

# Versa® L320

Notebook Computer

## User's Guide



**NEC**

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First Printing — August 2001

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## Glossary

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# Using This Guide

The *NEC Versa® L320 User's Guide* gives you the information you need to maximize the use of your NEC Versa notebook computer. Read this guide to familiarize yourself with the NEC Versa and its features. For specific information see

- Chapter 1, “Introducing the NEC Versa,” to acquaint yourself with the system hardware.
- Chapter 2, “Getting Started,” for instructions on how to connect, power on, and care for your system.
- Chapter 3, “Using the BIOS Setup Utility,” for details about modifying system parameters and power management.
- Chapter 4, “Using the Operating System and Utilities,” for an understanding of your Microsoft® Windows® operating system. You’ll also learn how to use the system utilities and CDs for loading applications, drivers, and the NEC Info Center.
- Chapter 5, “Using the System Drives and Bays,” to master procedures for using the NEC VersaBay™ IV slot, using the NEC Modular Bay slot, and installing a memory module.
- Chapter 6, “Communicating with Your NEC Versa,” for essential information about using PC Cards, the built-in MDC modem, the optional Mini PCI LAN, and the optional Mini PCI Wireless LAN.
- Chapter 7, “Traveling Tips,” for a variety of checklists to help you to prepare the notebook computer for travel, getting through customs and using your modem or LAN connection when you are on the road.
- Chapter 8, “Using External Devices,” for procedures for connecting external devices like an external monitor, headphones, a printer, or speakers.
- Chapter 9, “Using Multimedia,” for steps on integrating video and sound clips into impressive presentations.
- Chapter 10, “Solving System Problems,” for simple solutions to common problems that may arise while operating your notebook.
- Chapter 11, “Getting Service and Support,” for information about getting help when you need it from NEC Computers Inc.
- Appendix A, “Setting Up a Healthy Work Environment,” for guidelines that help promote a healthy work setting.
- Appendix B, “Specifications,” to review NEC Versa system specifications.
- Appendix C, “Frequently Asked Questions,” (FAQs) for a look at questions that users commonly ask and the answers to those questions.

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## Text Conventions

To make this guide as easy as possible to use, text is set up as follows.

- Warnings, cautions, and notes have the following meanings:



**WARNING** Warnings alert you to situations that could result in serious personal injury or loss of life.

---



**CAUTION** Cautions indicate situations that can damage the hardware or software.

---

**Note** Notes give important information, etc.

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- Names of keys are printed as they appear on the keyboard, for example, **Ctrl**, **Alt**, or **Enter**.
- Text that you must type or keys that you must press are presented in bold type. For example, type **dir** and press **Enter**.

## Related Documents

See the following documents for additional information on your NEC Versa notebook computer:

- The *NEC Versa L320 Quick Setup* sheet helps get your system up and running.
- The *NEC Versa L320 Quick Reference* card provides an easy-to-carry reference to LED meanings, controls, function key combinations, and NECC help numbers. (The quick reference card does not ship with some systems purchased outside the United States and Canada.)

The *NEC Info Center* is a fully navigational PDF document containing multimedia elements, a full search capability, and important information about your NEC Versa.

# 1

## Introducing the NEC Versa

- Before You Begin
- About Your NEC Versa L320 Notebook
- Around the Front of the System
- Around the Back of the System
- Around the Left Side of the System
- Around the Right Side of the System
- Around the Bottom of the System
- About the NEC Cable PortBar
- About NEC Wireless LAN

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## ***Before You Begin***

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**⚠ WARNING** Prolonged or improper use of a computer workstation may pose a risk of serious injury. To reduce your risk of injury, set up and use your computer in the manner described in Appendix A, Setting Up a Healthy Work Environment.

---

After completing the steps in the quick setup sheet that comes with your computer, your NEC Versa L320 system is ready to go! To get started, do the following:

- Read Appendix A, “Setting Up a Healthy Work Environment,” for guidelines that help you use your computer productively and safely. Information includes how to set up and use your computer to reduce your risk of developing nerve, muscle, or tendon disorders.
- Read through this guide to familiarize yourself with the NEC Versa.

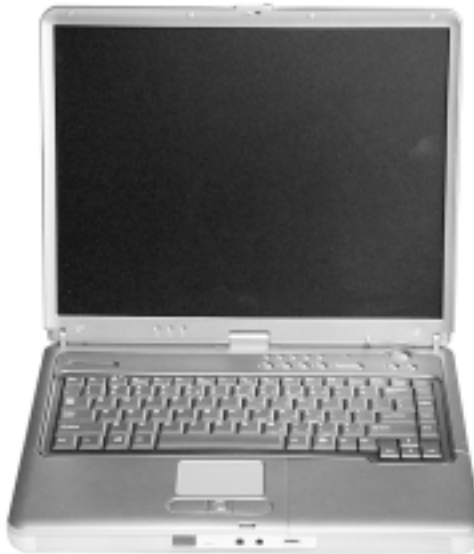
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## ***About Your NEC Versa L320 Notebook***

The NEC Versa L320 notebook computer offers you a portable system filled with exciting resources for business users. Standard features include a powerful Mobile Intel® Pentium® III Processor-M running at 933 MHz, 1 GHz, 1.13 GHz, or higher. This processor is designed to work together with the latest Peripheral Component Interconnect (PCI) architecture.

Your notebook computer supports up to 1 GB of system memory. In addition, your system comes with a high-performance hard disk drive, diskette drive, PC Card support and one of the following variable-speed optical drives: CD-ROM, DVD-ROM, CD-RW, or combination CD-RW and DVD-ROM. Microsoft® Windows® 98 Second Edition (SE) or Windows 2000 Professional is preinstalled. To optimize your connectivity options, all systems ship with a built-in MDC modem and some models come with a Mini PCI LAN or Mini PCI wireless LAN (when available). As a multimedia system, your NEC Versa L320 supports the AGP x4 standard and provides the tools needed to create and present impressive images using video clips and sound.

### ***NEC Versa L320 notebook computer***



To get comfortable with your notebook, read the following sections and take a tour around your system!

---

## ***Around the Front of the System***

The NEC Versa is compact with features on every side. First, look at the front of the system.


### ***Opening Your System***

Open your NEC Versa L320 notebook computer by sliding the LCD panel latch to the right. Lift the cover to reveal the LCD panel and the base unit features. See the section, “Front Features,” to locate the latch.

### ***Base Unit***

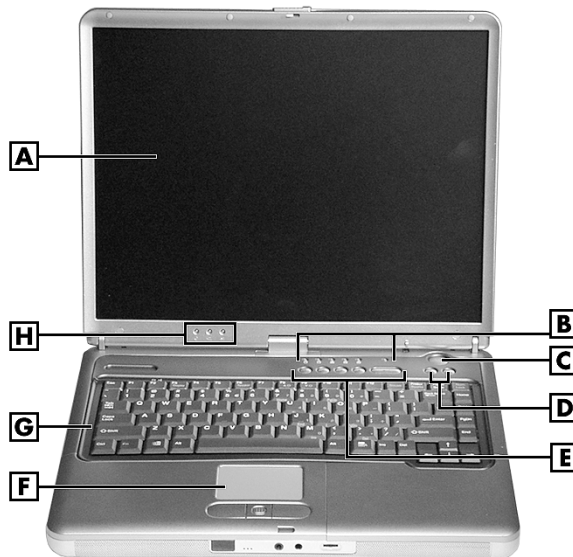
The base unit of your NEC Versa notebook offers the features shown in the following figure. Feature descriptions are provided after the figure.

---

** CAUTION** After extended use, the surface of the base unit, below the keyboard, may become hot to the touch.

---

*LCD panel and base unit*



- |                                  |                                    |
|----------------------------------|------------------------------------|
| <b>A</b> – LCD Panel             | <b>E</b> – Personal Code Buttons   |
| <b>B</b> – Operating Status LEDs | <b>F</b> – NEC VersaGlide Touchpad |
| <b>C</b> – Power Button          | <b>G</b> – Keyboard                |
| <b>D</b> – Shortcut Buttons      | <b>H</b> – Power Status LEDs       |

- 
- LCD Panel — Provides a high-resolution display for sharp, effective visuals on your NEC Versa notebook.
  - Operating Status LEDs — Keep you informed of your NEC Versa notebook's current operating status (see the section, "Status LEDs").
  - Power Button — Powers on and off the system (see the section, "Control Panel").
  - Shortcut Buttons — Launch your browser or your e-mail application with these buttons (see the section, "Control Panel").
  - Personal Code Buttons — Sets a personal code for security. Available on some systems (see the section, "Control Panel").
  - NEC VersaGlide™ Touchpad — Works like a standard computer mouse. Simply move your fingertip over the VersaGlide to control the position of the cursor. Use the selection buttons below the VersaGlide to select menu items. See "Using the NEC VersaGlide" in Chapter 2 for information about customizing VersaGlide settings.
  - Keyboard — Provides 87 keys with the standard QWERTY-key layout. (Models purchased outside of the U.S. and Canada ship with country-specific keyboard layouts.)
  - Power Status LEDs — Indicate whether the system is running on AC power or battery power, and indicate battery status (see the section, "Status LEDs").

## ***Control Panel***

The NEC Versa L320 control panel provides the features shown in the following figure. The control panel features are described after the figure.

---

## Control panel



**A** – Personal Code Button 1  
**B** – Personal Code Button 2  
**C** – Personal Code Button 3  
**D** – Personal Code Button 4

**E** – Personal Code Enter Button  
**F** – Shortcut Button  
**G** – Power Button  
**H** – Shortcut Button

### Security and Personal Code Buttons

Some systems have Personal Code Setting buttons. Use the buttons to set, enter, change, or cancel a personal security code. See “Personal Code Setting Utility” in Chapter 4 for more information.

### Power Button

---

**Note** If you are unable to power off the system, use the power override. Press the Power button and hold it in place approximately 4 to 5 seconds until the system powers off.

---

The Power button is a “smart” switch. It recognizes when the system is in a Windows 98 or Windows 2000 Standby mode, if the BIOS parameter “System Switch” is set to “Sleep.” If the system is in Standby mode, you cannot power off until you press the Power button to resume operation.

Put the unit in Standby mode when you need to be away from your system for a short period of time and want to return to where you left off. Standby mode shuts down all devices in the system while retaining data and system status.

- In Windows 98 and Windows 2000, go to Start, Shutdown, Standby to put your system into Standby mode.



- 
- Use the Power button in the following ways:
    - Press the Power button to power on.
    - Press the Power button to resume from a Windows 98 or Windows 2000 Standby mode and proceed with normal operation.
    - Hold the Power button in place for 4 or more seconds to initiate power override (powers off the system). Only use this option if you cannot power off your system using Start, Shutdown.

## ***Shortcut Buttons***

Some systems have shortcut buttons that can be configured to launch your default Internet browser and your default e-mail application. See “One-Touch Start Button Settings Utility” in Chapter 4 for information about configuring the buttons.

## ***Status LEDs***

The NEC Versa L320 system uses status lights marked with icons to communicate power status and operating status. Most of these LEDs are on the control panel (see the following figure). See the following sections for information about each LED.

### ***Control panel LEDs***



**A** – Power LED  
**B** – Battery Status LED  
**C** – E-mail Notification LED  
**D** – Drive Activity LED  
**E** – NEC Modular Bay Drive Activity LED

**F** – Caps Lock LED  
**G** – Scroll Lock LED  
**H** – Num Lock LED  
**I** – Security Indicator LED

---

**Note** The Radio Wave Status LED (available on some models) is on the right side of the unit. See “Around the Right Side of the System” to locate the LED and for a description of the LED.

---

## *Power Status LEDs*

Power Status LEDs indicate your NEC Versa L320’s current power status.

- Power Status LED — Lights to indicate the following status:
  - Lights green when the system power is on.
  - Blinks green when the system is in Standby mode.
  - Lights yellow (blinks when in Standby mode) to indicate that battery power is at 8% capacity or less.
  - Lights amber (blinks when in Standby mode) to indicate that battery power is at 3% capacity or less.
- Battery Charging LED — Lights to indicate battery charging activity.
  - Lights amber when the primary battery is charging. Blinks amber to indicate an error. The primary battery is installed in the battery bay.
  - Lights green when the secondary battery is charging. Blinks green to indicate an error. The secondary (optional) battery is housed in the NEC Modular Bay.

---

**Note** The system also has a Power Status LED and a Battery Charging LED on the back of the LCD panel. These LEDs can be seen when you are behind your notebook computer, or when the LCD panel is closed.

---

## *Operating Status LEDs*

Operating status LEDs keep you informed of your NEC Versa L320’s current operating status.

- E-mail Notification LED — Some systems have an LED that lights when new e-mail is received.

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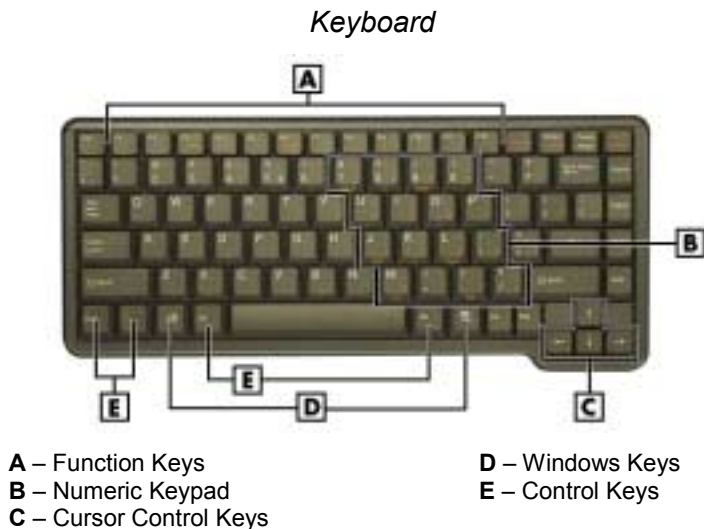
**Note** The system also has an E-mail Notification LED on the back of the LCD panel. This LED can be seen when you are behind your notebook computer, or when the LCD panel is closed.

---

- 
- Drive Activity LED — Lights when the NEC Versa L320 accesses the hard disk or an NEC VersaBay™ IV drive (second hard disk, CD-ROM, DVD-ROM, CD-RW, or combination CD-RW and DVD-ROM drive).
  - NEC Modular Bay Drive Activity LED — Lights when the NEC Versa L320 writes data to or retrieves data from the diskette drive in the NEC Modular Bay.
  - Caps Lock LED — Lights when caps lock is in effect.
  - Scroll Lock LED — Lights when scroll lock is in effect (not supported in the U.S. or Canada).
  - Num Lock LED — Lights when num lock mode is active.
  - Security Indicator LED — Lights green when the system is in security mode (not supported on all systems).
  - Radio Wave LED (on the right side of the system) — Lights green when a Bluetooth™ (when available) or Wireless LAN device is on. The LED goes out when the device is in a Sleep mode. To locate this LED, see the figure “Right-side features” later in this chapter.

## ***Keyboard Panel***

The NEC Versa L320 keyboard has a standard QWERTY-key layout. (Models shipped outside the U.S. are equipped with country-specific keyboard layouts.) Keyboard features are described after the figure.



