Wizard

STARTUP GUIDE

Instructions For Upgrading, Installing And Use

Revised on September 26th, 2001

Computerized Elevator Control Corporation

Swift *FUTURA/MERIDIA* Wizard
Startup Guide

The Swift Futura/Meridia Wizard software is to be used ONLY by those persons authorized to work with Swift Futura or Meridia equipment.

Computerized Elevator Control Corp. does not warrant that the functions in the Wizard software will meet your requirements or that the operation of the Wizard program will be uninterrupted or error-free.

Windows is a trademark of Microsoft Corporation in the United States of America and other countries.

Publication History
May, 1995   First Release
November, 2000   Updated Contact Info and added Revision Information
September, 2001   Updated to add Meridia controller (Wizard version 15.17) and to describe use
                          with Windows 98® and Windows NT® rather than Windows 3.1®

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Warning:

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I. INTRODUCTION

A. Introduction

The Swift Futura/Meridia Wizard is a custom software tool for use with any Swift Futura or Meridia Controller. It provides complete access to the control, setup, and troubleshooting of the controllers. Designed for the Windows® operating system, the Wizard presents the user with easy-to-use graphical Windows (see the Terminology section below) where most operations are done just by clicking or dragging a mouse.

The Wizard software was designed for use on a portable computer that can be attached by a serial cable to a Swift Futura or Meridia controller -- allowing a high-speed connection between the two systems.

Here are a few highlights of the many tasks that can be performed:
• Upgrade the Futura or Meridia car software by uploading it
• Monitor all the cars in the group
• View the car diagnostics Window
• Modify car control parameters on Windows grouped by function.
• Save and store all the car and system parameters

In order to install and use the Wizard a person must be familiar with the use of a Personal Computer and the Microsoft Windows® Operating Systems. This guide describes how to start the Wizard and some of the basics of the keyboard and mouse operations in addition to the specific Wizard functions. The first time that a typical computer procedure is mentioned it will be explained in some detail; subsequently it will simply be mentioned as though the detailed procedure is known. There are numerous books in bookstores and computer stores teaching the operation of Microsoft Windows® Operating Systems. Information can also be obtained by clicking "Start" then "Help" on the Microsoft Windows® Desktop. Any person using the Wizard when Online (with the PC connected to a Futura or Meridia controller) must be competent to work with Swift controllers; training that is not included in this guide. Otherwise, this document describes all connection, use and purpose of the Wizard. This document describes Wizard version 15.18. Earlier and later versions will differ somewhat.

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B. System Requirements

System Hardware

- A Pentium computer with a 150MHz clock and 32MB of RAM is the minimum requirement tested and verified for Wizard operation. It is likely that lesser system hardware such as a 486 computer can operate the Wizard but this has not been tested, such equipment being essentially obsolete. As the speed of the selected computer increases there is an advantage of reduced delay when switching Windows for different functions.
- An available serial port (COM port).
- A fixed disk drive ("hard-drive").
- A 3.5" diskette drive or CD drive for installing the Wizard.
- A diskette drive or modem for transferring diagnostic and parameter data to another computer.
- A Mouse, trackball or other cursor-positioning and clicking device.

System Software
The Wizard is designed to operate with Microsoft Windows 95®, Windows 98®, Windows NT® and Windows 2000®.

Disk Space
The Wizard will require at least 7MB of storage space on the computer hard drive. More storage will be needed during normal use for saving car and job information.

Software Distribution
The Wizard program can be installed either from 3.5" diskettes (a set of 5 diskettes for the current version) or from a CD.

C. Terminology

Below is a list of commonly used terms that are used in this Guide.

Keyword   Description

Keyword	Description
Abs File	A special file format. Swift Futura or Meridia car software and Meridia configuration data is stored either as a hex file or as an abs file, allowing easy transportation on a floppy diskette for example.
Button	When used as "left button" or "right button" this refers to a mouse button but when used with a name, such as "Close button" this refers to an icon on the screen which looks like a rectangular button and is clicked by pressing down the left mouse button when the cursor is over it.
Directory tree	Each disk has a "root directory" which lists other directories and files within it, if there are any (for example, a diskette might be empty). Within any of those directories listed in the root can be files and/or subdirectories. Within any of those subdirectories can be files and/or lower-level subdirectories. This nesting can continue for many levels, like the branches of a tree dividing.

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	Most programs that include file listing will allow an expanded view showing a portion of the directory tree down to whatever level chosen. The list of subdirectories from the drive and root leading down to a particular file, each separated by \ character, is called the path to the file.
Drag	Move the cursor onto an item on the screen then hold down the left mouse button and move the mouse, keeping the button depressed. If the item moves on the screen it is being "dragged".
Flash	Flash refers to one type of memory chip used on the SPU system board. Flash memory allows information to be preserved even when power is removed yet it can be erased and rewritten within the controller whenever required simply by sending appropriate instructions. The Futura and Meridia controllers store the car controller software and the system parameter information in Flash Memory. The Wizard's Flash Window is used to upgrade car controller software and configuration information.
Graphical User Interface	The GUI is the name for all the symbols, such as icons and sliders, on the screen that can be used to perform actions with minimal typing and no need to memorize large numbers of command mnemonics.
Hex File	A special file format. Swift Futura or Meridia car software and Meridia configuration data is stored either as a hex file or as an abs file, allowing easy transportation on a floppy diskette for example.
Icon	A small picture, usually representing a computer program, an available operation or file, used by the Windows operating system. From Windows, you double-click on an icon to start the program. A "Swift Futura" icon is created with each new Wizard installation.
Online	A serial connection that can communicate back and forth between the Wizard and the car controller is termed online.
Path	See **Directory tree.**
Root directory	See **Directory tree.**
Slider	A slider (or scrollbar) is a picture on the screen that looks like a sliding control. You can drag it with the mouse or click in it or click its end points to move it. This will change some related value, like the sliding volume and tuning controls on old radios.
SPU	System Processing Unit. The SPU is the main computer board in the car controller cabinet and is situated directly behind the SPU-LINK board. The SPU executes the car and group software and also communicates with the Wizard. The SPU can be thought of as the 'brains' behind the car controller.
SPU-LINK	The SPU-LINK is a special interface board that serves as a central cable connection point for communications with other devices.
Terminal Mode	A method of communicating with the SPU where commands are entered to retrieve information or perform tasks; also referred to as a command-line terminal. Knowledge of Futura and Meridia terminal commands is required. This contrasts with a Graphical User Interface.
Upload	Upload refers to the act of sending or transferring software from your computer to another system. New Futura or Meridia car software is *uploaded*

from the Wizard to the SPU.

Window
The name for a rectangular portion of the screen that contains icons and other data which are obviously grouped together. Usually the Window can be moved on the screen, everything within it also moving so that it stays intact. Often it can be minimized, disappearing and being represented only by a clickable button which is used to restore it, or it can be maximized, taking the entire screen. Sometimes its edges can be dragged, altering its size. The preceding features depend on how it was programmed. Often a Window is referred to as a "screen" in common parlance (for example, the "SPU Connection Screen" in the Swift Wizard) although it usually is really only a part of the screen, the meaning being quite obvious from the context.

Windows Dialog Box
Dialog boxes are small windows that appear on the screen, and are used to supply the program with additional information or actions to complete a task.

Windows Program Group
Program groups are used by Microsoft Windows® to reference installed programs. A "Swift Futura or Meridia" program group is created after the Wizard is installed. These program groups can be found in the Program Manager in Windows.

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D. Windows Basics

The following discussion assumes that you are using Microsoft Windows 95®, Windows 98®, Windows NT® or Windows 2000®.

1. Windows Tutorial and Help

Windows 98® includes a Tutorial on a CD titled "Windows 98 starts here". All versions of Windows have Help available by clicking the "Start" button at the bottom left of the Window then clicking Help in the list that appears.

2. Clicking the Mouse

Most operations and tasks in Windows, except typing text, can be done by moving and clicking a mouse or a similar device such as a trackball or finger-pad and associated buttons. These all have the same function and will all be referred to as a "mouse" here. In many cases the keyboard can be used instead of a mouse click. For example, if one letter of a name in an icon is underlined this generally indicates that pressing the letter on the keyboard while holding the Alt key pressed will be the same as clicking on the icon. However, Swift Wizard was not designed for use without a pointing device such as a mouse and many of its functions are not selectable by keyboard alone. There are two types of mouse clicks recognized by Windows and Swift Wizard, the "single-click" (self-explanatory) and the "double-click" (a rapid succession of two clicks). The "double-click" is always performed with the left mouse button). The "single-click" is always performed with the left mouse button in Swift Wizard unless otherwise noted. In general, in Windows a single click selects an item (called "giving it the Focus") and a double click performs the action (whether the item previously had the Focus or not). Selecting an item with the single click then pressing the Enter key performs it, the same as if double click had been used. In Swift Wizard a single click on an icon or menu item generally performs the action. Here are some examples of using one or the other:

Figure 1: Typical single-click buttons

Above are some typical buttons used in Swift Wizard that are activated by a single click. If the name inside the button has a border then that button has the Focus and can also be activated by pressing the Enter key.

