SYSTEMSOFT

Software for the Next Generation

CARDWIZARD™ / CARDWIZARD-PLUS™ FOR WINDOWS® NT

The Complete PC Card Software Solution for Windows NT

User's Guide

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CardWizard ™ for Windows® NT

User’s Guide

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Chapter 1

CardWizard for Windows NT

Unmatched PC Card Support for Windows NT 4.0

SystemSoft's *CardWizard for Windows NT* enables you to use PC Cards easily. The User Interface provides a graphical view of all PC Card slots in your computer and the advanced diagnostic capabilities assist you in configuring PC Cards.

What is CardWizard for Windows NT?

CardWizard for Windows NT enables PC Card Plug and Play in the Windows NT environment. It assists users in configuring PC cards simplifying the installation/configuration process.

CardWizard features a PC Card expert system that addresses advanced configuration issues. Insert a PC Card in a PC Card slot and the Wizard pops up a graphical representation of the slots and information about the card. If there are any problems, click on *Wizard* and CardWizard will assist in the problem resolution process. Problems like incorrect or missing PC Card drivers, system resource conflicts (IRQ, Memory, or I/O ports), unconfigured Network and ATA cards, as well as memory conflicts are handled.

In addition, *CardWizard* works with *PowerProfiler/SE*, SystemSoft's premier power management solution, and other third party power management systems from IBM and Toshiba to power manage PC Cards. *PowerProfiler/SE* combines highly integrated system-level software with a simple-to-use graphical interface that delivers unmatched power management capabilities.

What CardWizard for Windows NT Can Do for You

The *CardWizard for Windows NT* package extends the PC Card support for Windows NT in many ways:

1. Provides the ability to Hot-Swap Mass Storage (ATA, Flash, SRAM), Network, Combo, Multi-function (16-bit and CardBus), SCSI, Specialty and Modem PC Cards.
2. Supports 16-bit and CardBus PC Cards.
3. Provides support for PC Cards using existing Windows NT drivers.
4. Configures PC Cards automatically.
5. Minimizes user intervention when configuring PC Cards.
6. Provides extensive power management support for PC Cards including the ability to enable/disable PC Card slots.
7. Provides extensive Wizard diagnostics, providing the user with information about existing problems as well as the ability to automatically correct problems.
8. Assists user resource constrained systems by providing better handling of IRQs for Modem and ATA PC Cards.
9. Provides the ability to Hot-Dock your computer and configure PC Card and PCI Local Bus devices on the dock unit (*CardWizard-Plus* only).
10. Provides centralized control of your PC Cards through a graphical application.

What is CardWizard-Plus for Windows NT?

In addition to all of the features and functionality of *CardWizard for Windows NT, CardWizard-Plus for* W*indows NT* includes support for hot docking (enabling users to insert and eject their notebooks from the dock without having to shut down their systems). Through the application, users can view information on PCI devices and PC Card slots on the docking station. Hot docking supports the following devices:

- PC Card slots
- Pass-thru devices on the docking station (serial and parallel import devices, mouse, external keyboard, joystick, and monitor)
- Selected PCI network devices

ISA devices on the docking station are not supported in this environment. Limitations of this environment are:

- If the system is hot inserted into the dock, the ISA slots will not be available.
- If the system is cold docked, you will not be able to undock the system.

At this time, CardWizard-Plus only supports hot docking on docks which have a manual eject mechanism.

Chapter 2

Installing CardWizard for Windows NT

Installation Wizard Makes it Easy!

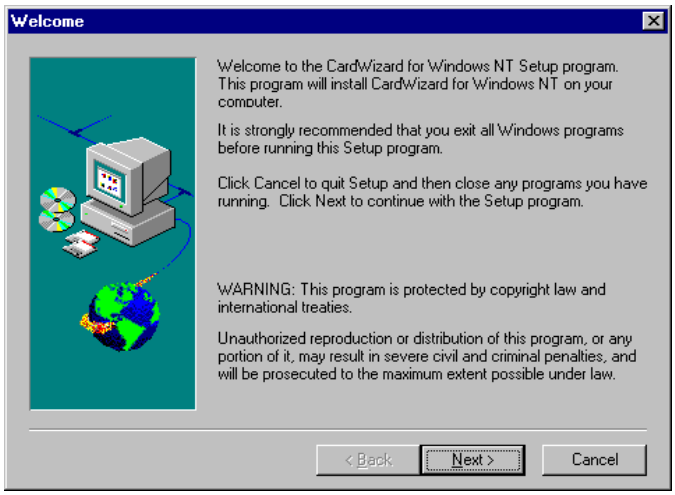
Installing *CardWizard for Windows NT* is a simple task. Just insert diskette 1 into the appropriate drive and follow the prompts on the screen. If you need assistance, refer to the instructions below.

1. If you have any PC Cards currently installed in PC Card slots, remove them.
2. If your system is connected to a network, log off before starting the installation.
3. Logon as an Administrator.
4. Insert diskette 1 in the drive.
5. Carefully read the ReadMe.txt file on the installation diskette.
6. Choose **Run** from the Windows NT Start button.
7. Enter **a:setup** on the Open line in the Run dialog box.
8. Choose **OK**.

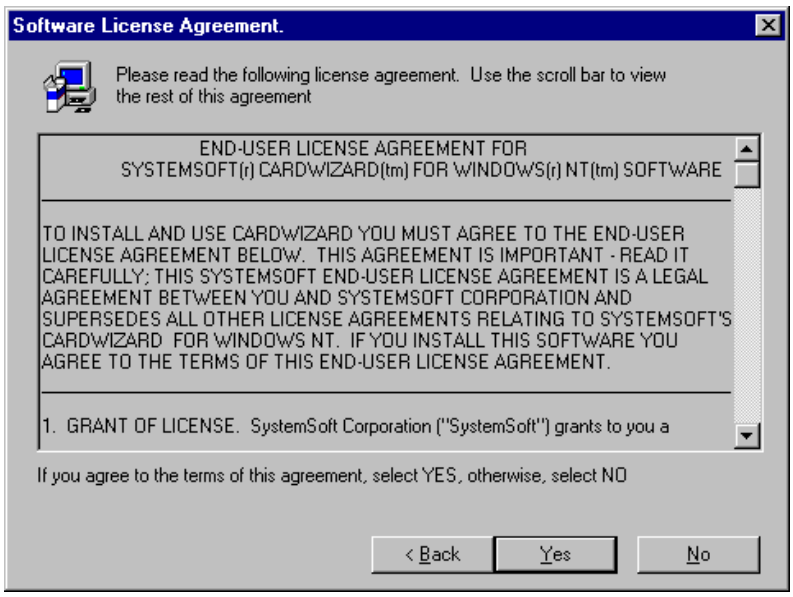
The installation program starts and indicates that Setup is preparing for the installation. You are then guided through the installation process.

The *CardWizard for Windows NT* Setup screen then appears.

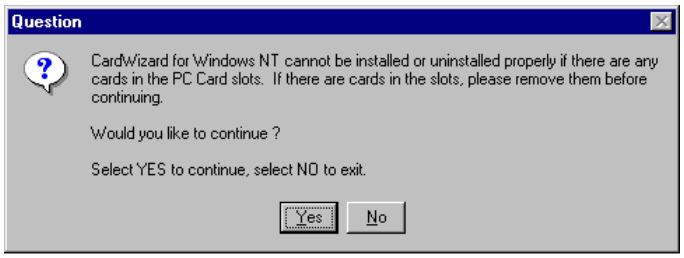
9. Select the **Next** button to display the Welcome screen



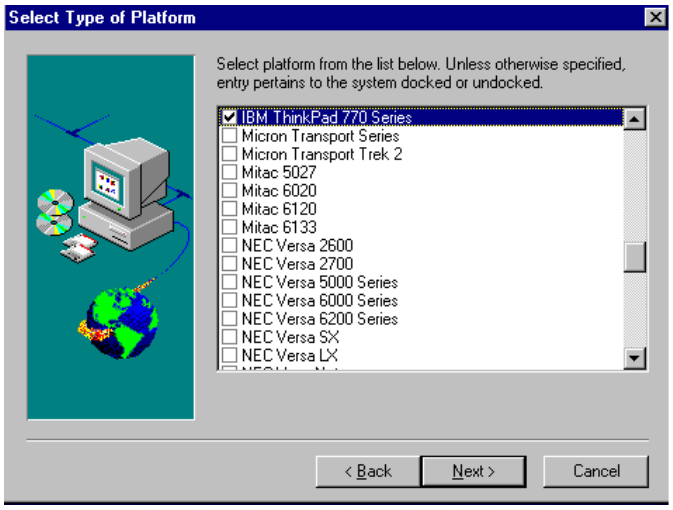
10. In some situations, the Software Licensing Agreement will appear. After reading the agreement, select **Yes** to confirm.