- 
- **Function Keys** — Twelve function keys, **F1** through **F12**, are available on the NEC Versa L320 keyboard. These keys work together with the **Fn** key to activate special preprogrammed functions.

Function keys can also be used within applications. Most are application-driven, so their function varies according to the application in use. See the specific application's user guide for information about how each function key works within the application you are using.

The following function key combinations are pre-programmed for the NEC Versa L320.

**Fn-Left Ctrl** — Simulates pressing the right control key to support IBM 327X connections (not supported in U.S./Canada).

**Fn-F2** — Toggles a wireless device on and off (in some systems).

**Fn-F3** — Toggles the video mode between LCD only, CRT only, Simultaneous mode, and TV out.

**Fn-F4** — Supported for Windows NT® Workstation 4.0. Sets standby power management mode on, in Windows NT.

— In Windows NT, press any key to resume from Standby mode.

— No function when Windows 98 or Windows 2000 is configured for Advanced Configuration and Power Interface (ACPI). In Windows 98 or Windows 2000, Standby is equivalent to the Windows NT Suspend mode. To resume from the Windows 98 or Windows 2000 Standby mode, press the Power button.

**Fn-F5** — Zooms the screen in or out slightly.

**Fn-F6** — Toggles the system speakers/beep off and on.

**Fn-F7** — Toggles between various power management levels in Windows NT. Beeps indicate the level chosen as follows:

1 beep	Off
2 beeps	Custom
3 beeps	Highest Performance
4 beeps	Longest Life

Fn-F7 has no function when Windows 98 or Windows 2000 is configured for Advanced Configuration and Power Interface (ACPI).

**Fn-F8** — Increases the LCD's brightness (eight settings).

**Fn-F9** — Reduces the LCD's brightness (eight settings).

**Scroll Lock** — Toggles the scroll lock feature on and off.

---

Windows Keys — Use the following two keys to facilitate your work.



Shortcut/Application key – provides quick access to shortcut menus. (This key acts like a right mouse button.)



Floating Window key – displays the Start menu.

- Numeric Keypad — Pressing **Num Lock** on the keyboard activates the numeric keypad numbers and functions printed in yellow on top of the keys.

The keypad lets you type numbers and mathematical operands (+, –) as you would on a calculator. The keypad is ideal for entering long lists of numbers.

When you press **Num Lock** again, the keys revert to their normal functions as typewriter keys.

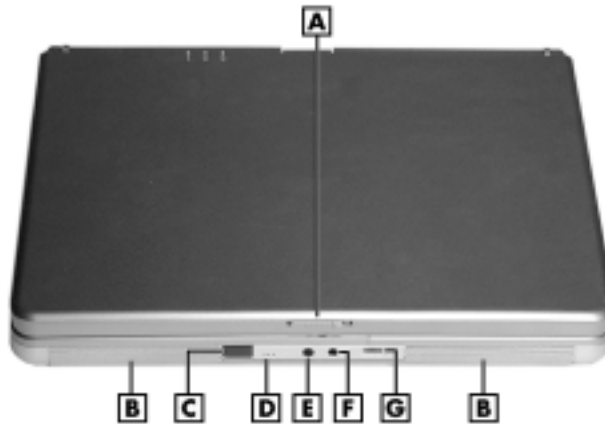
- Typewriter Keys — Typewriter keys (also called *alphanumeric* keys) are used to enter text and characters. Keys with yellow print on them behave differently when combined with control keys, the **Fn** key, or when **Num Lock** is active.
- Control Keys — **Ctrl**, **Alt**, **Fn**, and **Shift** are controls used in conjunction with other keys to change their functions. To use control keys, press and hold the control key while pressing another key. For example, “Press **Ctrl c**” means to hold down the **Ctrl** key and type the letter **c**. Key combinations work specific to the application you are running.
- Cursor Control Keys — Cursor control keys let you position the cursor on the screen where you want. On the screen, the cursor is a blinking underline, block, or vertical bar depending on the application. The cursor indicates where the next text typed is inserted.

---

## Front Features

The features on the front edge of the system are described after the following figure:

*Front features*



**A** – LCD Panel Latch  
**B** – Speakers  
**C** – IR Port  
**D** – Built-In Microphone

**E** – Microphone In Port  
**F** – Headphone In Port  
**G** – Volume Control

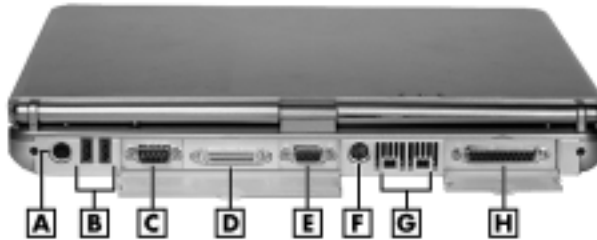
- LCD Panel Latch — Slide the latch to the right to open the NEC Versa L320 system.
- Stereo Speakers — Provide stereo sound for your multimedia presentations or listening pleasure. The built-in sound system also supports 3D sound, which simulates the latest surround-sound technology.
- IR Port — Allows you to transfer files between your NEC Versa and an infrared (IR)-equipped desktop or notebook computer.
- Microphone — Allows you to record monophonic sound directly into your notebook computer. See Chapter 9, “Using Multimedia,” for details about recording.
- Microphone In Port— Allows you to connect an external microphone for monophonic recording or amplification through the unit. Plugging in an external microphone disables the built-in microphone.
- Headphone In Port — Lets you plug in stereo headphones or powered speakers.
- Volume Control — Allows you to control the speaker volume through the thumb wheel.

---

## Around the Back of the System

You'll find system ports for connecting your NEC Versa L320 to optional devices (like a printer or external monitor) on the back of your NEC Versa L320. The ports are described after the figure.

### Back features



<b>A</b> – PS/2 Port	<b>E</b> – VGA Port
<b>B</b> – USB Ports	<b>F</b> – S-Video Out
<b>C</b> – Serial Port	<b>G</b> – IEEE 1394 Ports
<b>D</b> – NEC Cable PortBar Connector	<b>H</b> – Parallel Port

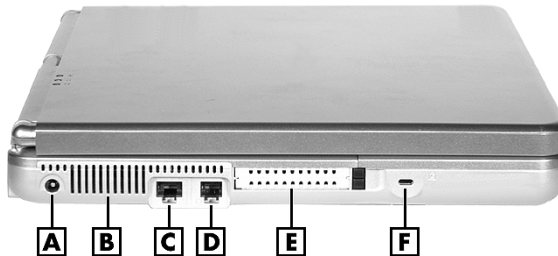
- PS/2<sup>®</sup> Port — Use the standard PS/2 port to connect an external PS/2-style mouse, PS/2-style keyboard, or PS/2-style Numeric Keypad to the system. With an optional Y-adaptor cable, you can connect up to two of these devices at the same time.
- USB Ports — Each Universal Serial Bus (USB) port allows you to connect up to 127 USB-equipped peripheral devices (for example, printers, monitors, and scanners) to your NEC Versa L320.
- Serial Port — Use this port to connect a digital camera or other serial device.
- NEC Cable PortBar<sup>™</sup> Connector — Plug your optional NEC Cable PortBar (port replicator) into this connector. You can connect many of your peripheral devices to the NEC Cable PortBar instead of the connectors on the back of the system.
- VGA Port — Use this 15-pin port to attach an external monitor to your NEC Versa L320.
- S-Video Out Port — Use this port to connect a camcorder, VCR, or a game machine for a connection that provides increased clarity and sharpness of imagery.
- IEEE 1394 Ports — Use each port to daisy chain up to 63 IEEE 1394 devices to your system. IEEE 1394 devices support Plug and Play connectivity for transfer rates of up to 400 Mbps. The Windows NT operating system does not support the IEEE 1394 ports.

- 
- Parallel Port — Connects a parallel printer or other parallel device. The parallel port default supports the Enhanced Capabilities Port (ECP) standard. The port also supports bi-directional and output only protocols.

## ***Around the Left Side of the System***

The left side of your NEC Versa L320 provides the features shown in the following figure. The left-side features are described after the figure.

*Left-side features*



**A** – AC Power Port  
**B** – Fan  
**C** – LAN Port

**D** – Modem Port  
**E** – PC Card Slots  
**F** – Kensington Lock Slot

- AC Power Port — Lets you attach the NEC Versa L320 to the AC power source using the AC adapter that comes with your system. Keep the system connected to AC power whenever possible to keep the battery pack and internal CMOS battery charged.
- Fan — Allows your system to cool properly and maintain a safe operating environment.



**CAUTION** Do not block the fan while the NEC Versa L320 is in use.

---

- Modem/LAN Ports — Some systems include a V.90 fax/data modem or a Mini PCI LAN port for network or Internet access.
- PC Card Slots — Two PC Card slots allow you to insert two Type II PC Cards or one Type III PC Card in the bottom slot.
- Kensington<sup>®</sup> Lock Slot— This slot allows you to attach a Kensington security lock or other compatible lock to secure the notebook from theft.

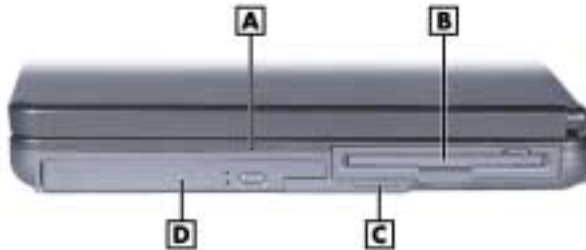


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## ***Around the Right Side of the System***

The right side of the NEC Versa L320 offers the features shown in the following figure. The right side features are described after the figure.

*Right side features*



**A** – Radio Wave Status LED  
**B** – NEC Modular Bay Slot

**C** – Modular Bay Latch  
**D** – VersaBay IV Slot

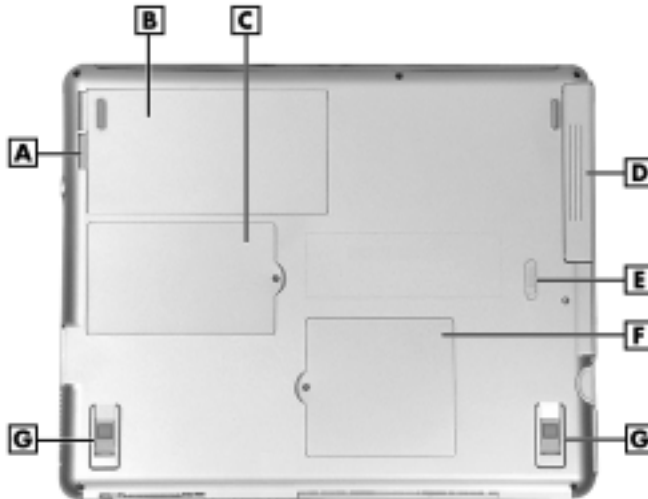
- Radio Wave Status LED — Provides the operating status of a Bluetooth™ or Wireless LAN device. The LED lights green when the Bluetooth or Wireless LAN device is on. The LED goes out when the device is in a Sleep mode.
- NEC Modular Bay Slot — Houses a diskette drive or an optional secondary battery. Devices can be swapped without the system being disassembled or turned over.
- Modular Bay Latch — Slide the latch to the left before removing a Modular Bay device from the system.
- NEC VersaBay IV Slot — Houses a CD-ROM, CD-RW, DVD-ROM, combination CD-RW and DVD-ROM drive, or a second hard drive. One of these drives comes with the notebook. This slot can also house an optional hard disk drive that's been placed in a specially designed cradle.

---

## Around the Bottom of the System

The bottom of the NEC Versa L320 offers the following features. The features are described after the figure.

*Bottom features*



- |                                       |                                    |
|---------------------------------------|------------------------------------|
| <b>A</b> – Battery Release Latch      | <b>E</b> – VersaBay IV Latch       |
| <b>B</b> – Primary Battery Bay        | <b>F</b> – Memory Module Bay Cover |
| <b>C</b> – Mini PCI and MDC Bay Cover | <b>G</b> – Tilt Foot               |
| <b>D</b> – NEC VersaBay IV Slot       |                                    |

- **Battery Release Latch** — Press the latch toward the edge of the system and hold it. Lift the battery up slightly by its edge and pull the battery toward the edge of the system to free the battery connectors and remove the battery. Do not lift the battery straight up.
- **Primary Battery Bay** — Equipped with a lithium ion (Li-Ion) battery.
- **Mini PCI and MDC Bay Cover** — Remove the screw to find the Mini PCI or MDC card.
- **NEC VersaBay IV Slot** — Houses a CD-ROM, CD-RW, DVD-ROM, or combination CD-RW and DVD-ROM drive.
- **Memory Module Bay Cover** — Remove the screw to find two SO-DIMM slots. One slot contains an SDRAM memory board configured by the factory. The other slot is empty for upgrade use.
- **Tilt Foot** — Adjust each foot to provide a flexible keyboard angle.

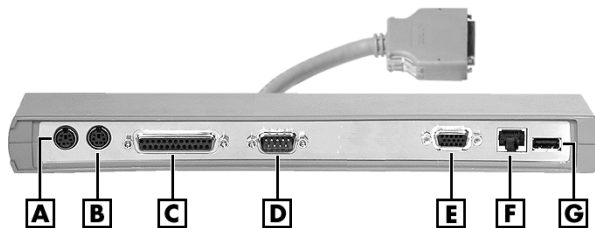
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## About the NEC Cable PortBar

The NEC Cable PortBar is an accessory that duplicates some of the ports on the back of your NEC Versa L320 system, including a power connector. Ports include a LAN port for a network connection. Keep the NEC Cable PortBar in your office connected to peripherals while you take your NEC Versa L320 on the road.

The ports on the NEC Cable PortBar are described after the following figure.

*NEC Cable PortBar*

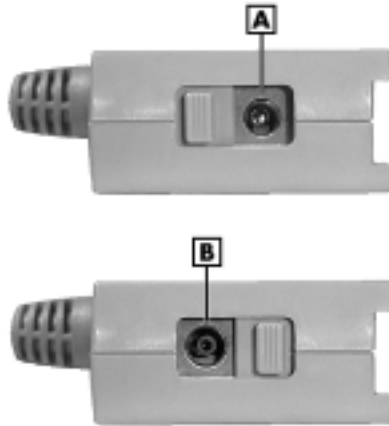


<b>A</b> – PS/2 Keyboard Port	<b>E</b> – VGA Port
<b>B</b> – PS/2 Mouse Port	<b>F</b> – LAN Port
<b>C</b> – Parallel Port	<b>G</b> – USB Port
<b>D</b> – Serial Port	

- PS/2 Keyboard Port — Connects to a 6-pin standard PS/2-style keyboard.
- PS/2 Mouse Port — Connects to a PS/2-style mouse.
- Parallel Port — Connects to a printer. You can change the LPT Mode in the Setup program.
- Serial Port — Connects to a serial device, such as a digital camera.
- VGA Port — Connects to an external VGA/SVGA monitor.
- USB Port — Connects up to 127 peripheral devices to your notebook computer.
- LAN Port — Connects via an RJ-45 connector to the system's built-in LAN card (available on some models).
- Power Connector — Connects to an AC adapter. The NEC Cable PortBar has two power connectors on the left side of the PortBar (see the following figure). Use the 19-volt DC power connector for the NEC Versa L320 notebook computer.

