

Using the seeding function in PocketGIS

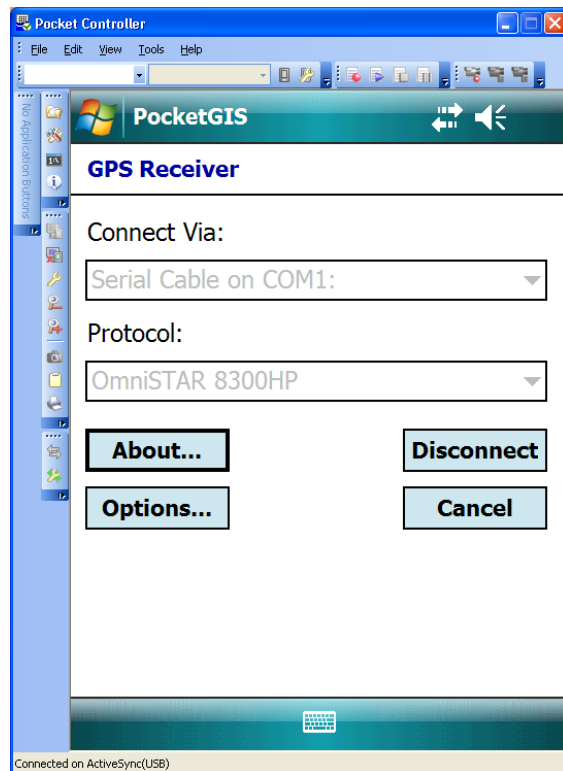
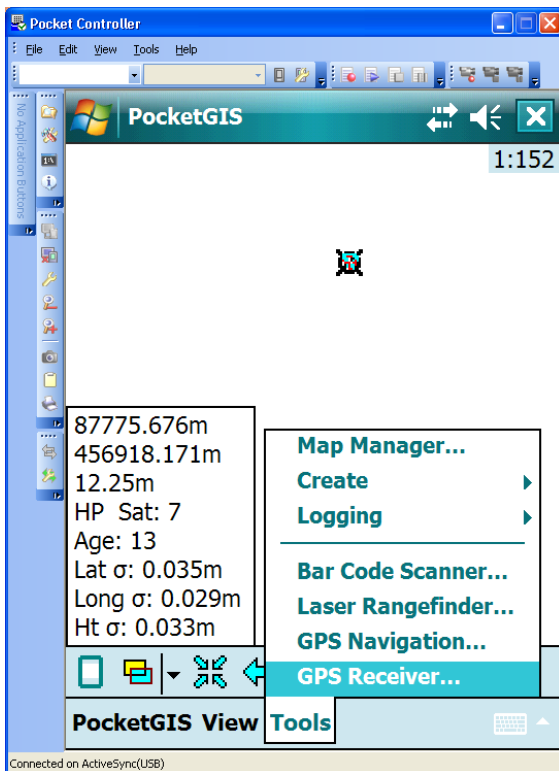
PocketGIS can not only take positions from a GPS receiver and log the data, the logged data points may also be used to seed the GPS receiver to speed up HP or XP convergence. Seeding cannot be done with just any receiver, since the receiver has to support the seeding command. At the moment, the OmniSTAR 8300HP, OmniSTAR 8305HP and OmniSTAR 8400HP receivers are capable of being seeded using PocketGIS.

Since seeding a receiver requires both position and standard deviations, make sure the following messages are enabled on the GPS receiver for PocketGIS to log:

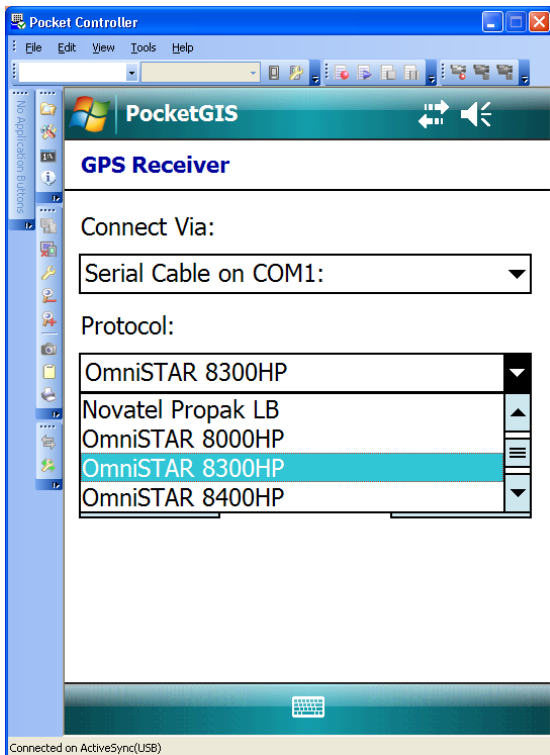
- GPGGA (8400HP) or GPGGALONG (8300HP and 8305HP)
- GPGST
- OMNIHPPOS (8300HP and 8305HP)