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The figure below shows a portion of a typical Desktop after Swift Wizard has been installed. This is the background screen that contains a selection of icons that will run programs if double-clicked. "Swift Wizard" is shown with the Focus (i.e. it is highlighted) so it can also be run by pressing the Enter key at this time. Single-click an item to give it the Focus.
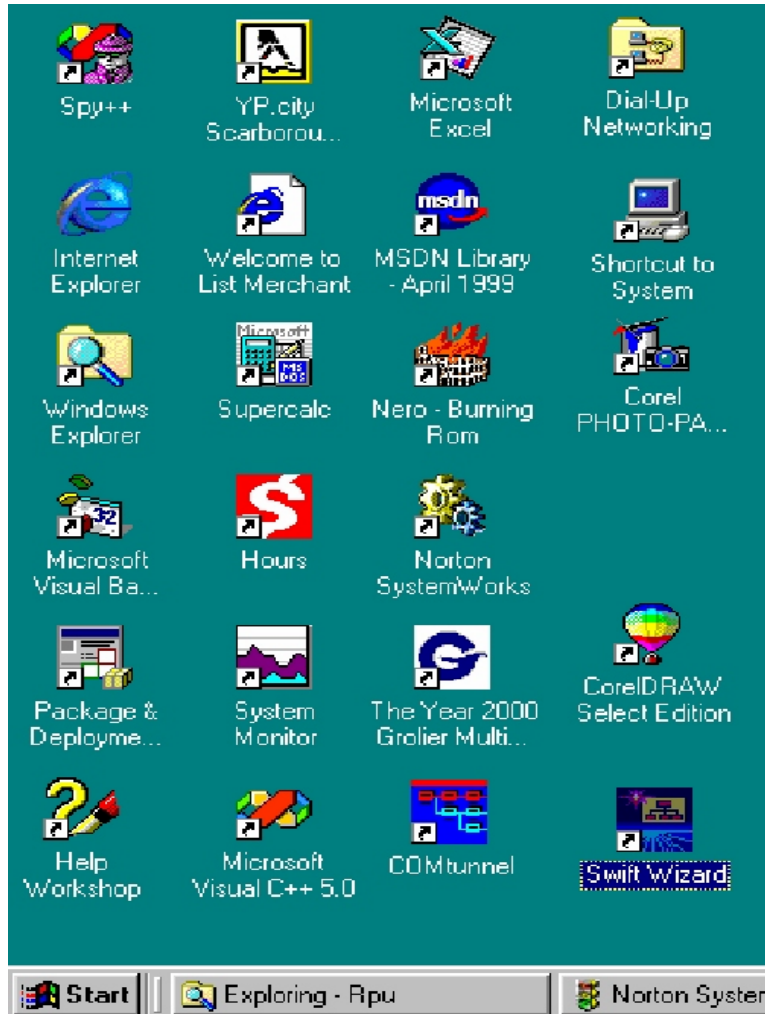

Figure 2: A typical screen Desktop after installation of Swift Wizard

Question: Why give some item the Focus if an action is not to be performed with it?

Answer: In certain cases, such as some lists, as each item gets the Focus information about it is displayed somewhere whereas a double-click (or single-click and the Enter key) actually select it.

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II. INSTALLATION

A. Removing the Previous Wizard

If you are an experienced Windows user, see the *Quick Steps* box below, otherwise, follow the detailed directions that follow.

Quick Steps
1. Use Control Panel to remove the prior Wizard Installations unless you are keeping them.   2. Delete the prior Wizard icons from the Desktop.

1. If there is already one or more prior CEC Wizard versions on this computer (they have the names futura and futura32 in the "Start"/"programs" list and Desktop icons – unless they were renamed by somebody using the computer) you have the choice of either keeping or removing them. Since each Wizard version is backward-compatible with all previous versions, the recommended choice is to remove them just for simplicity.

2. To remove prior CEC Wizard versions use "Add/remove programs" in the Windows "Control Panel". Click "Start" at the bottom left of the screen, click "Settings" in the list that pops up and click "Control Panel" in the list that appears to the right. A "Control Panel" Window will appear with many options about computer settings. Double-click "Add/remove programs". A Window will appear listing all the software packages that have been installed and Registered (meaning they have been properly installed so that Windows knows they exist and what files and computer resources they need, rather than just having their files copied to the computer without Registering). Scroll through the list and find the one or more prior copies of CEC Wizard, named futura and futura32, and for each one click on it and then click "Add/Remove". The program file and the references to it in the "Start"/"programs" list will be removed.

    Note: Be careful not to remove any programs that are not futura or futura32. The word "Wizard" is very commonly used in computers to mean anything that automates or makes procedures easier, so do not accidentally remove any other "Wizard" (i.e. not a CEC program) from your computer.

3. There might well be error messages during the removal process. It might indicate that it is being "terminated" or "aborted", usually because it cannot find files. This is never a problem. It happens because people install multiple copies (updates) without following this procedure first and because they delete the files themselves instead of following this procedure and because they move program files for reasons of organization and convenience, so the Windows record of software packages becomes incorrect. It just means that Windows cannot efficiently monitor what shared libraries are needed and remove those not needed to save disk space. Continue installing the new Swift Wizard whether this removal seemed successful or not.

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4. If there are any Desktop icons for older Wizard versions, generally named futura or futura32, the automatic uninstallation will not remove them. Remove them now by right-clicking (click with the right mouse button) the icon and select "Delete" from the list that appears. Alternatively, left-click to select it, then press the Delete key or press the Del key in the numeric keys with the keyboard Num-lock off).

B. Installing the Wizard

If you are an experienced Windows user, see the *Quick Steps* box below, otherwise, follow the detailed directions that follow.

Quick Steps
Close all other programs before you start the installation process.
1. Insert the Wizard Installation CD or diskette 1.
2. Click "Start" and "Run".
3. Type **<d>:\setup** (whichever drive) or Browse to setup.exe .
4. Click OK.
5. Follow the on-screen setup instructions. Use the default directory or select your own.
6. Create a Desktop icon if you want one.

Installation steps:

1. Make sure all other programs are closed because the installation will copy several shared software files into the system directory if the version of a shared component is later than the one already on your computer. Shared software libraries (files) are components of Microsoft Windows® that perform basic tasks and might be used by several software packages (e.g. one might be used by Swift Wizard, Windows Explorer® and Microsoft Word®). They cannot be updated if a program using them is running during installation.

2. Insert either the Wizard Installation CD or diskette 1 of the floppy disk set in its drive.

3. Click the "Start" button at the bottom left of the screen then click "Run" in the list that appears.

4. Type **a:\setup** if your installation is on diskettes or type something such as **d:\setup** or **e:\setup** if it is on a CD (that first letter must be whichever drive letter is your CD).

5. Alternatively, instead of typing click the "Browse" button and locate setup.exe on the CD or diskette in the Browse Window that opens by double-clicking on the line indicating its drive code (or single-click on it and press the Open button). Note that a list of drives and directories will "drop down" if you click the button with a down-arrow on it. Then either double-click on setup.exe or single-click on it and press the OK button in the Browse Window. It disappears and setup.exe is shown in the Run Window.
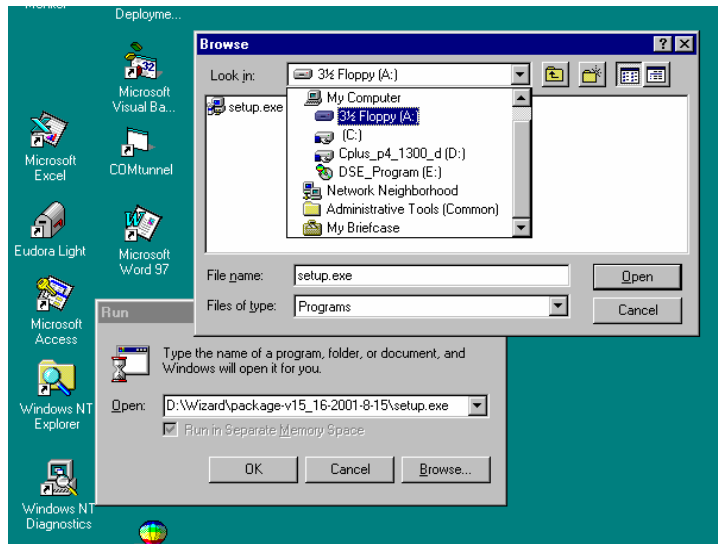
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Figure 3: Selecting an installation directory with the Browse feature

6. Click OK in the Run Window. The installation will start.

7. Follow the on-screen setup instructions during installation. Often there will be one or more messages indicating that a component being installed is older than a version of the same component which is already on your computer and recommending that you keep the existing (newer) one instead. Choose the default to keep the existing component (i.e. file) if you see this message. These are the shared software components mentioned above. To-date, the Swift Wizard has worked with all the various versions of shared software components that happened to be on computers used for development and testing (apparently, Microsoft is maintaining some reasonable level of backward compatibility).

8. The Wizard installation program will ask for the installation directory. If this is the first Wizard installation on this computer, click "Continue" to use the default directory C:\Program Files\ SwiftWizard. The installation will create this directory. If there is already a prior update of Wizard which is version 15.18 or later on this computer (i.e. if there is already a file futura32.exe in a directory named C:\Program Files\SwiftWizard) and you chose to keep it when you read the earlier section "Removing the previous Wizard", then click the "change directory" button and select a directory other than the default, thus retaining the previous version(s) and having more than one version of the Wizard. If you do select a new directory, not the default, it can have any name (something descriptive such as SwiftWizard_v1519 or whatever would be good) and the Wizard installation program will create it for you if it does not already exist. If you select the default directory, the recommended choice, the new Wizard version will overwrite the old one which is there. Versions of the Wizard prior to v15.18 were installed in directories C:\Program Files\futura or C:\Program Files\futura32 so will be unaffected if you did not remove them.

9. The installation process will copy some files to the installation directory specified and other files to the Windows system directory. When the process is complete, the Windows "programs" list will be updated to include an entry for "Swift Wizard".

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10. The installation will not put an icon for "Swift Wizard" on the screen Desktop. If you want one, for convenience in running Wizard, you can make it easily in Windows 98® by clicking on it in the "programs" list (click the "Start" button at the bottom left of the screen then click "programs" in the list that appears and find "Swift Wizard" in this list) then drag the cursor across to anywhere on the Desktop (the background screen) while holding down the mouse button and the "Ctrl" key (if you do not hold down this key it will move the entry and remove it from the "programs" list), then release the mouse button.