---

## NEC Cable PortBar power connectors



- A – 19-volt DC Power Connector for the NEC Versa L320 system  
B – 15-volt DC Power Connector (for future use)

## About NEC Wireless LAN

Some NEC Versa L320 notebook computers come with built-in wireless LAN capabilities featuring the Wi-Fi™ (wireless fidelity) IEEE 802.11b High Rate (HR) standard for business users. Wireless LAN eliminates the need for connecting cables between your computer and your local area network, facilitating mobility, minimizing downtime, and improving your productivity. With a wireless LAN solution, you have the flexibility of accessing e-mail, the Internet, corporate intranets, and resource planning applications on the network from your notebook computer.

The Wi-Fi compliant radio technology provides high-speed (11 Mbps) wireless networking with the performance capabilities of a wired 10BaseT LAN connection.

Wi-Fi products are tested by an industry group, WECA (Wireless Ethernet Compatibility Alliance), to meet the international IEEE 802.11b standard for wireless radio technology and guaranteed to work with all other Wi-Fi certified products.

# 2

## Getting Started

- NEC VersaGlide Touchpad
  - Power Sources for Your NEC Versa
  - AC Adapter
  - System Batteries
  - Using the Primary Battery
  - Using a Secondary Battery
  - System Care
-

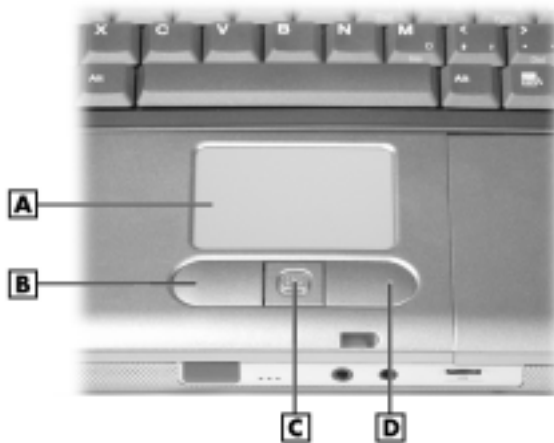
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## NEC VersaGlide Touchpad

The NEC VersaGlide touchpad is an easy way to control the cursor with your finger. Lightly glide your finger across the NEC VersaGlide and the cursor follows. Use the VersaGlide touchpad as follows.

- **Single tap the touchpad** — equivalent to a single click of the primary mouse button.
- **Double tap the touchpad** — equivalent to a double click of the primary mouse button.
- **Click and hold, then drag** your finger across the VersaGlide touchpad — equivalent to a click and drag of the primary mouse button.
- **Press** the scroll button up or down to scroll your document or screen.

### *VersaGlide features*



**A** – NEC VersaGlide touchpad  
**B** – Left Button

**C** – Scroll Button  
**D** – Right Button

Try all of the VersaGlide features and decide which you prefer. If you find the double tap or any of the other features difficult to use, go to the next section for general directions about adjusting the VersaGlide properties.

---

**Note** If you install another mouse driver over the shipping default, the double-tap capability may be lost.

---

---

## ***Making VersaGlide Adjustments***

The NEC VersaGlide offers a number of options that let you customize how it functions. The options let you control the cursor speed, select button orientation, enable or disable tapping, define auto jumps, enable easy-scrolling, and configure gestures to initiate selected functions by tapping in a designated area of the touchpad.

To access these options, locate the Windows Control Panel and double click the mouse icon. Use the context-sensitive help to learn more about each option. Select the option, and then press **F1** to access the context sensitive help.

## ***VersaGlide Tips***

Follow these basic tips while working:

- Use a light touch on the VersaGlide surface.
- Set up the NEC Versa notebook with your keyboard and VersaGlide at a comfortable height. Keep your forearms parallel to the floor. Your wrists should be relaxed and straight.
- While using the keyboard and VersaGlide, keep your shoulders and arms as relaxed as possible.
- Take regular breaks from the computer to rest your eyes. Perform stretching exercises to relax your fingers, hands, wrists, forearms, and shoulders.

See Appendix A, “Setting Up a Healthy Work Environment,” for more information.

## ***Power Sources for Your NEC Versa***

The NEC Versa notebook can be powered using three different sources, making it a truly portable system.

Operate your NEC Versa just about anywhere using one of the following power sources:

- the AC adapter connected to an electrical wall outlet (using AC power)
- battery power:
  - the 8-cell primary battery
  - with or without the optional 8-cell secondary battery that installs in the Modular Bay slot.
- the optional auto adapter. (Not available for all locations. For availability, consult your NEC Computers vendor. For details about using an auto adapter, refer to the accessory sheet that ships with the option.)

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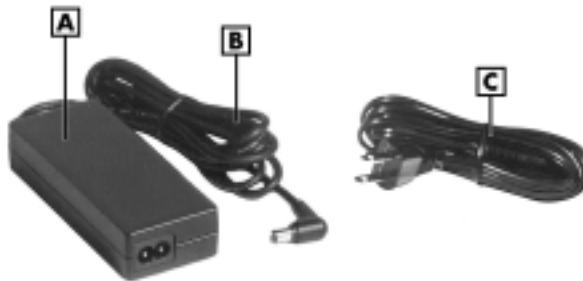
Read the following sections for specific information about using the NEC power sources.

## **AC Adapter**

Use the AC adapter and power cable that came with your NEC Versa notebook to run your computer on alternating current (AC) power, or to recharge the battery.

Keep the adapter connected whenever possible. The AC adapter charges the battery when it is connected, whether the NEC Versa notebook is powered on or off.

### *AC adapter*



**A** – AC Adapter  
**B** – AC Adapter Cable

**C** – Power Cable

---

**! WARNING** Do not attempt to disassemble the AC adapter. The AC adapter has no user-replaceable or serviceable parts inside. Dangerous voltage in the AC adapter can cause serious personal injury or death. The AC adapter is intended for use with a computer and must meet EN609050 standards.

---

### **Connecting the AC Adapter**

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**Note** The AC power cable type that your system uses depends on the country where you are using it. Contact the local dealer to purchase the correct power cable.

---

Connect the AC adapter as follows:

1. Connect the AC adapter cable to the power port on the left side of your NEC Versa notebook.



- 
2. Plug one end of the AC power cable into the AC adapter and the other end into a properly grounded 120- or 240-volt, 50- or 60-Hz wall outlet.

### *Connecting the AC adapter*



---

**⚠ CAUTION** Do not cover or place objects on the AC adapter. Keeping the adapter clear of objects lets the adapter cool properly during use.

Only use the AC adapter that comes with your NEC Versa L320. Although other adapters look similar, using them can damage your system.

---

## ***Powering On Your System***

Power on the system as follows:

1. Locate the latch on the front of the LCD panel, slide it to the right, and raise the panel.
2. Locate the Power button and press it to turn on system power. For additional information about Power control buttons and power LEDs, refer to Chapter 1, “Introducing Your NEC Versa.”

---

## **System Batteries**

Your NEC Versa notebook is equipped with a primary lithium ion battery that helps to prevent data loss. In addition, you can insert an optional secondary lithium ion battery in the NEC Modular Bay slot to give you more on-the-go power.

### **Primary Battery**

The standard lithium ion (Li-Ion) battery provides the main power source in your NEC Versa L320 computer. Your system comes with an 8-cell lithium ion battery that fits into the battery bay on the bottom of your system. See Appendix B for battery specifications. In addition to this battery, the CMOS battery also provides system power.

For information about installing or removing the primary battery, see the section, “Replacing the Battery” later in this chapter. For more information about the primary battery see the section, “Using the Primary Battery.”

### **Secondary Battery**

You can install an optional secondary lithium ion battery in the NEC Modular Bay slot on the right side of your NEC Versa notebook. Attaching a second fully charged battery allows you to work longer while you are away from an AC power source. For more information about the secondary battery, see the section, “Using the Secondary Battery.” For information about installing a secondary battery, see “Installing a Device in the Modular Bay Slot” in Chapter 5 or see the installation instructions that are packaged with battery.

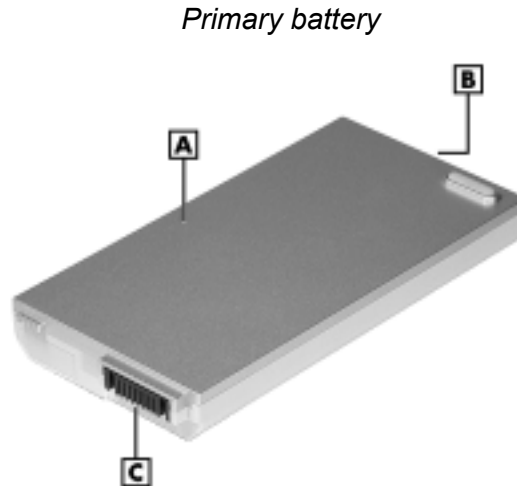
### **CMOS Battery**

This lithium battery provides battery backup and prevents data loss in the system’s complementary metal oxide semiconductor (CMOS) RAM. This memory area contains information on the system’s configuration, for example, date, time, drives, and memory. The CMOS battery charges when your NEC Versa notebook is connected to AC power. The CMOS battery may discharge completely if the NEC Versa notebook remains unused for approximately two months.

---

## Using the Primary Battery

The NEC Versa notebook comes with a rechargeable 8-cell lithium ion (Li-Ion) battery that's easy to install and remove.



**A** – Primary Battery  
**B** – Battery Latch (hidden)

**C** – Connector

---

**! WARNING** To prevent accidental battery ignition or explosion, adhere to the following:

- Keep the battery away from extreme heat.
- Keep metal objects away from the battery connectors to prevent a short circuit.
- Make sure the battery is properly installed in the battery bay.
- Read the precautions printed on the battery.

---

### Determining Battery Status

Your NEC Versa system provides tools to help you keep track of the main (and an optional) battery's power level. If your system is configured (default setting) to display the Power icon on the taskbar, an electrical plug appears when the system is connected to an AC power source or a battery icon appears when the system is not connected to an AC power source.

---

Use the system's power meter to determine battery status. Access the system's power meter in the following ways:

- Move the cursor over the Power icon on the taskbar to display the remaining battery power for the system's primary battery.
- Right click the Power icon on the taskbar to open the power meter or to adjust power properties.
- Double click the Power icon on the taskbar to display the remaining power for both the primary and optional secondary battery (if installed).
- Go to Start, Settings, Control Panel, and double click the Power Management icon. Select the Power Meter tab.

### ***Low Battery Status***

When battery power is low (8% or less), the power LED lights yellow. When battery power is very low (3% or less), the power LED flashes amber. When your system is in a low battery status, do one of the following:

- Power off the system, remove the spent battery, and replace it with a fully charged battery.
- Leave the spent battery in the system and connect your NEC Versa notebook to the AC adapter and a wall outlet.

### ***Returning the Battery to its Normal State***

To return the battery to its normal state, try the following:

- Remove and then reinstall the battery.
- Reinstall the battery in your NEC Versa notebook and fully recharge the battery (to 100%).
- Refresh the battery using the Refresh Battery function in the Exit menu of the BIOS Setup utility (see "Exit Menu" in Chapter 3).

### ***Extending Battery Life***

While on the road, it is important to be aware of the simple things you can do to extend the life of the system's main battery. One way is to keep the brightness setting low. Use the **Fn-F8** and **Fn-F9** function keys to control the brightness.

In addition, NEC Computers recommends that you always operate your system on AC power when using any external device and when playing DVD movies.

---

## **Battery Handling**

Keep the following in mind when removing or replacing a battery.

- Use only the battery designed for your NEC Versa notebook. Mixing other manufacturers' batteries, or using a combination of very old and new batteries can deteriorate battery and equipment performance.
- Turn off power to the system after use. Keeping system power on can degrade battery performance and shorten battery life.
- Clean the battery connectors with a dry cloth when they get dirty.
- Keep the battery out of the reach of children.

## **Replacing the Battery**

The following symptoms indicate that battery life is nearing an end. Replace batteries that display these symptoms.

- Shorter work times.
- Discoloration, warping.
- Hot to the touch.
- Strange odor.

Replace the battery installed in your NEC Versa system as follows.

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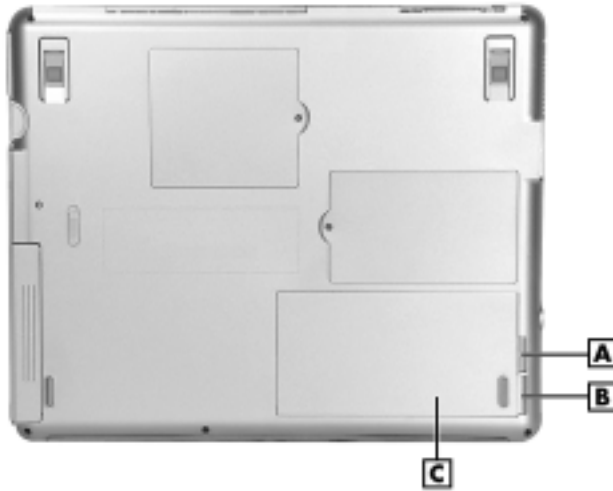
**Note** Use the batteries in the NEC Versa computer for which they are designed. Installing another manufacturer's battery, or using a combination of very old and new batteries can deteriorate battery and equipment performance.

---

1. Save your files, exit Windows, and turn off system power.
2. Close the LCD panel and turn over the system.

- 
- Slide the battery release latch toward the edge of the system and hold firmly.

*Locating the battery bay release latch*



**A** – Battery Release Latch  
**B** – Indentation

**C** – Primary Battery

- Grasp the edge of the battery at the indentation in the system case. Lift the battery up slightly. Once the edge is free, pull the battery out at an angle. Do not lift the battery straight up.

*Removing the battery*



- 
5. Insert the new battery as follows:
    - Locate the connector on the edge of the battery.
    - Locate the connector inside the battery bay.
    - Place the battery in the battery bay at an angle so the connectors line up.
    - Lower the battery into the bay, making sure that the battery release latch secures the battery in place.

### *Inserting the battery*



6. Turn the system over.

### **Charging the Battery**

Charge the primary battery and optional secondary (Modular Bay) battery by simply connecting your NEC Versa L320 system to an AC power source. To monitor the charging activity, observe the battery charging LED on the front of the system. The battery charging LED lights as follows:

- Lights amber when the primary battery is charging.
- Blinks amber if the primary battery encounters an error while charging.
- Lights green when the secondary battery is charging.
- Blinks green if the secondary battery encounters an error while charging.

---

## **Battery Precautions**

To prevent accidental battery ignition, rupture, or explosion, adhere to the following precautions.



**WARNING** There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

To avoid personal injury and property damage, read these battery precautions on handling, charging, and disposing of Li-Ion batteries.

- Keep the battery away from heat sources including direct sunlight, open fires, microwave ovens, and high-voltage containers. Temperatures over 140° F (60°C) may cause damage.
- Do not drop or bump the battery.
- Do not disassemble the battery.
- Do not solder the battery.
- Do not puncture the battery.
- Do not use a battery that appears damaged or deformed, has any rust on its casing, is discolored, overheats, or emits a foul odor.
- Keep the battery dry and away from water.
- Keep metal objects away from battery connectors. Metal objects in contact with the connectors can cause a short circuit and damage.

