

Instructions for Capturing and Downloading Waypoints for Garmin Etrex Vista

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The best resource for a Garmin Etrex unit is the user's manual that you should receive when you check out 1 or more of the units. Here are a few tips for general use and waypoint collection and data download.

General Info

1. The small button on the top of the screen that looks like a sheet of notebook paper will give you options for the page you are on.
2. The battery life will probably be 10-12hrs (less if it is particularly cold)
3. Options such as date and time, contrast, backlighting etc. can be accessed in the 'setup' page off the main menu.
4. The base maps should include... Oceans, rivers, lakes, cities and some small towns, interstates and principal highways and political boundaries. North America will have more detail in the base maps than Canada and Mexico.

Satellite Info

1. You need to receive a signal from 4 satellites in order to get a position.
2. Your position will be less accurate if the satellites you are receiving from are close together or all in a line (as seen on the display on the 'satellite' page).
3. Buildings, trees or particularly cloudy weather will all decrease the ability to receive signals from satellites and therefore your accuracy. So if you are having trouble, try walking to a more open area. The more sky the better.

Taking a waypoint...

1. After you have an established position with 4 or more satellites on the 'satellite page' use the toggle button on the front of the unit to get to the 'main menu'. Press down on the button, then pushing up, down and to the sides will allow you to navigate through the menu; pushing straight down allows you to make a selection.
2. On the main page choose 'Mark' your coordinates will be shown here for the point you are about to mark. It is a good idea at this point to write down the coordinates and the name of the way point for a hard copy back up.
3. Using the toggle button to scroll up, highlight the number on the flag and select it. This brings up a box for you to key in a name for the waypoint. When you are finished hit the OK button that appears next to the keyboard on the screen.
4. If you are ready to save your point select the OK button at the bottom of the screen. (Note: Highlighting and selecting the dot icon on the flag will allow you to change the symbol that represents this waypoint.)
5. To look at your waypoints you can select the 'map' button at the bottom of the page and this will show you your waypoints on top of the base map. Or you can select 'find' in the main menu and search for a specific waypoint.

Downloading your Data

1. When you check out an Etrex vista it does not come with a cord to connect to your PC, but this is available for use from the SSIL lab if you choose to download your points after using the unit.
2. There is a free program from the University of Minnesota called DNR Garmin that allows you to download your files to your PC and export them as shapefiles, .kml files for Google Earth and many other file formats.

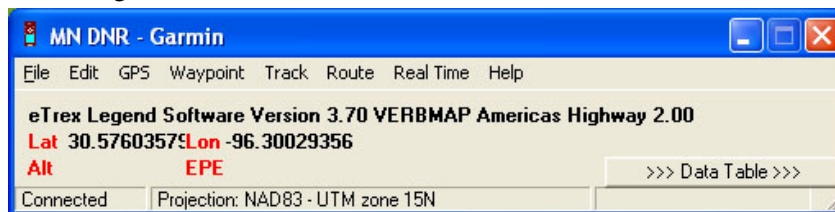
You can download the program here...

<http://www.dnr.state.mn.us/mis/gis/tools/arcview/extensions/DNRGarmin/DNRGarmin.html>

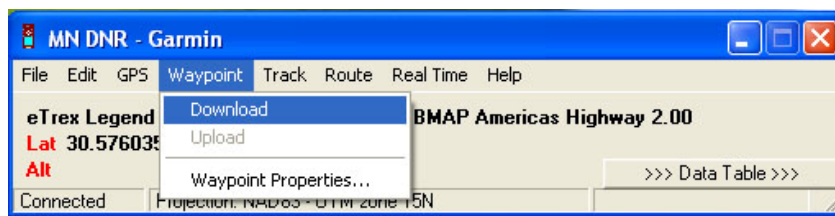
And find useful information and tips here on their Wiki...

http://156.98.35.198/cgi-bin/wiki.pl?Minnesota_DNR_GIS_Wiki

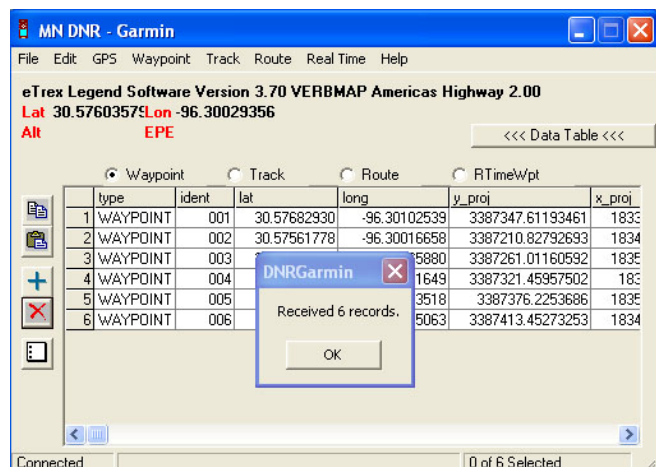
3. Once you have installed the program connect the cable to your unit and your PC and turn on the GPS unit.
4. On your PC open the program DNR Garmin.
5. Click OK to allow the GPS unit to connect to the program. The screen should look something like this...



