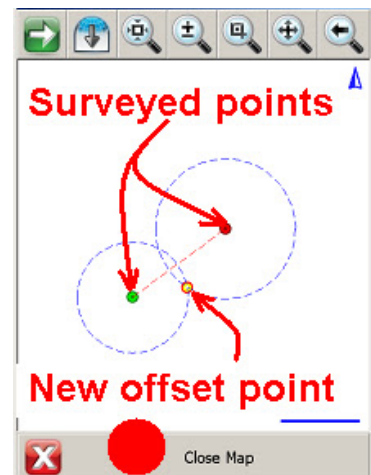


Fig. 3 - Point Offset



Disto D510 on pole



2m Surveyor's rod

8m wide blade tape

Surveyor's Tools

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