Versa® E120 DayLite™
Notebook Computer

User's Guide

Empowered by Innovation NEC

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Using This Guide

The *NEC Versa® E120 DayLite™ User's Guide* gives you the information you need to maximize the use of your NEC Versa E120 DayLite 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. This chapter includes information about using battery power.
- Chapter 3, "Using the BIOS Setup Utility," for details about modifying system parameters. The chapter includes information about a Battery Refresh option in the BIOS Setup utility Exit menu.
- Chapter 4, "Using the Operating System and Utilities," for an understanding of your Microsoft® Windows® operating system and its power management features. You can also find information about system utilities and applications available for your system.
- Chapter 5, "Adding Expansion Devices," to add and use USB devices, such as optical drives, and to add a PC Card, a CF Card, an external monitor, headphones, a printer, or speakers.

  This chapter also includes installation information for adding a memory module, and a secondary battery to the NEC Versa E120 DayLite system.
- Chapter 6, "Communicating with Your NEC Versa," for essential information about using the built-in MDC modem and LAN connection, and to connect to the Internet.
- 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, "Solving System Problems," for simple solutions to common problems that may arise while operating your notebook.
- Chapter 9, "Getting Service and Support," for information about getting help when you need it from NEC Solutions (America), 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.

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 particularly important information about what is being described.

- 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:

- *NEC Versa E120 DayLite Quick Setup*
  The Quick Setup shows how to quickly get your system connected and powered on.
- *NEC Versa E120 DayLite Release Notes*
  Release Notes provide additional information about your notebook computer that was not available at the time the user's guide was printed. Information in the Release Notes is the result of extensive product testing.
- *NEC Versa E120 DayLite User's Guide*
  An online version of your printed *NEC Versa E120 DayLite User's Guide* is available on the NEC Solutions Web site (**www.necsolutions-am.com**). Check the Web site for the most current online version of your printed user's guide.

1

Introducing the NEC Versa

- Before You Begin
- About Your NEC Versa 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

Before You Begin

⚠ 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 E120 DayLite 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.

About Your NEC Versa Notebook

The NEC Versa E120 DayLite™ notebook is a super light-weight, low- profile, state-of-the-art multimedia notebook computer designed for business users.

Internally, the Versa E120 DayLite notebook features the powerful low voltage (LV) Mobile Intel® Pentium® III Processor-M, running at 800 MHz or higher, and the industry-premium VIA Twister-T Core Logic bus architecture. Together, with its Unified Memory Architecture (UMA) VGA high-performance chip and audio chip, your notebook is ideal for creating and presenting impressive images and sound.

Externally, the Versa E120 DayLite notebook provides a wide choice of ports and connectivity, such as PC and CF™ Card slots, USB ports, an IEEE1394 port, built-in fax/modem and LAN, an external CRT port, and many other features. These features can make the life of a traveling executive a lot easier, at home and in the office.

The Versa E120 DayLite notebook comes with 256 MB of system memory and is easily upgradeable, supporting up to 768 MB of memory. You have virtually unlimited storage capacity with the hard disk system, which can handle most 2.5-inch, 9.5-mm IDE industry-standard drives, and with external USB optical drives, such as the standard CD-ROM and optional CD-R/CD-RW drives.

In addition, the Microsoft® Windows® 2000 operating system or Windows XP Professional operating system is preinstalled and ready to use.

Battery life is an important consideration in the design of your system. The Versa E120 DayLite uses the Advanced Configuration Power Interface (ACPI) for saving energy and it provides support for dual battery operation.

To get comfortable with your notebook and get the most out of it, 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.

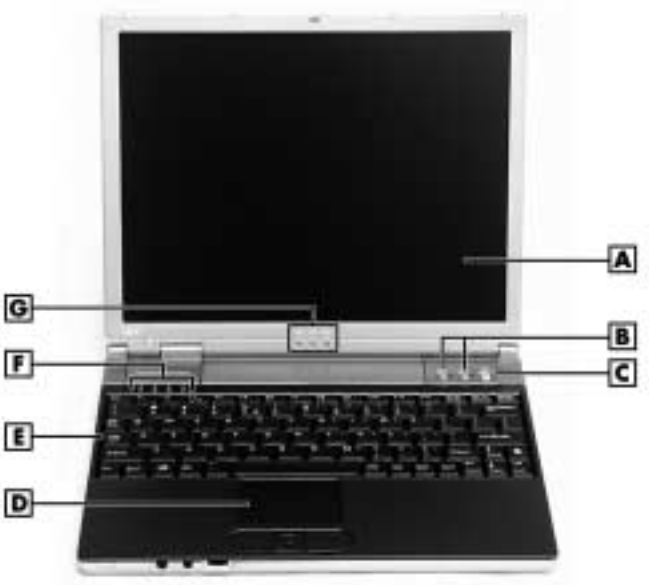
To open your NEC Versa E120 DayLite notebook computer, slide the LCD panel latch to the right and lift the cover (see the section, “Front Features,” to locate the latch).

Base Unit

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

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

LCD panel and base unit



A – LCD Panel
B – Shortcut Buttons
C – Power Button
D – NEC VersaGlide Touchpad
E – Keyboard
F – Drive and Keyboard Status LEDs
G – Power and E-Mail Status LEDs

- LCD Panel — Provides a high-resolution display for sharp, effective visuals on your NEC Versa notebook. You can use keyboard key combinations to increase and decrease LCD brightness and to toggle between video modes (see “Keyboard Panel”).
- Power and E-mail Status LEDs — Indicate power and e-mail status. Power LEDs indicate whether the system is running on AC power or battery power and indicate battery status. The e-mail LED notifies you when you have a new e-mail message. These LEDs also appear on the top of the notebook for viewing status when the LCD panel is closed. For detailed information, see the section, “Status LEDs”.
- Power Button — Powers the system on and off (see the section, “System Controls”).
- Shortcut Buttons — Launch your browser or your e-mail application (see the section, “System Controls”).
- 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 “NEC VersaGlide Touchpad” in Chapter 2 for information about using the VersaGlide and for customizing VersaGlide settings.
- Keyboard — Provides 83 keys with the standard QWERTY-key layout. (Models purchased outside of the U.S. and Canada ship with country-specific keyboard layouts.) See “Keyboard Panel” for information about key functions.
- Drive and Keyboard Status LEDs — Keep you informed of the current operating status of the hard drive and keyboard functions (see the section, “Status LEDs”).

System Controls

System controls let you select specific system operations. In the Versa E120 DayLite, system controls include the power button and two shortcut buttons.

System control buttons

A – Shortcut Button (e-mail)
B – Shortcut Button (Internet)
C – Power Button

Power Button

The power button is a “smart” switch. You can configure the power button to go into Standby or Hibernate mode or to power off when pressed. With Windows XP, you can also configure the power button to go into a “Do nothing” or “Ask me what to do” mode of operation.

Note See “Windows Power Management” in Chapter 4 for information about managing system power resources.

The default power button operation is to shut down. Under normal operation, the system performs a smooth shutdown when you press the power button.

Use the power button in the following ways:

- Press the power button to power on.
- Press the power button to resume from a Windows or Hibernate mode and proceed with normal operation.
- Perform the function as set in the Advanced tab of the Windows Power Option Properties dialog box.
- Hold the power button in place for 4 or more seconds to initiate a power override (powers off the system). Only use this option if you cannot power off your system from the Start menu.

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.

Shortcut Buttons

The Versa E120 DayLite system has two shortcut buttons that you can configure 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 Versa E120 DayLite system uses status LEDs marked with icons to communicate the status of system power and system operations (see the following figures and descriptions).

Power and e-mail status LEDs

A – Power LED
B – Battery Status LED
C – E-mail Notification LED

Drive and keyboard status LEDs

A – Drive Activity LED
B – Caps Lock LED
C – Scroll Lock LED
D – Num Lock LED

Power Status and E-mail LEDs

Power Status LEDs indicate whether the system is running on AC power or battery power, and indicate battery status as follows.

- 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 10% capacity or less.
  - — Lights amber (blinks when in Standby mode) to indicate that battery power is at 4% capacity or less.

  The Power Status LED is off when system power is off or when the system is in Hibernate mode (see “Hibernate” in Chapter 4).

- 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 connects to the bottom of the notebook and covers most of the bottom of the unit.

- E-mail Notification LED — Lights when new e-mail is received.

Note The system also has Power, Battery Charging, and E-mail notification LEDs on the top rear of the LCD panel. You can see these LEDs when you are behind your notebook computer or when the LCD panel is closed.

Drive and Keyboard Status LEDs

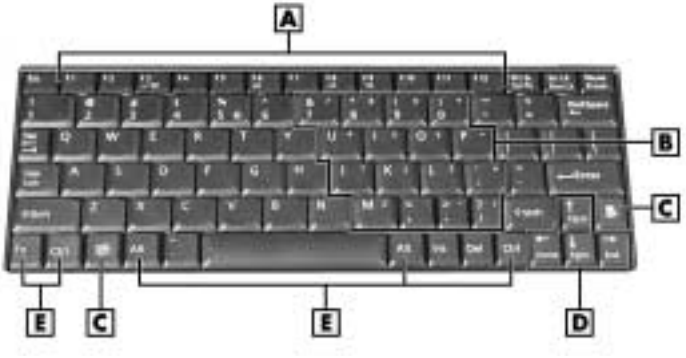
Drive and keyboard status LEDS include the following LEDs (see the previous figure for the location of these LEDs):

- Drive Activity LED — Lights when the NEC Versa accesses the hard disk.
- Caps Lock LED — Lights when caps lock is in effect.
- Scroll Lock LED — Lights when scroll lock is in effect.
- Num Lock LED — Lights when num lock mode is active. In this mode, you can use the embedded numeric keypad.

Keyboard Panel

The NEC Versa E120 DayLite 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.

Keyboard



A – Function Keys
B – Numeric Keypad
C – Windows Keys
D – Cursor Control Keys
E – Control Keys

- Function Keys — Twelve function keys, **F1** through **F12**, are available on the NEC Versa keyboard. Function keys 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 use.

  The function keys work together with the **Fn** key to activate special preprogrammed functions. The following function key combinations are pre-programmed for the NEC Versa E120 DayLite.

  Fn-F3 — Toggles the video mode between LCD only, CRT only, or Simultaneous mode (both LCD and CRT).

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

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

  Fn-F8 — Increases LCD brightness (eight settings).

  Fn-F9 — Reduces LCD brightness (eight settings).

- 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 **Fn-Num Lk** 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 **Fn-Num Lk** 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 Lk** 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.

Note Pressing the **Prt Sc** key without a printer connected to the system can cause a halt in system operation. Make sure you have a printer connected to the system before using the **Prt Sc** key.

Front Features

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

Front features

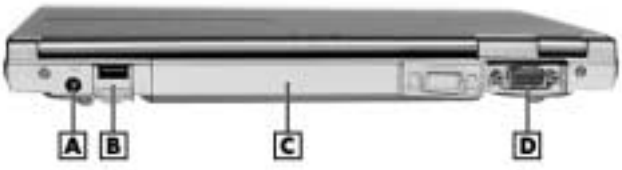
A – Microphone In Jack
B – Headphone/External Speaker Jack
C – Volume Control
D – LCD Panel Latch

- Microphone In Jack— Allows you to connect an external microphone for monophonic recording or amplification through the unit.
- Headphone/External Speaker Jack — Lets you plug in stereo headphones or powered speakers. Plugging in headphones disables the built-in system speakers.
- Volume Control — Allows you to control the speaker volume through the thumb wheel.
- LCD Panel Latch — Slide the latch to the right to open the NEC Versa E120 DayLite notebook.

Around the Back of the System

You'll find system ports for connecting your NEC Versa E120 DayLite to AC power and optional devices (like a printer, a storage device, or external monitor) on the back of your NEC Versa. The ports are described after the figure.

Back features



A – DC Power Port
B – USB Port
C – Battery Bay
D – VGA Port

- DC Power Port — Lets you attach the NEC Versa notebook to a DC power source, such as the AC power adapter that comes with your system. The AC power adapter plugs into an AC power source and into the DC power port on the rear of the NEC Versa notebook.

  The AC power adapter uses a standard 115-Vac or 230-Vac grounded power source. Keep the system connected to the AC power adapter and an AC power source whenever possible to keep the battery pack and internal CMOS battery charged.

- USB Port — Allows you to easily and conveniently connect a USB-equipped peripheral device to the NEC Versa. There are many USB devices available (for example, storage devices, printers, keyboards, mouse, monitors, scanners, and digital cameras) to expand system capabilities. The NEC Versa E120 DayLite has two additional USB ports on the right side of the system (see "Around the Right Side of the System").

  Connect your external USB CD-ROM drive to one of the USB ports. See "USB Devices" in Chapter 5 for additional information about adding USB devices to the NEC Versa notebook.

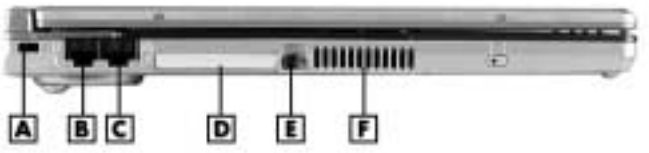
- Battery Bay — Contains the system's standard Lithium-Ion (Li-Ion) primary battery.

- VGA Port — Use this 15-pin port to attach an external monitor to your NEC Versa notebook. With an external monitor attached, use the keyboard function key combination **Fn-F3** to toggle between LCD, CRT, and Simultaneous LCD/CRT video modes (see "Keyboard Panel").

Around the Left Side of the System

The left side of your NEC Versa E120 DayLite provides the features shown in the following figure. Feature descriptions follow the figure.

Left-side features



A – Kensington Lock Slot
B – Fax/Modem Port
C – LAN Port
D – CF Card Slot
E – CF Card Eject Button
F – Vents

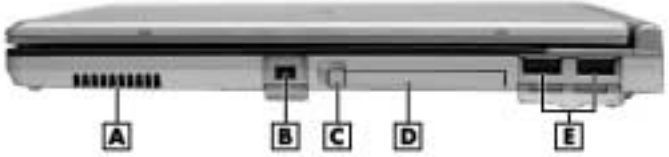
- Kensington® Lock Slot— This slot allows you to attach a Kensington security lock or other compatible lock to secure the notebook from theft.
- Fax/Modem Port — Use this port to connect the system's internal V.90 fax/modem to an analog telephone line for access to fax machine emulation, telephone answering machine functions, and the Internet.
- LAN Port — Use this port to connect the system to a local area network (LAN).
- CF Card Slot — Allows you to insert a Type I or Type II CompactFlash™ (CF) Card into this slot for connection to a wide variety of options, such as flash memory, personal data assistants (PDAs), and video cameras.
- CF Card Eject Button — Press this button to release a CF Card.
- Vents — Allow your system to cool properly and maintain a safe operating environment.

