INTRODUCTION

This software is designed to interface with a SG or SR Series Master Development System and to display the location and navigation data provided by the module. Documentation for the module can be found by clicking the "Software Help" label at the top of the main window.

THE PROGRAM INTERFACE

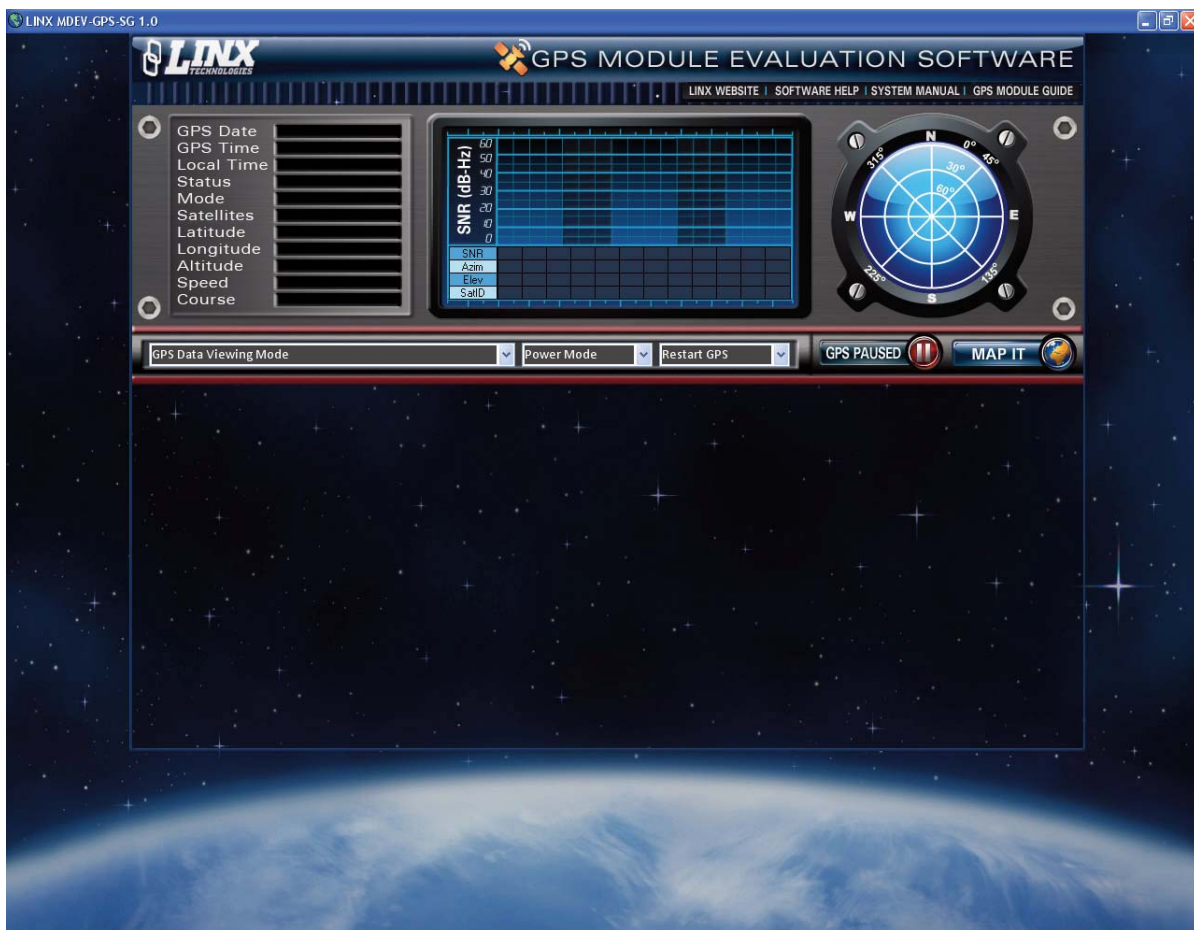When the program starts, the screen will be empty of data, as shown in the figure below.

