Using the ZMax with OPUS

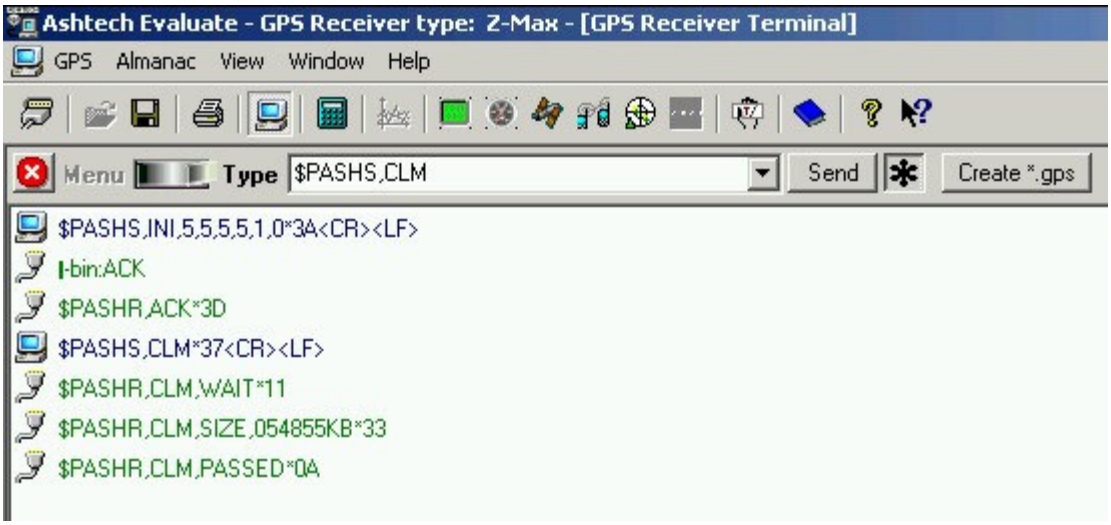
Please read the instructions for using OPUS on the OPUS web page before you begin.

http://www.ngs.noaa.gov/OPUS/index.html

Before beginning a new project it is a good idea to prepare the SD card and the GPS receiver by doing a re-init as described on page 11 in the Z-Max.Net Getting Started Guide.

Be confident that the SD card is prepared for data recording. If you need to use the $PASHS,CLM command to make that happen do so. Be sure to observe PASSED after sending the CLM command. This is something that can be done with the Evaluate software. SD cards can be formatted using the SD Card Formatter utility software.

ftp://ftp.magellangps.com



Once the SD card is ready to record data the field work can begin.

If this is the RTK base station first set up for RTK work and then do the following steps.

Use the yellow arrow keys to go to SURVCONF on the front panel. Press the green ENTER key.

Make sure the the recording interval is set to 005.0s or some other interval suitable for use with OPUS. Use the green ENTER and yellow arrow keys to change and accept the numbers.

Press the Red X key to exit the SURVCONF menu.

Press the down arrow key to SURVEY:STATIC and press ENTER

Use the ENTER and arrow keys to change the SiteID to a four character alpha-numeric SiteID. Avoid the use of punctuation. Use four letters and/or numbers.

Use the arrow keys to get to STATUS and press ENTER. Make sure you have a good solution going. OPUS can be picky about the quality of the data. Do not start a session for OPUS until it has a good group of SV's, low PDOP, and the clock is set to UTC time. If the receiver still has GPS time it is not ready for OPUS work.

Press the Red X key twice to exit the Survey menu.

Use the arrow keys to get to the SESSIONS menu and press ENTER.

Use the arrow keys to show STOP SESSION on the display and press ENTER. Then press ENTER again to confirm the choice. The ZMax will display DONE when this is finished.

Press the ENTER key when the display shows START SESSION. Press ENTER again to confirm the choice.

This will begin a file for use with OPUS that is not likely to be rejected.