⚠ CAUTION Do not block the vents while the NEC Versa is in use.

Around the Right Side of the System

The right side of the NEC Versa E120 DayLite offers the features shown in the following figure. These features are described after the figure.

Right side features



A – Vents
B – IEEE 1394 Port
C – PC Card Eject Button
D – PC Card Slot
E – USB Ports

- Vents — Allow your system to cool properly and maintain a safe operating environment.

⚠ CAUTION Do not block the vents while the NEC Versa is in use.

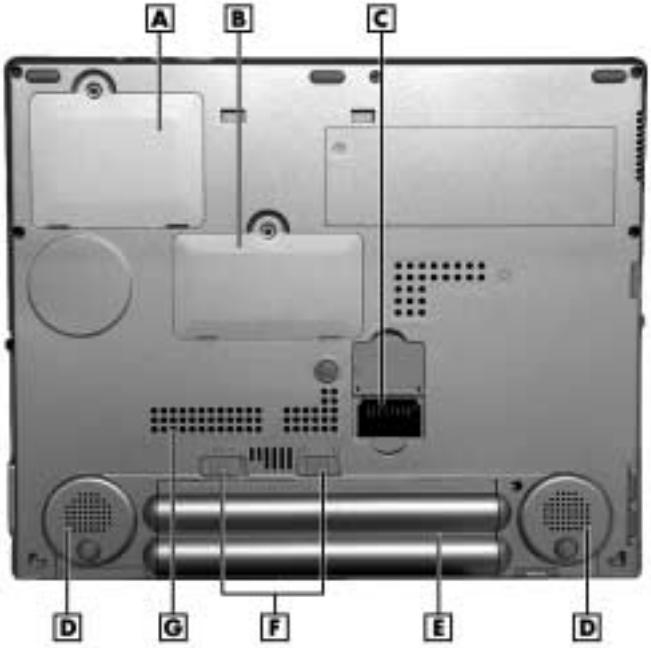
- IEEE 1394 Port — Use this port to daisy chain up to 63 IEEE 1394 devices to your system. IEEE 1394 devices support Plug and Play connectivity for transfer rates of up to 400 Mbps.
- PC Card Eject Button — Press this button to release a PC Card.
- PC Card Slot — Allows you to insert a Type I or Type II PC Card into this slot for connection to a variety of options such as flash memory, SCSI adapters, LAN connections, and hard drives.
- USB Ports — Allows you to easily and conveniently connect a USB-equipped peripheral device to each of these ports. The NEC Versa E120 DayLite has a third USB port at the rear of the system. See “Around the Back of the System” for additional information about USB ports.

  See “USB Devices” in Chapter 5 to connect the external CD-ROM drive that comes with your NEC Versa notebook and to connect other USB devices to the system.

Around the Bottom of the System

The bottom of the NEC Versa E120 DayLite offers the features shown in the following figure. Feature descriptions follow the figure.

Bottom features



A – Mini PCI Module Bay
B – Memory Module Bay
C – Secondary Battery Connector
D – Stereo Speakers
E – Primary Battery
F – Battery Lock/Release Buttons
G – Vents

- Mini PCI Module Bay — Contains a socket for the installation of an optional Mini PCI module (when available).
- Memory Module Bay — Contains a socket for memory upgrade. See Chapter 5 for detailed memory upgrade information.
- Secondary Battery Bay Connector — Allows the connection of a secondary lithium ion (Li-Ion) battery pack. See Chapter 2 for information about installing, charging, and using the secondary battery.
- 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.

- Primary Battery — Comes with the system. See Chapter 2 for information about installing, charging, and using the primary battery. See “Windows Power Management” in Chapter 4 to fully utilize battery power in your NEC Versa notebook.
- Battery Lock/Release Buttons— Press the buttons towards each other to remove the primary battery pack. See Chapter 2 for detailed battery installation information.

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

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, you might lose the double-tap capability.

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

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:
  - — 4-cell Lithium Ion (Li-Ion) primary battery
  - — with or without the optional 8-cell secondary battery that installs on the bottom of the NEC Versa.

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

AC Adapter

Use the AC adapter and power cable or wall plug that comes 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 Cable
B – AC Adapter
C – Power Cable
D – Wall plug

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

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 if it differs from the one provided.

Connect the AC adapter as follows.

1. Connect the AC adapter cable to the power port at the rear 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 E120 DayLite. Although other adapters look similar, using them can damage your system.

Note You can connect the wall plug that comes with the NEC Versa notebook to the AC adapter instead of the AC power cable. Connect the wall plug to the AC adapter and to the properly grounded 120- or 240-volt, 50- or 60-Hz wall outlet.

Using the AC adapter wall plug

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 (see “Front Features” in Chapter 1).
2. Locate the power button and press it to turn on system power. For additional information about power button features and power LED status, see Chapter 1, “Introducing the 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 install an optional secondary lithium ion battery pack on the bottom of your NEC Versa to give you more on-the-go power.

Primary Battery

The standard lithium ion (Li-Ion) battery provides the main power source when you are operating the NEC Versa notebook on battery power. Your system comes with a 4-cell lithium ion battery in the battery bay on the bottom of your system. See Appendix B for battery specifications.

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."

Note See "Windows Power Management" in Chapter 4 to fully utilize battery power in your NEC Versa notebook.

Secondary Battery

You can install an optional secondary lithium ion battery on the bottom of your NEC Versa notebook. This is a very thin battery pack that covers the bottom of the unit. 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" later in this chapter. For information about installing a secondary battery, see "Secondary Battery" in Chapter 5.

Using the Primary Battery

The NEC Versa notebook comes with a rechargeable 4-cell lithium ion (Li-Ion) battery that's easy to install and remove.

Primary battery

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, the following taskbar icons appear:

- An electrical plug appears when the system is connected to an AC power source.
- 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 in Windows XP or the Power Options icon in Windows 2000. Select the Power Meter tab.

Low Battery Status

When battery power is low (10% or less), the power LED lights yellow (blinks in Standby mode). When battery power is very low (4% or less), the power LED lights amber (blinks in Standby mode). 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

If battery performance drops, for example, you experience shorter work times, try one of the following procedures to improve battery performance:

- Remove and reinstall the battery in your NEC Versa notebook and fully recharge the battery (to 100%).
- Refresh the battery using the Battery Refresh 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:

- Keep the brightness setting low. Use the **Fn-F8** and **Fn-F9** function keys to control the brightness.
- Turn off the system when you finish using it.

In addition, NEC Solutions recommends that you always operate your system on AC power when using any external device.

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 Primary 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.

⚠ CAUTION Only use batteries that are designed for your NEC Versa computer. Installing another manufacturer's battery or using a combination of very old and new batteries can deteriorate battery and equipment performance.

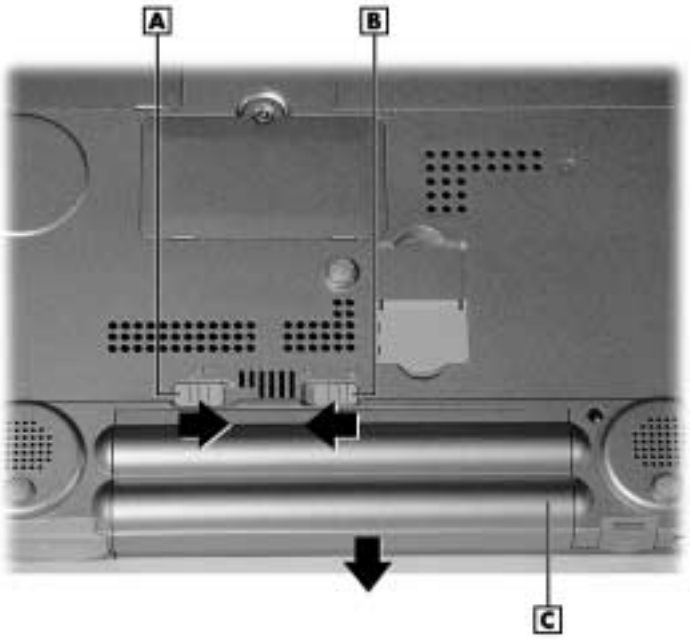
Note To replace a secondary battery, see "Secondary Battery" in Chapter 5.

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

3. Remove the primary battery as follows.

- Slide the battery lock button to the left release position.
- Slide the release button to the right and hold firmly.
- While holding the release button, slide the battery out of the battery bay.

Removing the primary battery



A – Battery Release Button
B – Battery Lock Button
C – Primary Battery

4. Insert the new battery as follows:

   - Make sure the right battery lock button is in the unlocked position (see the previous figure).
   - Align the battery connector and tab with the battery bay slot and connector.
   - Align the grooves on the sides of the battery with the rails in the battery bay.
   - Slide the battery into the battery bay. Press the battery into the connector to secure it.
   - Press the battery lock button to the right locked position.

Installing the primary battery

A – Battery Bay Slot
B – Battery Bay Connector
C – Battery Bay Rail
D – Primary Battery
E – Battery Groove (left side)

5. Turn the system over.

Charging the Battery

Charge the primary battery and optional secondary battery by simply connecting your NEC Versa 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 140º F (60ºC) 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 on the bottom of your computer. See "Secondary Battery" in Chapter 5 for installation information.

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

⚠ WARNING Do not run the system on secondary battery power without the primary battery in place.

The connector in the primary battery bay should not be exposed. An exposed connector can cause a danger if it is accidentally touched or if it connects with a metal object during system operation.

Also see:

- "Using the Primary Battery" earlier in this chapter for general information about handling system batteries.
- The precautions in the section, "Using the Primary Battery" for information that applies to the safe use of the secondary battery.

System Care

The NEC Versa E120 DayLite 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 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.
- VersaGlide touchpad — Regularly clean the VersaGlide touchpad with a clean dry cloth. Grease, dirt, and moisture can cause abnormal mouse operations.
- System case — NEC Solutions 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
- Updating the BIOS

Introducing BIOS Setup

Your NEC Versa notebook 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
- launch the Refresh Battery utility and fully discharge your lithium ion battery.

System parameter information, for example, date, time, drive, and security settings, is stored in the system's complementary metal oxide semiconductor (CMOS) memory. A lithium battery supplies power to the CMOS memory and maintains system configuration information when system power is off. The lithium CMOS battery charges when your NEC Versa notebook is connected to AC power.

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 BIOS Setup utility main menu. You can view and set system parameters from this menu and BIOS Setup's other menus. See the following sections for a description of how to use the BIOS Setup utility.

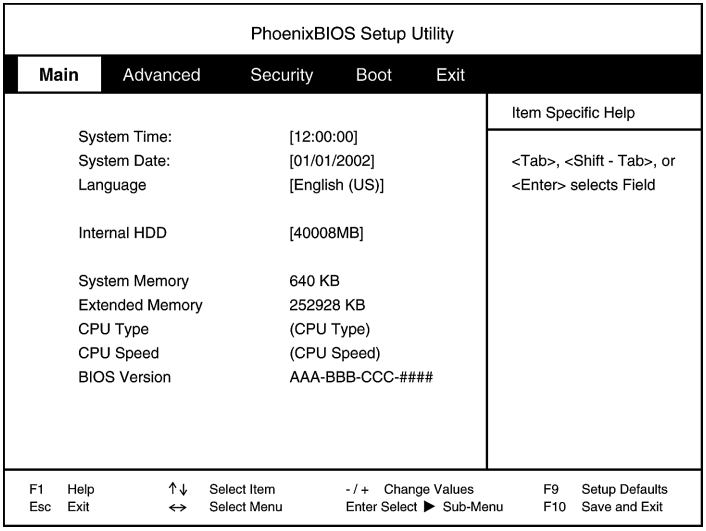
If the system detects an error during POST, it prompts you with a double beep and a message: "Press <F1> to resume, Press <F2> to enter Setup."

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** to enter BIOS Setup.

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

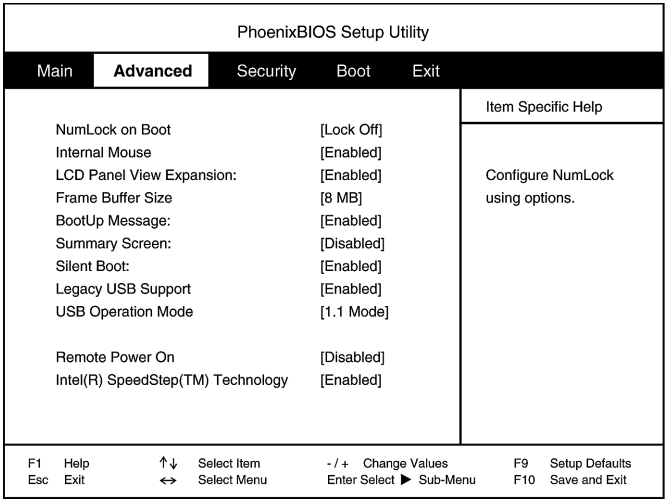


Use the up and down arrow keys (located on the lower right corner of the keyboard) to move through the BIOS Setup menu items.

Looking at Screens

BIOS setup screens have three areas as shown in the following screen.

Advanced BIOS Setup



- 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 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

Key	Function
F1	Displays help.
Esc	Exits a sub-menu or exits the current screen and goes to the Exit menu. From the Exit menu, displays the prompt, "Exit saving changes."
↑↓	Moves the cursor between the displayed parameters.
←→	Moves the cursor between top level menu items.
–/+	Changes the value for the selected item. You can also use the F5/F6 keys.
Tab	Moves the cursor between subfields. 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 has a menu for each of the following areas:

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

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 Language 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
Internal HDD	Auto	User Defined, CD-ROM, ATAPI Removable Disk Drive
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**, **Shift/Tab**, or **Enter** 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**, **Shift/Tab**, or **Enter** keys to move from field to field. Use the **-/+** or **F5/F6** keys to change the numbers within each field.

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

- Internal HDD — Opens a sub-menu with parameters for the internal hard 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 and firmware.

Advanced Menu

Use the Advanced menu to set the following functions.

Advanced Menu

Parameter	Default Setting	Alternate Setting(s)
NumLock on Boot	LockOff	LockOn
Internal Mouse	Enabled	Disabled
LCD Panel View Expansion	Enabled	Disabled
Frame Buffer Size	8 Mb	16 Mb, 32 Mb
BootUp Message	Enabled	Disabled
Summary Screen	Disabled	Enabled
Silent Boot	Enabled	Black, Disabled
Legacy USB Support	Enabled	Disabled
USB Operation Mode	1.1 Mode	2.0 Mode
Remote Power on	Disabled	Enabled
Intel® SpeedStep™ Technology	Enabled	Disabled

- NumLock on Boot — Specifies whether NumLock is enabled when the system boots.
- Internal Mouse — Sets the mouse function. Enabled allows the internal mouse to be active. Disabled turns off the internal mouse. (When set to Disabled, IRQ12 is freed up.)
- LCD Panel View Expansion — Expands the panel view when enabled, but may adversely affect the graphics/text quality. When disabled, reduces the panel view in some video modes.
- Frame Buffer Size — Indicates video memory size. Keep this parameter at its 8-MB default setting.