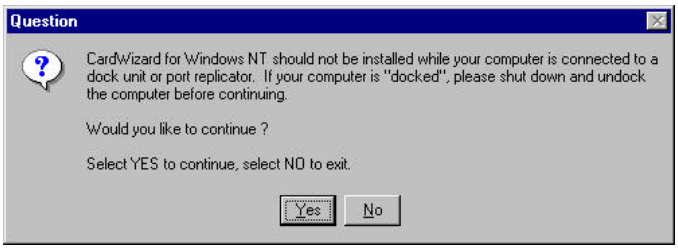
11. The following warning will appear. Remove any inserted PC Cards.



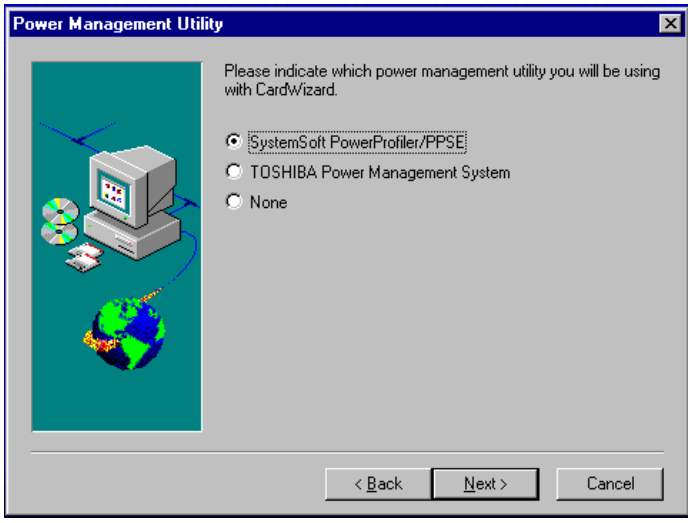
12. In some cases, a screen (similar to the one that follows), which displays several computer platforms, may appear. Select the correct computer from this list. If your system does not appear in the list, select **Other**.



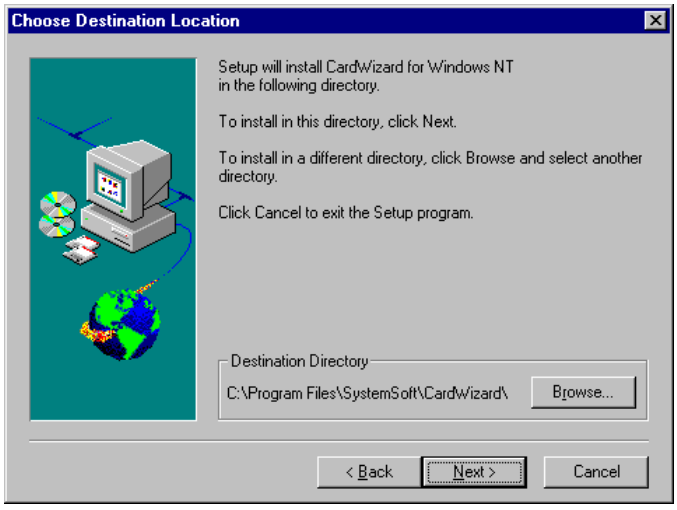
13. The following warning will appear when installing *CardWizard–Plus.* If your system is "docked", please select **No** in order to shut down and undock your system before continuing.



14. CardWizard supports multiple power management products including SystemSoft's PowerProfiler/SE, Toshiba's Power Management and IBM's Power Management. Sometimes, you may see the screen below. If so, choose the power management option appropriate for your system.

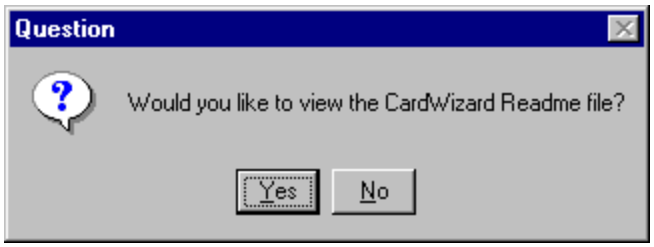


15. Select the **Next** button to display the Choose Destination Location screen.



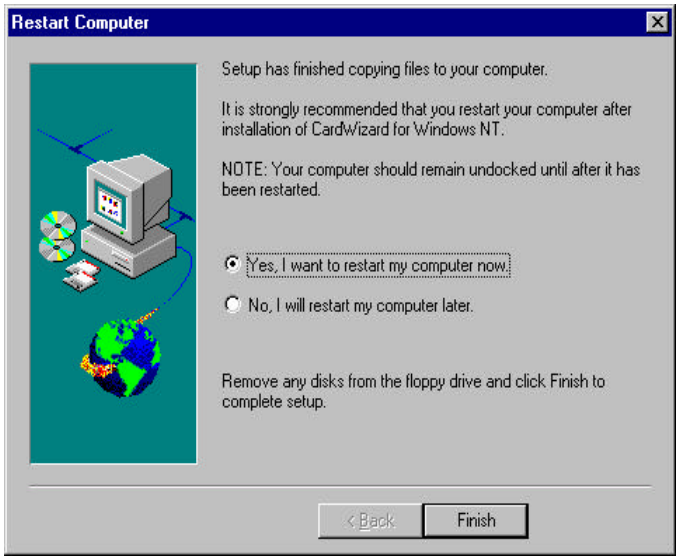
15. Choose **Next** to install the software in the default destination directory or select **Browse** to install the software into another directory. If **Browse** is selected, scroll through the folders and select the desired directory. Once the destination directory has been selected, choose **Next** to start decompressing and copying the files.

After all files have been copied, the following screen will be displayed.



It is recommended that you view the Readme file.

The final installation screen will then appear (the "NOTE" only appears when installing *CardWizard-Plus*).



Note: Remember to remove any disks before restarting your computer.

16. Before *CardWizard for Windows NT* can be run, the computer must be restarted. Choose **OK** to restart or **No**. Once you have restarted, you can launch the *CardWizard* application.

Note: when CardWizard is installed, users should look at the CardWizard application in order to find out the status of the PC Cards. The PC Card (PCMCIA) control panel applet is only partially supported by CardWizard.

CardWizard Licensing

CardWizard includes ViaTech's elicense software. When you first login, you will see the following screen

In order for CardWizard to continue to run, you will need to get a license for the software. CardWizard provides a 5 day grace period, but will stop working after 5 days if you do not get your license.

You can receive your license by clicking on the License button (while attached to the Internet) or contacting SystemSoft's TeleSales organization.

Uninstalling CardWizard for Windows NT

CardWizard can be uninstalled from either the Control Panel or the Start menu item.

Note, with version 4.1 and higher of CardWizard, CardWizard maintains user settings between installations. For example, users will not have to reenter slot names, slot orders or network card hot swap status.

To uninstall this version of CardWizard from the **Control Panel**:

1. Login as an Administrator.
2. Choose **Settings** from the Windows Start button.
3. Choose the **Control Panel**.
4. Choose the **Add/Remove** icon to display the Add/Remove Program Properties window.

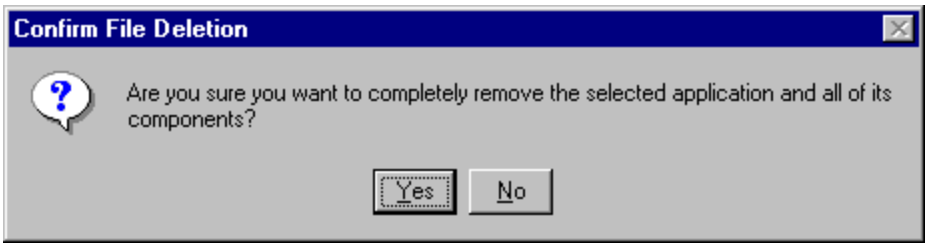
5. Choose the **CardWizard for Windows NT** name, then choose the Add/Remove button.
6. A dialog box appears asking if you want to completely remove *CardWizard* and all of its components.
7. Choose **Yes** to start the removal process.
8. From the Add/Remove Program properties window, choose **OK** to close the window.
9. The system will automatically reboot with *CardWizard for Windows NT* successfully uninstalled.

