

Track GPS Position

View windows in TNTgis can show the current position of an active Global Positioning System (GPS) unit or play back the changing track positions recorded in a GPS log file. The GPS menu on the View window lets you select and manage GPS sources and logs and choose the marker(s) to be used to show GPS positions. Active GPS sources (if any) are shown at the bottom of the GPS menu; a submenu for each source provides the options to track the GPS position in the main view and in the Locator.

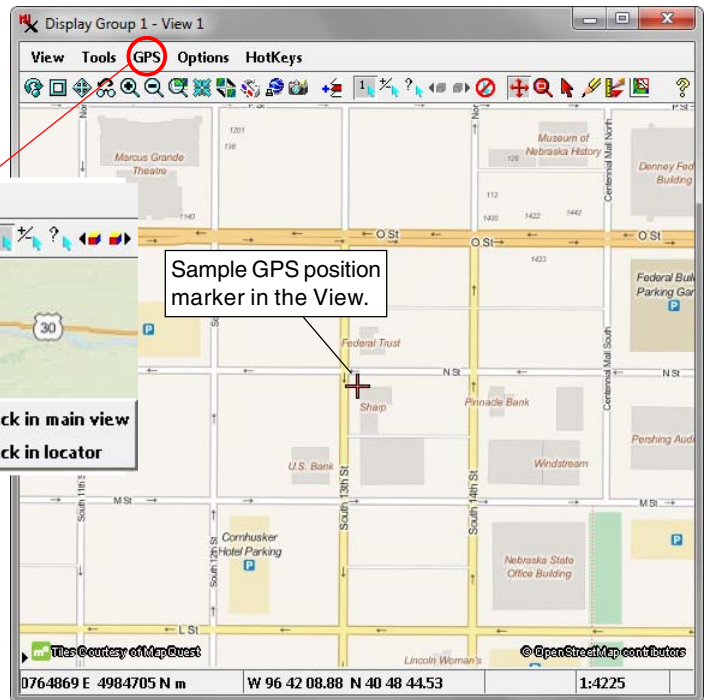
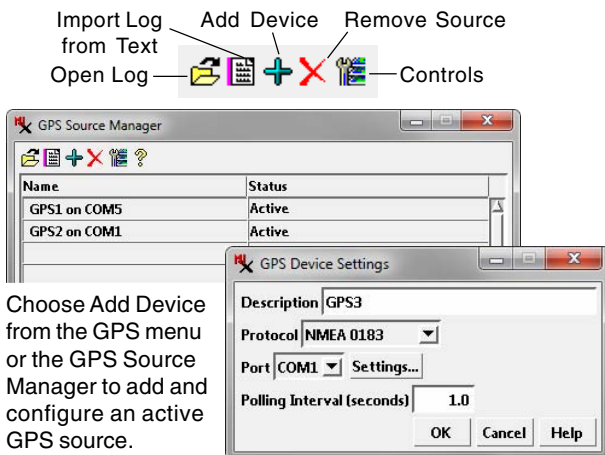
Auto-Scroll

The Auto-Scroll toggle option on the GPS menu enables the View window to automatically pan in the direction of a moving GPS source when the GPS position reaches the edge of the view.

If the current GPS position is completely outside the extents of the data layers being displayed, a special marker is automatically shown at the edge of the view to indicate the direction to the GPS position (see illustration above).

Adding and Managing GPS Devices

To add a GPS device for position tracking, choose Add Device from the GPS menu to open the GPS Device Settings window. (You can also add a GPS device from the GPS Source Manager window as described below). The default name of a new GPS device is "GPS" followed by a number. You can edit the Description field in the GPS Device Settings window to provide a more descriptive name if desired. Use the Protocol menu to choose the communication protocol for the stream of coordinate positions; the options are NMEA 0183 (the default), Trimble ASCII, and Garmin Protocol. The Polling Interval value sets the time interval in seconds between updates of the device's position.