- BootUp Message — When enabled, allows a boot message to be displayed while the system boots.
- 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.
- Legacy USB Support — When set to Enabled, enables support for a legacy USB device.
- USB Operation Support — When set to 1.1 Mode, the system uses the USB 1.1 standard. When set to 2.0 Mode, the system uses the faster USB 2.0 standard.
- Remote Power on — When set to Enabled, allows the LAN board to wake the system.
- Intel® SpeedStep™ Technology — When enabled, Intel SpeedStep technology is controlled by the operating system or applet. The system works at the optimized performance. When disabled, the system operates in a power conservation mode.

Security Menu

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

System Security Setup

Parameter	Default Setting	Alternate Setting(s)
Supervisor Password Is	Clear	(automatically detected)
User Password Is	Clear	(automatically detected)
Set Supervisor Password	Press Enter	
Set User Password	Press Enter	
Password on Boot	Disabled	Enabled
Fixed Disk Boot Sector	Normal	Write Protect
Assign HDD Password	Enter	
Internal HDD Password	Disabled	Enabled

- Supervisor Password Is — Display only. Automatically displays password status.
- User Password Is — Display only. Automatically displays password status.
- Set Supervisor Password — Controls access to the setup utility.
- Set User Password — Controls access to the system at bootup. To enter a User password, a Supervisor password must be enabled.
- Password on Boot — Establishes whether a password is required to boot the system.
- Assign HDD Password — Allows you to assign a password to restrict access to the hard disk drive contents if the hard drive is removed from your system (see "Hard Disk Drive Passwords" in this chapter).
- Internal HDD Password — Enables or disables the HDD password. When enabled, allows hard drive access only from this system.
- Fixed Disk Boot Sector — Normal disables boot sector write protect. Setting to Write Protect protects the hard disk boot sector against viruses.

Password Protection

Your NEC Versa supports a password for system security. 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.

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

To enter a password, select Set Supervisor Password, press **Enter**, enter the password, re-enter the password to confirm it, and press any key to continue. Repeat the procedure to set the User password.

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.

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.

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.**

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

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:

- USB Device
- USB CD-ROM
- Hard Drive
- Network Boot.

Network Boot — When enabled, enables the network boot function. When disabled, disables the network boot function.

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 — Exits the BIOS Setup utility without saving Setup data.
- Load Setup Defaults — Resets all BIOS settings to what they were when the system was shipped from the factory.
- Discard Changes — Loads the previous values from CMOS for all Setup items.
- Save Changes — Saves any changes made to BIOS settings during the current BIOS Setup utility session, but does not exit the BIOS Setup utility.
- Battery Refresh — Launches the Refresh Battery utility. The utility fully discharges your battery. Once refreshed, your battery is conditioned to recharge to its full capacity. To recharge the battery, connect your NEC Versa to AC power.

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 makes significant improvements or fixes to the current system BIOS. Your authorized NEC Solutions 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 Solutions Support Services at **1-800-632-4525** or access the NEC Solutions Web site, **www.necsolutions-am.com**, to obtain a copy of the BIOS update.

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.

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. Connect the USB diskette drive and 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.
- Select Boot menu in the BIOS Setup and set USB Device for booting from a floppy diskette (see "Boot Menu" earlier in this chapter).
- Remove any bootable CDs from any installed USB optical 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**. A message informs you of the update progress. Do not restart the system until the you are instructed to restart.

⚠ CAUTION Interrupting the BIOS update during the update process can cause damage to the system.

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 E120 DayLite 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
- Windows Power Management
- NEC Customize Utility
- One-Touch Start Button Settings Utility
- Application and Driver CD
- NEC Online Documentation
- Product Recovery CD
- NEC CD-RW CD

Windows Introduction

Your system comes preloaded with the Microsoft® Windows® 2000 operating system or the Windows XP operating system configuration. The operating system provides a means of running applications, navigating through your file structure, and using your notebook computer.

Windows 2000 and Windows XP incorporate the latest ACPI power management. To fully utilize battery power in your NEC Versa computer, see the following section, "Windows Power Management."

The new Windows XP operating system has a new clean look with a new user interface. Icons traditionally appearing on the desktop and taskbar of previous operating systems are not on the Windows XP desktop and taskbar. (You can customize your desktop with the programs you want to launch from your desktop.)

To find some of the Windows XP programs and directories, left click the Windows **Start** button. Windows XP displays a menu with programs and tools such as Internet Explorer, My Computer, Control Panel, and Printers and Faxes.

For a description of Windows XP icons, buttons, and menus, take the online Windows XP tour.

The Windows 2000 operating system has a traditional Windows desktop with icons such as My Computer and Internet Explorer on the desktop. Left click the Windows **Start** button to select the traditional Windows menus and program buttons.

For information about the Windows 2000 operating system, left click the Windows **Start** button and select the Help menu.

Windows Power Management

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.
- 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 Power Options Properties

Most ACPI power management settings are controlled through Windows Power Options Properties, not through the BIOS Setup utility.

To access Windows XP Power Options, go to Start, select Control Panel, Performance and Maintenance, and select Power Options.

To access Windows 2000 Power Options, go to Start, Settings, Control Panel, and select Power Options.

Power Options Properties includes the following power management areas:

- Power Schemes
- Alarms
- Power Meter
- Advanced
- Hibernate
- Intel SpeedStep technology (Windows 2000 option).

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

Parameter	Default Setting	Alternate Setting(s)
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

Power Schemes

Parameter	Default Setting	Alternate Setting(s)
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)	Windows XP: After 3 hours Windows 2000: After 1 hours	10, 15, 20, 25, 30, 45 minutes; 1, 2, 3, 4, 5, 6 hours; Never
System hibernates (Running on batteries)	Windows XP: After 2 hours Windows 2000: 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.

Alarms

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

Alarms

Parameter	Default Setting	Alternate Setting(s)
Low battery alarm	10%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action*	None	Standby, Power Off, Hibernate
Run a program	None	When the alarm occurs, run this program.
Critical battery alarm	3%	0-100%
Alarm Action Notification	Display message	Sound alarm
Alarm Action*	Windows XP: Hibernate	Power Off, Standby, Hibernate
	Windows 2000 Standby	
Run a program	None	When the alarm occurs, run this program.

*Enabling an Alarm action enables “Force stand by or shutdown even if program stops responding” setting.

- 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.

Power Meter

The Power Meter screen displays the remaining battery power and charging status for the battery. Choose to display for your battery status information either details for each battery or a progress bar with the total percentage of both batteries.

Advanced

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

Advanced

Parameter	Default Setting	Alternate Setting(s)
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	Windows XP: Stand by Windows 2000: None*	Standby, Do nothing, Hibernate
When I press the Power button on my computer	Shut down	Standby, Hibernate Windows 2000 only: Do nothing, Ask me what to do

*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.

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.

Note Hibernate is enabled by default in Windows XP.

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

In Windows 2000, you can set Intel SpeedStep technology in the Power Options menu (Intel SpeedStep Technology tab).

Windows XP has the Intel SpeedStep technology driver built into Windows. There is no Intel SpeedStep Technology tab in the Power Options menu.

If Intel SpeedStep technology is enabled in a system running Windows 2000, an icon appears on the taskbar allowing you to adjust processing properties. However, the default settings are recommended for optimal performance and battery conservation.

Recognizing Windows Power Management States

It's 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

Feature	LCD Timeout	Standby (STR)	Hibernate (STF)
Default Setting	2 minutes, DC power (Windows 2000) 5 Minutes, DC power (Windows XP) 15 minutes, AC power	5 minutes, DC power 20 minutes, AC power	10 minutes, DC power (Windows 2000) 2 hours, DC power (Windows XP 60 minutes, AC power (Windows 2000) 3 hours, AC power (Windows XP)
Manually Invoke	Close LCD panel.	Go to Start, Shutdown, Standby. Close LCD panel.* Press Power button.*	Close LCD panel.* Press Power button.*
System behavior	LCD panel is blank. Status LED lights green.	LCD panel is blank. Status LED blinks green.	LCD panel is blank. Status LED turns off. Progress bar indicates that current working environment is saved to hard disk.

Windows Power Management Behavior

Feature	LCD Timeout	Standby (STR)	Hibernate (STF)
Resume	Press any key.	Press Power button.	Press Power button. Progress bar appears during process.

*Only when set in Advanced Windows Power Management Properties.

NEC Customize Utility

The NEC Customize utility gives you the option to launch the NEC Versa Application and Driver CD. Use this option to install a variety of software applications, drivers, utilities, Internet browsers, and the online version of the printed *NEC Versa E120 DayLite User's Guide*. This utility also provides the option for installing the NEC wallpaper.

NEC Customize Utility Screen

The NEC Customize utility screen has the following features:

- 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.

One-Touch Start Button Settings Utility

The One-Touch Start Button Settings utility lets you configure the shortcut buttons on the Versa notebook (next to the power button) to launch your default Internet browser and default e-mail application.

Note You can use the One-Touch Start Button Settings utility to configure the Internet and e-mail shortcut buttons to launch programs other than your Internet browser and e-mail. Use the utility to configure the buttons to launch your favorite programs.

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

1. Install the One-Touch Start Button Settings utility from the NEC Versa E120 DayLite Application and Driver CD. Restart the system after completing the installation.
2. To run the utility, click Start, highlight Programs, and highlight 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").

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.

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

Application and Driver CD

A variety of software applications, drivers, utilities, Internet browsers, and an online NEC Versa E120 DayLite User's Guide are provided on the Application and Driver (A&D) CD that ships with your NEC Versa 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

Follow these procedures to launch the Application and Driver CD using the NEC Customize utility.

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 (or in the Start menu) 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.

NEC Online Documentation

An online version of your printed *NEC Versa E120 DayLite User's Guide* is available on the NEC Versa Application and Driver CD (see "Application and Driver CD" earlier in this chapter).

The online NEC Versa user's guide is in portable document format (PDF) and requires the installation of the Adobe® Acrobat® Reader. You can also install the Acrobat Reader from the Application and Driver CD.

Download the most current online version of the *NEC Versa E120 DayLite User's Guide* from the NEC Solutions Web site (**www.necsolutions-am.com**).

Product Recovery CD

The Product Recovery CD contains 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.

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 8 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.

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

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, CF Cards, USB devices, and monitors.
- Carefully review the Product Recovery CD options in the next section before proceeding.

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

Product Recovery CD Options

The Product Recovery CD and utility provides you with Full Disk Drive and Partition Only restore options. Move the cursor over each option on the NEC Product Recovery utility screen to display a description of the option in the window at the right side of the screen.

- Full Disk Drive — Completely rebuilds your hard disk drive, destroying all existing data in the process. Select this option if you wish to restore your hard disk drive to its initial installation state.

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

- Partition Only — Lets you preserve your existing hard disk drive partition structure and allows you to 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.

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

- 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.

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 CD1 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.

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, an NEC screen loads.
7. At the NEC screen, click Continue to start the recovery process.

   A screen with progress bars is displayed and indicates the progress of the recovery.

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

If you are restoring the Windows 2000 operating system, the recovery program prompts you for the next CD.

If you are restoring Windows 2000, remove CD1 at the prompt for the next CD and insert CD2 into the CD-ROM drive.

When the recovery process is complete for either Windows XP or Windows 2000, you are prompted to remove the CD from the CD-ROM drive and reboot your system.

8. At the prompt, remove the CD from the drive. 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.

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.

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 CD1 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.

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, an NEC screen loads.

7. At the NEC screen, click Continue to start the recovery process.

A screen with progress bars is displayed and indicates the progress of the recovery.

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

If you are restoring the Windows 2000 operating system, the recovery program prompts you for the next CD.

If you are restoring Windows 2000, remove CD1 at the prompt for the next CD and insert CD2 into the CD-ROM drive.

When the recovery process is complete for either Windows XP or Windows 2000, you are prompted to remove the CD from the CD-ROM drive and reboot your system.

8. At the prompt, remove the CD from the drive. 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.

NEC CD-RW CD

If your NEC Versa system comes with an optional CD-R/RW drive, you have the NEC CD-RW CD. The CD-R/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 an application, Easy CD Creator.

The materials that come with the CD describe how to install and use your software. On-screen 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-R/RW drive.

5

Adding Expansion Devices

- USB Devices
- Memory Module
- PC Cards
- CF Cards
- Secondary Battery
- Monitor
- IEEE 1394 Devices
- Audio Options

This chapter provides information for adding a variety of industry-standard expansion devices to your NEC Versa notebook. Included in this chapter are procedures for adding:

- USB devices (diskette drive, CD-ROM drive, CD-R/RW drive)
- a memory module
- PC Cards
- CF Cards
- a secondary battery
- a monitor
- IEEE 1394 devices
- audio options (microphone, headphones, stereo speakers).

USB Devices

The NEC Versa notebook comes with three USB ports which increase your connectivity choices. Each USB port allows you to connect up to 127 USB equipped peripheral devices to your notebook. These peripherals can include a diskette drive, CD-ROM drive, CD-R/RW drive, digital camera, scanner, printer, modem, mouse, keyboard, telephone, or game device.

You can add multiple USB devices to the notebook in several ways:

- add three devices, one to each USB port
- add multiple devices to each USB port by daisy-chaining each device to the next device (each device must have a USB port)
- add multiple devices to each port through an optional multiple USB port hub.

To connect an external USB device to your notebook, plug the USB device into one of the USB ports. See Chapter 1 to locate USB ports on your system.

Some USB devices might require power connections and/or driver installation. If you have an NEC USB diskette drive, CD-ROM drive, or CD-R/RW drive, see the following sections in this chapter for installation information. For other USB devices, see the documentation that comes with the device.

Note You can continue to use the system keyboard and VersaGlide touchpad while an external USB keyboard or USB mouse is connected.

You can disable the VersaGlide while an external mouse is connected (see “Advanced Menu” in Chapter 3.) The Internal Mouse parameter in the Advanced BIOS Setup menu lets you enable or disable the VersaGlide touchpad.

USB Diskette Drive

Use the NEC USB diskette drive option to load and start programs from a standard 1.44 MB, 3 1/2- inch diskette. A USB cable comes attached to the drive. The drive takes power from your notebook through the USB cable. There's no need to power the drive separately from an electrical outlet.

The USB diskette drive has the following features (see the following figure).

