



Using WinLabMon

This document describes the use of Conexant's GPS receiver monitoring and controller software, referred to as "WinLabMon". It is a Windows™ version of Conexant's software program LabMon, written for DOS. WinLabMon runs on a PC and allows the user to control the GPS receiver and to display the receiver outputs. The software is only compatible with PC's running Windows 98 or 2K at this time.

Installing the Software

A self-installing routine for WinLabMon is included on the distribution CD. Locate the folder on the CD called WinLabMon and select "**setup**" for installation of WinLabMon.

Note: Make sure the serial I/O cable from the GPS receiver is connected to COM1, COM2, COM3 or COM4 serial port of the PC in order to have data communications between the software program running on the PC and the GPS receiver.

After installation is completed, the program can be started from the Windows "Program Start" menu and the WinLabMon splash screen should appear (see figure 1). With the mouse, click on "OK" in the lower corner of the box to bring up the main WinLabMon window.

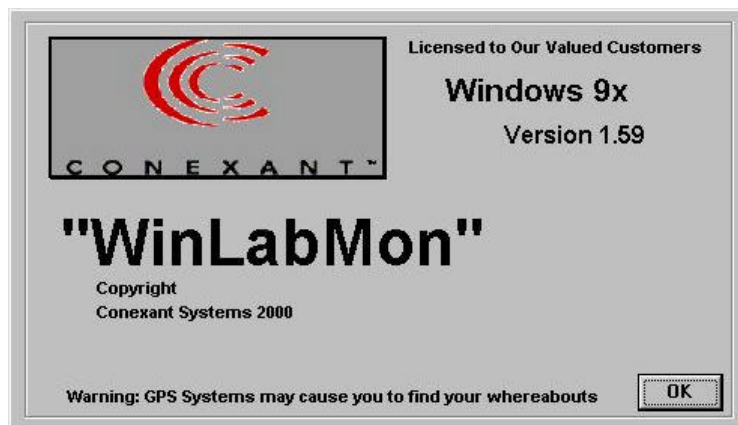


Figure 1.

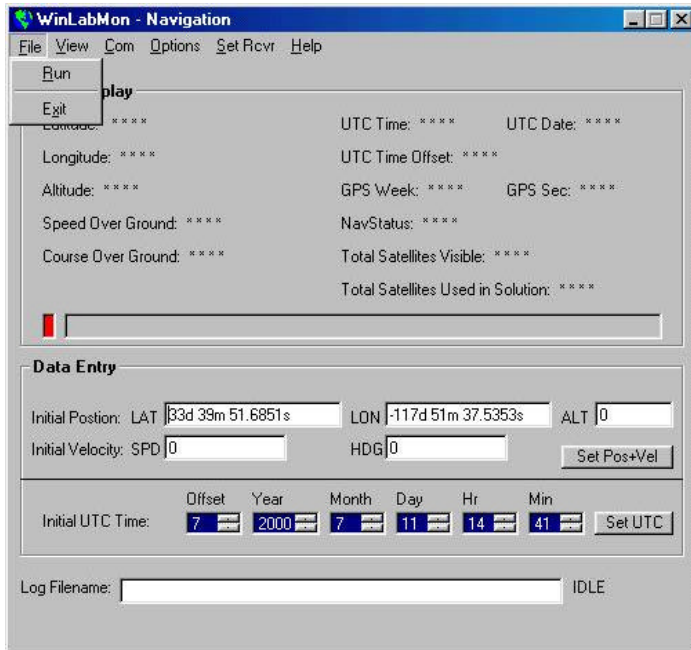


Figure 2.

The above main screen will show a red color on the status indicator when the software is not in a position to receive data from the GPS receiver. Note: This activity button also indicates power control condition for the USB version of the GPS Sensor receiver. Starting up the program is accomplished by pulling down the “File” menu and selecting “Run” (see figure 2).