Figure 1: The Initial Screen

The SG or SR Series Master Development system should be plugged into a USB port. When the button labeled "GPS Paused" is clicked, the software establishes a connection to the board through the USB module and initiates communication. Please note that the jumper on the development board must connect the TX USB and RX Module lines on the board's header. The label on the button changes from "GPS Paused" to "Reading GPS" once a connection is made. To close the connection, simply click the button again.

Once connection has been established, the software displays the information received from the GPS module, as shown in the figure below.
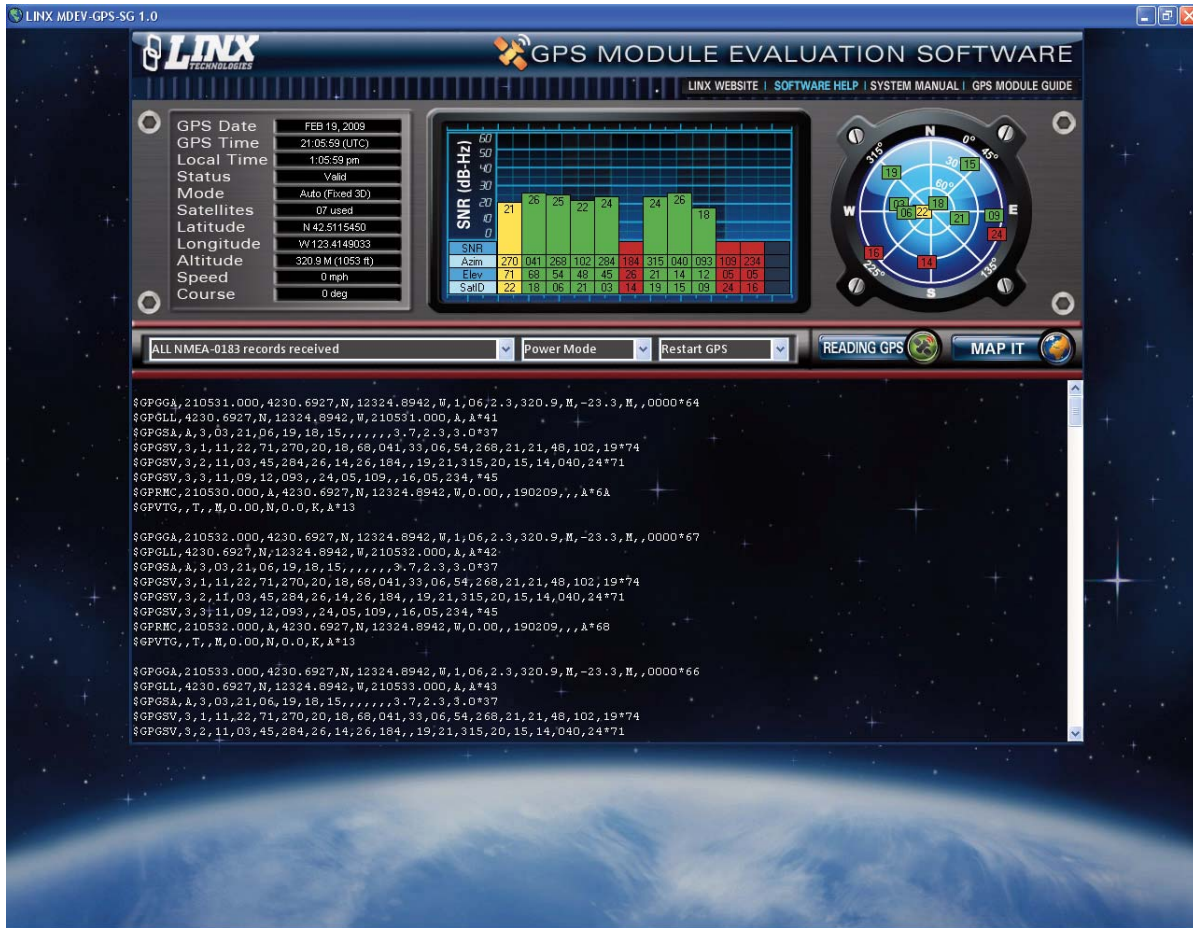

Figure 2: The Connected Screen

On the top left of the screen is a list of some typical data from the module. This includes the navigation and position information, as well as time, date, and satellite data.