In Windows NT® this feature is not available so click "Start", "Settings" and "Taskbar". Then click the "Start Menu Programs" tab and "Advanced". A directory tree will open at "C:\WINNT\Profiles\\<*your logon name*>\Start Menu\Programs" where \<*your logon name*> is actually the user name you used when starting the computer. Your "Swift Wizard" will only be shown in the "programs" list for that user. This is actually the directory of "shortcut files" from which the "programs" list is produced by Windows. Find "Swift Wizard" in this directory or some subdirectory within it, with the usual directory-searching methods. Drag a copy of "Swift Wizard" to the Desktop while holding down the mouse button and the "Ctrl" key (if you do not hold down this key it will move the entry and remove it from the "programs" list). The icon will appear on the Desktop.

C. Location of Files

The installation directory that is given will be used as the main location for the Wizard program and **all** other related files by default. You can, however, alter this to any directory whenever you use Wizard, as described below. Within this installation directory, three other directories will be created the first time that you run Swift Wizard (not during the installation). If the default directory C:\Program Files\SwiftWizard was used, the directories will look like this:

C:\Program Files\SwiftWizard\flash_files - Files containing car software which can be uploaded to a controller and, for the Meridia only, separate configuration files.

C:\Program Files\SwiftWizard\parameter_files - Files containing car parameter information. These also have some information about the building and car configuration but this cannot be uploaded to Flash from these files; it is intended to identify the files when they are used for Offline playback of diagnostic data.

C:\Program Files\ SwiftWizard \frame_files - Files containing diagnostic data which has been captured from controllers and can be "played back".

Additional files needed by the Wizard are copied to the C:\WINDOWS\SYSTEM or C:\WINNT\SYSTEM directory. These are program libraries, not written by CEC, often shared by programs from different suppliers because they do common things, such as database creation. If your computer has one with the same name, the installation will replace it if the Wizard version is newer or advise you to keep it if the Wizard version is older. This is based on the accepted notion that new versions must always be backward-compatible.

Also, note that there is a file named WIZARD.INI used by the Wizard to store initialization and configuration settings. You will never need to access this file, since the Wizard automatically updates this file every time you exit. If it is missing, the Wizard will automatically re-create it and fill it with default settings.

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D. Running the Wizard for the First Time

The first time you run Swift Wizard you will need to indicate which serial port (COM port) willbe used to connect to the controller unless it is the default COM1 which is the setting in the installation package. Also, the first time you run Swift Wizard it creates directories named flash_files, parameter_files and frame_files within the installation directory, as mentioned above, and it sets the paths where it will look for files and store new ones to these three directories. The Wizard will store this information in the configuration file WIZARD.INI that will be located in the same directory as the application, the default being C:\Program Files\SwiftWizard. You can alter any of these if you wish by using the same "Setup" button as for changing the COM port and you can make these changes as often as you wish whenever using the Swift Wizard.

Steps to "Set Up" the Wizard:

1. Start the Wizard by double-clicking on the Wizard icon on the Desktop.

Figure 4: The Wizard icon

2. From the Main SPU Connection Screen, the Window which first appears, click the SETUP button or press Alt/U. A setup Window appears like the one shown below. Fill in the information in the Setup dialog Window (see Figure 5). If you are unsure about anything, use the defaults by clicking OK. Click "Cancel" to cancel any changes you made in this window and close it.

Tip Most computers have only one or two serial ports (COM Ports). Normally these ports are designated as COM1 and COM2. If the computer is connected to a Futura or Meridia car controller, then clicking SCAN PORTS may reveal useful port information such as how many ports the computer has and which port the car controller is connected to.
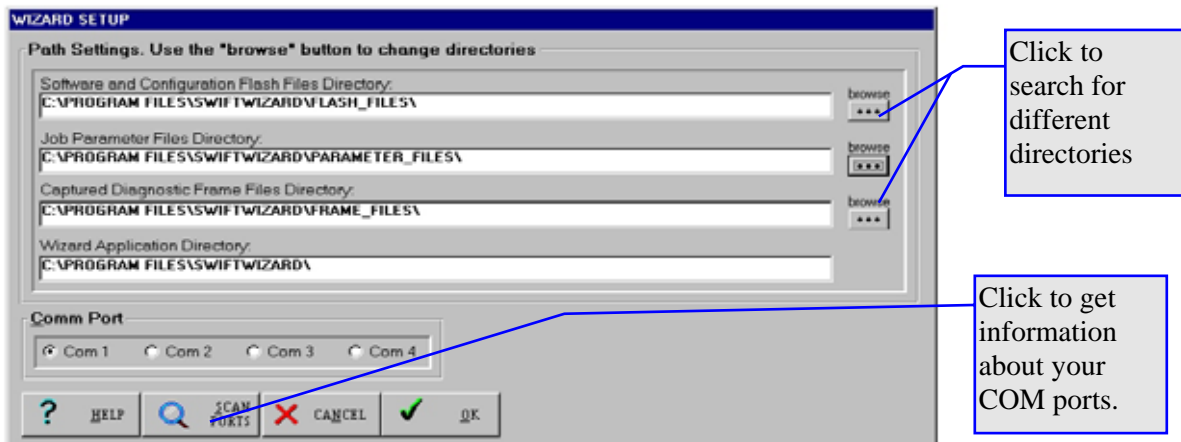

Click to search for different directories

Click to get information about your COM ports.

Figure 5: Choose the COM port and/or directories to use.

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Clicking SETUP from the "SPU Connection Screen" will always get you the Wizard Setup Dialog box.

Example: With the example of default directories in the figure above, the Swift Wizard will retrieve and store any diagnostic frame files that you produce in the "C:\PROGRAM FILES\SWIFTWIZARD\FRAME_FILES" directory.

3. If you prefer to retrieve or store files in some other directory than the initial default, click the "Browse" button alongside that file type and Browse to the directory you want; then click OK in the Browse window. Note however that you can always Browse to find a Parameter or Flash file at the time when you actually request one; these directories are only first choices to save you some searching time. The frame files, however, will always be stored in or retrieved from the "Captured Diagnostic Frame Files Directory" that you select in this Window.
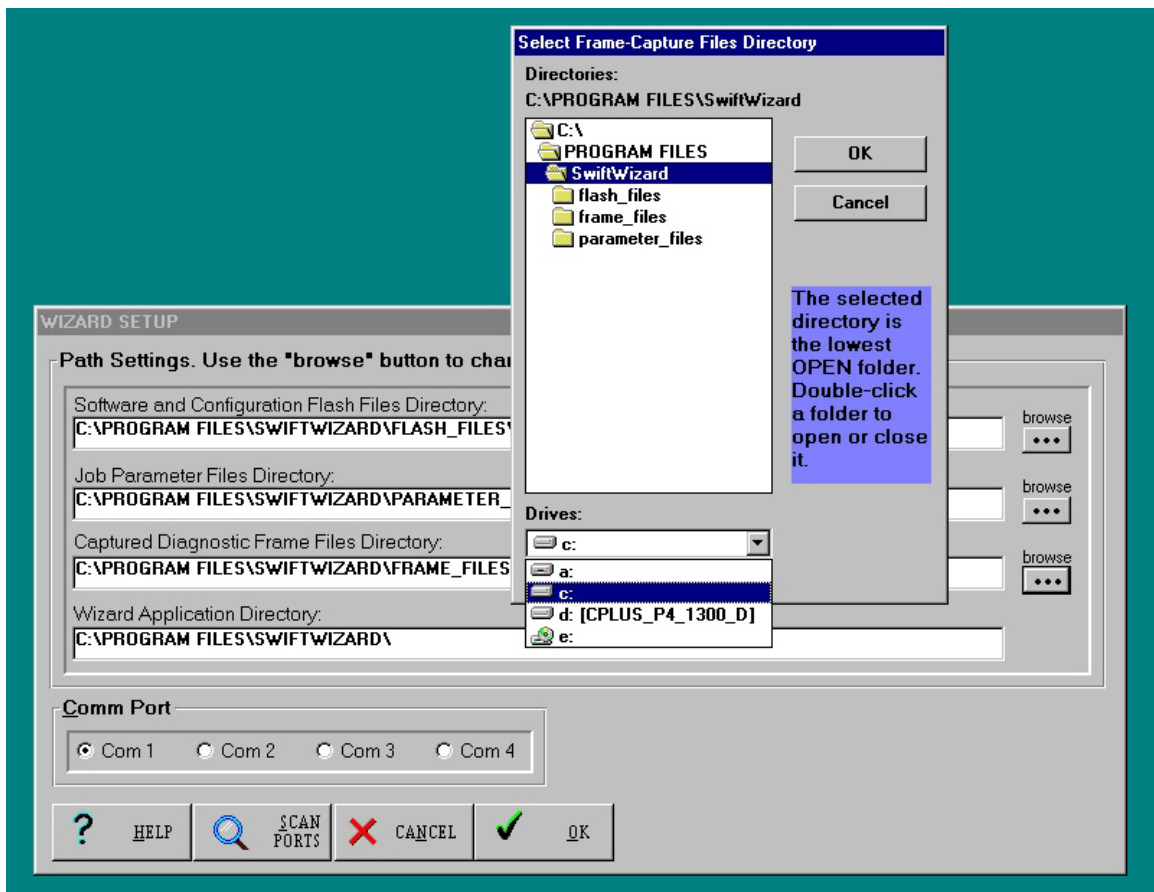

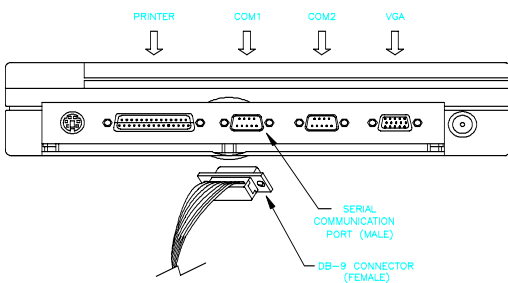**Figure 6: Browsing after pressing the "Browse" button in the Setup window**