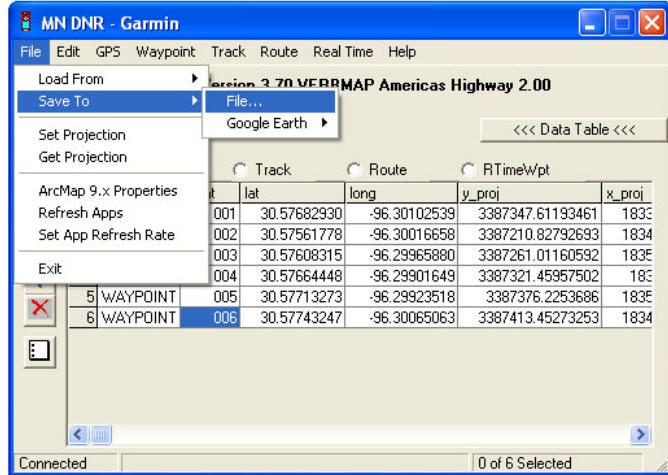
6. Select *Waypoint* drop down menu and select *download*.



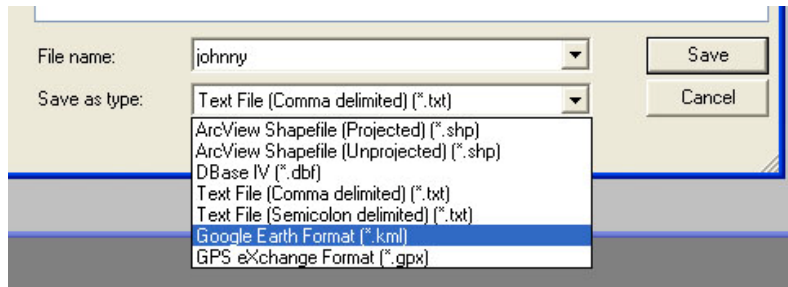
7. You should then see a list of your waypoints, click OK to confirm this.



8. Click *File, save to, file...*

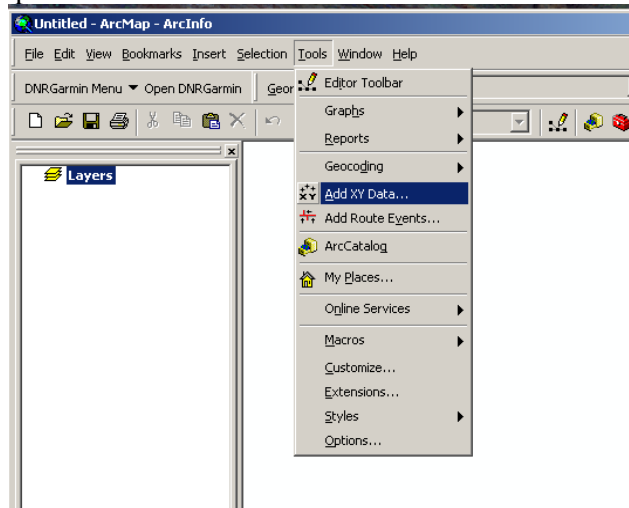


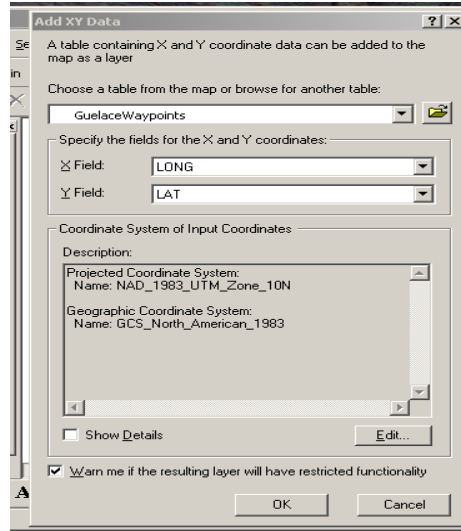
9. Here is where you can name your file and choose your file format. If you would like to create a shapefile with your points for use in ArcMap then choose the .dbf format click save and skip to the next section of instruction. If you would like to create a file to display in Google Earth then choose the .kml format and load the file into Google Earth.



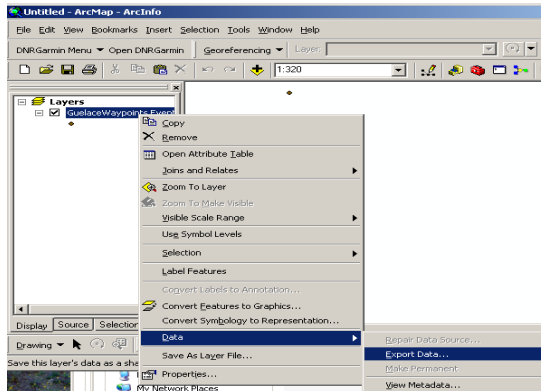
Creating a Shapefile (.shp) for use in ArcMap

1. Once you have exported your waypoints in .dbf format open ArcMap. In ArcMap, in the tools drop down menu select *Add XY Data*

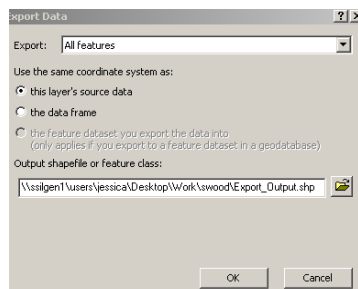




2. Navigate to your .dbf file then choose longitude as the X field and Latitude as the Y field (or Easting and Northing as appropriate for your data) and then select your coordinate system and click OK
3. You will see your points appear on the map and an event layer in your data frame. To export your data as a shapefile right click on your event layer, choose data > export data.



4. In the Export Data Window choose all features and choose the coordinate system you wish to use. Then navigate to the file where you want to save your shapefile and click OK.



5. You can now choose to add your shapefile to your ArcMap document