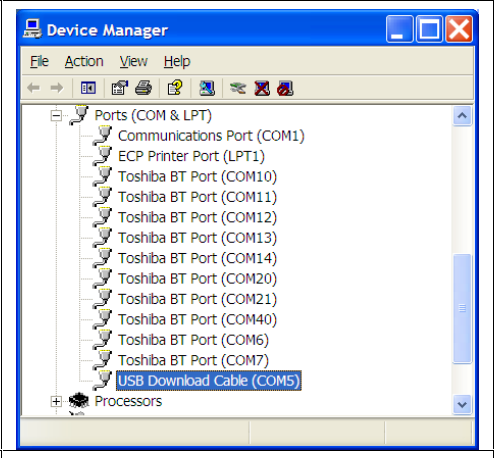
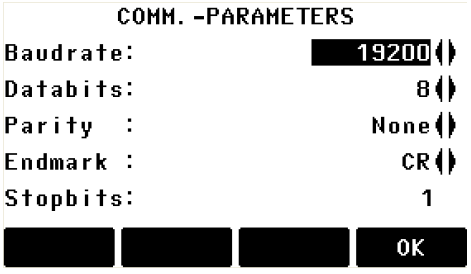
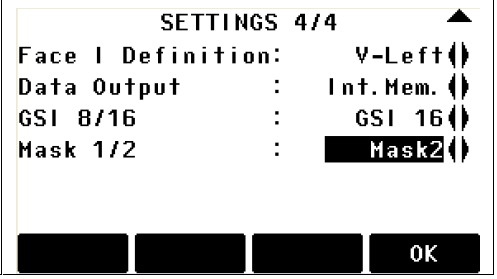
# Using Data Exchange Manager with TPS800

Most of this guide will be relevant for the TPS300, 400 and 700 series also but some functions may vary slightly.

| Step | Action | Screen Display |
|---|---|---|
| | **Data Exchange Manager** can be found in **Leica Geo Office (LGO) or Leica Survey Office.**<br><br>It is used for downloading recorded observations from the instrument or for uploading coordinates, codelists or formats to the instrument. | |
| 1 | To connect the instrument to your computer, use either a serial cable (9-pin) or a USB cable (GEV189).<br><br>You must know which port on your computer the cable is connected to. If you are using the USB cable, make sure the **driver to the cable is installed** first – see additional guide **USB download cable setup.** The cable should be recognised as "USB download cable" and the drivers installed from the included CD.<br><br>Use Windows Device Manager to view the USB port. |  |
| 2 | Once the cable is attached, make sure the communication settings are set to the same on both the computer and the instrument - they should be as default.<br><br>Check the communication settings on the instrument by going to **MENU, PAGE, F2-COMM Parameters.**<br><br>**F4-OK** confirms the selection.<br><br>Also check in **MENU, F2-Settings, PAGE** 3 times, and make sure **GSI 16** and **Mask2** are set.<br><br>**F4-OK** confirms the selection. |  <br>  |