Use the arrow keys to show LIST SESSIONS on the display and press ENTER. Use the up arrow key to display the current session. Observe the file size increasing as the display scrolls past each time. This will help to confirm that the SD card is prepared for data recording.

Press the Red X key to exit the SESSIONS menu.

Use the arrow keys to show SETTINGS on the display and press ENTER.

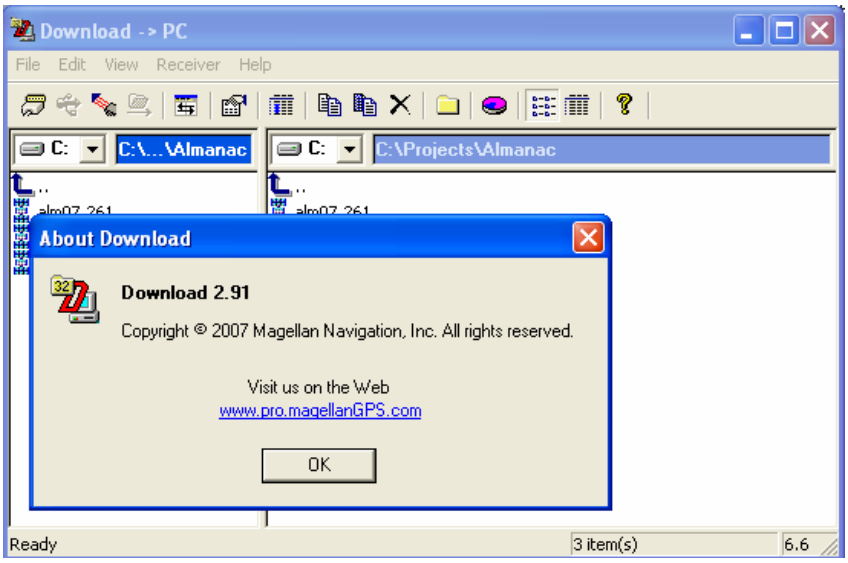
Use the down arrow key to display SAVE and press ENTER. Then press ENTER again to confirm the choice. The receiver will report DONE when this is complete. This will save your settings through a power cycle of the receiver.

Press the Red X key to exit the SETTINGS menu.

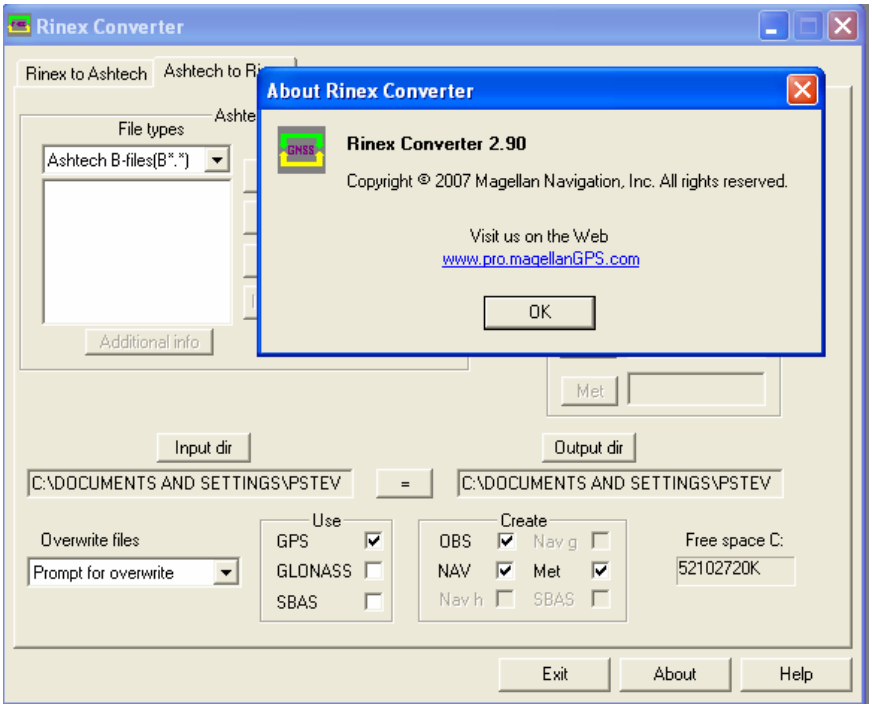
Avoid making changes in the SiteID, recording interval, or antenna height while the receiver is recording data for use with OPUS.