Points logged with the above messages enabled can be used as seed points. If you're not sure whether or not you've got the correct receiver messages enabled, please check the small position window in the lower left-hand side of the PocketGIS screen. If you can see your current position together with the Lat σ , Long σ and Ht σ values, you've got the correct receiver messages enabled. If the Lat, Long and Ht σ values are missing, please enable output of the GPGST and/or OMNIHPPOS messages. Please refer to your GPS receiver's manual on how to enable these messages.

For PocketGIS to send seeding information to a receiver, the program has to know which receiver is connected. You can set the receiver type in the Tools – GPS Receiver window.

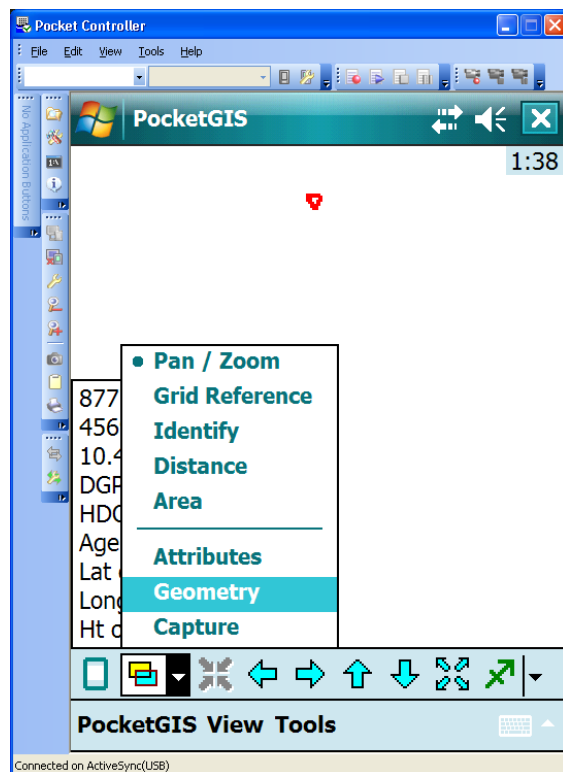
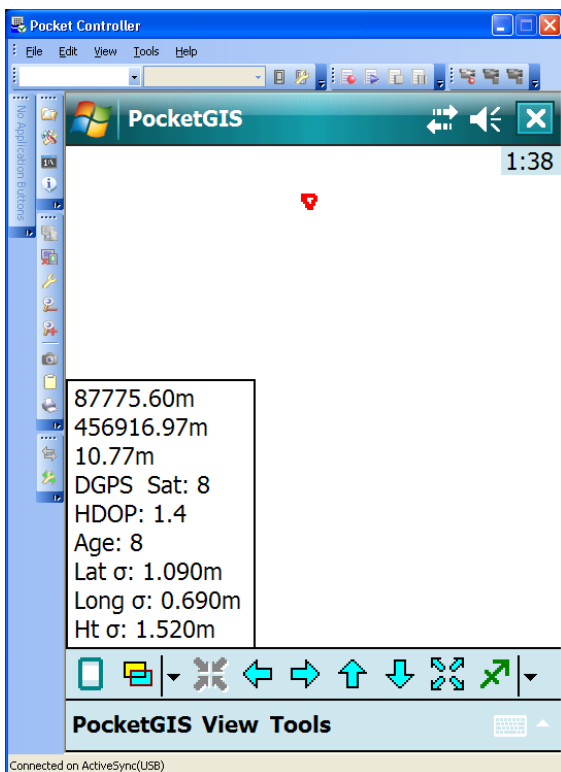