To uninstall this version of *CardWizard* from the **Start** menu:

1. Select the following:

2. **Programs → CardWizard for Windows NT → CardWizard for Windows NT Uninstallation**

3. You will see the following dialog box:



4. Select **Yes** to remove *CardWizard*.

5. The following confirmation message will appear:

Chapter 3

CardWizard for Windows NT Features

SystemSoft's CardWizard Makes PC Card Use a Snap!

This section specifies the features and functions (menu by menu presentation) of *CardWizard for Windows NT.*

Once the installation is complete, you can begin using your PC Cards in Windows NT. While your *CardWizard for Windows NT* application includes a comprehensive HELP system, this section describes many of the practical *CardWizard* features and provides additional hints for *CardWizard* use.

CardWizard for Windows NT supports Hot-Swapping of ATA, SRAM and Flash PC Cards as well as Fax/Modem PC Cards, Network PC Cards, Combo PC Cards, Specialty and SCSI PC Cards.

This release of *CardWizard for Windows NT* supports CardBus cards, including Multi-function cards.

Features

Unsurpassed PC Card Support

Supports the most cards and card types than any other PC Card product for Windows NT. Card types supported include:

- Modem/Serial/ISDN
- Network cards – including CardBus
- Combo and Multifunction cards – including CardBus
- Mass Storage cards – ATA, Flash, and SRAM
- Specialty cards – nontraditional PC Cards which have their own drivers.
- SCSI cards – including CardBus

Hot-Swapping

Provides the ability to insert and remove PC Cards after boot-time. With 5.0, support has been added to hot swap SCSI and Specialty cards. You can determine if a card supports Hot-Swapping by referring to the Action → Properties Menu in the CardWizard application. For more information on which cards are hot swappable, see our Web site at www.systemsoft.com.

Hot-Swap Test

For network cards to be hot swapped, a Hot Swap test must be run so that CardWizard knows its capabilities. See section Hot Swap Capability Test for more information on this feature.

Hot-Docking

CardWizard-Plus for Windows NT enables your portable computer to hot dock to, and hot eject from, a dock unit. In addition to hot docking, *CardWizard-Plus* can support PCI Local Bus Network Interface Cards and certain other PCI Local Bus devices.

Power Management

Integration with power management packages such as *PowerProfiler/SE*, enables the system to suspend and resume easily. PC Cards that are hot swappable are also power manageable. Therefore, you can use your PC Cards after resuming the system without having to reboot. Other power management features in Stop/Start of cards and Enable/Disable of slots.

Stop/Start a Card

Allows a user to power down a card. Prior to removal, Mass Storage PC Cards should be stopped to maintain data integrity.

Disable/Enable a Slot

Allows a user to power down a slot to save power when the card is not in use.

Problem Resolution

In the event that a card cannot be configured successfully, the Wizard feature will assist the user in configuring the card.

Card Information Display

The Card Information Display provides a graphical view of all inserted cards and devices. It also provides easy access to card settings, configuration items and user-selected options.

Card Properties

Provides information about a card, including card type, drivers used and hot swap capabilities.

Formatting Memory PC Cards

Allows the user to format Memory (Flash and SRAM) Cards, with FAT file system. NTFS is not supported.

User Settings for Modem/Serial & Mass Storage Cards

Enables users to define Com Ports and Drive Letters on a card basis. This way the card will always use the same drive letter no matter which PC Card slot is used.

Launching Applications

Often users run a specific application with a particular card type. *CardWizard for Windows NT* offers users the ability to automatically launch a particular application on card insertion. This eliminates the need for users to have to start the application manually.

Sound Options

Allow a user to associate Sound files with card insertion, removal, and Power Management events. It is possible to associate sounds for up to five distinct events.

Event Notification Options

Allow a user to control the display of card removal and insertion dialog boxes.

The Menu Bar

The *CardWizard for Windows NT* application has a single Menu Bar.

The Menu Bar is organized to assist you to select different views of the application, perform actions against cards, modify options and to obtain help.

File Menu

The **File Menu** contains only the **Exit** option. This enables you to exit the *CardWizard for Windows NT* application.

View Menu

The **View Menu** toggles the display of the **Toolbar** and the **Status Bar**. Also, using the **View Menu**, you can switch your card information display between **PC Cards** and **PCI Local Bus devices** (*CardWizard-Plus* only).

Actions Menu

The **Actions Menu** allows you to use the Wizard, stop a PC Card, display PC Card properties, enable/disable PC Card Slots, and format Memory PC Cards (Flash and SRAM Cards).

Options Menu

The **Options Menu** allows you to change card settings, to specify the names and the arrangement of slots, to setup how messages appear, to associate sounds with events (card insertion, removal and power management), and to automatically launch applications on card insertion.

Help Menu

The **Help Menu** allows you to view the Help Contents, allows you to access Help on using Help, displays the Topics contained within Help, displays the ReadMe file, and displays information about the *CardWizard for Windows NT* application itself.

Selected Menu Items in Depth

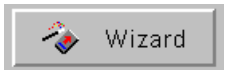
The following menu items are presented in the order in which they appear in the Menu Bar.

Actions Menu

The following features can be accessed by pressing the **right mouse button** (from the Card Information screen) or by selecting these items from the **Actions** menu: Wizard, Start, Stop, Properties, Enable, Disable, and Format.

Wizard

If you are experiencing a problem configuring your card, select the card in question (to activate the Wizard button for that card) then select the Wizard button in the Card Information window (from the Action menu, or by using the right Mouse button).



CardWizard for Windows NT then provides information on the problem and directs the user on how to resolve the problem.

Start

Starts a stopped PC Card.

Stop

Stops a PC Card and turns off power to the slot. This assists in saving power. Note that Mass Storage PC Cards must be stopped before they are removed. Failure to do so may result in unpredictable behavior and/or loss of data. Except for Network and SCSI PC Cards, Stop frees resources used by a PC Card.

You can also stop a PC Card by clicking on the traffic light on the ToolBar, using the right mouse button (and selecting **Stop**), or by selecting **Stop** from the Actions menu.

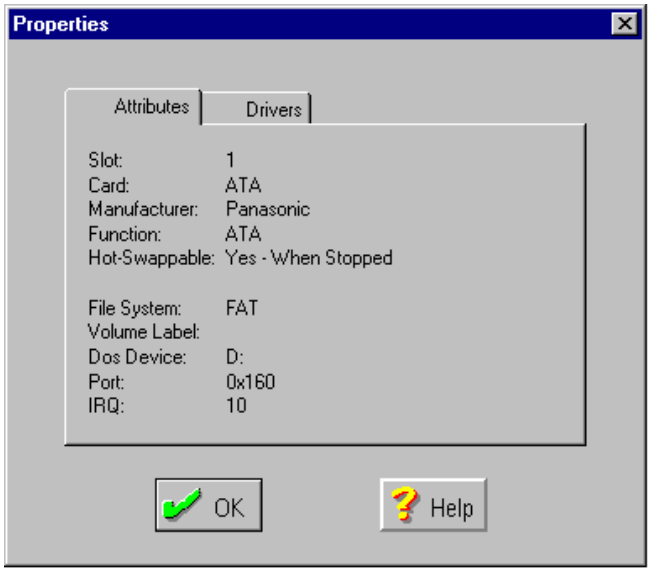
When the card is stopped, the PC Card information screen displays a red stop sign. Once a card has been stopped, the traffic light (in the toolbar) for this card turns from red to green. This green light, in the toolbar, indicates that this particular card is capable of being started.

Properties

The ***Properties*** dialog boxes display information about the attributes and drivers which are used for a card. *CardWizard for Windows NT* lists the properties in an easy-to-read display -- providing a centralized location for all card information.

Attributes

If you select **Attributes**, *CardWizard for Windows NT* displays the following screen for the inserted card.



Depending on the card inserted, the following fields are displayed.

Slot: indicates the slot this card is currently occupying.

Card: the type of card.

Manufacturer: the card manufacturer.