- Status LED — Lights during data read/write operations. When the indicator is lit, do not eject the diskette, unplug the USB cable, or turn off the NEC Versa notebook. Doing so can cause loss of data from your diskette.
- Eject button — Ejects the diskette.
- USB cable — Connects to a USB port on your NEC Versa notebook.
- Ease of use — Allows connection or removal from your notebook at any time, with notebook power on or off.

USB diskette drive features

A – USB Cable
B – Status LED
C – USB Diskette Drive
D – Diskette Eject Button

To connect and use the USB diskette drive, follow these steps.

1. Connect the USB cable attached to the drive to the USB port on your notebook. Notebook power can be on or off when connecting the cable.

2. Turn on notebook power, if it is not already on. If this is the first time the USB diskette drive is connected, a New Hardware Found message displays on your screen and a hardware driver automatically installs for your drive.

3. Insert a diskette in the drive, until it locks in place.

   To eject the diskette, press the eject button. Before ejecting the diskette, be sure that the status LED is not lit.

USB CD-ROM Drive

A USB CD-ROM drive comes with your NEC Versa notebook. Use the USB CD-ROM drive to load and start programs from a compact disc (CD) or to play your audio CDs. The USB CD-ROM drive is fully compatible with Kodak™ multisession Photo CD™ discs and standard audio CDs.

The USB CD-ROM drive is automatically assigned an available drive letter.

CD-ROM drive features are shown in the following figure (see the descriptions following the figure).

USB CD-ROM drive side and front features

A – Phones (headset) Jack
B – Volume Control
C – Release Latch
D – Status LED
E – Play/Stop Button
F – Forward Button

- Phones Jack — Provides a jack for an optional head set. Use this to listen to your audio CDs.
- Volume Control — Adjusts the volume of your audio CDs.
- Release Latch — Opens the CD-ROM drive cover. Slide this latch to open the cover and load or remove a CD from the drive. The latch opens the cover with or without power.
- Play/Stop Button — Use this button to start or stop your audio CD.

- On/Busy Status LED — Lights green when the USB CD-ROM drive is connected to your notebook. Lights amber during data read operations. Do not eject the CD, unplug the USB cable, or turn off the NEC Versa notebook when the indicator is lit.
- Forward Button — Use this button to advance the playback of your audio CD, one track at a time.
- USB Connector — Connect the USB cable to this connector located at the back of drive.
- Ease of use — The USB CD-ROM can be disconnected or connected to your notebook at any time, with notebook power on or off.

Using the USB CD-ROM Drive

To use the USB CD-ROM drive, follow these steps.

1. Connect the USB cable.
   - Plug the small end of the USB cable into the USB connector on the back of the drive.
   - Plug the large end of the USB cable into the USB port on your notebook.

Note When you need to unplug the USB cable from the drive, squeeze the connector releases while pulling the connector out.

USB CD-ROM drive cable connector

A – USB Cable Connector

2. Power on your notebook, if it is not already on. If this is the first time the USB CD-ROM drive is connected, a New Hardware Found message displays on your screen and a hardware driver automatically installs for your drive.
3. Slide the release latch towards the front of the drive to open the CD-ROM drive cover.
4. Put your CD, printed side up, over the spindle in the drive.
5. Close the CD-ROM drive cover. The CD autoplays if it has an auto start file. If it does not auto start, launch the CD from My Computer.

Handling CDs

When handling CDs, keep the following in mind.

- Always pick up the disc by its edges.
- Avoid scratching or soiling either side of the disc.
- Do not write on or apply labels to the data side of the disc.
- Keep the disc away from direct sunlight or high temperatures.
- Clean fingerprints or dust from the disc by wiping it with a soft cloth. Gently brush the cloth from the center of the disc toward the edge.

⚠ CAUTION Avoid using benzene, paint thinner, record cleaner, static repellent, or any other chemical on the disc. Chemicals and cleaners can damage the disc.

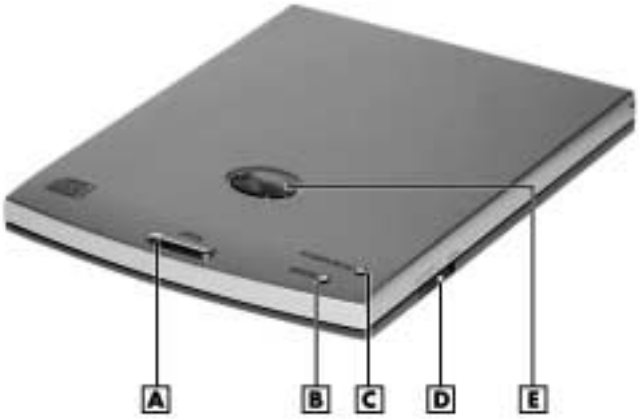
USB CD-R/RW Drive

Your NEC Versa notebook might ship with a USB CD-R/RW drive and Easy CD Creator™ software. Use the USB CD-R/RW drive to load and start programs from a compact disc (CD) or to play your audio CDs. The USB C-R/RW drive is fully compatible with Kodak Photo CDs and standard audio CDs.

In addition, the Easy CD Creator application allows you to write information to a CD and to back up information from your hard disk drive to a CD. For detailed information about using the USB CD-R/RW drive and installing the Easy CD Creator software, refer to the accessory sheet that ships with the drive.

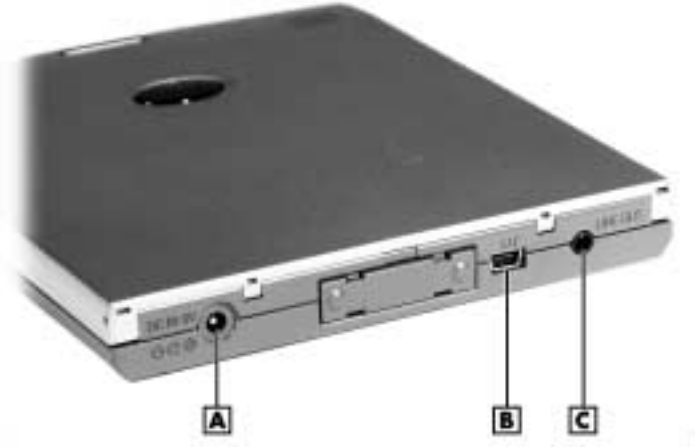
The USB CD-R/RW drive features are shown in the following figure (see the descriptions following the figure).

USB CD-R/RW drive top and side features



A – Open Button
B – Write Status LED
C – Power/Busy Status LED
D – Power Switch
E – Disk Observation Window

USB CD-R/RW drive rear features



A – DC In 6V Port
B – I/F Port
C – Line Out Jack

USB CD-R/RW drive bottom features

A – Mode Switch
B – Emergency Release Latch

CD-R/RW cables

A – USB cable **B** – AC/DC power adapter

- Open Button — Opens the CD-R/RW drive cover. Press this button when power is on to open the cover and load or remove a CD from the drive.
- Write Status LED — Lights during write data operations. When the LED is lit, do not open the CD-R/RW drive cover, unplug the USB cable, unplug the power cable, or turn off the NEC Versa notebook. Doing so might cause the loss of data from the CD.
- Power/Busy Status LED — Lights green when powered on. Lights amber during read operations. When the LED is lit, do not open the CD-R/RW drive cover, unplug the USB cable, unplug the power cable, or turn off the NEC Versa notebook. Doing so might cause the loss of data from the CD.
- Power Switch — Switches power on or off when the CD-R/RW drive is connected to AC power with the AC/DC power adapter. Slide the switch to power on the CD-R/RW drive.
- Disk Observation Window — Lets you see if the disc is rotating.
- DC In 6V Port — Connect the AC/DC power adapter to this power port to power your CD-R/RW drive.
- I/F Port — Connect the USB cable to the I/F port and to the USB port on your Versa notebook.
- Line Out Port — Connect optional headphones to this port.

- Mode Switch — Provides a four-position DIP switch for enabling/disabling Vibration Detective Mode.
- Emergency Release Latch — Allows you to manually open the CD-R/RW drive cover and remove a disc from the drive if the Open button function is disabled by software or a power failure.

  To open the cover and remove a disc in an emergency, slide the emergency latch on the bottom of the drive.

Software and drivers for the CD-R/RW drive are provided separately on a CD. Printed installation instructions are packaged with the CD.

Note CD-R/RW media must be formatted before you use it. Systems with USB CD-R/RW drives ship with an NEC CD-RW Software CD. Install the software on your system from this CD (see "NEC CD-RW CD" in Chapter 4.)

Using the USB CD-R/RW Drive

To use the USB CD-R/RW drive, follow these steps. Also refer to any instructions that might come with the drive.

1. Connect the small end of the USB cable to the I/F port at the rear of the USB CD-R/RW drive. Connect the other end of the cable to the USB connector on your notebook.
2. Connect the AC/DC power adapter to a 115 Vac power source. Plug the other end of the adapter into the DC IN connector on the rear of the drive.
3. Slide the USB CD-R/RW drive power switch towards the rear of the drive to turn power on.
4. Power on your notebook, if it is not already on. If this is the first time the USB CD-R/RW drive is connected, a New Hardware Found message displays on your screen. Follow the prompts to install the hardware driver.
5. Press the Open button on the top of the drive to open the CD-R/RW drive cover.
6. Put your CD, printed side up, on the spindle in the drive.
7. Close the CD-R/RW drive cover. The CD autoplays if it has an auto start file. If it does not auto start, launch the CD from My Computer.

Handling CDs

When handling CDs, keep the following in mind.

- Always pick up the disc by its edges.
- Avoid scratching or soiling either side of the disc.
- Do not write on or apply labels to the data side of the disc.
- Keep the disc away from direct sunlight or high temperatures.
- Clean fingerprints or dust from the disc by wiping it with a soft cloth. Gently brush the cloth from the center of the disc toward the edge.

⚠ CAUTION Avoid using benzene, paint thinner, record cleaner, static repellent, or any other chemical on the disc. Chemicals and cleaners can damage the disc.

Memory Module

System memory is upgradeable from 256 MB to 768 MB. The NEC Versa E120 DayLite has one 64-bit memory slot for a 144-pin SO-DIMM (Small Outline Dual Inline Memory Module). The slot supports a 128-MB, 256-MB, or 512-MB (when available) SDRAM module. The memory slot is located on the bottom of your notebook. See the following procedures to upgrade system memory.

Installing a Memory Module

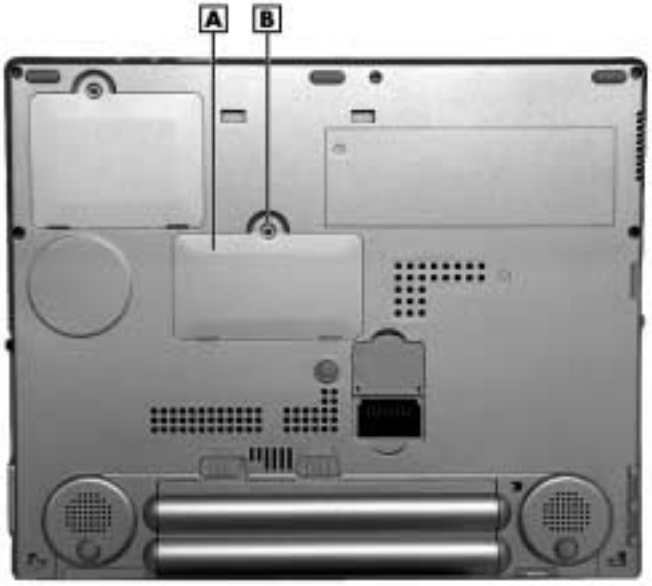
Follow these steps to upgrade the system memory.

1. Power off the system, disconnect AC power, and disconnect any peripheral devices.

   If installed, remove the optional secondary battery (see "Secondary Battery" later in this chapter).

2. Locate the screw securing the memory bay cover to the bottom of the notebook.

Memory bay cover



A – Memory Bay Cover **B** – Screw

3. Remove the screw and lift off the memory bay cover.

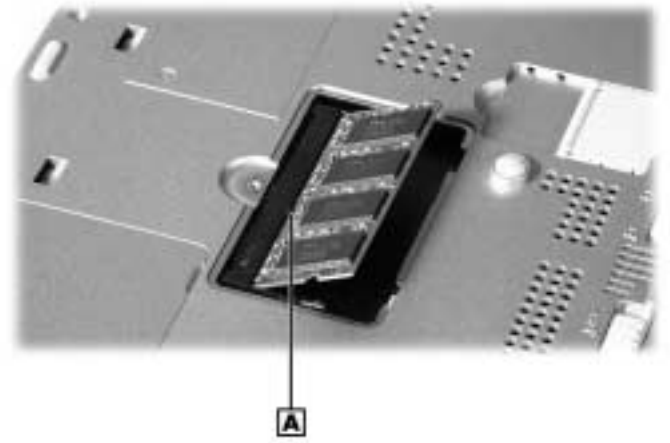
4. Install the new memory module as follows.

Note To remove a memory module, see "Removing a Memory Module."

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

- Locate the alignment notch on the module.
- Align the notch with the key in the slot connector.
- Holding the memory module at a 40-degree angle to the notebook, insert the module connector into the socket. Firmly push the module into the socket.
- Press down on the edge of the memory module until the locking tabs on the sides of the socket snap into place, securing the module.

Installing the memory module



A – Module Alignment Notch

5. Replace the memory bay cover and its screw. If removed, reinstall the optional secondary battery (see "Secondary Battery" later in this chapter).

6. Turn the system over. Reconnect peripherals and the AC adapter power cable.

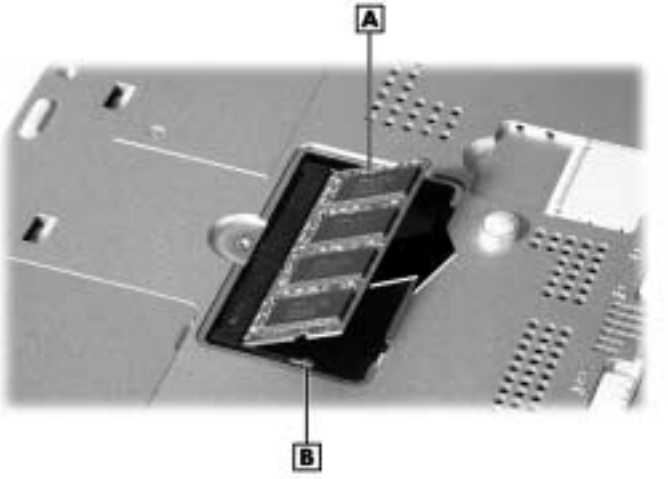
Removing a Memory Module

If you are replacing a memory module, remove the installed memory module as follows.

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

1. Press the locking tabs away from the sides of the module until the module pops up at an angle.
2. Pull the memory module out of the slot along the angle and store it in a static-free bag.