If the battery leaks:

- If the battery leaks onto skin or clothing, wash the area immediately with clean water. Battery fluid can cause a skin rash and damage fabric.
- If battery fluid gets into eyes, DO NOT rub; rinse with clear water immediately and consult a doctor.
- Take extra precautions to keep a leaking battery away from fire. There is a danger of ignition or explosion.

---

## **Precautions for Recharging the Battery**

Adhere to the following precautions when recharging the primary or secondary battery.

- Charge the battery for the specified charge time only.
- During charging, keep the environmental temperature between 32°F and 104°F (0°C to 40°C).



---

## Using a Secondary Battery

An optional secondary 8-cell battery is available for your NEC Versa notebook. This battery installs in the Modular Bay slot on the right side of your computer.

Use the secondary battery *in addition* to the primary battery to extend the amount of time you can run your system on battery power.

### Secondary Battery Precautions

Use these precautions when using the secondary battery in the Modular Bay slot.

- Do not attempt to run the system on secondary battery power if the primary battery is not installed.

The connectors in the primary battery bay should not be exposed. Connectors can cause a danger if they are accidentally touched or if they connect with a metal object during system operation.

- Always install the weight-saving module that ships with your system in the Modular Bay slot if no Modular Bay device is installed in the slot.



**WARNING** Do not run the system on secondary battery power without the primary battery in place. The connectors in the primary battery bay can cause a danger if they are accidentally touched, or if they connect with a metal object.

If the Modular Bay slot is empty, always install the weight-saving module to protect the bay and the connectors within it.

---

Also see the precautions in the section, “Using the Primary Battery” for information that applies to the safe use of the secondary battery.

### Replacing the Secondary Battery

See “Removing a Device from the NEC Modular Bay Slot” and “Installing a Device in the NEC Modular Bay Slot” in Chapter 5 for instructions on installing or removing the optional 8-cell secondary battery from the Modular Bay.

See the previous section, “Secondary Battery Precautions” for information about the safe use of the secondary battery. Also see the section, “Using the Primary Battery” earlier in this chapter for general information about handling system batteries.

---

## System Care

The NEC Versa L320 notebook computer is designed to be a durable, dependable system built for extensive use and travel. Follow these guidelines to maintain the condition and performance of your computer.



**WARNING** Immediately turn off and unplug the NEC Versa notebook under the following conditions:

- The power cord is damaged or frayed.
  - Liquid spills on or into the NEC Versa notebook.
  - The system is dropped or the casing is damaged.
- 

## Precautions for System Use

Follow these precautions when using your NEC Versa L320 computer and AC adapter.


- Avoid dropping or bumping the computer or the AC adapter.
- Do not stack heavy objects on the computer, the AC adapter, or the batteries.
- Avoid moving the NEC Versa notebook during system operation, especially while the hard disk, diskette drive, or other drive is being accessed.
- When using the AC adapter, make sure the power source falls within the system's compatible range of 100-240 volts and 50 or 60-Hz, AC. Never use the AC adapter if the voltage falls outside of this range. (Watch for this when traveling to other countries.)
- Turn computer power off before attaching or removing non-plug and play devices that are not warm- or hot-swappable.
- Do not push any foreign objects into the NEC Versa bays, connectors, and slots.
- Do not set the computer on top of a magnetized area. Doing so can destroy the data on your hard disk drive. (Some airline tray tables are magnetic.)
- Avoid using the computer or AC adapter for extended periods in direct sunlight.
- Do not use the system in humid or dusty environments.
- Turn computer power off before cleaning it.
- Avoid exposing the NEC Versa notebook or AC adapter to extreme changes in temperature or humidity. If it is unavoidable, allow your NEC Versa notebook to adjust to room temperature before use.
- When cleaning the system, use a soft, clean, dry cloth. Avoid wiping the display surface with abrasive material, including rough fabric. Do not use a cleaning solution; this may damage the notebook's magnesium case.
- If the AC adapter becomes extremely hot, unplug the adapter and let it cool.

---

## Storage Requirements

Store the computer and AC adapter in an environment that meets the following conditions:

---

 **CAUTION** If the temperature of the NEC Versa notebook suddenly rises or falls (for example, when you move the system from a cold place to a warm place) vapor condenses inside the system. Turning on the system under this condition can damage the internal system components.

Before turning on the system, wait until the system's internal temperature equalizes with the new environment and any internal moisture evaporates.


---

- Maintain storage temperatures between -4°F and 104°F (-20°C and 40°C).
- Keep the storage area free from vibration and magnetic fields.
- Keep the system and its components away from organic solvents or corrosive gases.
- Avoid leaving the system and its components in direct sunlight or near heat sources.

## Routine Cleaning

Clean or dust your system as follows:

---

 **CAUTION** Never use harsh solutions, household cleaners, or spray cleaners that contain caustic materials on the NEC Versa computer.

These cleaners are usually high in alkalinity, which is measured in pH. Using these cleaners can harm the magnesium surface.

---

- LCD screen — Carefully wipe the LCD screen with a soft cloth or a screen wipe designed for that purpose. Special screen wipes are available through your local computer dealer.
- System case — NEC Computers recommends that you carefully wipe the case with a slightly damp, almost dry cloth.

# 3

## Using the BIOS Setup Utility

- Introducing BIOS Setup
- Entering BIOS Setup
- Checking/Setting System Parameters
- Managing System Power
- Checking Switch Settings
- Updating the BIOS

---

## ***Introducing BIOS Setup***

Your NEC Versa L320 computer comes with a hardware program called the BIOS Setup utility that allows you to view and set system parameters. BIOS Setup also allows you to set password features that protect your system from unauthorized use.

Use BIOS Setup to:

- set the current time and date
- customize your operating system to reflect your computer hardware
- secure your system with a password
- balance your performance needs with power conservation.

## ***Entering BIOS Setup***

Access the BIOS utility at power-on. Just press **F2** when the following prompt appears.

Press <F2> to Enter BIOS Setup.

When you press **F2** to enter BIOS Setup, the system interrupts the Power-On Self-Test (POST) and displays the current CMOS RAM settings.

If the system detects an error during POST, it prompts you with a double beep and a message: “Press <F1> to resume.” If you press **F1**, the system continues past the error and attempts to load Windows normally. If you want to fix the error, carefully read the error message that appears above the prompt (taking notes if you want), and press **F2**. You will see this message if your CMOS battery becomes fully discharged.

---

## BIOS Setup Main Menu

After you press **F2**, the system displays the BIOS Setup Main Menu screen, similar to the following menu.

### BIOS Setup Main Menu

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Power	Boot	Exit
System Time: [12:00:00]				Item Specific Help	
System Date: [07/12/2001]				<Tab>, <Shift - Tab>, or <Enter> selects Field	
Language [English (US) / Japanese]					
Diskette A: [1.44/1.25 MB, 3 1/2"]					
Internal HDD 20004MB					
VersaBay CD-ROM					
System Memory 640 KB					
Extended Memory 60512 KB					
CPU Type (CPU Type)					
CPU Speed (CPU Speed)					
BIOS Version AAA-BBB-CCC-###					
F1 Help Esc Exit	↑↓ Select Item ←→ Select Menu	F5/F6 Change Values Enter Select ► Sub-Menu		F9 Setup Defaults F10 Save and Exit	

Use the up and down arrow keys (located on the lower right corner of the keyboard) to toggle through the BIOS Setup menu items.

---

## Looking at Screens

BIOS setup screens have three areas as shown next.

### Advanced BIOS Setup

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Power	Boot	Ext
				Item Specific Help	
	NumLock on Boot		[Lock Off]	Configure NumLock using options.	
	PS/2 Mouse		[Auto]		
	LCD Panel View Expansion:		[Disabled]		
	BootUp Message:		[Enabled]		
	Save to Disk Warning:		[Disabled]		
	Summary Screen:		[Disabled]		
	Silent Boot:		[Enabled]		
	Wireless LAN		[Disabled]		
	I/O Device Configuration				
F1 Help	↑↓ Select Item	F5/F6 Change Values		F0 Setup Defaults	
Esc Exit	←→ Select Menu	Enter Select ► Sub-Menu		F10 Save and Exit	

- Parameters — The left side of the screen. This area lists parameters and their current settings.
- Available Options and Help — The right side of the screen. This area lists alternate settings and Help text for each parameter.
- Key Legend — The bottom right corner of the screen. These lines display the keys that move the cursor and select parameters.

Options that are grayed out are not available for the current selection.

---

## Using Keys

The following table lists the BIOS Setup keys and their functions.

### ***BIOS Setup Key Functions***

<b>Key</b>	<b>Function</b>
F1	Displays help.
Esc	Exits the current screen and returns to the Main Menu screen. From the Main Menu screen, displays the prompt, "Quit without saving."
↑↓	Moves the cursor between the displayed parameters.
←→	Moves the cursor between menu items.
F5/F6	Changes the value for the selected item.
Tab	Moves the cursor between the subfields or moves the cursor to the next line or selection. For example, for System Time, Tab moves the cursor from hour to minute to second.
Enter	Brings up a parameter sub-menu.
F9	Reapplies the factory-shipped defaults.
F10	Saves and exits the BIOS Setup utility.

## Checking/Setting System Parameters

The BIOS Setup consists of a number of screens, each representing a specific area of the BIOS. The following tables list the BIOS parameters, their factory default settings, alternate settings, and a description of each setting. See the item-specific help that appears on each Setup screen for more details.

The BIOS Setup utility is broken down as follows:

- Main BIOS Setup
- Advanced CMOS Setup
- Security Setup
- Power Setup
- Boot Setup
- Exit



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## Resetting System Parameters

To reset all parameters to the default settings, press **F9**, press the arrow keys to select **Yes**, and press **Enter**.

### Main Menu

Use the Main menu to view the System Time, System Date and to modify drive parameters and related settings.

#### Main Menu

Parameter	Default Setting	Alternate Setting(s)
System Time	hh:mm:ss	
System Date	mm / dd / yyyy	
Language	English	Japanese
Diskette Drive A	1.44/1.25 MB, 3 ½"	Disabled
Internal HDD	Auto	User Defined, CD/DVD, None
VersaBay	CD/DVD	
System Memory		(automatically detected)
Extended Memory		(automatically detected)
CPU Type		(automatically detected)
CPU Speed		(automatically detected)
BIOS Version		(automatically detected)

- **System Time** — Sets the time; enter the current hour, minute, and second in *hr:/min:/sec*, 24-hour format.

To set the time, use the **Tab** or arrow keys to move from field to field. Use the **F5/F6** keys to change the numbers within each field.

- **Date** — Sets your NEC Versa's calendar month, day and year. The calendar clock is year 2000-compliant. These settings remain in memory even after you turn off system power.

To set the date use the **Tab** or arrow keys to move from field to field. Use the **F5/F6** keys to change the numbers within each field.

- **Language** — Designates the language displayed by the BIOS Setup utility.

- 
- Diskette Drive — Designates the drive type for your diskette drive.
  - Internal Drives — Assigns devices to the internal drives in your system.
  - VersaBay — Assigns the device to the VersaBay drive in your system.
  - System Memory / Extended Memory — Displays the amount of system memory and extended memory currently installed in your system.
  - CPU Type, CPU Speed — Displays the type and speed of the installed processor.
  - BIOS version — Displays the version number of the current BIOS Setup utility.

## ***Advanced Menu***

Use the Advanced menu to set the following functions.

### ***Advanced Menu***

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
NumLock on Boot	LockOff	LockOn
PS/2 Mouse	Auto	Both, Disabled
LCD Panel View Expansion	Enabled	Disabled
BootUp Message	Enabled	Disabled
Save to Disk Warning	Disabled	Enabled
Summary Screen	Disabled	Enabled
Silent Boot	Enabled	Black, Disabled
Wireless Device	Disabled	Enabled
I/O Device Configuration	[Enter]	

- NumLock on Boot — Specifies whether NumLock is enabled when the system boots.
- PS/2 Mouse — Auto allows the PS/2 mouse to be active if it is detected. Both allows the NEC VersaGlide touchpad and an external mouse to be active at the same time. Disabled turns off the internal mouse and prevents an external mouse from being active. (When set to Disabled, IRQ12 is freed up.)
- LCD Panel View Expansion — Specifies whether the panel view is reduced/off or expanded/on.

- 
- **BootUp Message** — Enabled allows a boot message to be displayed while the system boots.
  - **Save to Disk Warning** — When set to Disabled, no Save-to-Disk warning is displayed if the SAVE2DSK.BIN file does not exist.
  - **Summary Screen** — When set to Enabled, system configuration information is displayed on the screen during boot.
  - **Silent Boot** — When set to Enabled, the NEC logo screen is displayed during system boot. When set to Disabled, the Power-On Self-Test (POST) information is displayed during system boot. When set to Black, the screen is black until the system has booted.
  - **Wireless Device** — Enabled allows a Wireless LAN device (if installed) to be used. Disabled prevents a wireless device from functioning. (This setting only appears on systems with a Wireless LAN device installed.)
  - **I/O Device Configuration** — Pressing the Enter key brings up a sub-menu with entries for enabling the serial port, infrared port, parallel port, and the diskette drive controller. The infrared (IR) port is disabled by default. See “IR Port” in Chapter 6 for information about using the IR port.

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## Security Menu

Use the Security menu to configure your system for protection against unauthorized access.

### **System Security Setup**

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Security Mode	Password	FingerPrint
Set Supervisor Password	Press Enter	
Set User Password	Press Enter	
Set Supervisor FingerPrint	Press Enter	
Set User FingerPrint	Press Enter	
Password on Boot	Disabled	Enabled
Fixed Disk Boot Sector	Normal	Write Protect
Diskette Access	Supervisor	User
Assign HDD Password	Press Enter	
Internal HDD password	Disabled	Enabled

- Security Mode — Establishes the security method: password protection, FingerPrint access, or SmartCard access.
- Set Supervisor Password — When Security Mode is set to Password, establishes password protection for entering the BIOS Setup utility, booting the system, and resuming from Suspend.
- Set User Password — When Security Mode is set to Password, establishes a user password once a supervisor password is set. The user password allows the system to boot and resume from Suspend and Save-to-File.
- Assign Supervisor FingerPrint — Establishes access protection for entering the BIOS Setup utility, booting the system, and resuming from Suspend.
- Assign User FingerPrint — Establishes user access once supervisor access is set. The user privileges allows the system to boot and resume from Suspend and Save-to-File.
- Password on Boot — Establishes whether a password is required to boot the system.

- 
- Assign HDD Password — Allows you to assign a password to allow or restrict access to the hard disk drive contents.
  - Internal HDD Password — Enables or disables the HDD password.

## ***Password Protection***

Your NEC Versa supports a password for system security on several levels. Keep in mind that you must set the supervisor password before the BIOS Setup utility allows you to set a user password.

Once you set a supervisor password, you must enter it before you can enter BIOS Setup, access the system at startup, or resume from Suspend or Save-to-File, depending on your configuration selection.

## ***Establishing Passwords***

To establish password protection for entering the BIOS Setup utility or accessing the system at startup, you must set the supervisor password before setting a user password.