4. Click OK in the Setup window to save the information. The Wizard is now installed and ready to be used.
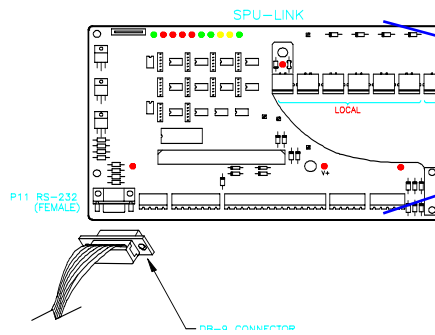
III. WIZARD BASICS

A. *Connecting the Wizard*

Once the Wizard has been properly installed, you will be able to use it to communicate with a car controller after you connect the computer to it. A serial cable with a 9-pin (DB9S) female connector on one end and a 9-pin male (DB9P) connector on the other is needed. Connect one end to the laptop computer and the other to the "P11 RS232" DB9S "USER" connector on the SPU-LINK board of a Futura controller. For a Meridia controller connect it to the DB9S connector, See the figures below:

LAPTOP COMPUTER (Rear View)   SPU-LINK BOARD   FUTURA CAR CONTROLLER
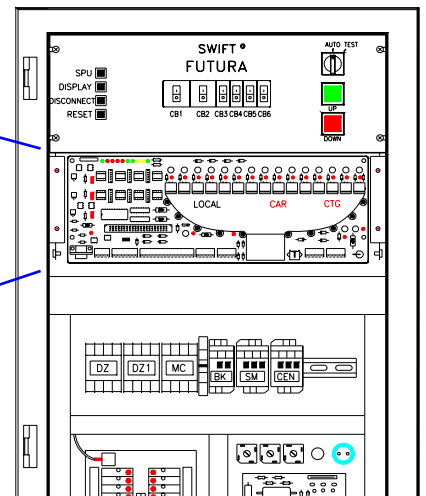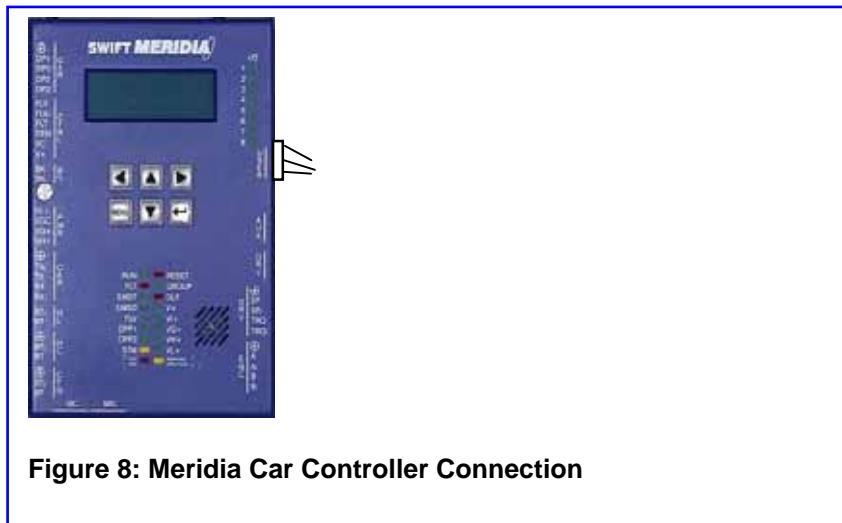

Figure 7: Futura Car Controller Connection

Figure 8: Meridia Car Controller Connection

B. Running the Wizard

Consult *Quick Steps* for a brief overview of the steps required. A more detailed discussion follows.

Quick Steps
1. Start the Wizard by double-clicking the Swift Wizard icon.
2. From the SPU/CCU CONNECTION SCREEN click the RUN WIZARD button.

1. Start the Wizard by double-clicking on the Wizard icon. The Window that appears is the SPU Connection Screen (see Figure 9). At this point, no communication with the car controller has been initiated. This initial Window serves as a starting point, allowing the user to select the desired task.
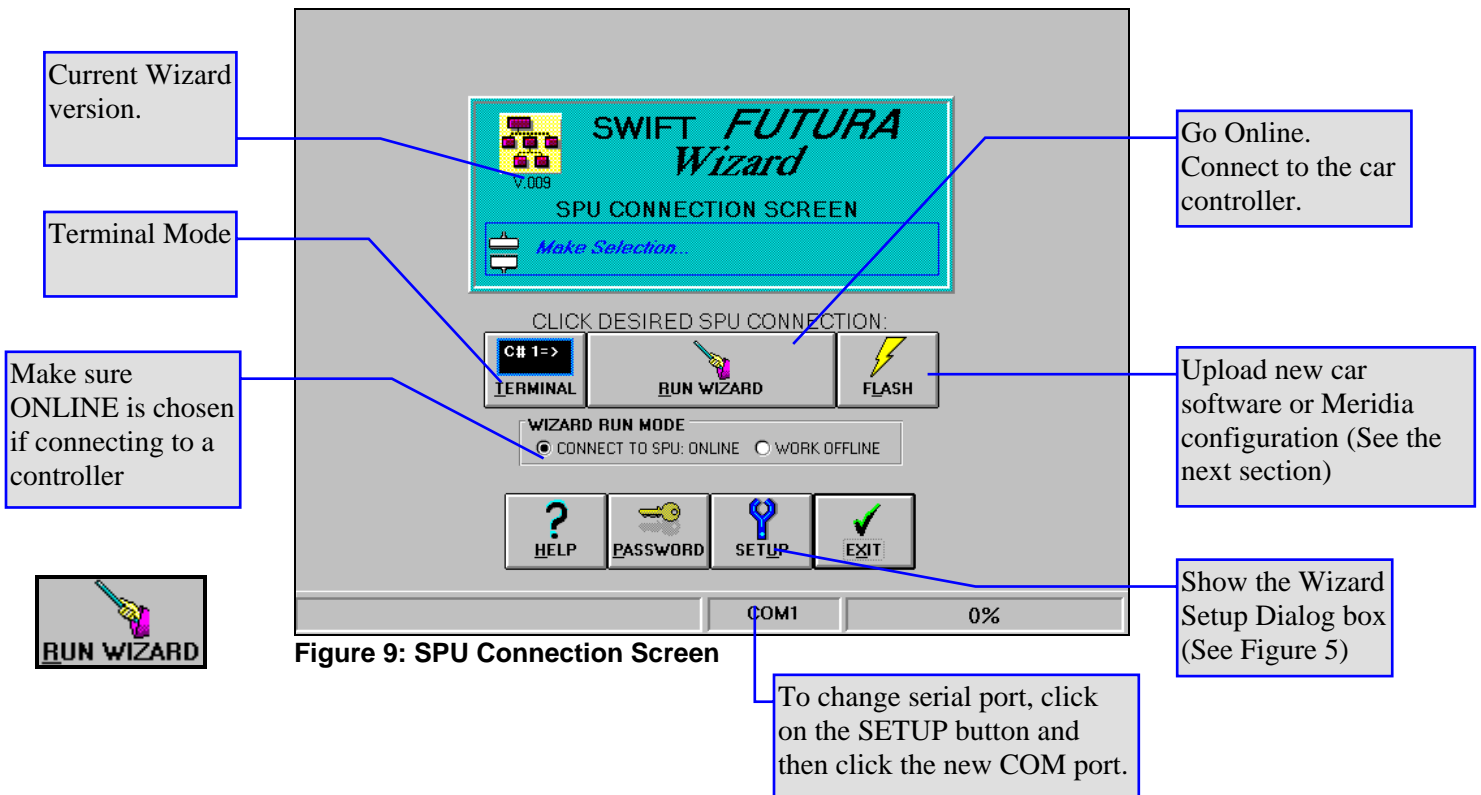
Current Wizard version.

Terminal Mode

Make sure ONLINE is chosen if connecting to a controller

Go Online. Connect to the car controller.

Upload new car software or Meridia configuration (See the next section)

Show the Wizard Setup Dialog box (See Figure 5)

To change serial port, click on the SETUP button and then click the new COM port.

Figure 9: SPU Connection Screen

2. Start with the SPU Connection Screen shown in Figure 9. Before beginning, make sure the "CONNECT TO SPU: ONLINE" is selected if you want the Wizard to communicate with the controller. The "WORK OFFLINE" option is used to examine playback files stored in the computer or to view stored parameter files with no connection to a controller required. Click the RUN WIZARD button and the Wizard will begin to communicate with the SPU in the controller. If everything verifies, the password Window will appear; otherwise, a message box will appear alerting you of the problem.

3. When the password Window appears, enter your password, and click OK. The Wizard will then start to load car and group information that it uses to setup the Windows.

Note It is assumed that the car controller software has been initialized properly, i.e. after you have uploaded the new software, you went through the proper setup procedure. If this was not done, you may not be able to use your standard password to logon. Consult your Futura or Meridia Installation Manual for more information.