Removing the memory module



A – Memory Module **B** – Locking Tab (1 of 2)

PC Cards

The NEC Versa notebook supports one Type I or II PC Card for extending system capabilities. Type I PC Cards are 3.3 millimeters (mm) thick, Type II PC Cards are 5.0 mm thick. Both types have a standard 68-pin connector.

Type I PC Cards are typically memory device cards such as Random Access Memory (RAM), Read Only Memory (ROM), Flash Memory, and Static RAM (SRAM) cards.

Type II PC Cards are often used for I/O devices such as data/fax modems, local area networks (LANs), and mass storage devices.

Memory or storage cards appear as a unique drive as long as the notebook has an available interrupt for the card.

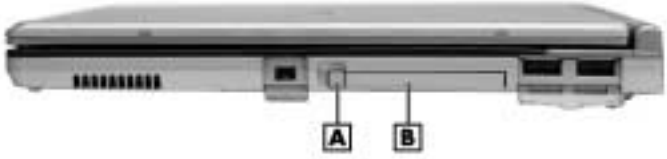
Some PC Cards are extended cards. The extended card has an additional physical component that protrudes beyond the normal card size. The extension can be as large as 40 mm deep by 9.65 mm high. The extension provides room for additional electronics as well as a location for external connectors.

Inserting a PC Card

The system integrates one PC Card slot on the right side of the notebook. To insert a PC Card, follow these steps.

1. Remove the PC Card slot cover by pressing twice on the eject button next to the slot. Pull the cover out of the slot and save it.

PC card slot cover



A – PC Card Eject Button **B** – PC Card Slot Cover

2. Align the PC Card so that the connector end points toward the PC Card slot and that the printed label or arrow side is up.
3. Insert a Type I or Type II PC Card into the slot.

   If the system is running, a low tone followed by a high tone lets you know that the card is fully inserted and recognized.

   Other tone sequences such as high, then low tones, indicate that the card is inserted but not recognized (card type unknown).

4. Follow the PC Card manufacturer's instructions for using the card.

Removing a PC Card

Follow these steps to remove a PC Card from its slot in the notebook.

1. At the Windows desktop, point to My Computer and to Control Panel (or select the PC Card icon in the taskbar).
2. Select the PC Card and select **Stop**.

   Windows alerts you if any applications are still using the card. Close the application(s).

   If all applications using the PC Card are shut down, services for that card are closed.

   A message displays on the screen stating that it is safe to remove the PC Card.
3. Remove the PC Card from it slot by pressing the eject button next to the slot. Pull the card out. Store the PC Card in a static-free container.
4. If you are not installing another PC Card, insert the previously removed slot cover into the slot to keep dust and dirt out.

CF Cards

The NEC Versa notebook supports one Type I or one high-capacity Type II CompactFlash (CF) Card for extending system storage capabilities. The CF Cards have a standard 50-pin connector. Type I cards are 3.3 mm thick and Type II cards are 5 mm thick.

The system integrates one CF Card slot on the left side of the notebook. Use the slot to insert one Type I or one Type II CF Card.

Inserting a CF Card

To insert a CF Card, follow these steps.

1. Remove the CF Card slot cover by pressing twice on the eject button next to the slot. Pull the cover out of the slot and save it.

CF card slot cover

A – CF Card Slot Cover **B** – CF Card Eject Button

2. Align the CF Card so that the connector end points toward the CF Card slot and the printed label side is up.
3. Insert the CF Card into the slot.
4. Follow the CF Card manufacturer's instructions for using the card.

Removing a CF Card

To remove a CF Card, follow these steps.

1. Remove the CF Card from it slot by pressing the eject button next to the slot. Pull the card out. Store the CF Card in a static-free container.
2. If you are not installing another CF Card, insert the previously removed slot cover into the slot to keep dust and dirt out.

Secondary Battery

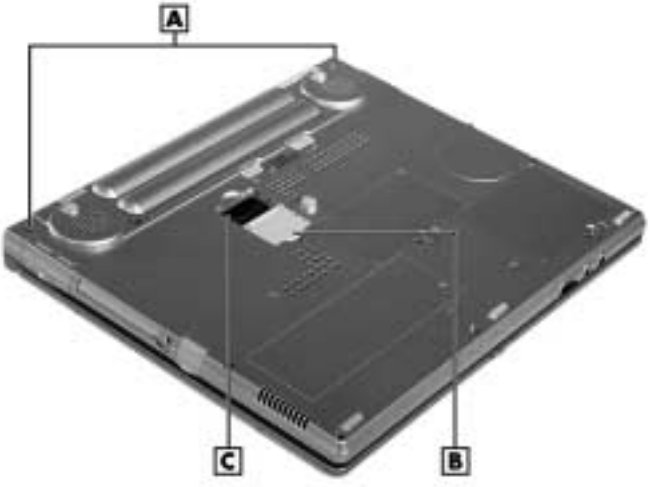
Your system comes with a battery connector on the bottom of the notebook that enables you to attach an optional secondary Lithium-Ion battery pack. Attaching the secondary battery increases battery life while you are away from an AC power source. See the following procedures to install and remove the secondary battery.

Installing the Secondary Battery

To install the optional secondary battery pack, proceed as follows (see Chapter 2 for procedures to install the primary battery).

1. Power off the system, disconnect AC power, and disconnect any peripheral devices.
2. Turn the notebook over and locate the secondary battery connector cover (see the following figure). Open the connector cover, rotate it back, and press it down into its recess.
3. Locate the two locking slots.

Secondary battery installation areas



A – Locking Slots
B – Battery Connector Cover
C – Battery Connector

4. Check that the two locking screws on the secondary battery are in the unlocked position.
   - In the unlocked position, the round dimple on the screw aligns with the small dot under the unlocked padlock symbol.
   - Use a flat-blade screwdriver to turn the screw(s) to the unlocked position.

Optional secondary battery

A – Locking Screws (2) **B** – Secondary Battery

5. Align the battery pack on the notebook, label side up, with the locking screws directly over the locking slots on the notebook (see the previous figure to locate the locking slots).
6. Set the battery pack down on the notebook, ensuring that the two locking screws are in the locking slots.
7. Slide the battery pack toward the front of the notebook, away from the primary battery, until the battery pack locks in place.
8. Turn the locking screws to the locked position.
   - Don't force the screws. If the screws don't turn easily, reseat the battery pack by sliding it towards the primary battery and then away from the primary battery.
   - When locked, the round dimple on the screw aligns with the dot next to the locked padlock symbol.

9. Turn the notebook over. Connect the AC adapter to the notebook and to an AC power source to charge the secondary battery.

Note See Chapter 2 for detailed information about using and handling batteries.

Removing the Secondary Battery

To remove the secondary battery, follow these steps.

1. Unlock the battery pack screws.
2. Slide the battery pack towards the primary battery and lift the battery pack straight up.

Monitor

You can add a standard external monitor to your NEC Versa notebook. You need a display signal cable (usually provided with the monitor). One end of the cable must have a 15-pin connector for the notebook.

Follow these steps to connect an external monitor to your notebook.

1. Check that the notebook is powered off and the monitor power switch is turned off.

Note The NEC Versa notebook must be powered off or suspended while the monitor is being connected.

2. Open the monitor port cover and attach the 15-pin cable connector to the VGA monitor port on the system (see “Around the Back of the System” in Chapter 1 for port location). Secure the cable connection with the cable connector screws.
3. Connect the monitor power cable and plug it into a properly grounded wall outlet.
4. Follow any setup instructions in the monitor user’s guide.
5. Turn on power to the notebook and device.
6. Press **Fn-F3** to toggle through the video modes.

IEEE 1394 Devices

Your NEC Versa notebook has an IEEE 1394 port that increases your connectivity choices. The IEEE 1394 port allows you to daisy chain up to 63 IEEE 1394 devices to your notebook. IEEE 1394 devices support Plug and Play connectivity for transfer rates of up to 400 Mbps. These peripherals might include a digital camera, scanner, printer, or other device.

Connect IEEE 1394 devices to your notebook as follows.

1. Install the drivers for your device.
2. Locate the IEEE 1394 port on your notebook (see "Around the Left Side of Your System" in Chapter 1).
3. Open the IEEE 1394 port cover. Plug the IEEE 1394 device into the IEEE 1394 port.

Audio Options

The NEC Versa comes equipped with built-in audio ports that let you record and play sound. The audio ports are conveniently located at the front of the NEC Versa notebook (see "Front Features" in Chapter 1 for port locations).

You can connect the following audio options:

- an external microphone to the microphone in jack
- headphones to the headphone/external speaker jack
- powered stereo speaker set to the headphone/external speaker jack.

Note If you are using an external microphone and experience sound distortion or feedback, lower the speaker volume.

For additional speaker setup and operation information, see the documentation that comes with the speaker set.

Use the volume control on the front of the notebook to adjust volume. You can also adjust volume through the Windows volume setting.

See your Windows documentation for information about recording and playback.

6

Communicating with Your NEC Versa

- MDC Modem
- LAN Connection
- Internet Connections

MDC Modem

NEC Versa E120 DayLite systems come equipped with a 56K capable fax/data modem that allows you to communicate with others via fax or e-mail, or to connect to an online service or bulletin board.

Note Due to FCC regulations in effect at the time that this document was printed, the 56K modem transmits at a maximum speed of 52K.

The speed of data transmission is dependent on the quality of telephone lines. Digitally terminated lines improve the speed of data transmission. Contact your service provider for more information.

Connecting the Modem

The fax/data modem provides one standard phone connector. NEC provides one analog cable for your convenience.

⚠ **CAUTION** Use only a 26AWG phone line when connecting the modem.

Use the following steps to connect the analog phone cable to your modem.

Note When using a modem outside the U.S. and Canada, you might need an international telephone adapter, available at most electronics supply stores.

1. Locate the analog phone cable that ships with the NEC Versa notebook. Each end of the cable has a RJ-11 connector that plugs into a standard wall outlet.
2. Connect one end of the cable into a standard telephone wall outlet.

⚠ **CAUTION** Check that your phone line is an analog phone line. If you are not sure, check with your telephone company. Never use your modem with a digital phone line. Doing so can destroy your modem.

3. Connect the other end of the cable into the computer's modem port on the left side of the system (see "Around the Left Side of the System" in Chapter 1).

LAN Connection

NEC Versa systems come with a local area network (LAN) connector that allows the connection of your system to a local area network. This connection supports the 10/100Base-TX LAN standard and both Wake-on-LAN and Network Boot functions.

To take advantage of the interface, connect an RJ-45 cable to the LAN port on the left side of the system (see “Around the Left Side of the System” in Chapter1.)

Internet Connections

Your NEC Versa system is equipped with the Windows operating system to provide a fully-integrated Internet experience. Use the Internet Connection Wizard on your desktop to configure your system for e-mail and Internet access. Sign up for a new account or configure your system to use an existing account.

Before using the Internet Connection wizard, to transfer an existing account for e-mail and Internet access, you need an Internet service provider (ISP) account and some or all of the following configuration information:

- the dial-up telephone number
- TCP/IP settings
- port settings
- a user name/logon and password
- your e-mail address
- the name of a POP3, IMAP, or HTTP server (for incoming mail)
- the name of an SMTP server (for outgoing mail).

Internet Connection Wizard

Access the Internet Connection Wizard in Windows through its desktop icon. The Windows Internet Connection Wizard offers the following choices:

- Sign-up for a new Internet account. Take advantage of the Microsoft Internet Referral Service.
- Transfer an existing Internet account.
- Manually configure an Internet account or connect through a local area network (LAN).

Launch the connection wizard and follow the on-screen prompts to configure your system for Internet access.

Accessing the Internet

Your NEC Versa system is equipped with an Internet shortcut button, located above the keyboard (see “Around the Front of the System” in Chapter1). The first time that you press the Internet shortcut button, the Internet Connection Wizard launches, allowing you to configure your system for Internet access.

Once your Internet connection is configured, pressing the Internet shortcut button launches your associated dial-up network connection, allowing you to enter your logon name and password. In addition, Microsoft Internet Explorer launches, providing quick access to your favorite Internet sites.

Sending and Receiving E-mail

Your NEC Versa system is equipped with an E-mail shortcut button, located above keyboard (see “Around the Front of the System” in Chapter1). The first time that you press the E-mail shortcut button, the Internet Connection Wizard launches, allowing you to configure your system for e-mail access. Once your Internet connection is configured, pressing the E-mail shortcut button launches your associated dial-up network connection, allowing you to enter your logon name and password. In addition, Outlook Express launches, providing quick access to your e-mail functions.

Modifying the Internet and E-mail Shortcut Buttons

The Internet and E-mail shortcut buttons are configured (default setting) to launch your Internet browser and e-mail applications, respectively. You can modify the default application settings with the One-Touch Start Button Settings utility. See “One-Touch Start Button Settings Utility” in Chapter 4 for information about running this utility.

7

Traveling Tips

- Preparing for Travel
- Packing for Travel
- Using Power Connections
- Getting Through Customs
- Connecting to the Internet

Preparing for Travel

The NEC Versa computer makes a natural traveling companion. With a little preparation you can use the computer practically anywhere you go, to prepare your business documents, confirm your travel plans, surf the Internet, or simply stay in touch with those back home!

Here is what you should do before you leave home:

Note Speed the trip through airport security by carrying a charged system. Inspectors may want to see the screen display a message. The boot message is usually sufficient.

If your system is fully charged, the inspection only takes a minute or so. Otherwise, be prepared to attach the AC adapter and power cable. And if you don't have these, the inspection might include a disassembly of the system.

- Back up your NEC Versa's hard disk.
- Insert a fully charged battery to make sure your system is ready to quickly boot up at the airport security check.
- Fully charge all your batteries.
- Tape your business card to your NEC Versa, AC adapter, and batteries.
- If you run your system with battery power, maximize battery life by using power-saving features whenever possible.
- Take along any application or data files that you might need on diskettes or CDs.
- Check that you have everything you need before you leave on a trip.

Packing for Travel

The following are what you should take with you when you travel with your NEC Versa.

- Extra fully charged batteries
- Single-outlet surge protector
- Appropriate AC plug adapter for international voltage requirements
- Extra phone cord to access hard to reach wall jacks
- Copy of proof of purchase for your computer and other equipment or customs registration form for customs check

- Customer support phone numbers for your software (domestic and international)
- AC extension cord.

Using Power Connections

With the right accessories, you can run your NEC Versa almost anywhere! Your system self-adjusts to various power sources. The United States, Canada, and most of Central and South America use 120-volt alternating current (AC). Most other countries of the world use 240-volt AC. The NEC Versa adapts to voltages ranging from 100 to 240 volts, 50 or 60-Hz.

There are a few countries with areas that use direct current (DC) as their main power source. You need a DC-to-AC converter in particular areas of Argentina, Brazil, India, Madeira, and South Africa.