- To enter a password simply select Set Supervisor Password, press **Enter**, enter the password, re-enter the password to confirm, and press any key to continue. Repeat the procedure to set the user password.
- To initiate password protection while you step away from your system, simply press **Ctrl Alt Backspace** simultaneously or place the system into Suspend or Save-to-File mode. The Caps lock and Scroll lock LEDs alternately flash indicating that you must enter a password to resume operation.

To establish password protection for resuming from Standby or Hibernation modes you must do the following:

- Set a Windows password in Control Panel, Password Properties, Change Passwords.
- Enable the option “Prompt for password when the computer goes off standby” in Control Panel, Power Management Properties, Advanced.

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## ***FingerPrint Protection***

Your system also allows you to establish system protection using an external fingerprint reader.

Your NEC Versa supports FingerPrint protection for system security on several levels. Keep in mind that you must set up supervisor access before the BIOS Setup utility allows you to set up user access.

Once you set up supervisor access, you must enter it before you can enter BIOS Setup, access the system at startup, or resume from Suspend or Save-to-File, depending on your configuration selection.

## ***Hard Disk Drive Passwords***

Your NEC Versa allows you to establish password protection for the internal hard disk drive. Hard disk drive (HDD) password protection restricts access to the drive, only if the drive is removed from your NEC Versa and installed in another system. You are not prompted to enter your hard disk drive passwords while the drive remains in your current system.

The HDD passwords are written to the system BIOS and to the hard disk drive to ensure that the password protection travels with the drive when moved from system to system.

## ***Establishing Hard Disk Drive Passwords***

To establish password protection for your system's hard disk drive you must establish a master password, establish a user password, and enable the established passwords for the internal HDD. Follow these steps to establish HDD passwords and to enable HDD password protection.

1. Enter the BIOS setup, highlight and select the Security Setup.

2. Highlight Assign HDD Password and press **Enter**.

The system prompts you to enter a master password.

3. Enter a master HDD password and press **Enter**.

The system prompts you to enter the password again to verify.

4. Enter the master password and press **Enter**.

The system confirms the creation of the master password and prompts you to enter a user password.

5. Enter a user password and press **Enter**.

The system prompts you to enter the password again to verify.

- 
6. Enter the user password and press **Enter**.
  7. Highlight and select Internal HDD Password and use the **F5/F6** keys to enable the selection. (This enables password protection for the internal HDD.)

## *Changing Hard Disk Drive Passwords*

To change hard disk drive passwords, enter the Security Setup, highlight Assign HDD Password, press **Enter**, and enter the current password that you wish to change. If you enter the current master password, you are prompted to enter a new master password. If you enter the current user password, you are prompted to enter the new user password. If you do not wish to establish a new master or user password, press **Esc** instead of entering a new password.

## *Using Hard Disk Drive Password Protection*

To facilitate the transfer of one or more HDDs between systems, establish a single master password (and store the password in a secure place). Forgetting your master password results in the inability to access the data on your hard drive. Establish different user passwords to limit access to specific systems.



**WARNING** If you set the master and user password on a hard drive, password security can never be disabled. Passwords can be changed. If the master password is forgotten and the drive is installed in another system, you cannot access the data on the hard drive.

If the hard drive is installed in another NEC Versa system with hard disk drive security enabled, the password must be entered to allow access to the hard drive. **If this NEC Versa system does not support hard disk drive security, you cannot access the data on the hard drive.**

---

With hard disk drive security enabled on the original NEC Versa system, the system boots normally.

If the hard drive is installed in another NEC Versa system with security enabled, you must enter the master password to access the hard disk drive. If the hard drive is installed in another NEC Versa system with security disabled, the system boots with no password required.

## *Moving the Hard Disk Drive*

When a password protected HDD is moved from its original system and installed in another system, error messages appear indicating that the drive is locked. Next, the Security Setup screen appears requiring the user to enter the master password to unlock the drive. Highlight the HDD password line and enter the master password when prompted.

---

To take advantage of HDD password protection in another system, the system must be equipped with the same HDD password protection feature. To determine if that system has HDD password, check the Security Setup in the BIOS Setup to see if there are provisions for establishing HDD passwords.

## ***Power Menu***

Use the Power menu to control some power saving functions in your system.

Note that the Advanced Configuration and Power Interface (ACPI) controls most power management functions of Versa L320 systems running the Windows 98 SE or Windows 2000 operating system. In Windows 98 SE, ACPI is configured through the Power Management Properties dialog box. In Windows 2000, ACPI is controlled through the Power Options Properties dialog box.

For details about ACPI power management, see the section, “Managing System Power,” later in this chapter.

See the following information on using the Power menu to balance high performance and energy conservation in your system.

### ***Power Menu***

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Power Switch	On/Off	Suspend/Resume
Power Management Function	Always On	Battery Only
Power Savings Level	Customized	Disabled, Maximum Power Savings, Maximum Performance
Suspend Timeout	20 minutes	5, 10, 15, 30, 40, 60 minutes, Off
Suspend Mode	Suspend	Save-to-Disk
Auto Save-to-Disk	Off	After 1 Hour
Suspend Warning Tone	Enabled	Disabled
Intel® SpeedStep2™ technology	Enabled	Disabled
Lid Switch	Backlight	Suspend
Remote Power On	Disabled	AC Only, AC/Battery
Resume On Modem Ring	Off	On
Resume On Time	Off	On
Resume Time	[HH:MM:SS]	



- 
- **Power Switch** — Sets the Power button as a power switch (with the On/Off setting) or a sleep button (with the Suspend/Resume setting).
  - **Power Management Function** — Select Always On to enable power management while the system is running under either AC power or battery power. Select Battery Only for power management only while running on battery power.
  - **Power Savings Level** — Specifies one of four levels of power management.
    - **Maximum Performance** — Provides good battery life and best performance with only minimal power conservation. Use while on the road or traveling short distances.
    - **Maximum Power Savings** — Provides best battery life, the maximum amount of power savings, and good performance. Use while traveling long distances.
    - **Disabled** — Disables power management and all device timeouts. Works well in an office environment while powering your NEC Versa with AC power.
    - **Customized** — Lets you define power management levels and specific device timeouts according to your own needs and present environment. Custom lets you set timeouts for CPU speed, hard disk timeout, video timeout, audio device timeout, Standby timeout, and Auto Suspend timeout.
  - **Suspend Timeout** — Sets the amount of time the system needs to be in Standby mode before entering Suspend mode.
  - **Suspend Mode** — Specifies either Suspend or Save-to-File as the default power management mode. For details about using this parameter, see the section, “Managing System Power,” later in this chapter.
  - **Auto Save-to-Disk** — Enables the system, after one hour in Suspend mode, to save the current working environment to a special file on the hard disk and to power down the system.
  - **Suspend Warning Tone** — Specifies whether the system warning tone sounds when Suspend mode starts. It is best to keep this option enabled.
  - **Intel® SpeedStep2™ technology** — Optimizes CPU performance when the system is powered under AC and regulates CPU performance when the system is powered by battery.
  - **Lid Switch** — Selects whether the system goes into a video timeout, or just turns off the LCD backlight under power management.
  - **Remote Power On** — Select AC Only to prevent the system from being powered on by a LAN board signal when the system is on battery power. AC/Battery allows remote power on under battery power.
  - **Resume On Modem Ring** — Determines whether the system can be brought out of a power-saving state when an incoming call is detected on the modem.

- 
- **Resume On Time** — When Enabled, brings the system out of a power-saving state at a specified time.
  - **Resume Time** — Specifies the time at which the system resumes from a power-saving state (if Resume On Time is set to Enabled).

## ***Boot Menu***

Boot menu allows you to define the boot order of system devices or to specify a boot remotely.

**Boot Devices** — Boot devices are listed by name, and the order of the names represents the boot order:

- ATAPI CD-ROM
- Diskette Drive
- Hard Drive.

**Network Boot Control** — Specifies whether the system can be booted remotely by a signal to the LAN board.

## ***Exit Menu***

The Exit menu provides the following options:

- **Exit Saving Changes** — Saves the changes you may have made to the BIOS settings, and exits the BIOS Setup utility.
- **Exit Discarding Changes** — Clears any changes just made to BIOS settings and exits the BIOS Setup utility.
- **Load Setup Defaults** — Resets all BIOS settings to what they were when the system was shipped from the factory.
- **Discard Changes** — Discards any changes made to BIOS settings during the current BIOS Setup utility session.
- **Save Changes** — Saves any changes made to BIOS settings during the current BIOS Setup utility session, but does not exit the BIOS Setup utility.
- **Refresh Battery** — Launches the Refresh Battery utility. Once launched, the utility fully discharges your battery to eliminate any residual memory effect. Once refreshed, your battery is conditioned to recharge to its full capacity. To recharge the battery, connect your NEC Versa to AC power.

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## ***Managing System Power***

In the Windows® 2000 and Windows® 98 Second Edition (98 SE) operating system environments, your NEC Versa notebook manages its power resources using the Advanced Configuration and Power Interface (ACPI) while the system is powered on using AC or battery (DC) power. ACPI enables the operating system to manage the power given to each attached device and to turn off a device when not in use.

Take advantage of the opportunity to manage power on your system to:

- Minimize battery drain.
- Preserve the life of your NEC Versa.
- Save time. When you return from that urgent call or meeting, you don't have to reboot, just press the Power button to resume system operation.

### ***Windows 2000 Power Options Properties***

In Windows 2000, most ACPI power management settings are controlled through Windows Power Options Properties, not through the BIOS Setup utility. To access Windows 2000 Power Options Properties, go to Start, Settings, Control Panel, and double click Power Options.

Power Options Properties features are broken down as follows.

- Power Schemes
- Alarms
- Power Meter
- Advanced
- Hibernate
- Intel SpeedStep technology.

---

## Windows 2000 Power Schemes

Use the Power Schemes options to define the appropriate Power scheme for your system, and to set timeouts for standby, LCD panel, and hard disk. Define parameters for your system when running under AC (plugged in) or DC (running on batteries) power.

### **Power Schemes**

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Power Schemes	Portable/Laptop	Home/Office Desk, Presentation, Always On, Minimal Power Management, Max. Battery
Turn off monitor (Plugged in)	After 15 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off monitor (Running on batteries)	After 5 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off hard disks (Plugged in)	After 30 Minutes	3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off hard disks (Running on batteries)	After 5 Minutes	3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System standby (Plugged in)	After 20 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System standby (Running on batteries)	After 5 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System hibernates (Plugged in)	After 1 Hour	10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5, 6 hours; Never
System hibernates (Running on batteries)	After 10 minutes	10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5, 6 hours; Never

---

- Power Schemes — Defines the most appropriate power scheme for your computer.
- Turn off monitor — Selects the time delay before your LCD panel turns off.
- Turn off hard disks — Selects the time delay before your hard disk(s) power down.
- System standby — Selects the system standby timeout period for your system when running under AC or DC power.
- System hibernates — Selects the system hibernate timeout period for your system when running on AC or DC power.

## *Windows 2000 Alarms*

Use the Alarms screen to define the point at which the battery alarm activates. Define the alarm to either sound, display a warning message, or invoke Standby, Hibernate, or Shutdown.

### ***Alarms***

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Low battery alarm	10%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action Power Level	None	Standby, Power Off, Hibernate
Critical battery alarm	3%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action Power Level	Standby	Power Off, Standby, Hibernate
Run a program	None	When the alarm occurs, run this program.

- Low battery alarm — Allows you to define a low battery alarm percentage, notification, and system action.
- Critical battery alarm — Allows you to define a critical battery alarm percentage, notification, and system action.
- Run a program — Allows you to run a specific program when an alarm occurs.

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## Windows 2000 Power Meter

The Power Meter screen displays the remaining battery power and charging status for the primary and secondary batteries. Choose to display either a percentage progress bar or a battery icon with percentage indicator for your battery status information.

## Windows 2000 Advanced

The Advanced window allows you to select behaviors for the taskbar icon, standby password, LCD panel, when closed, and the Power button.

### **Advanced**

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Always show icon on taskbar	Unchecked	Checked
Prompt for password when computer goes off standby	Checked	Unchecked
When I close the lid on my computer	None*	Standby, Power Off, Hibernate
When I press the Power button on my computer	Power Off	Standby, Hibernate

\*When None is selected, LCD panel turns off when closed.

- Always show icon on the taskbar — Determines whether or not the Power Meter icon displays on the taskbar.
- Prompt for password when computer goes off standby — Determines whether or not the system prompts for your Windows password when resuming from Standby.
- When I close the lid of my computer — Defines the system action when the LCD panel is closed.
- When I press the Power button on my computer — Defines the system action when the Power button is used.

## Windows 2000 Hibernate

Use the Hibernate window to enable hibernate support, see the amount of free disk space, and the amount of disk space required to hibernate. When your system hibernates it performs a save-to-disk. Your current working environment is saved to the hard disk. Use the Power button to resume from hibernation and your system returns to its previous state.

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## ***Windows 2000 and Intel SpeedStep Technology***

Use the Intel SpeedStep technology (available in systems with Intel Pentium III processors) to optimize processing speed and conserve battery life.

Enable Intel SpeedStep technology through the Power menu (Intel SpeedStep2) in the BIOS Setup utility. The available settings are Disabled and Enabled. Use Disabled to turn off Intel SpeedStep2 technology.

If Intel SpeedStep2 technology is enabled in your system, an icon appears on your taskbar allowing you to adjust processing properties. However, the default settings are recommended for optimal performance and battery conservation.

For information about accessing the BIOS Setup utility refer to “How to Use Setup” and “Advanced Menu” earlier in this chapter.

## ***Windows 98 SE Power Management Properties***

In Windows 98 SE, most ACPI power management settings are controlled through Windows Power Management Properties, not through the BIOS Setup utility, unless otherwise noted. To access Windows 98 SE Power Management Properties, go to Start, Settings, Control Panel, and double click Power Management.

The Power Management Properties features are broken down as follows:

- Power Schemes
- Alarms
- Power Meter
- Advanced
- Hibernate
- Intel SpeedStep technology.

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## Windows 98 SE Power Schemes

Use the Power Schemes options to define the appropriate Power scheme for your system, and to set timeouts for standby, LCD panel, and hard disk. Define parameters for your system when running under AC (plugged in) or DC (running on batteries) power.

### **Power Schemes**

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Power Schemes	Portable/Laptop	Home/Office Desk, Always On
Turn off monitor (Plugged in)	After 15 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off monitor (Running on batteries)	After 2 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off hard disks (Plugged in)	After 30 Minutes	3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
Turn off hard disks (Running on batteries)	After 3 Minutes	3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System standby (Plugged in)	After 20 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never
System standby (Running on batteries)	After 5 Minutes	1, 2, 3, 5, 10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5 hours; Never

- Power Schemes — Defines the most appropriate power scheme for your computer.
- Turn off monitor — Selects the time delay before your LCD panel turns off.
- Turn off hard disks — Selects the time delay before your hard disk(s) power down.
- System standby — Selects the system standby timeout period for your system when running under AC or DC power.



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## Windows 98 SE Alarms

Use the Alarms screen to define the point at which the battery alarm activates. Define the alarm to either sound, display a warning message, or invoke Standby, Hibernate or Shutdown.