At the end of the session you can turn off the receiver to close the session.

The data needs to be downloaded with a current version of the Download program that comes with GNSS Solutions Tools.

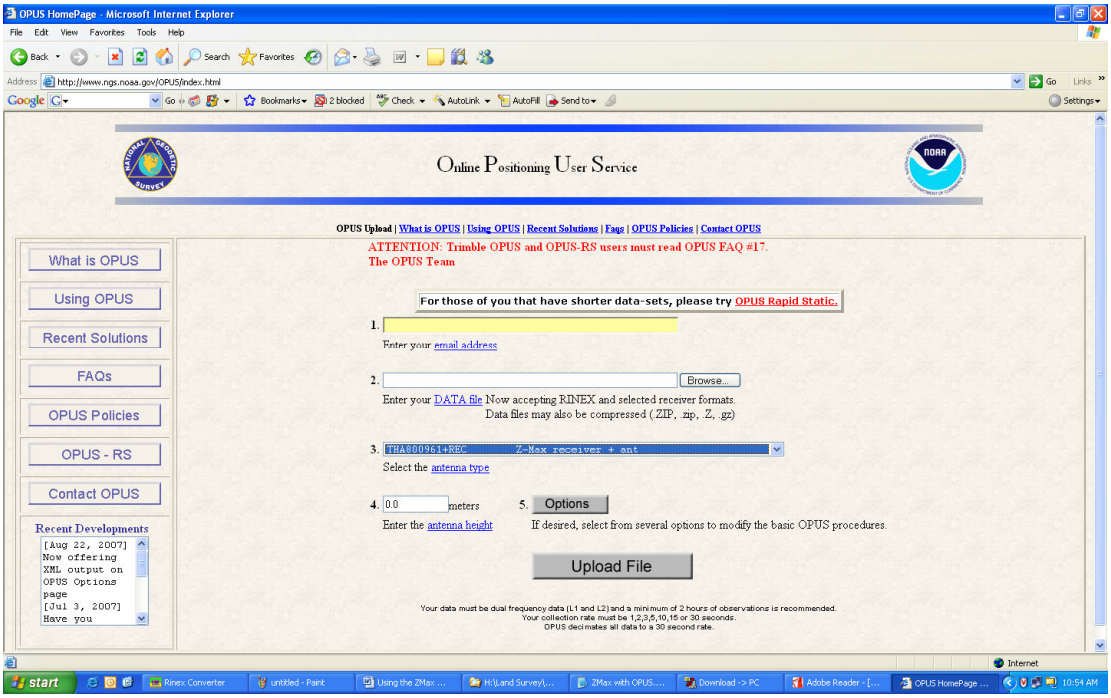


After a proper download the RINEX Converter program that comes with the GNSS Solutions Tools will make a RINEX file for OPUS.



Be sure to take the check marks off of GLONASS and SBAS. OPUS will only accept GPS data in the file.

On the OPUS web site be sure to select the correct antenna type. Remember that the antenna height must be a vertical height to the ARP. The Antenna Reference Point on the ZMax is the bottom of the receiver where it mounts on the pole or tripod.



Helpful NGS links:

http://www.ngs.noaa.gov/ANTCAL/

http://www.ngs.noaa.gov/OPUS/index.html

http://www.ngs.noaa.gov/OPUS/OPUS-RS.html

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