

Easy GPS v. 3

Brief Overview

This program is intended to quickly and unambiguously collect waypoints on a handheld computer for later downloading to a personal computer. The program combines information gathered from a GPS receiver (latitude, longitude) and user-entered data.

To Start

The first step is to load the software. Download the folder “Easy GPS v.3” to your PC from either a Compact Disk or from a Web source. Connect your PDA and establish a connection. Note that you do not need to be in ‘Sync’ mode so a guest partnership is preferred. In the program folder on the PC, open the Setup file. Follow the instructions on the screen. Easy GPS should load automatically on the PDA. It is recommended that you upload to the Program Files folder for ease in later location. This is the default pathway.

Preparation Prior to Running

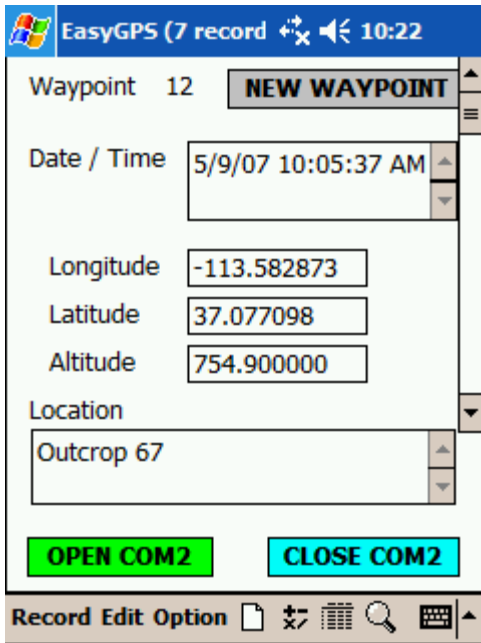
GPS receivers need to warm up at the start of the day, and this might take five minutes or longer. You can use Easy GPS or another program to test the receiver. It is recommended that you use a different program that allows you to see the quality of the data. We prefer the program GPS Viewer. Open GPS Viewer from the Program List. Scan to find the GPS which should be on COM 2, with a baud rate of 4800. Open the GPS and run until a good connection is reached. In Europe and Africa, you want the WAAS / EGNOS box checked to get the correct satellites. You will have a working signal if the satellite bars are blue and the screen shows the correct time and date and a realistic latitude and longitude. **Once this is attained, you must close the program or the COM port will stay locked on!** To make sure, go to Start > Settings > Memory > Running Programs and check to see if the program is turned off.

Alternatively, you can turn on Easy GPS and wait for GPS receiver to lock on a good connection, showing an acceptable data stream.

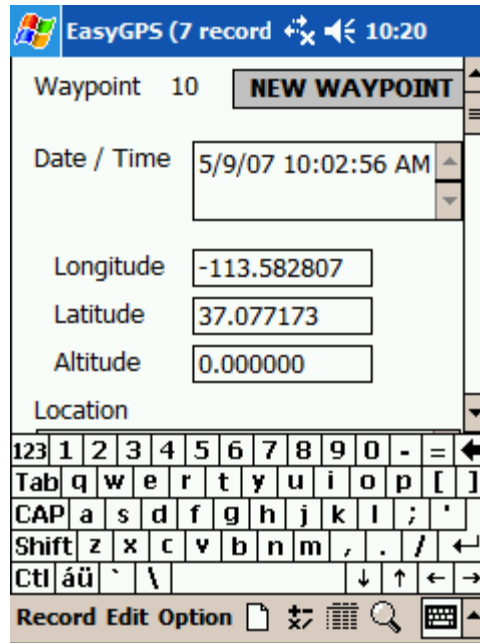
Turning on Easy GPS

Depending on how you set your parameters, the program could have installed in a variety of places. If you installed in the Program Files, go to Start > Programs and you will see the icon. Otherwise, you can use the File Explorer program. Click on the icon to start the program. On the opening screen, note the different features. The lower left green button opens the COM2 port. You need to do this to start the GPS at the beginning of data collection. The lower right blue button turns off the COM port. Do not click this button until you are finished with data collection for the session or you will need to warm the GPS receiver back up and this could lead to an increase in error. The upper right button is used to collect a new data entry, which automatically populates the “Date and Time,” “Latitude,” “Longitude,” and “Altitude” boxes. The Location field exists to allow you to enter text. Each new entry will be assigned a unique Waypoint number.