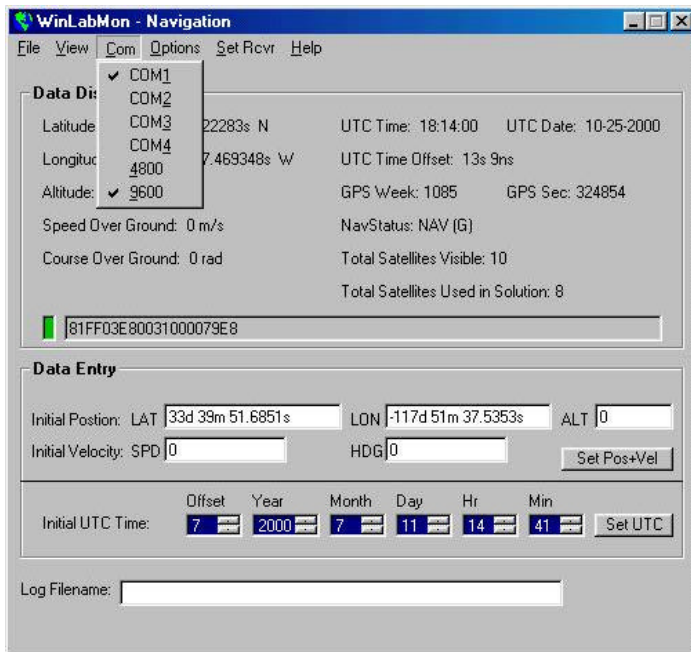


Figure 3.

Select the communications port that the interface cable is connected to on the PC and set the baud rate by selecting the settings in the “com” window (see figure 3). The RS232 version GPS Sensor receivers are set to a default value when shipped from the Conexant factory which is: 9600 bps and in binary mode. The USB version receivers are defaulted to 4800 bps and NEMA.

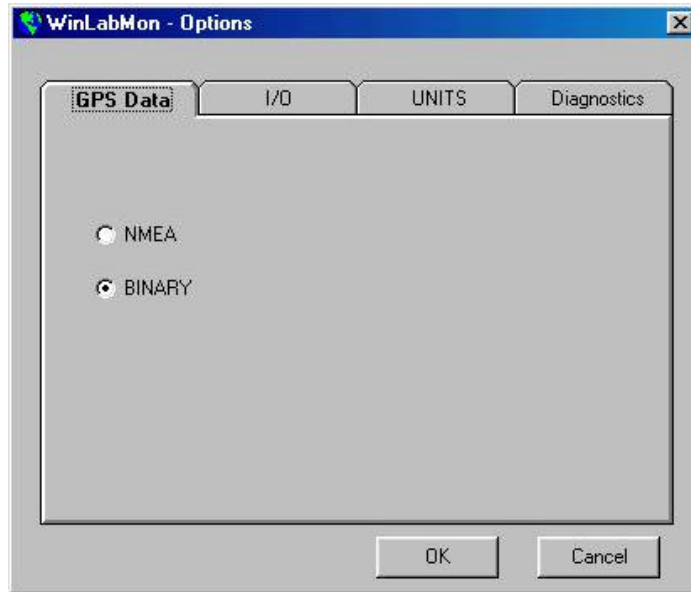


Figure 4.

Figure 4 shows the various windows under “Options”. It is used to select modes of Conexant binary or NEMA-0183.

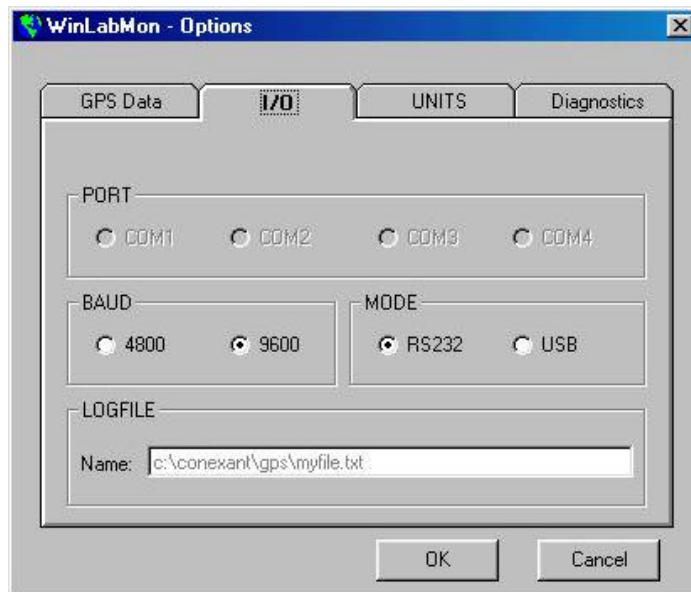


Figure 5.