Function: the function of the card (Modem, ATA, Flash, SRAM, Network etc.).

Hot-Swappable: indicated if the card is Hot-Swappable and if it must be Stopped prior to removing.

Capacity: the disk capacity for Mass Storage PC Cards.

File System: the file system for Mass Storage PC Cards.

Volume Label: the disk volume for Mass Storage PC Cards.

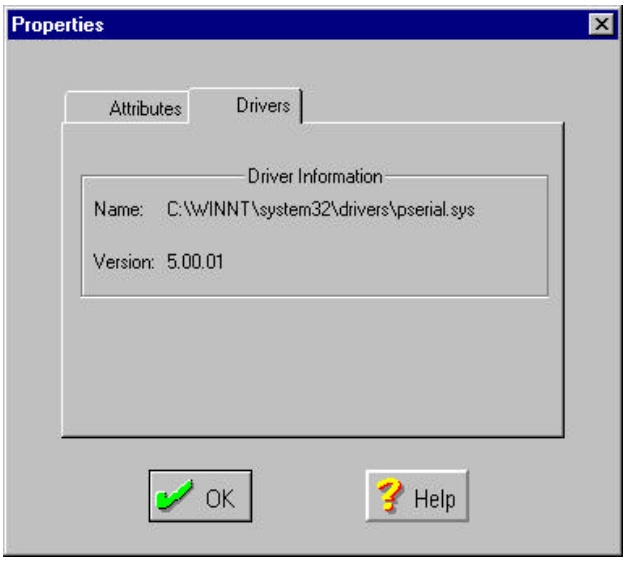
DOS Device: the COM port or the Drive Letter used by this device.

Port: the I/O address associated with this device.

IRQ: the interrupt used by this device.

Drivers

Selecting Drivers displays information about the driver used:



Name: indicates the full path to the driver for this card.

Version: indicates the version for the current driver.

Enable

This allows you to restore power to the currently highlighted PC Card Slot. You can enable a slot only if it has previously been disabled.

Disable

This allows you to remove power from the currently highlighted PC Card Slot, reducing the drain on your battery. Note that this slot stays “disabled” even after you have rebooted the system. During the period that the slot is disabled, it can be used as a storage location for any PC Card.

Format

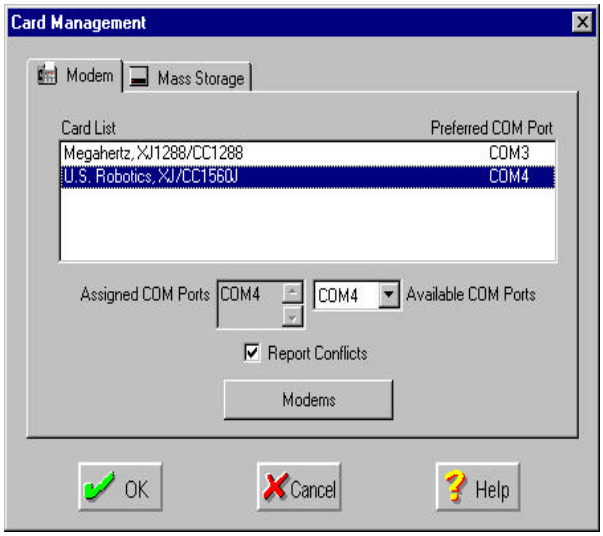
This allows you format the currently highlighted PC Memory (SRAM or Flash) Card. For additional information on using Format, see Chapter 5.

Options Menu

The following menu items can be accessed from the **Options** menu: Card Management, Slot Management, Notify, Sound and Launch.

Card Management

Selecting Card Management lets you specify both Modem and Mass Storage settings.



Modem

The **Modem** section allows users to define which Com Ports will be used by Modem and Serial PC Cards. This way, the modem will always use the same Com Port regardless of which PC Card slot is used. This feature is intended for users who are familiar with managing system resources and configuring modem cards. Note: this feature is not available for Winmodem cards.

The **Card List** box contains a list of all modem cards, which have been configured by *CardWizard* and their corresponding **Preferred COM Port** settings. A new modem card is automatically added to the card list upon its first successful insertion. The Preferred COM Port setting of a newly added modem card defaults to the first available COM Port at the time of the first successful insertion.

The **Assigned COM Ports** box displays the COM Ports presently used by the highlighted modem card in the card list. This box is grayed if the highlighted modem card is not present in the system.

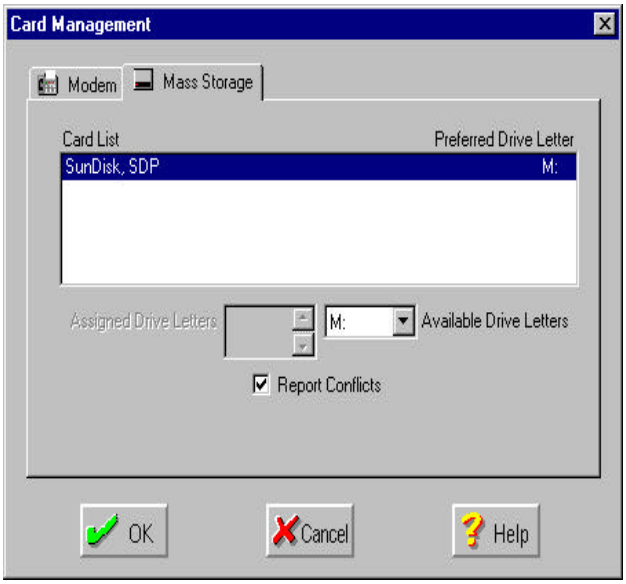
The **Available COM Ports** box displays the Com Ports which can be used for the card. Selecting a COM Port from the drop list modifies the Preferred COM Port setting of the highlighted modem card. The change takes effect after you have pressed the **OK** button and reinserted the PC Card.

The **Report Conflicts** check box specifies the behavior of the Wizard if it cannot use the Preferred COM Port settings because of an existing conflict. If the box is set, the Wizard will display a message with a "Correct" button, allowing you to choose whether or not to automatically correct the problem. If the box is not set, then the Wizard will immediately correct the problem using the first available COM Port it finds, beginning with the Preferred COM Port plus one.

The **Modem button** enables you to configure your modem by starting the Microsoft Windows NT Modem Control panel applet.

Mass Storage

The **Mass Storage** section allows you to set Drive Letters to use for the Mass Storage PC Card.



The **Card List** box contains a list of all mass storage cards that have been configured by *CardWizard* and their corresponding **Preferred Drive Letter** settings. A new mass storage card is automatically added to the card list upon successful first insertion. On first insertion, the Drive Letter assigned defaults to the first available Drive Letter.

The **Assigned Drive Letters** box displays the Drive Letters that are presently being used by the highlighted card. This box is grayed if the highlighted mass storage card is not present in the system.

The **Available Drive Letters** box displays the drive letters available for the system. Selecting a Drive Letter from the drop list modifies the Preferred Drive Letter setting for the highlighted mass storage card. The change takes effect after you have pressed the **OK** button and reinserted the card.

The **Report Conflicts** box specifies the behavior of the Wizard if it cannot use the Preferred Drive Letter settings because of an existing conflict. If the box is set, the Wizard will display a message with a "Correct" button, allowing you to choose whether or not to automatically correct the problem. If the box is not set, then the Wizard will immediately correct the problem automatically by using the first available Drive Letter it finds, beginning with the Preferred Drive Letter plus one.

Slot Management

This dialog lets you configure your PC Card slots.

First Slot Number

Lets you decide whether *CardWizard* should refer to your first slot as slot 0 or slot 1. If you choose to call the first slot "Slot 0" and your computer has two PC Card slots, the first slot will be called slot 0 and the second will be called slot 1. Any changes will take effect once you have pressed the **OK** button.

Note that, if you are using *CardWizard-Plus* and are assigning slot numbers, the docking station numbers will be designated as D0 and D1 respectively, if 0 is selected or D1 and D2 respectively if 1 is selected.

Slot Representation

CardWizard displays your system's PC Card slots one on top of the other. *CardWizard* lets you decide whether you want the top slot to be your first slot or the bottom slot to be your first slot. Any changes will take effect once you have pressed the **OK** button.