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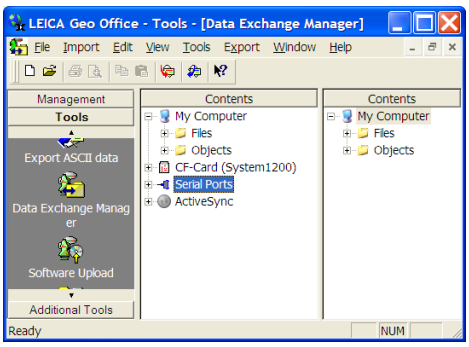
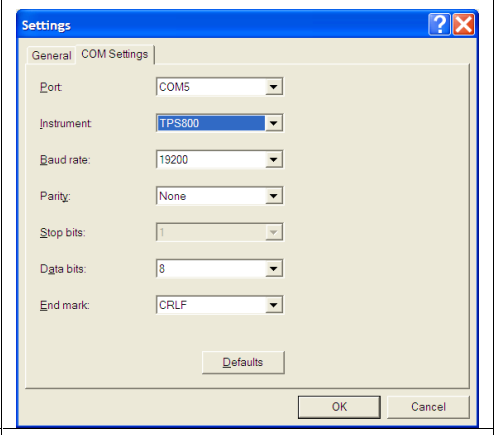
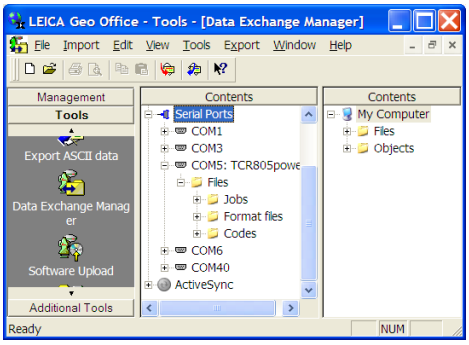
| 3 | On your computer, in **LGO**, go to **Tools, Data Exchange Manager**.<br><br>Where it says **Serial Ports**, right-click and select **Settings**<br><br>Select the **COM Settings** tab.<br><br>Select the **Port** number on your computer<br><br>Select the **instrument** type and check the communication settings match that on the instrument.<br><br>Select **OK** to confirm. |  <br>  |
| 4 | Next to serial ports is a small **+** symbol. Use this to expand and view the available ports.<br><br>On the correct port number click the **+** symbol again to initiate communication with the instrument.<br><br>The instrument name should appear, i.e. **TCR805**<br><br>If there is a communication problem, check all settings, especially the port number and see the **USB download cable setup** guide.<br><br>Expand the **Files** folder to reveal the **Jobs**, **Format Files** and **Codes** folders.<br><br>To download files go to **step 5**<br><br>To upload files go to **step 8** |  |

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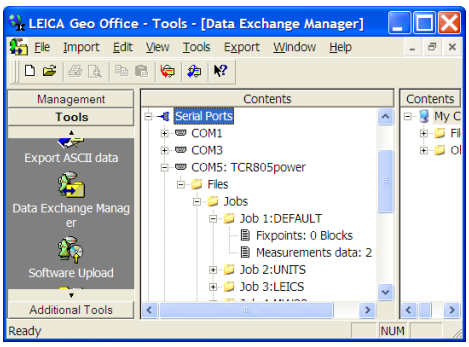
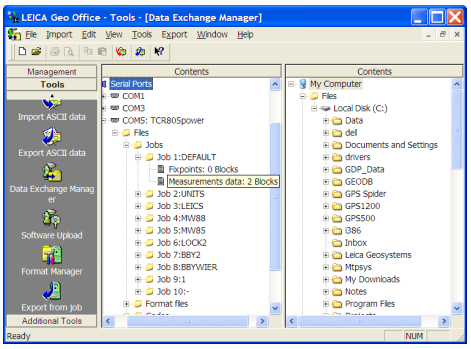
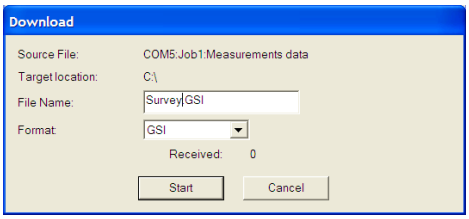
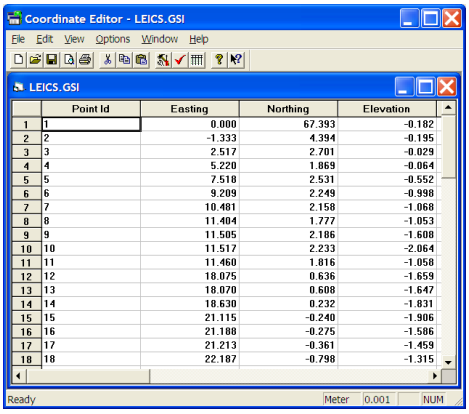
| 5 | **To Download:**<br><br>Expand the **Jobs** folder to reveal a list of the jobs saved on the instrument.<br><br>Each job contains a **fixpoints** file and **measurement data** file. Fixpoints contains control points or manually entered points. Measurement data contains all the observation measurements including station setup information. |  |
| 6 | On the right hand side of the screen, expand the **Files** folder to reveal your C: drive on your computer. Select a folder to store your data.<br><br>To transfer a measurement data file, drag the file from the instrument side to your computer on the right side. |  |
| 7 | A new **Download** dialogue box should appear as indicated.<br><br>Enter a filename and the extension you wish to save it as, i.e. Survey.GSI<br><br>Select the data Format you require. See additional guide **Coding and Data Formats** for more information on this.<br><br>Press **Start** to begin the transfer. The Received blocks should start counting up and the instrument should say **Downloading Observations.**<br><br>The file will now be on your computer and is ready to be opened or imported into an appropriate program, depending on the format.<br><br>Use **Coordinate Editor** (in **Additional Tools** in **LGO**) to open a GSI file and view the coordinates in a tabular format. The information here could be copied to Excel if required. |  <br>  |