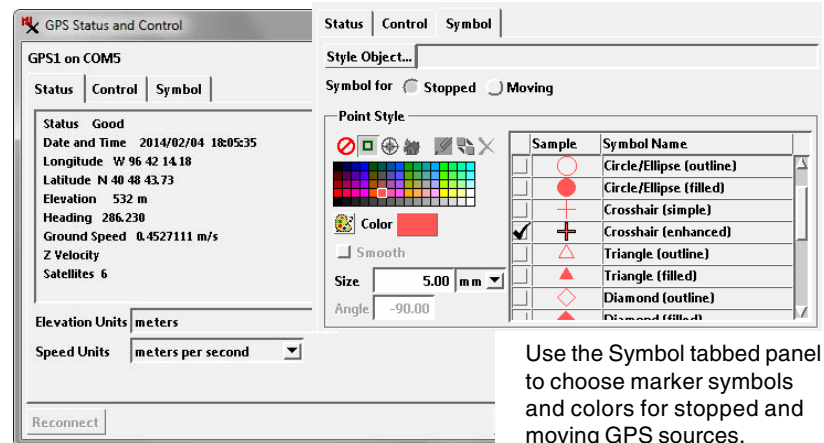
If the GPS source reports a position outside the extents of the data in the display, this symbol appears at the edge of the view canvas and points in the direction of the GPS position.

The GPS Source Manager window lists all of the GPS devices that have been configured and notes whether the device is currently Active or Inactive. The Add Device icon button opens the GPS Device Settings window just described. To remove a device from the list, left-click on the list entry to highlight it and press the Remove Source icon button. The Controls icon button opens the GPS Status and Control window.

GPS Status and Control Window

The Status tabbed panel on the GPS Status and Control window shows the current readings for the selected GPS device, including position, heading, ground speed, and the number of satellites accessed. The Symbol tabbed panel includes a Point Style selection control for choosing a marker symbol, color, and size for moving and stopped sources.

(continued)



Use the Symbol tabbed panel to choose marker symbols and colors for stopped and moving GPS sources.

The Predefined icon button is active by default in the Point Style controls. The scrolling list presents a variety of predefined point symbols you can choose from. Use the Color controls to select a color for the symbol and the Size and Angle controls to set the size and orientation of the symbol.

You can choose from a wider selection of symbols or create a custom marker symbol by pressing the Style Object pushbutton and selecting a main-level style object in a Project File as the source of additional styles. Choosing a style object activates the Symbol and Bitmap icon buttons, allowing you to choose or create a vector or bitmap symbol. For more information on point styles, see the Technical Guide entitled *Creating Styles for Point Elements*.

The Control tabbed panel provides controls for playing back a GPS track from a log file, as described in the following section.

Playing Back a GPS Track from a Log File

The View window can “play back” the series of time-stamped positions recorded in a GPS track in a log file. During playback the GPS marker is moved to successive track positions at a rate based on the time information recorded with the track points. When the Auto-Scroll toggle option is turned on in the GPS menu, the View window automatically pans in the direction of a moving GPS source when the source reaches the edge of the view.

To open a GPS log file, use the Open Log option from the GPS menu or press the Open Log pushbutton on the GPS Source Manager window. The View window can play back GPS track positions with date/time information from logs in NMEA, GPX, and MicroImages formats. If you have GPS track data in some other formatted text form, use the Import Log from Text option on the GPS menu or the Source Manager window. The *Import log file from formatted text* window lets you specify whether the data is in columns or delimited and to specify the field numbers for X, Y, and Z coordinates, date, time, and heading,

as well as the format for the date and time.

The playback controls on the GPS Status and Control window’s Control tabbed panel resemble those for common audio or video playback devices (see illustration below).

Arrow buttons are provided to Play, Reverse, Fast Forward, and Fast Reverse. Next Section and Previous Section buttons are provided to skip to a different track section in the GPS log file. Enter a larger value in the *Playback rate* field to speed up the rate of movement of the GPS position marker in the View. The Auto-repeat toggle is turned on by default to play the GPS track on a continuous loop.