Slot Names

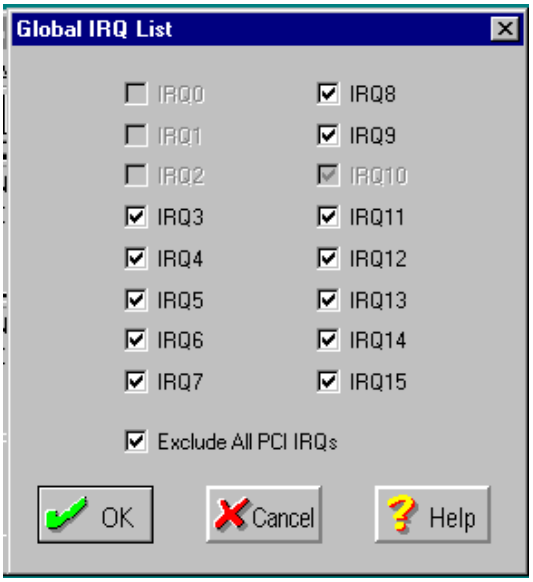
CardWizard optionally allows you to assign a name for each PC Card slot. Any changes will take effect once you have pressed the **OK** button. For example, in the screen above, Slots 0 and 1 have been named “BOTTOM” and “TOP” respectively. (NOTE: Only *CardWizard-Plus* can identify which slots reside on a dock unit.)

IRQ Settings

In previous versions of CardWizard, the ISA IRQ mask could only be modified through the registry. This was cumbersome. With 5.0 and higher, you can set the IRQs on a global or slot basis using the Slot IRQ Settings and Global IRQ Settings respectively.

The **Slot IRQ List** dialog box allows the system administrator to specify the IRQs that may be used when configuring 16-bit PC cards. This should represent the IRQs which are available to the PC Card slot. A check mark next to an IRQ number indicates that the IRQ may be used. You can set different values for each slot. The change will take effect once you have pressed the **OK** button.

The **Global IRQ List** dialog box allows the system administrator to specify the IRQs that may be used when configuring 16-bit PC cards. This should represent the IRQs which are available on the platform. A check mark next to an IRQ number indicates that the IRQ may be used. The change will take effect once you have pressed the **OK** button.



The Slot and Global IRQ masks are used together to determine if an IRQ is available for card configuration. The IRQ must be available in both the Slot and Global IRQ mask to be used.

With release 4.1 and higher, CardWizard provides the ability to share PCI IRQs for ISA devices. In some configurations, this may cause problems and therefore, you can turn off IRQ Sharing for your platform. Currently, this is done using the Registry Update Utility available from SystemSoft's web site (www.systemsoft.com).

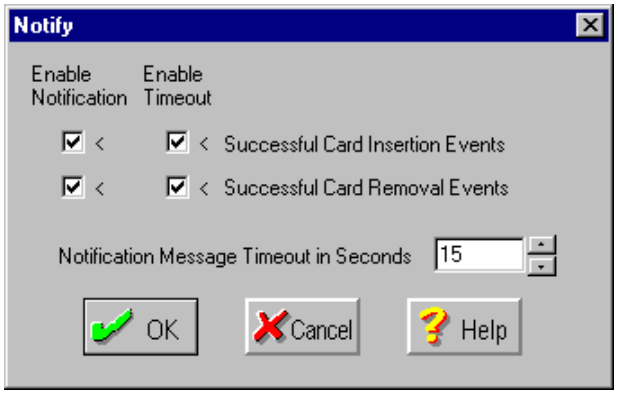
Through the utility, you can create 3 different configurations depending on your system needs:

1. Share the PCI IRQ used for the CardBus slots
2. Share ISA IRQs
3. Do not share the IRQ

Exclude All PCI IRQs: When using IRQs, PCI IRQs can also be used as an ISA IRQ. Using Exclude All PCI IRQs, you can specify whether or not to automatically exclude all the IRQs that are in use on the PCI Local Bus. If the box is checked, all PCI IRQs will automatically be excluded and appear grayed in any IRQ List. If the box is not checked, only the PCI IRQ of the corresponding PC Card slot will be excluded and will only appear grayed in the corresponding Slot IRQ List. IRQs 0, 1, and 2 are never usable and are always grayed.

Notify

The Notify menu item provides information on Enabling Messages and on User Message Confirmation. This enables you to control the display of card insertion and removal dialogs. Note: unsuccessful events such as card not configured or removing a Mass Storage card without first stopping it, are always displayed.



Successful Card Insertion Events: Allows you to select whether messages pop-up when you insert and successfully configure a PC Card. When a checkmark is in the check box, messages will pop-up each time a card is inserted -- displaying the name of the card, card type and hot swap status. To toggle this messaging option, simply click once in the Enable Notification box at left. The change will take effect once you have pressed the **OK** button.

Successful Card Removal Events: Allows you to select whether messages pop-up when a card is removed. When a checkmark is in the check box, a message will appear when a card is removed from any PC Card slot in your computer. To toggle removal messaging, click once in the option box at the left. The change takes effect after you press the **OK** button.

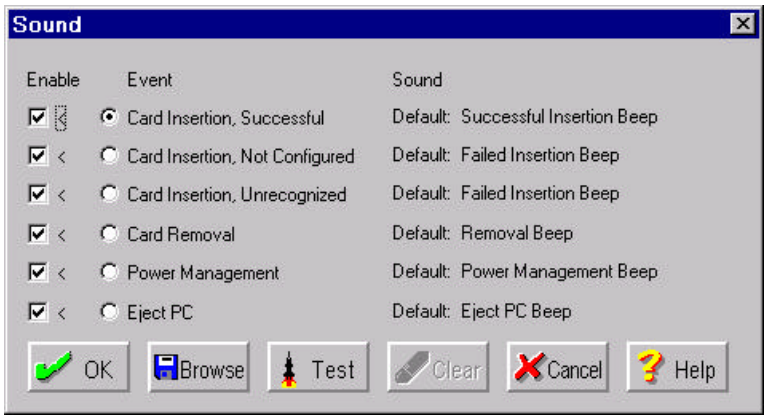
Notification Message Timeout in Seconds*: CardWizard* insertion and removal messages can be configured to automatically disappear after a set time interval. This option allows you to set the duration these displayed messages. Simply point or click on either the up or down arrow to increase or decrease the duration in seconds of all displayed messages. This change will take effect once you have pressed the **OK** button.

Note that when the Power Management System attempts to Suspend the system, the Wizard may automatically display information about cards in the system. Messages which require you to take action cannot be suppressed.

Note: If you have not checked the "Enable Timeout" box, the corresponding notification messages will remain visible until you clear it. This is true for all messages except Power Management. Power Management messages will always time out. (The default duration is 15 seconds and the maximum duration is 50 seconds.)

Sound

The Sound screen allows you to associate sounds (.WAV files or beeps) with PC Card insertion and removal events.



It is possible to associate sounds with the following:

Card Insertion, Successful: The PC Card has been inserted into a slot and correctly recognized and configured by Card Services.

Card Insertion, Not Configured: The PC Card has been inserted and recognized; i.e. , there is a resource conflict or a lack of resources, etc.

Card Insertion, Unrecognized: The PC Card has been inserted, but not recognized.

Card Removal: The PC Card has been removed from a slot.

Power Management: A Power Management event has occurred. Messages for Power Management events will only display if there is an error.

Eject PC (*CardWizard-Plus* only): An Eject PC event has occurred.

To associate a sound file with an event:

1. Click on the **Browse** button and select a sound file (.WAV file) for the event you have chosen. This lets you browse for the desired sound file. Once you have selected a file, a Sound Files Selection dialog box will appear.

2. Click on the **Test** button to listen to the beep or sound (.WAV file) before enabling it. You can test either the existing (current) file, if one is already present, or the new file that you have just selected. Click on the **OK** button to accept the newly selected file.

3. Click in the **Enable** box to activate the sound card the next time the event occurs. If the enable box is not selected or if a sound card is not present and Event is selected, the default beep will occur (for this event) using the system's speaker.

4. Click on the **OK** button to accept the settings and exit.

The following items appear in this dialog box. These items will be highlighted and available for selection only if they are applicable.

Enable
Enable allows you to activate and deactivate PC Card sound events. A checkmark indicates that the sound file appearing on the right will play when the associated event occurs.

Card Events
It is possible to associate sounds for up to five distinct events (described earlier).