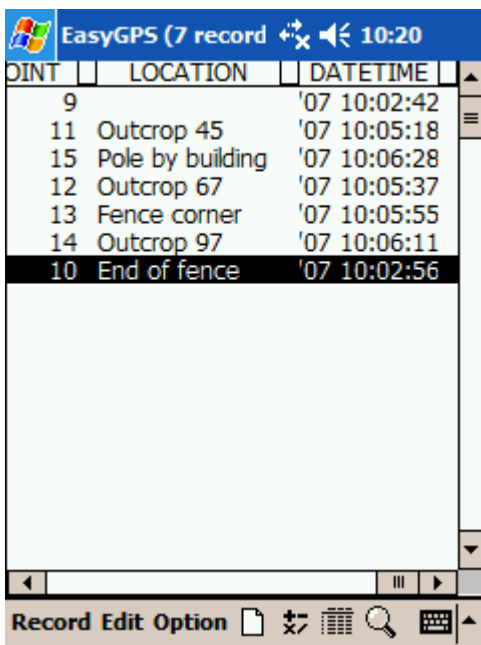
Along the lower bar are several menu options. The one in the middle that looks like a list of data will toggle the screen between the data entry and the data table. The rest of the buttons and options are not commonly used.



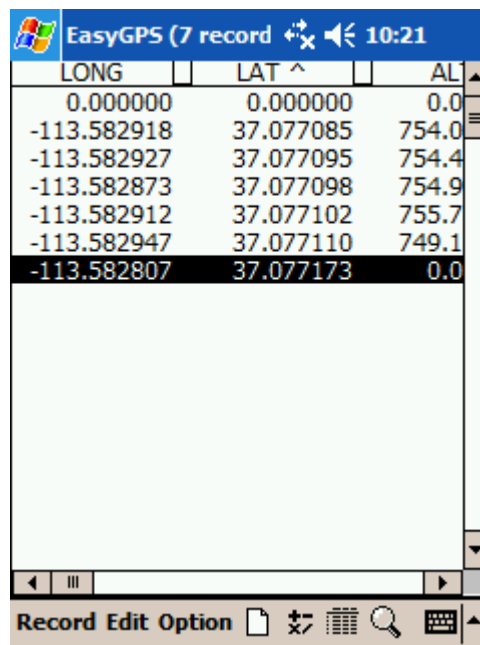
Opening screen (after recording data)



Text box opens to allow notes in “Location”



View of data table (left side).



View of data table (right side).

Collecting Data

To collect data, simply press the “NEW RECORD” button in the upper right corner. Then, you can use the stylus to enter information into the “Locations” box if you wish. Note that the Waypoint, Date and Time, Latitude, Longitude, and Altitude are fixed. **Please note, however, that the information is not part of the permanent record unless a new entry is made.** That is, if you change the Location, it will overwrite your last entry. To see your data list, touch the

icon on the menu bar that looks like a data table. Click it again to go back to the data screen. The table defaults to show the last entry so use the side bars to scroll up and down or sideways.

Downloading Data

At the end of the session, you will want to download the data as a text file to be opened in a database, spreadsheet, or GIS program. Go to Option > Export. The data will be sent as a file with the name VCE_GPS and will be stored in the same location as the program file.