Figure 5 illustrates the I/O conditions for the PC. The serial "Com" port, the baud data rate and mode, RS232 or USB selections can be made using this window.

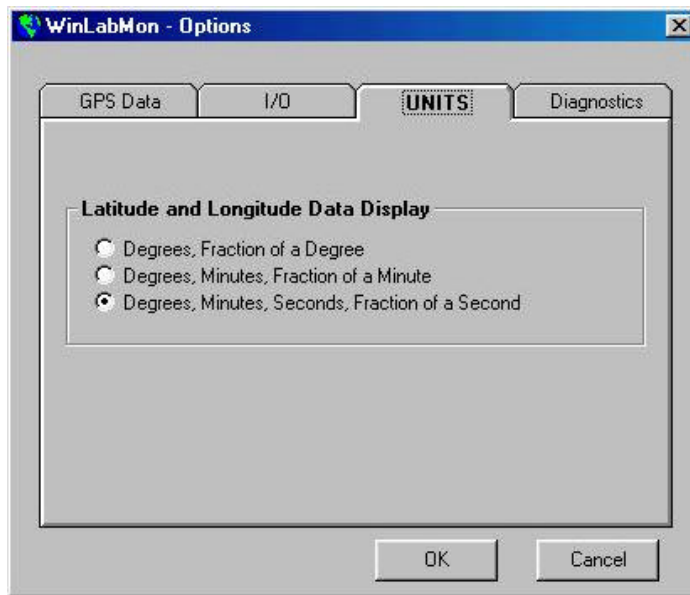


Figure 6 indicates selections for how Latitude & Longitude are displayed.

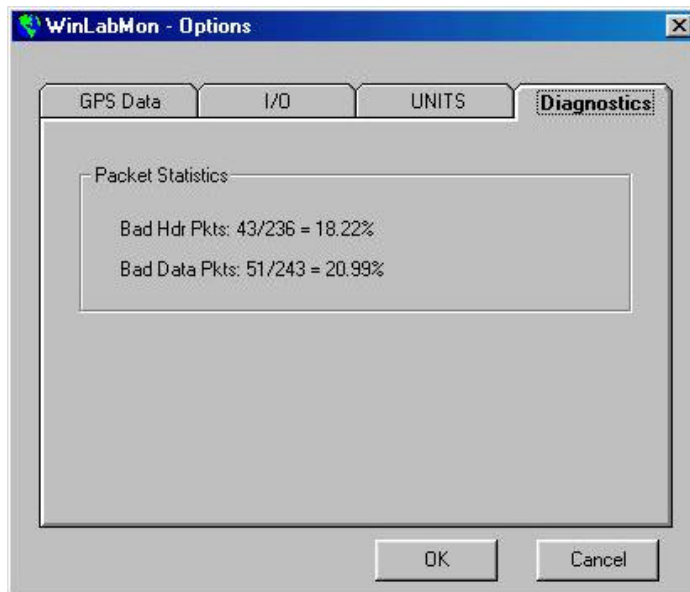


Figure 7 is the screen used for viewing diagnostics on data I/O.

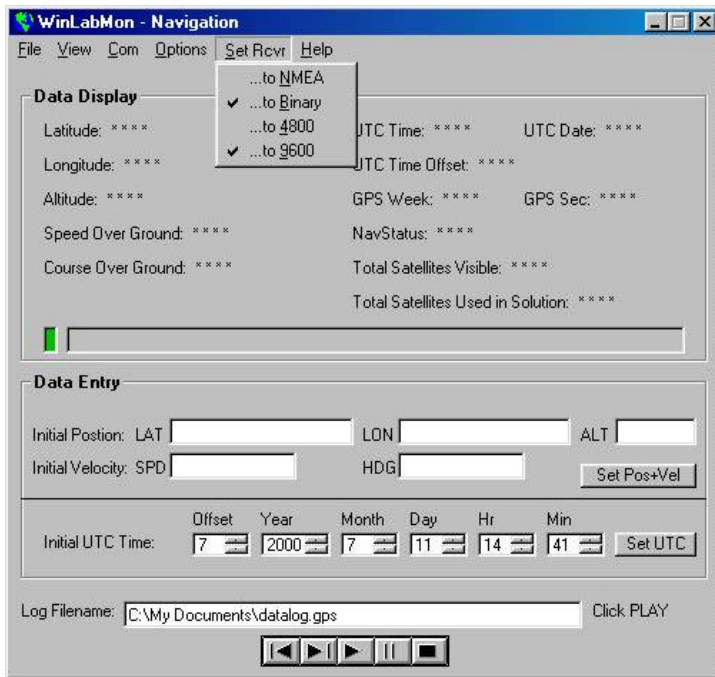


Figure 8 is shows the window used to set communications parameters for the GPS receiver.