Sound
Once you have chosen a sound (.WAV) file using the **Browse** option, the name and location of the sound file will appear next to the event under the "Sound File Heading". In the event that the address of the sound file is long, *CardWizard* will abbreviate the address so the most crucial information is displayed.

Once you have selected a file, a Sound Files Selection dialog box will appear. Click on the **Test** button to listen to the sound (.WAV file) before enabling it. You can test either the existing (current) file, if one is already present, or the new file that you have just selected. Click on the **OK** button to accept the newly selected file.

It is recommended that you use a sound file which is smaller than 180KB.

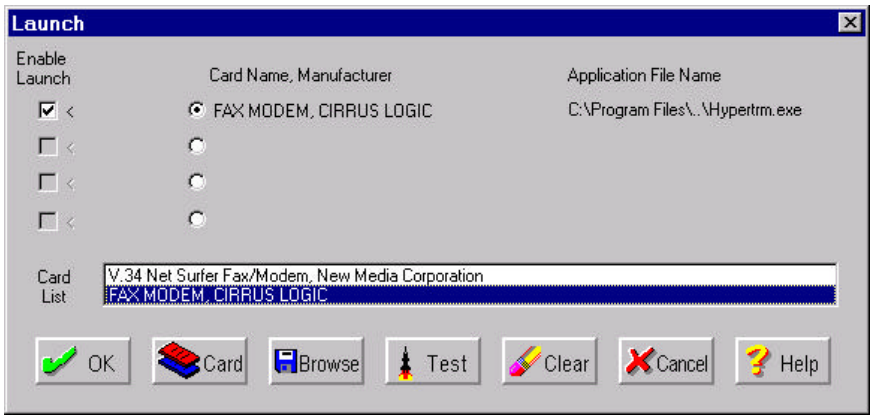
Browse Button
By clicking on the **Browse** button, you will have access to files on any of the drives available to you. Choose a file that has a .WAV extension (a sound file) and choose **OK** to select it.

Test Button
Once you have selected a sound (.WAV) file to associate with an event, you can listen to it by clicking on the **Test** button.

Clear Button
Click on the **Clear** button to erase an entire line. Only the highlighted line will be cleared.

Launch

The ***Launch*** screen allows you to associate applications with PC Cards so that an application will automatically launch when the associated PC Card is inserted.



Note: *CardWizard for Windows NT* will only launch an application when the associated PC Card is configured. In addition, as launching is associated with the current user, launching is only possible with PC Cards that are inserted after the system has booted and the user has logged on.

To associate an application with a PC Card for auto-launch:

1. Highlight a card in the **Card List** box by clicking on it.
2. Click on the **Card** button. The card's name and manufacturer information will be displayed below the "Card Name, Manufacturer" heading.
3. Click on the **Browse** button and select an application to be launched for the card you have selected. The application name and location will appear below the "Application File Name" heading.
4. Click on the **Test** button to verify that you have chosen the right application and that it launches properly.
5. Click inside the **Enable** box to activate auto launch the next time the card is inserted.
6. Click on the **OK** button to accept the settings and exit.

The application will then automatically launch when this PC Card is inserted.

The following items appear in this dialog box. These items will be highlighted and available for selection only if they are applicable.

Enable Launch

Enable allows you to activate or deactivate application auto-launching for PC Card insertions. A checkmark indicates that the application appearing on the right will be launched each time the associated PC Card is successfully inserted and configured.

Card Name, Manufacturer

The Card Name, Manufacturer column displays the identity of the card which will have an application associated with it.

Application File Name
Once you have chosen a launch application using the **Browse** option, the name and location of the application will appear next to the associated card under the Application File Name Heading. In the event that the address of the application is long, CardWizard will abbreviate the address so the most crucial information is displayed.

Card List Box
The Card List Box contains the names of all PC Cards that are currently installed in your machine. If you remove or insert a card while in the Launch dialog box, this box will be updated automatically.

OK Button
Select this button to accept the current application launching assignments that appear in this dialog box.

Card Button
If you have highlighted a card in the **Card List** box, clicking on the Card Button will place the card beneath the **Card Name, Manufacturer** heading so you can associate an application with it.

Browse Button
By clicking on the **Browse** button, you will have access to files on any of the drives available to you. Select an application and choose **OK** to select it. The application name will appear to the right of the associated card beneath the **Application File Name** heading.

Test Button
Once you have selected an application to launch with a specified PC Card, you can simulate an auto-launch by clicking on the Test button.

Clear Button
Click on the **Clear** button to erase an entire line. Only the highlighted line will be cleared.

Cancel Button
Click on the **Cancel** button to close this dialog box without making changes.

Help Menu

In addition, *CardWizard for Windows NT* offers on-line Help designed to make it easy for you to use this product with a minimum of effort. The Help Menu has the following options:

- Contents - Choose this menu item to bring up *CardWizard* Help.
- Using Help - Choose this menu item for comprehensive instructions on using Microsoft Windows NT Help.
- Help Topics - Choose this menu item to list all available *CardWizard* Help topics.
- ReadMe - Choose this menu item to view the ReadMe file included with your *CardWizard for Windows NT* software.
- About *CardWizard* - Choose this menu item to display the version, copyright, memory use, processor and hard disk information for *CardWizard for Windows NT.*

Quick Launch

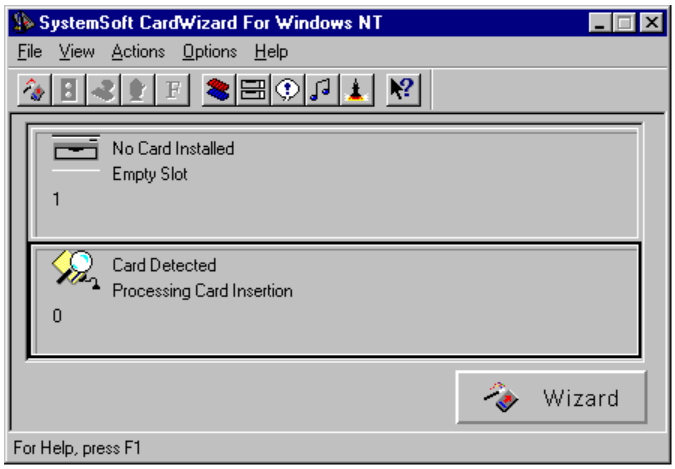
Once you have installed *CardWizard for Windows NT*, you can Quick Start the application by right clicking on the *CardWizard* icon in the System Tray on the TaskBar.

This causes the *CardWizard* menu CardWizard to appear on the TaskBar, to the left of the *CardWizard* icon. Clicking on this *CardWizard* menu once with the left mouse button launches the Wizard application.

Another way to launch the *CardWizard for Windows NT* application is to double-click on the system tray icon with the left mouse button.

Hot-Swap Capability Test

Many Network PC Card drivers support Hot-Swapping. To determine if your Network PC Card supports Hot-Swapping, insert the card. You will see a screen similar to the following:

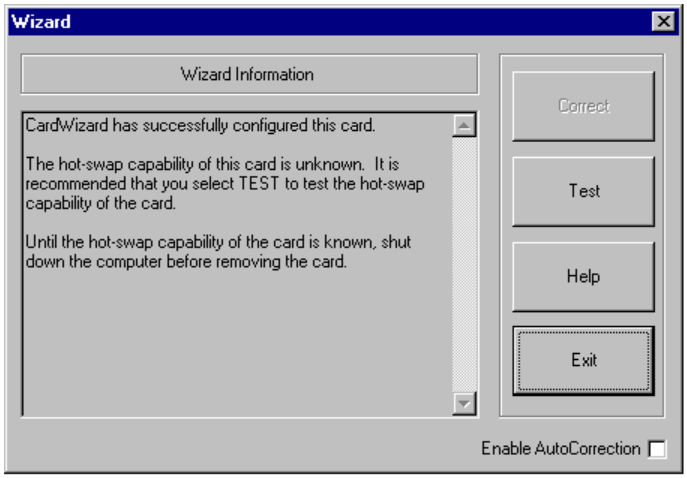


Once your newly inserted network card appears, a Network icon will appear which indicates whether or not the PC Card driver support Hot-Swapping.

If the icon has a double arrow (see below), Hot-Swapping is supported.