4. Once successfully connected, you will see the Main Menu Window. The button corresponding to the car you are connected to will be enabled, all other car buttons will be disabled.
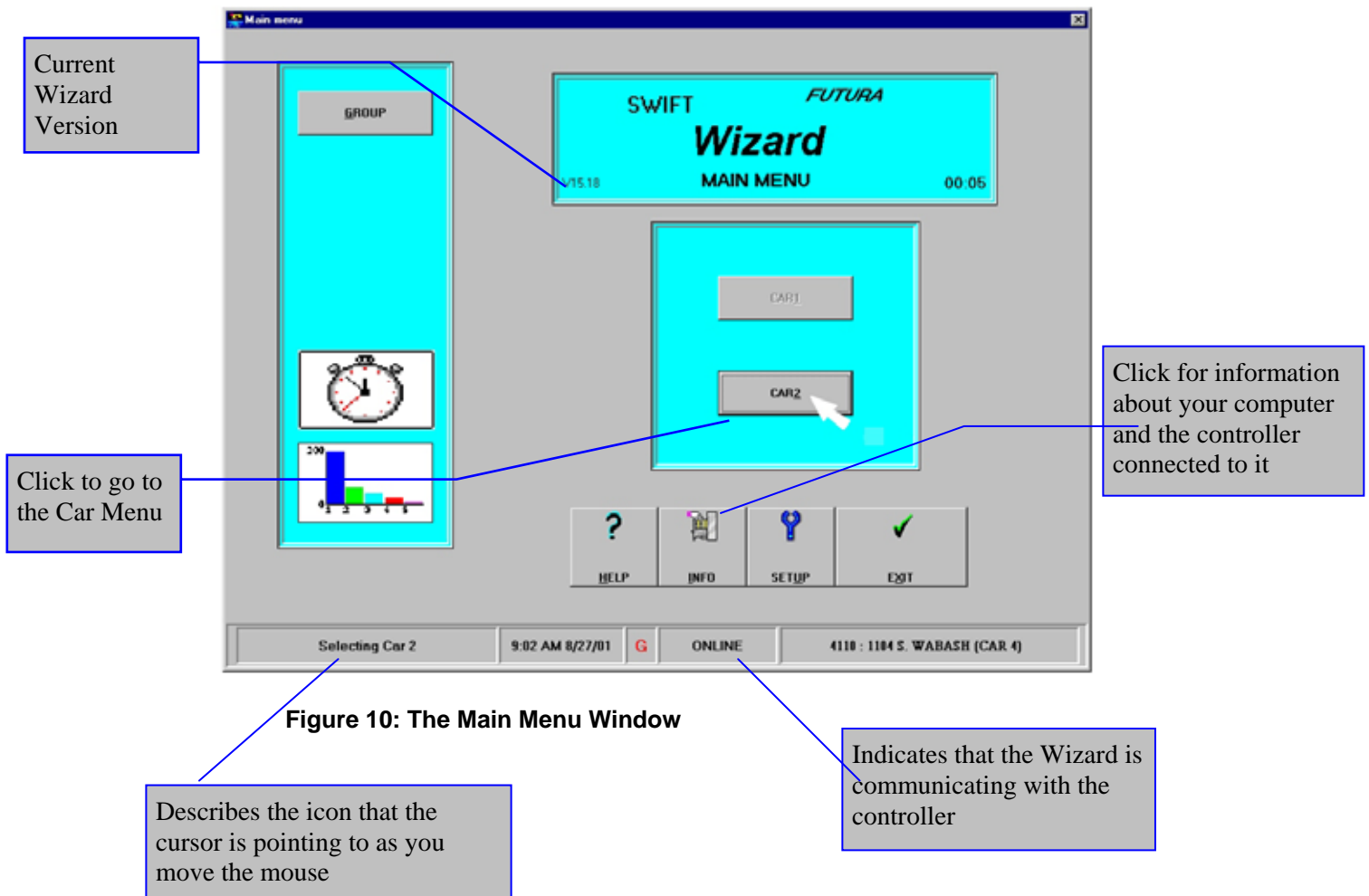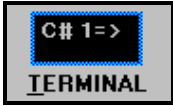

Current Wizard Version

Click to go to the Car Menu

Click for information about your computer and the controller connected to it

Figure 10: The Main Menu Window

Describes the icon that the cursor is pointing to as you move the mouse

Indicates that the Wizard is communicating with the controller

C# 1=>

TERMINAL

C. How to go to Terminal Mode

Consult *Quick Steps* for a brief overview of the steps required. A more detailed discussion follows.

Quick Steps
1. Start the Wizard by double-clicking the Swift Futura icon.
2. Starting at the SPU Connection Screen, click the TERMINAL button.
3. When finished click CLOSE to exit the TERMINAL screen.

The Terminal Mode provides a simple communication method with the controller using the commands (mostly 3 characters each) described in the controller manuals. It would not be used (although it can be) to view or change most parameters since these are more conveniently grouped and shown in the graphical Windows (Limits, Drive, Door Timing and so on) described later. However, there are a few parameters and some other commands that can only be performed in the Terminal Mode Window at present. You will become accustomed to these as you use the Wizard and note its correlation to the "Human Interface" section of the controller manual.
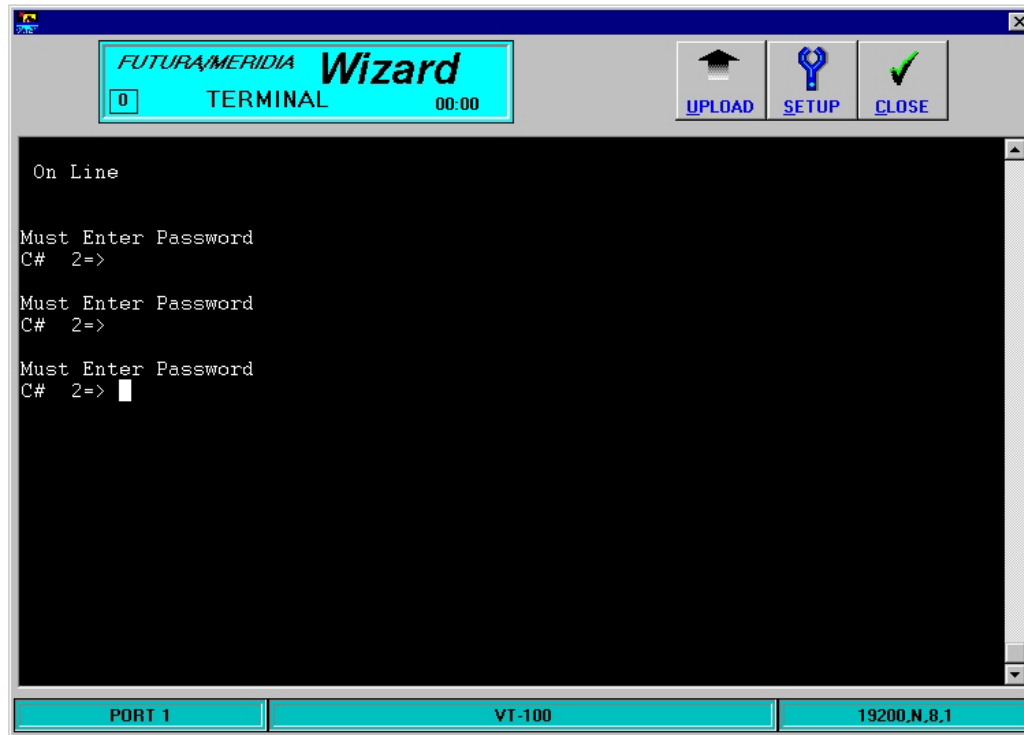To go to Terminal Mode start with the SPU Connection Screen shown in Figure 9. Click the

Figure 11: The Terminal Window

TERMINAL button. Once inside the Terminal Window, press the Enter key, to verify that you have communications between the Wizard and the SPU. If you see a response on the screen, you

are connected. Your terminal Window will appear as shown in Figure 11 -- If you are unfamiliar with terminal commands, please consult your Futura or Meridia Installation Manual.

In the example shown in Figure 11 a password has not yet been entered and this must be done before any commands will be accepted. If the password had already been entered after pressing the RUN WIZARD button before returning to this Window, then commands would be accepted immediately.

If you press the UPLOAD button the Flash Upload Window will appear. This can also be evoked from the SPU Connection Screen Window by pressing the FLASH button. The procedure for Flash Upload of controller software or Meridia configuration is described later.

If you press the SETUP button the "Wizard Terminal Setup" pop-up Window will appear. You can use this to alter the COM serial port and low-level communications format to use for communicating with the controller. The current standard for Futura and Meridia controllers is 19200 baud (the speed) with no parity, 8 bits of data and 1 stop bit, typically shown as 19200,N,8,1 when described. The current setting is shown at the bottom of the Window (see Figure 11). When finished, close this pop-up Window by clicking the OK button to make any changes that were requested or clicking the CANCEL button to ignore any changes.

Figure 12: The Terminal Setup Pop-up Window

When you have finished using the Terminal Mode Window exit from it by pressing the CLOSE button.

IV. WIZARD PROCEDURES

A. How to Upload New Car Software

Consult *Quick Steps* for a brief overview of the steps required. A more detailed discussion follows.

> ### Quick Steps
>
> 1. Start the Wizard by double-clicking the Swift Futura icon.
> 2. From the SPU Connection Window, click the FLASH button.
> 3. In the Flash Window (titled Car Software or Car Configuration) select the location of the car software, Meridia car configuration or RVU software.
> 4. Select the file you want to upload, then click the UPDATE CONTROLLER SOFTWARE button.

This section details the steps required to upload Futura or Meridia car software or Meridia configuration data from the Wizard to the SPU. This Window is also used to upload software to the "RVU – Wizard".

1. Start the Wizard by double-clicking the Wizard icon on the screen Desktop. The SPU Connection Screen Window (shown in Figure 9) will appear. Click the FLASH button. The Flash Window (shown in Figure 13) will appear.

2. Click the Futura, Meridia or RVU option in the "controller type" block so that the type of controller connected (or RVU) is shown as the one selected (unless it is already). The Flash Window does not automatically select the controller type because controller software is not necessarily installed to give that information. If you select Futura or Meridia there will be an "upload baud rate" box allowing you to select the speed at which to send the new software. Higher speeds are just to reduce the time spent uploading. You would probably use the highest speed and try again at a lower speed if there is any problem, which might be caused by line-noise. If you select RVU there is no choice of speed to upload new software to an RVU. If you select Meridia there will be an "upload type" box allowing you to choose whether new software (the "program" choice) or new configuration data (the "config" choice) is being uploaded. For the Futura, the software and configuration data are always bundled together in the same file so both must be uploaded together.

3. Use the "Select Drive" drop-down list to indicate the disk drive holding the file to upload. If it is on a diskette, insert it into drive A: before selecting it. To see the list of disk drives on your computer and to choose one, click the button with the down-arrow on it, which causes a list of disks to appear (i.e. drop-down) then click the disk you want to select. When you select a disk, if it is not the same as previously selected then a directory tree on that drive will be shown in the "Directory" list box near the right of the Window. If you chose the drive which has the default directory (which can be seen and altered in the Setup Window) then the default directory will be at the end of the tree; otherwise if the drive is the one containing the Wizard application (futura32.exe) then a "flash_files" directory within that will be at the end of the tree; otherwise it will show what was previously shown for that drive or show the root

directory if it is drive A: (a diskette). In any case, this is only an initial point from where you can search to any directory on the drive. You can also change the drive as described here any number of times while searching.

