



## Removing OS Scaling to create Scale Factor 1


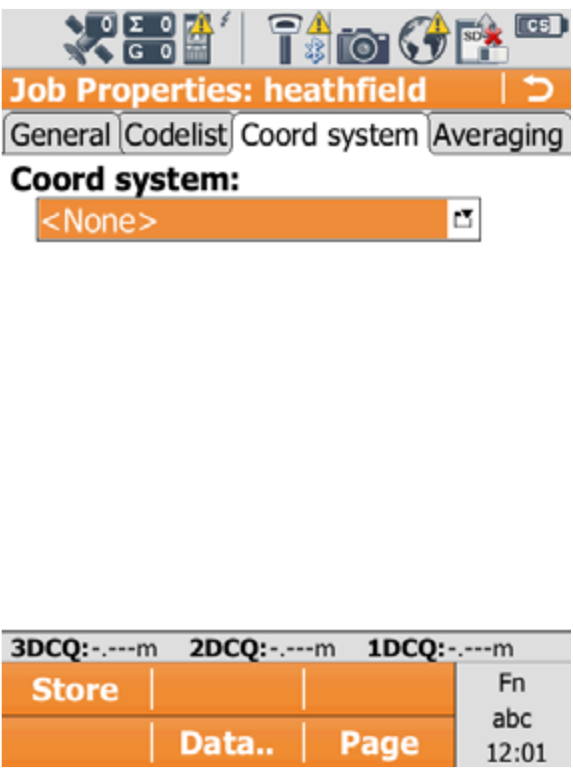
The purpose of a One Point Localisation is to create a flat grid centered on a single surveyed point. The survey point can have any ENH value but in this case, we are using the OS coordinate system to generate an ENH. We can then use these values to center our flat grid, creating a “pseudo” OS coordinate system without the scale factor inherent in the OS coordinate system files. It is suitable for surveys up to a radius of no more than c.2km from this point and can be conducted on site.

Step	Action	Screen Display
1	Create a new working job on the Viva controller, ensuring that you use the <b>OSGB36</b> coordinate system.	
2	Press the * <b>key</b> to the right of the central D-pad on the controller to bring up the <b>GPS Favourites</b> . Press <b>8)Quality control</b> then select <b>Param..</b> at the bottom of the screen and set the stop criteria to 20 positions.	

### Sunbelt Rentals Survey

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3	<p>Press <b>OK</b> until you reach the main menu. Then go into <b>Survey</b> and connect to the Smartnet RTK service. Measure your fixed position.</p>	 <p>The screenshot shows the 'Leica GPS Favourites' menu with icons for: 1. Current GPS position, 2. Satellite tracking, 3. RTK data link status, 4. RTK settings, 5. Load RTK profile, 6. Server / mountpoint, 7. Start RTK stream, 8. Quality control, and a Page button. At the bottom is a keypad with '3DCQ:-.---m', '2DCQ:-.---m', '1DCQ:-.---m', 'OK', 'Fn', 'abc', and '12:04'.</p>
4	<p>This will give you your OSGB position. You will now need to copy the ENH values into a new job which does not have the OSGB coordinate system attached.</p>	
5	<p>Go to the main menu of the controller then go to <b>Jobs and data</b> and create a new job. Ensure that the job has the option of <b>&lt;none&gt;</b> as it's coordinate system then store the job.</p>	 <p>The screenshot shows the 'Job Properties: heathfield' menu with tabs for 'General', 'Codelist', 'Coord system', and 'Averaging'. The 'Coord system' tab is active, showing a dropdown menu with '&lt;None&gt;'. At the bottom is a keypad with '3DCQ:-.---m', '2DCQ:-.---m', '1DCQ:-.---m', 'Store', 'Data..', 'Page', 'Fn', 'abc', and '12:01'.</p>

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Then within **Jobs and Data** go to export and copy data and export ASCII data. Export the point you recorded earlier as a CSV file. Then you can reimport it into your job with the **<none>** coordinate system.



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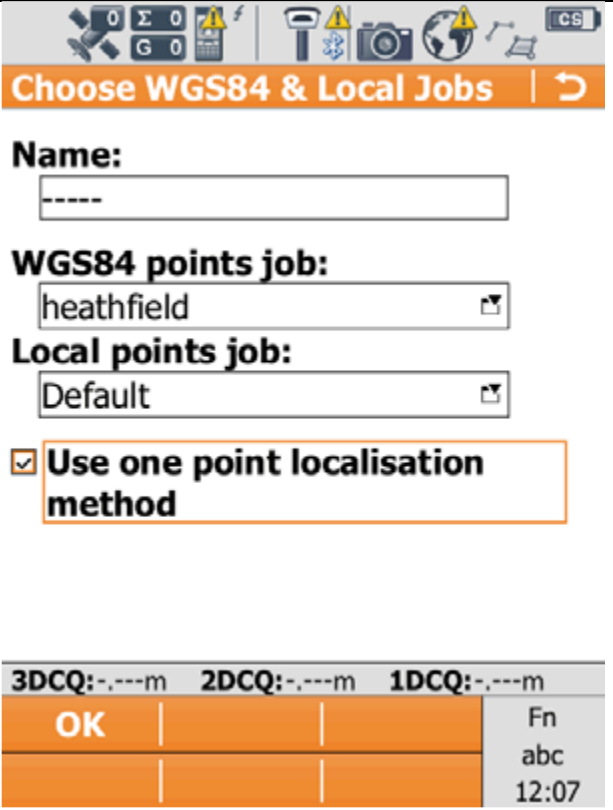

You can now begin the coordinate comparison. From the main menu select **Go to work** then **Survey+** the **Determine coord sys**.