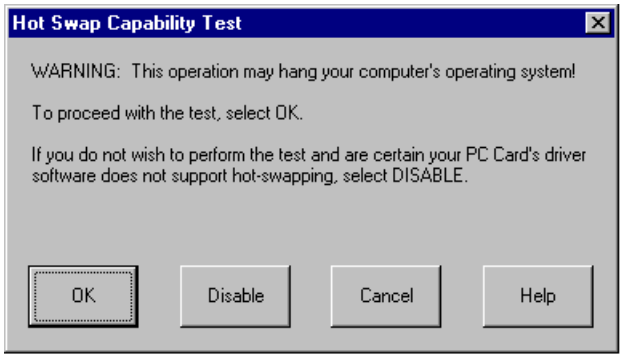
If an icon with a one-sided arrow appears (see below), that indicates that the Hot-Swap test should be run to determine if the PC Card driver support Hot-Swapping.

Select the Wizard Button (which will then be highlighted). You will see the Wizard screen. The Wizard will indicate that it is not sure whether the card is Hot-Swappable and it will recommend that you select **Test** to test for Hot-Swap capability.



Running the Test

Select Test and the following screen will appear:



As the Warning indicates, running this test on some cards may cause your system to freeze so it is recommended that you save any work that is in progress before proceeding.

If your system freezes or your driver does not pass the test, you may want to contact your PC Card vendor for an updated driver for your Network PC Card may or may not have updated drivers. In addition, you may be able to download an updated driver from the SystemSoft home page at: **www.systemsoft.com/product/pccard/certcard/index.htm**

To run this test, select the **OK** button.

To disable the Hot-Swap capability, select the **Disable** button. Use this button if you know that a card/driver is not Hot-Swappable and want to forego the test and just disable the functionality.

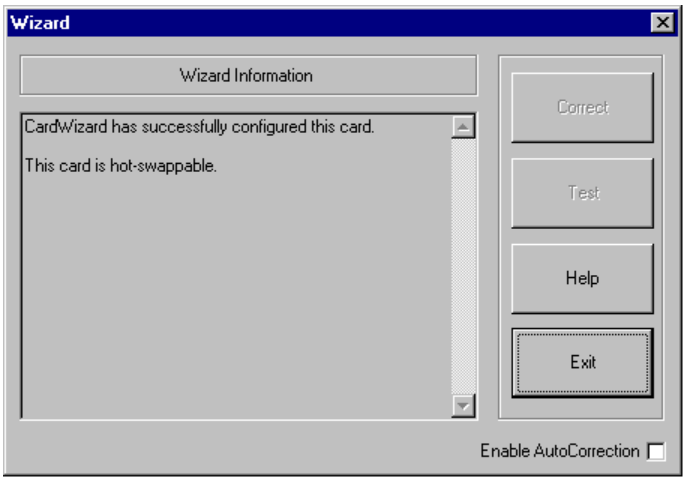
To exit the screen without running the test, select the **Cancel** button.

Possible Test Results

If you run the test, the following results are possible.

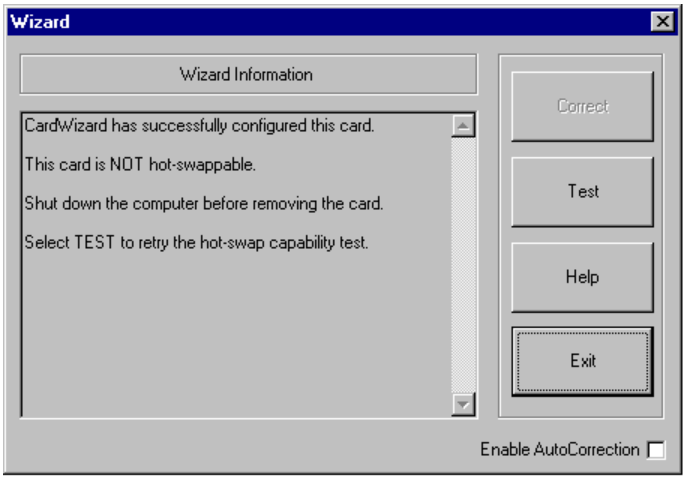
1. Your network card driver passes the test and is Hot-Swappable (see below).

When you subsequently insert the card, the following screen will appear:

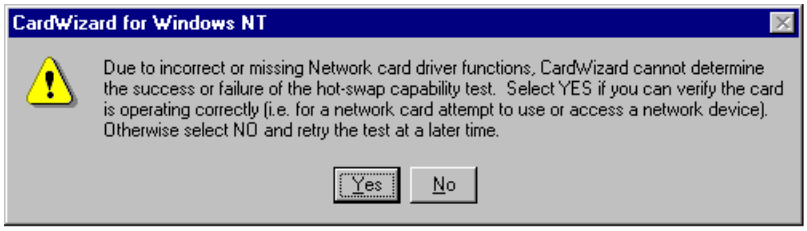


2. Your network card driver fails the test and is NOT Hot-Swappable (see below).

When you subsequently insert the card, the following screen will appear:



3. During the test, you system freezes, indicating that your driver is NOT Hot-Swappable.
4. You get a result indicating that it is uncertain whether your driver is Hot-Swappable (see below).



If you get an uncertain result, you need to check to see if the network is accessible. To do this, attempt to view the contents of a file that is stored on a network volume. If you can "see" the network, you should manually mark the card as Hot-Swappable by clicking **Yes**. If you cannot "see" the network, click **No** to mark the card as NOT Hot-Swappable.

Note: Once the test has been run, for subsequent insertions the Wizard screen will indicate if the card is Hot-Swappable. However, if you install a new driver for your PC Card, you will need to retest the card (to confirm that the new

Power Management Support

CardWizard for Windows NT provides support for power management. Power management is used to conserve battery life on a laptop PC. Power is conserved by suspending the machine. When suspended, many devices are powered off and others run at low power consumption levels. When the machine is resumed (exits the Suspend state), it returns to the state that it was in before the Suspend occurred. Programs and data that were in use before the Suspend are restored to their original state. This is done using power management applications such as SystemSoft's *PowerProfiler/SE*.

Power Suspension

A system can be suspended if:

- the battery power level is below a critical low level
- the hardware suspend button (on your computer) is pressed
- a software suspend button within a power management application (such as *PowerProfiler/SE*) is pressed

CardWizard assists the user in managing PC Card devices over a Suspend/Resume cycle. The PC Card Controller and the cards are powered off as part of a Suspend event. Each card type is handled differently, to prevent losing data or crashing the machine when powered off and then back on again. For example, all files must be closed on an ATA disk prior to Suspend.

The *CardWizard* presents instructions to help you avoid potential problems. The user is expected to follow the instructions before allowing the Suspend to complete. In some cases, the Wizard will reject the Suspend event.

Note that the system can also do a Critical Suspend where the system is automatically suspended by the system because the battery life is about to expire. In the case of a Critical Suspend, your system may not be able to fully resume to the same state that existed prior to the Suspend. On resume from Critical Suspend, *CardWizard* analyzes the set of cards that were in use at the time of the Suspend and presents the user with instructions for saving data and preventing system problems. The instructions may require that the user reboot the machine.

Suspend and Resume for Various Card Types

The table below indicates how *CardWizard* handles each card type over a Suspend/Resume cycle.

Card Type	Suspend Handling	Resume Handling	Resume after Critical Suspend
Modem	Suspension occurs (transparent to user.)	Card artificially removed/inserted with the same configuration.	Card artificially removed/inserted with the same configuration.
Network*	System rejects suspension.	Not applicable	*CardWizard* recommends a reboot.
Combo & Multifunction*	System rejects suspension.	Not applicable	*CardWizard* recommends a reboot.
Mass Storage (ATA. Flash, or SRAM)	If any files are open, the User is asked to close them. Logical disk drives connected to the Mass Storage Disk are dismounted.	Card artificially removed/inserted with the same configuration.	Card artificially removed/inserted with the same configuration. User will receive a warning that data may have been lost.
SCSI*	System rejects suspension.	Not applicable	*CardWizard* recommends a reboot.
Specialty*	System rejects suspension.	Not applicable	*CardWizard* recommends a reboot.

* *CardWizard for Windows NT* supports Hot-Swapping on Network PC, Combo, multifunction, SCSI and Specialty cards. If the drivers for a particular card is hot swappable, the Suspend / Resume handling is the same as it is for Modem cards.