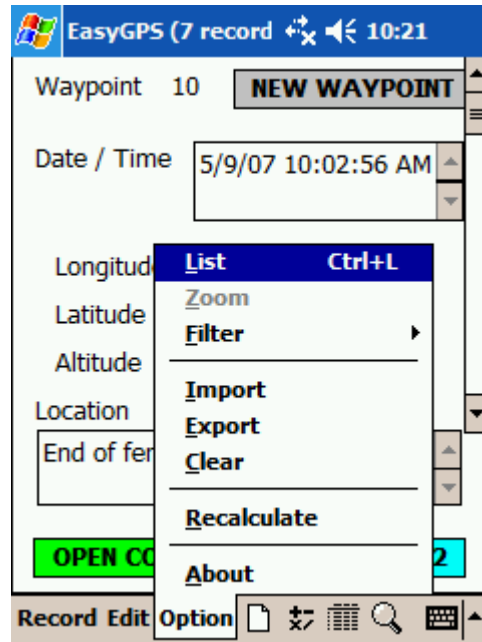
VERY IMPORTANT!! Note that the file cannot be given a unique name during exporting. Therefore, if you export the data, the file will overwrite a previous version (a warning box will appear, see picture). So, make sure you download to the PC and rename before exporting the next day!!

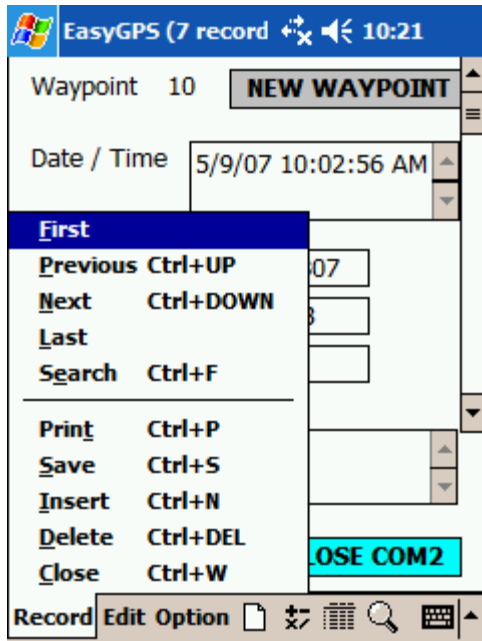
While linked to the PC through ActiveSync, click on Tools > Explore Device. From the windows, you can find the file for copying to a folder on your PC. Again, once copied, give the file a unique name.

If you downloaded the program to the Program Files, you can find the export file by going to My Windows Mobile-Based Device > Program Files > VCE_GPS. You can rename the file here if you want to keep several versions on the Recon. When you export, the file will always be called VCE_GPS so it will not overwrite a file whose name has been changed. We recommend exporting the files often to avoid accidental data loss or overwriting.

If you want to save and export multiple times in the field without the PC, go to the file after you export it and click on the name. Normally, the file will be found by going to Programs > File Explorer > My Device > Program Files > VCE_GPS. This will open up the text file in Microsoft Word. Once in word, you can go to Tools > Save Document As... and save it to the main memory (or CompactFlash card) under a new name.

This procedure is admittedly cumbersome. However, it is necessary to avoid data loss through synchronization.





Additional Tools

This program was intentionally made simple to avoid confusion. However, there are a few features that might be of use. Along the menu bar at the bottom, the “Records” tab allows you to scroll through the records on either screen. Note that the search feature will not work as written. The “Options” tab is used for exporting data.

Errors

In our testing, we did not come across any errors, yet! There are two potential problems that need to be addressed. First is the possibility of overwriting data mentioned above. Make sure to take precautions. The second problem is the lack of a GPS signal. When this occurs, you get a warning box stating “Communication error” when you press “NEW RECORD.” There are three possibilities for no GPS signal:

- 1) *GPS not connected.* Make sure the GPS is plugged in and the light comes on when the COM port is opened.
- 2) *Low battery.* The GPS requires more battery power than is needed to simply run the computer. If the batteries are low, replace.
- 3) *COM port is in use.* This is the most likely scenario and occurs if another program is using the COM port. As described above, go to Start > Settings > System > Memory and click the “Running Programs” tab on the bottom. Turn off all programs that you do not need open right now. This is a problem with Windows Mobile; many programs do not turn off when they are closed. Check this often to save power.