4. The box to the left of the directory list box shows the Flash (software or configuration) files in the directory currently selected in the directory list box. The files with names ending ".HEX" or ".ABS" or having a C somewhere before the extension period and a 0 immediately after the period (such as 4110c2.001) will be listed because these are the standard names for Futura, Meridia and RVU Flash files (see Appendix B). Any other files in the directory will not be shown, so cannot be selected. To select another directory click on it in the directory list box; the directories within it, if any, will be shown below it and the Flash files within it, if any, will be shown in the file list box. The selected directory is the lowest OPEN folder shown (its folder icon looks open); the files are listed for this directory, which is not necessarily the lowest in the list (there might be closed folders below it)

5. When the correct drive and directory have been selected, click the file containing the car software (or Meridia configuration data) from the file list. Note that the information about the file in the top right area includes the message "Not a valid Parameter file". This is because the same Window is used to select Parameter files, for a different purpose, as well as these Flash files. Click the UPDATE CONTROLLER SOFTWARE button (note that the button still has this name even if it is only Meridia configuration data, in which case software will not actually be changed) and the Flash update information/confirmation Window (Figure 14) will appear.
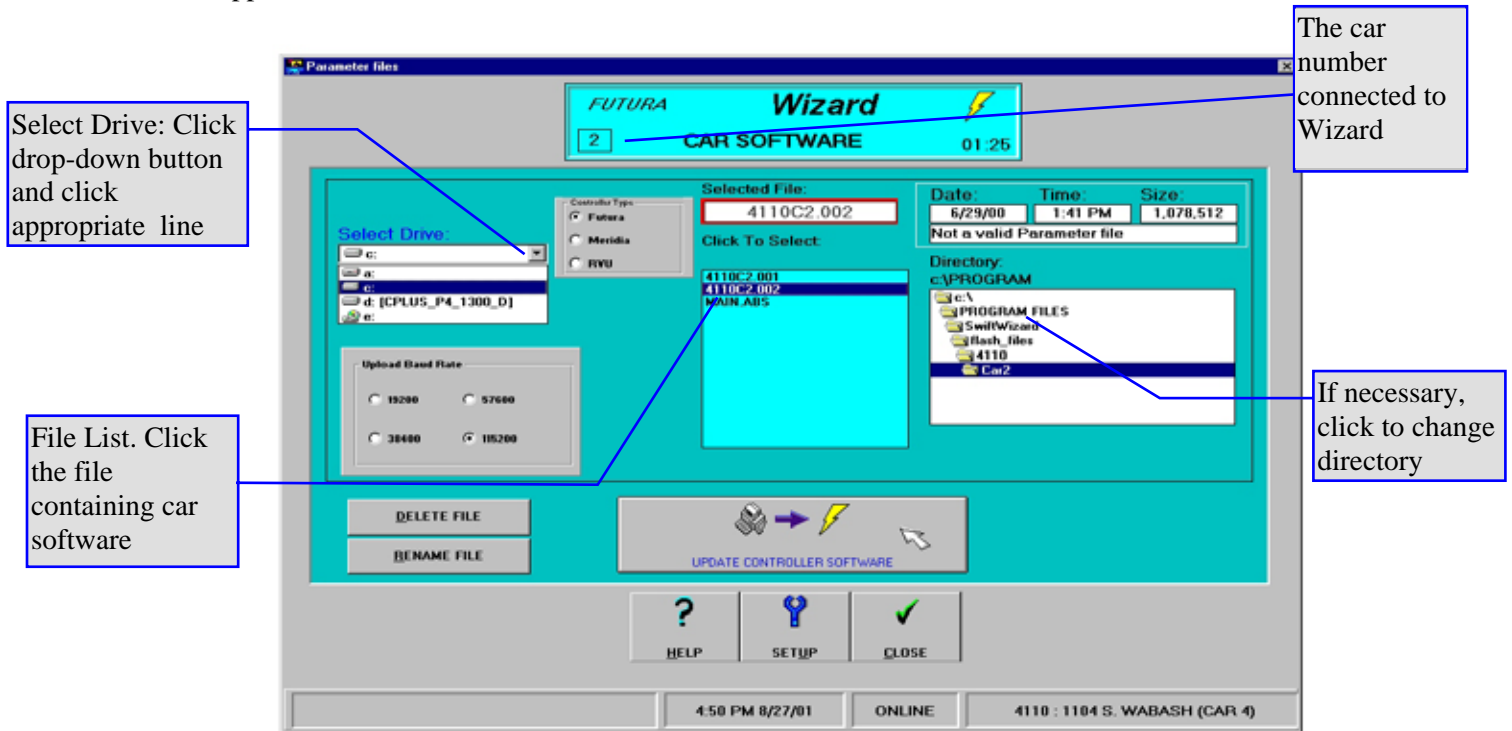

Figure 13: The Flash Upload Window.

6. Click OK in the Flash update information/confirmation Window to start the upload. The progress of the various stages of uploading, erasing the EEPROM, writing to the EEPROM

and waiting for the controller to confirm success, will be indicated by the progression of a coloured bar in this small Window.
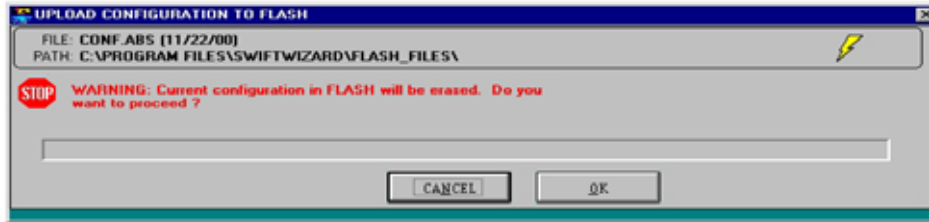

Figure 14: Flash Upload Dialog Box

7. Usually the Wizard can put the controller into the required state to perform the upload but there is one case in which a controller can be unresponsive to any command from the Wizard. If the Wizard encounters this lack of response it advises you to cycle power to the controller *while the Wizard continues to run* (shown in Figure 15)**.** This allows the Wizard to catch the controller at the correct instant during its power-up sequence and direct it to enter the Flash upload mode. If the Wizard does not detect success during the following 60 seconds after this message it finally ends the Flash upload attempt with a failed result. If some attempts always fail and the connection is confirmed good, the cable undamaged and the P.C. port working then Tech Support might need to be contacted because there might be a hardware problem with the controller or possibly a BIOS problem (the low-level basic software that can only be changed by part replacement).
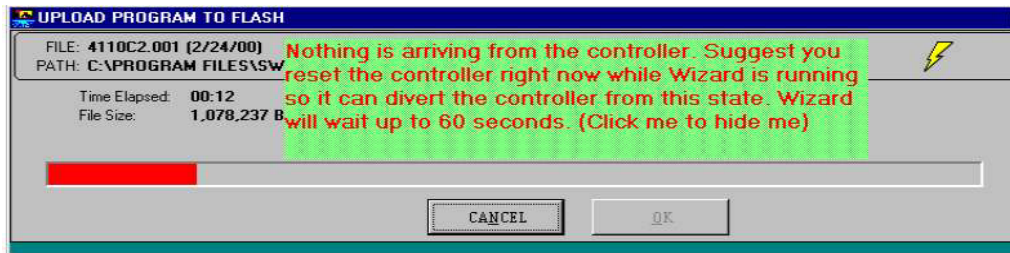

Figure 15: Flash Upload Requesting Controller Power Cycling

8. When the Flash Upload has completed, the controller starts the software and its success or failure is shown in a monochrome "Terminal Window" (see Figure 16). You cannot type in this Window; review it and click OK to close it.

Figure 16: Flash Upload Completed Successfully

B. How to Save Car Parameter Files

The Car Parameters can be saved in files for purposes such as viewing later (perhaps in the office) and reloading into this controller or another with the Wizard. Configuration data is also saved along with the Car Parameters and this is typically used to play back recorded diagnostic data.

Consult *Quick Steps* for a brief overview of the steps required. A few detail notes follow.

Quick Steps

1. Start the Wizard by double-clicking the Swift Futura icon.
2. From the SPU Connection Screen click the RUN WIZARD button.
3. Enter your password. After connecting and reading information from the controller, the Main Menu Window (figure 10) will appear.
4. Click the button corresponding to the connected car and the Car Main Menu Window (figure 17) will appear.
5. Click the PARAMETERS button to get to the CAR PARAMETERS Window (figure 18).
6. Select the directory where you want to save the Parameters file (refer to the preceding section "How to Upload New Car Software" for details).
7. Click SAVE. The Wizard will then read all the parameters from the controller.
8. Edit the filename in the dialog box that appears, if necessary, then click OK to save the file.

Figure 17: Car Main Menu Window

Follow the steps detailed in Quick Steps. The directory shown initially depends on the current setting for the Wizard on this computer, which can be altered by clicking the SETUP button in this Window (and some others) and changing the "Job Parameter Files Directory" in the pop-up

Window which then appears, using its "Browse" button. In any case, whatever the initial directory you can Browse around in the Car Parameters Window, which is the same one used for Flash Upload shown in Figure 13. The browsing is described in its accompanying text above.