To use your system overseas, you need an adapter plug. There are several different plugs available worldwide. You can buy these at an electronics supply store.

Getting Through Customs

With so many countries in the world, you can be sure that there are a variety of customs regulations. Plan wisely to get your NEC Versa notebook computer through customs by carrying the appropriate documentation to assure the customs agent that your system is not a recent purchase.

Travelers are often asked, when returning to their home country, whether or not they purchased the computer while outside of the country. Sometimes, the proof of purchase such as a bill of sale, insurance policy, or purchase receipt is sufficient. Taking along the purchase receipt for your notebook computer may sound practical, but may not always suffice, particularly when the purchaser of the computer is your company and the original receipt is not available to you.

Another alternative to a proof of purchase document is a Certificate of Registration, a document that is issued when you register your notebook computer with the Customs Service prior to departure. The certificate of registration contains a brief description of your computer and lists appropriate serial numbers for identification. The document is available from the customs web site at http://www.customs.ustreas.gov/.

To avoid hassle when moving your system through customs, you may want to obtain a certificate of registration and carry it whenever you travel out of the country with your NEC Versa notebook computer.

Connecting to the Internet

Whether you are on a business trip or vacation, connecting to the Internet while you travel can be expensive and frustrating unless you are prepared. Here are some tips on how to avoid frustration and expense while on the road.

Connecting Using a Modem

If you have access to a standard telephone jack while you are traveling, you can probably use your modem for dial-up access to your favorite sites. Follow these guidelines for connecting and configuring your system.

1. Before leaving home, check with your Internet Service Provider to see if it has:
   - A local access number at your point of destination.
   - A toll-free number that can also save you money.
   - In the absence of a local ISP access number or toll-free number, charging the call to your home phone can be less expensive than charging the call to your hotel room.

2. Prepare your system for phone line access in another country.
   - Line access outside of a hotel may require the addition of a “9” or “8” preceding the phone number string.
   - To circumvent unusual dial tone sounds sometimes encountered in other countries, you may have to modify a system configuration setting to “ignore the dial tone.”

3. Always check the phone line to determine whether or not it is digital vs. analog. *NEVER* use your modem with a digital phone line. Doing so can destroy your modem!

Connecting Using a LAN

Many hotels and convention centers now offer direct Internet access for a nominal fee. If your hotel provides this service, follow these guidelines for connecting and configuring your system.

- Many hotels can provide a LAN cable by prearrangement, so you can travel with a minimum of accessories.
- Plug the LAN cable into your system and the LAN connector in the room or hall where you want to access the Internet.

- After connecting the LAN cable, connect your system to an AC power outlet (if desired) and power on your system.
- Try launching your browser (Microsoft Internet Explorer, or Netscape Communicator, for example):
  - If your TCP/IP network settings are already configured to "Use DHCP for WINS Resolution" you should be able to access the Internet.
  - If your TCP/IP network settings are not set to use DHCP, a help screen may appear, or you may be directed to call the LAN provider for assistance configuring your system.

    Follow the instructions that are provided to you completely, so your settings work effectively with the provider's system.
- If you have problems, the hotel or convention center may be able to direct you to a support technician.

8

Solving System Problems

- Problem Checklist
- Startup Problems
- If You Need Assistance

Once in a while you may encounter a problem with your NEC Versa. If the screen is blank, the instructions don't help, or no error message appears, use the information here to determine and fix the problem. You still may be able to solve the problem yourself!

Problem Checklist

First check the items in the following list. If these items don't help, see the table that follows the list.

- Power is on to the computer.
- The electrical outlet to which your AC adapter is connected is working. Test the outlet by plugging in a lamp or other electrical device.
- All cables are tightly connected.
- The display setting is configured correctly.
- The display's brightness control is adjusted properly.
- If using battery power, check that the battery pack is properly inserted and fully charged.

Troubleshooting

Problem	What to Do
The system does not power on.	If you are operating the system with battery power, check that the battery pack is correctly inserted. Attach the AC adapter to recharge the battery. If you have the AC adapter attached, check that the electrical outlet you are using works.
LCD screen is dark and blank.	Power-saving mode has shut off the backlight. Try to recover by pressing any keyboard key. The built-in LCD may not be selected. Press **Fn-F3** once or twice. Screen brightness needs adjustment. Adjust the control (**Fn-F8** and **Fn-F9**). The system entered Standby mode due to low battery power. Plug in the AC adapter before resuming operation.

Problem	What to Do
Battery power does not last long.	Use power-saving modes. Fully charge and fully discharge the battery several times to recondition it. Use the Battery Refresh function in the Exit Menu of the BIOS Setup utility (see “Exit Menu” in Chapter 3). Replace the battery.
Information on the LCD screen is difficult to see.	Adjust the brightness controls (press **Fn-F8** and **Fn-F9**).
The Suspend/Resume function does not work.	If the system does not suspend, a disk drive might be busy. Wait until the disk drive stops and try again. If system does not resume, it may have auto suspended on a low battery. Attach the AC adapter and try again. If the system still does not suspend, check that Auto Play is disabled for the CD-ROM drive.
An optional component does not work.	Make sure the component is securely installed or connected. Verify that the system parameter for the I/O port configuration is set correctly in Setup.

Startup Problems

The system displays an invalid configuration error message at power on when there are the following conditions:

- the current configuration information doesn't match configuration information stored in Setup, such as when an internal option is added.
- the system loses configuration information.

If either condition is true, the system displays an invalid configuration information message.

To continue start-up procedures, press **F2** and run the Setup utility to set current system parameters.

If an error message appears before the operating system starts, look up the error message in the following table. Follow the instructions. If you see other error messages, the hardware might need repair.

If the system frequently loses the setup configuration data, the internal CMOS battery may need to be replaced at an authorized NEC repair center.

POST Error Messages

The NEC Versa has a built-in checking program that automatically tests its components when you turn the system power on. This diagnostic test is called the Power-On Self-Test (POST). If the system finds a problem during POST, the system displays an error message. If this happens, follow the instructions in the POST error message table.

POST Error Messages

Error Message	Explanation
Diskette drive A error	Drive A: is present but fails the BIOS POST diskette tests. Check to see that the drive is defined with the proper diskette type in Setup.
Extended RAM Failed at offset: *nnnn*	Extended memory not working or not configured properly at offset *nnnn*.
Failing Bits: *nnnn*	The hex number *nnnn* is a map of the bits at the RAM address (in System, Extended, or Shadow memory) which failed the memory test. Each 1 (one) in the map indicates a failed bit.
Fixed Disk 0/1/Disk Controller Failure	Fixed disk is not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup to make sure the fixed-disk type is correctly identified.
Incorrect Drive A type – run SETUP	Type of floppy drive A: not correctly identified in Setup.
Keyboard Controller error	The keyboard controller failed test. You may have to replace keyboard or controller.
Keyboard Error – Keyboard not working	Keyboard error *nn* BIOS discovered a stuck key and displays the scan code *nn* for the stuck key.
Operating system not found	Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.
Parity Check 1 – Parity error found in the system bus	BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.
Parity Check 2 – Parity error found in the I/O bus	BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays ????.

POST Error Messages

Error Message	Explanation
Previous POST did not complete successfully.	POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with wait states, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the wait-state configuration is correct. This error is cleared the next time the system is booted.
Real time clock error	Real-time clock fails BIOS test. It may require board repair.
Shadow Ram Failed at offset: *nnnn*	Shadow RAM failed at offset *nnnn* of the 64k block at which the error was detected.
System battery is dead – Replace and run SETUP	The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.
System cache error – Cache disabled	RAM cache failed the BIOS test. BIOS disabled the cache.
System CMOS checksum bad – run SETUP	CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. Run Setup and reconfigure the system either using the Default Values and/or making your own selections.
System RAM Failed at offset: *nnnn*	System RAM failed at offset *nnnn* of the 64k block at which the error was detected.
System timer error	The timer test failed. Requires repair of system board.

If You Need Assistance

If you have a problem with your computer, first review the checklist and troubleshooting table in the previous section.

If you still have a problem, see Chapter 9, "Getting Service and Support," for details about contacting NEC.

Note If you purchased and are using this product outside the U.S. or Canada, please contact the local NEC office or their dealers for the support and service available in your country.

9

Getting Service and Support

- Service and Support Contact Information
- Web Site
- Support Services
- E-mail to Support Services

Service and Support Contact Information

Service	Contact Information
NEC Solutions (America), Inc. Web Site	www.necsolutions-am.com
Support Services Web Site	support.neccomp.com
Phone to Support Services (U.S. and Canada customers only).	1-800-632-4525
E-mail to Support Services through a commercial online service or the Internet.	Internet e-mail address: tech-support@nec-computers.com

Note If you purchased your computer outside the U.S. or Canada, please contact the local NEC office or their dealers for support and service.

If you have access to a telephone, a modem, and/or a LAN Internet connection, you can use these services to obtain information about your system at any time, day or night, seven days a week.

Not only do these services provide information about your NEC system, they can also be used to answer your questions and help solve any problems you may have with your system, should that ever be necessary.

Web Site

If you have a modem or are connected to a network, you can access the NEC Solutions Web site. You can do this through a commercial online service or through your Internet account. The Web site contains general information about NEC Solutions and its products, press releases, reviews, a reseller locator, and service and support information.

Look in the Service and Support area for the following:

- technical documentation, including Frequently Asked Questions, reference manuals, and warranty information
- BIOS updates, drivers, and Setup Disk files to download
- contact information, including telephone numbers for Technical Support and links to vendor Web sites
- an automated e-mail form for your technical support questions
- a password-accessible area for resellers.

To access the NEC Solutions Home Page, enter the following Internet Uniform Resource Locator (URL) in your browser:

http://www.necsolutions-am.com/

To access the NEC Solutions Support Page, enter the following Internet Uniform Resource Locator (URL) in your browser:

http://support.neccomp.com/

Support Services

NEC Solutions also offers direct technical support through Support Services. NEC Solutions Support Services is for U.S. and Canadian customers only; international customers should contact the local NEC office or dealer for the support and service available in their country.)

Direct assistance is available 24 hours a day, 7 days a week. Call NEC Solutions Support Services, toll free, at **1-800-632-4525** (U.S. and Canada only) for system hardware support and to find out about the extended service programs available for purchase.

Please have your system accessible while calling for technical support to ensure that NEC Solutions support personnel can successfully troubleshoot your system.

For outside the U.S. or Canada, please contact your local NEC office or dealer for the support and service available in your country.

E-mail to Support Services

NEC Solutions Support Services offers technical support by e-mail if you have Internet access. The e-mail address is:

tech-support@nec-computers.com

When using the e-mail support service, you should include the word “Notebook” in the subject field for prompt response from the appropriate technical person.

You should provide as much specific information about your questions as possible. You will receive a response to your questions, usually within one business day.

A

Setting Up a Healthy Work Environment

- Making Your Computer Work for You
- Arrange Your Equipment
- Adjust Your Chair
- Adjust Your Input Devices
- Adjust Your Screen or Monitor
- Vary Your Workday
- Pre-existing Conditions and Psychosocial Factors

Making Your Computer Work for You

Computers are everywhere. More and more people sit at computers for longer periods of time. This appendix explains how to set up your computer to fit your physical needs. This information is based on ergonomics — the science of making the workplace fit the needs of the worker.

Some nerve, tendon, and muscle disorders (*musculoskeletal disorders*) may be associated with repetitive activities, improper work environments, and incorrect work habits. Examples of musculoskeletal disorders that may be associated with certain forms of repetitive activities include: carpal tunnel syndrome, tendinitis, tenosynovitis, de Quervain's tenosynovitis, and trigger finger, as well as other nerve, tendon, and muscle disorders.

Note 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 this appendix.

Although some studies have shown an association between increasing hours of keyboard use and the development of some musculoskeletal disorders, it is still unclear whether working at a computer causes such disorders. Some doctors believe that using the keyboard and mouse may aggravate existing musculoskeletal disorders.

Note Contact a doctor if you experience pain, tenderness, swelling, burning, cramping, stiffness, throbbing, weakness, soreness, tingling and/or numbness in the hands, wrists, arms, shoulders, neck, back, and/or legs.

Some people are more susceptible to developing these disorders due to pre-existing conditions or psychosocial factors (see "Pre-existing Conditions and Psychosocial Factors" later in the appendix).

To reduce your risk of developing these disorders, follow the instructions in this appendix. If you experience discomfort while working at your computer or afterwards, even at night, contact a doctor as soon as possible. Signs of discomfort might include pain, tenderness, swelling, burning, cramping, stiffness, throbbing, weakness, soreness, tingling and/or numbness in the hands, wrists, arms, shoulders, neck, back, and/or legs.

Note To increase your comfort and safety when using your notebook computer as your primary computer system at your home or office, note the following recommendations:

Use a separate, external keyboard attached to your notebook computer.

Use a separate, external monitor attached to your notebook computer.

Arrange Your Equipment

Arrange your equipment so that you can work in a natural and relaxed position. Place items that you use frequently within easy reach. Adjust your workstation setup to the proper height (as described in this appendix) by lowering the table or stand that holds your computer equipment or raising the seat height of your chair. Position your notebook computer directly in front of you for increased safety and comfort.

Adjust Your Chair

Your chair should be adjustable and stable. Vary your posture throughout the day.

Check the following:

- Keep your body in a relaxed yet upright position. The backrest of your chair should support the inward curve of your back.
- Use the entire seat and backrest to support your body. Tilt the backrest slightly backwards. The angle formed by your thighs and back should be 90° or more.
- Your seat depth should allow your lower back to comfortably contact the backrest. Make sure that the backs of your lower legs do not press against the front of the chair.
- Extend your lower legs slightly so that the angle between your thighs and lower legs is 90° or more.
- Place your feet flat on the floor. Only use a footrest when attempts to adjust your chair and workstation fail to keep your feet flat.
- Be sure that you have adequate clearance between the top of your thighs and the underside of your workstation.
- Use armrests or forearm supports to support your forearms. If adjustable, the armrests or forearm supports should initially be lowered while all the other adjustments discussed in this appendix are made. Once all these adjustments are completed, raise the armrests or adjust the forearm supports until they touch the forearms and allow the shoulder muscles to relax.

Adjust Your Input Devices

Note the following points when positioning your notebook computer or any external input devices.