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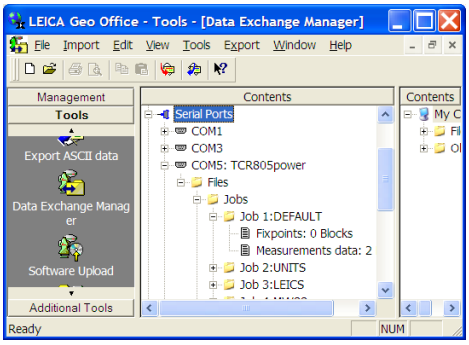
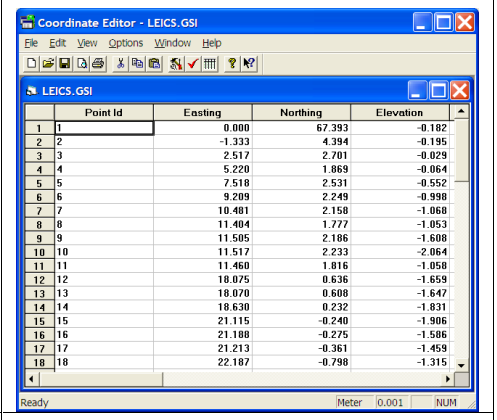
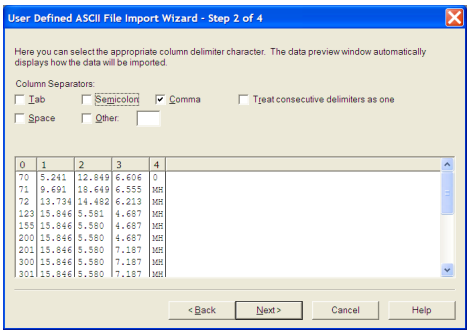
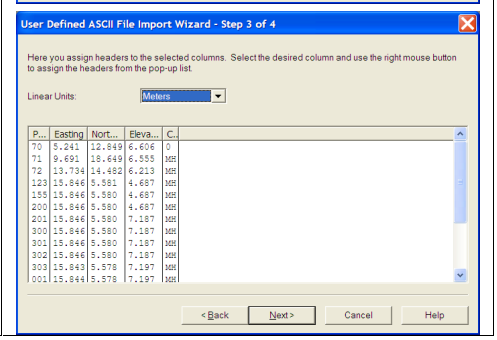
| 8 | **To Upload:**<br><br>Expand the **Codes** or **Format Files** folder to reveal a list of the codes or formats saved on the instrument.<br><br>On the right hand side of the screen, expand the Files folder to reveal your C: drive on your computer. Select the folder where you stored your codes or formats.<br><br>To transfer a file, drag the file from the computer to the instrument, into the appropriate folder on the left side.<br><br>Format files should be dragged into the **Formats** folder<br>Codelists should be dragged into the **Codes** folder |  |
| 9 | Coordinate files must be in a **GSI** format to be dragged onto the instrument. To view coordinates open them in Coordinate Editor.<br><br>You can get most other type of coordinated text files uploaded by first opening them in **Coordinate Editor**.<br><br>Go to **File**, **Open** and choose **files of type-all** |  |
| 10 | This will start the **ascii import wizard**.<br><br>**Step 1** – select Free and then **Next**<br><br>**Step 2** – select the character that separates the columns in your text file, ie. comma, so that the data appears in columns. Click **Next**<br><br>**Step 3** – define the columns by right-clicking in the column headers and selecting point id/ easting/ northing, as appropriate. Click **Next**<br><br>**Step 4** – You can save the settings as a template for quicker imports again if required. Click **Finish**<br><br>You can now save the coordinates as a GSI file. Drag the GSI file into an appropriate job folder to upload the fix points. |  <br>  |