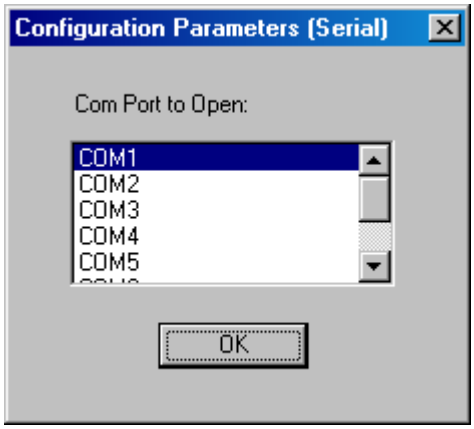
SwifTrax User Guide

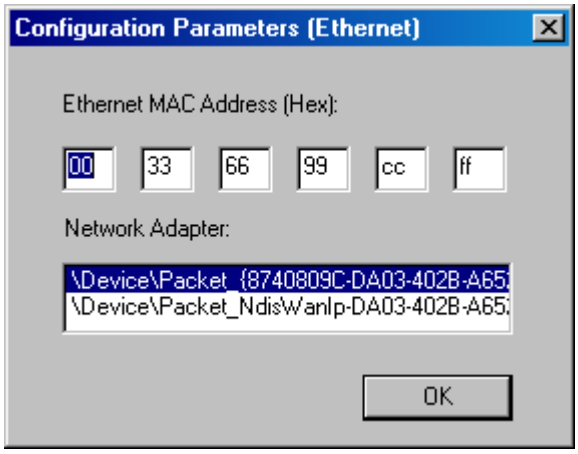
Overview:
Before using the SwifTrax Graphical User Interface (GUI), please consult the Installation and Startup document for your SwifTrax product. The SwifTrax GUI is not a standalone application - it is necessary to have the development board loaded with SwifTrax logic and the PC connected to the development board (via Serial or Ethernet) before the SwifTrax GUI will work properly. **Note:** Executing the SwifTrax GUI commands before the PC is properly connected to the development board may cause the GUI to stop responding. Some commands (reads and writes) expect responses from the board. If the board is not connected to the PC, the GUI never receives a response to the commands that it issues, and so it remains in a loop awaiting a response that never comes.

The SwifTrax GUI is a software tool that allows the user to issue read and write instructions to SwifTrax logic loaded onto a development board. These read and write instructions are issued over the Transparent Communications Interface (TCI). SwifTrax currently supports two flavors of the TCI – Serial and Ethernet. SwifTrax-Basic uses the Serial interface, while SwifTrax-Advance and SwifTrax-Elite both use the Ethernet interface. The read and write commands may be configured and run with the graphical controls, or they may be programmed into a batch file and run automatically.