In the middle is a list of information on up to 12 satellites displayed in a bar graph format. This includes the satellite ID, its azimuth and elevation, and its signal to noise ratio. Each satellite is color coded according to how the receiver is using it. A satellite that is being tracked and used for a position fix is green. A satellite that is being tracked, but not used for a fix is in yellow. A satellite that is not being tracked or used is in red. The more satellites that are used for a fix, the more accurate the fix.

On the far left is a polar plot showing the location of the satellites in view relative to the receiver's position. The satellite's ID number is shown and is color coded as described above.
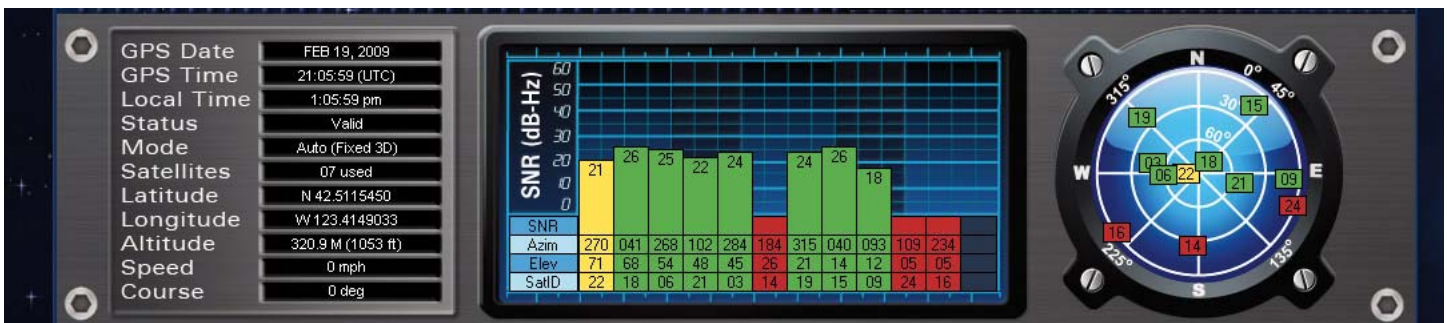

Figure 3: Connected Screen (Display Section)

The bottom half of the screen is a list of the data from the receiver. The format of this data is controlled by the dropdown menu above the box.

Figure 4: The Connected Screen (Data Section)

The first option is "ALL," which shows the raw data output by the receiver module. There are six other options for displaying specific NMEA message formats. Please see the GPS Receiver Module Data Guide for more information on these other options.

Next to the message format drop-down menu is a Power Mode menu. This is used to set the power mode of the module, either full power or power saving modes. The selections allow the user to pick from the receiver being on for 200, 300, 400, 500 or 600mS/S, or always on. The less time the receiver is on, the lower the current consumption and the better the battery life, but the less frequently the receiver will be able to update its position.

Next to the Power Mode menu is a Start-up menu. This allows the user to force the receiver into specific start modes; Hot Start, Warm Start, Cold Start, or Enable Defaults.

Next to the Start-up menu is the GPS Paused / Reading GPS button. Click this button to start or stop communication with the receiver.

At the top right of the box is a button labeled "Map It." When this button is clicked the Google Maps web site is opened and the current position is displayed. All of the features of Google Maps are enabled, such as multiple views, zooming, and printing. Note that the PC running the software must be connected to the Internet for this to open. If the coordinates are not valid, then a message box will open stating the invalid coordinate error.

Figure 5: Help Links

Additional information can be found by clicking on the labels at the top of the window. These open the Linx website in the default web browser or reference documents in Adobe Acrobat.

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