- Position your keyboard directly in front of you. Avoid reaching when using your keyboard or mouse.
- If you use a mouse, position it at the same height as the keyboard and next to the keyboard. Keep your wrists straight and use your entire arm when moving a mouse. Do not grasp the mouse tightly. Grasp the mouse lightly and loosely.
- Adjust the keyboard height so that your elbows are near your body and your forearms are parallel to the floor, with your forearms resting on either armrests or forearm supports, in the manner described previously. If you do not have armrests or forearm supports, your upper arms should hang comfortably at your sides.
- Adjust the keyboard slope so that your wrists are straight while you are typing.
- Type with your hands and wrists floating above the keyboard. Use a wrist pad only to rest your wrists between typing. Avoid resting your wrists on sharp edges.
- Type with your wrists straight. Instead of twisting your wrists sideways to press hard-to-reach keys, move your whole arm. Keep from bending your wrists, hands, or fingers sideways.
- Press the keys gently; do not bang them. Keep your shoulders, arms, hands, and fingers relaxed.

Adjust Your Screen or Monitor

Correct placement and adjustment of the screen or external monitor can reduce eye, shoulder, and neck fatigue. Check the following when you position the screen or external monitor.

- Adjust the height of your screen or external monitor so that the top of the screen is at or slightly below eye level. Your eyes should look slightly downward when viewing the middle of the screen or external monitor.
- Position your screen or external monitor no closer than 12 inches and no further away than 28 inches from your eyes. The optimal distance is between 14 and 18 inches.
- Rest your eyes periodically by focusing on an object at least 20 feet away. Blink often.
- Position the screen or external monitor at a 90° angle to windows and other light sources to minimize glare and reflections. Adjust the monitor tilt so that ceiling lights do not reflect on your screen or external monitor.

- If reflected light makes it hard for you to see your screen or external monitor, use an anti-glare filter.
- Clean your screen or external monitor regularly. Use a lint-free, non-abrasive cloth and a non-alcohol, neutral, non-abrasive cleaning solution or glass cleaner to minimize dust.
- Adjust the screen or external monitor's brightness and contrast controls to enhance readability.
- Use a document holder placed close to the screen or external monitor.
- Position whatever you are looking at most of the time (the screen or reference material) directly in front of you to minimize turning your head while you are typing.
- Get regular eye check-ups.

Vary Your Workday

If you use your computer for prolonged periods, follow these instructions.

- Vary your tasks throughout the day.
- Take frequent short breaks that involve walking, standing, and stretching. During these breaks, stretch muscles and joints that were in one position for an extended period of time. Relax muscles and joints that were active.
- Use a timer or reminder software to remind you to take breaks.
- To enhance blood circulation, alter your sitting posture periodically and keep your hands and wrists warm.

Note For more information on workstation setup, see the American National Standard for Human Factors Engineering of Visual Display Terminal Workstations. ANSI/HFS Standard No. 100-1988. The Human Factors Society, Inc., P.O. Box 1369, Santa Monica, California 90406.

Pre-existing Conditions and Psychosocial Factors

Pre-existing conditions that may cause or make some people more susceptible to musculoskeletal disorders include the following: hereditary factors, vascular disorders, obesity, nutritional deficiencies (e.g., Vitamin B deficiency), endocrine disorders (e.g., diabetes), hormonal imbalances, connective tissue disorders (e.g., arthritis), prior trauma (to the hands, wrists, arms, shoulders, neck, back, or legs), prior musculoskeletal disorders, aging, fluid retention due to pregnancy, poor physical conditioning and dietary habits, and other conditions.

Psychosocial factors associated with these disorders include: workplace stress, poor job satisfaction, lack of support by management, and/or lack of control over one's work.

Contact a doctor if you experience pain, tenderness, swelling, burning, cramping, stiffness, throbbing, weakness, soreness, tingling and/or numbness in the hands, wrists, arms, shoulders, neck, back, and/or legs.

This appendix was prepared in consultation with Dr. David Rempel of the University of California/San Francisco Ergonomics Program and Mr. M.F. Schneider of HUMANTECH, Inc., Ann Arbor, Michigan.

B

Specifications

- Base System
- Expansion
- Power
- Security
- Dimensions and Weight
- Recommended Environment

Base System

Note Components may vary. The specifications provided in this appendix are similar, but not necessarily identical to those in your system.

System Processor

- Mobile Intel Pentium III Processor LV-M, featuring Intel SpeedStep™ Technology — 800 MHz, or higher
- 133-MHz Front-Side Bus (FSB)

Random Access Memory (RAM)

- Standard Onboard Main Memory — 256 MB high-speed PC133 memory
- Optional Memory — One SO-DIMM slot on bottom of system supports optional 128-MB, 256-MB, or 512-MB PC133 memory module; support for up to 768 MB of memory
- Video RAM — 8 MB (UMA)
- Cache RAM — 512-KB L2 cache

Read-Only Memory (ROM)

512-KB flash ROM

Calendar Clock

Year/month/day/hour/minute/second maintained by internal back-up battery

Core Chip

VIA Twister-T chipset composed of VT8606 (North Bridge) and VT82C686B (South Bridge)

LCD

Extended Graphics Array (XGA) LCD panel

- 10.4-inch reflective active-matrix Thin Film Transistor (TFT) color display
- Resolution — 1024 × 768 max
- Colors — up to 65,536
- Color depth — 24-bit

Audio

- ADI AD1886
- Internal stereo speaker
- Internal microphone (mono)
- SoundBlaster compatible
- Hardware volume control
- Software beep control
- S/P DIF support

Keyboard

Membrane-type, with standard QWERTY-key layout (International keyboards are country specific)

- Function keys — 12 keys
- Cursor Control keys — 8 keys; including 4 arrow keys arranged in inverted T layout
- Numeric keypad — embedded
- Windows keyset
- Fn key — function key for ROM-based key functions
- Shortcut keys — 2 keys (Internet, e-mail)

Pointing Device

VersaGlide/NX pad with scroll button

Hard Disk Drive

- Internal, 2.5-inch, 9.5mm, IDE, UltraDMA/100
- 20-GB, 30-GB, or higher hard disk drive

Note When referring to storage capacity, GB stands for one billion bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Input/Output (I/O) Facilities

Integrated industry-standard interfaces

- Modem Port — 1 port, RJ-11 jack
- LAN Port — 1 port, RJ-45 jack
- IEEE 1394 — 1 port, 1394 standard bus
- DC In — 1 port for AC adapter cable
- USB Ports — 3 ports
- VGA — 1 port, 15-pin high-density D-sub
- Microphone In — 1 port, 3-pin, Mini-Pin jack
- Stereo Headphone Out — 1 port, 3-pin, Mini-Pin jack (with SP DIF)

MDC Modem

- K56flex™ compatible
- V.34 extended rate protocol
- V.90 compliant
- Enhanced AT command set
- Class 1 and 2 Fax protocols
- Built-in speaker with software controllable volume
- Integrated on main board

LAN

- 10Base-T and 100Base-TX
- Resume-on-LAN support
- Full duplex support
- Software support for management server
- Integrated on main board

Expansion

Note Some devices may come standard, depending upon your system configuration.

Storage Devices

- Optional external USB industry-standard 3.5-inch, 1.44-MB diskette drive
- External USB 6x CD-ROM drive
- Optional external USB 8x CD-R/RW drive

Note When referring to storage capacity, MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Card Slots

- One 32-bit card slot for Type I or II PC Card
- One CF card slot for Type I or Type II CF Card

Power

ACPI power management support; power status and battery charge status LEDs

Primary Battery

- Lithium ion (Li-Ion), 4 cell
- Housed in battery compartment on bottom of system

Optional Secondary Battery

- Lithium ion (Li-Ion), 8 cell, 14.4V, 3000 mAh
- Housed in stackable battery pack that fastens to bottom of system
- Swappable

AC Adapter

- Input Voltage — 100 to 240 volts (V) AC, 50 watt (max.)
- Output Voltage — 19 volts DC, 50 watt (max.)

Security

- Kensington lock slot
- Power-on password

Dimensions and Weights

System

- Width — 10.63 in (270 mm) max
- Depth — 8.66 in. (220 mm) max
- Height — 0.77 in. to 0.93 in. (19.5 mm to 23.7 mm)
- Weight — minimum 2.98 lbs. (1.35kg)

Recommended Environment

Operation

- Temperature — 41ºF to 95ºF (5ºC to 35ºC)
- Relative Humidity — 20% to 80% (Noncondensing)

Storage

- Temperature — –4ºF to 104ºF (–20ºC to 40ºC)
- Relative Humidity — 20% to 80% (Noncondensing)

C

Frequently Asked Questions

- External Mouse
- Display
- PC Cards
- Diskette Drive
- Booting
- Power Management
- Battery Charging
- Miscellaneous

External Mouse

How can a mouse and an external keyboard be connected to the notebook at the same time?

The NEC Versa E120 DayLite is equipped with three USB ports that allow you to connect any combination of three USB devices, at the same time. If you purchase a USB mouse and a USB keyboard, simply plug each device into any of the USB ports on your system.

Display

What is the maximum resolution I can run in simultaneous mode?

The maximum resolution in simultaneous mode is 1024 x 768 for XGA TFT panels, depending on the capabilities of the external monitor. You can obtain higher resolutions if you connect a higher-resolution external monitor and switch to CRT-only mode.

How can I change my video drivers?

Right click My Computer (in the Start menu in Windows XP, on the desktop in Windows 2000), select Properties, select the Hardware tab. Click the Device Manager button. From Device Manager, double click Display adapters. Right click S3graphics Twister. Select Update Driver. Follow the wizard instructions.

PC Cards

Why do certain PC Cards cause my battery life to drop noticeably?

Certain hard disk cards and wireless radio cards consume more power than others and can impact battery life. When not using any PC Card, close all applications using the card and pop it part of the way out of the slot to save power.

Diskette Drive

Why can't I boot from the diskette drive?

To boot from the diskette drive, be sure that you have a diskette in the drive containing operating system files. Be sure to check the Boot menu parameters in the BIOS Setup Utility to determine the designated sequence of boot devices. See Chapter 3, "Using the BIOS Setup Utility."

See your operating system documentation for information about creating system diskettes.

What happens if I leave a diskette in my diskette drive?

Shutting down your system with a diskette in the drive can damage the data on your diskette and your drive. Remove the diskette before powering off.

How do I format a diskette?

Select My Computer (in the Start menu in Windows XP, on the desktop in Windows 2000) and then right click (click the right-hand mouse button) on the diskette drive icon. Select Format and choose the format process that best suits your needs.

What type of diskette do I use in my diskette drive?

The Versa E120 DayLite supports the 1.44-MB* diskette drive option which uses 3.5-inch high density (HD) diskettes. These diskettes are also called double-sided, high-density (DSHD) diskettes. You can store 1.44 MB* of information on these diskettes.

This diskette drive can also use 3.5-inch double-sided, double-density (DSDD) diskettes. These diskettes only hold 720 kilobytes of data – about half the amount of data that 1.44-MB* diskettes hold.

Why does the amount of available storage displayed for the diskette drive vary between utilities?

Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Booting

How do I warm boot my computer?

Go to Start, Turn Off Computer or Shut Down, Restart the computer.

How do I cold boot my computer?

Press the system's Power button to perform a cold boot or go to Start, Turn Off Computer or Shut Down, Turn Off to shut down the computer. Wait at least five seconds, and then turn the power on.

What is the difference between a warm boot and a cold boot?

A warm boot restarts the system while system power is on. A warm boot is also a software reset. A warm boot clears volatile system memory and reloads the operating system.

A cold boot is a system start with power off. A cold boot also resets the hardware. It checks the hardware and reloads the operating system.

Power Management

Does my system come with power management features enabled?

Yes, your system comes with power management features enabled. Your system manages its power resources using the Advanced Configuration and Power Interface (ACPI). ACPI power management settings are controlled through the Windows Power Options Properties.

See "Windows Power Management" in Chapter 4 for a description of power management settings. Also, see the Windows documentation for detailed information about managing power.

What is the purpose of Standby mode?

You can initiate a Standby mode (full Suspend-to-RAM) by accessing Start, Turn Off Computer, Stand By. This places the system in a deeper state of "sleep" and requires that you press the power button to resume operation.

Putting your system into Standby initiates the Standby power-saving mode and is a convenient way of conserving energy when you are going to be away from your system for a short period of time.

What is the function of Hibernation mode?

Hibernation (Suspend-to-File) provides the greatest power savings by putting the system into a maximum power shutdown. When the system goes into Hibernation mode, it saves data and system status and then shuts off power to all components. Hibernation mode lets you save power without first saving your work. Resuming from Hibernation mode requires less time than performing a cold boot.

Your system must be configured for Hibernation. In Windows Power Management Properties, check the box labeled "enable hibernate support," under the Hibernate tab.

To go into Hibernation mode, go to Start, select Turn Off Computer. Press the Shift key (Stand By changes to Hibernate.) Select Hibernate.

How do I bring my system out of Standby mode?

Pressing the power button brings the system out of Standby mode.

What can I do to conserve battery power?

There are several ways to conserve battery power, and this is an important activity, particularly if you frequently use your system in situations when you can't operate your system on AC power.

Try using your system with a lower screen illumination to conserve battery (use the **Fn-F9** key).

There are also activities that draw larger amounts of battery power. If possible, operate your system on AC power in these circumstances to conserve your battery. For example, NEC Solutions recommends running the system on AC power while using external devices such as a printer or a USB drive or when connected to a network.

Battery Charging

Is it normal for the area near the VersaGlide touchpad to get warm while recharging a battery?

The battery generates heat during recharging and discharging. You do not need to worry about overheating. A protection circuit inside the notebook prevents overheating.

Why didn't my fully-charged spare battery have as much power as a newly charged battery?

Batteries self-discharge when they are not being charged (about 1% per day for a Li-Ion battery). To make sure a battery pack is fully charged, recharge it before you need it. Keep the battery installed in the system and keep the AC adapter connected to AC power whenever possible.

Why is my battery operation time getting shorter?

Heat or residual memory might be shortening the battery operation time.

The battery is heat sensitive and can only be charged to its maximum if the battery and its environment is within 59 to 77 degrees Fahrenheit (15 to 25 degrees Centigrade). The more the temperature deviates from this range during recharging, the less chance the battery can fully charge. To recharge the battery to its full capacity, it is recommended to cool down the unit by unplugging the AC adapter. When the unit has cooled, then plug in the AC adapter to start recharging again.

Also, use the Battery Refresh feature in the BIOS Setup utility to fully discharge your battery and eliminate any residual discharge effect. See "Exit Menu" in Chapter 3 for information about this feature.

Once refreshed, your battery is conditioned to recharge to its full capacity with the AC adapter connected to AC power.

Miscellaneous

How do I set the time and date?

You can change the time and date in Windows double clicking the time in the lower right corner of the screen. Change the date and time as needed.

How do I speed up my application?

If the application you are using runs really slow, close any other applications you are not using — this should speed things up.

If your application still runs slow, you might consider installing additional memory. See "Memory Module" in Chapter 5. (If upgrading after initial purchase, the memory module provided with the system may have to be replaced with an optional larger memory module in order to achieve the maximum capacity.)