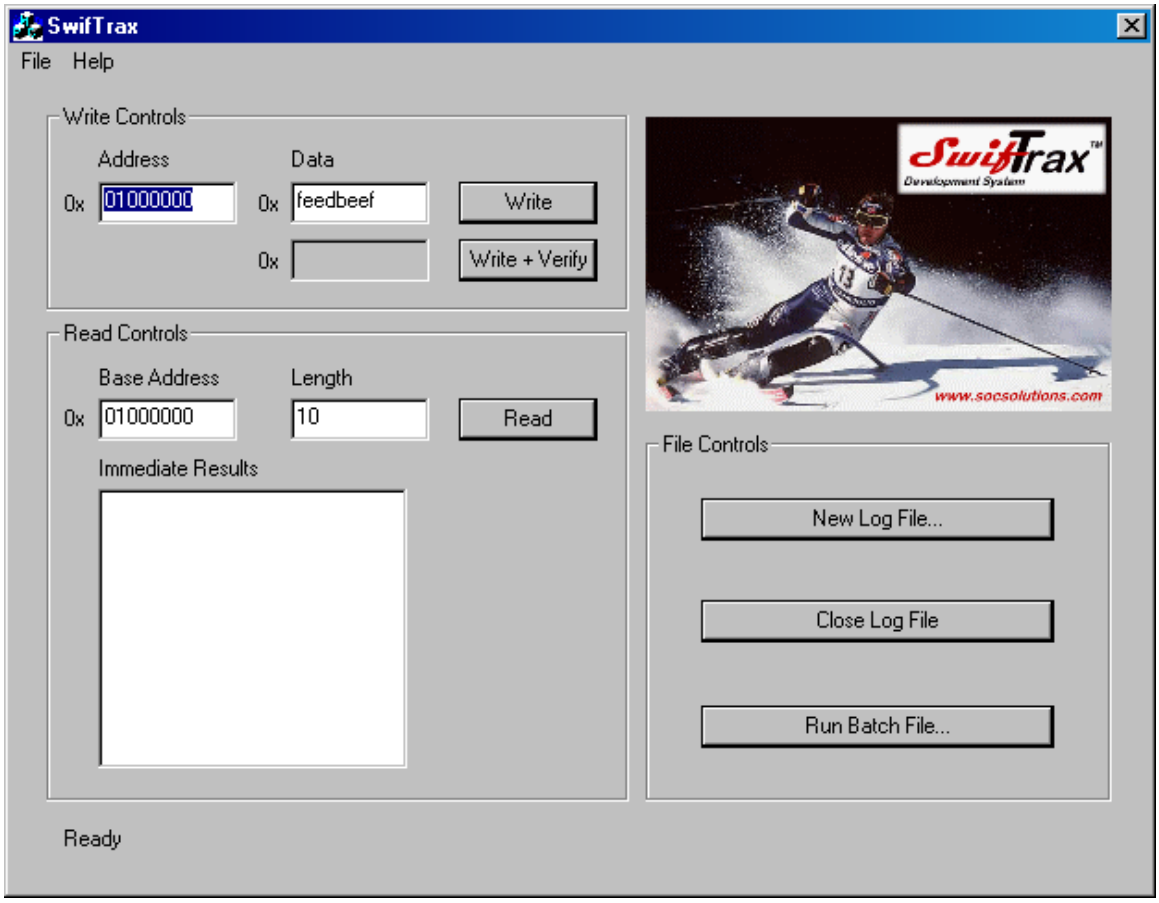
Initialization (Serial):
Upon first running the application, you will be asked to choose the serial port that you will use to connect the PC to the development board. Select the appropriate serial port for your PC and then select OK. Upon selecting OK, the settings are saved in a configuration file. The next time the application is run, settings from the configuration file are loaded into the configuration parameters dialog.



Initialization (Ethernet):
Upon first running the application, you will be asked to choose the appropriate Network Adapter from the list displayed (for systems with one network card, this is usually the first choice) and enter the MAC address of that Network Adapter. The MAC address can be found by opening a command window and typing "ipconfig /all" at the prompt. Select OK when you are through with these configurations. Upon selecting OK, the settings are saved in a configuration file. The next time the application is run, settings from the configuration file are loaded into the configuration parameters dialog.



The SwifTrax GUI:
Below is a screenshot of the SwifTrax GUI. The GUI is comprised of five main areas: the Menu bar (top), the Status bar (bottom), Write Controls, Read Controls, and File Controls.



- **The Menu:**

The Menu Bar at the top of the application window has four submenus:
File→Quit: Select this to exit the application. Alternatively, select the "X" in the upper right-hand corner of the application window.
Help→SwifTrax: Displays this document.
Help→API: Displays documentation on the SwifTrax API. Most useful here is the documentation on how to create a batch file.
Help→About: Displays information about the SwifTrax application.

- **Write Controls:**

The Write Controls are comprised of two input edit boxes, one display box, and two control buttons. To configure a write to the development board, type in an address in the Address edit box, and type in a 32-bit word of data into the Data edit box. The address should correspond to a valid address on the development board, and the data is data that is to be written to that address. Note that all edit/display boxes are in hexadecimal. To execute the write, select the "Write" control button. Alternatively, to execute the write and then immediately read back the contents of the address that was just written, select the "Write + Verify" control button. The results of the immediate read are displayed in the grayed display box.

- **Read Controls:**

The Read Controls are comprised of two input edit boxes, one display box, and one control button. To configure a read from the development board, type in an address in the Address edit box, and type in a length into the Length edit box. The address is the base address for the read and should correspond to a valid address on the development board, and the length is the number of 32-bit reads from consecutive addresses (starting with the base address) to be executed. Note that the Address edit box is in hexadecimal, but the length edit box is in decimal. To execute the read, select the "Read" control button. The results of the read are displayed in the "Results" display box.

- **File Controls:**

The File Controls are comprised of three control buttons. Select the "New Log File…" button to open a new log file that records all API activity (reads, writes, etc.). Select the "Close Log File" button to close any open log file and cease the recording of API activity. Select the "Run Batch File…" to execute a set of commands in the batch file scripting language. See the API reference for the log file format and for creating batch file scripts.

- **The Status Bar:**

The Status Bar is a display that gives the status (success, failure) of a given API command. Commands that will update the status display are Write, Write + Verify, Read, New Log File, Close Log File, and Run Batch File.