Downloading data from the Trimble GeoXM/XT GPS unit

Detailed "Cheat Sheet" – step-by-step instructions including differential correction

1) To transfer data that you collected in the field using the Trimble GeoXM or GeoXT GPS unit, you need to have the latest version of Microsoft ActiveSync installed on your desktop/laptop computer. You can get this for free from Microsoft.com.
2) Place the GPS unit into its cradle, which must be connected to your computer by USB cable (it also must be plugged into an electrical outlet). ActiveSync should launch automatically on your office computer. If not, try removing the GPS unit, wait a minute, then try again.
3) ActiveSync will give you a choice of the partnership type you want to set up – choose Guest Partnership (or No if the options are Yes and No) and click Next.
4) Click the Explore button on the ActiveSync window. This will pop up a Windows Explorer/My Computer type of window. Now you need to find where your data is stored on the GPS unit. We typically store the data in \Disk\My Documents\<project_name>\ (to find \Disk\, double-click My Pocket PC – this may have a different name).
5) Once you have found the folder in which your data is stored, highlight all the files that make up the shapefile(s) that you edited in the field. This means all the files that start with the same name but have various three-letter extensions (there may be more than one set of these if you edited a line and a point layer, etc.), for instance: **DCRtrailpoint.apl, DCRtrailpoint.dbf, DCRtrailpoint.prj, DCRtrailpoint.shpl, DCRtrailpoint.shx, DCRtrailpoint.ssf, and DCRtrailpoint.vbs.**
6) Highlight all these files by shift-clicking on them, then right-click on them and choose Copy.
7) Now we need to find a place to put them on your office computer. Choose an area that makes sense, either on your hard drive or a network drive. Create a new folder to store just today's GPS data – it should be named in a way that you will be able to tell what work project and what date the data is from. For instance, you may store your data in C:\gps\ , and you could create a new folder called "leominster6-25-06".
8) Paste the data into this new folder by right-clicking on the folder and choosing Paste.
9) At this point you can differentially correct the data if you want (this will increase the data's spatial accuracy). You can either do this yourself or email it to GIS staff and they will do it for you. The following steps describe how to do this:
10) Open GPS Pathfinder Office 2.90. You can use the Default project or you can use or create a special project.
11) Open the .SSF file(s) you just downloaded by clicking the Open button and browsing to them. You will see a bunch of little black dots on the screen, which are your GPS positions.
12) Choose Differential Correction from the Utilities menu. This will open up the Differential Correction dialog.
13) On this dialog window, the Rover Files section should show your .SSF files. In the Base Files section, click Internet Search and choose your Base Data Provider. We generally use the URI base station, which is called "COOP_CORS, Environmental Data Center, Univ. of Rhode Island," but you can use another if you prefer. If you are far away from Rhode Island you may want to find a base station that is closer. The reason we like the Rhode Island site is that the base station files are posted hourly, so you can differentially correct as soon as you return to the office. If you don't see the one you want in the drop-down list, click New… and choose it from the list (get the newest list from Trimble's internet site).
14) Click OK on the Internet Search window, and tell it to download all required files (if asked). If the Confirm Internet Setup window appears, click Yes. The base station files should start downloading. You may get an error, but as long as it indicates that you have 100% coverage you are OK.
15) Once your base station file download is complete, click OK on the Differential Correction window to perform the correction. When it is done, you'll get a message telling you if it was successful.
16) You'll now need to copy the .COR file(s) (which is a differentially corrected version of the .SSF file) to the folder where your shapefile and .SSF file are located. Pathfinder Office usually puts .COR files into C:\Pfdata\DEFAULT\ (if you are using the default project – it might be a different folder if you are using another project). Cut and paste this file into the folder where your shapefile and .SSF file are.

17) Now you are ready to run the ShapeCorrect utility. Click Start—Programs—GPS Pathfinder Office 2.90—ShapeCorrect. [NOTE: if you don't see ShapeCorrect as an option, you'll need to download it as an update by using the GPS Pathfinder Office Updater utility. If you have trouble doing this, contact GIS staff.] Click Browse and browse to your shapefile(s). Make sure that "Corrected and Uncorrected" is the selected option under Output GPS Positions. Click OK. This utility will save your existing <filename>.shp file as <filename>.bkp, and it will substitute a new <filename>.shp file with the corrected positions. Now your data is differentially corrected.
18) Now the shapefiles are on your office computer and ready to use in ArcView/ArcGIS or the program of your choice. You can add them to your GIS project like any other shapefile – by clicking the Add Data ("plus") button in ArcView/ArcMap. If this is data that GIS staff would find useful, please email it to them (again, you need to email all the files that start with the same name but have different three-letter endings).
19) Once you are sure that you have the data downloaded correctly, you'll need to delete the data from the GPS unit so you can start next time with fresh empty shapefile(s). Go to the folder on your GPS unit that held the data you downloaded (\Disk\My Documents\???\ ).
20) Delete all the files that you downloaded (all the files that start with the same name but have different three-letter file extensions). Make sure you delete the file that ends with ".SSF". Do this by clicking on the first file and then shift-clicking on the last file (these are the same files you copied in steps 5-6) and then right-clicking on one of the highlighted files and choosing Delete.
21) Now copy the matching files (there won't be an .SSF file) from the "empties" folder (which should be in the same folder on the GPS unit that you just deleted files from) into the folder you just deleted the files from (go to the "empties" folder, highlight all the files by clicking on the first file and then shift-clicking on the last file, right-click on one of the highlighted files and choose Copy, then go to the main folder (up one level) and right-click in an empty area and choose Paste). Next time you use the GPS unit you will be editing these new empty shapefile(s).
22) Keep the GPS unit on a recharger cradle!

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