Normally, the Protocol will be set to 'NMEA 0183 (V2.0)'. If that is the case, tap the 'Disconnect' button, select either 'OmniSTAR 8300HP' for an OmniSTAR 8300HP or OmniSTAR 8305HP receiver or 'OmniSTAR 8400HP' for an OmniSTAR 8400HP receiver from the drop-down box and then tap the 'Connect' button again. The receiver type selection will enable PocketGIS to send the correct seeding

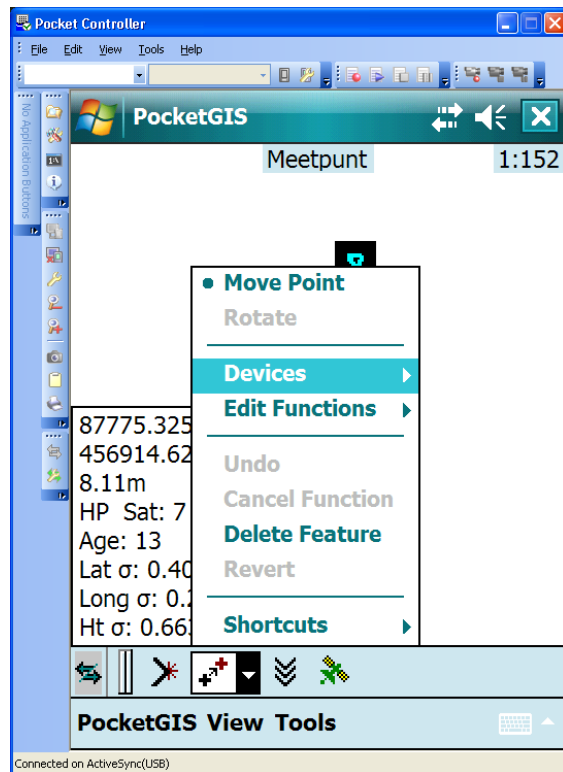
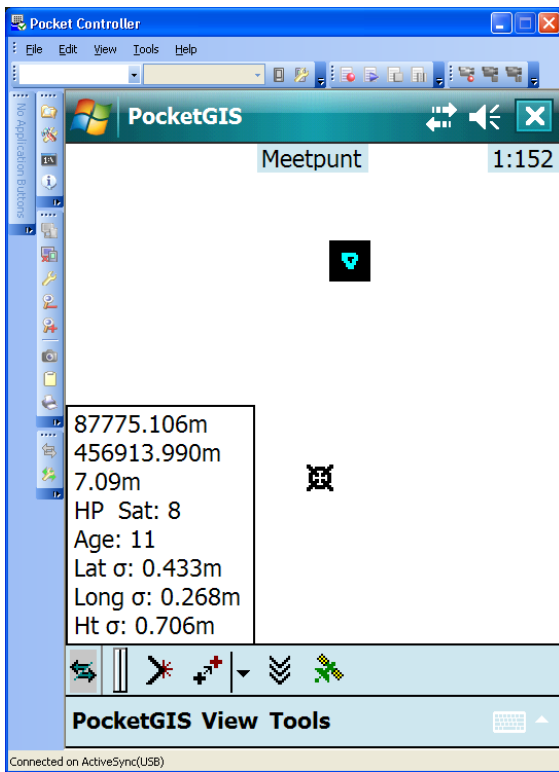


commands to the receiver attached.