### *Alarms*

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Low battery alarm	10%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action Power Level	No action	Standby, Hibernate, Shutdown
Critical battery alarm	3%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action Power Level	Hybernate	Standby, Shutdown, No Action

- Low battery alarm — Allows you to define a low battery alarm percentage, notification, and system action.
- Critical battery alarm — Allows you to define a critical battery alarm percentage, notification, and system action.

## Windows 98 SE Power Meter

The Power Meter screen displays the remaining battery power and charging status for the primary and secondary batteries. Choose to display either a percentage progress bar or a battery icon with percentage indicator for your battery status information.

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## *Windows 98 SE Advanced*

The Advanced window allows you to select behaviors for the taskbar icon, standby password, LCD panel, when closed, and the Power button.

### ***Advanced Windows***

<b>Parameter</b>	<b>Default Setting</b>	<b>Alternate Setting(s)</b>
Always show icon on taskbar	Checked	Unchecked
Prompt for password when computer goes off standby	Unchecked	Checked
When I close the lid on my computer	None	Hibernate, Standby, Shutdown
When I press the Power button on my computer	Shutdown	Standby, Hibernate

- Always show icon on the taskbar — Determines whether or not the Power Meter icon displays on the taskbar.
- Prompt for password when computer goes off standby — Determines whether or not the system prompts for your Windows password when resuming from Standby.
- When I close the lid of my computer — Defines the system action when the LCD panel is closed.
- When I press the Power button on my computer — Defines the system action when the Power button is used.

## *Windows 98 SE Hibernate*

Use the Hibernate window to enable hibernate support. When your system hibernates, it performs a save-to-disk. Your current working environment is saved to the hard disk. Use the Power button to resume from hibernation and your system returns to its previous state.

---

## ***Windows 98 SE and Intel SpeedStep Technology***

Use the Intel SpeedStep technology (available in systems with Intel Pentium III processors) to optimize processing speed and conserve battery life.

Enable Intel SpeedStep technology through the Power menu (Intel SpeedStep2) in the BIOS Setup utility. The available settings are Disabled and Enabled. Use Disabled to turn off Intel SpeedStep2 technology.

If Intel SpeedStep2 technology is enabled in your system, an icon appears on your taskbar allowing you to adjust processing properties. However, the default settings are recommended for optimal performance and battery conservation.

For information about accessing the BIOS Setup utility refer to “How to Use Setup” and “Advanced Menu” earlier in this chapter.

## ***Windows Power Management States***

ACPI uses different levels or states of power management. These power management states occur automatically, based on the system’s default settings, or manually, when invoked. Settings are configurable to occur while on battery power or AC power.

The ACPI power management states in the Windows 2000 and Windows 98 SE environments include:

- LCD timeout — manages power at the lowest level by shutting down the LCD.
- Standby — also known as Save-to-RAM (STR), Standby manages power by saving your current working environment to memory and shutting down most system devices. Conserves more power than an LCD timeout.
- Hibernate — also known as save-to-disk, Hibernate manages power by saving the current working environment to an area on your hard disk, then powering off your system. Conserves the most battery power.

---

## Recognizing the Windows Power Management States

It is important to recognize your system's behavior when in each of these power management states. The following table describes the system behavior for each power management state.

### Windows Power Management Behavior

	LCD Timeout	Standby (STR)	Hibernate (STF)
<b>Default Setting</b>	2 Minutes, DC power.	5 Minutes, DC power.	On DC power: 15 minutes for Windows 98SE; 10 minutes for Windows 2000.
	15 Minutes, AC power.	20 minutes, AC power.	On AC power: 60 minutes for Windows 2000 and Windows 98SE
<b>Manually Invoke</b>	Close LCD panel.	Go to Start, Shutdown, Standby. Close LCD panel.*	Close LCD panel.* Press Power button.*
<b>System behavior</b>	LCD panel is blank.	LCD panel is blank.	LCD panel is blank.
	Status LED lights green.	Status LED blinks green.	Status LED turns off. Progress bar indicates that current working environment is saved to hard disk.
<b>Resume</b>	Press any key.	Press Power button.	Press Power button. Progress bar appears during process.

\*Only when set in Advanced Windows Power Management Properties.

---

## Checking Switch Settings

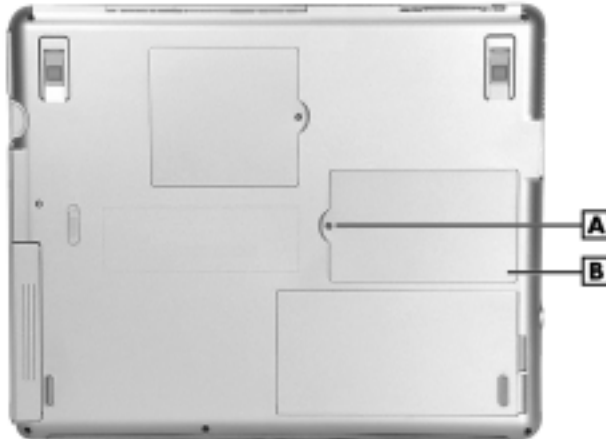
An eight-position dip switch is located on the bottom of the system in the Mini PCI/MDC bay. To access the dip switch, follow the procedure in “Accessing Switches.” For a description of switch settings, see “Looking at Switch Settings.”

### Accessing Switches

Follow these steps to access the switches under the Mini PCI/MDC bay.

1. Make sure the system is powered off and that no peripheral devices are attached.
2. Turn over the system and locate the Mini PCI/MDC bay cover.

#### *Locating the Mini PCI/MDC bay cover*



**A** – Screw

**B** –Mini PCI/MDC Bay Cover

3. Remove the screw and bay cover.



**CAUTION** Before handling any internal components, discharge static electricity from yourself and your clothing by touching a nearby unpainted metal surface.

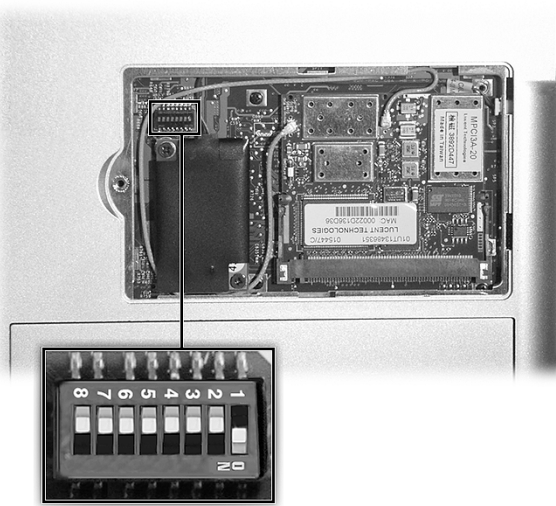
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## Looking at Switch Settings

The following figure shows the default switch settings. Switch setting descriptions follow the figure.

*Default switch settings*



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**⚠ CAUTION** Never use a pencil to change switch settings. Residue from the pencil can damage the system.

Using a fine-tipped object to gently change a switch setting between “ON” or “OFF.”

---

- Switch 1, Keyboard Select — The default setting is “ON” for U.S. keyboard.
- Switch 2, Keyboard Select — The default setting is “OFF” for U.S. keyboard.
- Switch 3, Reserved for Factory Use — The default setting is “OFF.”
- Switch 4, Password Override Switch — The default setting is “OFF.” If you forget your password and cannot access the data on your NEC Versa, change the setting to “ON” to erase your current password.
- Switch 5, Reserved for Factory Use — The default setting is “OFF.”

- 
- Switch 6, PIN Security mode — The default setting is “OFF.” The system ships without a Personal Security code, but with the PIN security option enabled. This means you can boot the system without a PIN if a PIN has yet to be set, or boot the system with a PIN if the password has been set.

---

**Note** If you set a Personal Security code and forget the code, call NEC Computers Support Services at **1-800-632-4525** for information about how to reset the code.

---

- Switch 7, Reserved for Factory Use — The default setting is “OFF.” (For U.S.)
- Switch 8, RTC Reset — The default setting is “OFF.”

## ***Updating the BIOS***

The BIOS is code transmitted onto your system’s microprocessor, or central processing unit (CPU). As indicated in this chapter, you use the BIOS Setup utility to configure your system’s software and hardware features. Only use the BIOS Update Diskette for your specific model to update your NEC Versa system BIOS.

---

**Note** You only need to update the BIOS if NEC Computers makes significant improvements or fixes to the current system BIOS. Your authorized NEC Computers dealer or support representative can help you determine this.

---

To update the system BIOS you must:

- Obtain the BIOS Update
- Prepare the BIOS Update Diskette
- Perform the BIOS Update.

## ***Obtaining the BIOS Update***

If you are informed that the default BIOS needs an update, contact NEC Computers Support Services at **1-800-632-4525** or access the NEC Computers web site, **[www.neccomp.com](http://www.neccomp.com)**, to obtain a copy of the BIOS update.

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**Note** If you purchased and are using this computer outside the U.S. or Canada, please contact a local NEC office or dealer in your country.

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## ***Preparing the BIOS Update Diskette***

Before using the BIOS update diskette, you must make the diskette BIOS flash ready. Refer to the **readme.txt** file on the diskette before using the diskette.

Follow these instructions to prepare the BIOS Update Diskette.

1. Scan your hard drive for any computer viruses.
2. Unlock the write protect notch on the diskette, if necessary.
3. Insert the diskette into the diskette drive.
4. Type **a:\install** (where a: is the diskette drive) at the DOS prompt and follow the on-screen instructions.

Install.bat copies the DOS system files from your hard drive onto the BIOS Update Diskette to make it BIOS flash ready.

The system prompts you when the process is complete.

5. Scan the BIOS Update Diskette for computer viruses.

The diskette is ready for use.

## ***Performing the BIOS Update***

Make the following preparations before performing the BIOS update. Before you begin, be sure to:

- Connect the computer to AC power and power off the computer.
- Configure the Boot Device Setup to boot from a floppy diskette.
- Remove any bootable CDs from the VersaBay IV drive.
- Write down what you've done to customize your BIOS settings.

Once you have prepared the system for a BIOS update, perform the following steps:

1. Insert the BIOS Update diskette into the diskette drive.
2. Power on the computer with the diskette in the diskette drive. The computer boots and automatically loads the utility. Read the message that displays and follow the instructions.
3. Press **Enter** to continue.

The utility checks the currently installed BIOS version and the diskette's BIOS version. The Main menu appears.



- 
4. Use the arrow keys to highlight the “Display BIOS Version” option on the Main Menu. Use this option to check the currently installed BIOS version and the version of the new replacement BIOS.

Press any key to return to the Main menu.

5. Highlight the “Install New BIOS” option and press **Enter**.
6. Press **Y** and then press **Enter**. After a brief pause, a message appears telling you to remove the diskette from the file bay drive.
7. Remove the diskette and press any key to continue. The utility updates the BIOS.  
Power off your computer. The next time you power on your computer, you will have the latest NEC Versa L320 computer BIOS revision level.
8. Power on your computer. A CMOS Checksum message appears and prompts you to press **F2** to enter Setup.
9. Press **F2** to enter Setup and restore the default parameter settings.
10. Reconfigure Setup with the custom settings you documented for yourself before beginning this procedure.
11. Press **F10** to save changes and exit Setup.

# 4

## Using the Operating System and Utilities

- Windows Introduction
- NEC Utilities
- SpeedStep Applet
- SoftDVD Player
- NEC CD-RW CD
- Application and Driver CD
- Personal Code Setting Utility
- NEC Info Center
- PartitionMagic
- Product Recovery CD
- One-Touch Start Button Settings Utility

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## **Windows Introduction**

Your system comes preloaded with the Microsoft® Windows® 98 Second Edition (SE) operating system or the Windows 2000 operating system configuration.

These Microsoft® operating systems provide a means of running applications, navigating through your file structure, and using your notebook computer. Each operating system offers its own look and employs its own tools through an easy-to-use graphical interface.

### **Windows 2000**

Windows 2000 gives you the newest features offered by Microsoft, including a Desktop with room to maneuver, taskbar icons for quick access to installed applications, a system performance and monitoring manager, enhanced entertainment features, and a fully integrated Internet experience.

### **Desktop Icons**

With Windows 2000, the following icons are installed on your desktop:

- **My Computer** — Provides access to drives, printers, the control panel, network features, and scheduled tasks.
- **Recycle Bin** — Gives you a trash container in which to put and discard unwanted files or allows you to restore those same files back to their original location.
- **My Network Places** — When on a network, provides access to network printers and other computers on your network. Use my network places to browse through the computers in your workgroup and the computers in the entire network.
- **My Documents** — Provides you with a convenient place to store documents, graphics, and other files for quick access.
- **Connect to the Internet** — Runs the Internet Connection wizard that helps you to set up your computer to access the Internet.

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**Note** Before connecting to the Internet, you must either connect an optional modem and a working phone line to your system or install a LAN card for network access.

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Your NEC Versa comes with all the software you need to get started on the most popular services available today. For a fee, online services give you access to the Internet, email, the world wide web, travel information, news reports, and more.

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**Note** Before choosing and registering for an online service, you must connect your system to a local area network or to a working phone line. The phone line must be analog. If you are unsure what type of line you have, call your local phone company.

If you are using this product outside the United States or Canada, some online services may require a long-distance or international call.

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- NEC Customize — Gives you the option to launch the Application and Driver CD.
- Internet Explorer — Provides your default Internet program. Also access Internet Explorer under Start, Programs, Internet Explorer.

### *Taskbar Icons*

With Windows 2000, three icons appear on the taskbar. Use the cursor to hover over the icon and display its function, right click the icon to display its menu options, or double click the icon to launch it.

The following icons normally appear on the left side of the Windows 2000 taskbar.

- Internet Explorer — Allows you to browse the Internet or view local HTML files. Also access Internet Explorer under Start, Programs, Internet Explorer.
- Outlook Express — Provides your default email program with secure and personalized features for email and newsgroup communication. Also access Outlook Express under Start, Programs, Outlook Express.
- Show Desktop — Minimizes all active screens to display your desktop.

### *Windows 98 Second Edition*

Windows 98 Second Edition gives you features offered by Microsoft, including a Desktop with room to maneuver, a taskbar for quick access to a variety of system functions, state-of-the-art plug and play support, powerful system utilities, enhanced entertainment features, and a fully integrated Internet experience.

### *Desktop Icons*

With Windows 98 SE, the following icons are installed on your desktop:

- My Computer — Provides access to drives, printers, the control panel, network features, and scheduled tasks.
- Recycle Bin — Gives you a trash container in which to put and discard unwanted files or allows you to restore those same files back to their original location.

- 
- Setup MSN Internet Access — Provides a setup program that allows you to sign-up for the Microsoft Network. If you already have an account, use this interface to sign-on to the Microsoft Network.
  - Network Neighborhood — Appears when your computer is connected to a network. Use the network neighborhood to browse through the computers in your workgroup and the computers in the entire network.
  - My Briefcase — Provides a mechanism for file synchronization between the NEC Versa and another system.
  - My Documents — Provides you with a convenient place to store documents, graphics, and other files for quick access.
  - Connect to the Internet — Runs the Internet Connection wizard that helps you to set up your computer to access the Internet.

---

**Note** Before connecting to the Internet, you must either connect an optional modem and a working phone line to your system or install a LAN card for network access.

---

- Online Services — Includes setup icons for a variety of online services.