If there are any Car Parameters files already in a directory they will be shown when you select it. For this purpose, any files having a letter p anywhere in the name and a digit immediately following the extension period are considered to be Car Parameters files. When you click on a file that is shown its basic information is read, even if you will not be using that file, and its creation date, time, file size and building name are shown. If it is found to be not a Car Parameters file that is stated in place of the building name.
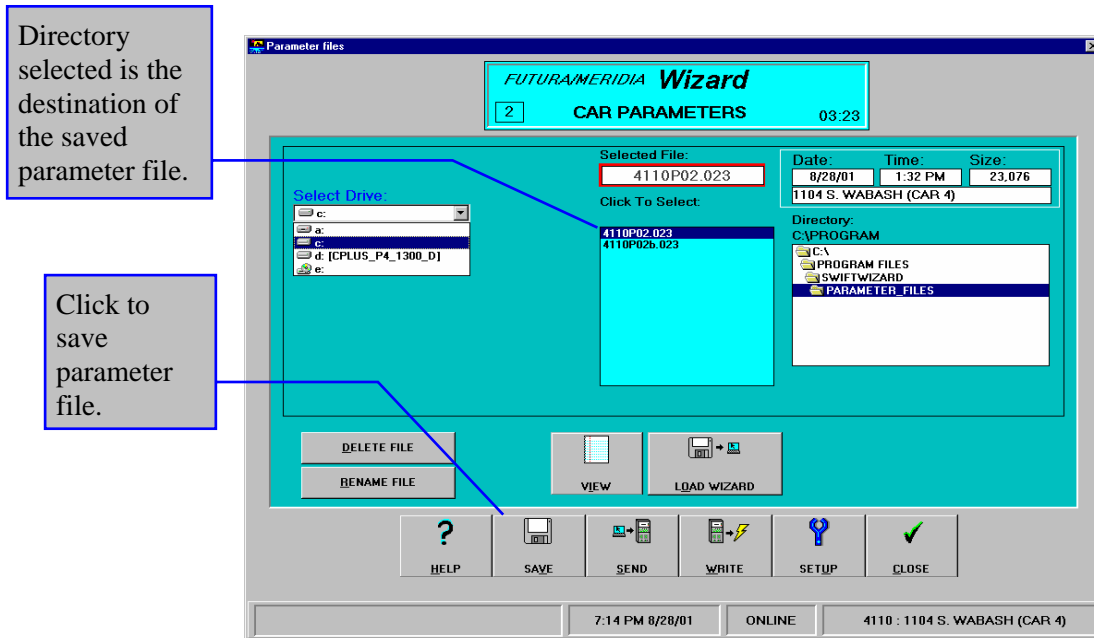

Figure 18: Car Parameters Window

This Window is also used for viewing and loading Car Parameters files, but when you click the SAVE button any existing file that you might have clicked is ignored. Rather, a suggested file name is built from the job number, car number and car software version which are now read from the controller along with the car parameters (see Appendix B). The suggested file name is shown and you can alter it. For example, you might add a sequence number or letter of your choosing before the extension period if there is already a parameter file of that name and you wish to keep several (typically, if differing parameters are being tried for the same car).

Then click OK in the file name pop-up Window and the Car Parameters file will be written, then the summary box shown in Figure 19 will be shown. Click OK to hide it and finish.

Figure 19: Summary of Car Parameters Stored

C. How to Load Car Parameter Files

The Car Parameters can be loaded from a file where they were previously saved, then written to the controller. After loading from the file, most parameters can be viewed with the Wizard and altered if necessary before they are sent to the controller.

Consult *Quick Steps* for a brief overview of the steps required. A more detailed discussion follows.

Quick Steps

1. Get to the Car Main Menu Window (Figure 17) as described in Section B *Quick Steps.*
2. Click the PARAMETERS button.
3. Select the File you want to load and click the LOAD WIZARD button.
4. Click OK to the warning message to confirm. This will initialize the Wizard with the parameters from the file.
5. Click SEND to transfer the information to the SPU. This will store the parameters in temporary RAM memory.
6. Click WRITE. This will save RAM data to permanent FLASH memory.

Follow the steps detailed in *Quick Steps*. Details of the procedure for browsing through the directories to locate the file you want are given in the earlier section ***How to Upload New Car Software*** and the parameter file names listed will be as described in the previous section ***How to Save Car Parameter Files.***
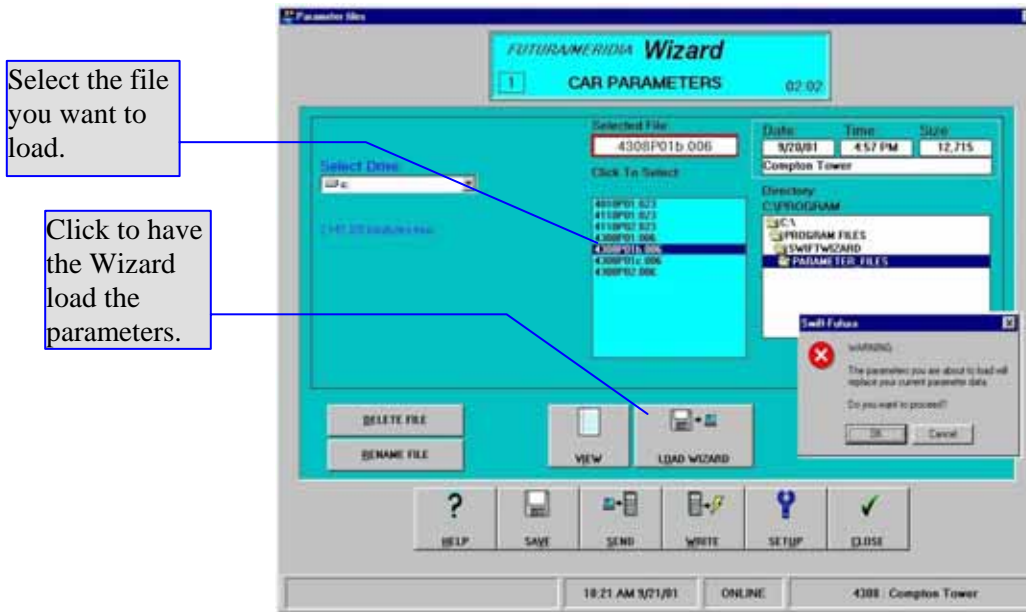

Select the file you want to load.

Click to have the Wizard load the parameters.

Figure 20:   Loading Car Parameters

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D. How to Change Car Parameters

After reading from the controller most Car Parameters can be changed within one of the eight graphical Windows - "Load Weighing", "Services", "General", "Brake", "Drive", "Motion", "Door Timing" and "Limits" - then written back to the controller. Those that are not shown in any of these Windows must be altered in the Terminal (text only) Window.

Consult *Quick Steps* for a brief overview of the steps required. A more detailed discussion follows.

Quick Steps
1. Get to the Car Main Menu Window (Figure 17) as described in Section B *Quick Steps*. The Car Parameters will automatically be read from the controller.   2. Click the button for the type of Car Parameters Window which you want to view or change. The appropriate Window (for example, "Limits") will appear.   3. Move the sliders and click CSW options to make changes.   4. Click CLOSE to leave the Window. Confirm that the changes should be written to controller Ram and Flash memory.   5. Repeat the above for any other Windows containing other parameters to be changed.

1. Do initial steps as in Quick Steps above. From the Car Main Menu click a button for the one of the eight Windows that names the type of parameter you want to change ("Door Timing" for example). That Window will appear.

2. Each numeric parameter represented in a Window will have a corresponding slider bar (also called a scrollbar). The parameter value is changed by sliding the bar; it cannot be typed. There are three ways to move the bar and change the parameter: (1) Click the arrow button at either end of the bar to increase or decrease the value. This makes the smallest possible change (2) Drag the slider with the mouse. This makes changes much faster but is difficult to get precision (3) Click within the bar on either side of the slider. This makes a change by a preset amount.

    Normally, you would drag the slider close to the value you want then use methods (1) and (3) to obtain the precise value.

    Most CSW flags are represented in the parameter Windows. They are shown as checkboxes. Click the box to set or reset the CSW flag.

    When a parameter on the screen does not have the same value as it does in controller RAM, it is highlighted (the value has a purple background). The single oddity is door preopening; for readability it shows the zones rather than the CSW flags so any zone that does not match the current controller RAM setting is highlighted.

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To cancel any changes in the parameter Window currently showing and make these parameters the same as those in controller RAM, press the CANCEL button and a pop-up Window appears allowing you to either restore this set of parameters in the Wizard from controller RAM or restore both controller RAM *all* parameters in the Wizard (not just this Window) from controller Flash memory.

Some of the parameter Windows include one or more sets of buttons which are clicked to view different parameters in the same space, to fit more on the screen. For example, the MOTION MENU parameter Window shown in Figure 21 has a set of three buttons which are clicked to select either "MOTION A", "MOTION B" or "PRE-COND" parameters in the set of slider bars on the left side of the Window. The "PRE-COND" parameters can only be viewed if the preconditioning CSW flag is selected in the checkbox at right. A second set of buttons chooses whether USL, DSL, Faults, Offset parameters or Damp(ing) parameters are shown.
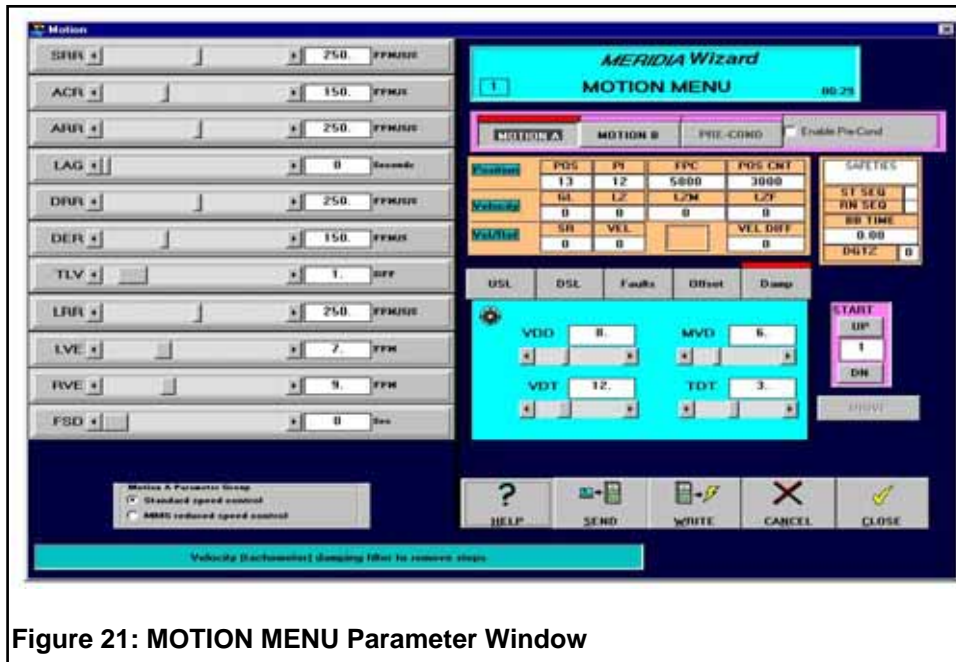

Figure 21: MOTION MENU Parameter Window

Note: In the MOTION MENU Window there is some additional information as well as the parameters. Various position and speed data is shown in real time. Also, the car can be run from this screen by selecting a number of floors to run (typing it in) and clicking the UP or DOWN button. The Slowdown Limits can be seen in this Window as part of the Motion data but can be altered in the LIMITS parameter Window.