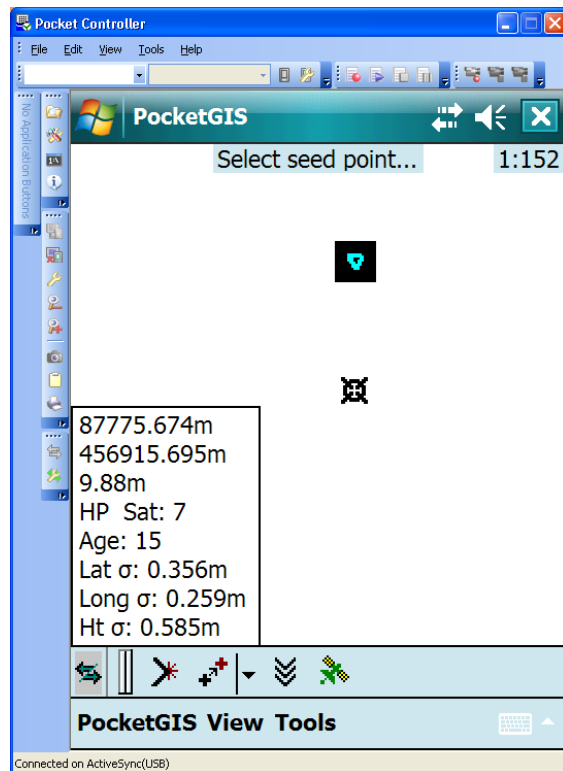
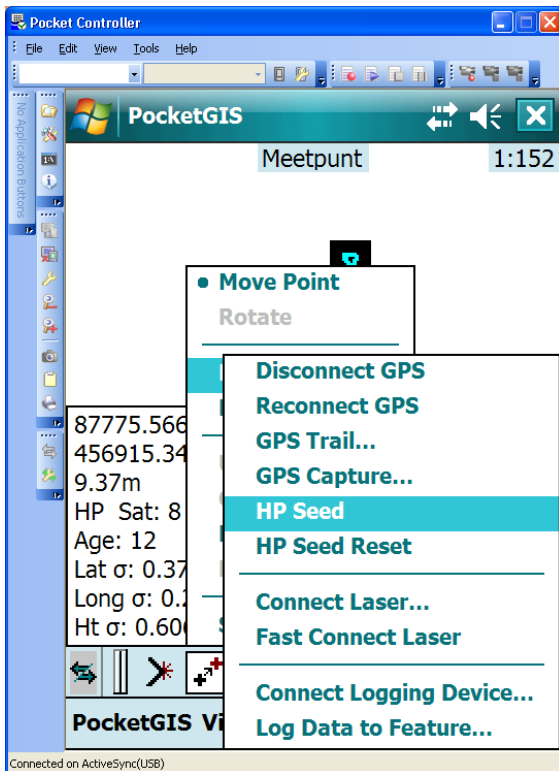
When you want to seed a receiver, first return to a pre-recorded seed point (a point logged previously with a good-quality, so low σ values, HP position). Switch over to the 'Geometry' view (see pictures below)



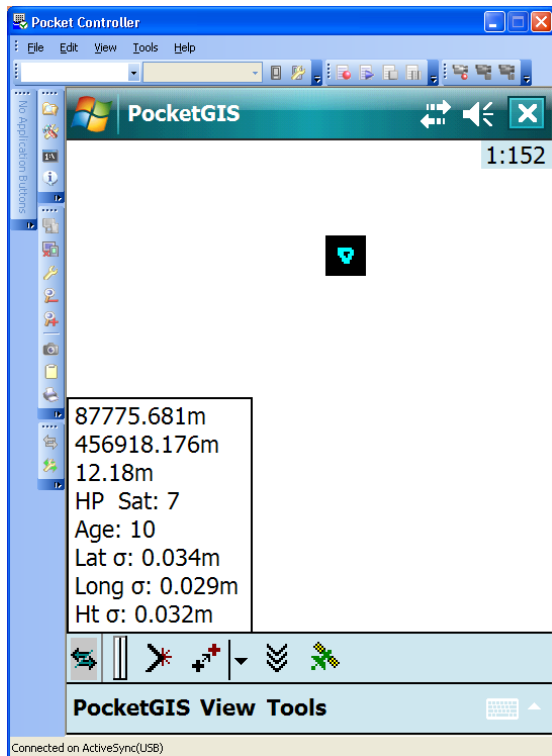
Next, select the previously logged point you want to use as a log point by tapping it on the screen.



Now tap the symbol with the two 'plus' signs at the bottom of the screen and select 'Devices' from the menu that opens. In the submenu that opens, select 'HP Seed'. The top of the screen will now show a message 'Select seed point...'



Make sure the antenna is positioned over the seed point, preferably on exactly the same location (lat, lon, height) as when the seed point was logged. Now tap the seedpoint (again). The text 'Select seed point...' will disappear. **Don't move the antenna until the receiver reports an HP converged position.**



Dependent on the number of GPS satellites available, it may take between 10 and 40 seconds before the receiver will report a converged HP position with a position accuracy at or near the accuracy of the seed point position. When the converged HP position is reported, the receiver and antenna may be moved again.