Your NEC Versa comes with all the software you need to get started on the most popular services available today. For a fee, online services give you access to the Internet, email, the world wide web, travel information, news reports, and more.

---

**Note** Before choosing and registering for an online service, you must connect your system to a local area network or to a working phone line. The phone line must be analog. If you are unsure what type of line you have, call your local phone company.

If you are using this product outside of the United States or Canada, some online services may require a long-distance or international call.

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- NEC Customize — Gives you the option to launch the Application and Driver CD.
- Outlook Express — Provides your default email program with secure and personalized features for email and newsgroup communication. Also access Outlook Express under Start, Programs, Outlook Express.
- Internet Explorer — Provides your default Internet program. Also access Internet Explorer under Start, Programs, Internet Explorer.

---

## *Taskbar Icons*

With Windows 98 SE, a number of icons appear on the taskbar. Use the cursor to hover over the icon and display its function, right click the icon to display its menu options, or double click the icon to launch it.

The following icons normally appear on the left side of the Windows 98 SE taskbar.

- Internet Explorer — Allows you to browse the Internet or view local HTML files. Also access Internet Explorer under Start, Programs, Internet Explorer.
- Outlook Express — Provides your default email program with secure and personalized features for email and newsgroup communication. Also access Outlook Express under Start, Programs, Outlook Express.
- Show Desktop — Minimizes all active screens to display your desktop.

The following icons normally appear on the right side of the Windows 98 SE taskbar.

- Task Scheduler — Enables you to schedule tasks, such as Disk Defragmenter, to run regularly. Also access Task Scheduler under Start, Programs, Accessories, System Tools, Scheduled Tasks.
- Power Management Properties — Displays your current power source and total remaining battery power. Access Power Management Properties under Start, Settings, Control Panel, Power Management.
- NEC VersaGlide — Allows you to adjust your VersaGlide (mouse) properties. Also access NEC VersaGlide under Start, Settings, Control Panel, Mouse.
- Volume Control — Adjusts the volume and speaker balance when you play audio files. Also access Volume Control under Start, Programs, Accessories, Entertainment, Volume Control.
- Time/Clock — Allows you to adjust the time and date, rearrange active windows on your desktop, create a new toolbar or customize your existing toolbar.

For more information about the desktop and taskbar icons, refer to the Windows 98 SE online help.

---

## ***NEC Utilities***

NEC Computers provides several programs and routines designed to make your NEC Versa notebook run more efficiently.

The NEC utilities include:

- NEC Customize utility
- PHDISK utility (Windows 98 SE).

### ***NEC Customize Utility***

The NEC Customize utility gives you the option to install or launch the:

- Application and Driver CD — Use this option to install a variety of software applications, drivers, utilities, internet browsers, and the NEC Info Center.
- Phoenix<sup>®</sup> BaySwap utility — Use this utility to configure your system so you can hot or warm swap your VersaBay IV devices or Modular Bay devices. If the Phoenix BaySwap utility is not already installed on your system, install it using the NEC Customize utility.

### ***NEC Customize Utility Screen***

The NEC Customize utility screen consists of the following.

- A window at the top half of the screen lists the available options.
- The window below the options list displays a description of each option when the option is highlighted.
- The Launch button initiates a selected option when clicked.
- The More Info button provides an overview of the NEC Customize utility.
- The Exit button closes the NEC Customize utility.

### ***Using the NEC Customize Utility***

Follow these steps to use the NEC Customize utility.

1. Double click the NEC Customize icon.
2. From the display window, select the desired option.
3. Click Launch or Install to initiate the selected option.
4. Follow the on-screen instructions to process the selected option.  
For some of the selected options you are prompted to reboot your system.
5. If necessary, click Exit to close the NEC Customize dialog box.

---

## ***PHDISK Utility for Windows 98 SE***

The PHDISK utility for Windows 98 SE configures your NEC Versa system's save-to-file (STF) area on the hard disk drive. This allows you to use your system's power management features to automatically save open files when your system hibernates.

To set up PHDISK use the information in the following sections.

---

**Note** For more details about the PHDISK utility, see the ReadMe.txt file in the necutils\phdisk directory.

---

### ***Preparing Your System for the PHDISK Utility***

Before running the PHDISK utility, verify that:

- **All appropriate drivers have been installed from the NEC Application and Driver CD.**

(For information about installing all appropriate drivers displayed in the Drivers Table Interface on the NEC Application and Driver CD, see "Application and Driver CD" in this chapter.)

- **No devices listed under Device Manager are flagged with a yellow exclamation point.**

(To check the Device Manager, click Start and click Control Panel. Double click the System icon and click the Device Manager tab. Check each device listing, expanding the sub-items if necessary, to be sure no devices are tagged with yellow exclamation points.)

If these two conditions are not met before you install the PHDISK utility, Hibernate will not work correctly, and your hard drive may become corrupted.



**CAUTION** Before running the PHDISK utility, verify that all appropriate drivers have been installed, and that no device listed in Device Manager is flagged with a yellow exclamation point.

If not, Hibernate does not work correctly, and your hard drive may become corrupted.

---

### ***Running the PHDISK Utility***

Follow these steps to run the PHDISK utility.

1. With system power on, insert the NEC Application and Driver CD in the CD-ROM or DVD-ROM drive. For more information on using the Application and Driver CD, see "Application and Driver CD" in this chapter.



- 
2. Select the PHDISK utility for installation. Follow the prompts to install the appropriate files on your hard drive.
  3. Once the files have been installed, exit the Application and Driver CD interface and remove the CD.
  4. Restart your system in MS-DOS mode by pressing Start and clicking Shutdown. Select 'Restart in MS-DOS mode' and click **OK**.
  5. At the MS-DOS prompt, type **cd \necutils\phdisk** and press **Enter** to change to the \necutils\phdisk directory.
  6. Type **phdisk** and press **Enter**. The PHDISK utility interface appears with the following valid options:
    1. Create Partition
    2. Create File
    3. Reboot
    4. Exit
  7. Enter **2** and press **Enter**. (Be careful *not* to select Create Partition.) A prompt similar to the following appears:

Please input size (Minimal: 74179) KB:

(The minimal size varies according to the amount of system memory installed in your system.)
  8. Press **Enter** to accept the minimal size. A file large enough to accommodate your system's memory is created on the hard disk drive, and the PHDISK utility interface appears again.
  9. Enter **3** (for Reboot) and press **Enter**.
  10. If necessary, press any keyboard key when prompted to reboot the system.
  11. When Windows 98 SE has restarted, click Start, click Settings, and click Control Panel. Double click the Power Management icon.
  12. Click the Hibernate tab. Put a check in the box next to **Enable hibernate support** and click **Apply**.
  13. Select the Advanced Tab. The following settings now provide Hibernate as a choice in their pull-down menus.
    - When I close the lid of my portable computer
    - When I press the power button on my computer
  14. Select Hibernate for either or both of these settings (if desired). Click **OK** to close the Power Management Properties window.

---

## ***Applet for Intel SpeedStep2 Technology***

The processors that ship with the NEC Versa L320 notebook computer include the Intel SpeedStep2 technology. Intel SpeedStep2 technology allows you to customize performance of your NEC Versa notebook, optimizing performance when your system is running under AC power, and conserving battery life when your system is running on battery power.

If your processor is equipped with Intel SpeedStep2 technology, an icon appears on your taskbar allowing you to adjust processing properties. However, the default settings are recommended for optimal performance and battery conservation.

For more information about configuring settings for Intel SpeedStep2 technology, see the sections in Chapter 3 that are specific to the operating system you use. For information about accessing the BIOS Setup utility refer to “Entering BIOS Setup” and “Advanced Menu” in Chapter 3.

## ***SoftDVD Player CD***

If your system comes with a DVD-ROM drive preinstalled, you have the SoftDVD Player CD. The SoftDVD Player is software that allows you to play DVD videos on your computer, and lets you control the DVD-ROM drive with onscreen controls.

The materials that come with the CD describe how to install and use your software, and onscreen prompts provide guidelines during the installation. Once the software is installed, access the onscreen SoftDVD help for more information about using and configuring your DVD-ROM drive.

## ***NEC CD-RW CD***

If your NEC Versa system comes with a CD-RW drive preinstalled, you have the NEC CD-RW CD. The CD-RW drive lets you load and start programs from a CD and write information to a CD. The NEC CD-RW CD provides a driver, CDINIT, and two applications, Easy CD Creator and DirectCD.

The materials that come with the CD describe how to install and use your software, and onscreen prompts provide guidelines during the installation. Once the software is installed, access the on-screen help for more information about using and configuring your CD-RW drive.

---

## ***Application and Driver CD***

A variety of software applications, drivers, utilities, Internet browsers and the NEC Info Center are provided on the Application and Driver (A&D) CD that ships with your NEC Versa L320 system. Some of the drivers are already installed as part of your operating system environment. The additional software on the A&D CD lets you take full advantage of your system resources.

Use the Application and Driver CD to install the software of your choice. Some software applications install their own desktop icon allowing quick access to the application. You can also access some applications through the Start, Programs menu.

### ***Launching the A&D CD with Windows 2000***

Follow these procedures to launch the Application and Driver CD using NEC Customize with Windows 2000.

1. Insert the Application and Driver CD into the CD-ROM drive.
2. Double click the NEC Customize icon.
3. Select Application and Driver CD.
4. Click Install to launch the CD.

The Application and Driver CD dialog box appears.

---

**Note** If the NEC Customize icon is not available, double click My Computer on the desktop and then click the CD icon. The Application and Driver CD dialog box appears.

---

### ***Launching the A&D CD with Windows 98 SE***

Follow these procedures to launch the Application and Driver CD using NEC Customize with Windows 98 SE.

1. Insert the Application and Driver CD into the CD-ROM drive. If the CD does not auto-run, perform steps 2 through 4.
2. Double click the NEC Customize icon, if necessary.
3. Highlight Launch Application and Driver CD.
4. Click Install to launch the CD.

The Application and Driver CD dialog box appears.

---

**Note** If the NEC Customize icon is not available, double click My Computer on the desktop and then click the CD icon. The Application and Driver CD dialog box appears.

---

## ***Application and Driver CD Dialog Box***

The Application and Driver CD dialog box consists of the following components.

- Selection Tabs — Located just below the title bar, each tab represents a software category. The selection tabs include applications, drivers, utilities, internet browsers, and the NEC Online Documentation.
- Description — Located in the bottom portion of the dialog box, the text describes the selected or highlighted software category or application, driver, etc.
- Install — Clicking the Install button installs the selected software.
- View — Clicking the View button displays installation instructions for those utilities that are not installed using the A&D CD utility.
- Exit — Clicking the Exit button closes the Application and Driver CD dialog box.

## ***Installing the A&D CD Software***

Once the Application and Driver CD dialog box appears, follow these steps to install the desired software.

1. Click the selection tab of your choice.
2. Click the desired application, driver, or utility.
3. Click the Install button to install your selection.

Follow the on-screen instructions to install your selection.

4. Click Exit to close the Application and Driver CD dialog box.
5. Remove the CD from the CD-ROM drive when the installation is complete.

## ***Personal Code Setting Utility***

Use the Personal Code Setting utility along with the personal code buttons on the NEC Versa L320 (available on some systems) to set a personal code and secure the system. Once the personal code is set, the system will not boot until you enter the personal code.

The personal code must also be entered if the system goes into a power-saving state.

---

See the following sections for procedures on establishing personal codes, clearing a personal code, using a personal code to access the system, and using a personal code to bring the system out of a power-saving state.

## ***Identifying Personal Code Setting Buttons***

The following figure shows the locations of the Personal Code Setting buttons on the system. (Not all systems come with Personal Code Setting buttons.)

### ***Locating Personal Code Setting buttons***



**A** – Personal Code Button 1  
**B** – Personal Code Button 2  
**C** – Personal Code Button 3  
**D** – Personal Code Button 4

**E** – Personal Code Enter Button  
**F** – Shortcut Button  
**G** – Power Button  
**H** – Shortcut Button

## ***Establishing Personal Codes***

The Personal Code Setting utility can store a Supervisor personal code, and up to two User personal codes. Follow these steps to establish a personal code.

1. Prepare to set the personal code:
  - To set a User personal code for the first time, press the **1** button and the **Enter** button at the same time and hold both down for at least 5 seconds.
  - To set a Supervisor personal code for the first time, press the **2** button and the **Enter** button the same time and hold both down for at least 5 seconds.

When the system is in Personal Code Input mode, the LED flashes.

- 
2. Enter up to 5 button strokes for the password. Multiple buttons held down at the same time represent a unique entry, independent of individual button strokes.
  3. Press the **Enter** button to set the password.

---

**Note** The personal code can be up to 5 button strokes. Multiple buttons held down at the same time represent a unique entry (independent of individual button strokes) — allowing close to 800,000 personal code combinations.

---

## ***Clearing a Personal Code***

Follow these steps to clear a personal code.

- To clear a User personal code:
  - Log on as the User with the personal code you want to change.
  - Press the **3** button and the **Enter** button at the same time and hold both down for at least 5 seconds.
  - Enter the personal code *to be cleared* and press the **Enter** button.

---

**Note** A User personal code can be cleared by the Supervisor, without the Supervisor knowing the User personal code.

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- To clear a Supervisor personal code:
  - Log on as the Supervisor.
  - Press the **4** button and the **Enter** button at the same time and hold both down for at least 5 seconds.
  - Enter the personal code *to be cleared* and press the **Enter** button.
- To set a new personal code, see “Establishing a Personal Code.”

When the Supervisor or User personal code is being cleared or reset, the Security LED flashes.

---

**Note** If you forget your password (personal code), contact NEC Computers Support Services for information about clearing it. See Chapter 11, “Getting Service and Support,” for contact information.

---

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## **Using the Personal Code to Access the System**

Once you set one or more personal codes on the system, you must enter one of these personal codes before the system can finish booting up.

After the system has been turned on, but before it boots, the Personal Code Security LED lights. Enter the personal code and press the **Enter** button.

When a valid personal code is entered, the LED goes out and the system finishes booting up.

An alarm sounds for one minute if there are three unsuccessful attempts at entering the personal code. It is still possible to enter the correct personal code while the alarm is sounding, but after the alarm stops, the system goes into a Suspend state.

You can attempt personal code entry again. See “Bringing the System Out of a Power-Saving Mode.”

## **Bringing the System Out of a Power Saving Mode**

If the system goes into a power-saving state after bootup, the Security LED remains off. In this state, the Personal Security Code utility goes into security mode. The utility requires the entry of a valid personal code before the system can come out of the power-saving state.

---

**Note** If you forget your password (personal code), contact NEC Computers Support Services for information about clearing it. See Chapter 11, “Getting Service and Support,” for contact information.

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## **NEC Info Center**

The Application and Driver CD contains the NEC Info Center, a fully navigational online document that provides information for the traveling professional and an online version of portions of the printed user’s guide.

## **Installing the NEC Info Center**

To install the NEC Info Center simply follow the instructions, presented earlier in this chapter, for launching the Application and Driver CD and installing the software. For the most current version of the *NEC Versa L320 User’s Guide*, periodically check the NEC Computers web site at [www.neccomp.com](http://www.neccomp.com).

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## ***Uninstalling the NEC Info Center***

Use the Windows Add/Remove Programs or the Wise uninstall feature to uninstall the NEC Info Center.