When the parameters are the ones you want there are two choices for changing them in the controller: (1) change the RAM values only, so they can be restored from controller Flash memory if required or (2) change both the RAM and Flash memory values so that the new parameters will pertain even if power is lost and the previous parameters no longer exist in the controller.

To store the new parameters in controller RAM only, press the SEND button. To store the new parameters in controller RAM and Flash memory, either press the SEND button

followed by the WRITE button or simply close the Window and confirm that changes should be sent to the controller.

Parameters that are only stored in controller RAM will be lost (replaced by parameters from controller Flash memory) when the Wizard is disconnected or the controller power is cycled.

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E. How to View and Save Diagnostic

The state of all I/O points on the controller boards and a variety of speed and position data can be stored every $1/16^{th}$ of a second for about 30 seconds for the Meridia or almost 40 seconds for the Futura. This can then be played back – started, stopped, stepped or run forwards or backwards. Also it can be stored on disk and copied to other computers for viewing with the Wizard in an office, with no connection to a controller required. The diagnostic file size is only about 200K bytes so it can quickly be transmitted via Internet.

DIAGNOSTIC

Consult *Quick Steps* for a brief overview of the steps required. Detailed notes follow if more information is needed.

> **Quick Steps**
>
> 1. Get to the Car Main Menu Window (Figure 17) as described in Section B *Quick Steps*.
> 2. Click the Diagnostic button.
> 3. In the Diagnostic Window click the FRAME button to enable the RESET, ACTIVATE and SETUP buttons.
> 4. Click SETUP to select a trigger type (default is immediate capture) then press ACTIVATE to capture the Diagnostic data or prime the trigger for automatic capture (if not "immediate").
> 5. When data is ready the button below FRAME changes from "NO FRAME ACTIVITY" or "WAITING TO TRIGGER" to "FRAMES CAPTURED" and the nine playback buttons appear. Use the buttons to play back and view as required. Click the FRAME button to return to a real-time display.
> 6. If you want to store Diagnostic data, click the "FRAMES CAPTURED" button, click OK to store the Parameter file and click SAVE to store the

If there is already Diagnostic data stored in the controller when the Diagnostic Window appears, the "FRAMES CAPTURED" button will be active and the playback (tape recorder style) buttons will appear when the FRAME button is clicked. The data is lost when controller power is cycled or when the RESET button is clicked in this Window or when the RVU-Wizard resets it.

When real-time data is being displayed the building/date/time bar across the top is blue; when playback data is being displayed it is red.

When Diagnostic data is being stored on disk a Parameter file is stored first. This file will be required if the Diagnostic is later played offline by the Wizard (i.e. with no connection to the controller) because it contains some group and car configuration information. This is precisely the same file as would be stored if SAVE was used in the PARAMETERS Window. However, Wizard does not check whether one of these files was already created; it simply creates another file. The suggested Parameter file name is given and it is recommended that it be used, except that you might prefer to alter it slightly if another Parameter file of the same name exists and you do not wish to overwrite it (for example, add a letter after the car number). You cannot alter the directory during this procedure except to store on diskette drive A: if you prefer. The Parameter

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directory can be altered by using SETUP from the SPU/CCU CONNECTION SCREEN or the MAIN MENU.

The Diagnostic Frame file uses the recommended naming convention and cannot be altered. For a particular job and car number, the file name suffix (after the period) uses the first 3-digit sequence that does not already exist for this file name in the directory, so there can be 999 Diagnostic files for a car before some overwriting or deletion is required. As with the Parameter files, the Diagnostic Frame file directory can be altered with the SETUP button from the SPU/CCU CONNECTION SCREEN or the MAIN MENU.

For the Meridia there is space to show 16 I/O boards with 8 modules each. At the right is a list of all I/O boards. To show any board in this list in any of the 16 places, first click the board in the list to highlight it then click in the name bar (above pin 1) of the slot where it is to be placed and it will replace the board that is currently there.
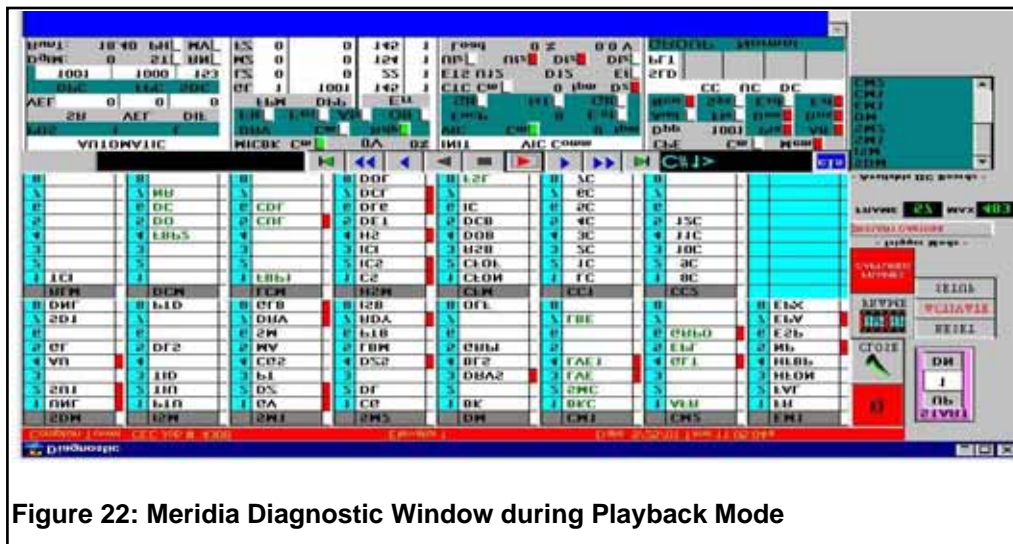
Figure 22: Meridia Diagnostic Window during Playback Mode

For the Futura there is space to show 8 I/O boards (called Diagnostic blocks or SMIs) with 24 modules each. To alter which SMI is shown in any of these Diagnostic blocks click SETUP and the DIAGNOSTIC SETUP Window will appear. It shows a miniature display of the 8 Diagnostic blocks and any additional SMIs in an area to the left side. To replace any board in any of the 8 places, drag the new board with the mouse to the location you want and it will replace the board that is currently there, if any (the old board will then appear in the unused group at left). To remove a board without replacing it either click it and click the REMOVE button or double-click the board. Click OK when done.

At about the centre of the Window is a place where Terminal-type commands (as described in the Human Interface section of the controller manual) can be typed for transmission to the controller. With the Futura, the Wizard Diagnostic includes a blue button at about the right-centre of the Window which is clicked to replace the display of the lower four Diagnostic blocks with a miniature Terminal screen showing the commands and controller responses and clicked again to restore the Diagnostic block display, whereas with the Meridia the Wizard Diagnostic always shows this miniature Terminal screen.

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To display the Group operation Window from the Diagnostic Window press the G button at the top (Meridia) or bottom (Futura) right side. To return to the Diagnostic Window press the button with the car number in the Group operation Window.

Figure 23: Futura Diagnostic Window during Playback Mode

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V. Appendix A -- Troubleshooting

Presented below are some of the more common situations that may confront the user.

No Serial Communications

To verify communications, go to the Terminal Window (from the SPU/CCU CONNECTION SCREEN). Click the Enter key, wait for a response. This will verify that you have communications between the Wizard and the SPU. If there is no response, you may have one or more of the following problems:

1. Bad serial cable. The cable may have a broken wire or bad connector.
2. The COM port number selected through the Wizard is incorrect. It can be changed with SETUP from the SPU/CCU CONNECTION SCREEN.
3. Another program is using the same COM port -- the Wizard cannot take control.
4. The Futura SPU or Meridia CCU may need resetting.

Upload Errors

If an error has occurred while trying to upload car software, please verify the following:
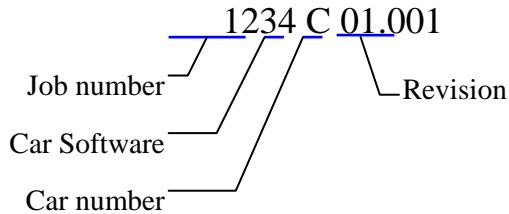
1. You used the Flash button from the SPU/CCU CONNECTION SCREEN.
2. Check that you have communications with the SPU/CCU. Go to the Terminal Window and press Enter -- you must see a new prompt if everything is okay.
3. Try it again at a lower speed.

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VI.   Appendix B -- File Naming Convention

A special naming convention is used for files accessed by the Wizard. The file names provides information about the file type, job number and car that it pertains to.

Car Software Files

Example: 1234C01.001

1234 C 01.001

Job number

Car Software

Car number

Revision

Wizard Parameter Files

Example: 1234P01.001

1234 P 01.001

Job number

Parameter File

Car number

Revision

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