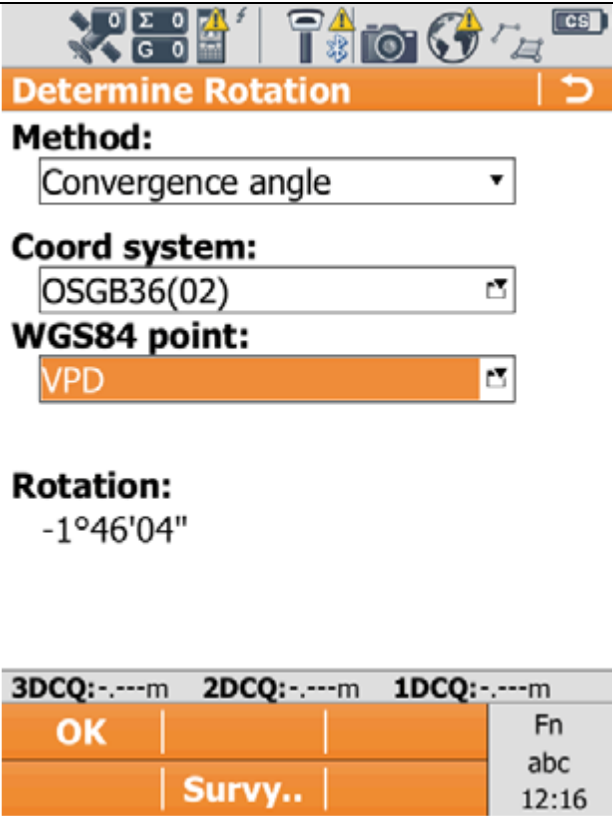


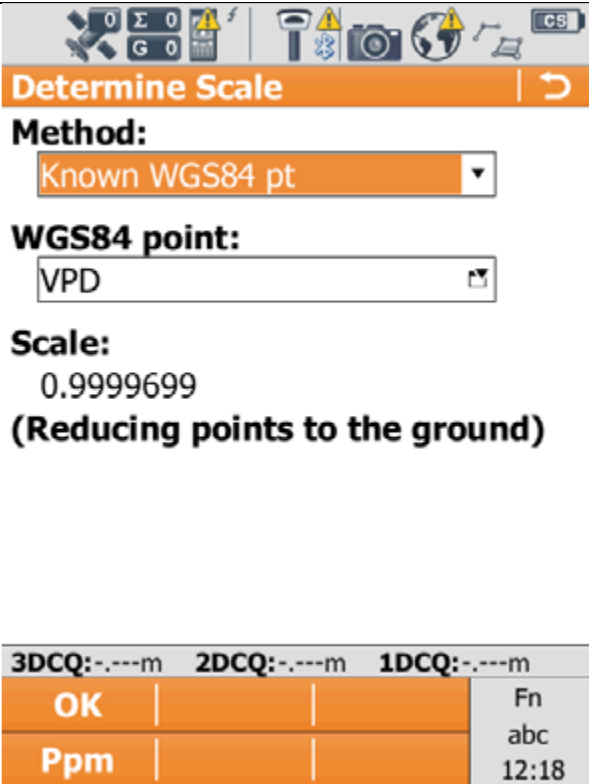
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8	<p>Select the <b>One-step conversion</b>, then press <b>OK</b>. Name your coordinate system then select your original survey as your WGS84 job and your &lt;none&gt; coordinate system job as the local points job. <b>Tick the box</b> to use the one point localization method.</p> <p>Then press OK.</p>	 <p>The screenshot shows the 'Choose WGS84 &amp; Local Jobs' screen. At the top is a toolbar with icons for various functions. Below the title bar, there is a 'Name:' field with a text input box. Underneath, 'WGS84 points job:' is followed by a dropdown menu showing 'heathfield'. 'Local points job:' is followed by a dropdown menu showing 'Default'. A checkbox labeled 'Use one point localisation method' is checked. At the bottom, there is a keypad with '3DCQ:-,---m', '2DCQ:-,---m', and '1DCQ:-,---m' at the top, and 'OK', 'Fn', 'abc', and '12:07' at the bottom.</p>
9	<p>Select your Height mode to be Elliptical then press <b>OK</b>. Select the Osgmo2gb Geoid model then press <b>OK</b>.</p>	 <p>The screenshot shows the 'Choose System Components' screen. It has a similar toolbar at the top. Below the title bar, 'Geoid model:' is followed by a dropdown menu showing 'OSGM02 (GB)'. At the bottom, there is a keypad with '3DCQ:-,---m', '2DCQ:-,---m', and '1DCQ:-,---m' at the top, and 'OK', 'Fn', 'abc', and '12:10' at the bottom.</p>

10	Match your two points in position and height.	 <p><b>Choose Common Point</b></p> <p><b>Match in:</b>        Position &amp; height</p> <p><b>WGS84 point:</b>        VPD</p> <p><b>Local point:</b>        11</p> <p>3DCQ:-.---m    2DCQ:-.---m    1DCQ:-.---m</p> <p>OK     Fn            abc            12:15</p>
11	Determine the rotation of the coordinate system. Select <b>Convergence angle</b> as the method and OSGB36 as the coord system.	 <p><b>Determine Rotation</b></p> <p><b>Method:</b>        Convergence angle</p> <p><b>Coord system:</b>        OSGB36(02)</p> <p><b>WGS84 point:</b>        VPD</p> <p><b>Rotation:</b>        -1°46'04"</p> <p>3DCQ:-.---m    2DCQ:-.---m    1DCQ:-.---m</p> <p>OK     Fn            abc            12:16</p>

12	<p>Determine the scale using the known WGS84 pt then press <b>OK</b>.</p>	
13	<p>You can now Name and store your new coordinate system.</p>	