Also, refer to your operating system's documentation for tips on optimizing system performance.

Why do I get a message "Insufficient memory" when I run some games?

The "Insufficient memory" refers to the 640 kilobytes of (DOS) base memory. Since there are drivers being loaded at power on, the amount of memory can be lower than the game requires.

Contact the game manufacturer and request advice to create a boot disk. This loads only the drivers necessary to run the game.

How do I find help in a Windows application?

If you need help in a Windows application, click on a Help button or Help menu item. Most applications provide online help. If the application doesn't provide these, try pressing **F1**.

How do I save a file?

You save a file by selecting File, then Save, from the drop down menu. If the file was not previously named, you are prompted for a file name. In Windows XP and Windows 2000, you can use up to 255 characters to name a file.

*When referring to storage capacity, MB stands for one million bytes. Some utilities may indicate varying storage capacities. Total user-accessible capacity may vary depending on operating environments.

Glossary

A

AC adapter
A device that connects an NEC Versa notebook computer and an AC wall outlet to provide AC power for running the system and recharging the battery.

A/D conversion
The process of converting an analog signal into a digital signal.

AGP
Advanced Graphics Port is an interface specification designed for the throughput demands of 3D graphics. AGP introduces a point-to-point channel allowing the graphics controller direct access to main memory, increases bandwidth to 266-MBps, and supports throughputs of 533-MBps and 1.07-GBps.

animation
The art of making things appear to move in two-dimensional (2D) or three-dimensional (3D) space and making events happen over time.

applications programs
Software designed to perform specific functions, like solving business or mathematical problems.

audio
The range of acoustic, mechanical, or electrical frequencies that humans hear.

B

base RAM
Area of system memory between 0 and 640 kilobytes available to the user for the operating system and application programs.

BIOS
Basic Input Output System. A collection of computer routines, usually burnt into ROM, that controls the real-time clock, keyboard, disk drives, video display, and other peripheral devices.

bit
Binary digit. The smallest unit of computer data.

bits per second
(bps) A unit of transmission. Also called baud rate.

board
Printed circuit board (PCB). Board on which computer components are soldered and thin wires are printed to connect the components.

boot
To start up a computer. See cold boot and warm boot.

bus
An electronic circuit within a computer used for transmitting data or electrical power from one device to another.

byte
Group of eight contiguous bits.

C

CardBus
A 32-bit high-performance bus defined by the PC Card Standard and released by the PCMCIA standards body and trade associations. CardBus offers wider and faster 32-bit bus and bus mastering operation for improved adapter performance and can operate at speeds up to 32-MHz.

CD
Compact disc. A polished metal platter capable of storing digital information. The most prevalent types of compact discs or those used by the music industry to store digital recordings and CDs used to store computer data. Both types are read-only, which means that once the data is recorded onto them, they can only be read or played.

CD audio
Also called digital audio, uses the same format as conventional music CDs. CD audio sounds have been digitized at a high sampling rate.

CD-ROM drive
Compact Disc Read-Only Memory. A computer-controlled device that reads high-capacity optical discs and sends the output to the computer.

CD-RW drive
Compact Disc Read/Write. A computer controlled device that reads from and writes to high capacity optical discs.

clock
Electronic timer used to synchronize computer operations.

CMOS
Complementary Metal Oxide Semiconductor. A chip that contains nonvolatile memory in the Versa notebook. CMOS is backed up by an internal battery that preserves clock/calendar data and system configuration parameters stored in CMOS.

cold boot
Process of starting up the computer by turning on the power. If power is already on, the process means to turn off the computer and turn it on again. A cold boot reinitializes all devices.

CRT
Cathode-Ray Tube. A type of display screen used in desktop monitors. It forms the screen image using tiny dots called, pixels. See also LCD.

cursor
A movable image on the display screen that indicates where the next entered data appears.

D

default
A value, option, or setting that the computer automatically selects until you direct it otherwise.

digital audio
Recorded sounds such as speech and sound effects. These are played back by the audio circuit's Digital-to-Analog Converter (DAC).

digital sound
A description of a sound wave that consists of binary numbers.

digitizing
The process of converting an analog signal into a digital representation.

diskette
A thin flexible platter coated with a magnetic material for storing information.

diskette drive
A magnetic drive that writes on and retrieves data from a diskette.

E

enhanced VGA
A video interface that offers more colors or higher resolution than VGA.

extended RAM
The area of RAM above the first megabyte of memory in the system available for enhancing system performance.

F

FIR
Fast Infrared, an infrared technology that sends data at 4.0 Mbit/second (4 million bits per second).

FM synthesis
A technique for synthesizing sound that uses a combination of modulated sine waves to produce different waveforms.

function key
The set of keys on the keyboard (usually F1 through F12) that let you get help and error message information or quickly select frequently used commands.

H

hard disk
A rigid magnetic storage device that provides fast access to stored data.

hardware
The electrical and mechanical parts from which a computer is made.

hertz
(Hz) A unit of frequency equal to one cycle per second.

hot key
Combination of two or three keys that you press simultaneously for a particular function.

IEEE 1394 Standard
IEEE 1394 devices support Plug and Play connectivity for transfer rates of up to 400 Mbps. Use this port to daisy chain up to 63 IEEE 1394 devices to your system.

input/output
(I/O) The process of transferring data between the computer and external devices.

IDE
Intelligent Drive Electronics. A hard disk drive type that has controller electronics built into the drive and delivers high throughput.

infrared
Technology that uses infrared waves to communicate data between the IR-equipped devices without the use of cables. The IR port on the NEC Versa notebook is Infrared Data Association (IrDA) compatible.

interface
A connection that enables two devices to communicate.

interrupt
A special control signal from an I/O device that diverts the attention of the microprocessor from the program to a special address.

K

kilobyte
(KB) 1024 bytes.

L

LAN
Local Area Network.

LCD
Liquid Crystal Display. An LCD consists of a thin sandwich of two glass plates with sealed edges, containing nematic liquid-crystal material that forms the screen image. Versa displays are LCD type.

load
To copy a program into the computer's memory from a storage device.

M

megabyte
(MB) 1,048,576 bytes.

memory
Electronic storage area in a computer that retains information and programs. A computer has two types of memory — read-only memory (ROM) and random access memory (RAM).

menu
A video display of programs or options.

microprocessor
A semiconductor central processing unit that is the principal component of a microcomputer. Usually contained on a single chip that includes an arithmetic logic unit, control logic, and control-memory unit.

MIDI
Musical Instrument Digital Interface. A standard serial bus, digital interface designed to connect electronic musical devices. MIDI has no innate sound of its own.

MIR
Medium Infrared, an infrared technology that sends data at 1.152 Mbit/second (1,152,000 bits per second).

mode
A method of operation; for example, the NEC Versa notebook operates in either normal or power-saving modes.

modem
MOdulator-DEModulator. A device that links computers over a telephone line.

MPEG
The MPEG (Moving Pictures Experts Group) standard is used to encode motion images. The MPEG player program in Windows lets you play back MPEG files.

multimedia
Integrated forms of media such as sound, text, graphics, and video.

N

nonvolatile memory
Storage media that retains its data when system power is turned off. Nonvolatile memory in the Versa notebook is a complementary metal oxide semiconductor (CMOS) chip that is backed up by an internal battery. The backup battery preserves the clock/calendar data and system configuration parameters stored in CMOS. See volatile memory.

O

operating system
Set of programs that manage the overall operation of the computer.

overwrite
Storing information at a location where information is already stored, thus destroying the original information.

P

page
A type of message transmission in which a message is sent or received via modem to a paging device from a computer (with paging communications software) or telephone.

parallel interface
Interface that communicates multiple data bits at a time.

parallel printer
A printer with a parallel interface.

parameter
A characteristic of a device or system.

partition
Process of dividing mass storage (hard disk drive) into isolated or separate sections. Partitioning a hard drive creates additional logical drives, e.g., a 5.1-GB hard drive partitioned into three logical drives creates drives C, D, and E. Partitioning facilitates file management by allowing you to isolate the computer's operating system to drive C while storing applications and data files on separate drives D and E (also referred to as partitions).

password
A string of characters that the user must enter before the system allows access or system privileges.

PC Card
A credit-card–sized peripheral interface standard for portable devices. Types of PC cards (also known as PCMCIA cards) currently offered by major vendors include fax/modems, LAN, storage cards, and wireless communications devices.

peripheral
Input or output device not under direct computer control. A printer is a peripheral device.

pixels
Picture elements. Tiny dots that make up a screen image.

port
Provides the means for an interface between the microprocessor and external devices. A cable connector is usually plugged into the port to attach the device to the computer.

processor
In a computer, a functional unit that interprets and executes instructions.

prompt
A special symbol indicating the beginning of an input line. Also a message that appears on the screen indicating that the user must take a certain action.

Q

QWERTY
The QWERTY keyboard, designed in the 1800s for mechanical typewriters, refers to the first six keys (QWERTY) on the top row of letters on the standard keyboard.

R

RAM
Random Access Memory. A storage device into which data is entered and from which data is retrieved in a nonsequential manner.

read
To extract data from a storage device such as a diskette.

ROM
Read-Only Memory. Memory in which stored data cannot be modified by the user except under special conditions.

reset
The process of returning a device to zero or to an initial or arbitrarily selected condition.

resolution
The degree of screen image clarity. Video display resolution is determined by the number of pixels on the screen. Resolution is usually specified in pixels by scan lines, for example, 800x600. See pixels.

RS-232C
Standard interface for serial devices. This port is sometimes referred to as the serial port.

S

scanner
An optical device that reads printed material and converts it to a computer screen image.

serial interface
An interface that communicates information one bit at a time.

serial printer
A printer with a serial interface.

SIR
Serial Infrared, an infrared technology that sends data at 2.4 Mbit/second (2,400,000 bits per second).

SO-DIMM
Small Outline Dual-Inline Memory Module. A small circuit board that holds memory chips. A dual in-line memory module (DIMM) has a 64-bit path.

software
Programs that run on a computer such as operating systems, word processors, and spreadsheets.

SpeedStep technology
Intel SpeedStep technology provided with some Pentium III processors lets you customize high-performance computing on your notebook computer. When powered by a battery, the processor drops its computing speed to lower power consumption and conserve battery life.

S/PDIF
Sony and Philips Digital Interconnect Format. S/PDIF enables a computer system to produce digital audio output through the use of an optical output cable to an optical disk device.

Standby mode
A state of power management that puts the system to "sleep." Standby mode shuts down all devices in the system while retaining data and system status.

SVGA
Super Video Graphics Array. Graphics technology that supports up to 256 or more colors and a graphics resolution of 800 x 600 pixels.

SVGA+
Super Video Graphics Array Plus. Graphics technology that supports up to 262,144 colors and a graphics resolution of 1400 x 1050 pixels.

system board
The main printed circuit board inside the system unit into which other boards and major chip components, such as the system microprocessor, are connected.

s-video
Short for *super-video*, a technology for transmitting video signals over a cable by dividing the video information into two separate signals: one for color, and the other for brightness. When sent to a television, s-video produces sharper images and superior color definition.

T

TFT
Thin Film Transistor. A type of LCD color screen that supports up to 16.8-million colors.

U

USB
Universal Serial Bus. This new external bus standard supports the connection of up to 127 peripheral devices, such as mice, modems, and keyboards. USB supports plug-and-play installation on some systems.

V

VersaGlide touchpad

A small, touch-sensitive pad used as a pointing device on your NEC Versa notebook computer. With the VersaGlide, you can move your finger along the pad to move the cursor or simulate a mouse click by tapping the pad.

VGA

Video Graphics Array. Graphics technology that supports up to 256 colors and a graphics resolution of 640x480 pixels.

volatile memory

Storage media that loses its data when system power is turned off. Standard memory and memory that you add to the Versa notebook are volatile memory. See nonvolatile memory.

W

warm boot

Process of resetting the computer without turning off the power through keyboard input (pressing Ctrl, Alt, and Del keys simultaneously). The system returns to an initial or arbitrarily selected condition.

warm swap

Process of swapping devices in and out of a computer system without turning off the power. The system must be in a sleep state before removing or inserting a device.

waveform

A graphic representation of a sound wave as displayed on an oscilloscope, which converts sound waves into electronic signals.

write

To record or store information to a storage device.

X

XGA

Extended Graphics Array. This high-resolution graphics standard supports 1024x768 pixels and 16 million simultaneous colors. XGA also supports non-interlaced monitors.

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Regulatory Statements

The following regulatory statements include the Federal Communications Commission (FCC) Radio Frequency Interference Statement, compliance statements for Canada and Europe, battery disposal and replacement information, and the Declaration of Conformity.

FCC Statement for United States Only

⚠ WARNING Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from the one to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canadian Department of Communications Compliance Statement

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations (pursuant to ICES-003 Issue 2, Revision 1).

Avis de conformité aux normes du ministere des communications du Canada

Cet equipment ne depasse pas les limites de Classe B d'émission de bruits radioelectriques pour les appareill numerique, lelles que prescribes per le Reglement sur le brouillage radioélectrique elebil por le minisieredes Communications du Canada.

European Community Directive Conformance Statement

This product is in conformity with the protection requirements of EC Council Directive 89/336/EEC on the approximation of laws of the Member States relating to electro-magnetic compatibility. This product satisfied the Class B limits of EN 55022.

Battery Replacement

A lithium battery in some computers maintains system configuration information. In the event that the battery fails to maintain system configuration information, NEC Solutions recommends that you replace the battery. For battery replacement information, call your NEC Solutions dealer or NEC Solutions Support Services.

⚠ 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.

⚠ AVERTISSEMENT Il y a danger d'explosion s'il y a replacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type recommandé par le constructeur. Mettre au rébut les batteries usagées conformément aux instructions du fabricant.

Battery Disposal

The main battery may be made of Lithium Ion (Li-Ion) and the CMOS clock battery is made of Lithium.

Do not place used batteries in your regular trash. The batteries must be collected, recycled, or disposed of in an environmentally approved manner.

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling, and disposal of the batteries.

LCD Panel Disposal

The LCD lamp in your computer's LCD panel contains mercury.

Do not place a used LCD panel in your regular trash. The panel must be collected, recycled, or disposed of in an environmentally approved manner.

Contact your local waste management officials for other information regarding the environmentally sound collection, recycling, and disposal of the LCD panel.

MDC Modem FCC Registration Number

For systems with a built-in MDC modem, the FCC registration number of your system is H8N-TAI-36099-M5-E with a Ringer Equivalence of 0.6B.

NEC Solutions (America), Inc.

DECLARATION OF CONFORMITY

We, the Responsible Party

NEC Solutions (America), Inc.
15 Business Park Way
Sacramento, CA 95828

declare that the product

NEC Versa E120 DayLite

is in conformity with part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.