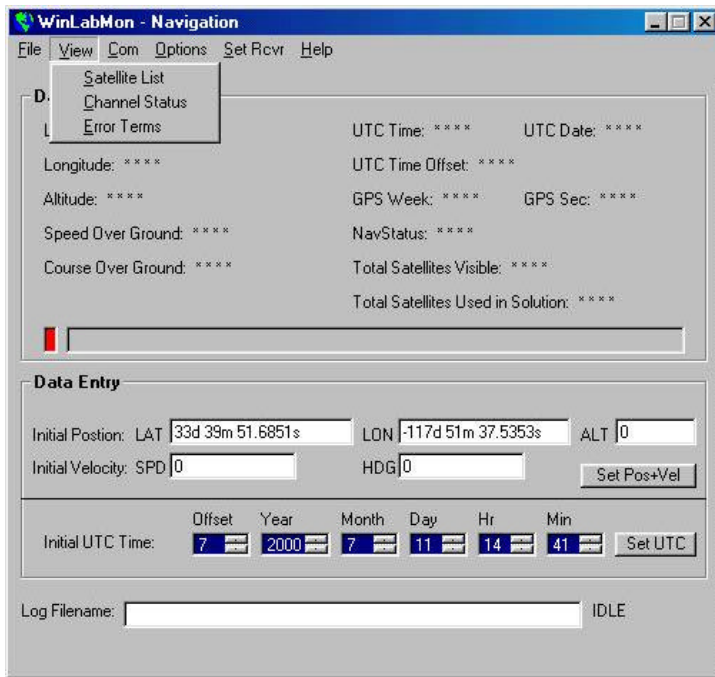


Figure 9.

Figure 9 shows the windows “Satellite List”, “Channel Status” and “Error Conditions”. These windows contain data only when the GPS receiver and WinLabMon are in the active running mode. The “Satellite List” will show which satellites vehicles (SV) are being received, their elevation and azimuth positions and their respective signal levels. Also, this screen is used to set the antenna mask angle (specific conditions of the installation). See figure 10. The mask angle can be used for conditions where the antenna cannot be used to view satellites below certain levels of elevation such as obstructions like buildings, trees, etc.

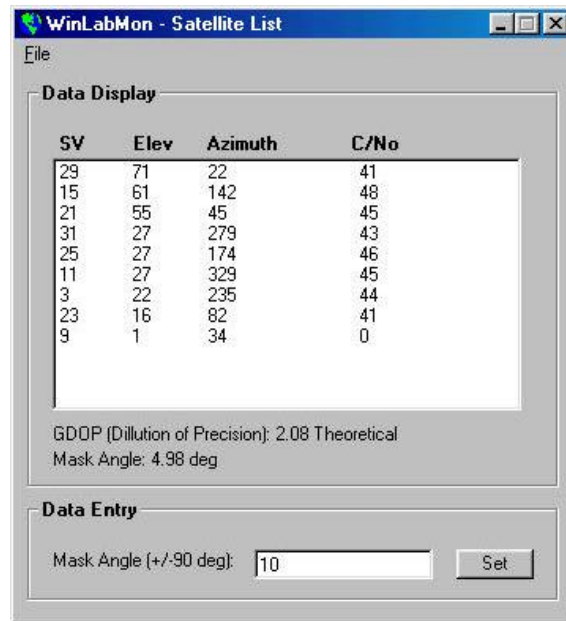


Figure 10.

Figure 11 shows the satellite channel status, which satellites are “In Track” and if they are used in the solution.