From the above table, note the following:

If the user does not respond to a suspend dialog within the appropriate time (which is configured from the *CardWizard* Notify Options screen), the Wizard takes the following default actions:

- Hot-Swappable Network and Combo Cards as well as Modem and Mass Storage Cards accepts the suspension.

- Non Hot-Swappable Network, Combo Cards, SCSI and Specialty PC Cards reject the suspension.

Chapter 4

Formatting PC Cards

Preparing and Using Removable PC Mass Storage Cards

This chapter describes how to prepare and use removable Mass Storage cards, that is, ATA, Flash and SRAM PC Cards.

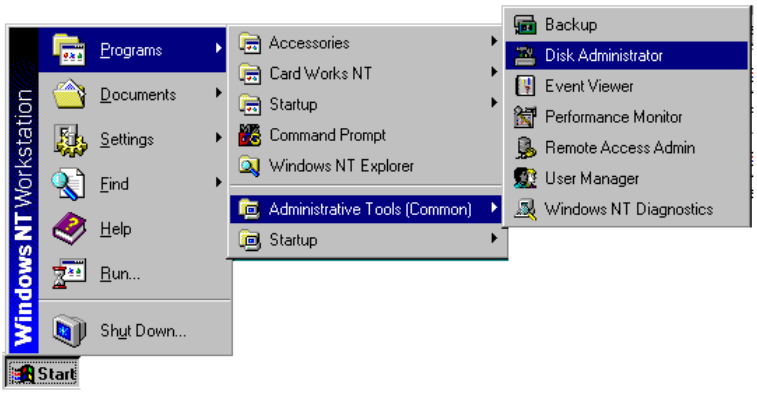
Formatting ATA Cards

An ATA PC Card can be used like most storage devices. Your new ATA card needs to be formatted like any hard disk.

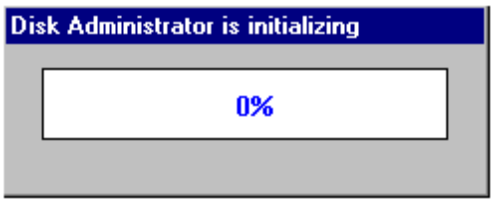
To format an ATA Card from Windows NT:

Method 1 (From the **Start Button**)

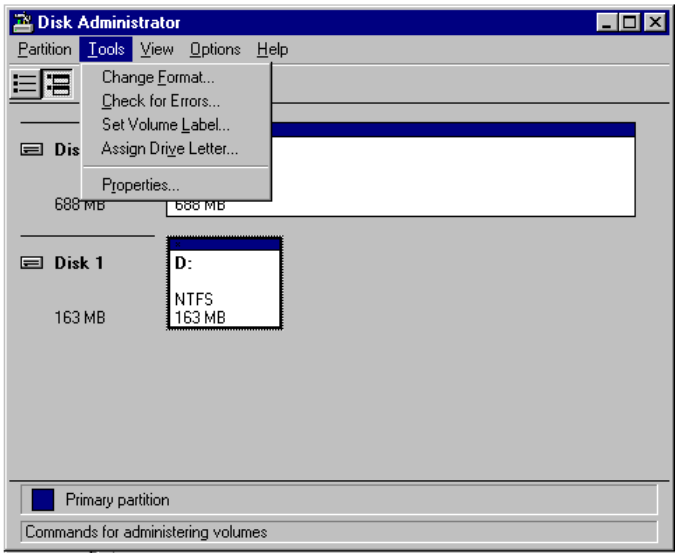
- Select Programs, Administrative Tools, and Disk Administrator. See below.



- The Disk Administrator will initialize. See below.



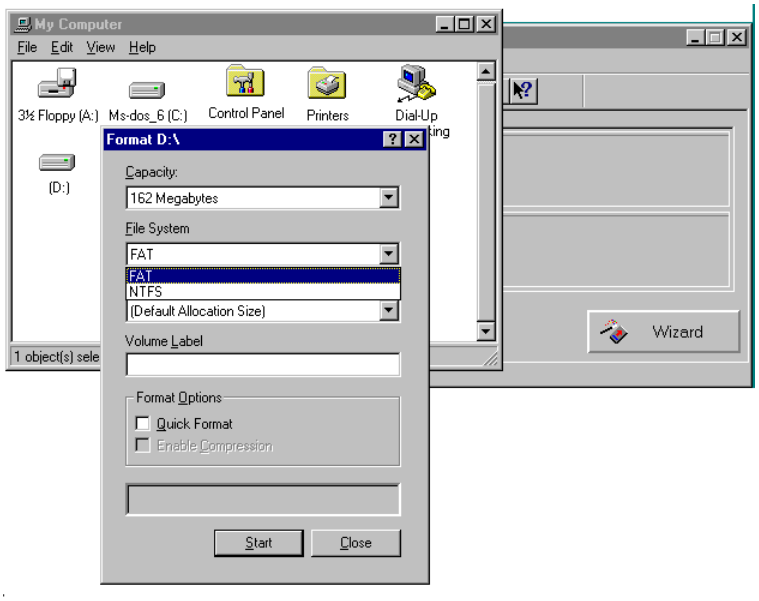
- From the Disk Administrator Dialog Box you can then Partition and either **Format** or **Change Format** (from the Tools menu) your ATA PC Card. See below.



Once this format is complete, your ATA PC Card should be ready for use.

Method 2 (From **My Computer)**

- From My Computer, select the icon representing your Mass Storage PC Card.
- From the File menu select **Format**. The Format dialog box (see below) will appear.
- Make any desired changes to the fields in the Format dialog box. (Selecting **Quick Format** will shorten the time it takes to format your card.)
- Click **Start** to format the card.



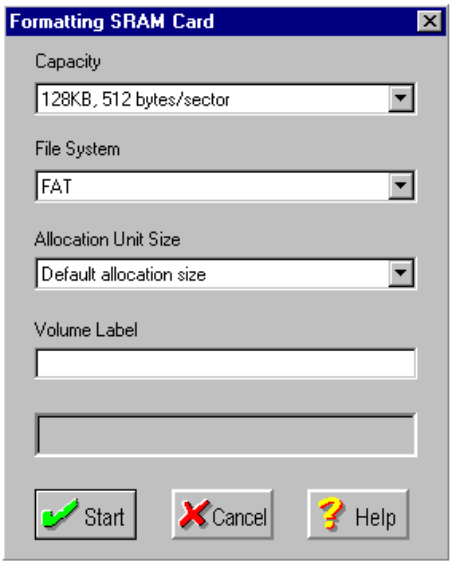
Formatting Memory (SRAM or Flash) PC Cards

A Memory PC Card can be used like most storage devices. Your new SRAM or Flash PC Card needs to be formatted like any hard disk.

To format a Memory PC Card using *CardWizard*:

- Select **Format** from the Actions Menu or after pressing the right mouse button. (You can also select the Format icon from the ToolBar).

- The following dialog box will then appear:



- Make any desired changes to the fields in the Formatting SRAM Card dialog box.
- Click **Start** to format the card.

Appendix

A

Accelerator Keys

CardWizard Short Cuts

The following Accelerator keys have been defined for the *CardWizard for Windows NT* application. All Windows NT **defined** keys are also supported.

Accelerator	Menu Item	Action
Alt-F	FILE	Pop Up File Menu
X	Exit	Exit the Application
Alt -V	VIEW	Pop Up the View Menu
T	Tool Bar	Toggled Tool Bar Display On/Off
S	Status Bar	Toggled Status Bar Display On/Off
C	PC Card List	View PC Card Slots (*CardWizard-Plus* only)
P	PCI Device List	View PCI Local Bus devices managed by *CardWizard-Plus*
Alt – A	ACTION	Pop Up the Action Menu
W	Wizard	Launch the Wizard
S	Stop	Stop the Card
Alt - O	OPTIONS	Pop Up the Option Menu
T	Setting	SubMenu
U	User	User Settings
S	Slot	Slot Settings
N	Notify	Notification Settings
B	Set Speaker Beep	Toggled Speaker On/Off
S	Sound	Sound File Settings
L	Launch	Launch Applications Settings
Alt - H	HELP	Pop Up the Help Menu
C	Contents	Displays *CardWizard* Help contents
U	Using Help	Displays information on using Windows NT HELP
H	Help Topics	Display Help Topics
R	ReadMe	Displays the ReadMe file
A	About Dialog	Display information on this release

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