To uninstall the NEC Info Center using the Windows Add/Remove Programs feature, follow these steps:

1. Go to Start, Settings, Control Panel, and double click Add/Remove Programs.
2. Use the scroll bar, if necessary, to display the NEC Info Center item.
3. Highlight NEC Info Center and click the Add/Remove button.
4. Select Automatic as the uninstall method and click Next.
5. Click Finish to complete the uninstall.
6. When the uninstall is complete, click OK and close the Control Panel window.

To uninstall the NEC Info Center using the Wise uninstall feature, access the C:\NEC INFO directory on your hard disk drive. Double click the **unwise.exe** file or icon to remove all files and directories associated with the NEC Info Center.

## ***PartitionMagic Special Edition***

Dividing the hard disk drive into several partitions lets you efficiently organize operating systems, programs, and data. PartitionMagic® Special Edition, included on the Application and Driver CD that ships with your system, allows you to optimize hard disk drive space with an easy click of the mouse. Visually create, format, shrink, expand, and move hard disk partitions in minutes.

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**Note** PartitionMagic Special Edition is for use with Windows 98 and Windows NT operating systems. Windows 2000 operating systems do not support PartitionMagic.

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Your NEC Versa notebook ships with an internal hard disk drive consisting of a single FAT 32 partition, drive C:. Use PartitionMagic Special Edition if you want to create multiple partitions and convert your hard disk drive to FAT 16 partitions.

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**Note** PartitionMagic Special Edition software differs from the full-featured version and does not include all program functionality or user manuals.

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 **CAUTION** Before using PartitionMagic Special Edition, refer to the associated cautionary notes on the Application and Driver CD. The cautionary notes contain important information about designating the partitions on the hard disk drive.

The partitions must be properly designated before using the Product Recovery CD to reinstall your operating system. If the partitions on the hard disk drive are not properly designated, it will appear as though data loss has occurred after using the Product Recovery CD.

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## ***Product Recovery CD***

The Product Recovery CD contains **Error! Bookmark not defined.**the NEC Product Recovery utility that allows you to restore your system to its initial installation state.


If you determine that you need to restore your system to its initial installation state, use the instructions that follow.

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**Note** Only use the Product Recovery utility to restore your system to its initial installation state as a last resort. Check the problem checklist in Chapter 10 for information about solving problems before using the CD. The Product Recovery utility provides options that either remove or replace existing files, a process that may result in data loss.

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 **CAUTION** Before using the Product Recovery CD, enter the BIOS Setup utility and restore the BIOS default settings. Save the default settings before exiting the BIOS Setup utility.


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## ***Guidelines for Using the Product Recovery CD***

Follow these guidelines when using the Product Recovery CD.

- Use AC power.
- Remove all optional hardware such as PC Cards, USB devices, printers, and monitors.
- Carefully review the Product Recovery CD options in the next section before proceeding.

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 **CAUTION** Choose your restore option carefully to prevent losing data and applications installed on your system.

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## Product Recovery CD Options

The Product Recovery CD and utility provides you with a number of choices. Move the cursor over each selection on the NEC Product Recovery utility screen to display a description of the selection in the window at the right side of the screen.

- Restore System — Select this option if you wish to restore your hard disk drive to its initial installation state. Restore System allows you to restore your system in one of the following ways.

- Full Disk Drive

Completely rebuilds your hard disk drive, destroying all existing data in the process.

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**Note** Use the Full Disk Drive restore option if your hard disk consists of one partition (drive).

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- Partition Only

Lets you preserve your existing hard disk drive partition structure and format only the primary partition without affecting the extended partition(s). Partition Only formats drive C: (of a multiple partitioned drive) and restores drive C: to its initial installation state. *To use the Partition Only option, drive C: must be equal to or greater than 1 GB.* Additional partitions, for example, drives D:, E:, etc., remain intact. For important information about partitioning your hard disk drive, see the section, “PartitionMagic Special Edition,” earlier in this chapter.

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**Note** Use the Partition Only restore option if your hard disk is partitioned into two or more partitions (drives).

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- Exit — Exits the NEC Product Recovery utility.

## Full Disk Drive Restore

If your preinstalled software becomes unusable and you cannot boot from the hard disk, use the Product Recovery utility to restore your system to its initial shipping configuration. The Full Disk Drive restore option *erases* the hard disk *completely* before reinstalling the files.



**CAUTION** The Full Disk Drive restore option deletes *all* files on the hard drive and replaces them with the original factory installed files.

Only use the Full Disk Drive restore option if the preinstalled software is unusable.

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Use the Product Recovery utility to perform a Full Disk Drive restore as follows.

1. Check the Product Recovery CD title and make sure that it is the correct CD for your NEC Versa computer and operating system.
2. Put the CD into the CD-ROM drive tray, close the drive door, and reboot your system.
3. Read the License Agreement screen that appears. Use the VersaGlide touchpad to position the cursor on the Accept button. Left click to accept the agreement.

You have the option of accepting or declining the agreement. If you decline the agreement, the recovery utility exits.

4. In the NEC Product Recovery utility screen, use the VersaGlide touchpad to choose Full Disk Drive to restore your hard disk drive to its original factory installed state.



**CAUTION** Choose your restore option carefully to prevent losing data and applications installed on your system.

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5. Read the Warning screen.

A warning displays indicating that your hard disk is about to be erased.

6. Select Continue to proceed to perform a Full Disk Drive restore.

If you select Back, the recovery utility returns to the prior screen, which has an exit option.

If you select Continue, a screen with progress bars displays and lets you know the progress of the recovery.



**CAUTION** Do not turn off or disturb the system during the recovery process.

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7. When the recovery process is complete, you are prompted to remove the CD from the CD-ROM drive and reboot your system.
8. Press **Enter**, click Reboot, or press **Alt-R** to reboot your system.

A series of hardware detection screens display, the system reboots and the Windows Setup screen appears. Follow the on-screen instructions to set up Windows.

You are required to reenter your Microsoft license number.

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## Partition Only Restore

If your preinstalled software on drive C: of your multiple partitioned drive becomes unusable and you cannot boot from the hard disk, use the Product Recovery utility to restore your primary partition to its initial shipping configuration.



**CAUTION** Use the Partition Only restore option only if your hard disk drive consists of multiple partitions *and* if drive C: contains the operating system and related drivers. Move all other data and applications to other partitions (drives) or the Partition Only restore process will erase them completely.

The Partition Only restore option deletes *all* files on drive C: and replaces them with the original factory installed files. Only use the Partition Only restore option if the preinstalled software on drive C: is unusable.

For important information about partitioning your hard disk drive, see the section, "PartitionMagic Special Edition," earlier in this chapter.

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Use the Product Recovery utility to perform a Partition Only restore as follows:

1. Check the Product Recovery CD title and make sure that it is the correct CD for your NEC Versa computer and operating system.
2. Put the CD into the CD-ROM drive tray, close the drive door, and reboot your computer.
3. Read the License Agreement screen that appears. Use the VersaGlide touchpad to position the cursor on the Accept button. Left click to accept the agreement.

You have the option of accepting or declining the agreement. If you decline the agreement, the recovery utility exits.

4. In the NEC Product Recovery utility screen, use the VersaGlide touchpad to choose Partition Only to restore drive C: of a multiple partitioned drive to its original factory installed state.



**CAUTION** Choose your restore option carefully to prevent losing data and applications installed on your system.

If the hard disk is configured with multiple or extended partitions you may have to reinstall some software to restore configuration settings and shared files.

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- 
5. Read the Warning screen.

A warning displays indicating that drive C: (the primary drive/partition) is about to be erased and formatted. It may be necessary to reinstall software to the other drives (partitions) to reestablish Start Menu links and other configuration requirements stored on drive C:.

6. Select Continue to proceed, to perform a Partition Only restore.

If you select Back, the recovery utility returns to the prior screen, which has an exit option.

If you select Continue, a screen with progress bars displays and lets you know the progress of the recovery.



**CAUTION** Do not turn off or disturb the system during the recovery process.

---

7. When the recovery process is complete, you are prompted to remove the CD from the CD-ROM drive and reboot your system.
8. Press **Enter**, click Reboot, or press **Alt-R** to reboot your system.

A series of hardware detection screens display, the system reboots, and the Windows Setup screen appears. Follow the on-screen instructions to set up Windows.

You are required to reenter your Microsoft license number.

## ***One-Touch Start Button Settings Utility***

The One-Touch Start Button Settings utility lets you configure shortcut buttons I and II on the Versa L320 control panel to launch your default Internet browser and default e-mail application.

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**Note** You can use the One-Touch Start Button Settings utility to configure buttons I and II to launch programs other than your Internet browser and e-mail application – for example, a favorite program.

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Use the following procedure to run the One-Touch Start Button Settings utility.

1. Install the One-Touch Start Button Settings utility from the Application and Driver CD. See “Application and Driver CD” earlier in this chapter for information about installing software from this CD.

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2. To run the utility, click Start, highlight Programs and One-Touch Start Button Settings Utility. Click One-Touch Start button Settings Utility. The utility launches.
  3. For each button, browse and select the default program you wish to launch. You can rename the program (for example, “My browser”).

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**Note** The name of the program displays on your screen by default. Uncheck the box for “Display on screen to display name on screen if you do not want to display the name.”

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4. Click OK. Select “Yes” to save the setup and exit the utility.

# 5

## Using the System Drives and Bays

- NEC Modular Bay Slot
  - NEC VersaBay IV Slot
  - Phoenix BaySwap Utility
  - Variable-Speed CD-ROM Drive
  - Variable-Speed CD-RW Drive
  - Variable-Speed DVD-ROM Drive
  - Combination CD-RW and DVD-ROM Drive
  - Memory Modules
-

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## ***NEC Modular Bay Slot***

The NEC Modular Bay slot is located on the right side of the system. Your NEC Versa notebook ships with a diskette drive installed in the bay.

The NEC Modular Bay slot lets you maximize your computer's capabilities and is designed for ease-of-use. It allows you to:

- Install an optional secondary battery in the slot instead of the diskette drive.
- Hot swap and warm swap the diskette drive or the secondary battery.
- Remove a Modular Bay device simply by sliding the Modular Bay device latch and pulling the device out, without having to turn the system over.
- Install the weight-saver module that ships with the system. Using the module in the Modular Bay slot, you lighten your NEC Versa notebook for travel, and protect the bay when no device is installed.

For details about using hot and warm swapping, refer to the section, "Phoenix BaySwap™ Utility," later in this chapter, or access the Phoenix BaySwap utility online help.

Read the instructions that come with your Modular Bay device for specific information about installation and configuration. Contact your NEC Computers dealer to purchase a battery.

## ***NEC VersaBay IV Slot***

The NEC VersaBay IV slot is located on the right side of the system. Your NEC Versa notebook ships with one of these optical drives installed in the bay: CD-ROM, CD-RW, DVD-ROM, or combination CD-RW and DVD-ROM. The VersaBay IV slot can also house an optional hard disk drive that's been placed in a specially designed cradle.

The NEC VersaBay IV slot lets you maximize your computer's capabilities and is designed for ease-of-use. It allows you to:

- Hot swap and warm swap storage devices.
- Change VersaBay IV devices without having to disassemble the system.
- Install the weight-saving module that ships with the system. Using the module in the VersaBay IV slot, you lighten your NEC Versa notebook for travel, and protect the bay when no device is installed.

For details about using hot and warm swapping, refer to the section, "Phoenix BaySwap Utility," later in this chapter, or access the Phoenix BaySwap utility online help.



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Read the instructions that come with your VersaBay IV device for specific information about installation and configuration. Contact your NEC Computers dealer to purchase additional VersaBay IV devices.

## **Phoenix BaySwap Utility**

The NEC VersaBay IV slot supports hot swapping (switching devices while the system is powered on) and warm swapping (switching devices while the system is in a sleep state) for many bay devices, through the Phoenix BaySwap Utility. Using hot swapping and warm swapping extends the power of plug and play technology to your NEC VersaBay IV devices and NEC Modular Bay devices. This dynamic solution further increases the flexibility of your already versatile notebook computer.

### **Installing the Phoenix BaySwap Utility**

If the Phoenix BaySwap utility is not already installed, use the NEC Customize utility to install it. For details about using the NEC Customize utility, see Chapter 4 “Using the Operating System and Utilities.”

When the swap utility is installed on your system, a small icon appears in the lower right-hand corner of the Windows taskbar. Moving your cursor over the icon displays information about the device in the NEC VersaBay IV or NEC Modular Bay slot.

### **Using the Phoenix BaySwap Utility**

With the Phoenix BaySwap utility running on your notebook computer, you can hot or warm swap a CD-ROM, CD-RW, DVD-ROM, or combination CD-RW and DVD-ROM drive in the NEC VersaBay IV slot. In addition, you can swap the diskette drive or secondary battery in the NEC Modular Bay slot. Please note the following when using the swap utility:

- Windows 98 SE Power Management *must be enabled* to use the swap utility.
- Windows 2000 supports hot swapping without use of the Phoenix BaySwap utility.

Swap devices in the NEC VersaBay IV slot or the NEC Modular Bay slot as follows:

1. If you have files open on the device you are planning to remove, close them.
2. Click on the swap utility taskbar icon to display the menu.

A box appears identifying the device (if any) in the NEC VersaBay IV slot or the NEC Modular Bay slot that can be ejected.

3. Click the name of the device to prepare it for being ejected.

When the device can be safely removed, a message box appears.

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4. Remove the device (see the section, “Removing a Device from the NEC Modular Bay Slot” or “Removing a Device from the NEC VersaBay IV Slot). Click OK after the device is removed.
  5. Insert a different device in the NEC VersaBay IV slot or the NEC Modular Bay slot (see “Installing a Device in the NEC Modular Bay Slot” or “Installing a Device in the NEC VersaBay IV Slot”).

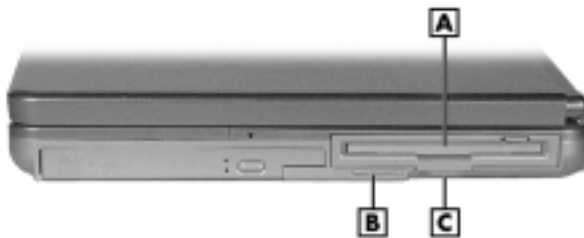
References to the drive letter listed under My Computer and the Windows Explorer change automatically when the device is swapped or removed. The balloon message that appears when you move your cursor over the taskbar icon also changes to reflect the new VersaBay IV or Modular Bay status.

### ***Removing a Device from the NEC Modular Bay Slot***

Use the following steps to remove a device from the NEC Modular Bay slot.

1. Use the Phoenix BaySwap utility or power off the system.
2. Locate the NEC Modular Bay release latch to the left of the Modular Bay slot.

#### ***Locating NEC Modular Bay features***



**A** – NEC Modular Bay Device  
**B** – Modular Bay Release Latch

**C** – Pull tab

3. Slide the latch to the left and hold it. Grasp the pull tab on the device and remove the device from the system.



**CAUTION** Always install the weight-saving module that ships with your system in the Modular Bay slot if no Modular Bay device is installed in the slot. See “Installing a Device in the NEC Modular Bay Slot” for instructions on installing the module.

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