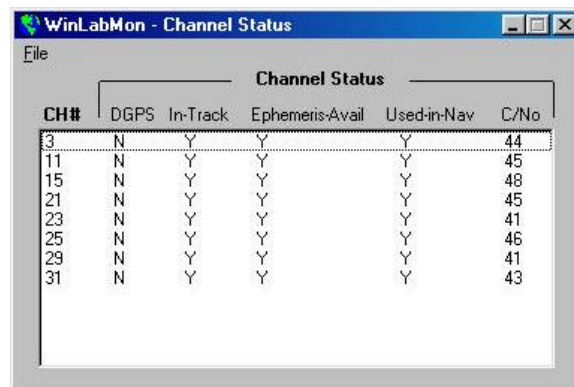


Figure 11.

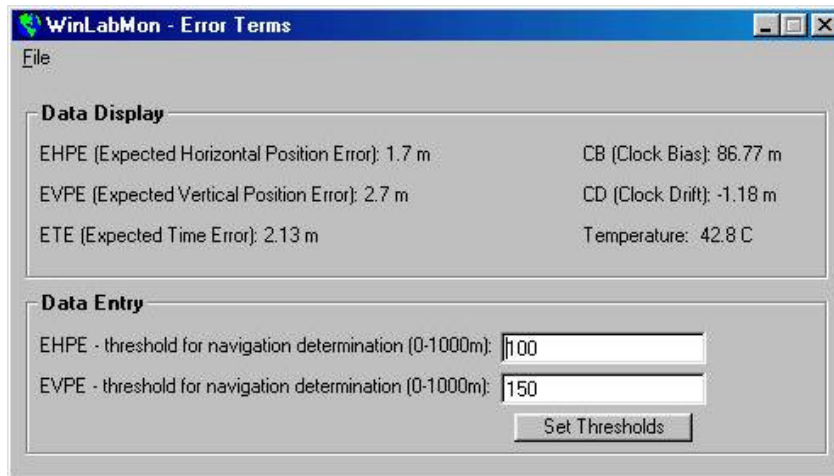


Figure 12.

Figure 12 is used to show the various navigation and position error conditions reported by the GPS receiver and the thresholds that are user configured.

WinLabMon can be used to store data received from the satellites. The file that is generated can then be used for other purposes or re-played at a future time using WinLabMon. See figures 13 and 14 below.



Figure 13

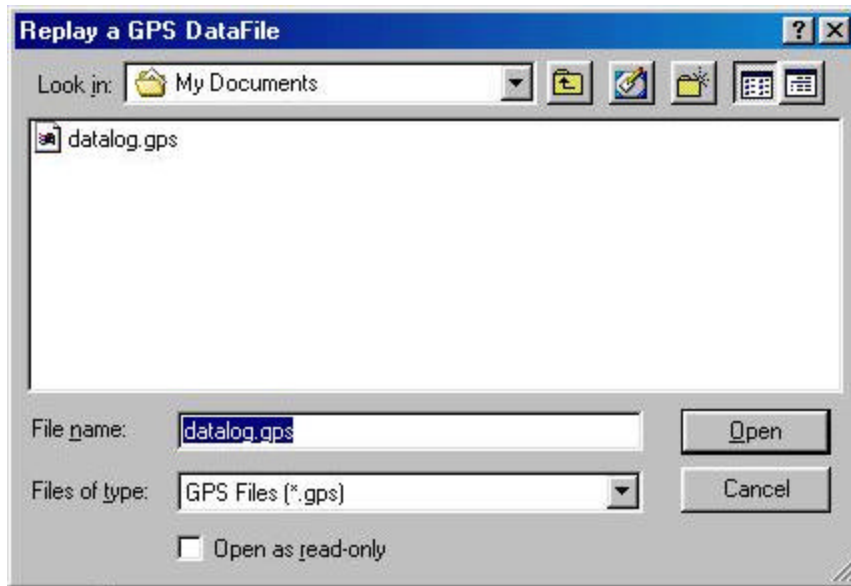


Figure 14

Summary

Conexant is providing this software as a tool to aid developers and designers using the various versions of GPS receivers such as Jupiter, Sensor and others in the Zodiac family.

For additional information, questions or assistance using WinLabMon, contact:

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If you have any questions on the use of WinLabMon or want to learn more about Conexant GPS receiver products, please feel free to contact your local Conexant sales office, your Conexant Manufacturers' Representative or the address above. Thanks for your interest in Conexant products.